Xopero Knowledge Base

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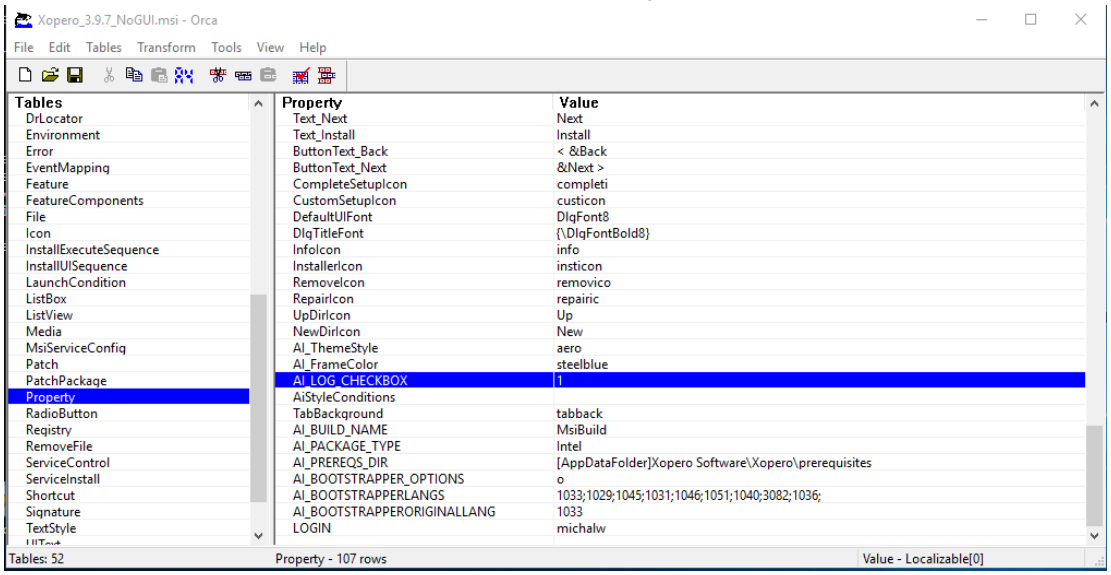
Applications

Deploying application through GPO

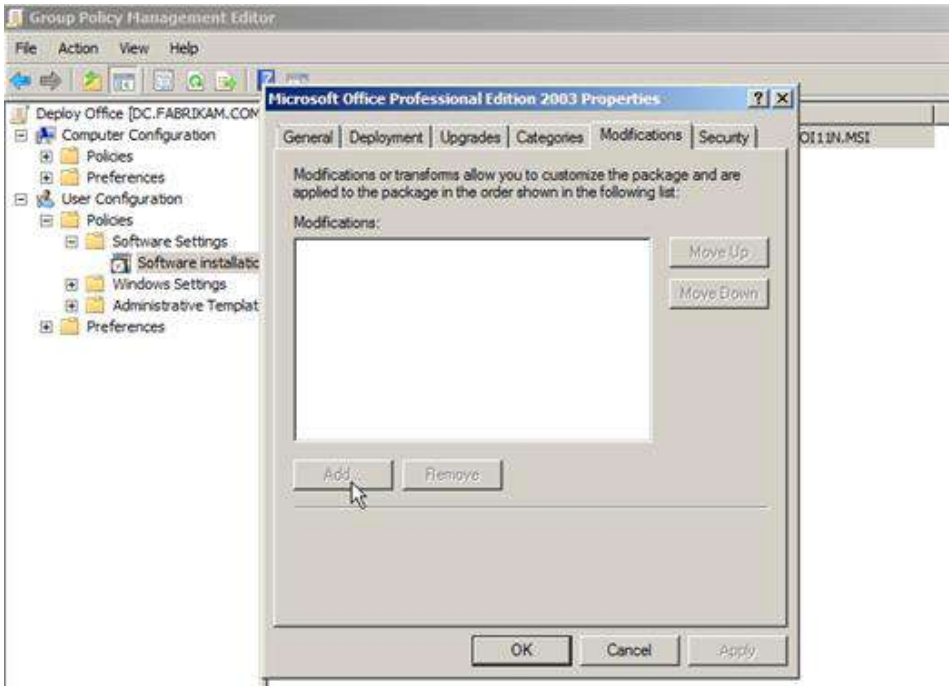
The use of switches in package distribution

When distributing the Xopero package through GPO policies, it is possible to use switches. To use the switches, an additional operation is required, namely, you need to prepare the MST transformation file, for example, using the Orca software - after installing and opening the Xopero_NoGui.msi installer, enter the Properties table and add new fields (Add row) that will be used for installation .

You must add LOGIN, PASSWORD, SERVER fields and enter the appropriate values for them - i.e. login, user password that the application will use to authorize to Xopero as well as the IP address of the device with the Xopero server installed.



After performing this operation, select Transform> Apply transform from the menu, and then add the generated .MST file to the package distribution policy in the Modifications field:



After adding modifications and installation on the devices, they will automatically log in to the account details provided in the switches.

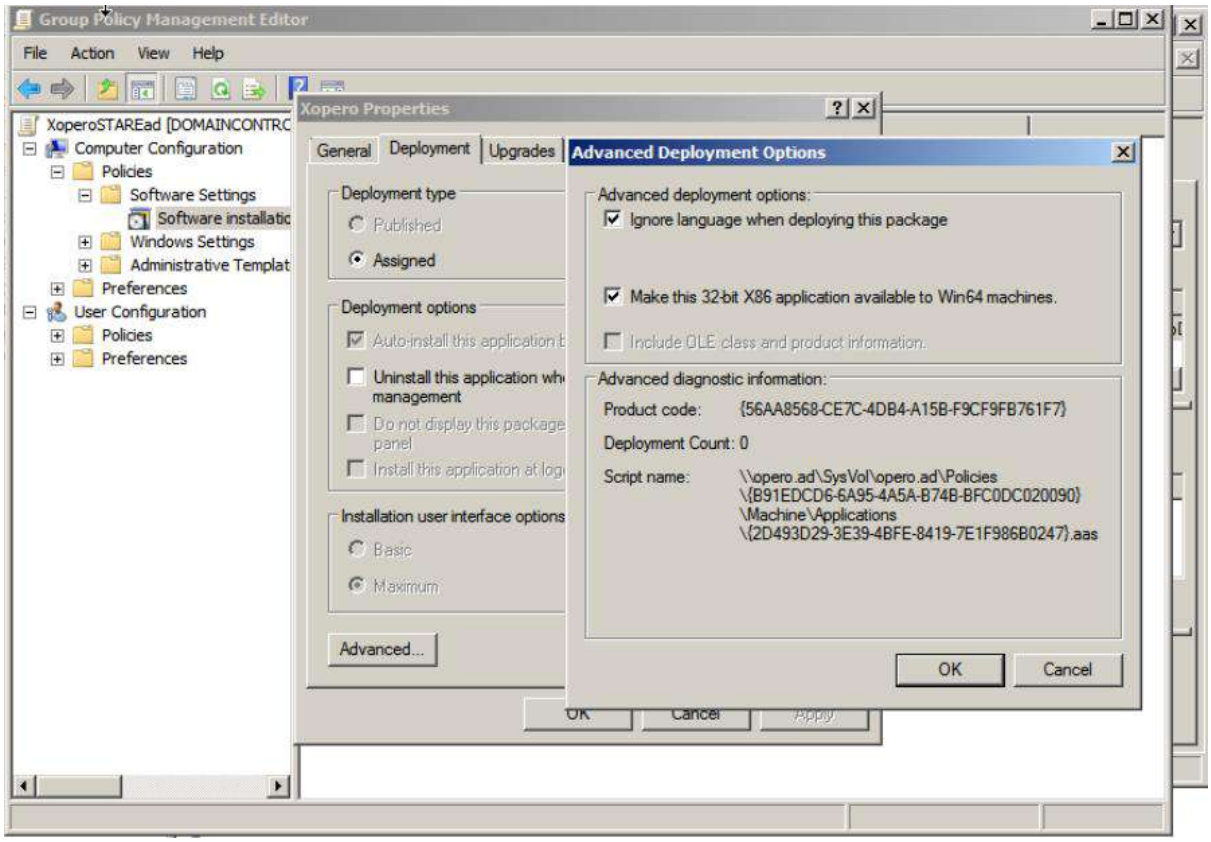
Application distribution via GPO

Xopero applications are available in the form of executable files (.exe) as well as in the form of .msi installation packages, which allow you to distribute applications in the Active Directory domain with GPO policy.

Description of the process of preparing the installation package for distribution is available on the Microsoft website:

https://support.microsoft.com/en-us/help/816102/how-to-use-group-policy-to-remotely-install-software-in-windows-server

The Xopero package requires some additional operations for proper distribution. You need to open Advanced Deployment Options and mark "Ignore language when deploying this package" option.



Xopero Cloud Management - Reseller Panel

Wallet

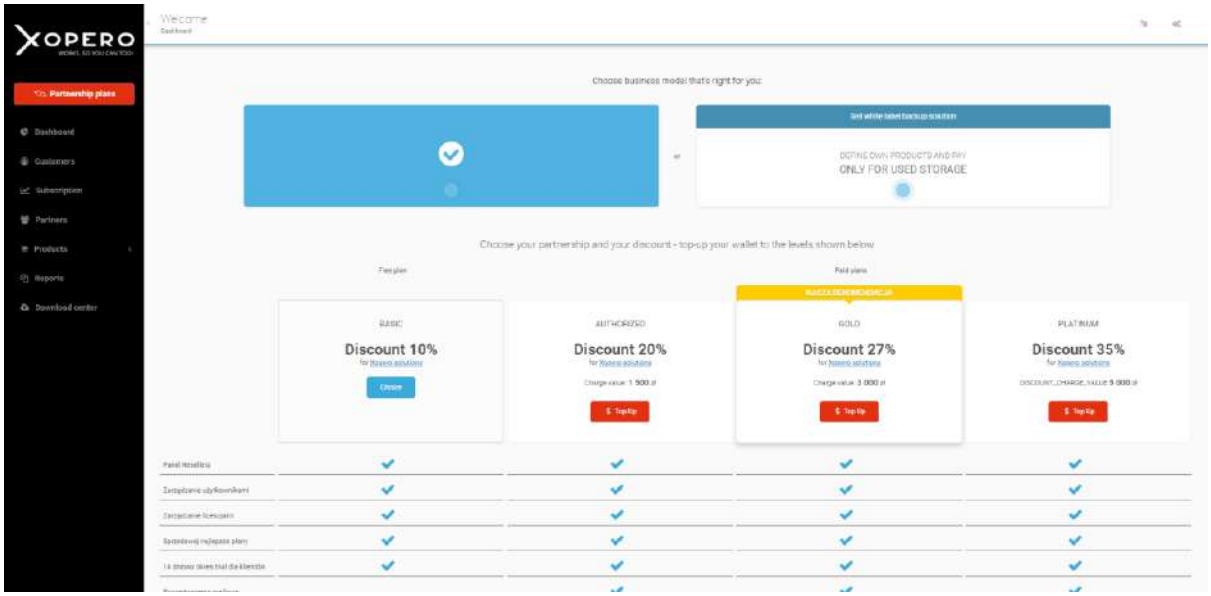
This panel version introduced two settlement options - top up and bottom up.

Top Up

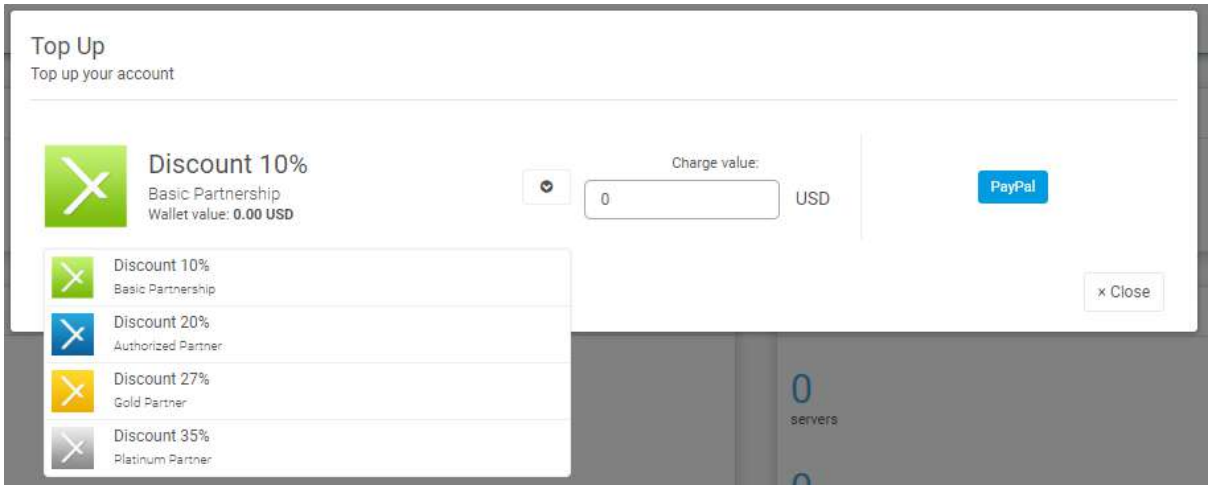
Top up is a one of the payments way. On the main dashboard, which is visible after logging in, you can see the Account Type field, which informs about the partnership level and account balance.

In the case of the top up method, it is possible to upgrade the partnership level:

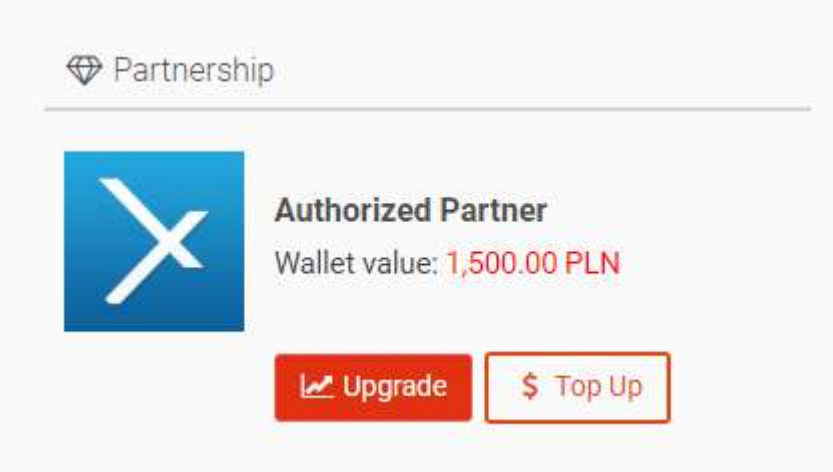
- Basic Partner - has a 15% discount on the purchase of Xopero services, it is a level of partnership granted "at the start",
- Authorized Partner - has a 20% discount on the purchase of Xopero services, in order to get to this level you need to top up your wallet,
- Gold Partner - has a 27% discount on the purchase of Xopero services, in order to get to this level you need to top up your wallet,
- Platinum Partner - has a 35% discount on the purchase of Xopero services, in order to reach this level you need to top up your wallet.



You can top up account with any amount, using the Top up button.



If you are a top up reseller ypu can create top up and bottom up resellers. In case of creating a bottom up reseller, the funds for activating the subscription are taken from your wallet.



Bottom up

Method of invoicing for a specified period of time. In the case of a reseller with a bottom-up method, all services are automatically activated and the reseller is settled in accordance with the contract.

Type of resellers

Billing

A billing reseller is a reseller for which the subscription life cycle is managed by the Xopero system - subscriptions have expiration dates.

Products

A product reseller is a reseller that resells Xopero products.

Parameters

Parameter reseller can create their own products and are billed for used resources.

Partners Program

Reseller has access to the panel in Read Only mode. Reseller can view lists of its customers and sold subscriptions.

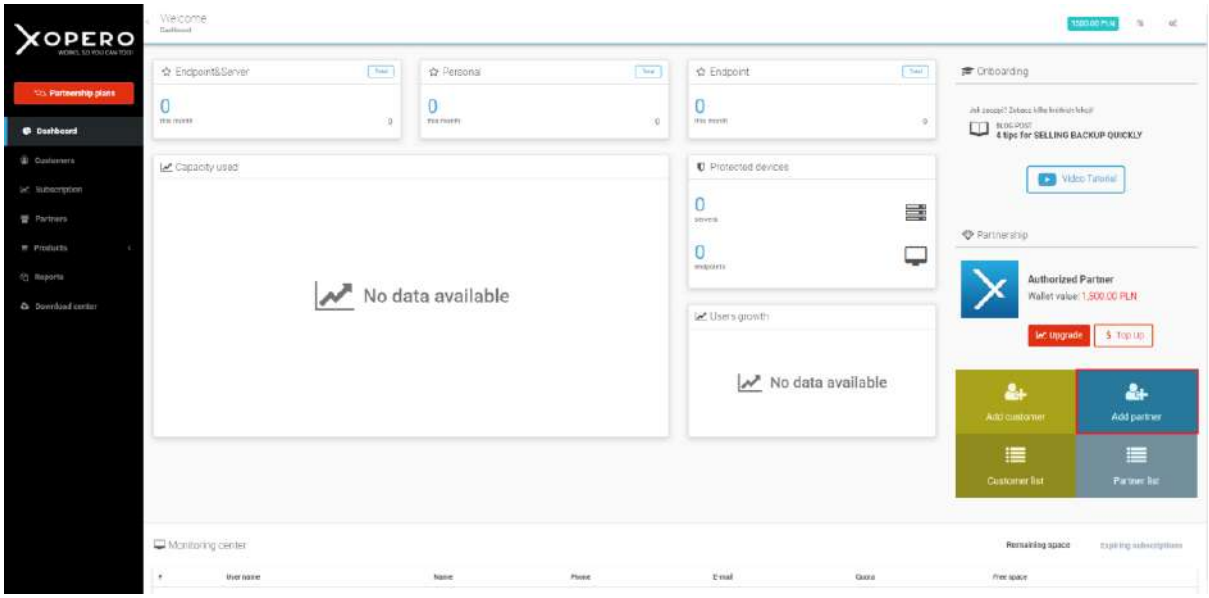
API

It is a reseller who controls the validity of the subscription and uses the API to create users. It does not have rigidly assigned products, each parameter is given in the API call. Its clients do not need to have a license expiration date.

Create reseller

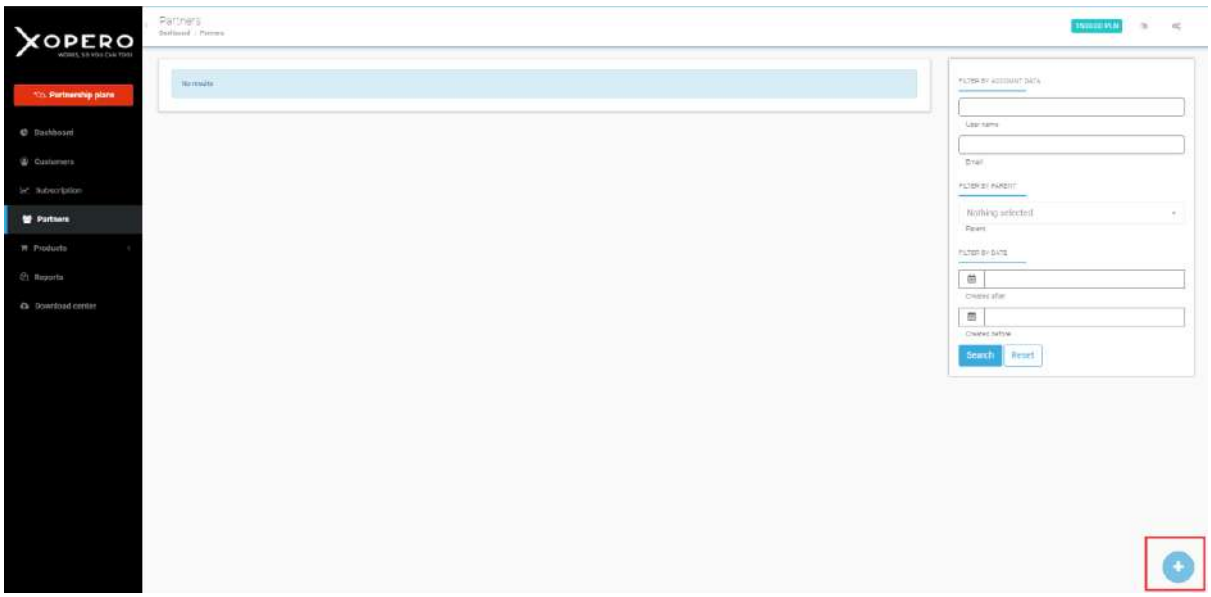
The reseller creation form can be called from two locations:

1. After logging in, you will be moved to the Dashborad tab, where in the bottom right corner there are action buttons that allow you to create customers and resellers faster.



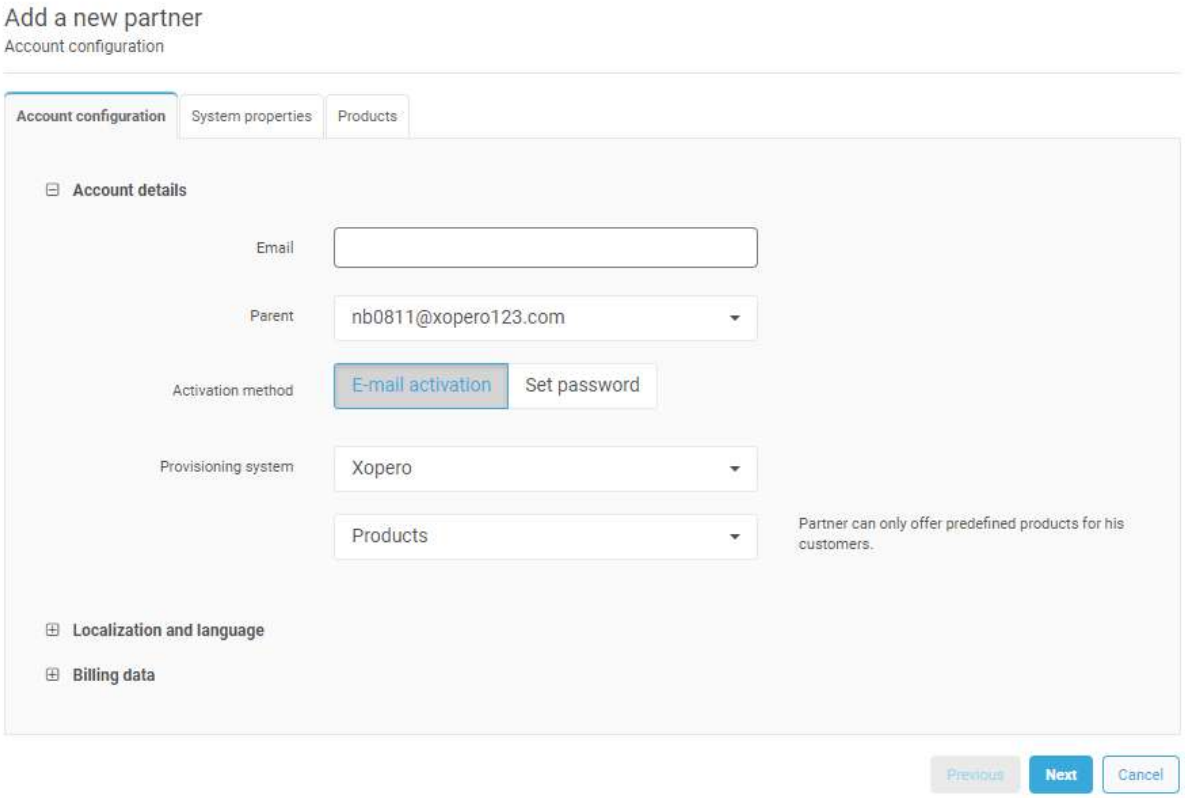
2. The second place where you can create other resellers is the Partners tab.

After going to the Partners tab, in the bottom right corner there is a button for adding resellers.



When you choose to add a partner, an addition form will be displayed, where you will have to complete:

1. In the first step of the partner's email and, if necessary, other data. It also selects how to activate the account:
    - Parameters - Parameter reseller can resell Xopero products and create its own.
    - Partners Program - This is a read-only reseller, has limited features, can view a list of customers and resellers.
    - Email activation - the partner will receive an e-mail with an activation link and will set a password by himself,
    - Set password - the reseller assigns a password for the subreseller.
    - Billing system - a way of managing the subscription life cycle.
    - Products - Product reseller resells Xopero products.

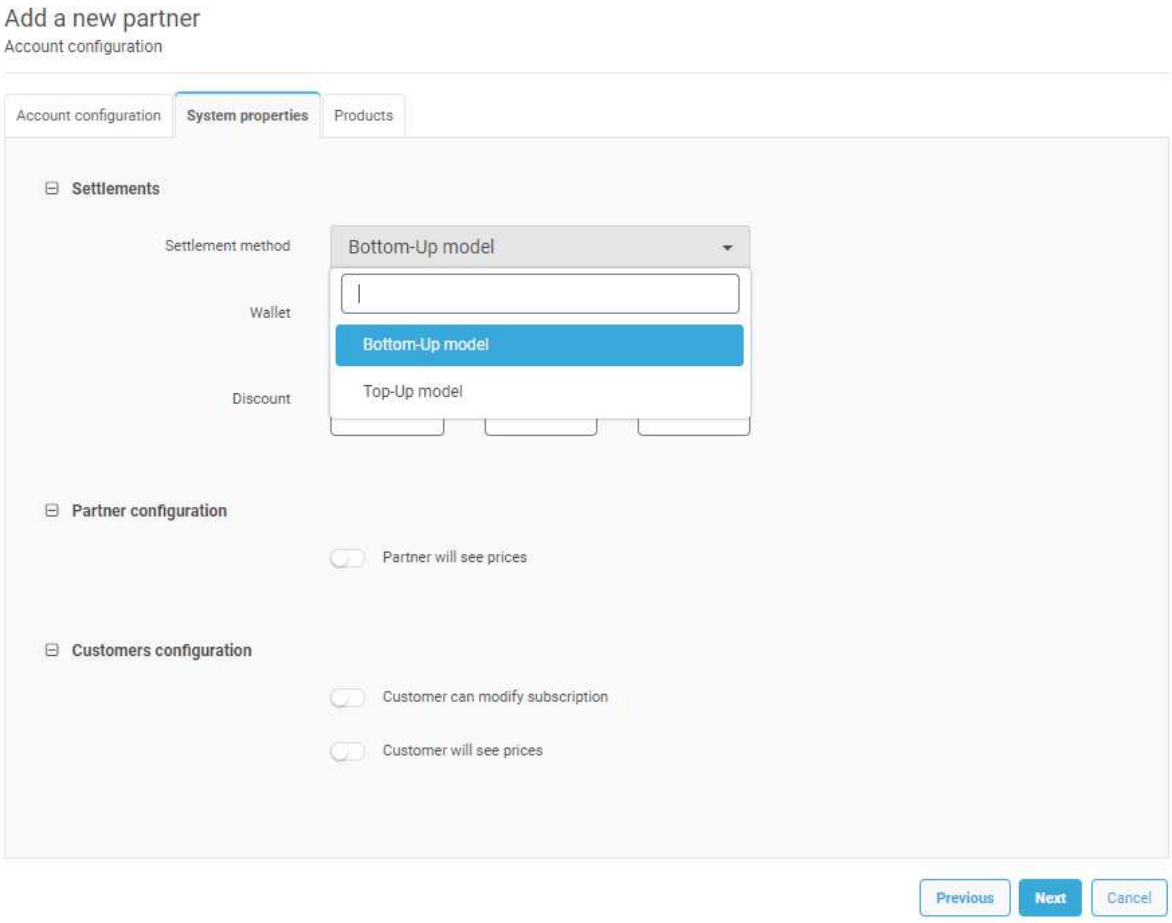


In the next step, you have to select the settlement method and system settings:

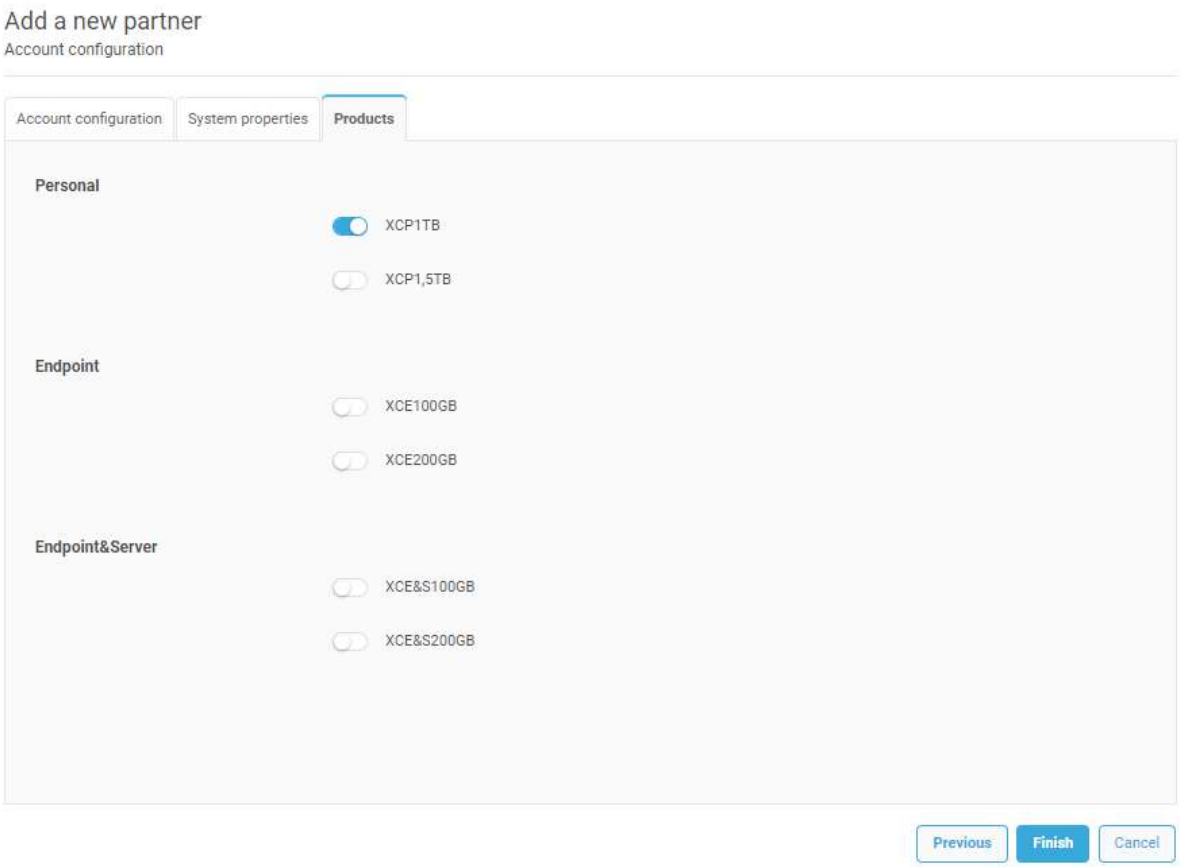
1. Bottom-Up model - payment on the basis of invoices, reseller is settled after the time specified in the contract.

- Discount - the amount of discounts on selected types of products determined in the contract.
- Wallet - in case the top up reseller creates a bottom up reseller, he must choose from which wallet the bottom up reseller will take funds (settlements between the reseller and his child).

2. Top-Up model - payment in advance, reseller has a "wallet", which top-ups and from which funds are taken for the activation of services.
3. Reseller will see prices - Reseller, which is created will see the prices of the licenses created.
4. Customer can modify the subscription - the customers of this reseller will be able to modify the subscription - extend it, change plans/parameters. The service will appear as inactive and will wait for activation by the reseller.
5. Customer will see prices - the customers of this reseller will see the subscription prices during the modification.



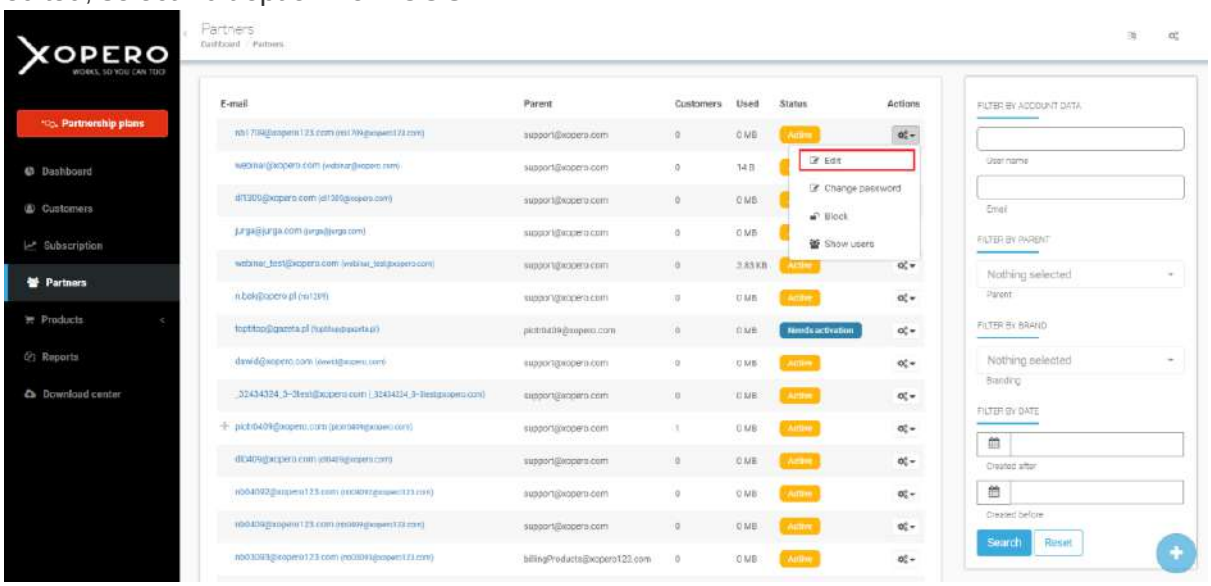
In the last step, you can assign products to his subreseller.



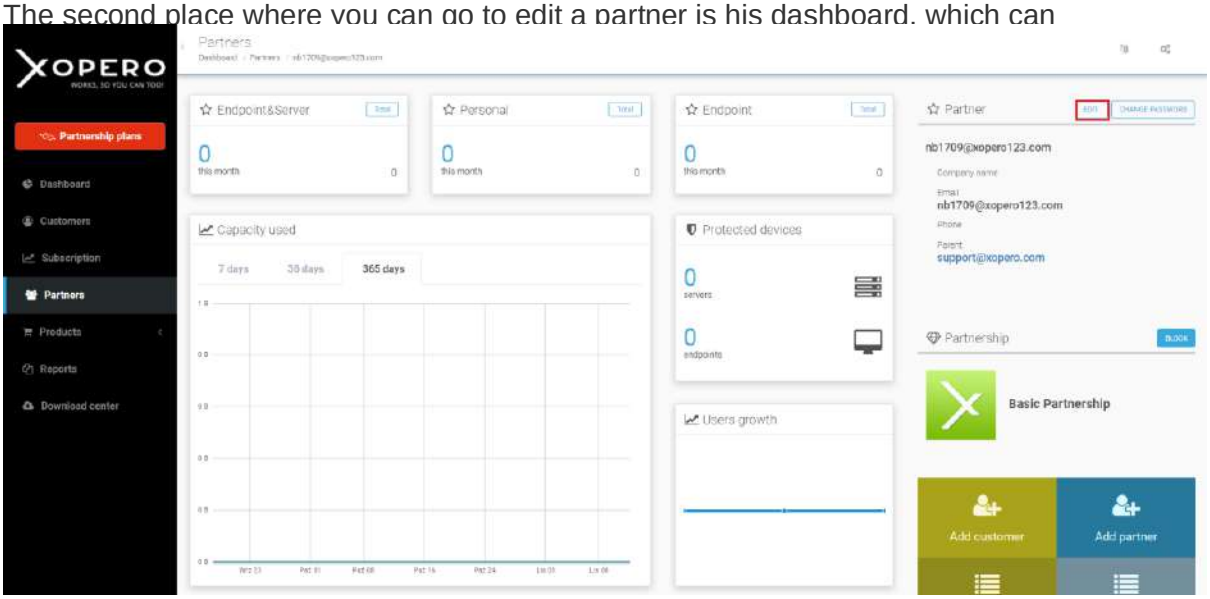
Edit reseller

If you want to make changes in your sub-reseller account, you can do it from two places:

You can go directly from the partner list to edit the selected partner. For the partner to be edited, select Edit option from COG.

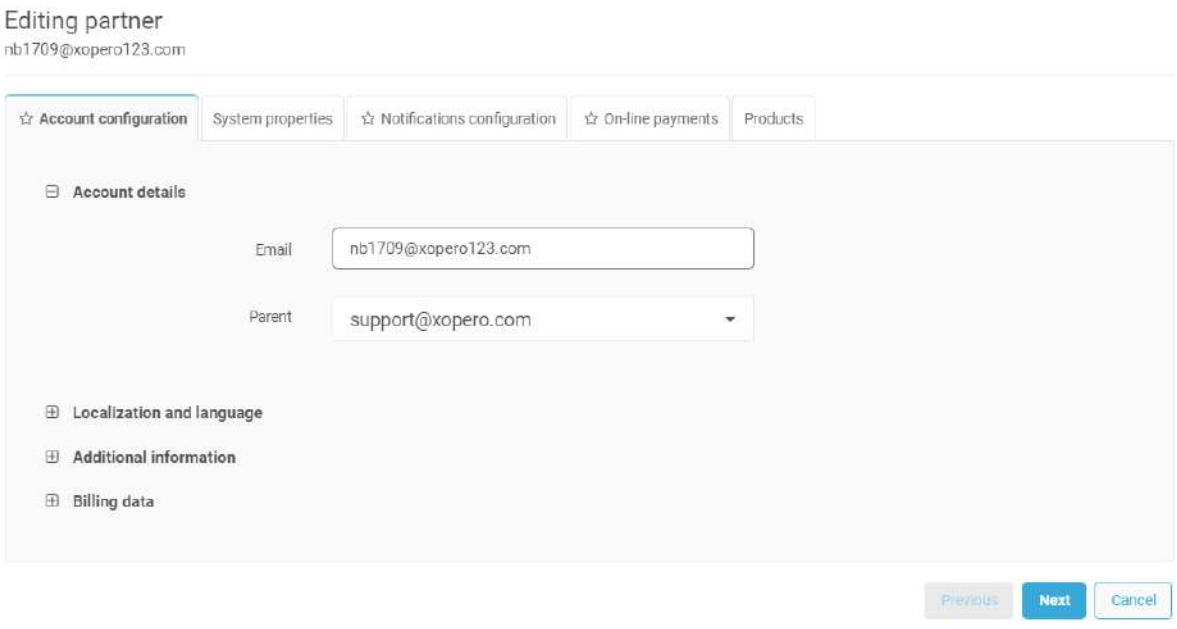


1. The second place where you can go to edit a partner is his dashboard, which can

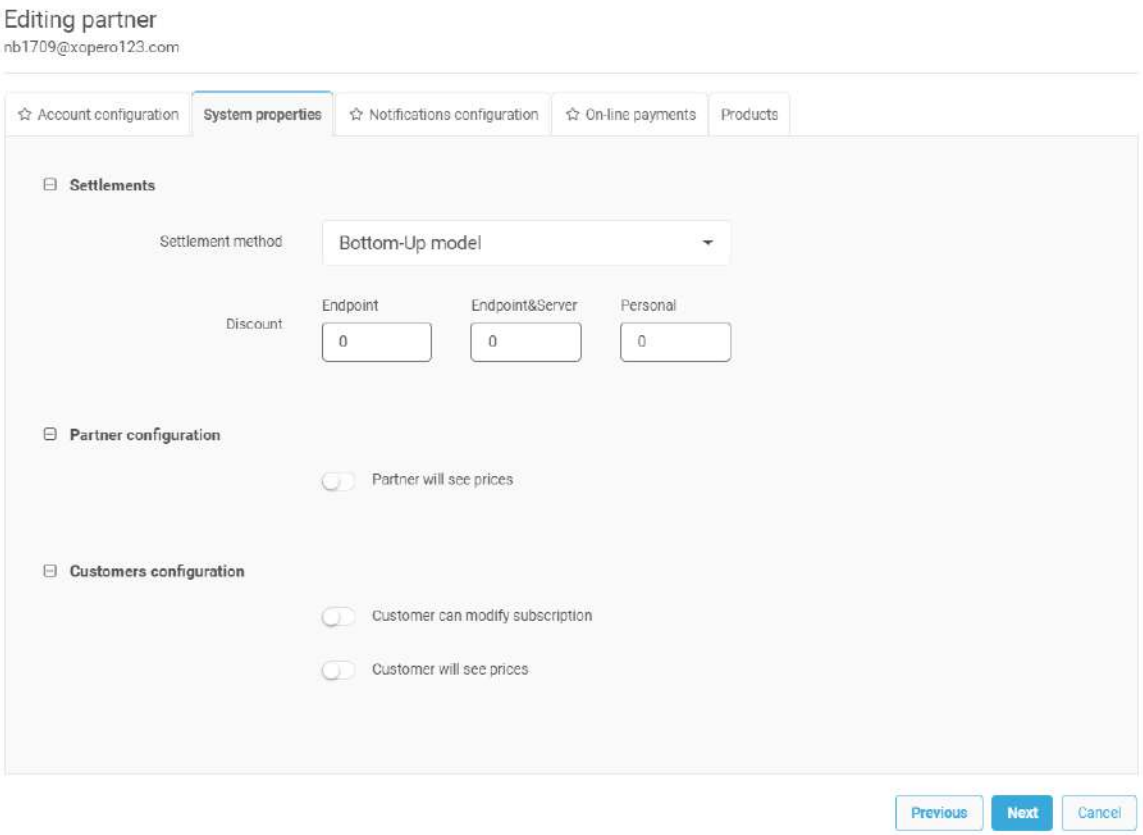


After selecting the editing option, the editing window will be displayed, and there is a possibility to change:

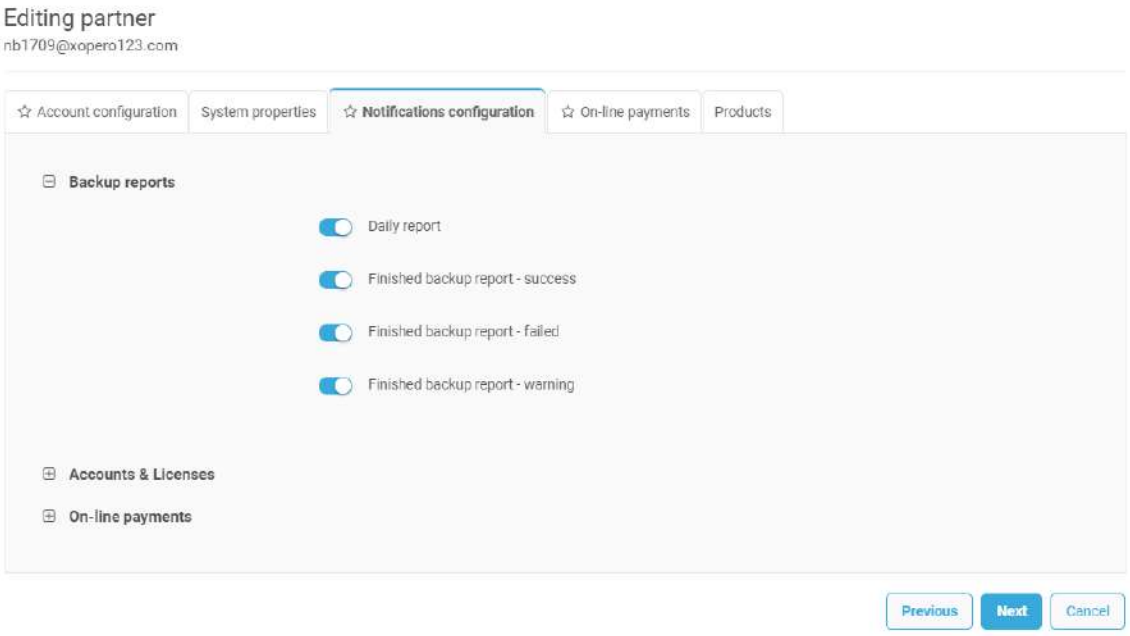
1. In the first tab:
    1. e-mail address,
    2. parent,
    3. localization and language,
    4. billing data.



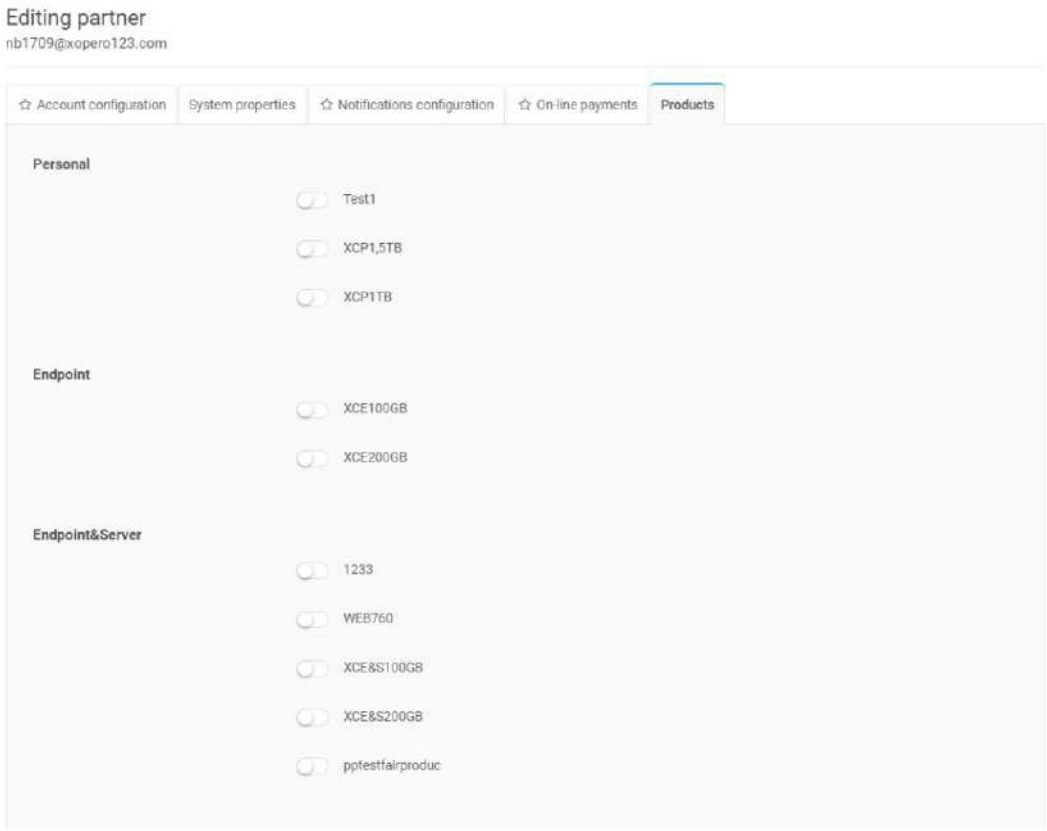
2. In the next tab you can change system properties(visibility of prices for the partner and its customers and allow for modification of the partner's customers).



3. In the third tab you can enable or disable selected e-mail notifications sent by the Xopero system.



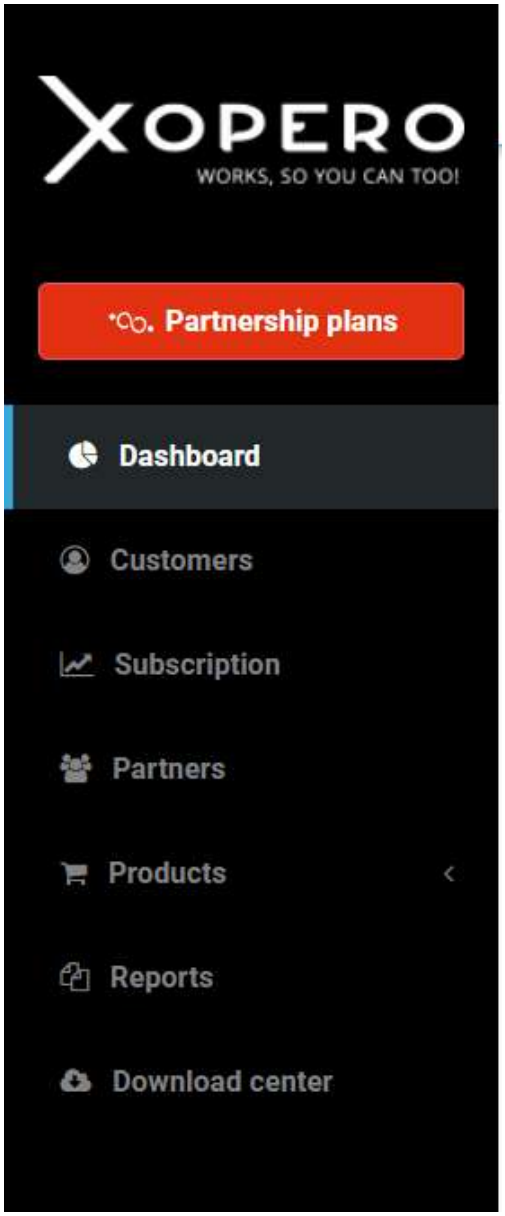
4. In the last one tab there is a possbility to assigned more products or to exclude the possibility of selling some of them.



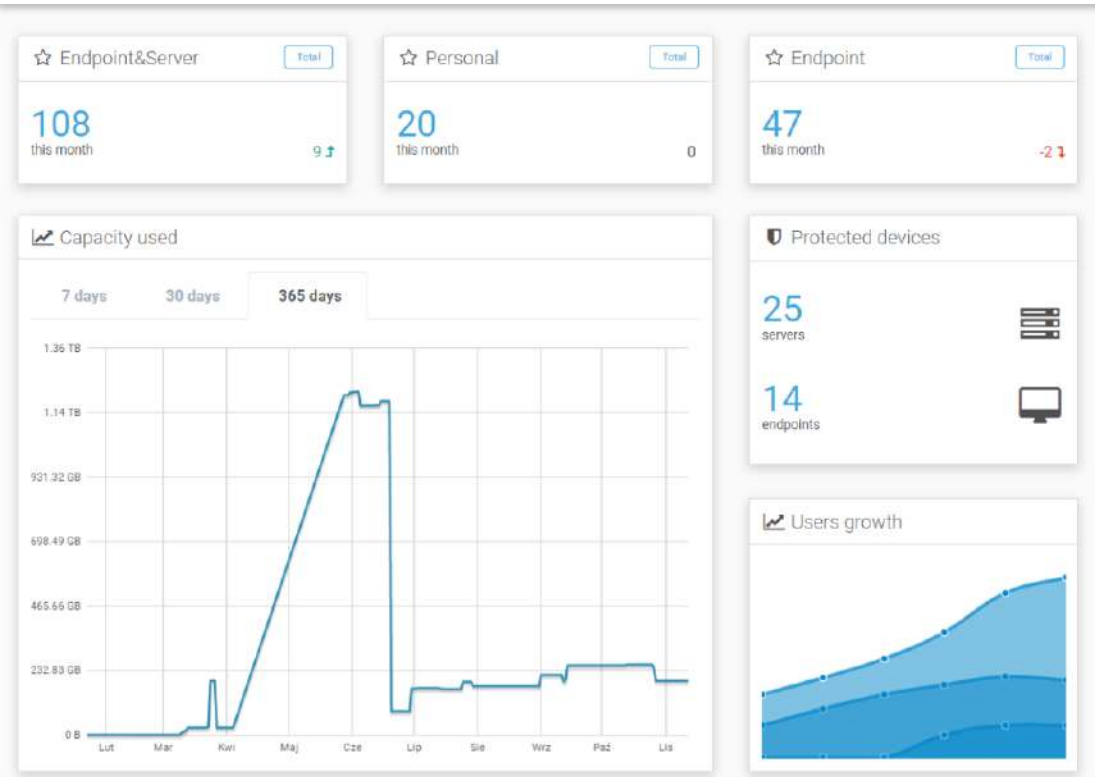
Reseller's dashboard

On the left side you will find menu. One by one:

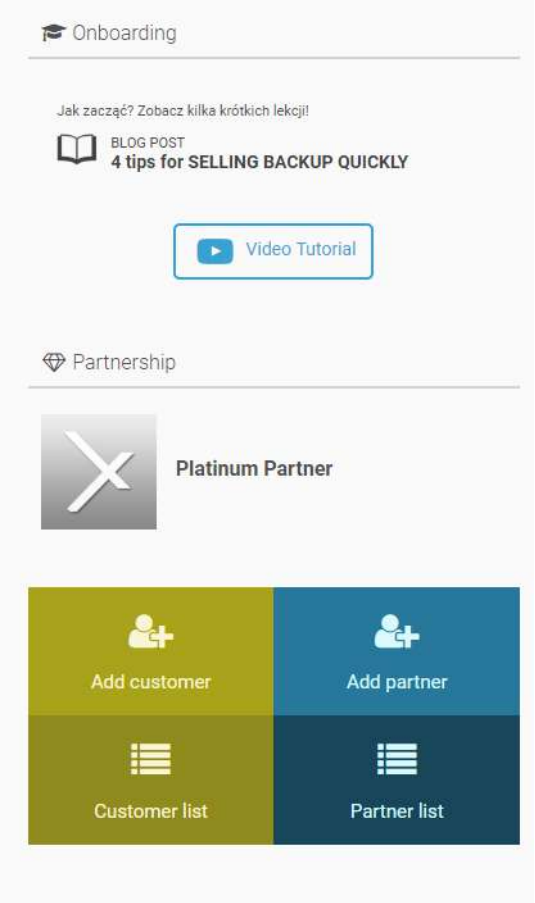
- Partnership plans - this button allows you to go to the Partnership upgrade page,
- Dashboard - main view of the reseller,
- Customers - list of customers,
- Subscriptions - list of subscriptions,
- Partners - resellers list,
- Products - list of available products,
- Reports - you can generate reports here,
- Download Center - all applications are available here.



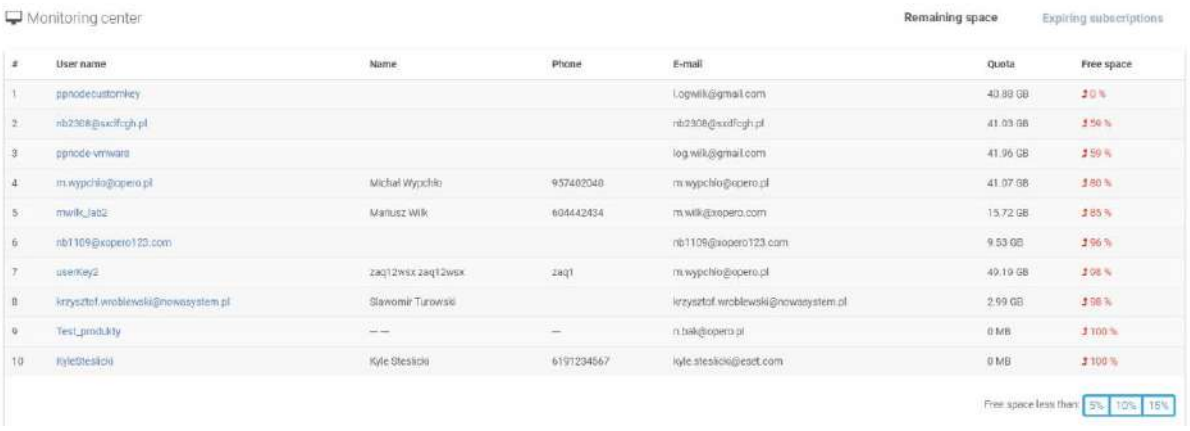
In the central point of the dashboard displays statistics on the growth of specific licenses, users, the amount of used space and the amount of capacity used by customers.



On the right side of the dashbord you will find links to training materials, partnership information, buttons to top up or upgrade your account (in the case of a top up reseller), as well as buttons to add customer and partner and switch to their lists.



At the bottom there is the Monitoring Center, which allows you to monitor accounts that are running out of space or the subscription will expire in the near future in order to react early enough and extend or increase the customer's package.

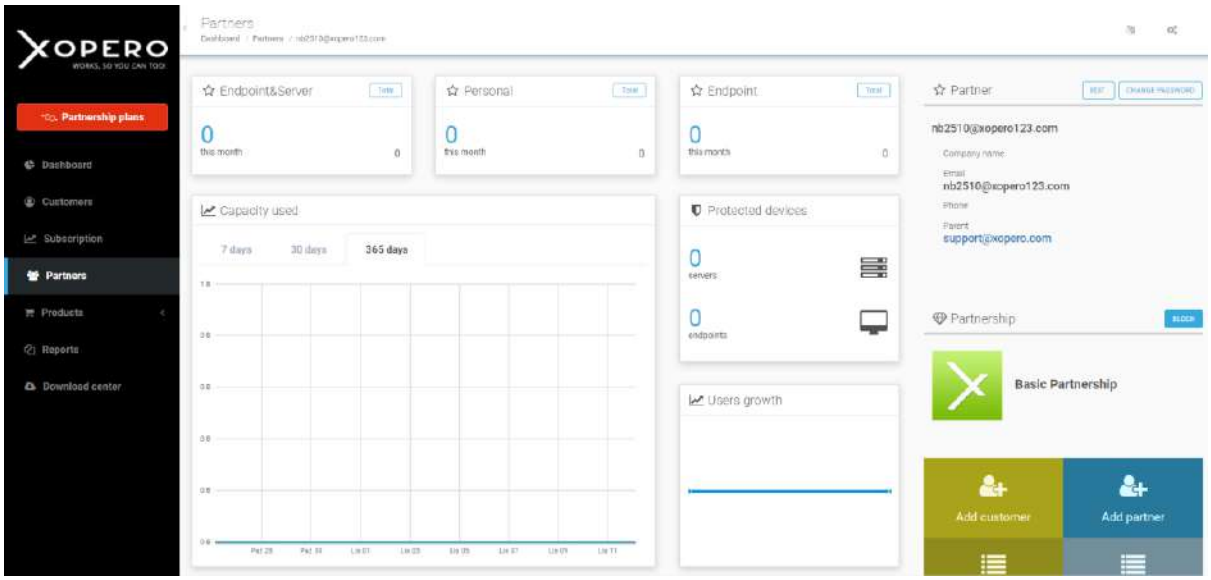


Subreseller's dashboard

The subreseller's dashboard is displayed in two cases:

1. After the created a subreseller, the reseller is redirected to his dashboard.
2. After going to the list of partners you have to click on the email of the selected partner, this will take you to his dashboard.

The subreseller's dashboard doesn't differ much from your dashboard. In the case of a subreseller you can see on the right side the information about the partner (about you) not the OnBoarding section.

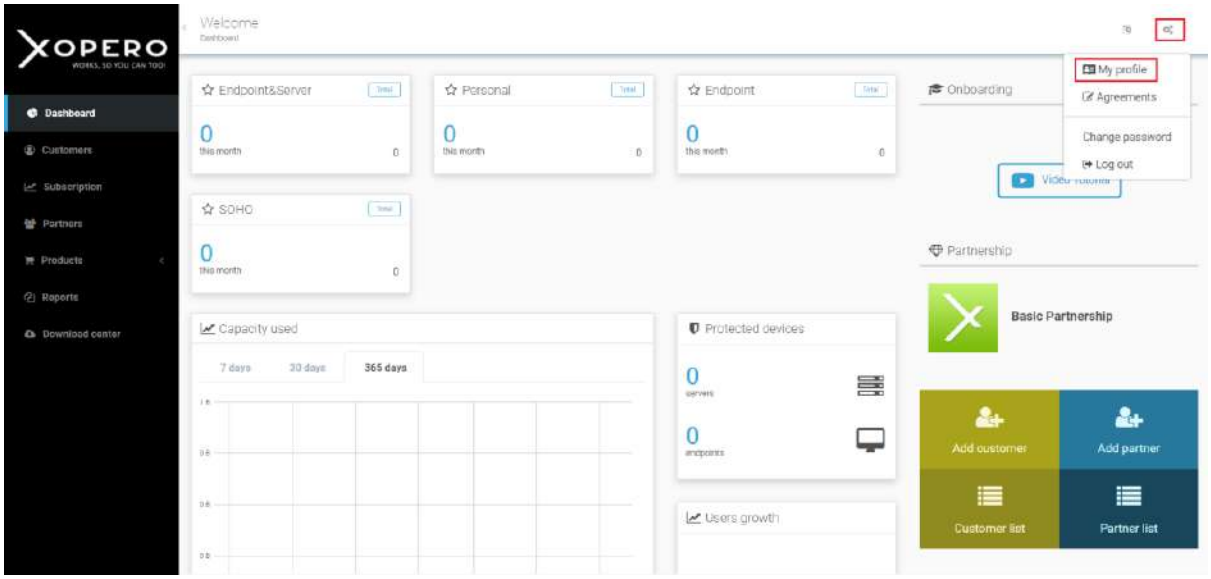


Action buttons (add and redirect to lists) refer to clients and partners of the subreseller whose dashboard is displayed. From here you can add clients or partners for this subreseller.

Own account edit and password change

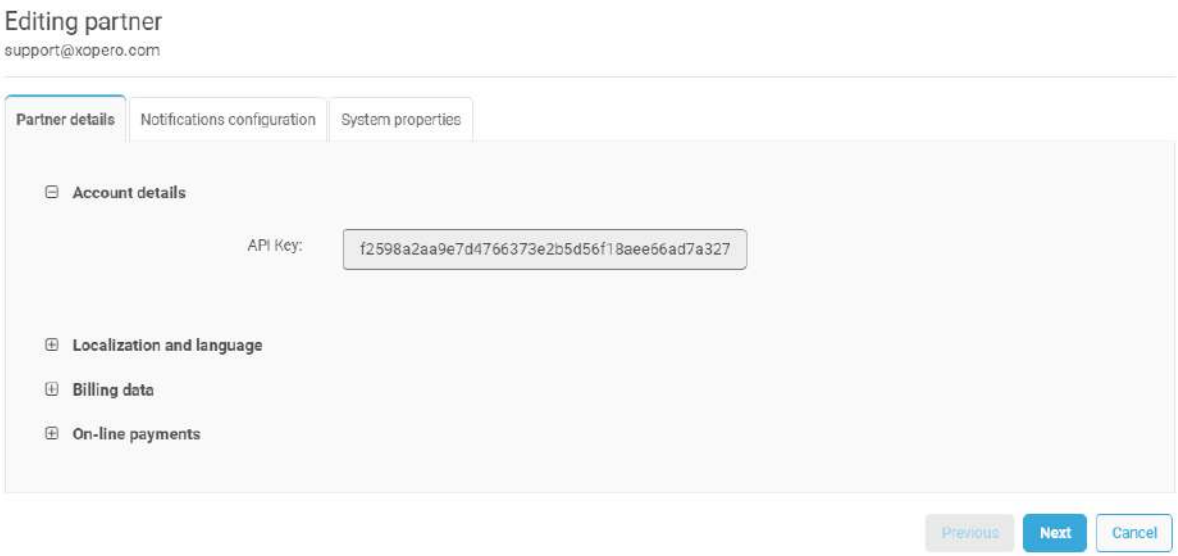
Own account edit

You can edit your own account from the COG at the top right corner of the page.

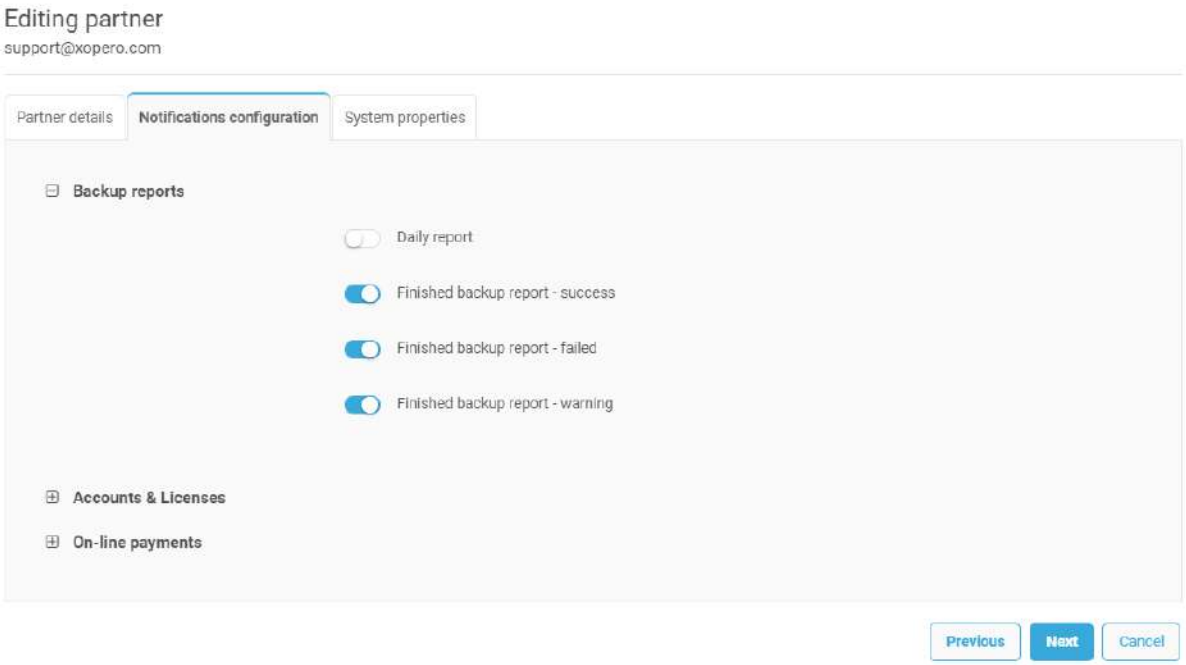


In the custom edition you can change:

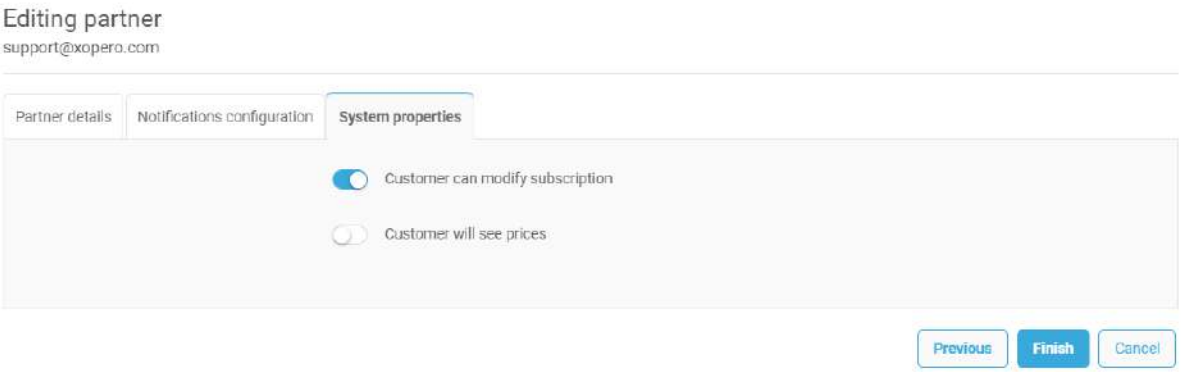
1. Basic information such as time zone, language and billing data.



2. Disable or enable e-mail notifications.

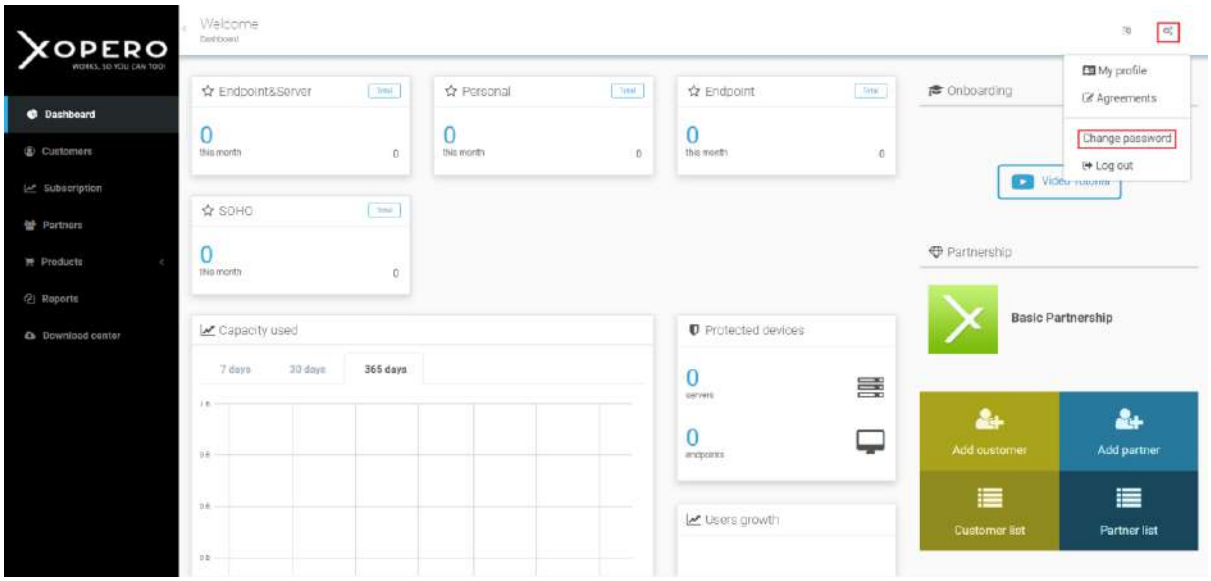


3. Change the system properties regarding the visibility of prices for your customer and the possibility to modify the subscription by him.

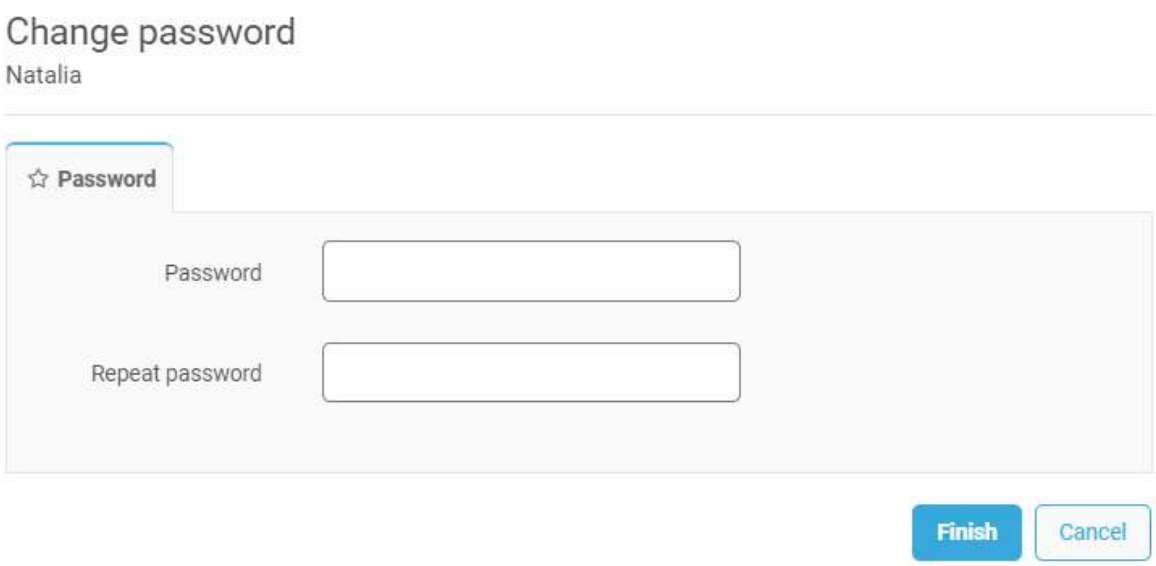


Password change

The password change form can be open using the Change password option in the COG at the top right corner of the page.



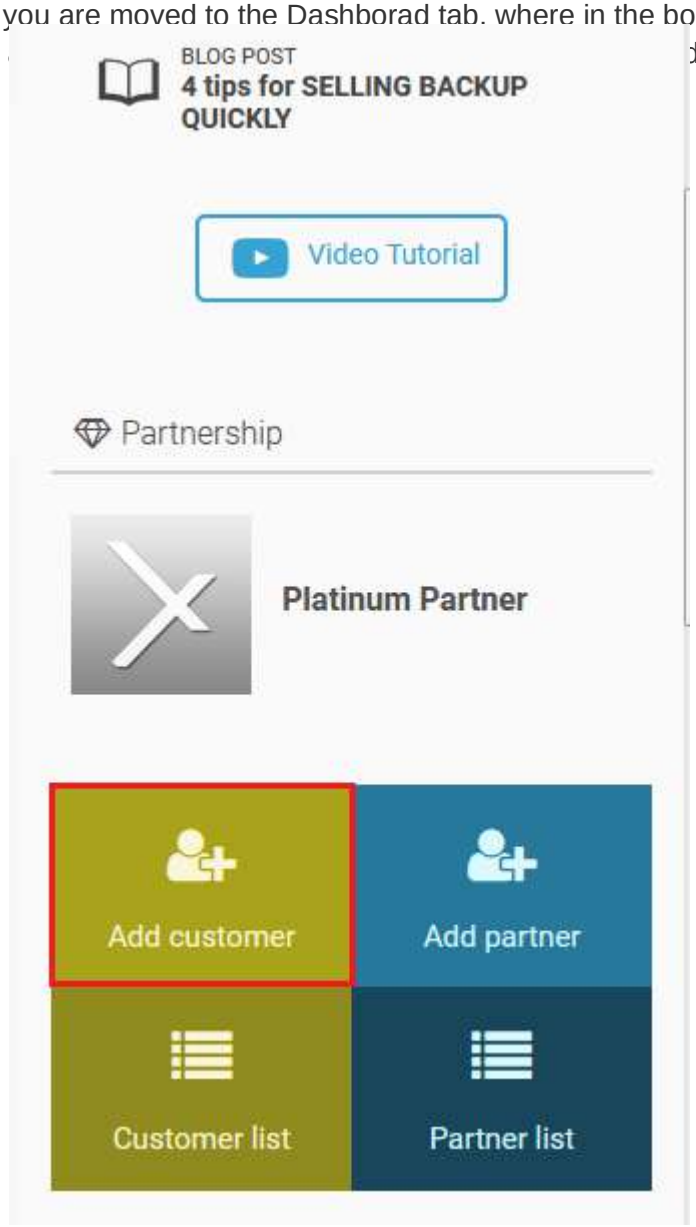
After selecting this option, the password change form will be displayed, there you need to enter and repeat the new password.



Create customer

You can create the customer from two places:

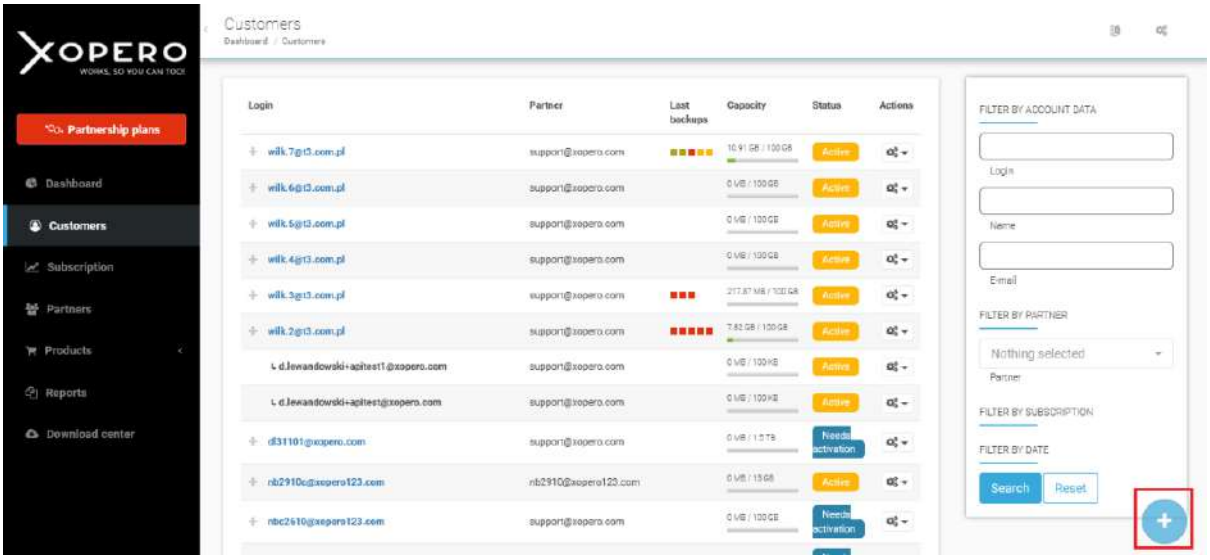
1. After logging in, you are moved to the Dashborad tab, where in the bottom right corner there are d resellers



faster.

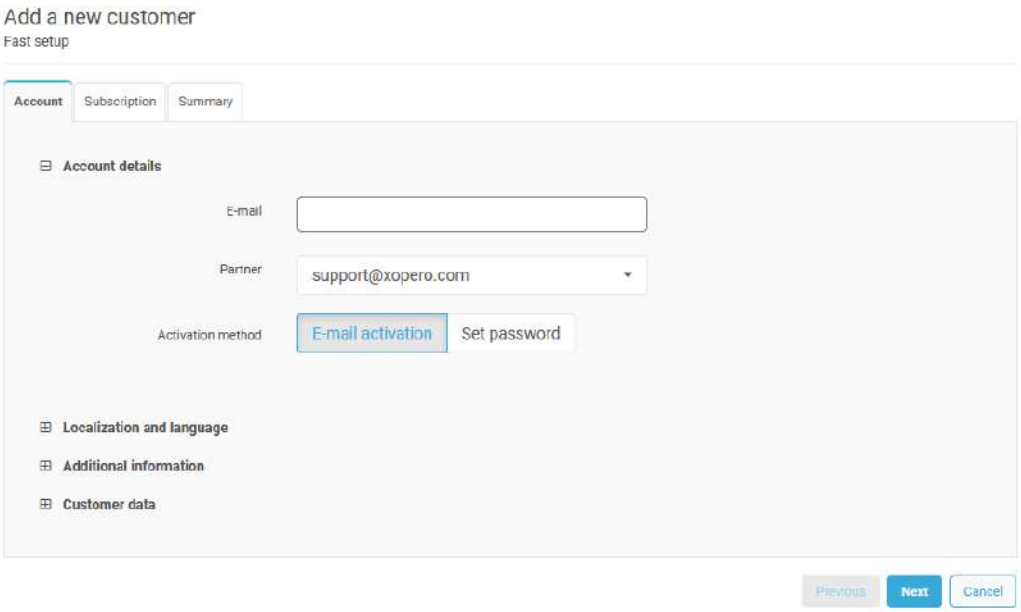
2. The second place where you can create customers is the Customers tab. After going to the Customers tab, in the bottom right corner there is a button for adding

customers.

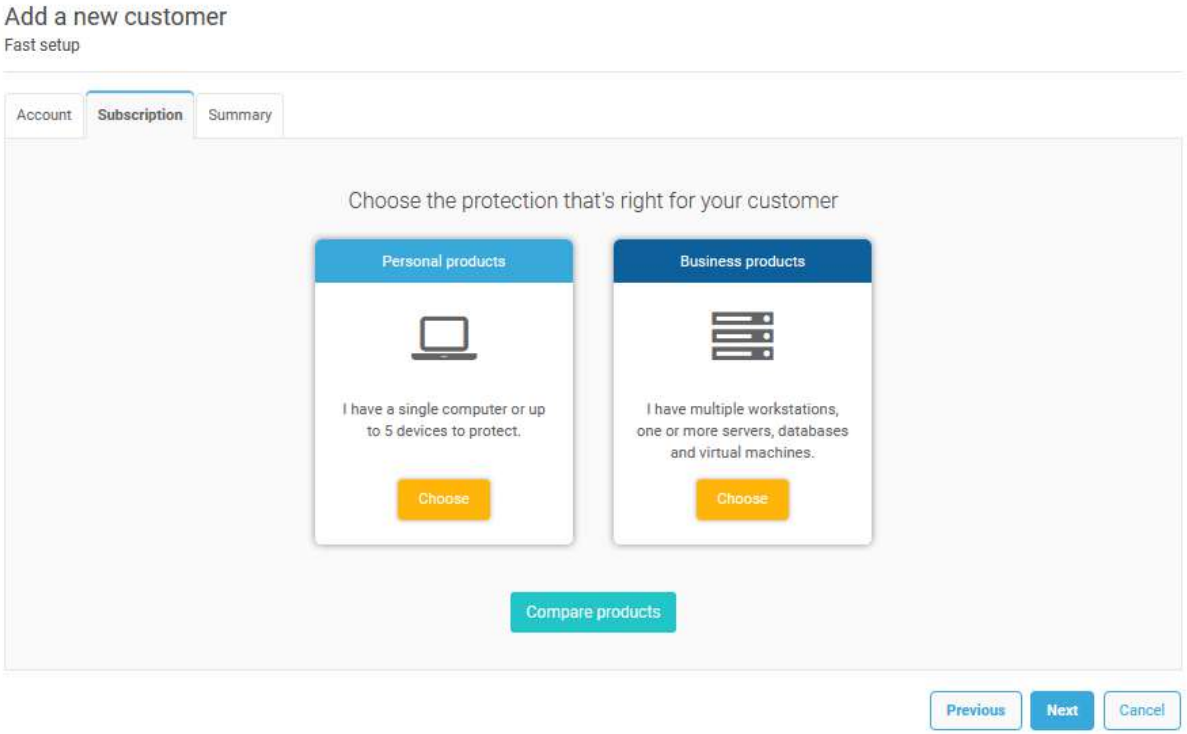


After selecting the add customer option, an addition form will be displayed, where you will have to fill in the form:

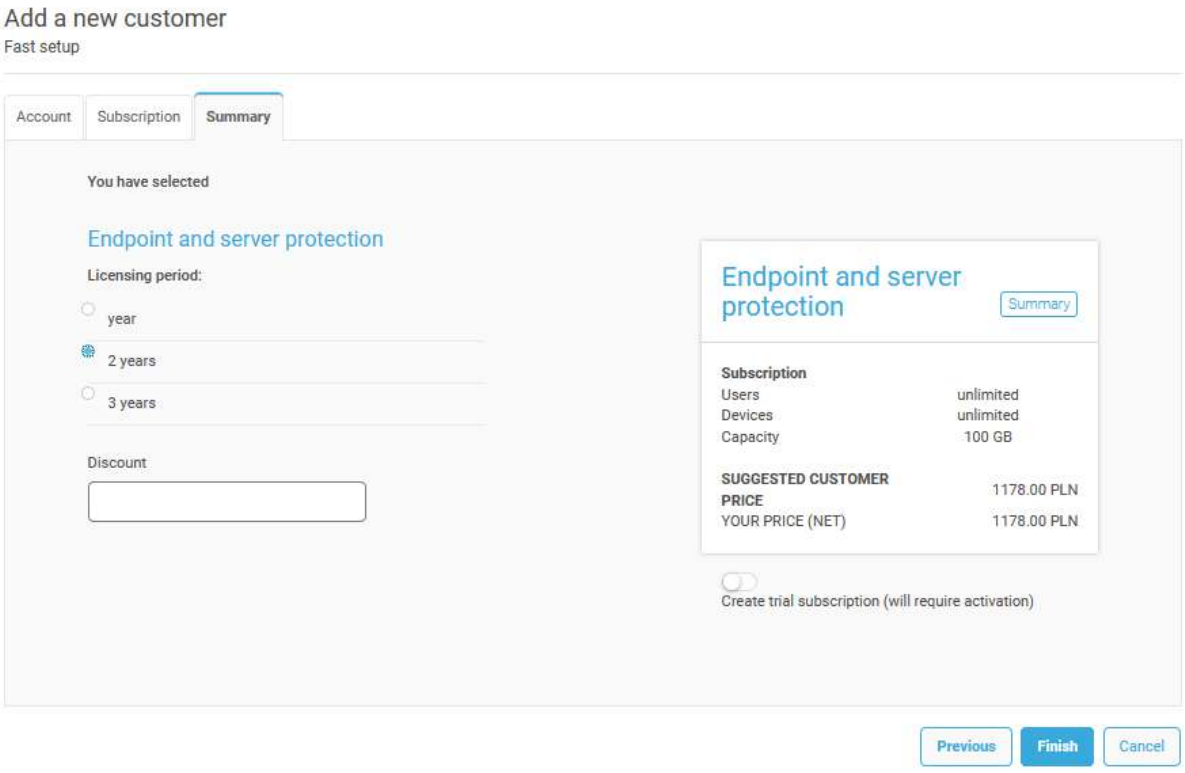
1. In the first step of the customer's email and, if necessary, other data. It also selects how to activate your account:
    1. Email activation - the customer will receive an e-mail with an activation link and will set a password by himself,
    2. Set password - the reseller assigns a password for the customer.



2. In the next step, you will select the product which you had sold to the customer.



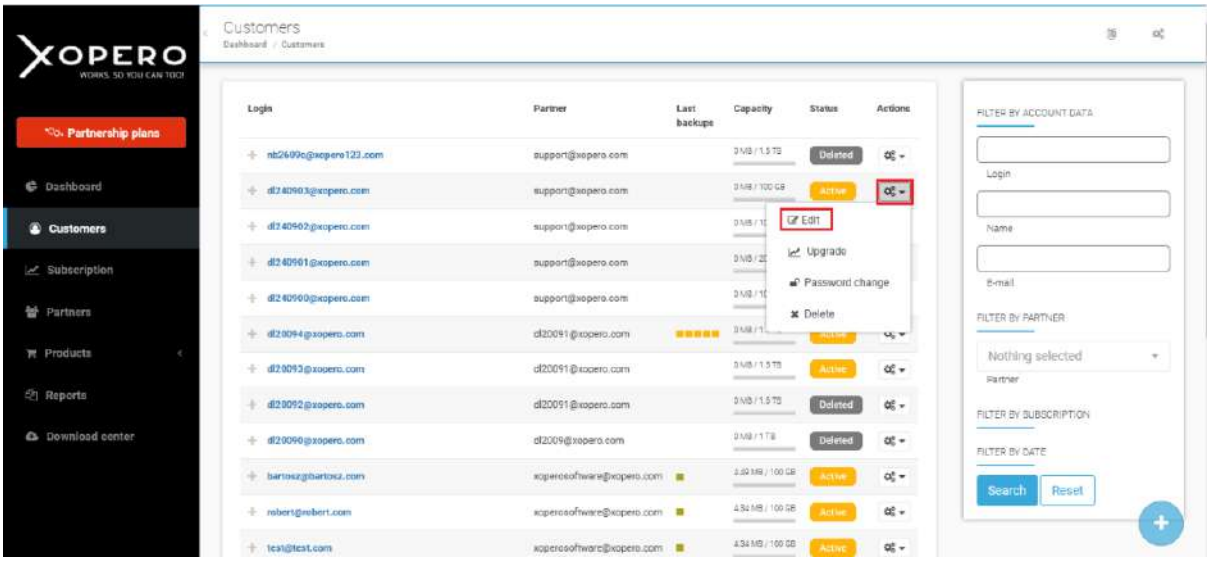
3. In the last step of creating a customer choose the period of time for which customer is buying the subscription. A summary is displaying, and when you click Finish your license is automatically activated. A trial license is created when the reseller doesn't have enough funds to activate (in the case of top up) or after selecting the option below the summary.



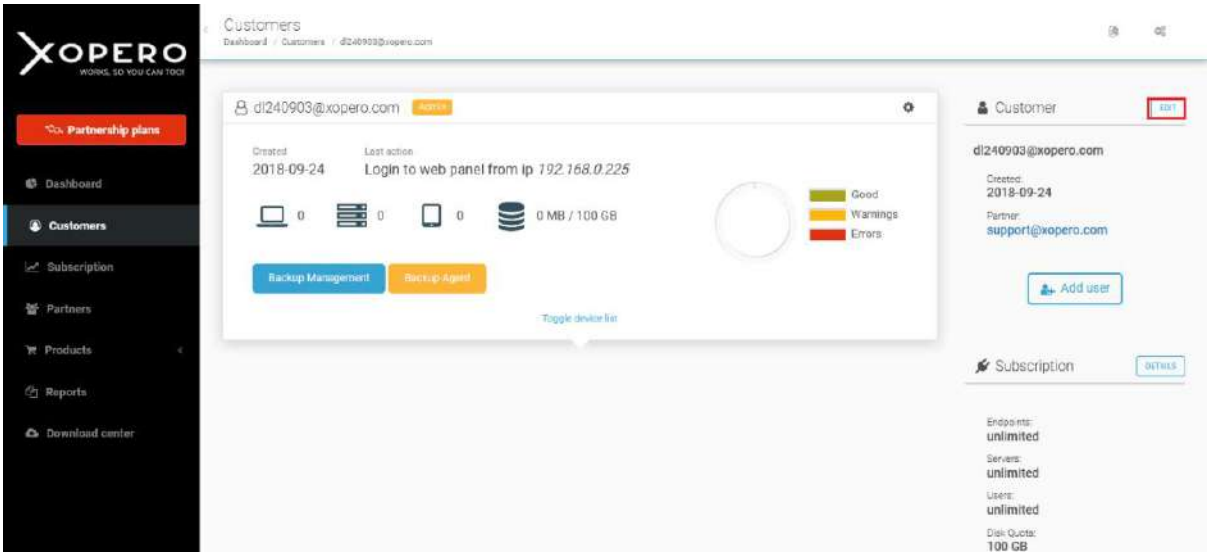
Edit customer

You can edit customer from two places:

1. From customers list you can go to the editing of the selected customer. For the edit customer, select the Edit from COG option.

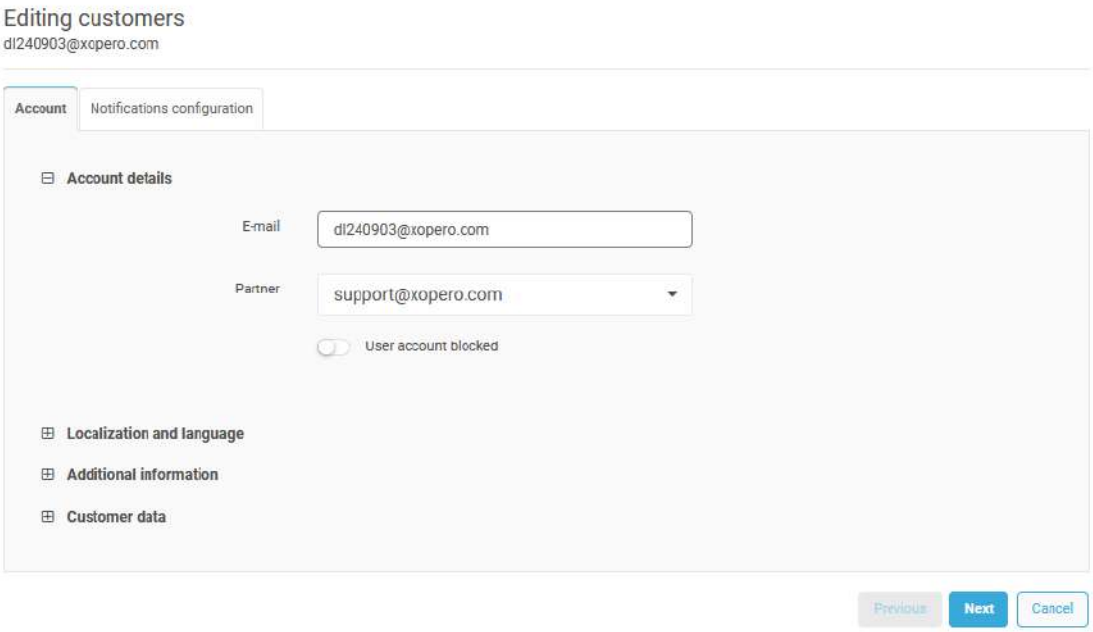


2. The second place where you can go to edit the customer is his dashboard, which can be accessed by clicking on the customer list in the customer's e-mail/login.

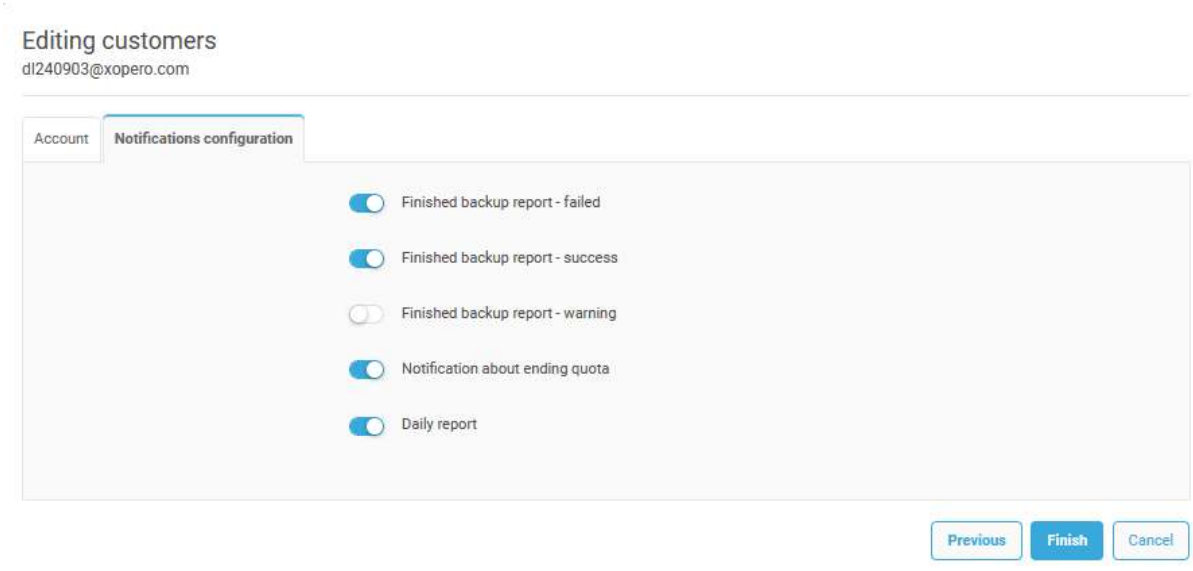


After selected the editing option, the editing window will be displayed, where you will be possible to change:

1. In the first tab:
    1. e-mail address,
    2. parent,
    3. block account,
    4. timezone and language,
    5. add short note,
    6. customer personal data.



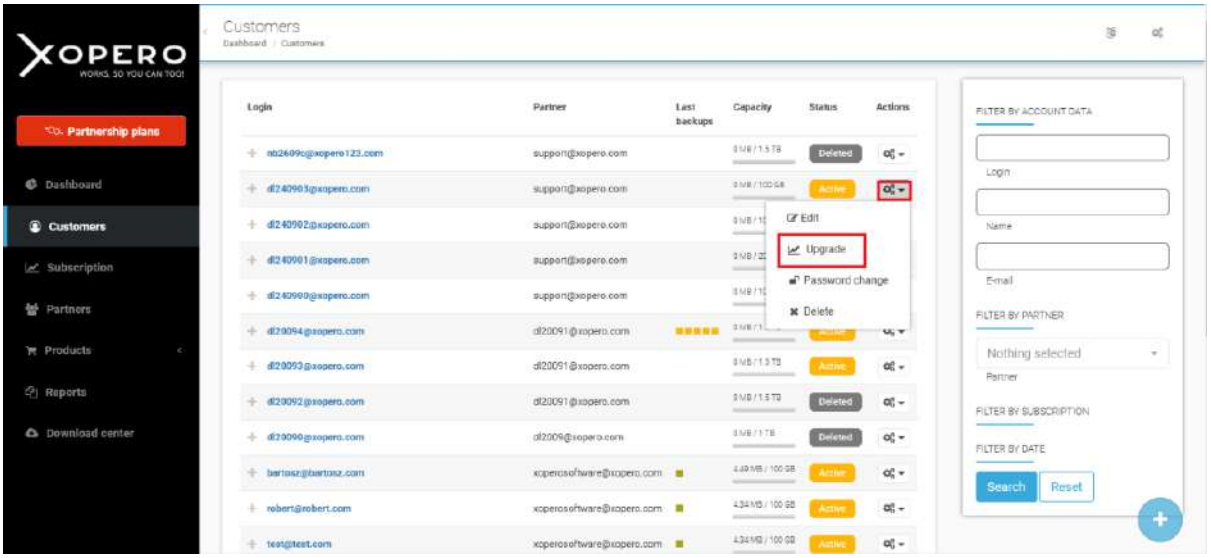
2. In the next tab you can disable and enable e-mail notifications.



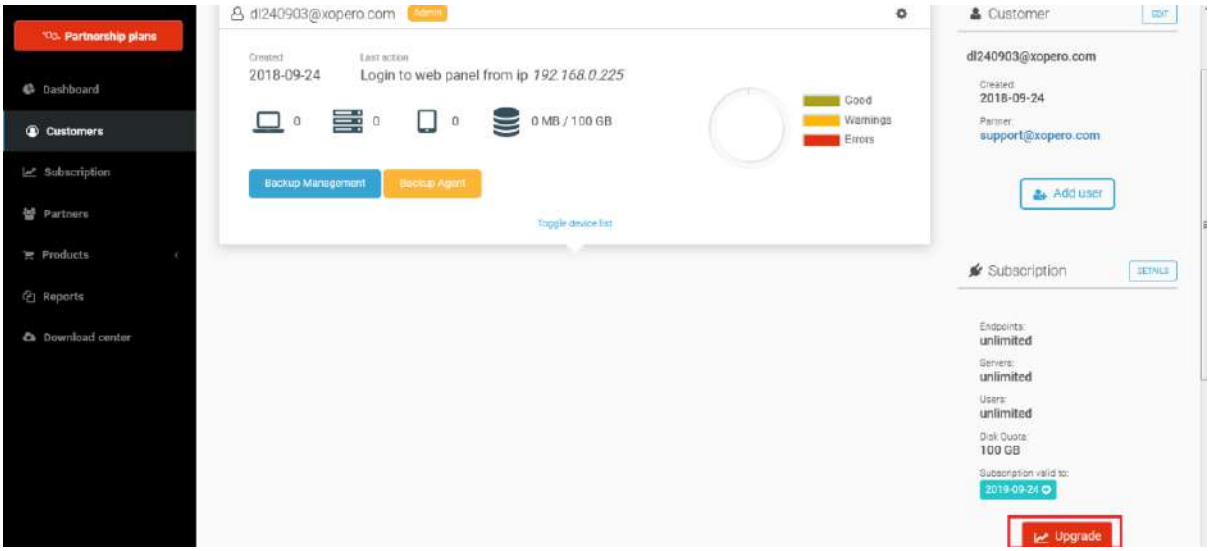
Subscription extension and renewal

You can extend your subscription from two places:

1. After going to the customer list for the selected customer, expand the options in the COG and select Upgrade.

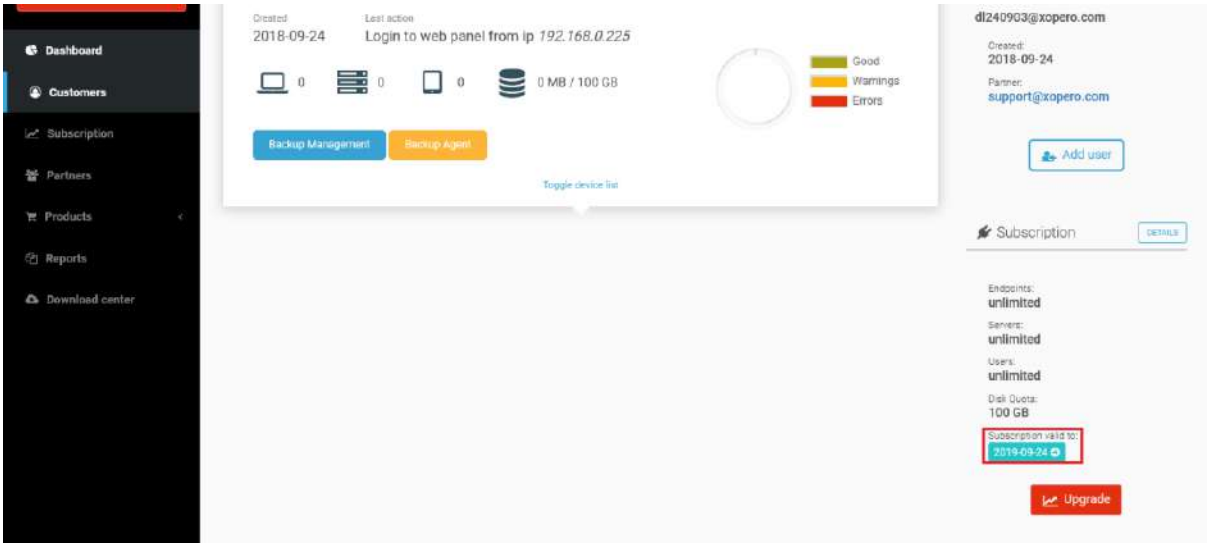


2. In the customers list click on the e-mail/customer login, after loading the customer dashboard go to the Subscription section on the right side click on the Upgrade button.



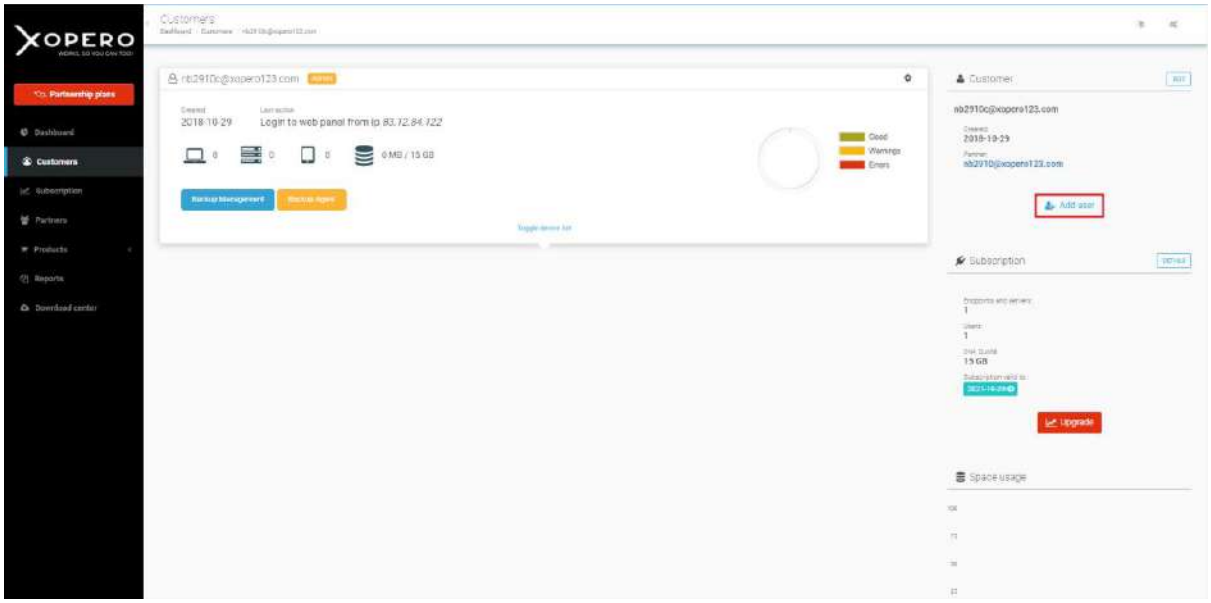
Subscription renew can only be done from one place:

1. In the customers list click on the customer's e-mail/login, after loading the customer's dashboard go to the Subscription section on the right side click on the license expiration date (when the license is inactive, this button is used to activate the license).



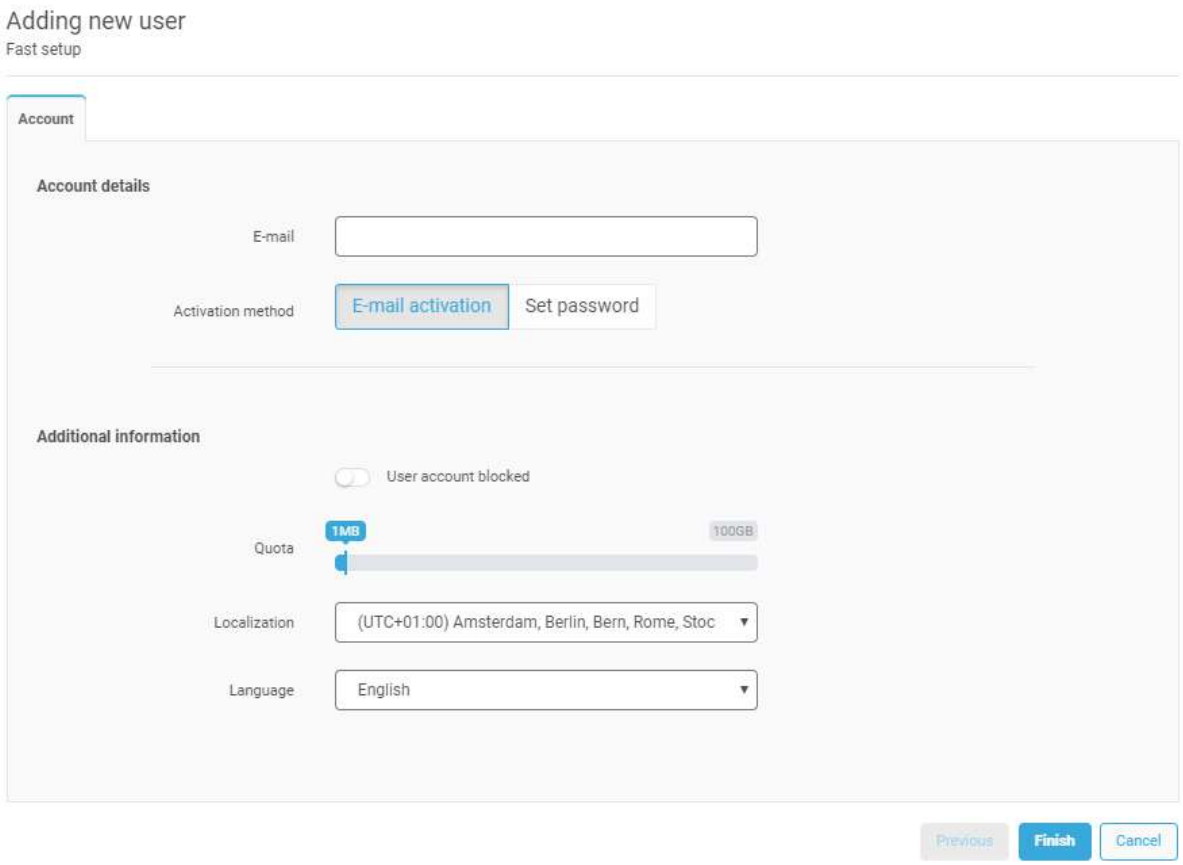
Add user

You can add users only from customer dashboard.



After clicking the Add User button, a form will be displayed and there you will fill:

1. Enter e-mail address,
2. select the activation method:
    1. E-mail - the user receives an e-mail with a link to activate the account, gives himself a password,
    2. Set password - reseller sets a password for the user.
3. reseller using the switch, selects whether the account should be blocked after its creation (by default is not),
4. use the slider to assign the amount of space for the user account,
5. choose a timezone and language.

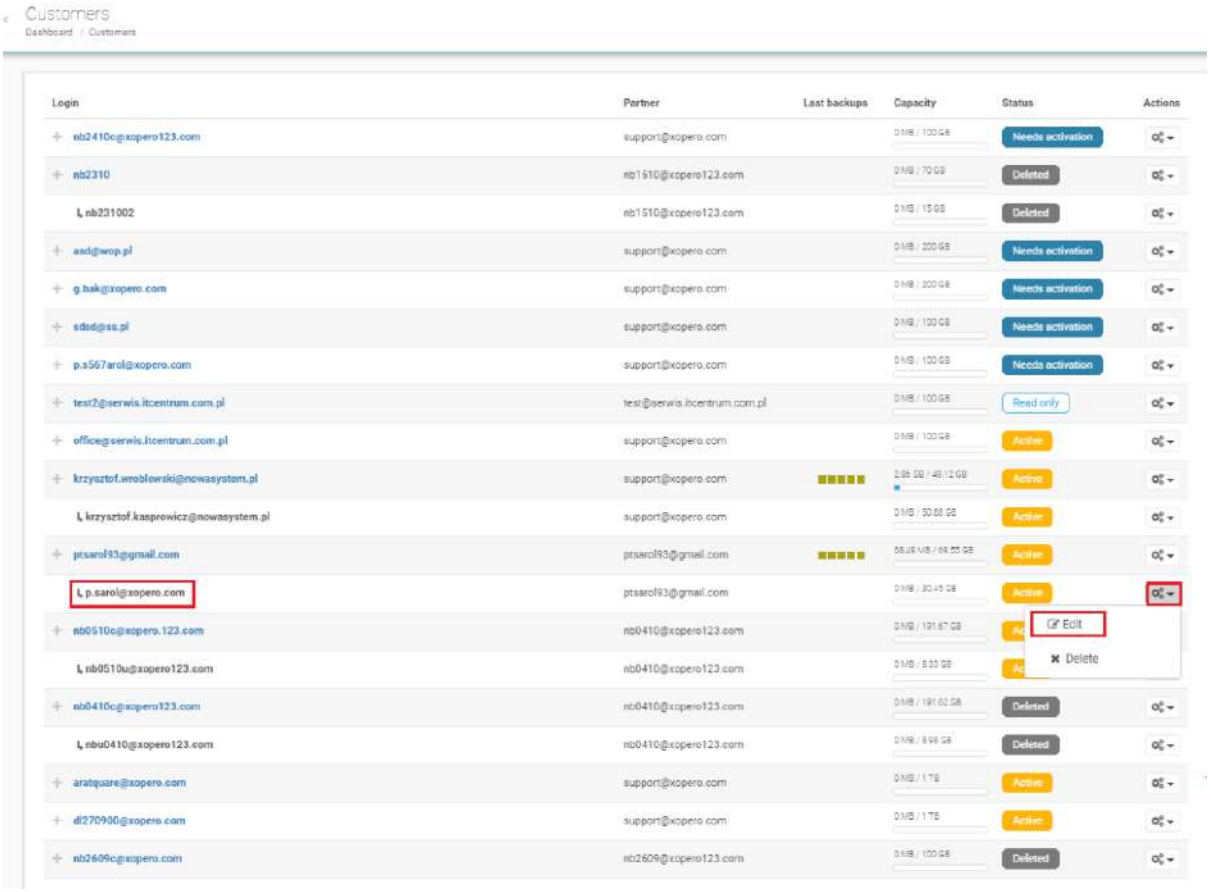


Edit user

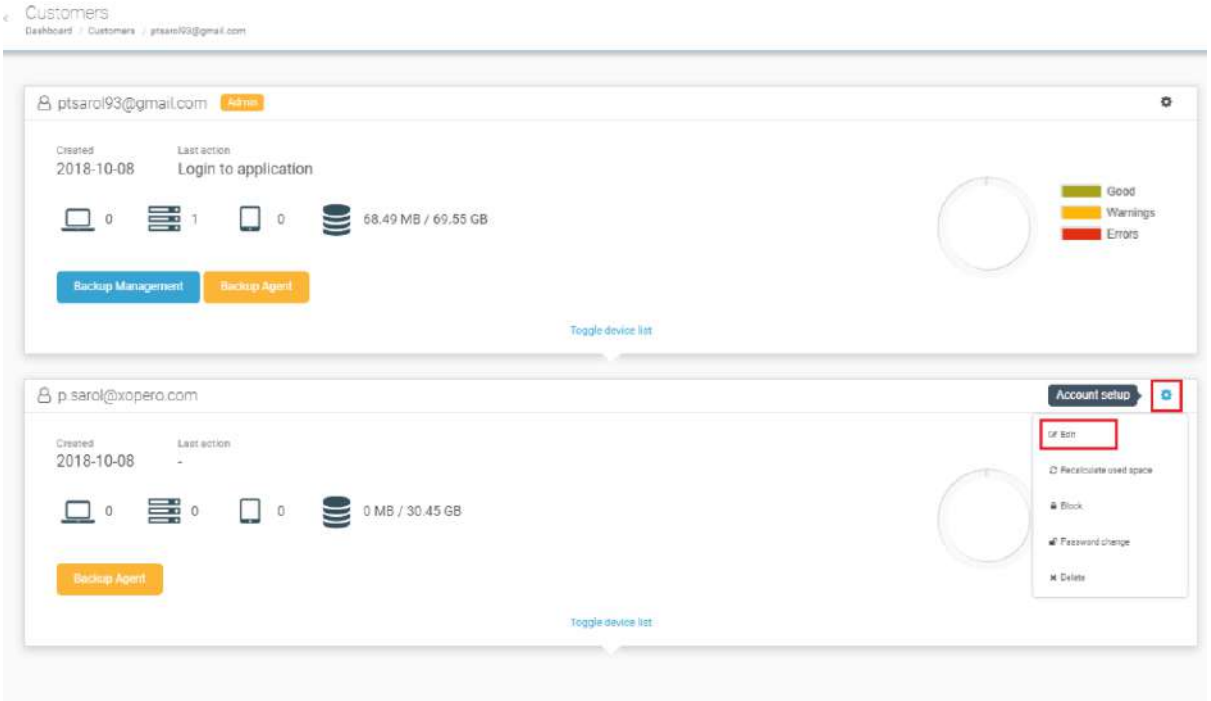
Users list is visable on customers list and customer dashboard.

You can edit the users from two places:

1. You can go directly from the customers list to the edition of the selected user.

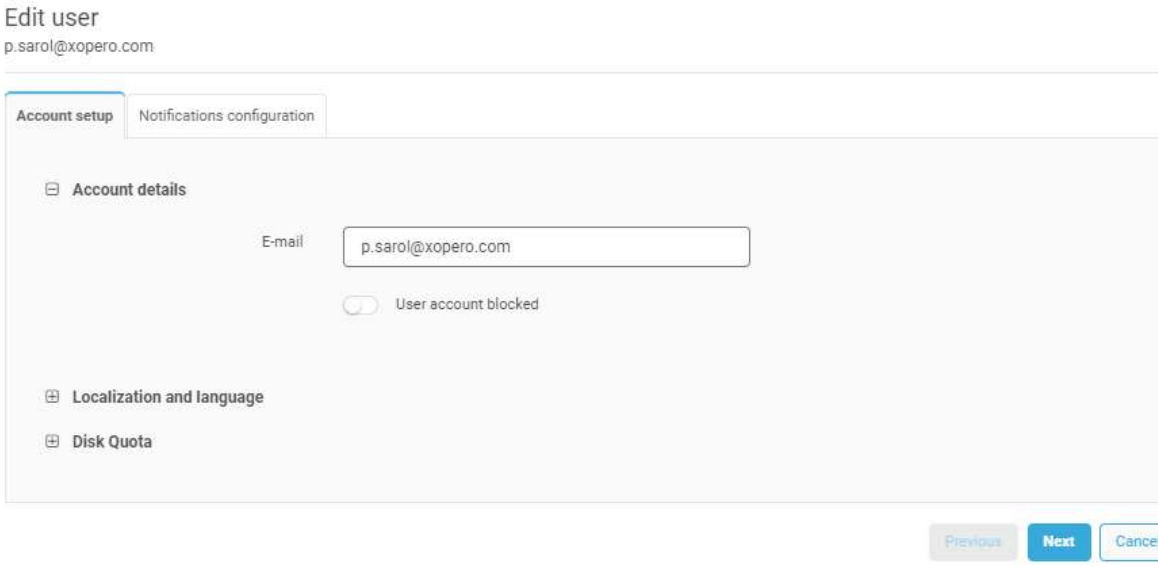


2. The second place where you can go to edit the user is the customer dashboard, which can be accessed by clicking on the customer e-mail/login.

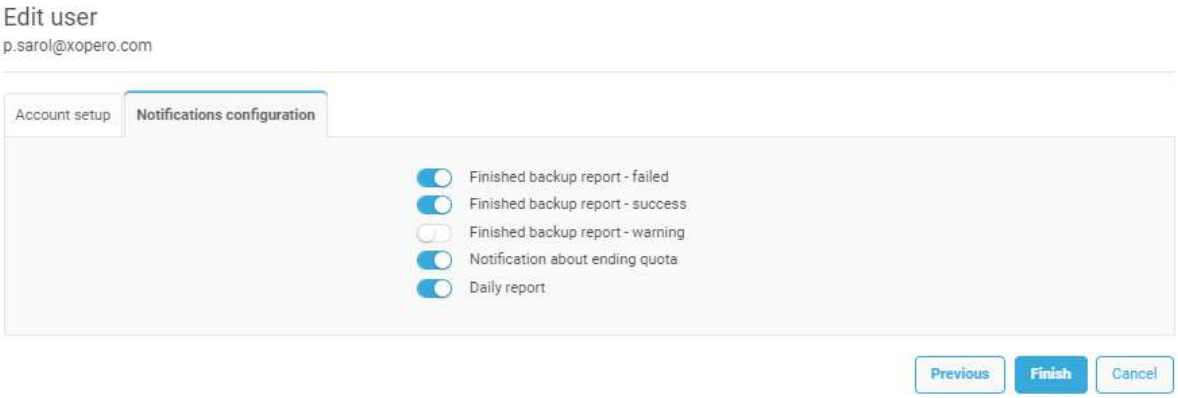


After select the edit option, the edit window will be displayed, where it is possible to change:

1. In the first tab:
    1. E-mail address,
    2. block account,
    3. timezone and language,
    4. amount of assigned space.

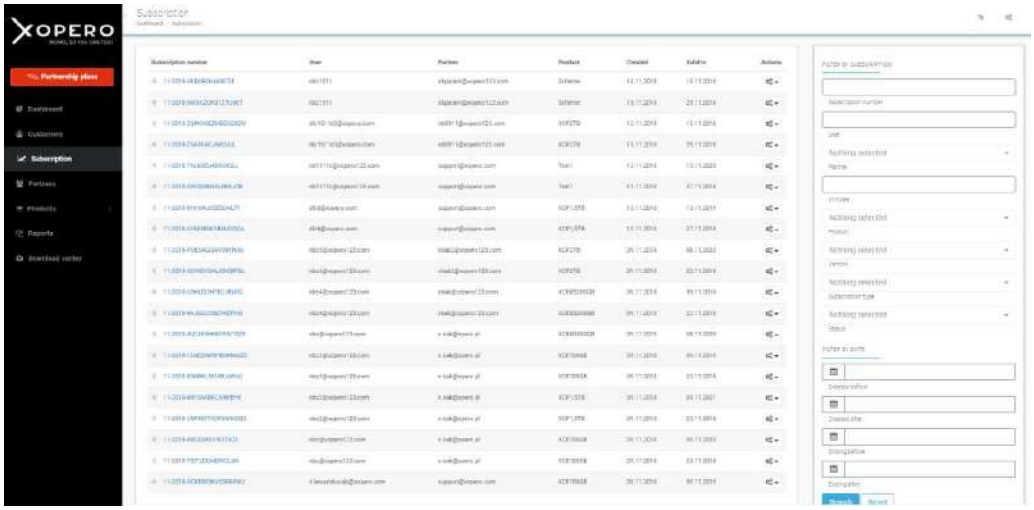


2. In the next tab it is possible to disable and enable e-mail notifications.

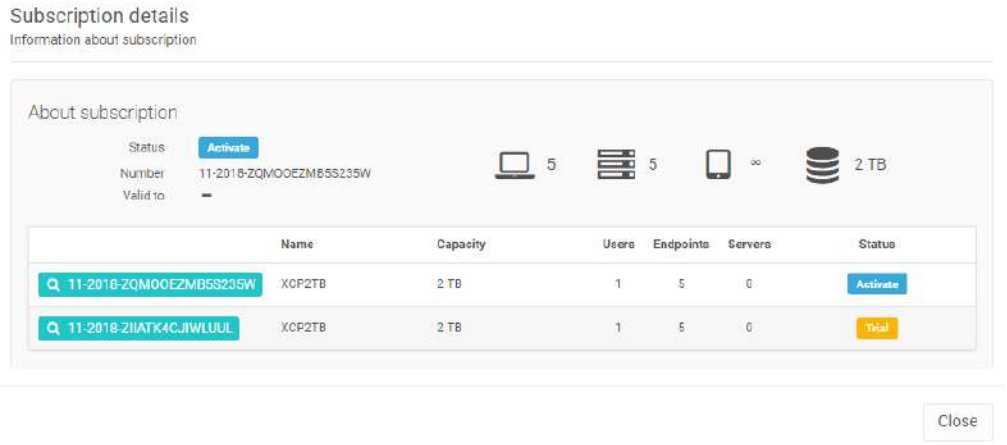


Subscription tab

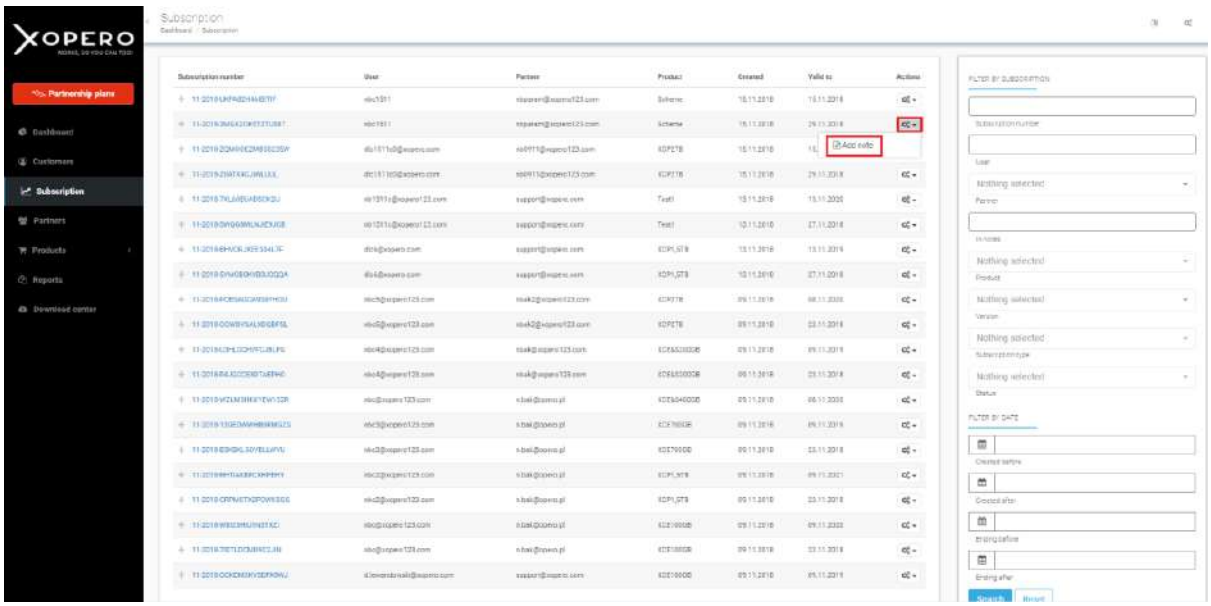
In this tab you will find all your customer subscriptions. There will also be subscriptions that have already expired.



In this tab you can check the details of subscription by clicking on its number.



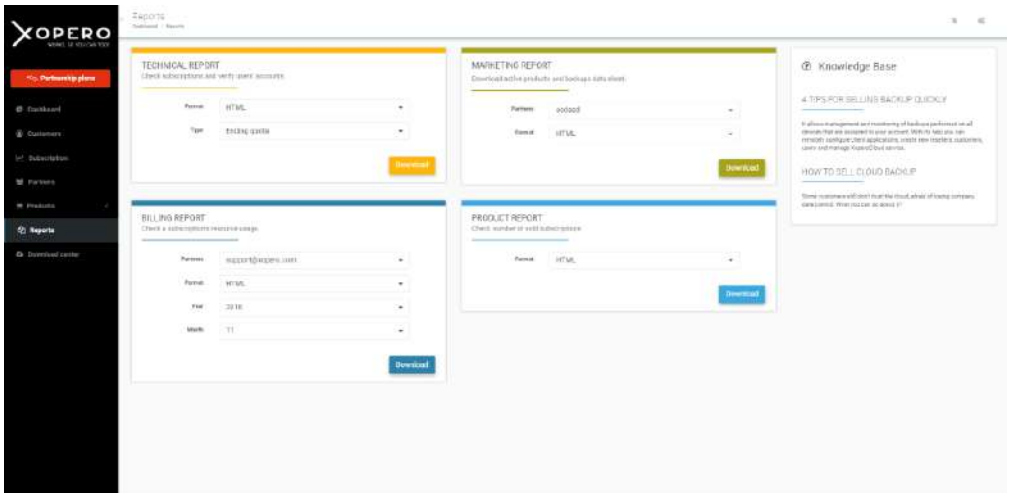
The only action you can perform in this tab is to add a note to subscription.



Reports

In this tab a you can generate sales reports for your or yours sub-resellers. You can generate 4 types of reports:

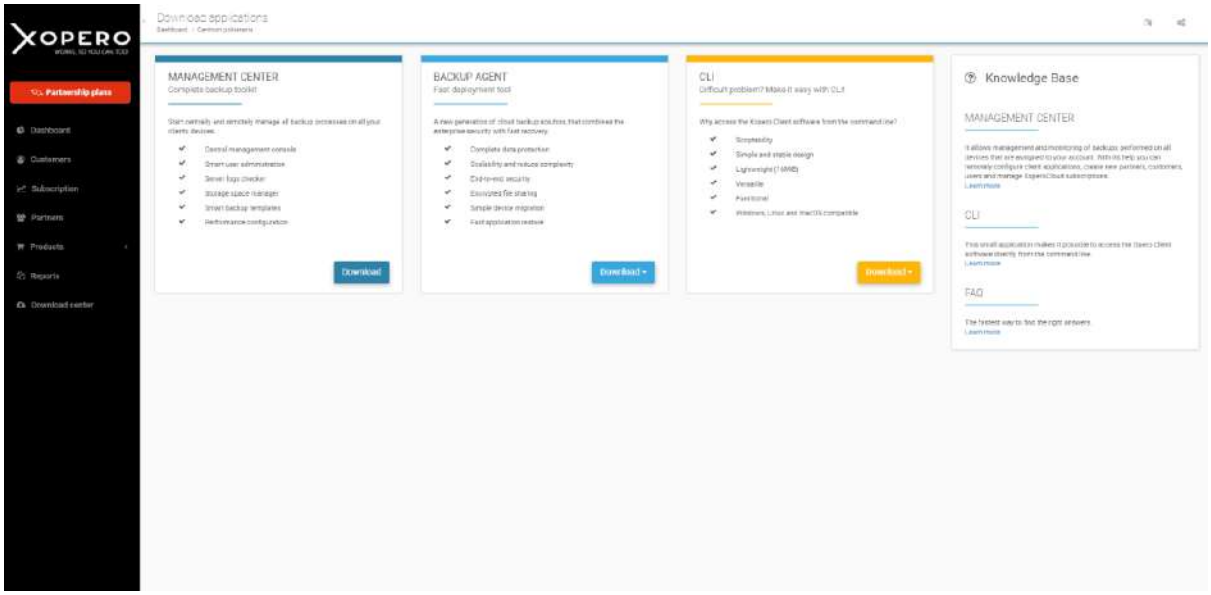
- Technical report - with technical reports you can check which users are out of the space, the subscription expires or the grace period ends. You can also check which users have been inactive in the last 3 months.
- Marketing reports - allows you to check which users and their subscriptions were created by the selected reseller
- Billing report - allows you to check the use of resources against the subscription.
- Product report - allows you to check the number of products sold.



Download Center

In the download center you can download Xopero applications:

- Management Cenetr - an application that allows you to remotely manage the backups of your customers and their users,
- Backup agent - an application that allows you to perform backups on Windows Vista and newer systems (including servers),
- CLI - application that allows you to perform file backup on systems which supports JAVE from 1.5 upwards.



Filters

Filters are available in tabs below:

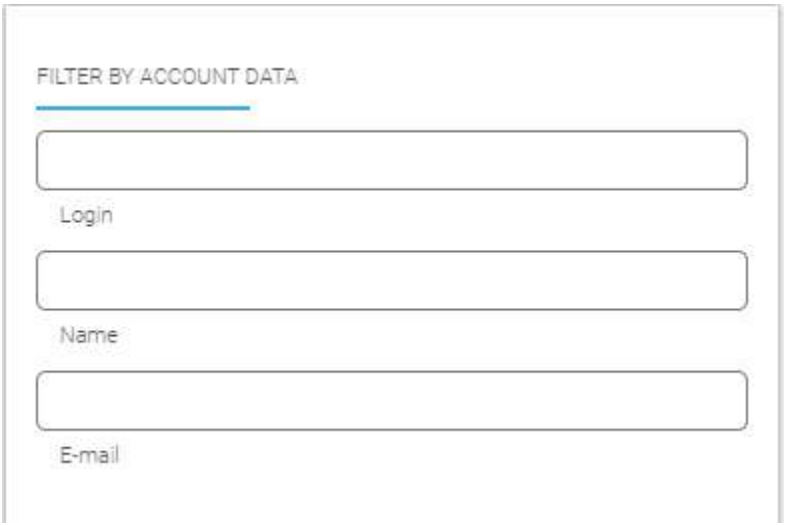
- Customers,
- Subscriptions,
- Partners,
- Products.

Filters are used to select and display data about chosen parameters.

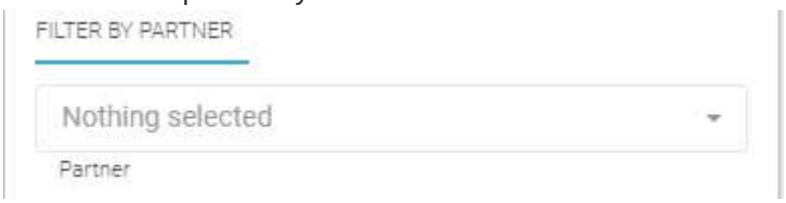
Customer filter

Customer filter allows you to filter the list of customers and find those with interesting you parameters. The customer filter provides many filtering options:

1. Filter by account data:
    - Login,
    - Name,
    - E-mail,



2. Filter by partner:
    - Partner - reseller has a possibility to search for customers of their sub-resellers,

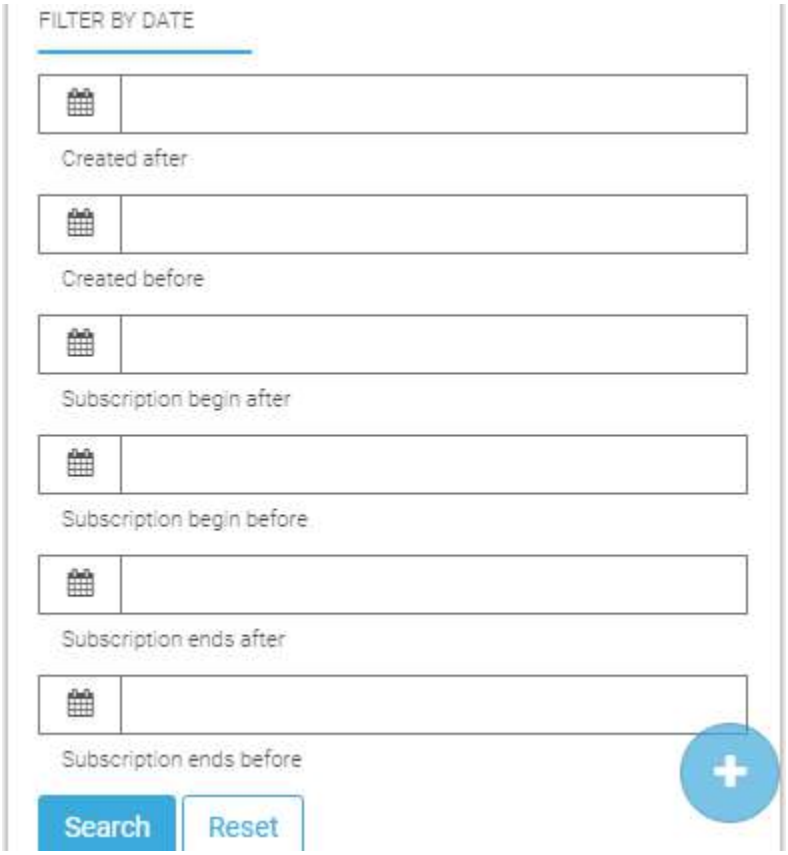


3. Filter by subscription:
    - Ending in:
        - one month,
        - quarter,
        - half of year,
    - Free space less than:
        - 5%
        - 10%
        - 15%
    - Licence version:
        - Endpoint&Server,
        - Endpoint,

- Personal,

4. Filter by date:
    - Created after - searches for accounts that were created after a given date,
    - Created before - searches for accounts that were created before a given date,
    - Subscription begin after - searches for accounts whose subscription started after a given date,
    - Subscription begin before - searches for accounts whose subscription started before a given date,
    - Subscription ends after - searches for accounts whose subscription ends after a given date,

- Subscription ends before - searches for accounts whose subscription ends before a given date.

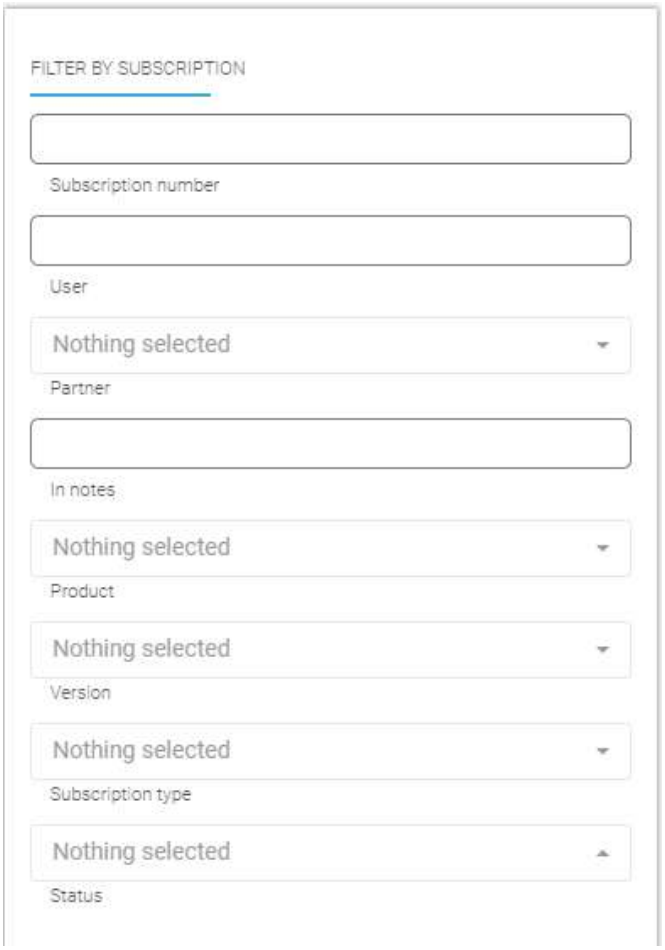


Subscription filter

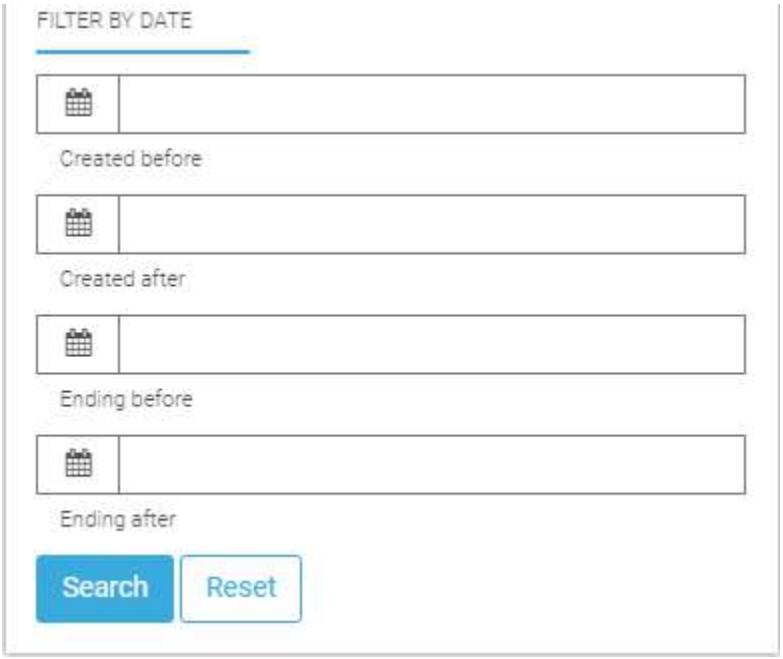
Subscription filter allows you to filter the list of subscriptions and find those with interesting you parameters. The subscription filter provides many filtering options:

1. Filter by subscription:

    - Subscription number - the number assigned after the create subscription,
- User - the customer to whom the subscription is assigned,
- Partner - the partner who created the subscription,
- In notes - searches if the specified sequence of characters is in the note added to the subscription,
- Product - allows you to filter the list by a selected product (e.g. XCE100B),
- Version - in this filter you can define if you are looking for applications with Freemium, Trial or Full status,
- Subscription type - allows you to search for subscriptions which have a type:
- Status - allows you to search for subscriptions that are:
    - creation,
    - upgrade,
    - extension,
    - upgrade and extension,
    - awaiting,
    - current,
    - cancelled,
    - expired,
    - deleted,



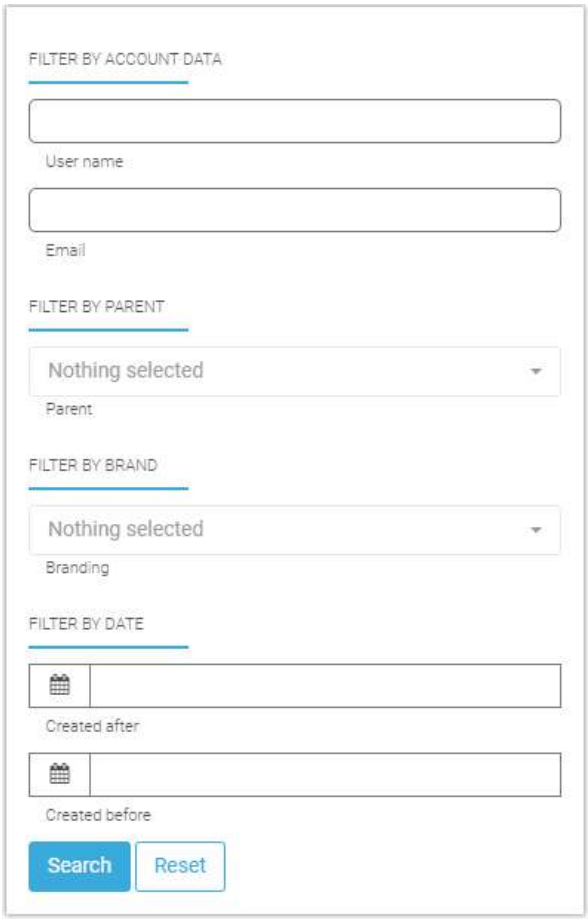
2. Filter by date:
    - Created before - searches for and displays subscriptions created before a given date,
    - Created after - searches for and displays subscriptions created after a given date,
    - Ending before - searches for and displays subscriptions ending before the given date,
    - Ending after - searches for and displays subscriptions ending after the given date,



Partner filter

The Partner filter allows you to filter the list of partners and find those with interesting you parameters. The partner filter provides many filtering possibilities:

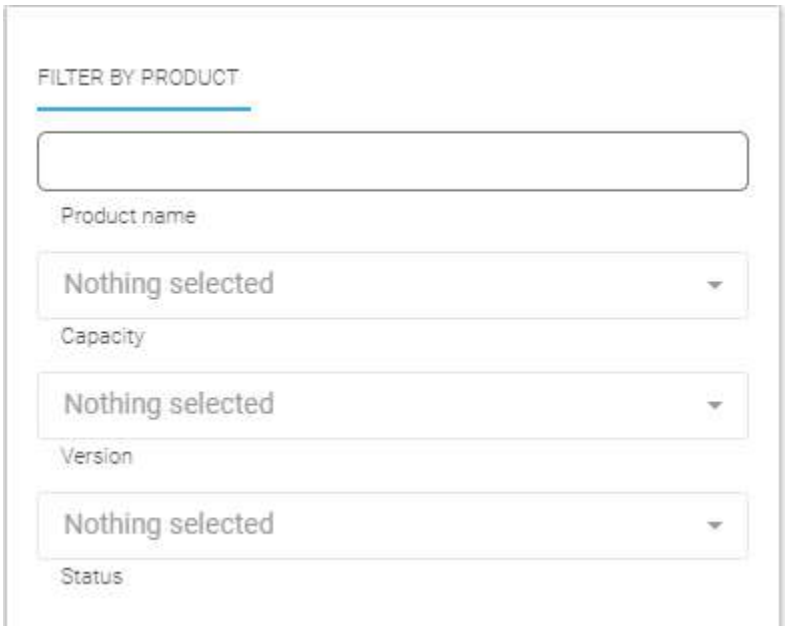
1. Filter by account data:
    - User name,
    - E-mail,
2. Filter by parent:
    - Parent - allows you to search for subresellers of chosen reseller,
3. Filter by brand:
    - Brand - allows you to search for resellers in a chosen brand,
4. Filter by date:
    - Created after - allows you to search for partners created after the given date,
    - Created before - allows you to search for partners created before the given date,


FILTER BY ACCOUNT DATA
User name
Email
FILTER BY PARENT
Nothing selected
Parent
FILTER BY BRAND
Nothing selected
Branding
FILTER BY DATE
Created after
Created before
Search
Reset

Product filter

The product filter allows you to filter the list of products and find those with interesting you parameters. The product filter provides a wide range of filtering options:

1. Filter by product:
    - Enable - products visible to customers during modification,
    - Disable - products invisible to customers during modification.
    - Product name,
    - Capacity - allows you to search for products by entering the capacity in GB,
    - Version - allows you to search for products by selecting their version:
        - SOHO,
        - Personal,
        - Endpoint,
        - Endpoint&Server,
    - Status:
        - Enable - products visible to customers during modification,
        - Disable - products invisible to customers during modification,



2. Filter by number of:

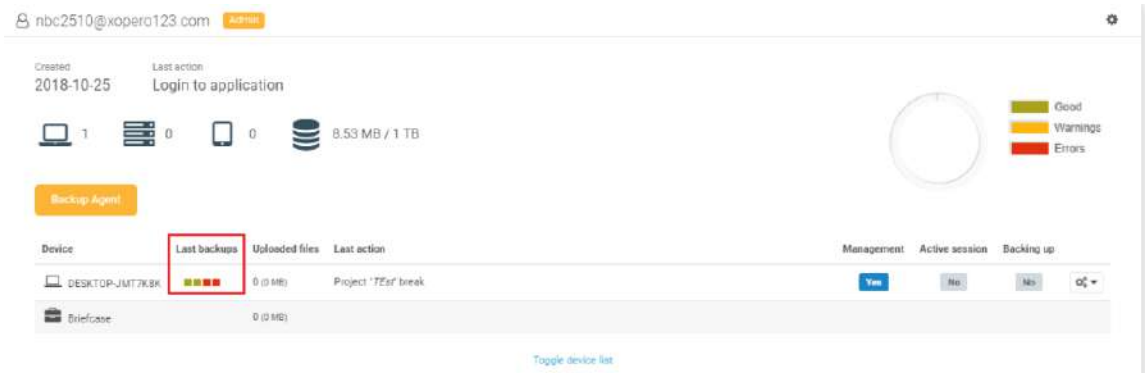
- Users - the filter allows you to search for products in which the customer can define a given number of users,
- Devices - the filter allows you to search for products in which the customer can assign a given number of devices.

Logs

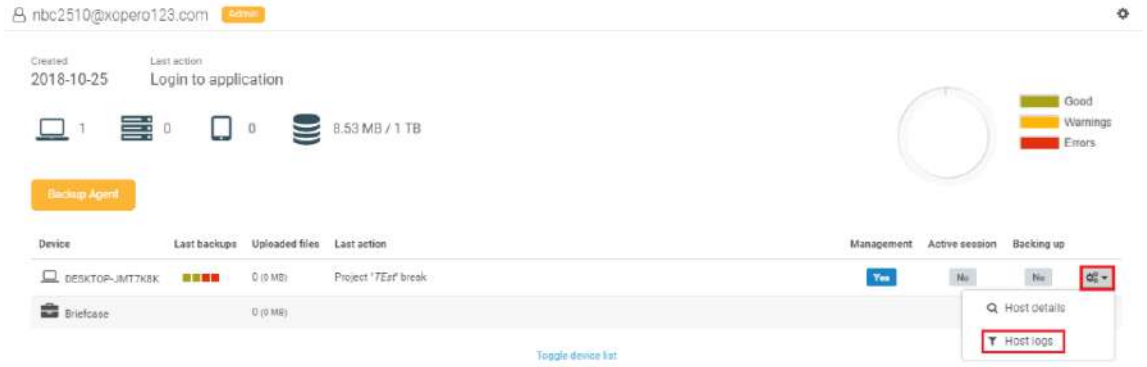
Ypu can access to the user logs from two places:

1. It is possible to go to the logs from the customers list.
   - If the customer or its users make a backup (successful, error or warning), then in the Last Backups column colored squares will appear, their colors suggest the state with which the backup was completed, after clicking on the square you will be redirected to the page with the client's logs.

2. It is possible to check the logs from the customer's dashboard.
   - After switching to the customer's dashboard, find the user who has backed up and whose logs you would like to check. Expand the list of a given user devices and select from which device the logs you would like to check. Then, in the Last Backups column, click on the colored square and it redirected you to the logs page.



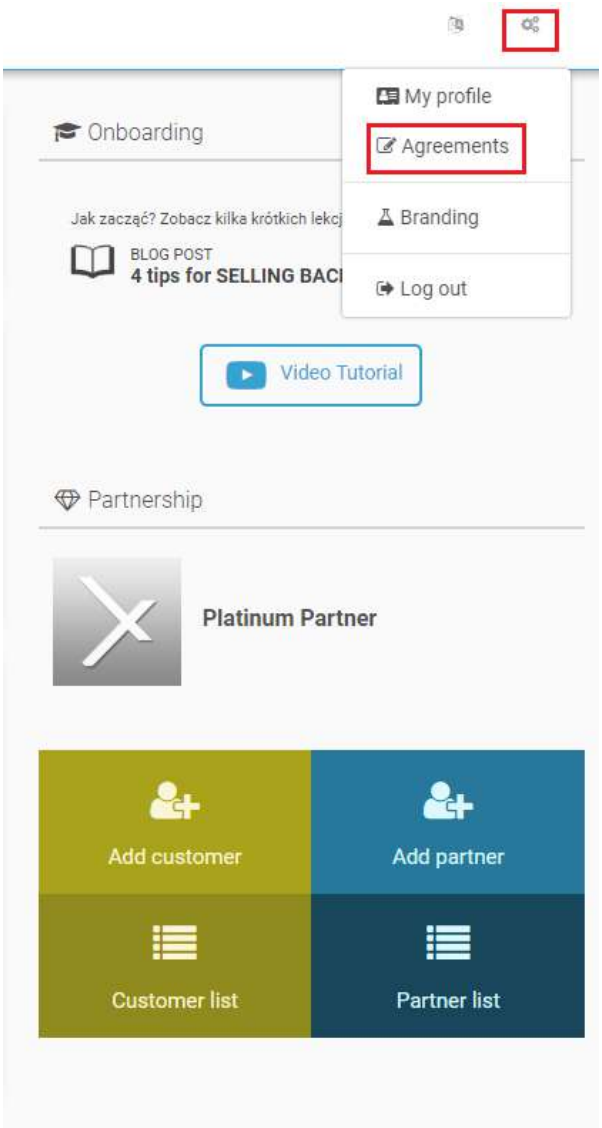
- After expanding the list of devices, select the Host logs option from the COG for the chosen device.



After moving to the list of logs you can see not only the logs for backups, but also those for logging into the application and the panel, reset encryption key, etc.

Agreements

If the you want to check the agreements, you can do it by clicking on the COG in the top right corner and selecting the option Agreements. You will be redirected to a page where you can check the content of the agreements.

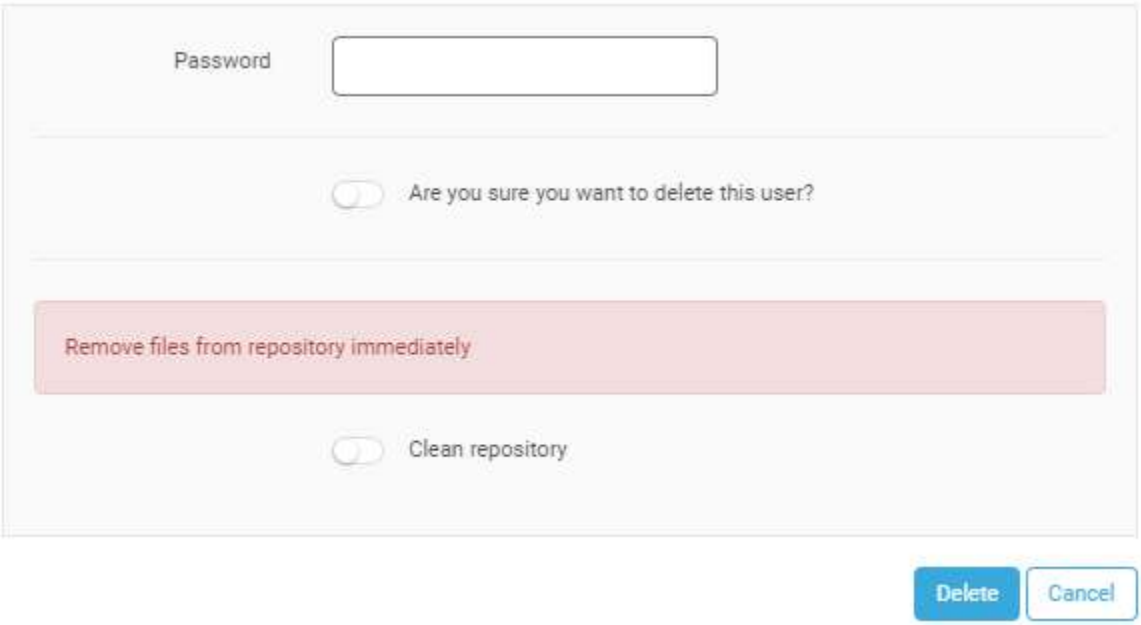


Deleting customer and user accounts

You can open the customer/user deletion form from the customer dashboard, which can be viewed by clicking on the customer list in the customer's e-mail/login.

When you select Delete, the window will be displayed where you will need to:

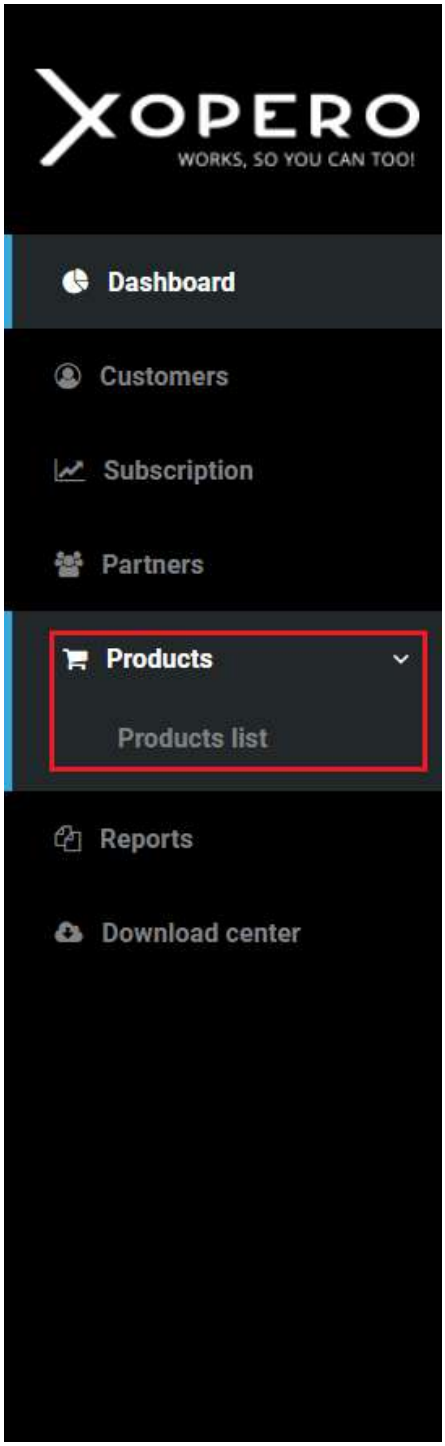
1. Enter your password,
2. Confirm your desire to delete your account,
3. Decide whether the customer/user has to be permanently removed - after about 24 hours from the removal the customer/user will be removed completely from the panel, it is not possible to re-activate it (Clean repository).

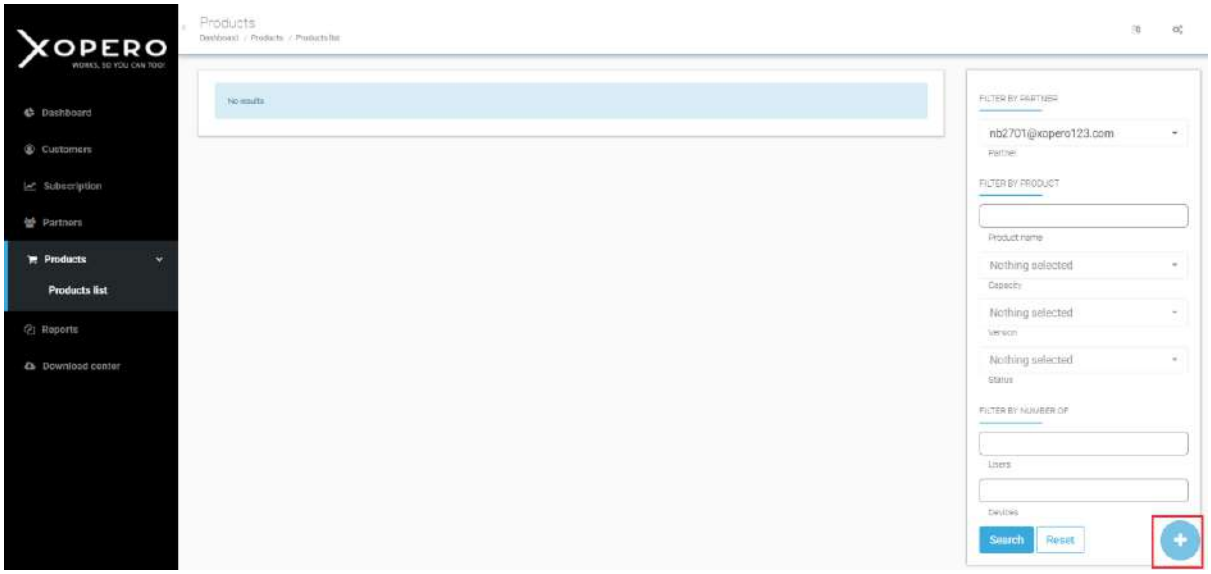


Create product

Only parameter reseller can create products - charged for used resources!

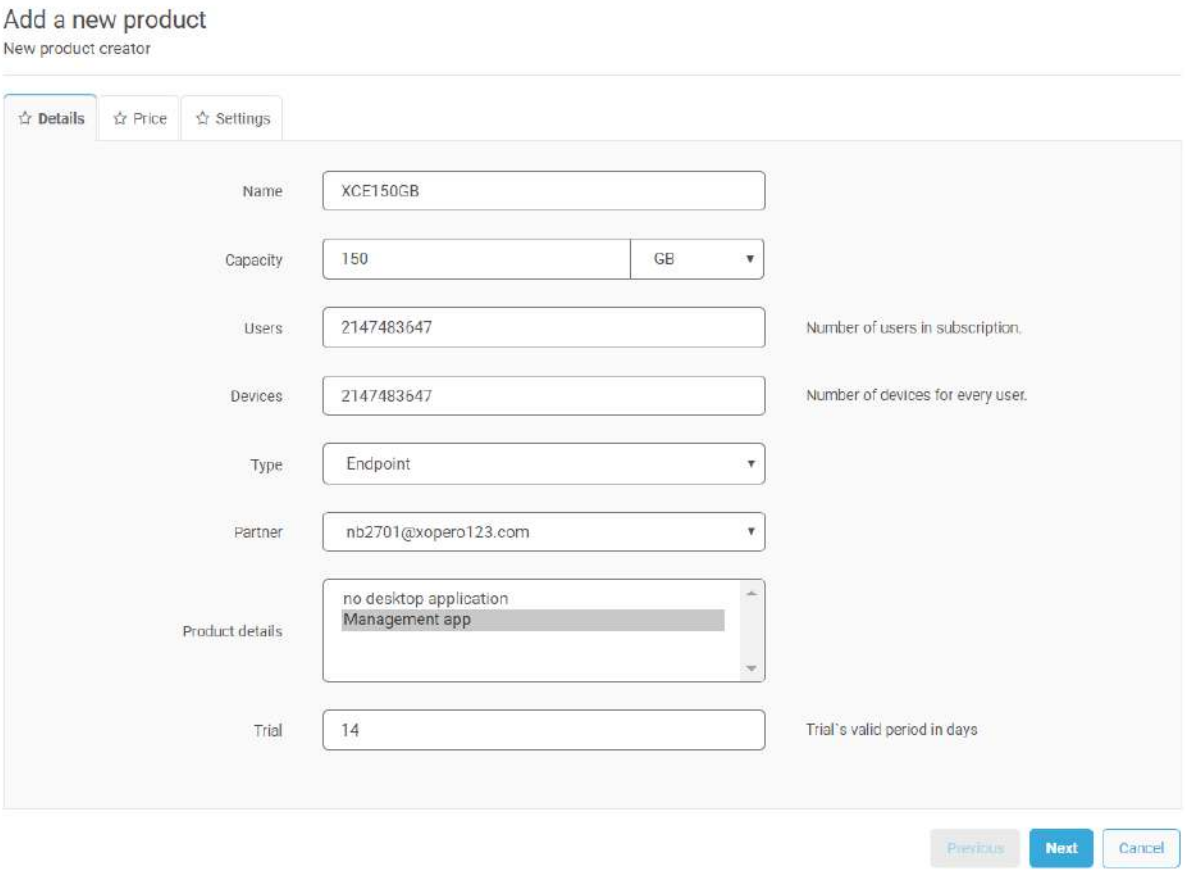
The product creation form can only be called from one location: Products -> Product list.


XOPERO
WORKS, SO YOU CAN TOO!
Dashboard
Customers
Subscription
Partners
Products
Products list
Reports
Download center

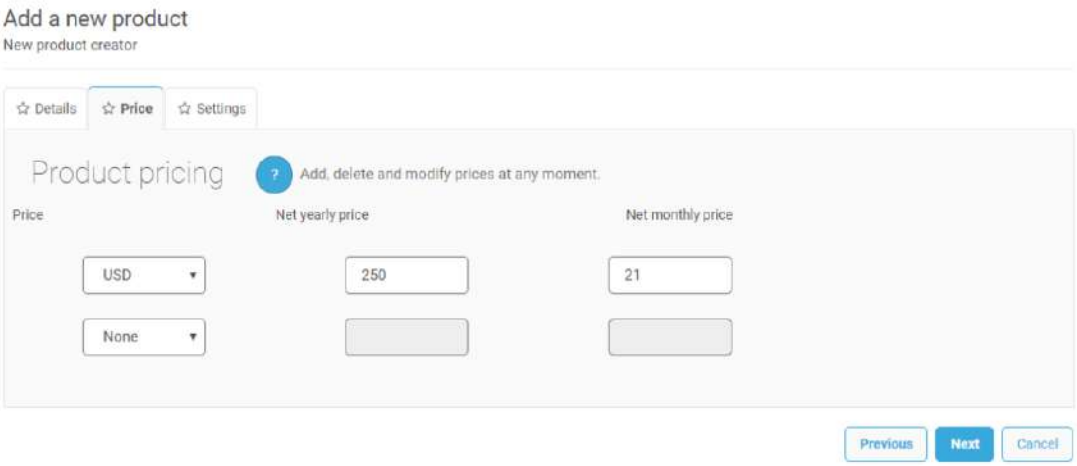


When you choose to add a product, an addition form will be displayed, where you will have to complete:

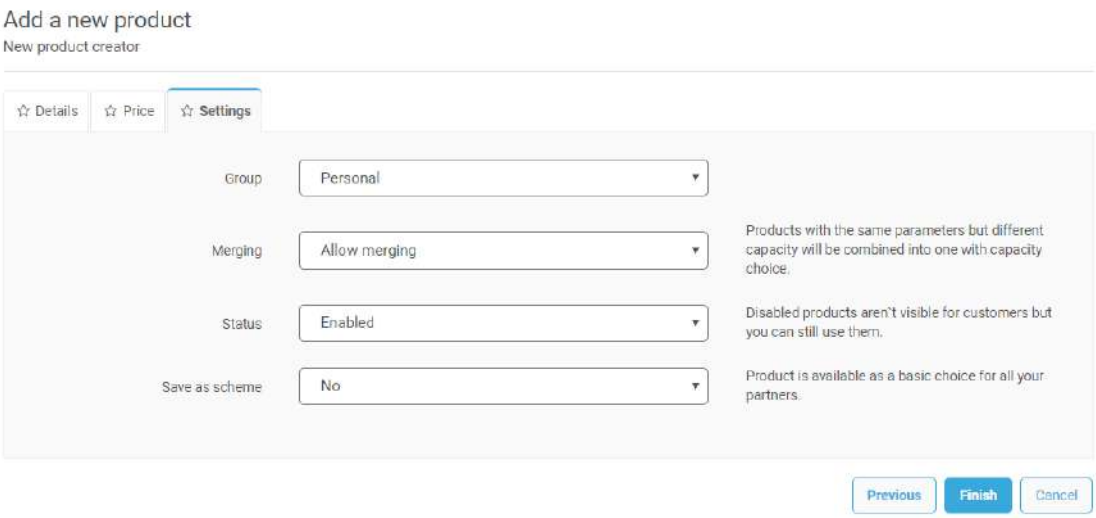
1. In the first step you have to fill the data on the number of users and devices, license type, capacity, etc.:
    - Name - product name which will be visable to the reseller and/or its customers,
    - Capacity - in MB, GB or TB as needed,
    - Users - the number of users who you will be able to be created under the license (if they are to be unlimited, the number must be specified - 2147483647),
    - Devices - the number of devices that can be assigned to accounts within the license (if they are to be unlimited, enter the number - 2147483647),
    - Type - license type:
        - Endpoint&Server,
        - Endpoint,
        - Personal,
    - Partner - product owner,
    - Product details - allow you to select additional applications (they will appear in the Download Center) or disable the Desktop application (the client will not be able to download it),
    - Trial - trial in days.



2. In the second step, you have to define the price of the product:
    - In the first field you have to choose the currency,
    - Then give the amount for the year of subscription,
    - Price of the month subscription.



3. In the last step, the reseller has the possibility to change additional options:
    - Group - assignment to a product group (None, Business or Personal),
    - Merging:
        - Allow merging - products with the same parameters but different capacity will be combined into one with capacity choice,
        - Disallow merging - will be displayed as a separate product,
    - Status:
        - Enable - visible for you and your customers,
        - Disable - visable only for you,
    - Save as scheme:
        - No,
        - Yes - the product is automatically assigned when you create a subreseller.



SVSCreator

What is it and what is it for?

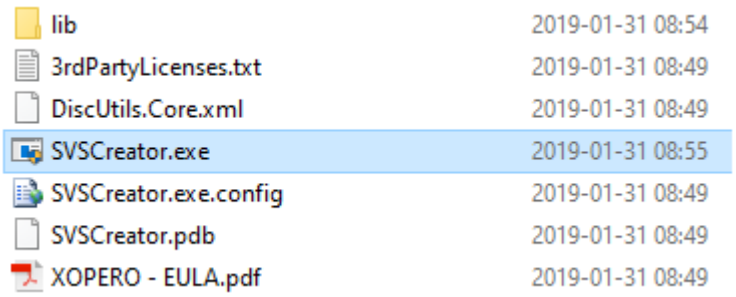
SVSCreator is a separate tool that allows user to build an ISO image containing the SVS application in Windows PE. The created ISO image allows you to restore the operating system from a disk image backup and upload selected drivers to it.

More information's about the SVS application can be found here.

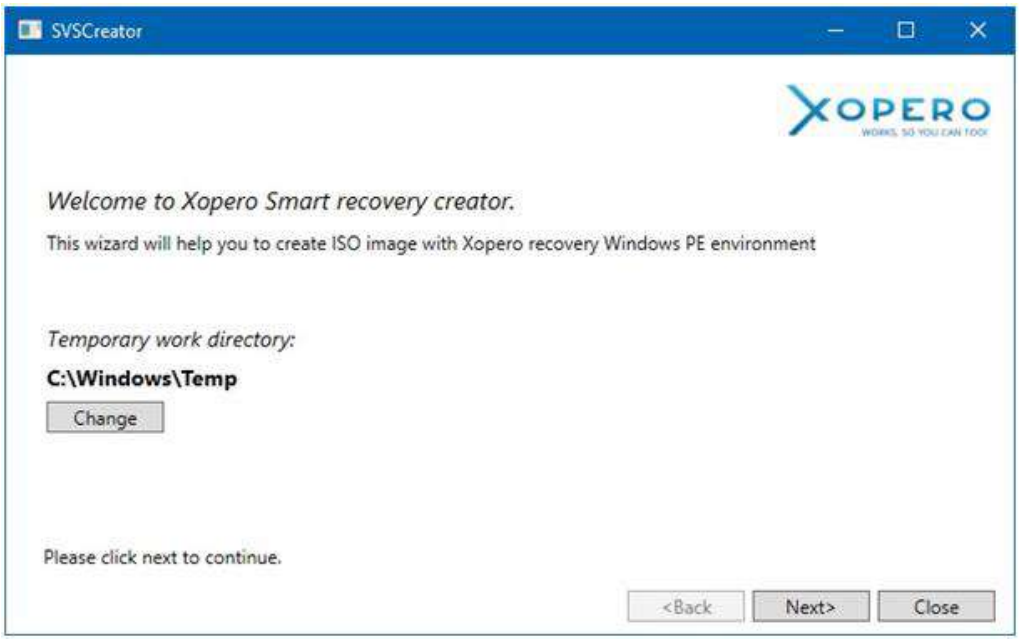
Windows Preinstallation Environment - an advanced boot environment that allows you to prepare client computers for installing the operating system.

Creating the SVS ISO image in Windows PE

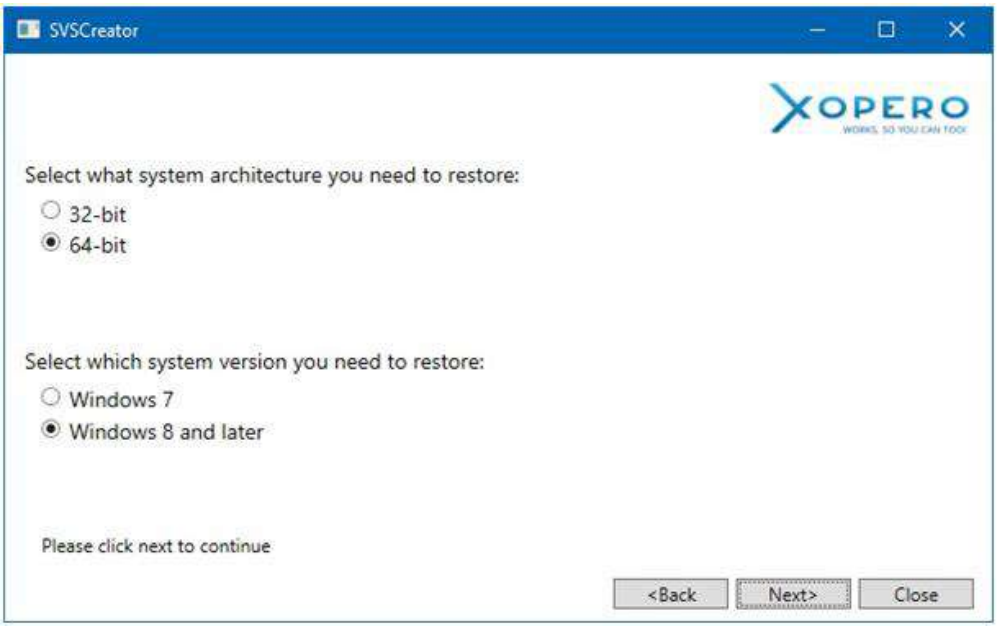
After downloading the SVSCreator, extract the files from the ZIP archive to a separate folder, and then run the application by opening the file: SVSCreator.exe.



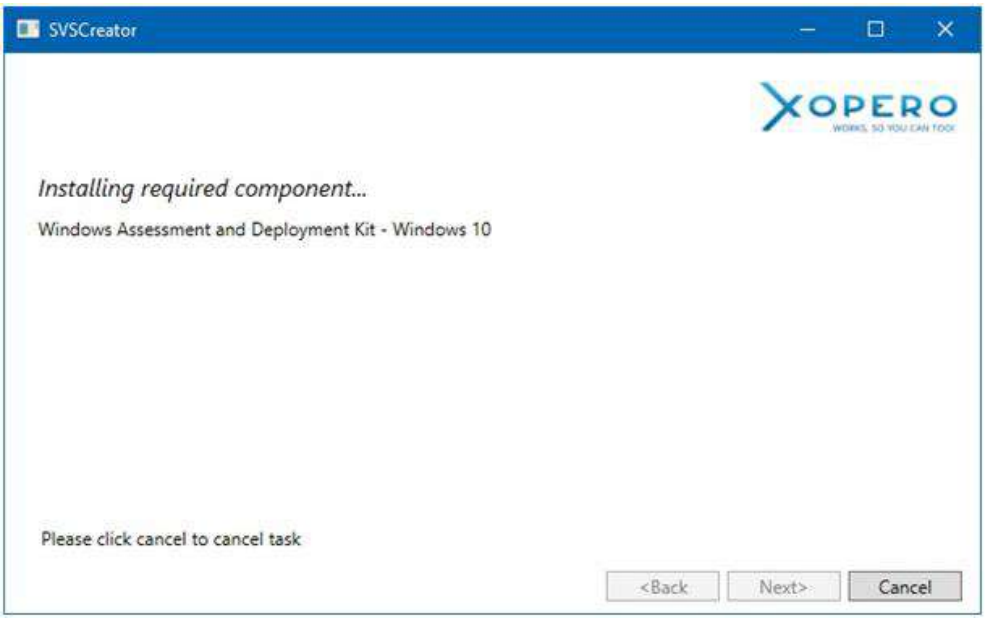
The SVSCreator application window will be open. In the first step, the user will be asked to specify the location for the Xopero SVS ISO image (the default path is C:\Windows\Temp).



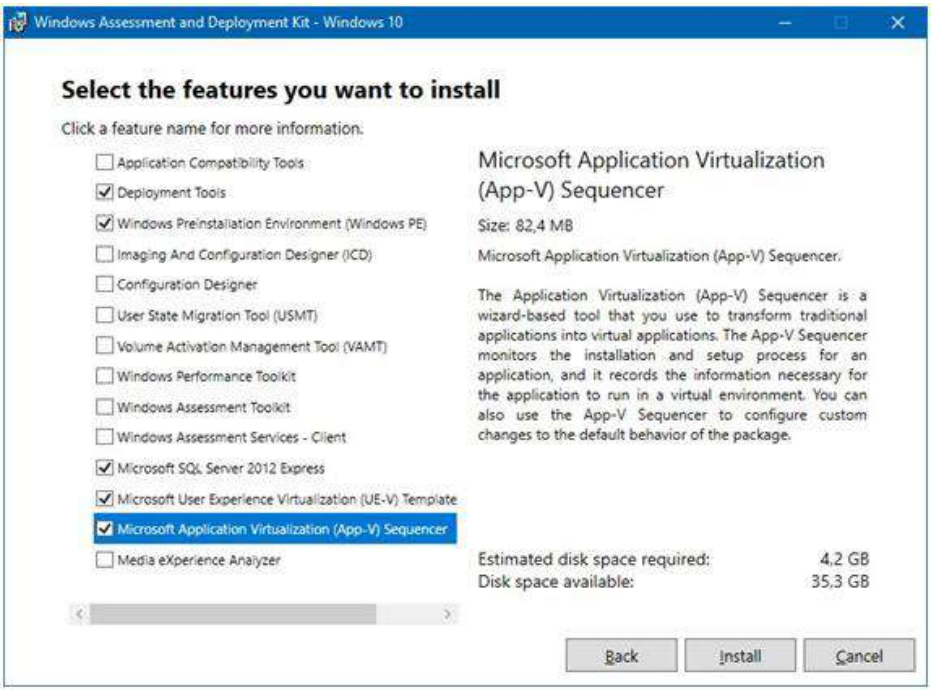
After selecting the Next button, define the operating system parameters that you want to restore - architecture and version.



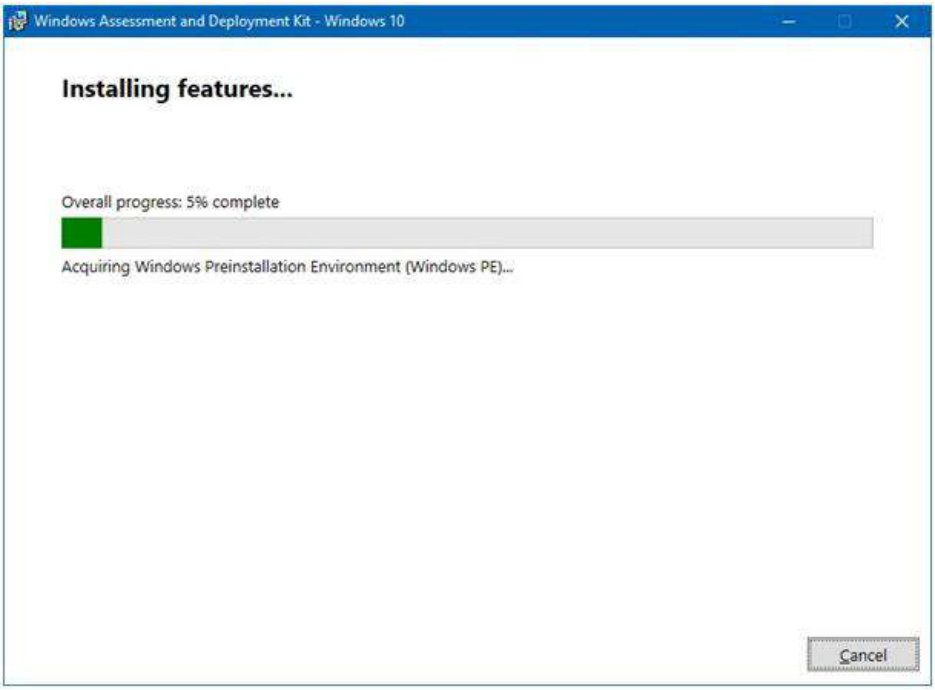
At this point, the installation of the Windows ADK components will begin. Please wait until it is completed.



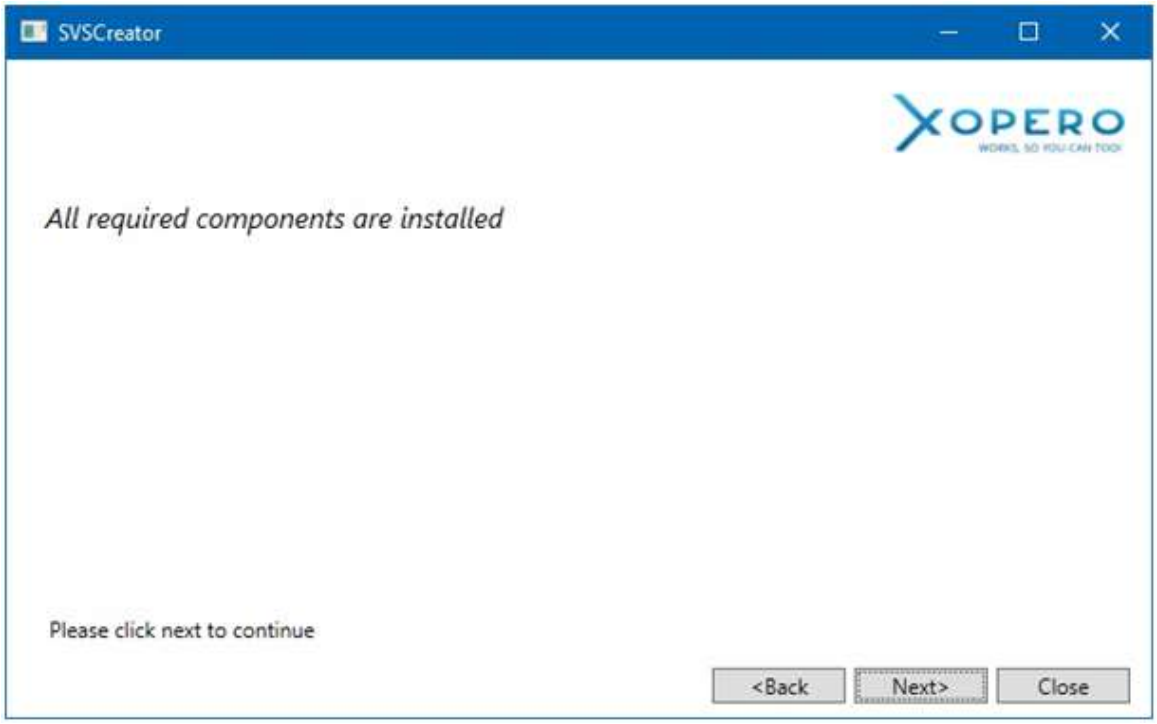
The Windows Assessment and Deployment Kit window will open, with tools selected automatically that are required to build Windows PE.



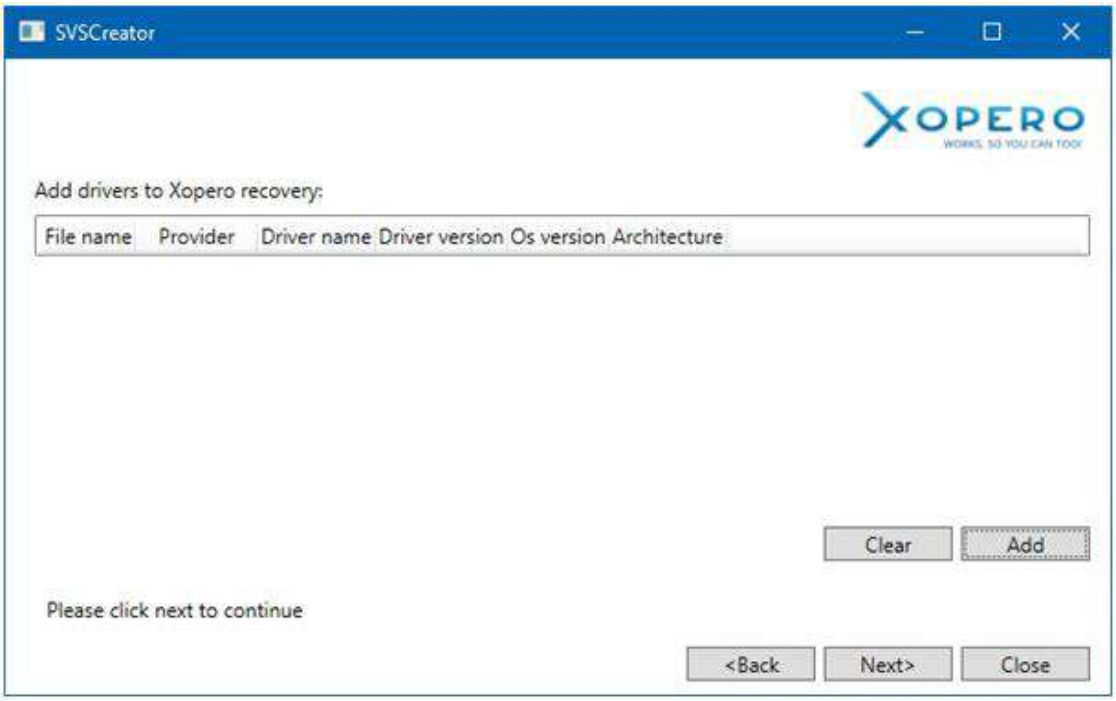
After selecting the components provided by Microsoft, the installation progress bar will appear.



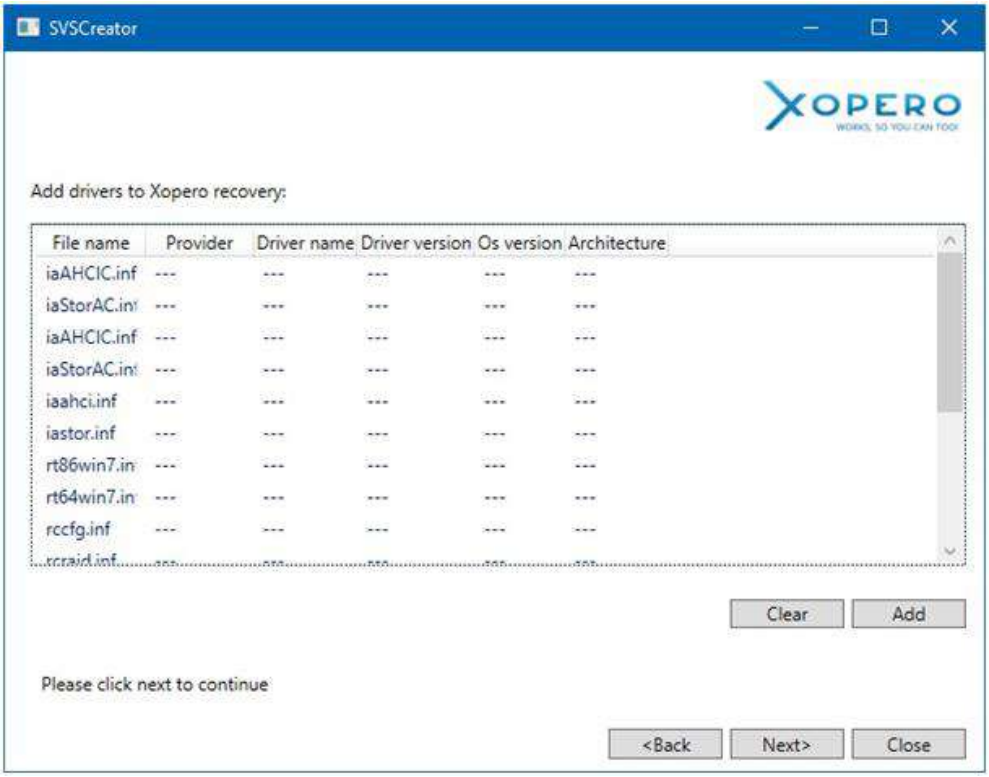
After downloading and installing selected components, you'll be able to proceed to the next steps to create an ISO image.



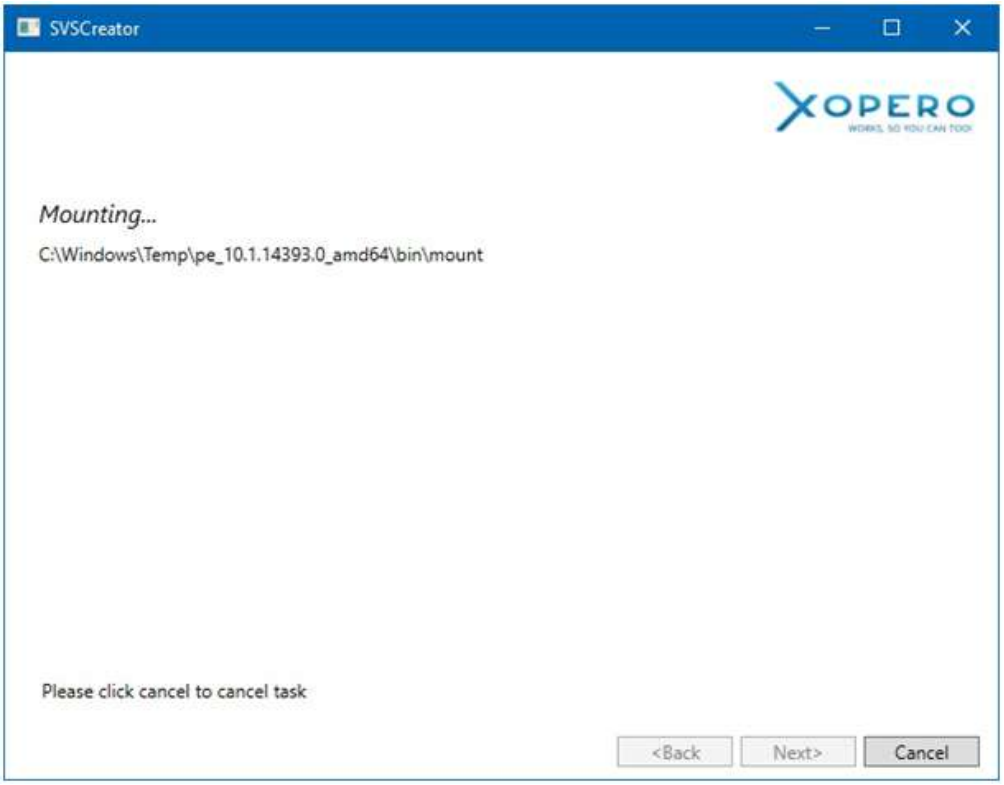
After selecting the Next button, the following window will be displayed to indicate the location of the drivers for the restored operating system image.



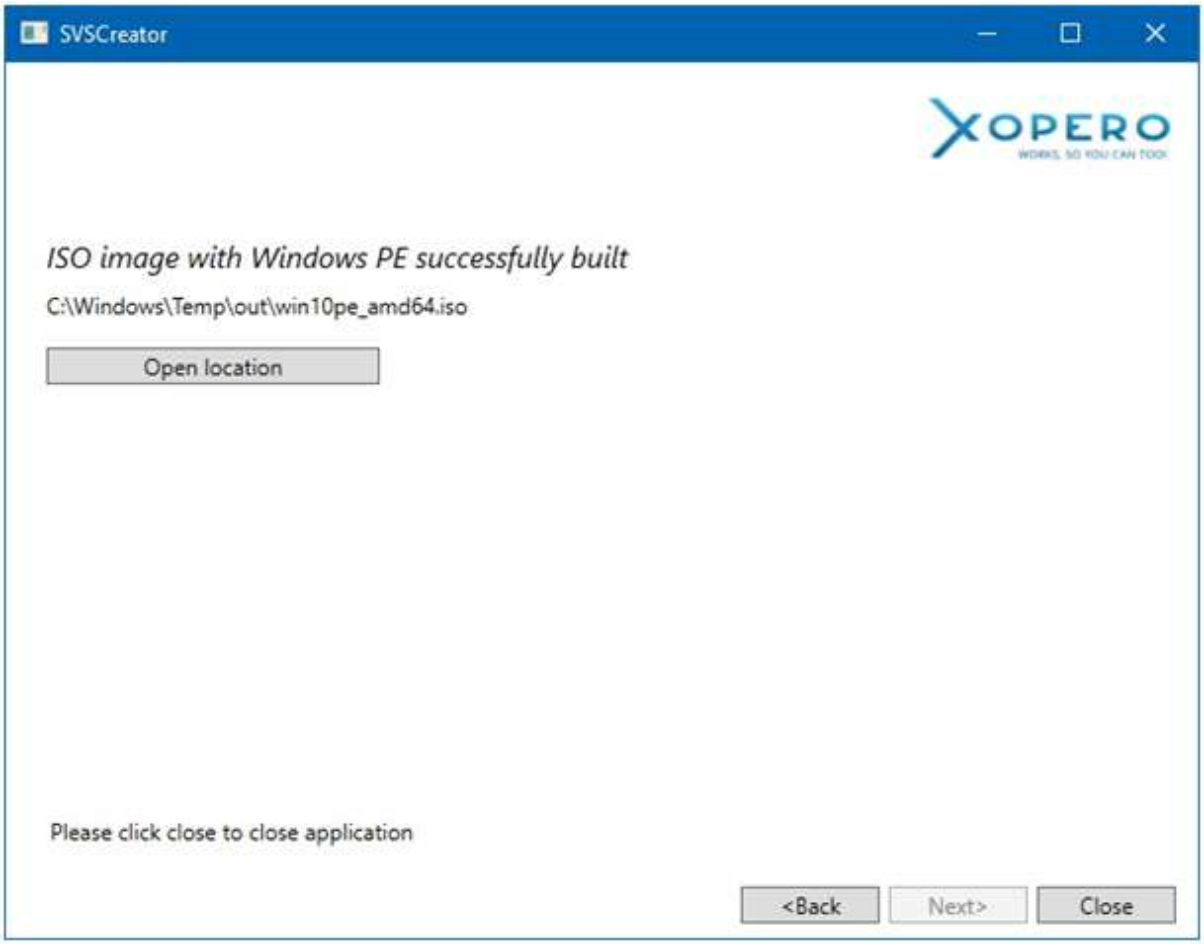
Then the list of drivers located in the selected directory will be displayed. At this step, the user can review the list and add additional drivers.



In the next step, the application will start building the ISO containt the SVS app at Windows PE.



After the ISO file build is completed, the user will be notified by the message: *ISO image with Windows PE successfully built* and information about its location.



Manual for recording an ISO image on a PenDrive can be found here.
Manual for booting a USB flash drive can be found here.

System recovery - means Bare Metal Recovery

Manual for preparing a bootable media can be found here.

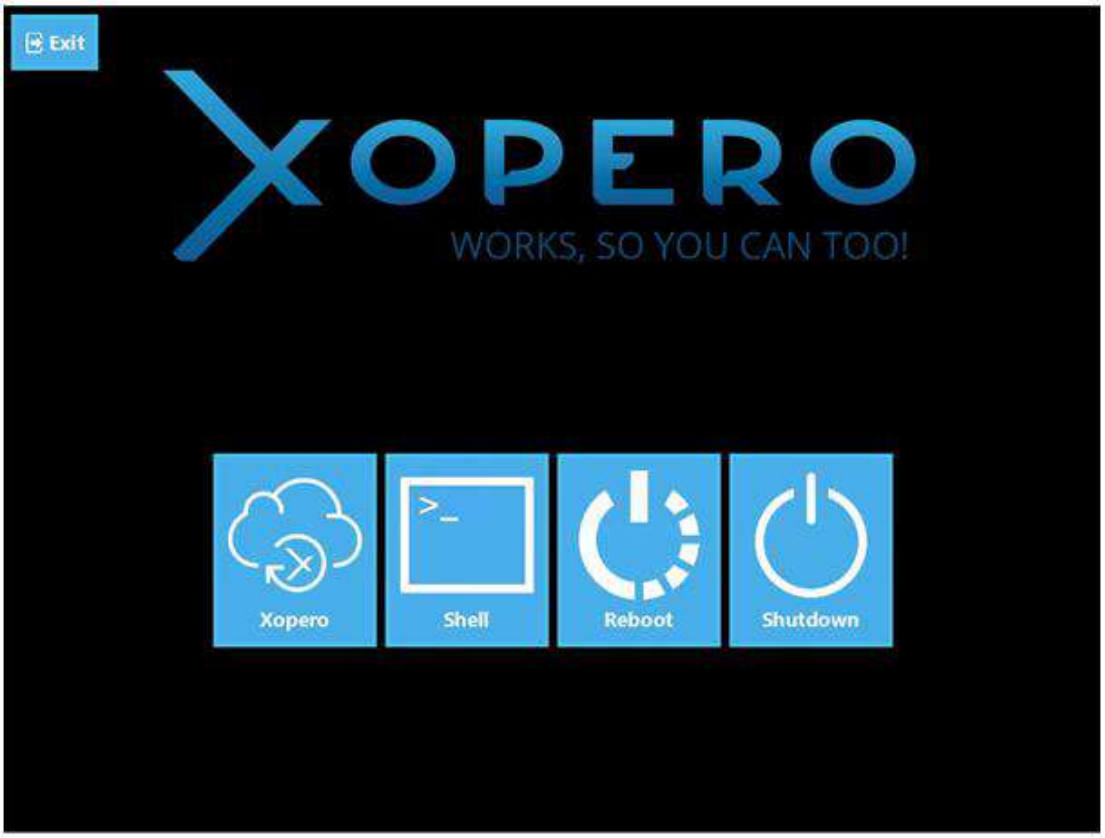
After starting Xopero SVS in the Windows PE, the following options will be displayed:

Xopero - go to the next window with additional restore options.

Shell - go to the command line.

Reboot - restart the machine.

Shutdown - shutdown the machine.



After selecting the Xopero button, a menu will appear displaying the options described below.

- *Restore* - starts the Bare Metal Restore process.
- *Fix boot problems* - solution to problems running the operating system. More information here.
- *Drivers* - loading the drivers. More information here.

After selecting the Restore option, the login form for the Xopero user account will be displayed.

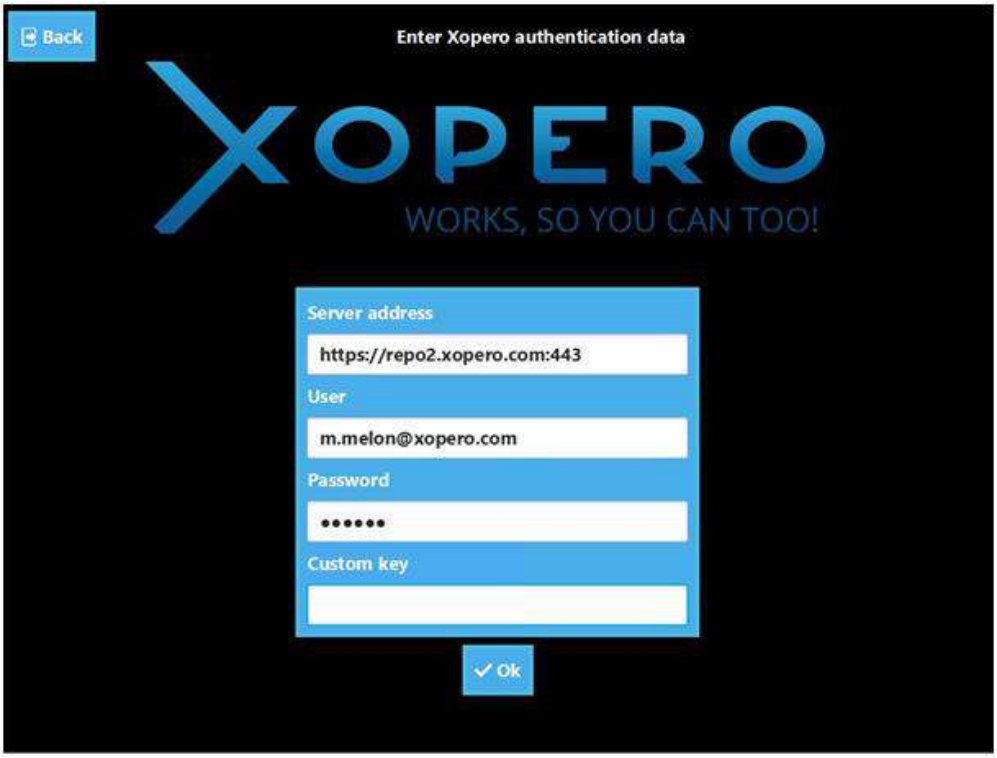
To properly configure the connection to the account where the disk image was backed up, you need to enter the server address, username and password. If the user has his own encryption key, enter it as well.

When logging at to the account in the Xopero Cloud service, enter the following server address:

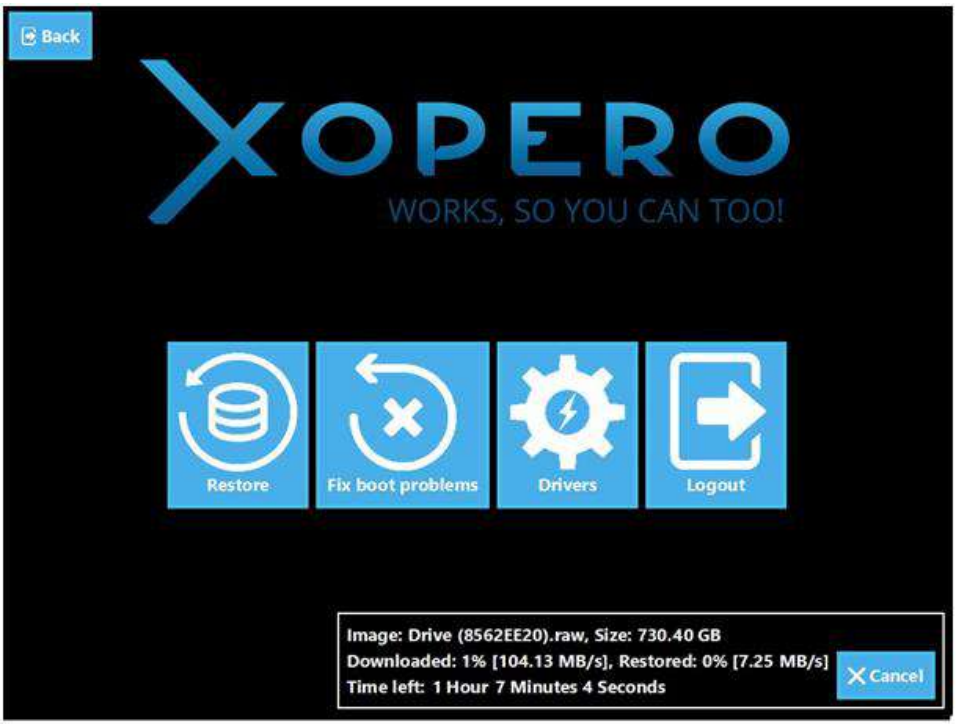
- https://repo1.xopero.com:443 for the panel: https://cloud.xopero.com/
- https://repo2.xopero.com:443 for the panel: https://cloud2.xopero.com/
- https://usrepo.xopero.com:443 for the panel: https://uscloud.xopero.com/
- https://asiarepo.xopero.com:443 for the panel: https://asia.xopero.com/

In case of doubts regarding the choice of server address, please contact our technical support (link).

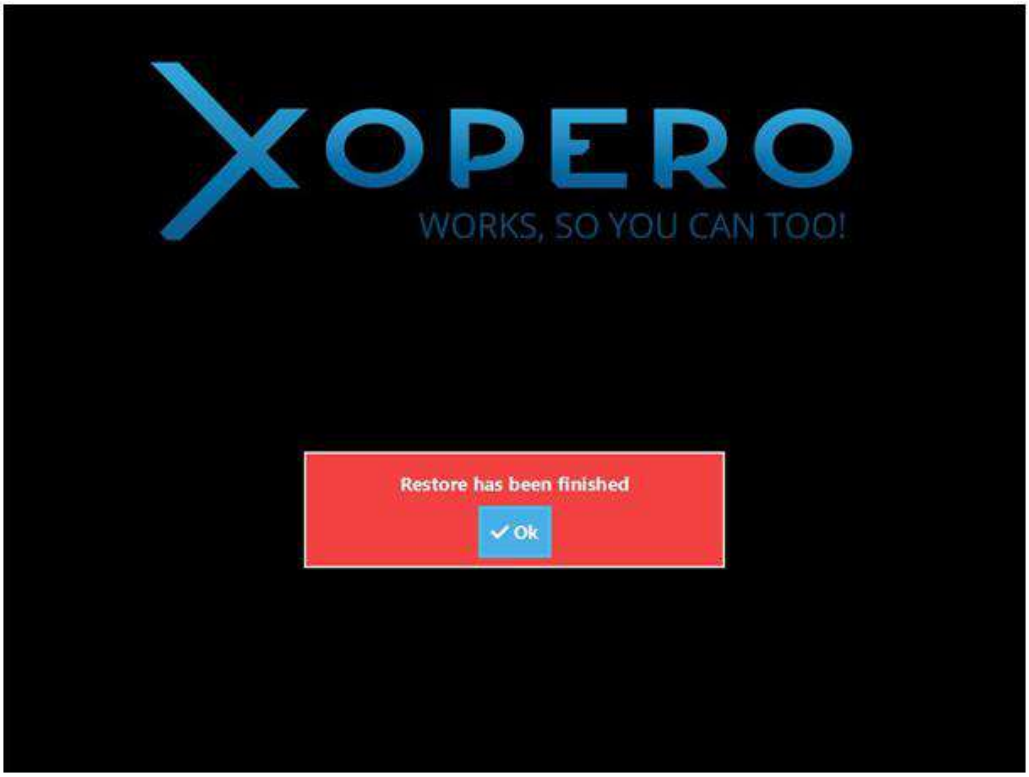
For local solutions, enter the IP address of the device on which the Xopero server module is running (e.g. https://192.168.0.199:45554).



After starting to restore the system image, the bottom of the screen will display information about the approximate time remaining to the end of the operation.



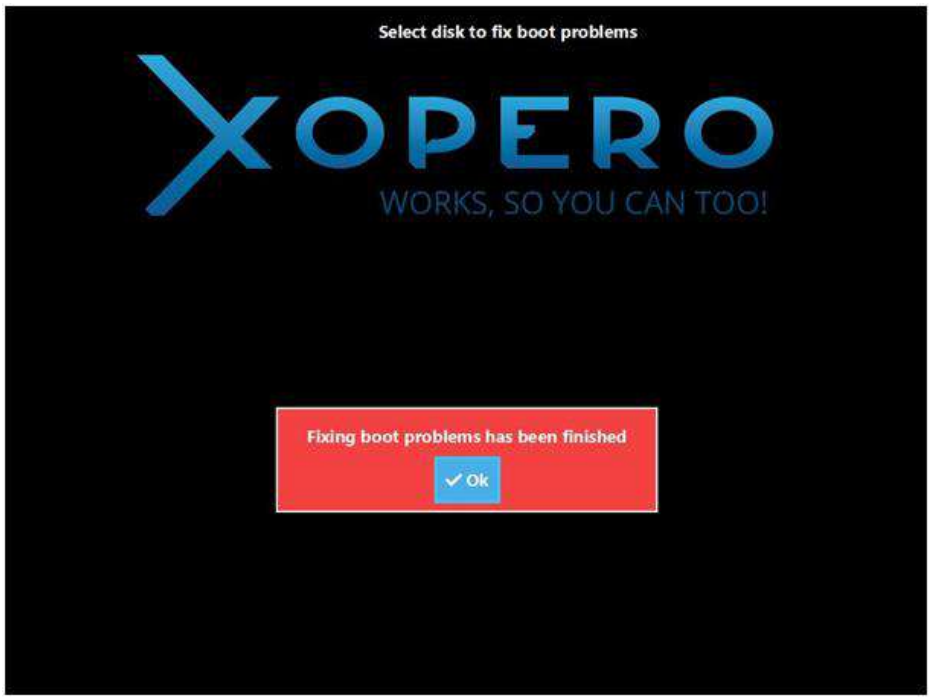
The user will be notified of the system restore completion with the message: *Restore has been finished*.



Troubleshoot system startup issues

The Smart Virtualization Stick application is equipped with the fix boot problems tool, which allows you to solve problems with run the restored system.

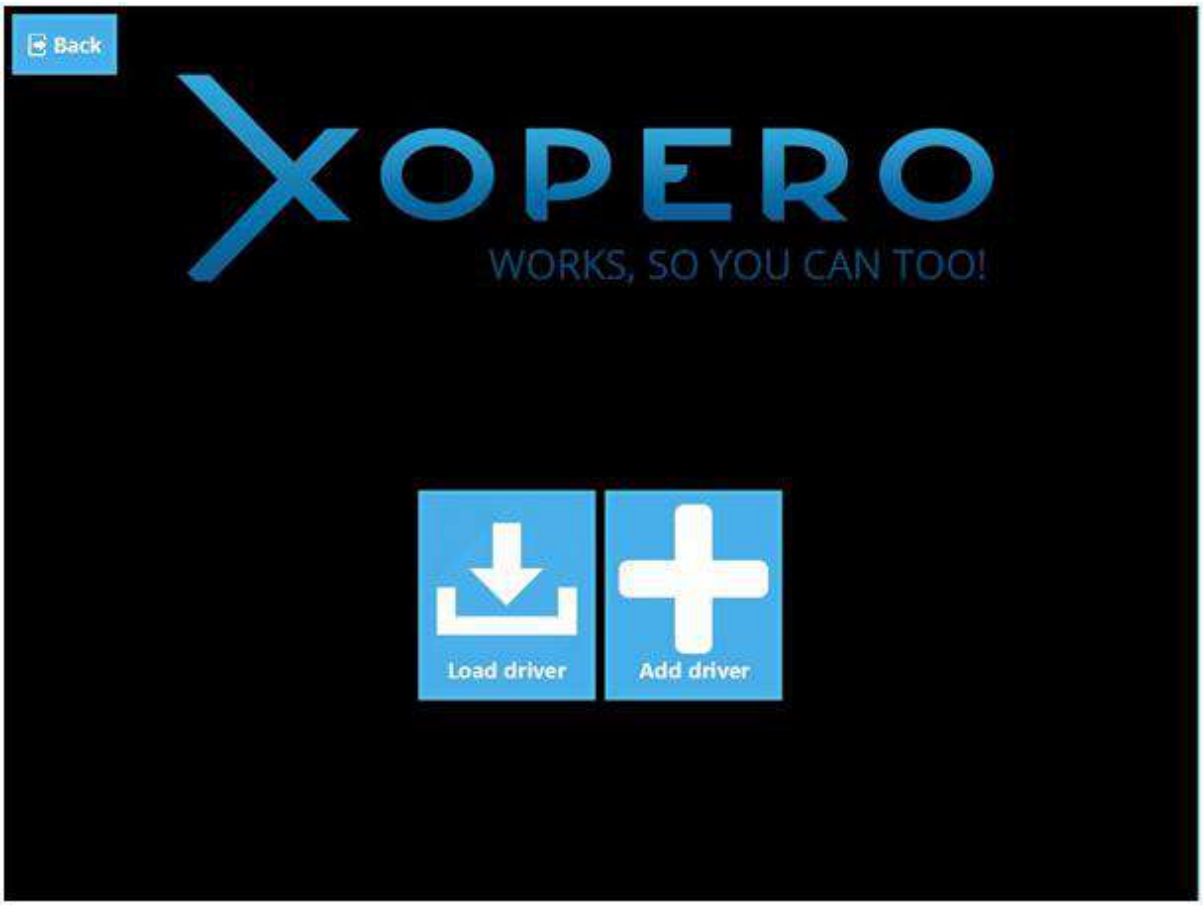
After selecting the fix boot problems option, the application will try to automatically detect the cause of problems with starting the system and it will implement solution. You will be notified of the completion of this operation with the following message: *Fixing boot problems has been finished*.



Add and load drivers

After entering driver window, the following two options will be displayed.

- *Load driver* - loads the driver into Windows PE (the environment that user is currently using).
- *Add driver* - adding a driver to the disk selected by the user (after system recovery).



An example of using the option to add drivers

If the disk image has to be restored into two disks connected in a RAID array, select the Load driver option, and select the RAID array driver which should be loaded into Windows PE. Before adding the driver, the system will detect two separate disks, after adding it'll detect one located in the RAID array. In the next step, restore the image to the disk.

After restoring the disk image, the user should select the Add driver option, i.e. add the driver to the restored operating system. This will allow the operating system to start correctly after restarting the machine.

The RAID driver is an example. It is also possible to add or load other drivers.

SVS & Bare Metal Restore

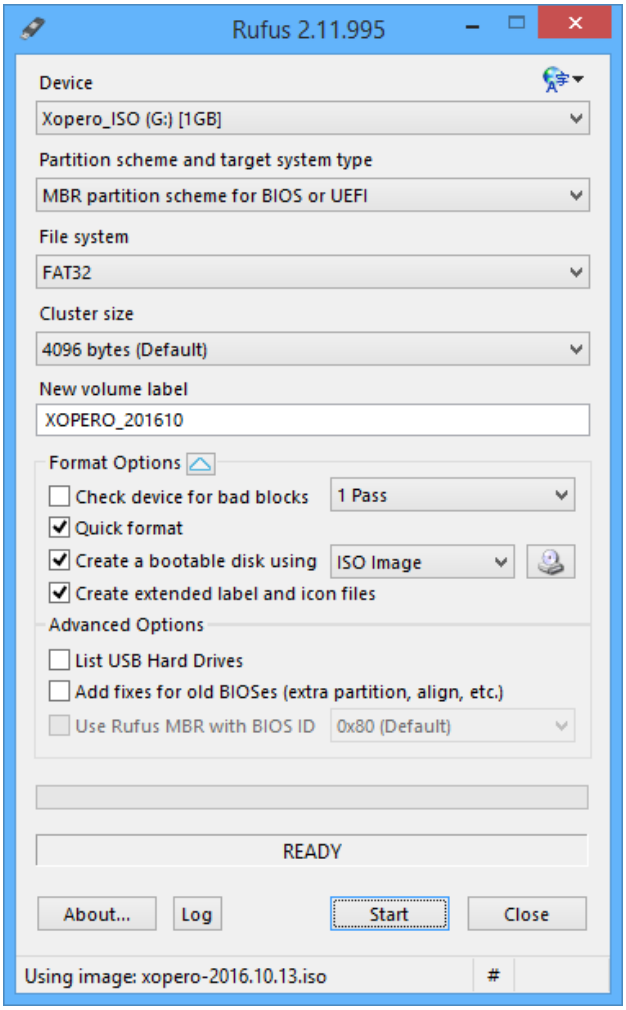
What is it and what is it for?

Smart Virtualization Stick is an independent tool which is used to restore disk images.

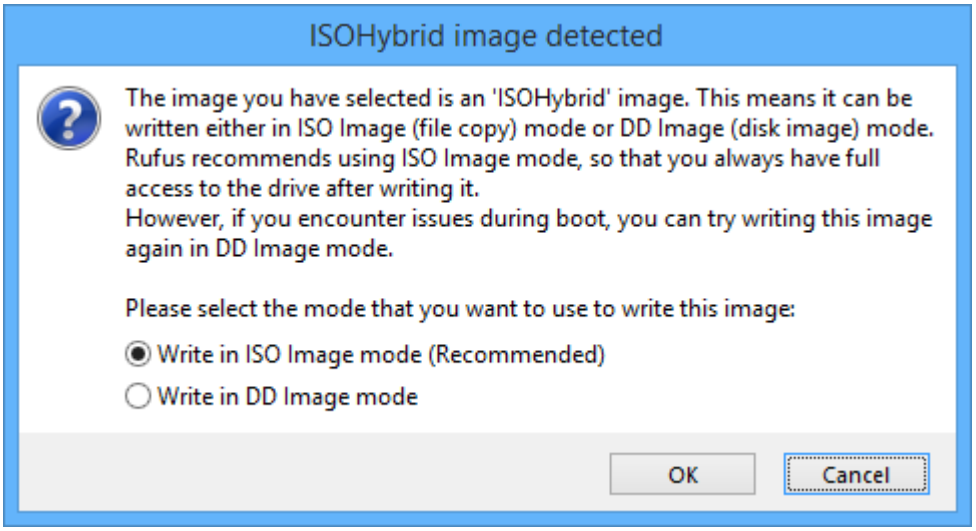
With it, you can restore the system after a computer failure from a previously made HDD Image backup.

Burning SVS on usb drive

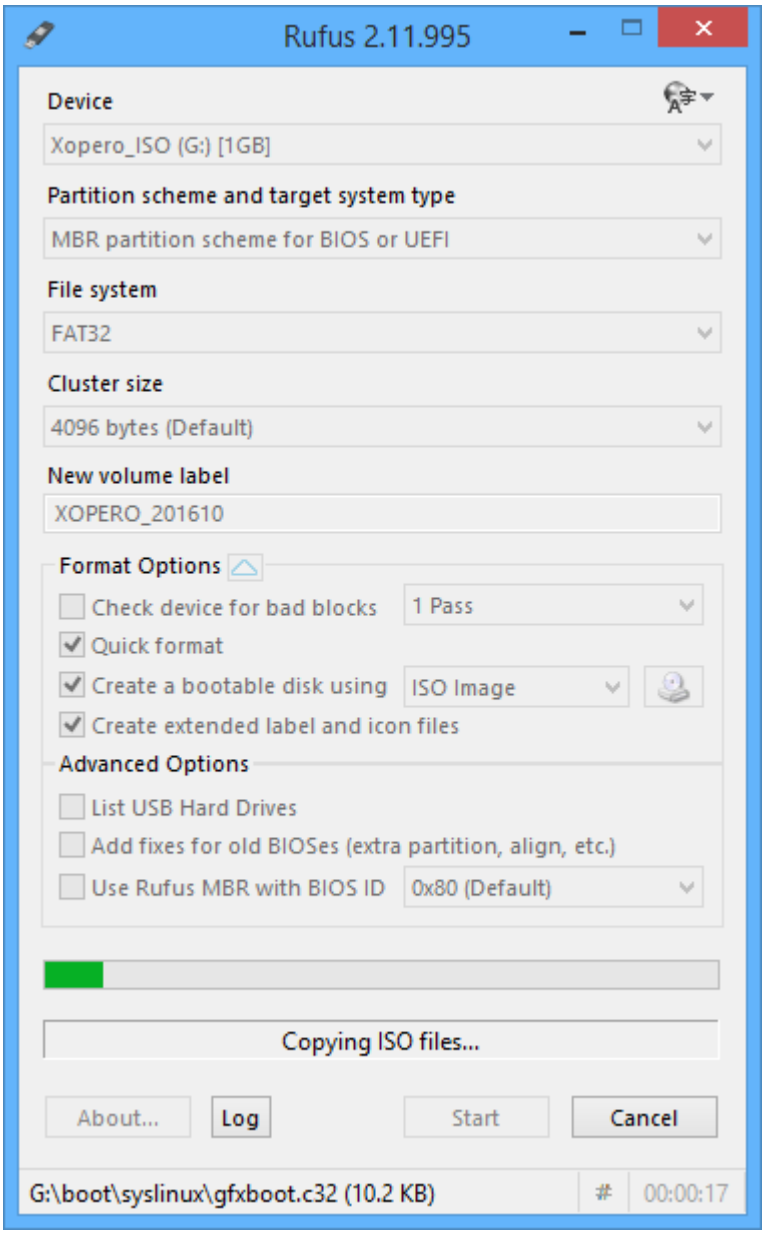
To burn Xopero SVS on pendrive, use the program to create a bootable USB flash drive, eg. Rufus. In the field *Device* you need to indicate USB flash drive on which you want to record the ISO image, then select the file to record and press *Start*.



After completing these steps a window appears with the message, about detection ISOHybrid image, where you should select *Write in ISO Image mode* and accept.



After completing the above steps will be initiated the process of burning an ISO image to a USB flash drive.



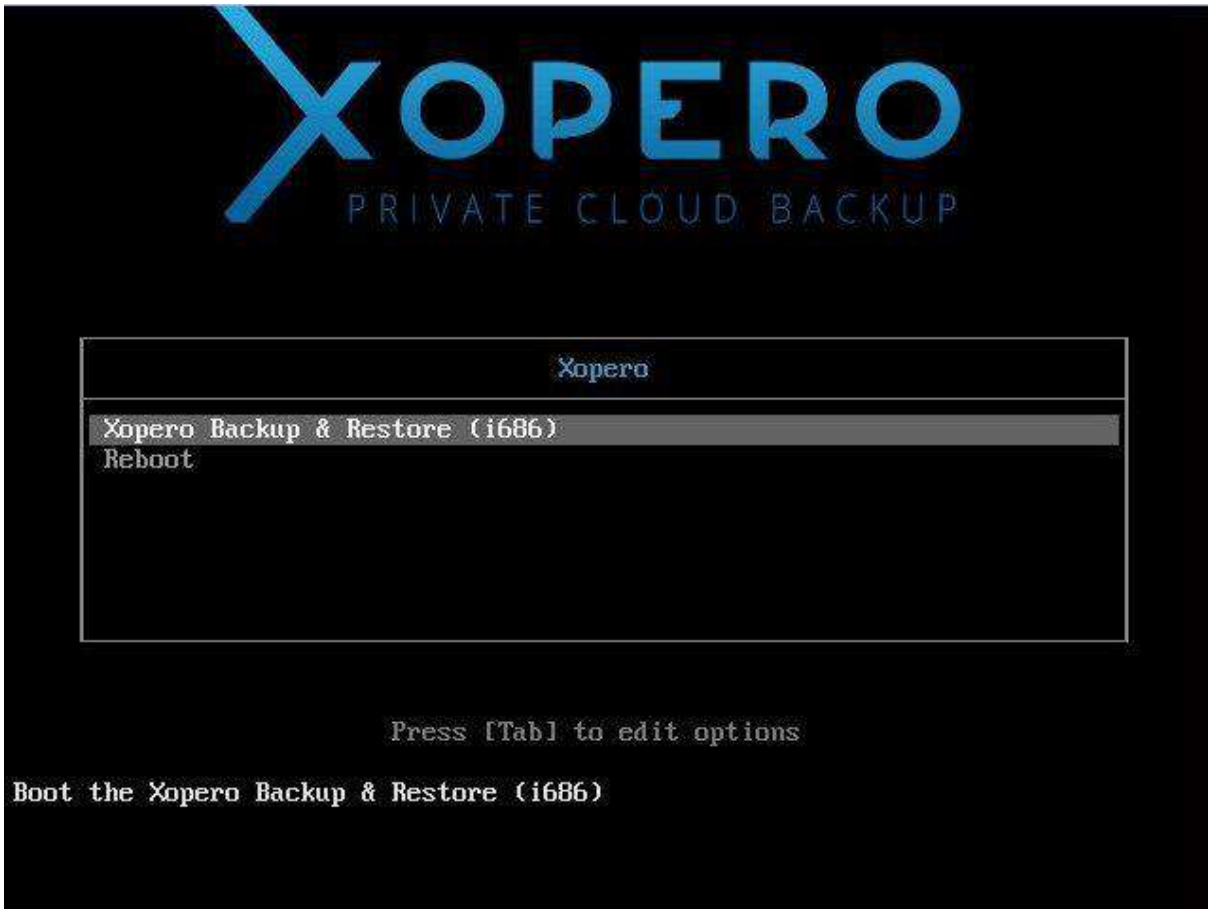
Starting SVS

To start SVS from USB flash drive in the BIOS/EFI must be set the boot sequence (boot from *USB-HDD*).

Keep in mind that there is no way to switch between UEFI and EIF and vice versa!

System recovery - means Bare Metal Recovery

After starting Xopero SVS from USB flash drive displays a window, where there are two options. In order to restore system you have to choose *Xopero Backup & Restore*.



Next, from available option choose *Xopero*.

After choose this option displays a window Xopero utils, where you have to choose *Configure* option.

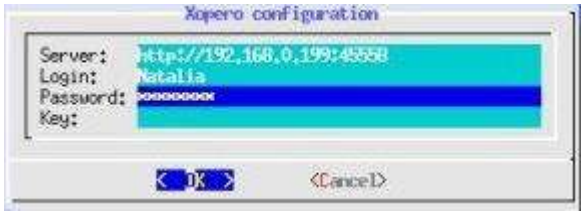
To properly set up the connection to your account, which was made HDD image backup you must enter the server address, user name and password. If the user has given his own encryption key, you also must enter it.

When logging at to the account in the Xopero Cloud service, enter the following server address:

- **https://repo1.xopero.com:443 for the panel: https://cloud.xopero.com/**
- **https://repo2.xopero.com:443 for the panel: https://cloud2.xopero.com/**
- **https://repo3.xopero.com:443 for the panel: https://cloud3.xopero.com/**
- **https://usrepo.xopero.com:443 for the panel: https://uscloud.xopero.com/**
- **https://asiarepo.xopero.com:443 for the panel: https://asia.xopero.com/**

In case of doubts regarding the choice of server address, please contact our technical support (link).

For local solutions, enter the IP address of the device on which the Xopero server module is running (e.g. https://192.168.0.199:45554 or http://192.168.0.199:45558).



If the configuration has been correct it will be confirmed by the message, and displays an additional option *Restore*, which you select to restore the system.

Next, you need to select the host from which you want to restore the system.

In the next steps select the backup image, version and drive to which you want to restore the system.

Before start the restore displays a message, informing about the possibility of losing data stored on the disk that will be restored system.

After choose *Yes* option being restoring.

After the end of the operation message is displayed.

If the message will be accepted, the application will return to the first window, where you select *Shutdown* option.

Then, change the boot sequence order to boot from the disk that has been restored system.

Resetting drivers

The drivers should be reset in case a problem with starting the system after he has been restored. To do this, you have to start the Smart Virtualization Stick again on the computer with the restored system and choose option ***Reset*** in Xopero utils window. This option does not require connection with server.

In the next step you must specify the drive where you want to perform said operation.

Then choose the partition with Winsows and confirm, causing the reset drivers starts.

After successful completion of this operation, you should see a confirmation message shown in the screenshot below.

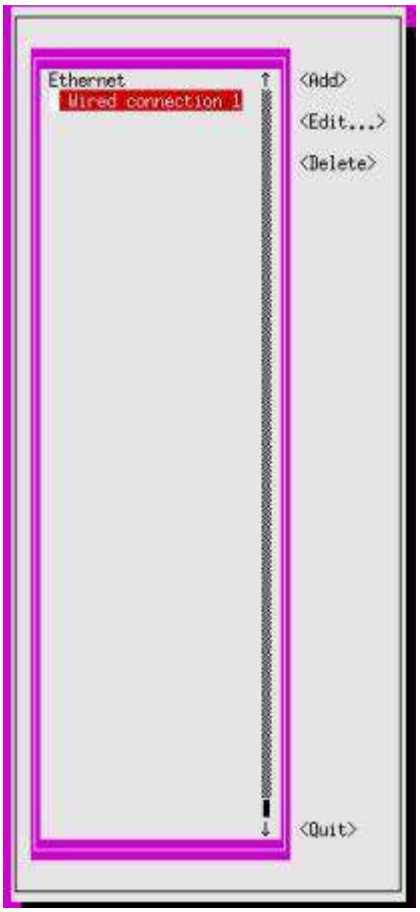
Network configuration

To configure the network connection choose ***Network*** option in System utils window.

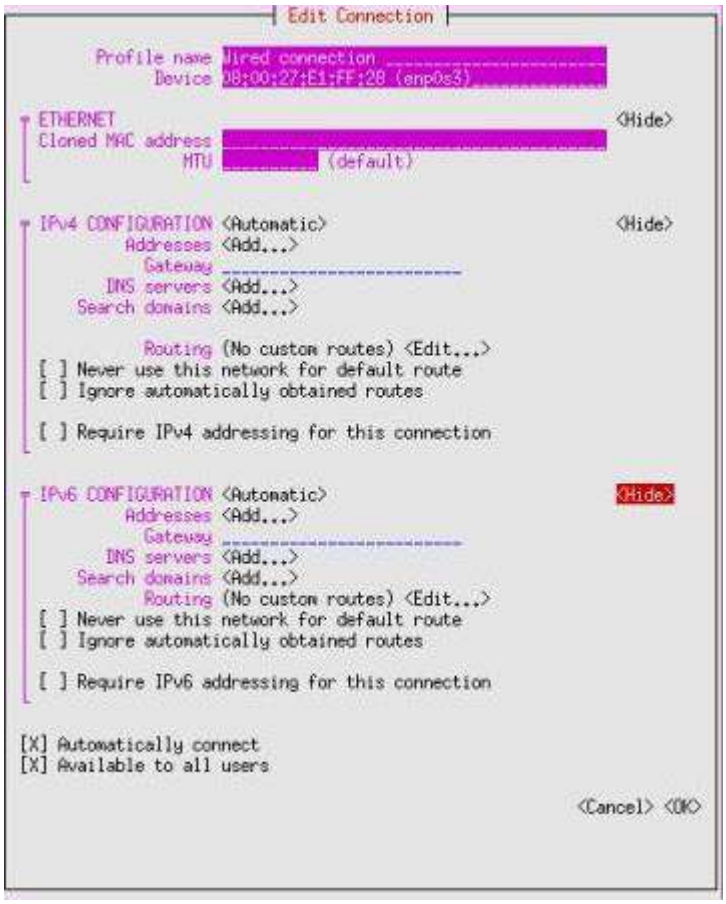
In the next window you can select the network configuration or network interface settings.

After selecting the first option will be displayed a window in which a choice of three options.

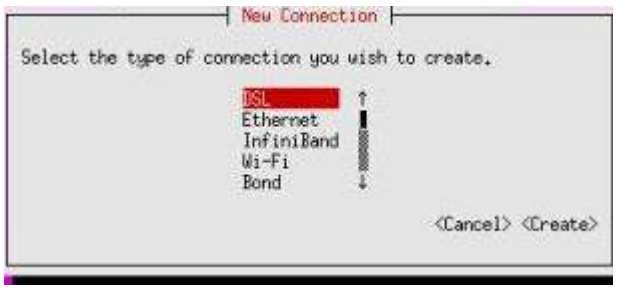
First option ***Edit a connection*** allows you to edit or delete existing connections and add the new connection.



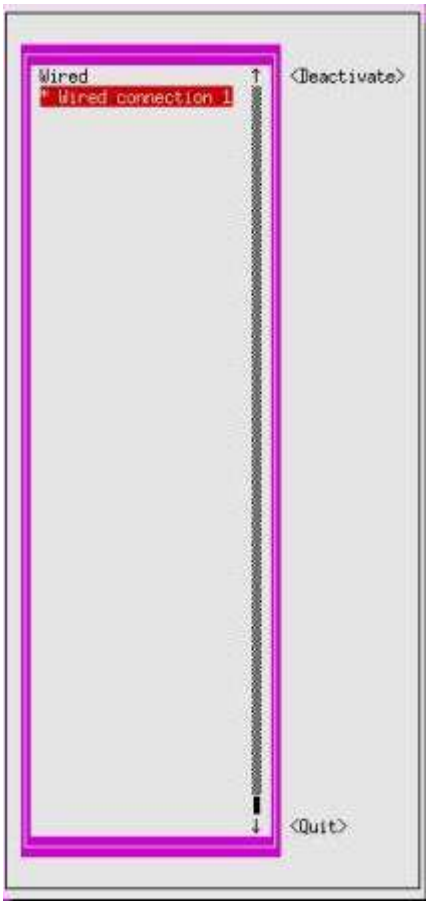
Edit option allows you to change the name of the connection and clonnign the device MAC address, as well as manual configuration IPv4 and IPv6.



Adding a new connection you have to choose connection type, then properly configure.



Activate a connection option allows to activate or deactivate the network connection.



Variant *Set system* ***hostname*** allows to give a name for the host, which is using by SVS.

After select ***Interfaces*** option window with network interfaces is displayed, where you should select one of them.

Next displays a list, which allows you to select one of the available transmission standards Ethernet.

Virtualization - what is it and how to do it?

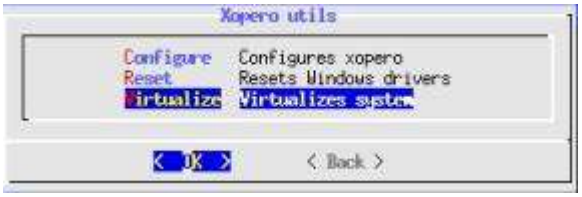
What is it?

Virtualization allows you to start the machine, if the computer is not fully compatible with it, it lets you to modify the image.

Virtualization allows you to access to the inside of the machine without the need to record it to disk and configure virtualizers.

How to do it?

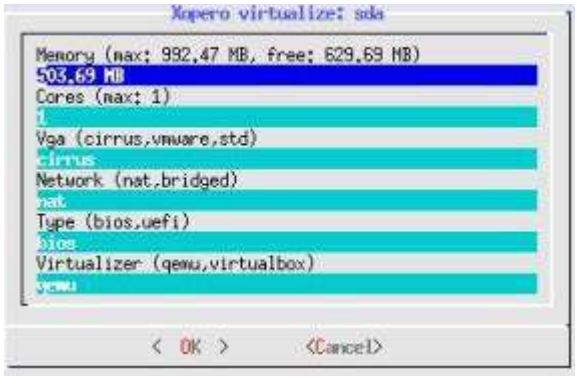
Option the system virtualization is shown in Xopero utils window as ***Virtualize***.



After selection, the user must choose the source from which the system will be subject to the present operation. There are two option.

The first is ***Local hard drive***, system virtualization from a local drive. After select this option must indicate the disk, which has to come under the virtualization.

In the next step in Xopero virtualize window the user must enter the required parameters, that is, the amount of RAM, the number of processor cores, standard graphics card and firmware, as well as choose a virtualizer.



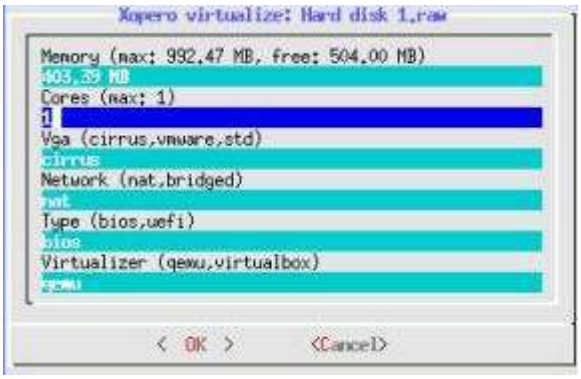
The second option is ***Network***, which allows the system image virtualization shared on the server. To share file HDD image backup on the server, use the export options - in project backup go to the *Advanced* tab select *Export* and choose the export task.

After selection ***Network*** option displays a window, where you have to choose a server, on which is the image.

In the next step choose the directory, in which is the RAW file.

Then you need to select HDD image which to be subjected virtualization.

In the next step in Xopero virtualize window the user must enter the required parameters, that is, the amount of RAM, the number of processor cores, standard graphics card and firmware, as well as choose a virtualizer.



After the execution previously discussed actions in both cases is requested to confirm system virtualization.

Approval of the options associated with editing the data in a disk image.

System restore from encrypted disk

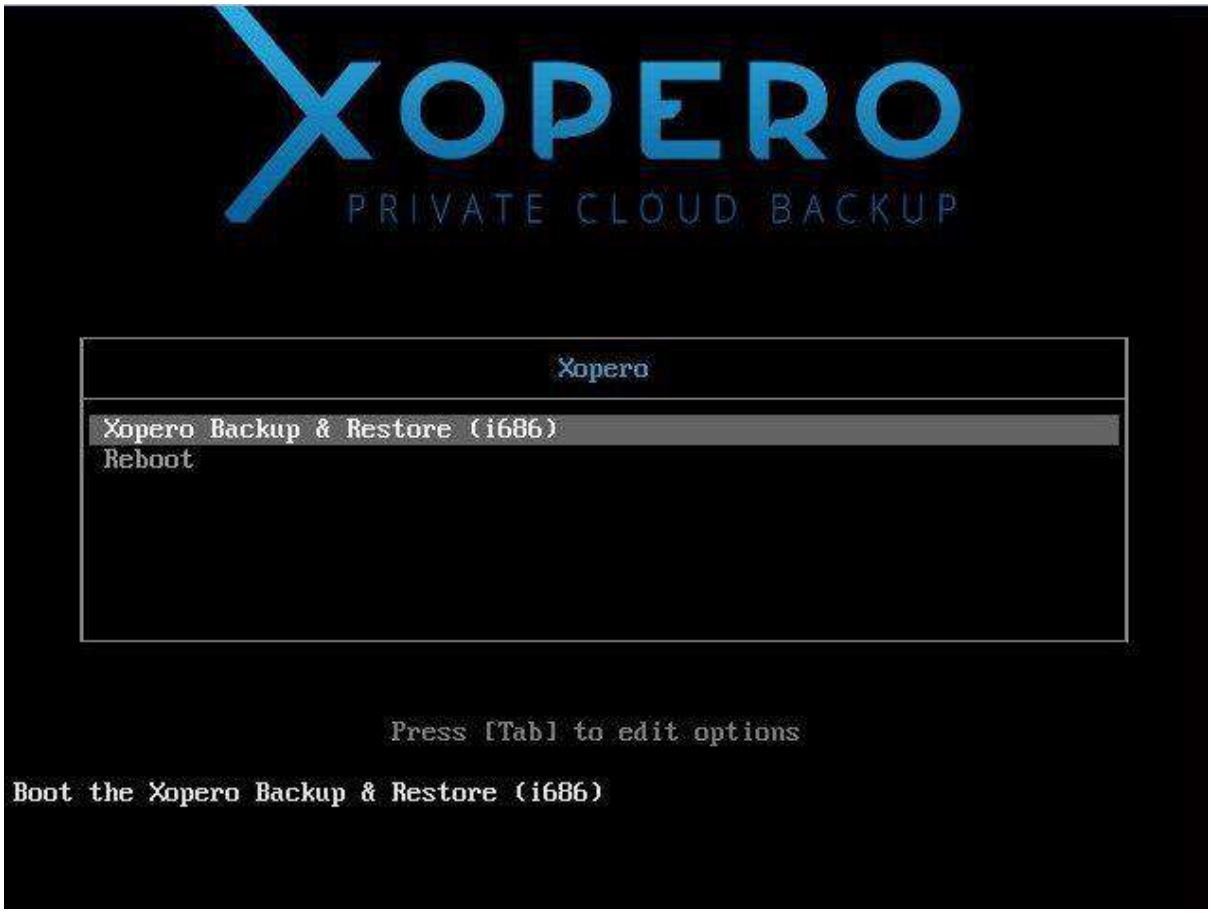
In case if HDD is encrypted with some encrypted programs Xopero still has access to the drive while it is not encrypted. It lets Xopero to perform HDD Image backup with no issues. Encrypted programs may edit boot sectors what may cause some issues after Bare Metal Restore process because the drive is no longer encrypted. If you will get any errors linked with invalid bootsector please try follow the steps:

1. Do HDD Image backup of the encrypted disk,
2. Restore with Smart Virtualization Stick,
3. Start the computer from the iso file of the operating system,
4. Select the Repair option,
5. Start CMD from Advanced Options,
6. Execute following commands one by one:
   bootrec / FixMbr
   bootrec / FixBoot
   bootrec / ScanOs
   bootrec / RebuildBcd
7. Remove OS installer and reboot computer.

Select network location of the RAW image

The SVS application allows to restore the operating system from a disk image in RAW format, located in a network resource (at local network). Manual for restoring the RAW image can be found here.

After starting Xopero SVS from a USB stick, the following window will appear with two options available. To restore the system, select Xopero Backup & Restore.



The System utils window will be displayed, in which you should select option: *Runs xopero retore*.

In the next step, select: *Restores disk* to go to the options for restoring the disk.

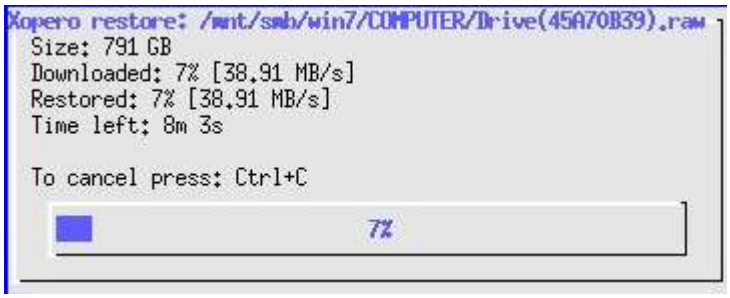
You will be asked to indicate the location from which the disk image will be downloaded. Select *Network share* from the available options.

A list of available network locations will be displayed. You should select the server on which the RAW image is located.

Then write credentials for the network resource.

You will be able to view the shared resources on the selected server. At this stage you should indicate the location of the RAW image.

After starting to restore the system image, information about the approximate remaining time will be displayed.



You will be notified of the system restore completion with the message: *Disc restored :)*.

Xopero software installation

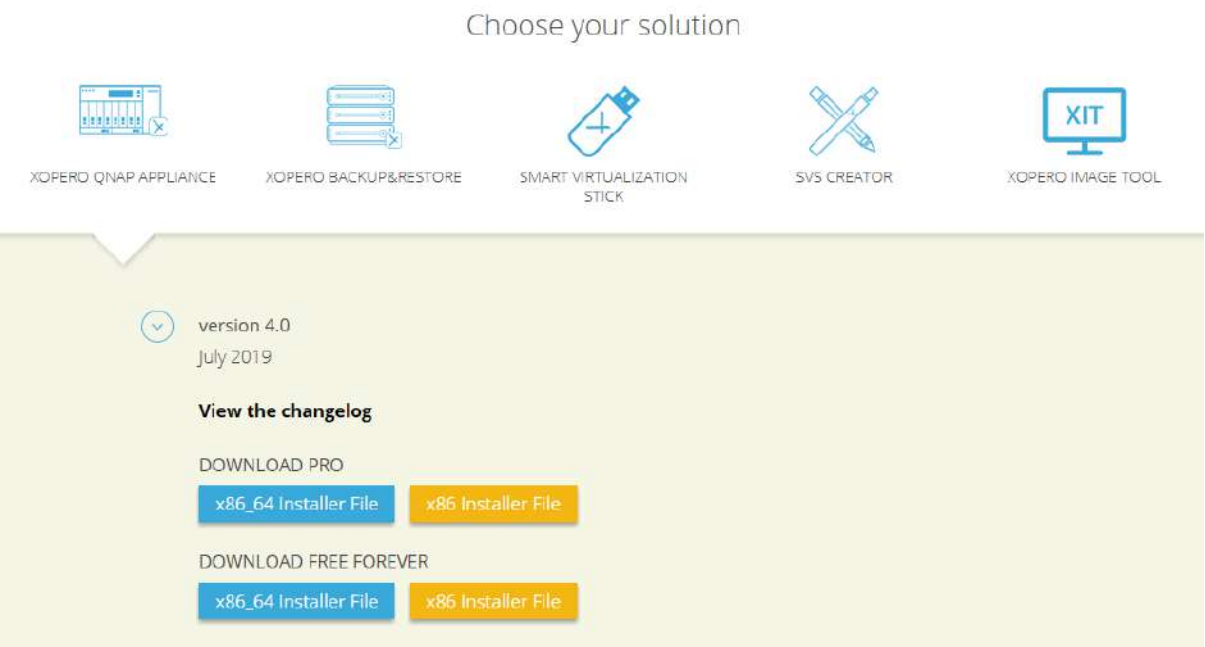
QNAP Appliance

Introduction

The following document will guide you through the installation of Xopero on the QNAP device. To install Xopero on QNAP, it has to be remembered that the particular NAS's processor must be built on x86/x64 architecture and run under the QTS 4.0 (or newer). System requirements are available on our website:https://xopero.com/system-requirements/

How to get Xopero?

You can download Xopero backup installation package directly from our website: https://xopero.com/latest-updates/

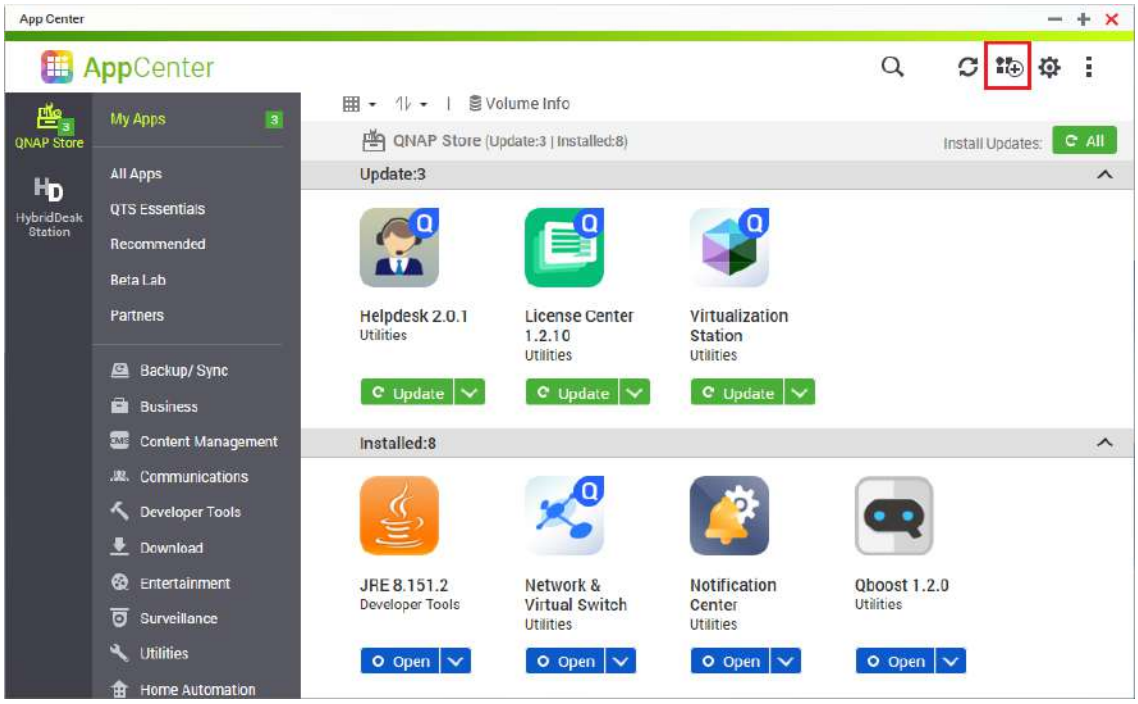


For NAS with QTS 4.2 download x86 Installer File.

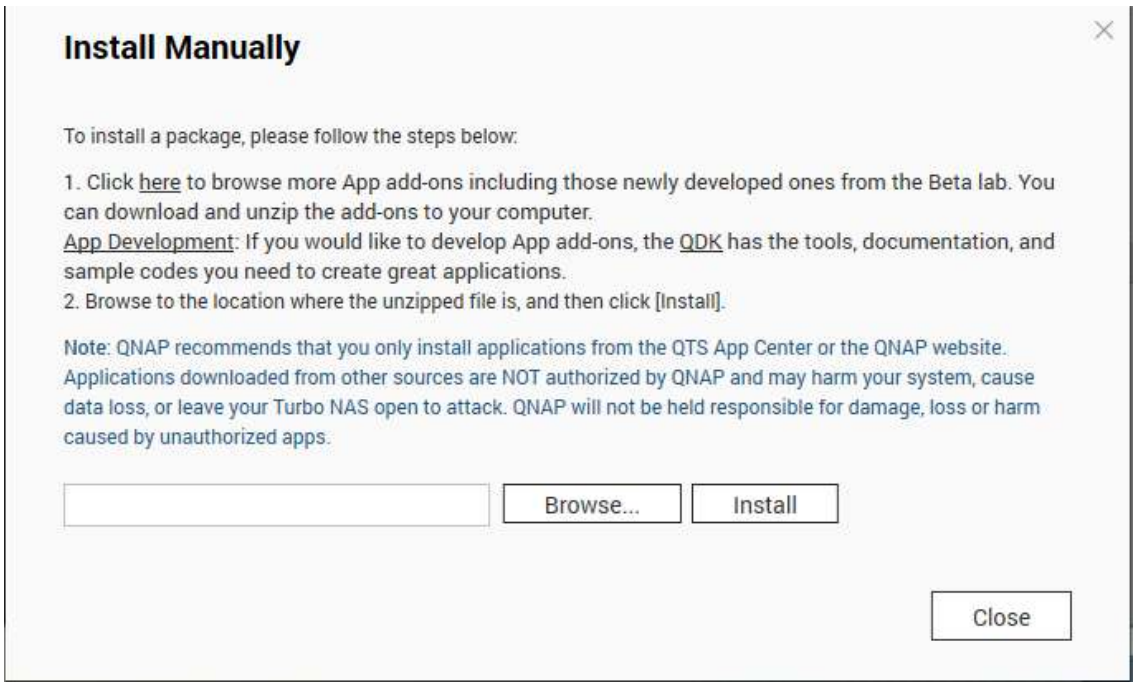
For NAS with QTS 4.3 or newer download x86_64 Installer File.

Installation

To install or update Xopero, go to your QNAP web panel and open the App Center. Click on ***Install Manually*** button which is placed in the right, top corner.



In the subsequently displayed dialog window click *Browse* button and select the package that you had downloaded. Then click *Install* button and installation process will begin.



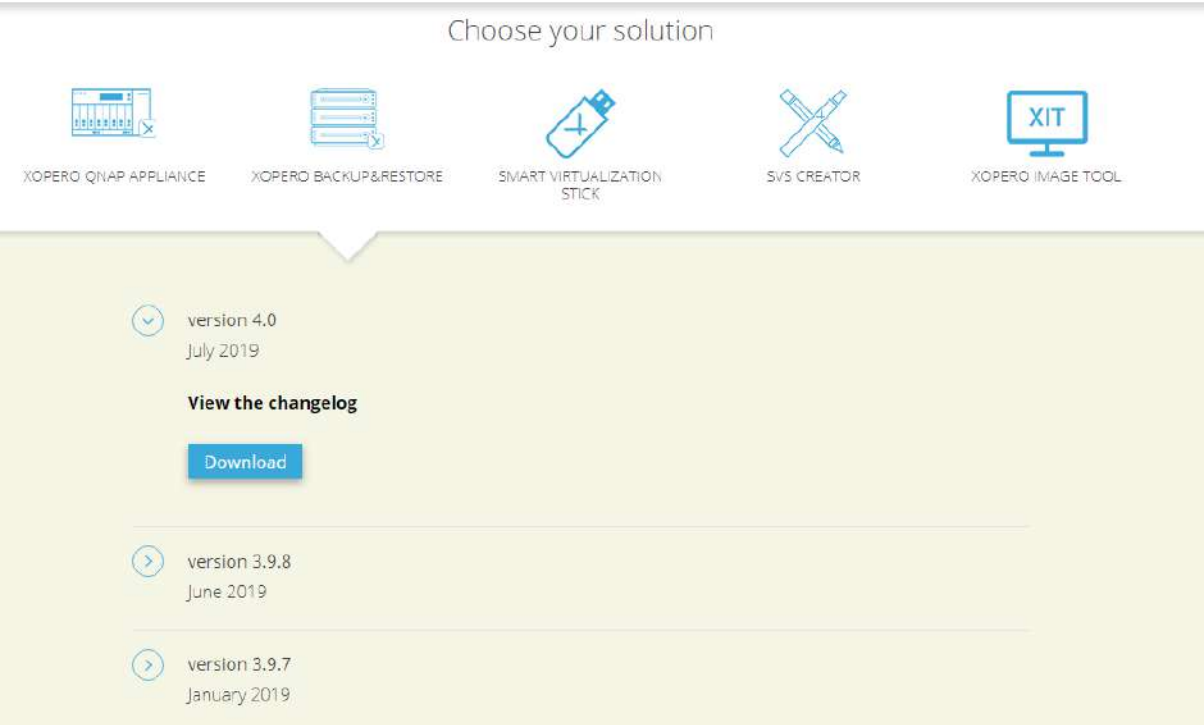
The installation process will take approximately 2 minutes. When it is finished you can start to protect your data with Xopero.

More informations about: Management Center, Client Application.

Backup&Restore

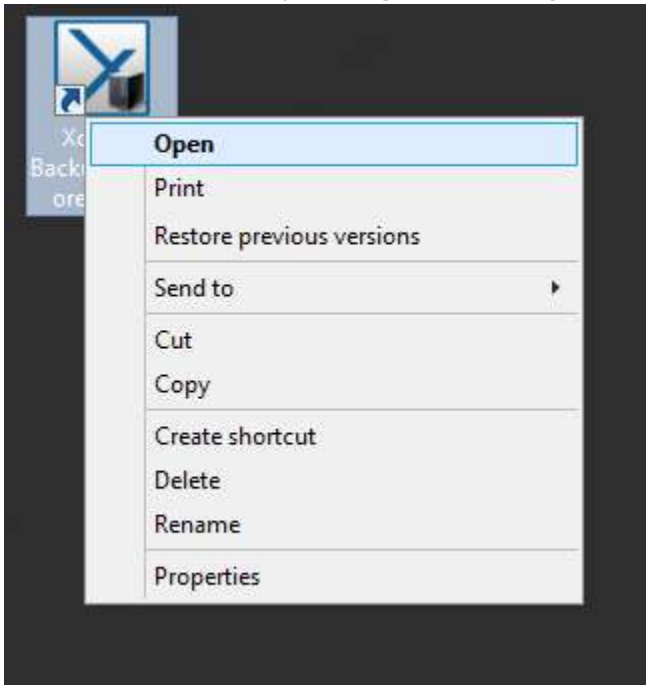
1. To get the latest version **Xopero Backup&Restore** go to https://xopero.com/latest-updates/

and click Download To check if your system is compatible click here.

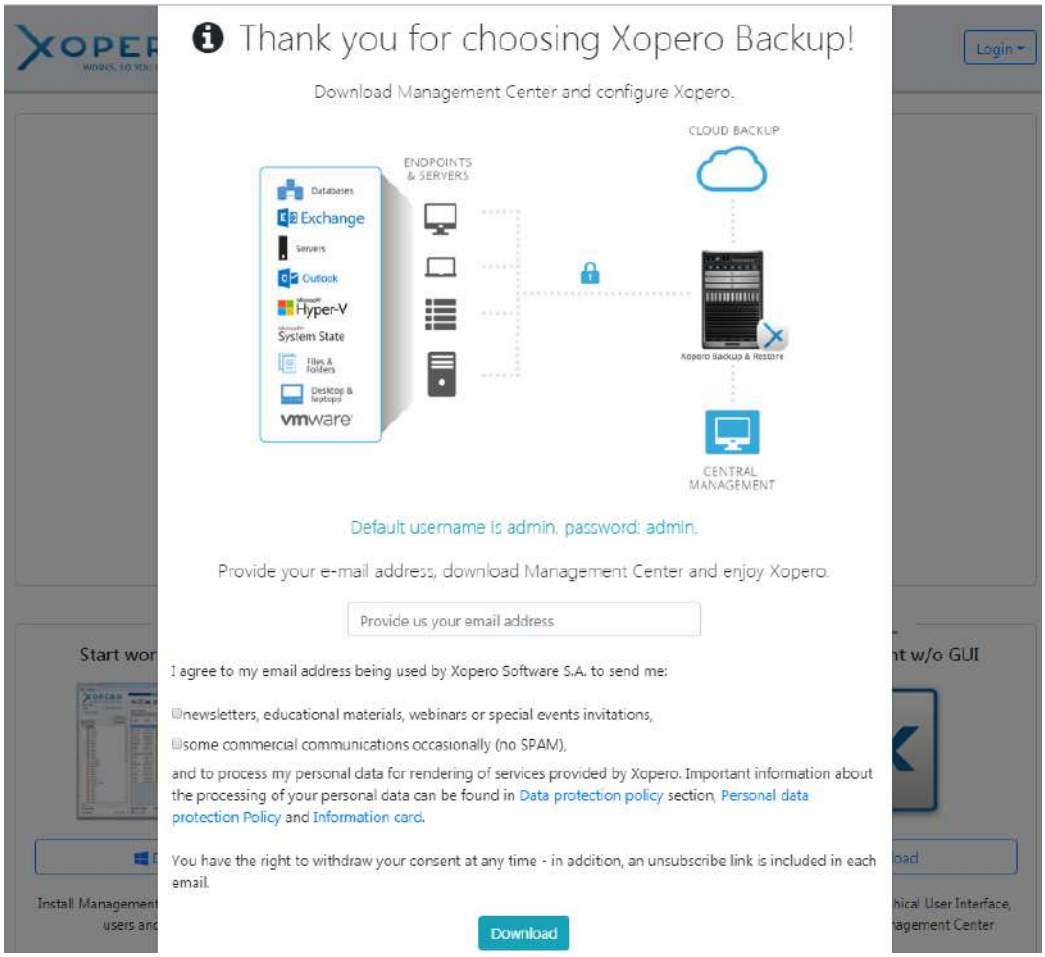


2. After download, open file to start installation. Choose preferred language and click Next.

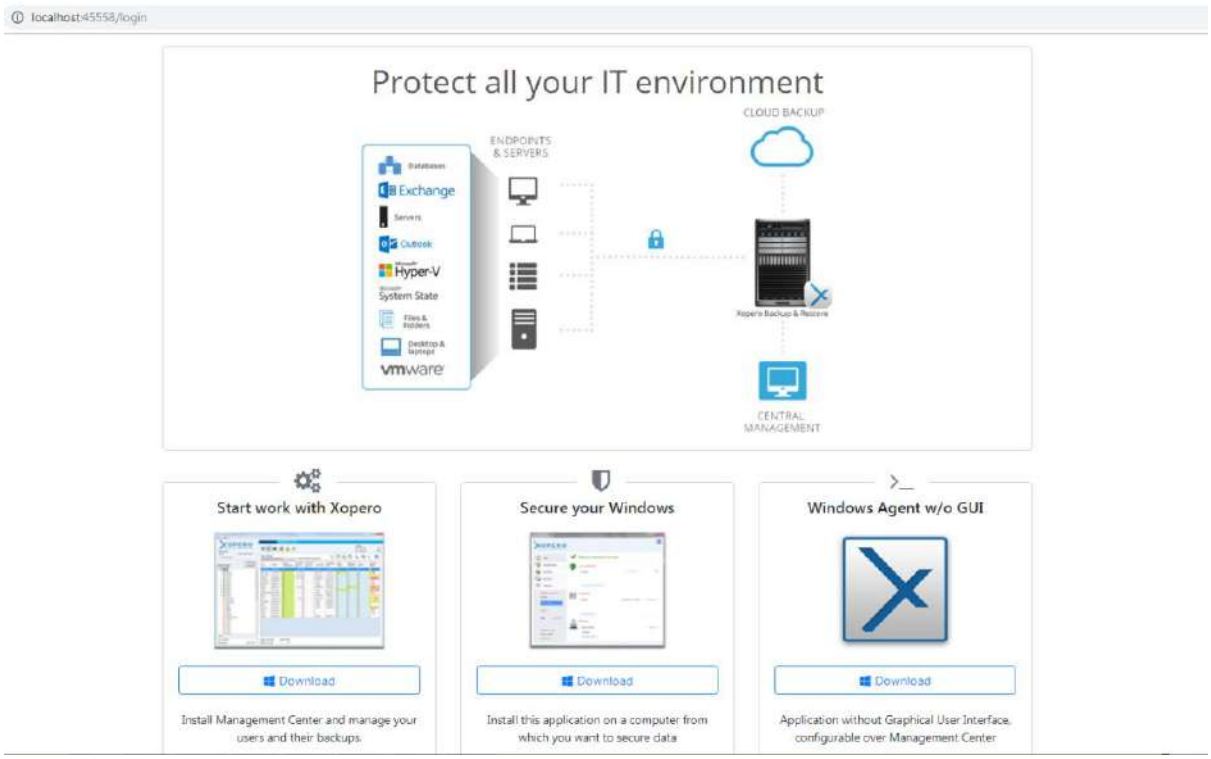
3. After installation open **Xopero Backup&Restore Panel**



4. Download application Management Center and install it on your PC. Afterwards go through the first-run-creator.



5. Thanks to Xopero Control Panel you will be able to download set of applications needed to protect your infrastructure (such as: Management Center, Client Application and/or Client Application without GUI).



CLI application

Introduction

Preface

These modifications make it possible to access the Opero Client software from the command line. The following actions will be implemented: addhost, backup, backupbriefcase, createconfig, delete, deletehost, dir, gethostslimit, gethostslist, getversion, getversionslimit, initkeytype, renamehost, resetaccount, restore, setversionslimit. These actions will be described in more detail in the following paragraphs. For all actions applies that a successful action is indicated by means of exit code 0. In all other cases a status code of 1 will be used.

Definitions

User – a base system unit which represents a single account/person in the system. The user is identified by his login.

Host – a single computer on which the Opero application runs. It imposes the consistency in the directory structure in the backup processes and when restoring the data for different computers. Number of hosts is limited according to the product.

Briefcase – disk space where user files are stored. This data are encrypted with briefcase key. The contents of this directory are synchronized on each of the computer of one user where the Opero application is installed.

Backup projects – the projects represent the files that were archived by the user using Opero Backup application. The files are differentiated based on the host that performed the backup. All projects are encrypted, each with the same key (default or user-defined)

Symbols used in this document

-- parameter <parameter>- required parameter,

[--parameter <parameter>] – additional parameter, non-required.

Configuration

The command line client does not need any configuration for it to function properly. All necessary information required to complete a given action is supplied via command line

options. The default values for options otherwise configurable via the full Opero client should be such that these are satisfactory in the majority of installations. The command line client is able to read default values from a configuration file. When used, this configuration file is expected to reside in one of the following folders:

- $HOME/.backup_cli.conf
- /etc/backup_cli.conf
- Path to configuration file can be indicated by parameter –config

If the command line client detects a configuration file in one of the aforementioned folders, it will load and process the contents of this configuration file before processing the command line options. If an error is found in the configuration file, the command line client will issue an error message describing which value, setting or option is causing the error and terminate with an exit value of 1.

Opero Command Line application requires Java 1.5 or newer.

If using command line application in Windows, it is recommended to do it from PowerShell.

Required parameters

Below parameters are required for each command.

Argument	Description
--login <login>	User login.
--password <password>	User password.

--server <address>	The network address of the Xopero Server specified as: --server=https://repo.xopero.com:443 (for cloud.xopero.com users) --server=https://repo2.xopero.com:443 (for cloud2.xopero.com users) --server=https://cloud3repo.xopero.com:443 (for cloud3.xopero.com users) --server=https://cloud4repo.xopero.com:443 (for cloud4.xopero.com users) --server=https://usrepo.xopero.com:443 (for uscloud.xopero.com users) --server=https://asiarepo.xopero.com:443 (for asia.xopero.com users) //this address is an example, it works for Xopero Cloud, Backup Expert and

	Backup Expert Blue, but every brand has different address The network address and port of the Xopero QNAP Appliance and Xopero Backup&Restore server specified as: ● --server=http://XOPERO_SRV:45558 - for HTTP connection, ● --server=https://XOPERO_SRV:45554 - for HTTPS connection.
--key <key>	Custom encryption key - required if the user has defined custom encryption key.

Additional parameters

Below parameter is additional and can be used for each command.

Argument	Description
[--help]	Command help.
[--config <path>]	Path to config file.
[--cache-dir <path>]	Path to cache directory.

[--log-dir <path>]	Path to log directory.

Create configuration file

Creates a new configuration file.

Command:

java -jar cli.jar createconfig --path=/home/tim/.backup.conf

Example:

java -jar opero-commandline.jar createconfig --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558

or

java -jar opero-commandline.jar createconfig --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --key=mykey

```
C:\>java -jar opero-commandline.jar createconfig --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:4555
8 --path=C:\Users\Natalia\backup_cli.conf
```

Argument	Description
[--path <path>]	Path to save file to. Default is 'backup__cli.conf' in user home directory

If the configuration file is created in the user's home directory, it will be automatically picked up by the CLI application.

Encryption key initialization

Initializes new encryption key for user account.

Command:

java -jar cli.jar initkeytype --key=mykey

Example:

java -jar opero-commandline.jar initkeytype --login=Natalia --password=zaq12wsx --server=http://192.168.0.199:45558 --key=123456

```
C:\>java -jar opero-commandline.jar initkeytype --login=Natalia --password=zaq12wsx --server=http://192.168.0.199:45558
--key=123456
```

If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar initkeytype --key=123456

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar initkeytype --config=D:\CLI.conf --key=123456

Argument	Description
[--key <key>]	Encryption key is initialized with user private key. Default is DEFAULT encryption key(generated automatically).

Encryption key/account reset

Resets user encryption key/account. **After using it all user data and host have been deleted**. To use this user account again it is required to initialize new encryption key.

Command:

java -jar cli.jar resetaccount --no-confirm

Example:

java -jar opero-commandline.jar resetaccount --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --no-confirm

```
C:\>java -jar opero-commandline.jar resetaccount --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:4555
8 --no-confirm
```

If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar resetaccount --no-confirm

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar resetaccount --config=D:\CLI.conf --no-confirm

Argument	Description
[--no-confirm]	Action will not need confirmation.

Get account info

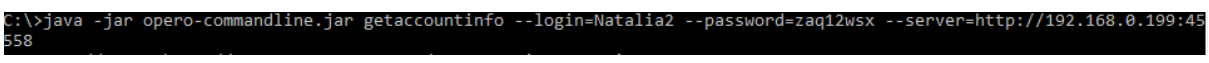
Gets info about: license type, hosts limit, capacity, used space...

Command:

java -jar cli.jar getaccountinfo

Example:

java -jar opero-commandline.jar getaccountinfo --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558



If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar getaccountinfo

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar getaccountinfo --config=D:\CLI.conf

Set file version limit

Sets limit of file versions that are stored on backup servers.

Command:

java -jar cli.jar setversionslimit --limit=15

Example:

java -jar opero-commandline.jar setversionslimit --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --limit=15

```
C:\>java -jar opero-commandline.jar setversionslimit --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:
45558 --limit=15
```

If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar setversionslimit --limit=15

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar setversionslimit --config=D:\CLI.conf --limit=15

Argument	Description
--limit <number>	File versions limit. Default is 30

Get file version limit

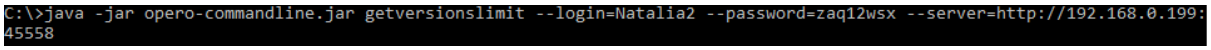
Gets limit of file versions that are stored on backup server.

Command:

java -jar cli.jar getversionslimit

Example:

java -jar opero-commandline.jar getversionslimit --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558



If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar getversionslimit

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar setversionslimit --config=D:\CLI.conf

Get hosts limit

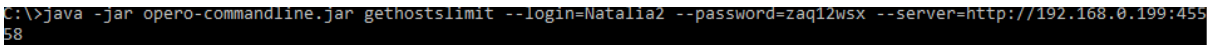
Gets hosts limit available for user.

Command:

java -jar cli.jar gethostslimit

Example:

java -jar opero-commandline.jar gethostslimit --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558



If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar gethostslimit

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar gethostslimit --config=D:\CLI.conf

Get hosts list

Gets list of all hosts that are assigned to user account.

Command:

java -jar cli.jar gethostslist

Example:

java -jar opero-commandline.jar gethostslist --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558

```
C:\>java -jar opero-commandline.jar gethostslist --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:4555
8
```

If you have a **configuration file** in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar **gethostslist**

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar **gethostslist** --config=D:\CLI.conf

Add new host

Adds new host under the user account (if host limit is not reached).

Command:

java -jar cli.jar addhost --host-name=TIM-LAPTOP

Example:

java -jar opero-commandline.jar addhost --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --host-name=Natalia2

```
C:\>java -jar opero-commandline.jar addhost --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --h
ost-name=Natalia2
```

If you have a **configuration file** in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar **addhost --host-name=Natalia2**

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar addhost --config=D:\CLI.conf **--host-name=Natalia2**

Argument	Description
--host-name <name>	**New host name.**

Change host name

Changes given host name. Host must exists and be assigned to given user account.

Command:

java -jar cli.jar renamehost --old-host-name=TIM-LAPTOP --new-host-name=JANE-LAPTOP --no-confirm

Example:

java -jar opero-commandline.jar renamehost --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --old-host-name=Natalia2 --new-host-name=Natalia-Laptop --no-confirm

```
C:\>java -jar opero-commandline.jar renamehost --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558
--old-host-name=Natalia2 --new-host-name=Natalia-Laptop  --no-confirm
```

If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar **renamehost --old-host-name=Natalia2 --new-host-name=Natalia-Laptop --no-confirm**

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar **renamehost --config=D:\CLI.conf --old-host-name=Natalia2 --new-host-name=Natalia-Laptop --no-confirm**

Argument	Description

--old-host-name <name>	**Current host name that has to be changed.**
--host-name <name>	**New host name.**
[--virtual]	**If used operates on virtual hosts.**
[--no-confirm]	**Action will not need confirmation.**

Delete host from account

Deletes host and all its data from user account.

Command:

```
java -jar cli.jar deletehost --host-name=TIM-LAPTOP --no-confirm
```

Example:

java -jar opero-commandline.jar deletehost --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --host-name=Natalia-Laptop --no-confirm

```
C:\>java -jar opero-commandline.jar deletehost --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558
--host-name=Natalia-Laptop  --no-confirm
```

If you have a **configuration file** in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar **deletehost --host-name=Natalia-Laptop --no-confirm**

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar **deletehost** --config=D:\CLI.conf **--host-name=Natalia-Laptop --no-confirm**

Argument	Description
--host-name <name>	Host name that has to be deleted.

[--no-confirm]	**Action will not need confirmation.**

Get projects list

Gets list of all projects in host.

Command:

java -jar cli.jar getprojectslist --host-name=TIM-LAPTOP

Example:

java -jar opero-commandline.jar getprojectslist --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --host-name=NATALIA1

```
C:\>java -jar opero-commandline.jar getprojectslist --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:4
5558 --host-name=NATALIA1
```

If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar getprojectslist --host-name=NATALIA1

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

```
java -jar opero-commandline.jar getprojectslist --config=D:\CLI.conf --host-name=NATALIA1
```

Argument	Description
[--host-name <name>]	Host name, which you want to get project list from.

Backup

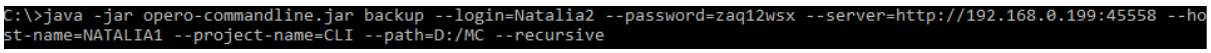
Performs a backup.

Command:

```
java  -jar cli.jar backup --host-name=TIM-LAPTOP --project-name=Photos --path=/home/tim/photo, /home/tim/picture --key=mykey --recursive
```

Example:

java -jar opero-commandline.jar backup --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --host-name=NATALIA1 --project-name=CLI --path=D:/MC --recursive



If you have a **configuration file** in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar backup --path=D:/MC --recursive

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar backup --config=D:\CLI.conf **--path=D:/MC --recursive**

Argument	Description
--path <path1, path2, ...>	**This argument specifies a list of files and/or directories to be backed up. multiple paths are separated with ','. It is the user's responsibility to properly quote any file or folder name containing embedded whitespace or other special characters. If the optional --*recursive*option is specified, all specified folders will be backed up**

	recursively. The use of relative paths is allowed and will be treated properly by the agent(this means that the agent will fully resolve any relative path into the correct absolute path and automatically compress any redundant path components).
[--host-name <name>]	**Host name to which files will be added. This host must be firstly added to user account by command *addhost*. Default is current host.**
[--project-name <name>]	**Project name to which files will be added. Default is 'commandline'.**
[--recursive]	**This argument specifies to set backup as recursive.**
[--backup-method <method>]	**Specifies backup method for files: REGULAR | DIFFERENTIAL |**

	INCREMENTAL. Default is automatic.
[--path-separator <separator>]	**Path separator of files and/or directories list. Default is ','.**
[--key <key>]	**User encryption key used to encrypt a stored files. Required if user defined his own encryption key(not default).**

Output

This command will print, during and after backup, list of backed up files, one line for each file (the full path will be shown).

Backup briefcase

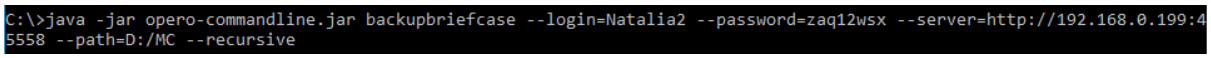
Sends files to briefcase.

Command:

```
java -jar cli.jar backupbriefcase --path=/home/tim/ln  --briefcase-dir=\\ln --recursive
```

Example:

java -jar opero-commandline.jar backupbriefcase --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --path=D:/MC --recursive



If you have a **configuration file** in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar backupbriefcase --path=D:/MC --recursive

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar backupbriefcase **--config=D:\CLI.conf** --path=D:/MC --recursive

Argument	Description

--path <path1, path2, ...>	**This argument specifies a list of files and/or directories to be backed up. multiple paths are separated with ','. It is the user's responsibility to properly quote any file or folder name containing embedded whitespace or other special characters. If the optional --recursive option is specified, all specified folders will be backed up recursively. The use of relative paths is allowed and will be treated properly by the agent(this means that the agent will fully resolve any relative path into the correct absolute path and automatically compress any redundant path components).**
[--recursive]	**This argument specifies to set backup as recursive.**
[--briefcase-dir <directory>]	**Specifies the directory in briefcase where files will be uploaded. If it is not given files are sent to main briefcase directory.**

[--path-separator <separator>]	**Path separator of files and/or directories list. Default is ','.**

Output

This command will print, during and after file sending, list of sent files, one line for each file (the full path will be shown).

Delete

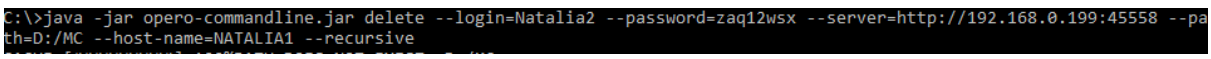
Deletes files and directories that were sent to backup server.

Command:

java -jar cli.jar delete --host-name=TIM-LAPTOP --project-name=Photos --path=\\\\home\\tim\\picture --recursive --no-confirm

Example:

java -jar opero-commandline.jar delete --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --path=D:/MC --host-name=NATALIA1 --recursive



If you have a **configuration file** in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar delete

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar delete **--config=D:\CLI.conf**

Argument	Description
[--host-name <name>]	Host name from which files have to be deleted. Default is current host.
[--project-name <name>]	Project name from which files have to be deleted. Default refers to all project given from host.

[--path <path1, path2, ...>]	**Paths of files and directories that have to be deleted. The name should contain the full path where the directory of file is located. Multiple files and/or directories are separated with ','.**
[--version <GUID1, ...>]	**It is specifying which file versions have to be deleted. Multiple versions are separated with ','. If it is not given all versions will be deleted.**
[--date <YYYY-MM-DD hh:ss:mm>]	**Paths/versions created after this date will not be included.**
[--recursive]	**This argument specifies to delete files recursively from directory. If it is not given subdirectories and their files will not be deleted, only files in given folder.**

[--no-confirm]	**Action will not need confirmation.**

Output

As output, the delete command will print the list of deleted files or folders on standard output, one line for each file (the full path will be shown).

Restore

Restores files from backup servers.

Command:

java -jar cli.jar restore --host-name=TIM-LAPTOP --project-name=Photos --restore-dir=/home/tim/restore --path=\\\\home\\tim\\picture --key=mykey --recursive

Example:

java -jar opero-commandline.jar restore --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --path=D:\MC --host-name=NATALIA1 --recursive

```
C:\>java -jar opero-commandline.jar restore --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --p
ath=D:\MC --host-name=NATALIA1 --recursive
```

If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar restore

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

java -jar opero-commandline.jar restore --config=D:\CLI.conf

Argument	Description
[--host-name <name>]	Host name from which files have to be restored. Default is current host.
[--project-name <name>]	Project name from which files have to be restored. Default refers to all project from given host.

[--path <path1, path2, ...>]	Path to directories that have to be restored. It is possible to type there a file that we want to display versions. If empty then main folder will be selected by default.
[--version <GUID1, GUID2, ...>]	File versions id that has to be downloaded. If it will be given then paths parameter will be missed.
[--date <YYYY-MM-DD hh:ss:mm>]	Paths/versions created after this date will not be included.
[--recursive]	Restores all directories that are under given path.
[--restore-dir <dir>]	Local directory where files will be downloaded. If not specified files will be downloaded to current directory.

[--key <key>]	User encryption key used to decrypt a downloaded files. Required if user defined his own encryption key (not default).
[--overwrite]	Specifies overwrite mode: ASK | YES | NO. Default is ASK.
[--maxThreads <number>]	Maximum number of threads to use. Default is 8.

Output

As output, the restore command prints the list of restored files and folders on standard output, one line for each file (the full path is displayed).

Get version info

Returns version number.

Command:

java -jar cli.jar getversion

Example:

java -jar opero-commandline.jar getversion

```
C:\>java -jar opero-commandline.jar getversion
```

List directories

Dir

Commands shows directories or file version stored on backup servers.

java -jar cli.jar dir --path=\\opero_agent\\Client\\client.jar --long-format

F | \opero_agent\Client\client.jar | R | 2013-01-14 10:20:12 | c6ff0019-9ed5-41d1-b582-baffc5fc9f20 | 2013-01-14 10:20:12 | 1605164

F | \opero_agent\Client\client.jar | R | 2013-01-14 10:20:12 | acdcc334-4717-45bf-b017-61653ae03470 | 2013-01-14 10:20:12 | 1605164

Long file version format

The long file version displays the results in the following format:

type|path|backup method|date modified|GUID|date created|size in bytes|description

The type indicator possible values :

- **F - File**
- **D - Directory**

The backup method indicator possible values:

- **R - Regular**
- **P - Partial**
- **D - Differential**
- **I - Incremental**

For a single-directory listing, the name tag only contains the name of a file or directory and not contains the path. For a recursive directory listing the name contains the relative full path.

The size of a file will be displayed in bytes. The date created and date modified display the date when a file has been created or modified. The date format for files is YYYY-MM-DD hh:mm:ss. The GUID defines the file version.

Examples

The request to display the 'opero_agent\Client' directory for briefcase:

java -jar cli.jar dir --path=\\opero_agent\\Client\\client.jar --long-format

F | \opero_agent\Client\client.jar | R | 2013-01-14 10:20:12 | c6ff0019-9ed5-41d1-b582-baffc5fc9f20 | 2013-01-14 10:20:12 | 1605164

F | \opero_agent\Client\client.jar | R | 2013-01-14 10:20:12 | acdcc334-4717-45bf-b017-61653ae03470 | 2013-01-14 10:20:12 | 1605164

With --recursive option:

java -jar cli.jar dir --path=\\opero_agent\\Client --long-format --recursive

F | client-with-logging.sh | R | 2013-01-14 10:20:12 | 26bdad8d-c2aa-4771-86af-e54be3f2997b | 2013-01-14 10:20:12 | 123 | rwxr-xr-x | u: tim | g: tim

F | client.jar | R | 2013-01-14 10:20:12 | c6ff0019-9ed5-41d1-b582-baffc5fc9f20 | 2013-01-14 10:20:12 | 1605164

F | config\logging.propeties | R | 2013-01-14 10:20:12 | d6f680f5-ca0b-4e04-98b5-b18dbed374f9 | 2013-01-14 10:20:12 | 142

F | whitelabel.jar | R | 2013-01-16 09:51:48 | de504389-1d89-407b-a55f-a2fb483708e1 | 2013-01-16 09:51:48 | 17431

For file versions:

java -jar cli.jar dir --path=\\opero_agent\\Client\\client.jar --long-format

F | \opero_agent\Client\client.jar | R | 2013-01-14 10:20:12 | c6ff0019-9ed5-41d1-b582-baffc5fc9f20 | 2013-01-14 10:20:12 | 1605164

F | \opero_agent\Client\client.jar | R | 2013-01-14 10:20:12 | acdcc334-4717-45bf-b017-61653ae03470 | 2013-01-14 10:20:12 | 1605164

Short format file version

The short version displays the results in the following format:

<type>|<name>

The type indicator possible values:

- **F - File**
- **D - Directory**

For a single-directory listing, the name tag only contains the name of a file or directory and not contains the path. For a recursive directory listing the name contains the relative full path.

Launch remote management capabilities

It allows remote management from the Management Center.

Command:

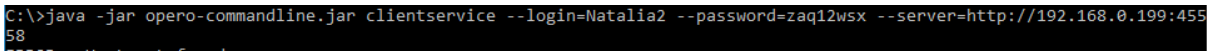
java -jar cli.jar clientservice

Example:

java -jar opero-commandline.jar clientservice --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558

Or:

java -jar opero-commandline.jar clientservice --login=Natalia2 --password=zaq12wsx --server=http://192.168.0.199:45558 --daemon&



If you have a configuration file in user's home directory, you do not need to enter the parameters: login, password, server:

java -jar opero-commandline.jar clientservice

If you have a configuration file in a different directory than the user's home directory, then you have to enter the parameter: config, e.g.

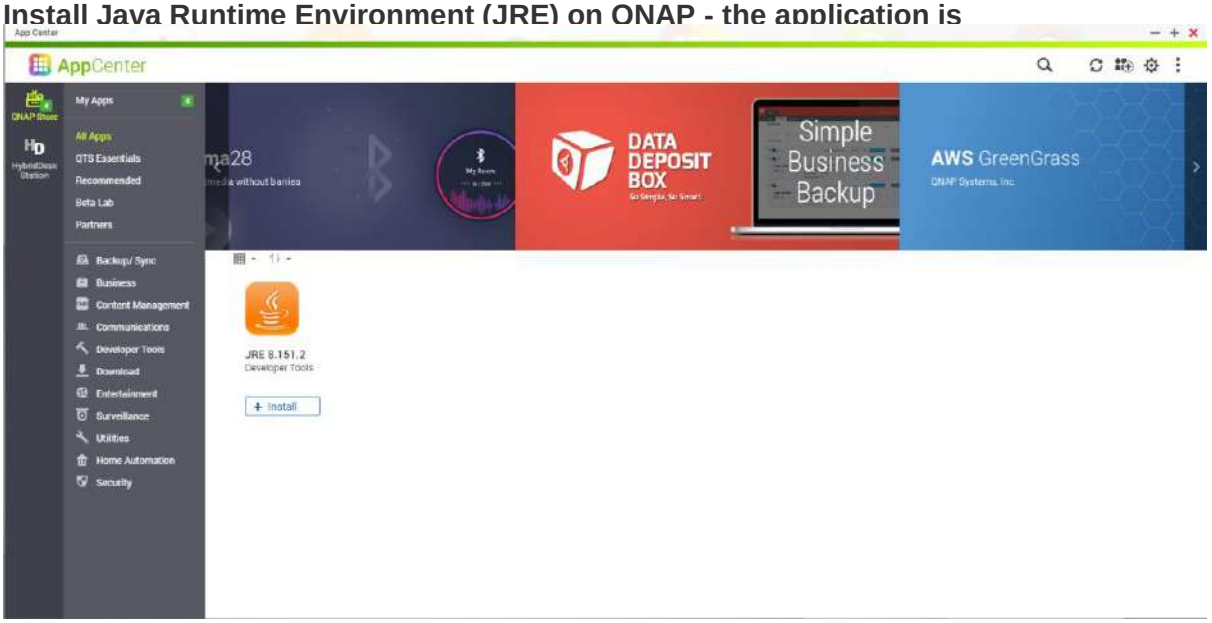
java -jar opero-commandline.jar clientservice **--config=D:\CLI.conf**

Argument	Description
[--config]	**Path to configuration file.**
[--daemon]	**It makes the CLI can be closed only by "killing" the process or pressing the combination CTRL + C.** **& - causes the process to run in the background and you can disable the console.**

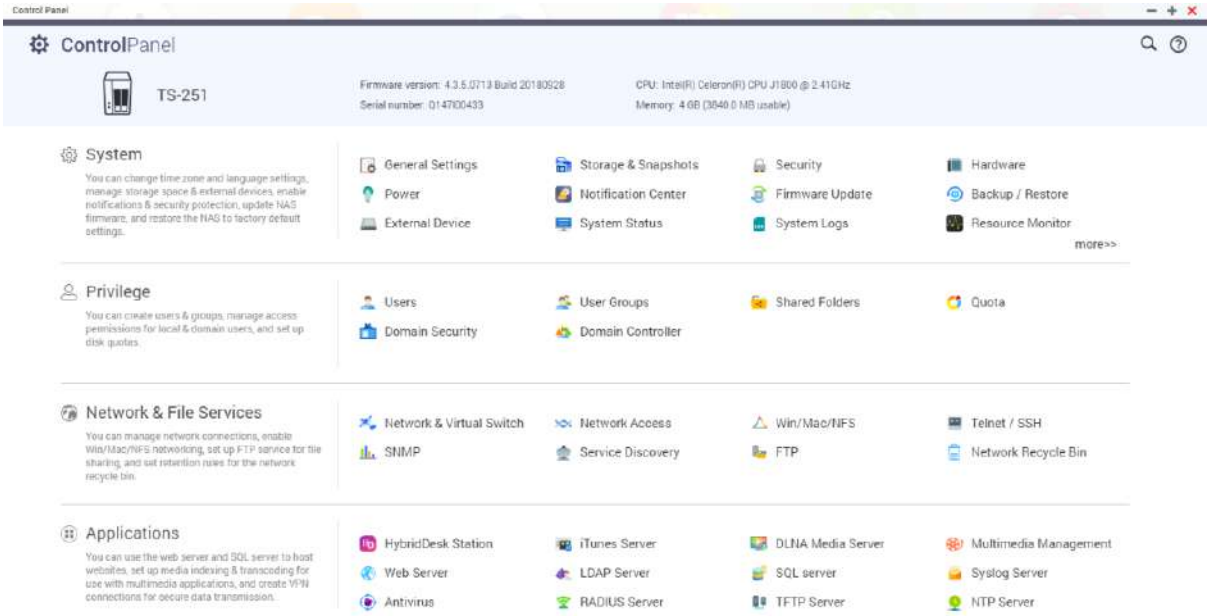
Running the CLI application on QNAP

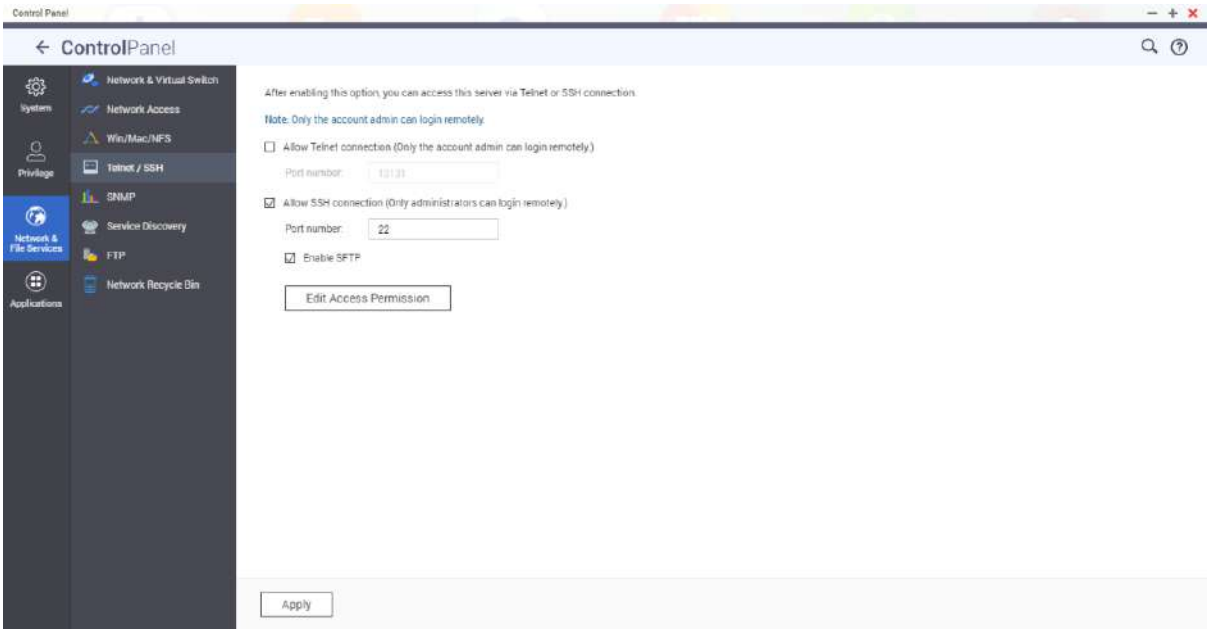
CLI application can run directly on QNAP NAS - it allows you to backup of resources from the NAS directly to Xopero backup server or to the Xopero Cloud server. All backups will be be incremental and differential, and the data will be compressed and encrypted, and will be versioned. Additionally, deduplication mechanisms will work, and data recovery will be carried out exactly the same way as in the case of other Xopero backups, through one of our applications, for example, i.e. Management Center. In order to configure the CLI application to QNAP it is necessary to:

- **Install Java Runtime Environment (JRE) on QNAP - the application is**

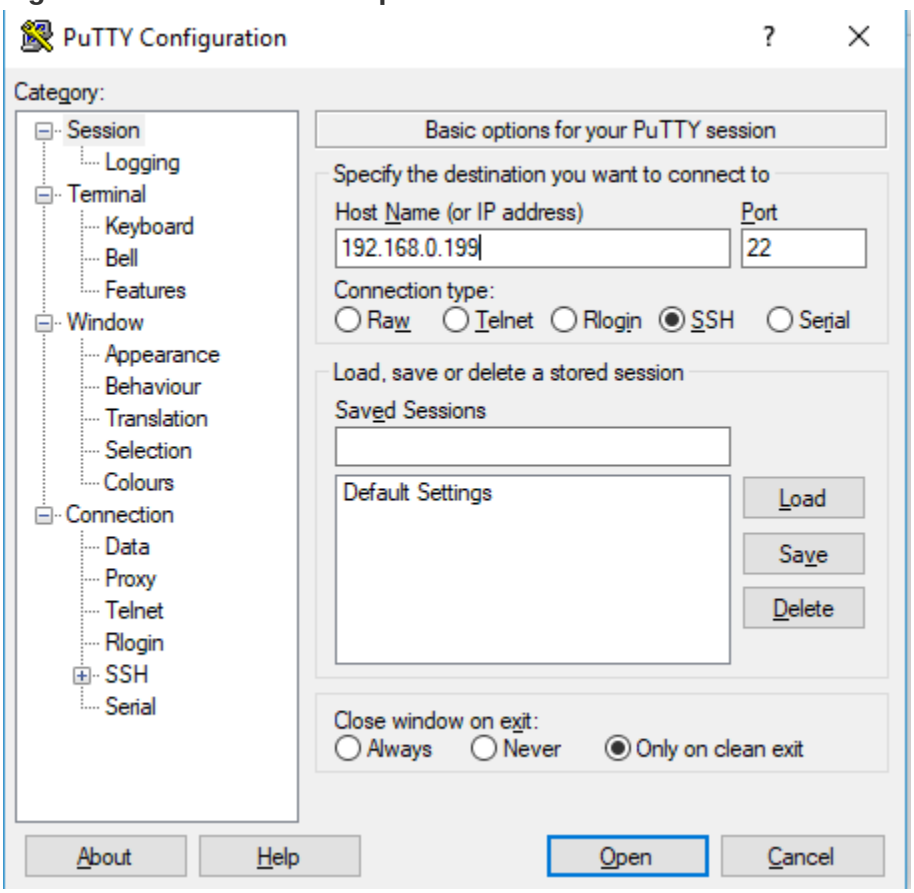


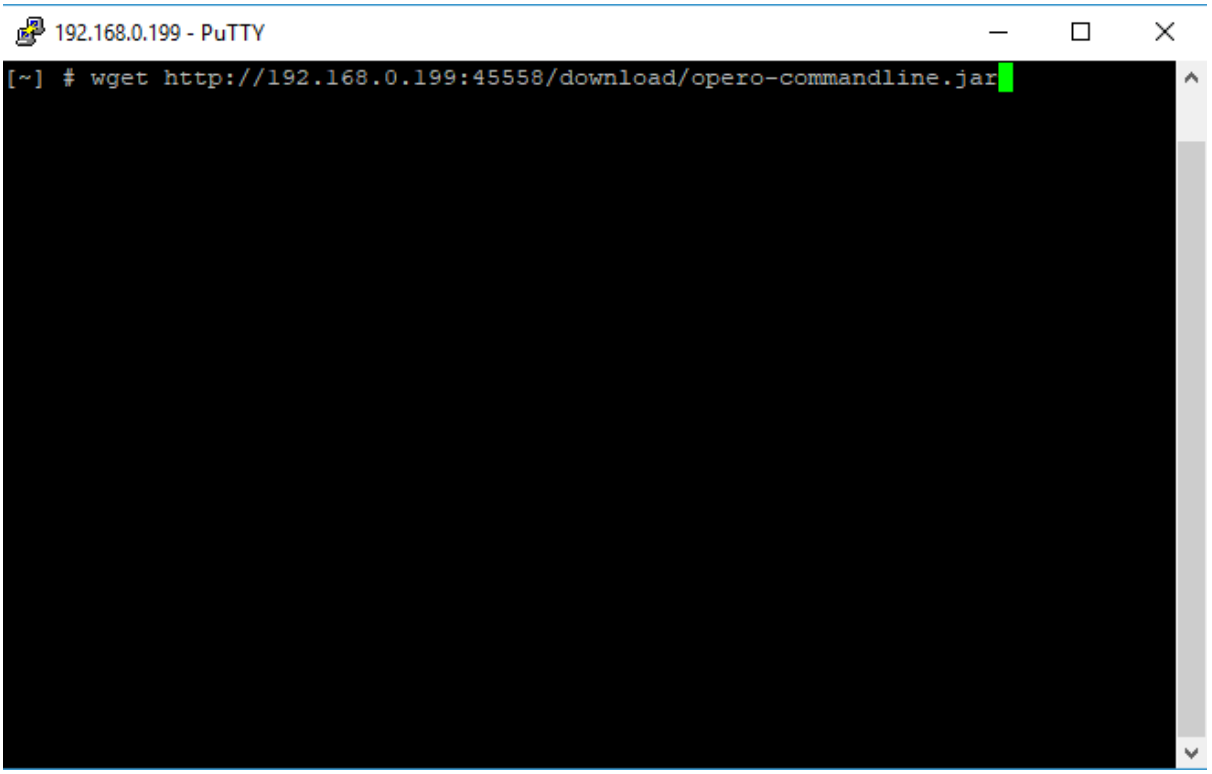
- **Enable SSH on QNAP - to do it, log in to QNAP NAS, go to Control Panel and select Telnet/SSH option,**



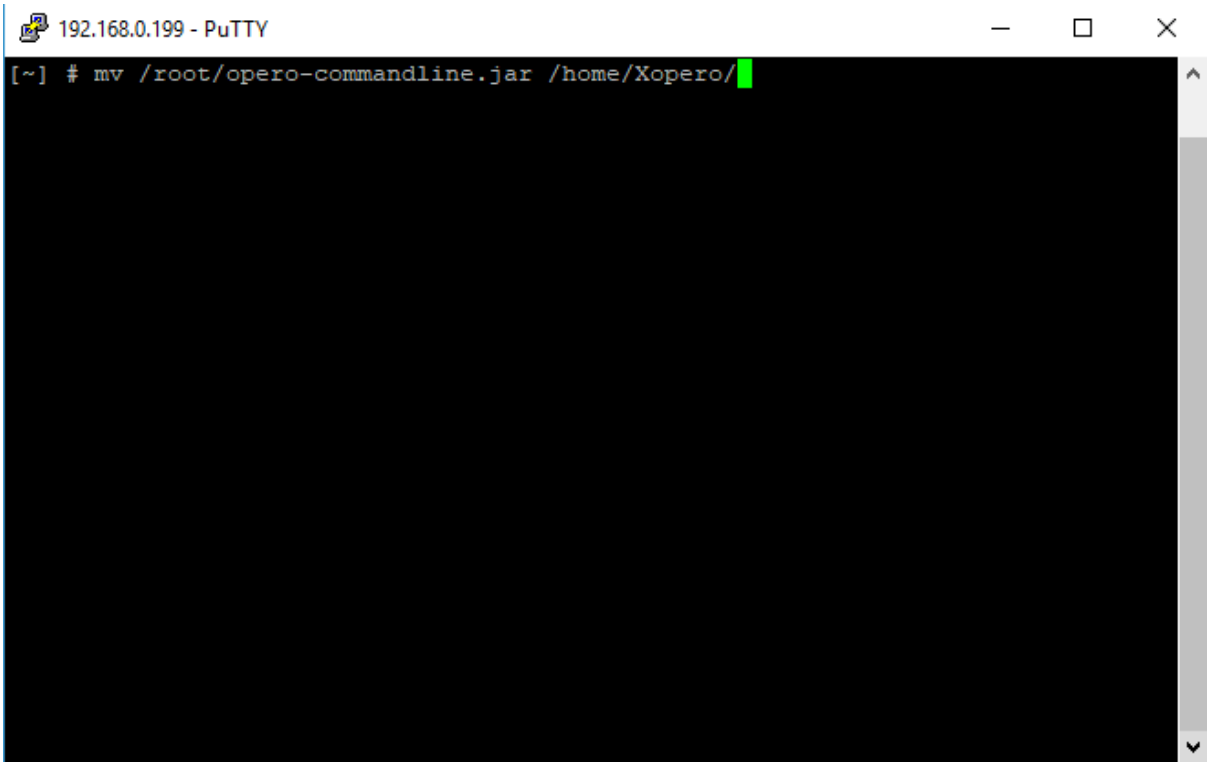


- **Log in to QNAP via SSH and download the CLI application, which is available in the Download Centre in the Xopero Control Panel.**
  The default location of the Xopero CLI application (opero-commandline.jar) is: {QNAP server address}\Web\xopero\download,
  e.g. \\192.168.0.199\Web\xopero\download

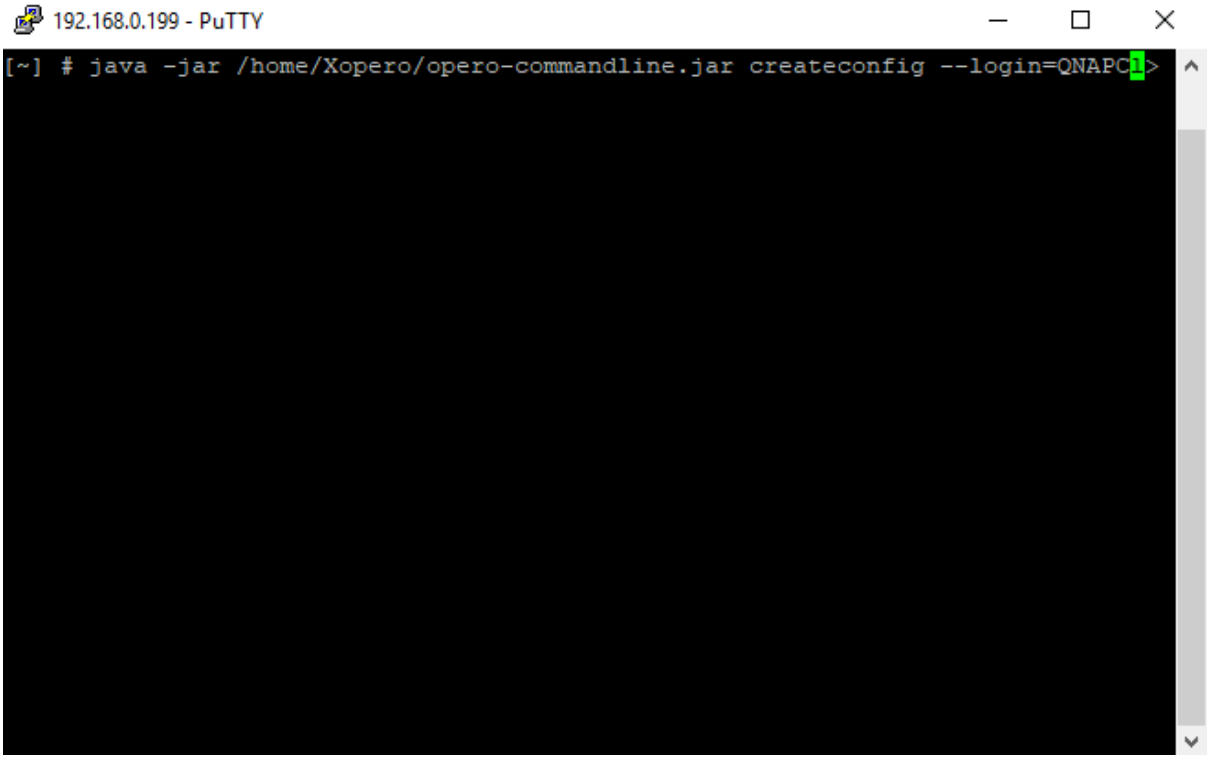




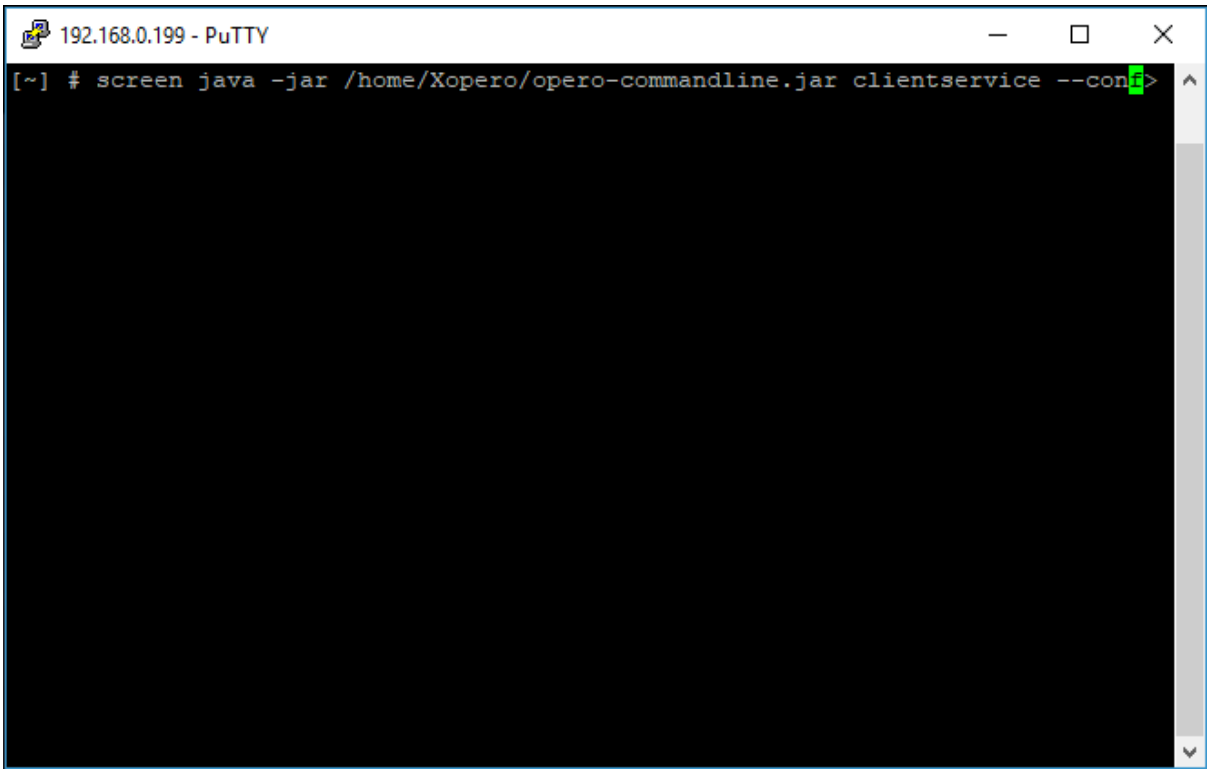
- **Applications can be moved from the /root/ directory,**



- **Create a configuration file for CLI applications,**



- **When you start the application, use the screen command, which will allow the application to running after the SSH connection is closed,**
  Np. screen java -jar /home/Xopero/opero-commandline.jar clientservice --config=/home/Xopero/.backup.conf



- **Configure local data backup from the Local Management Center or Cloud Managament Center.**

You can find more information about enabling remote management service here.

CLI autostart as a service on Windows system

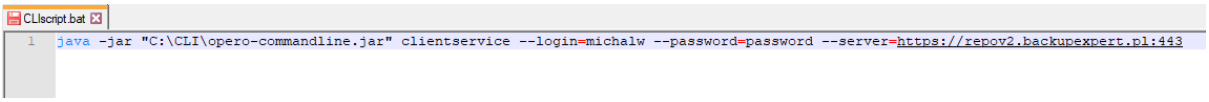
The CLI application can be launched when Windows starts. To do this, prepare a script that launches the CLI application as a service, and then attach it to the system schedule.

Preparation of the script

You can create a .bat executable script in a notepad, just type the following command in it:

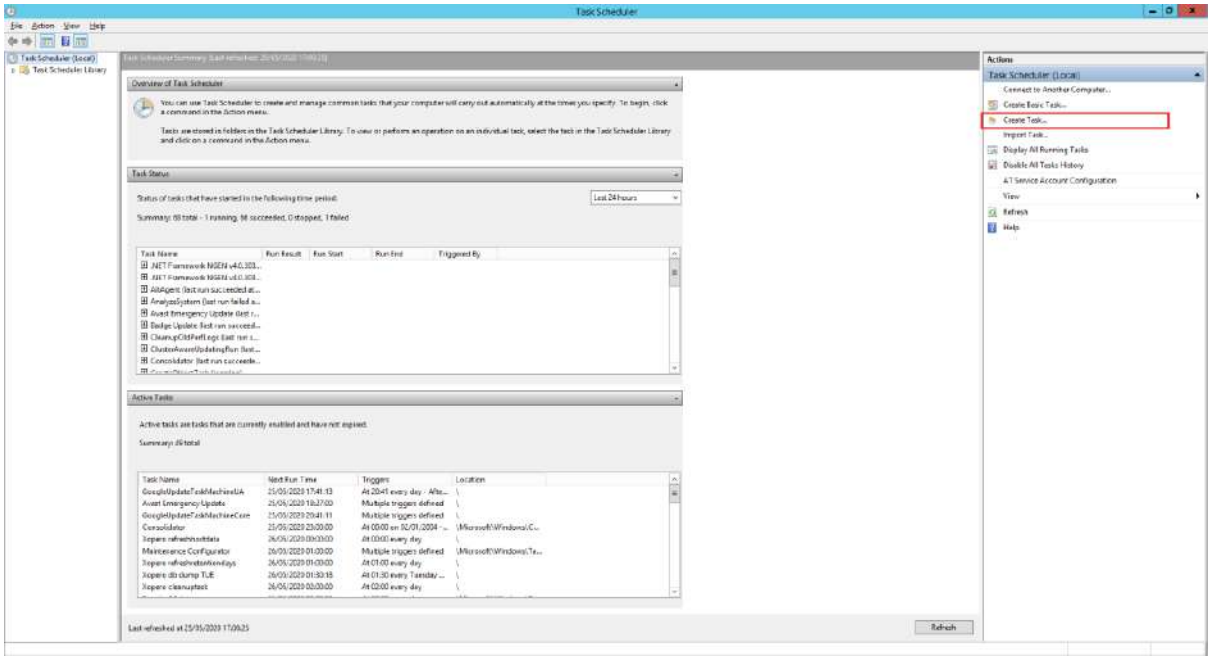
java -jar <path_to_CLI_application> clientservice --login=<login> --password=<password> --server=<sever_address>

example:

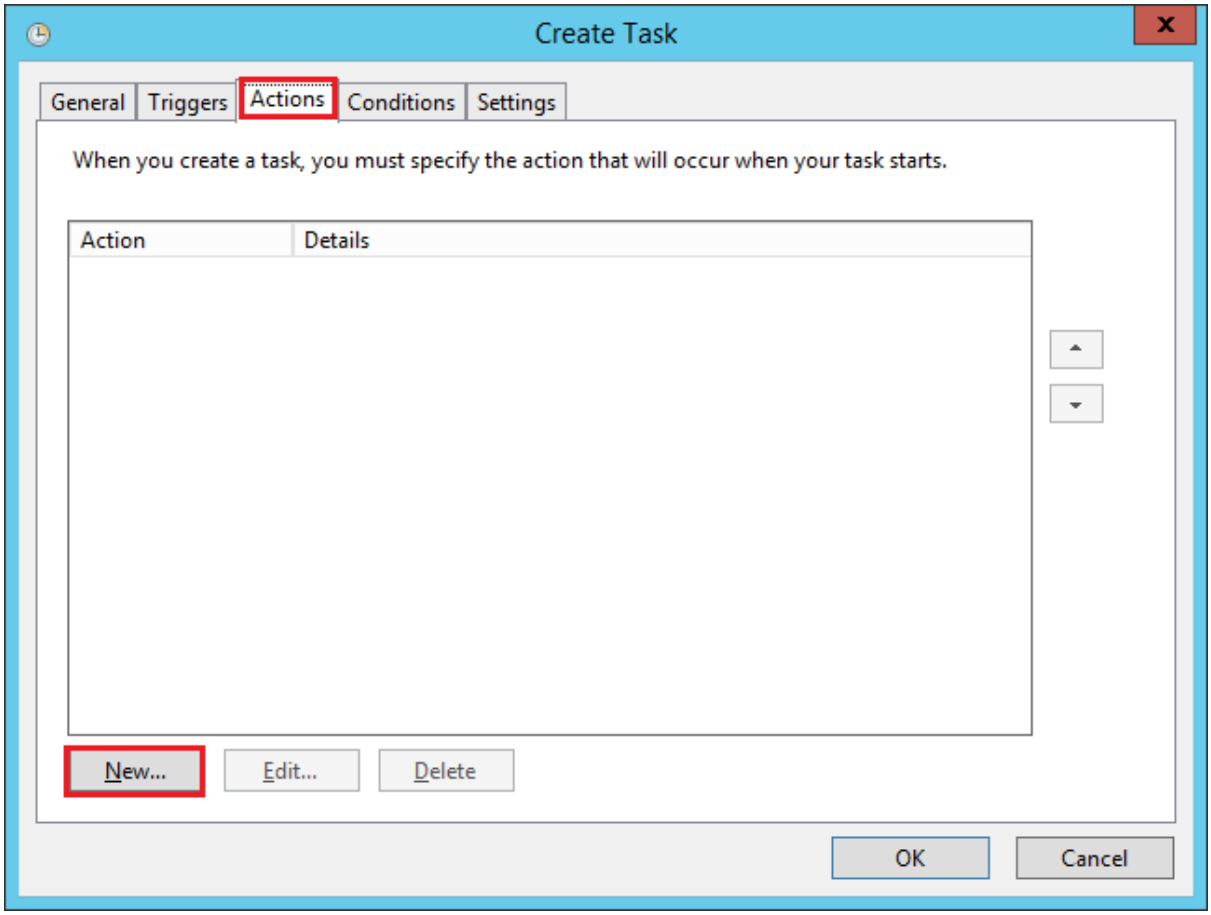


Save the file so prepared under any name with the extension **.bat.**

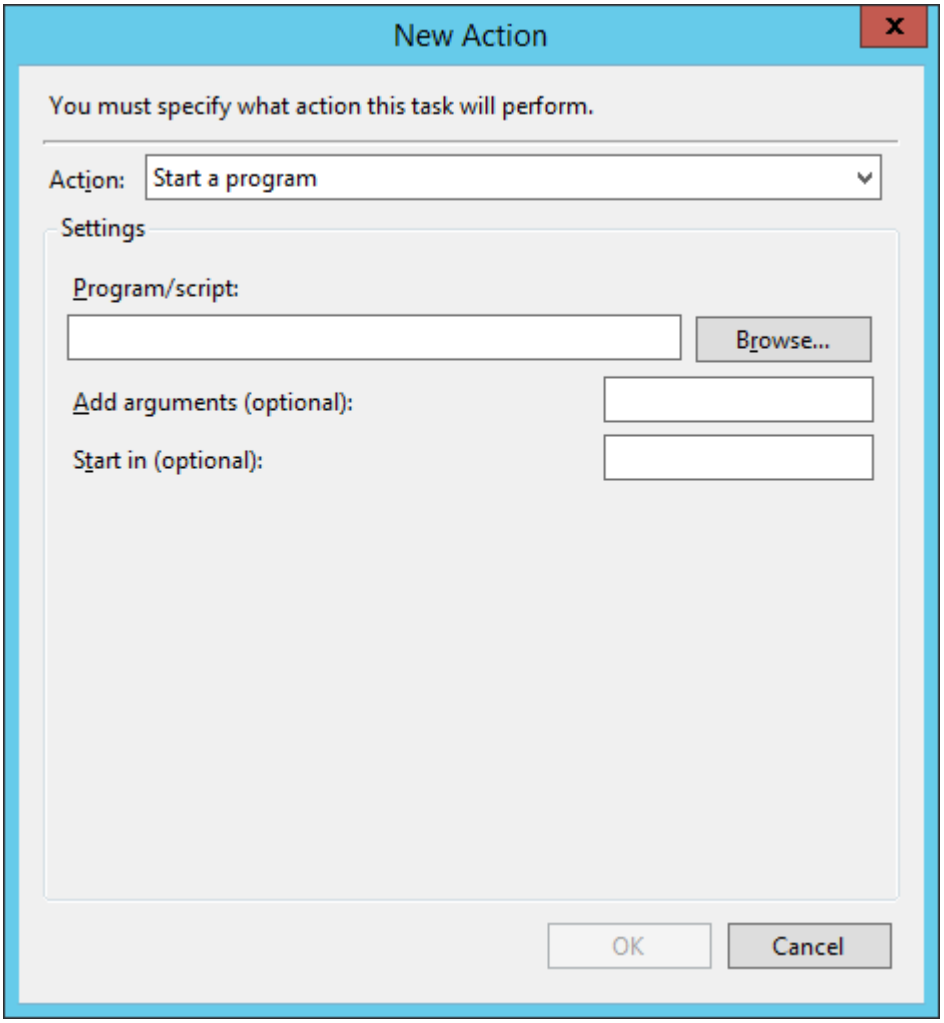
Open Task scheduler on your Windows system and then choose **Create Task...** option



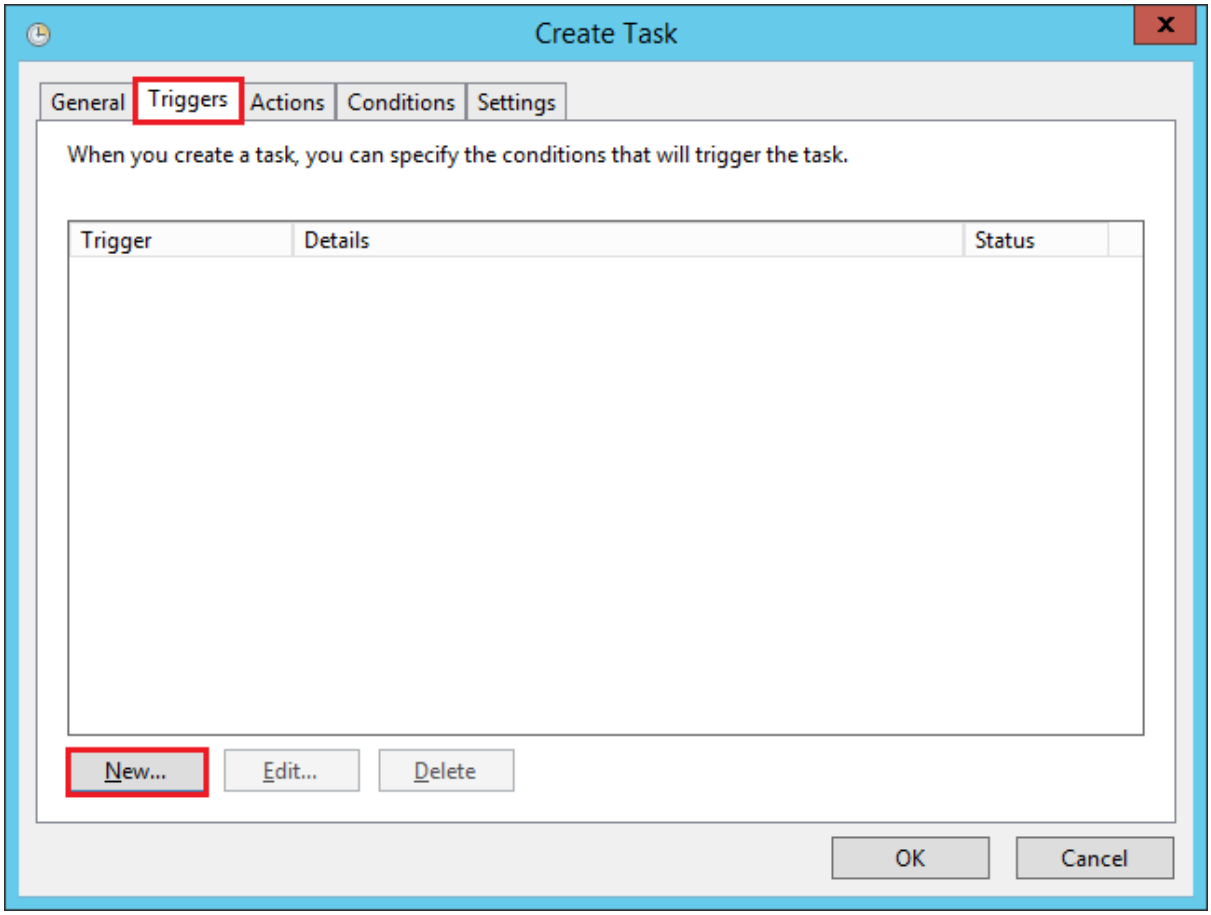
Define the task name, then go to the **Actions** tab and click the **New** button:



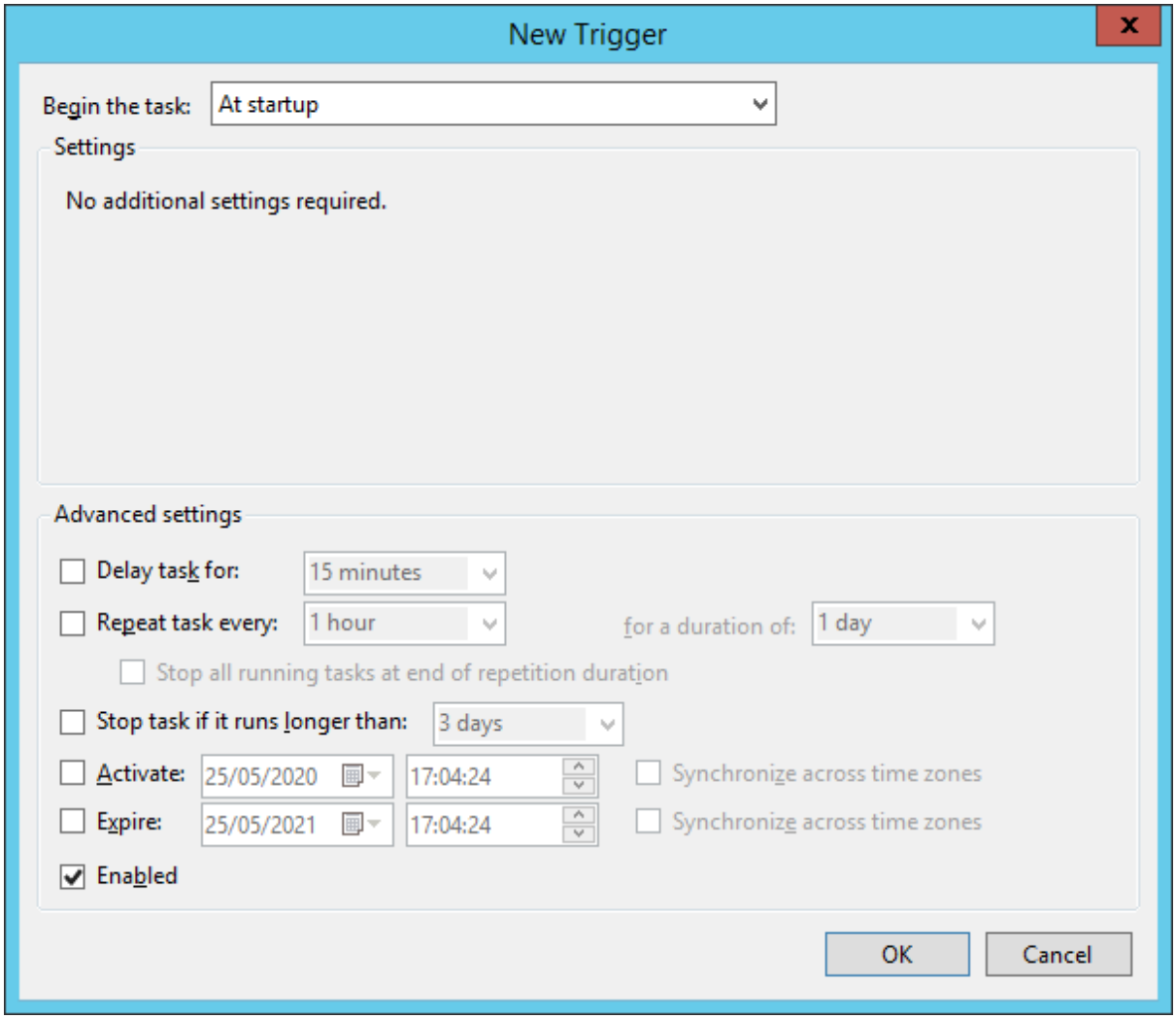
Then in the **Program/script** field indicate the path to the script you created:



Close the window confirming the creation of actions with the OK button, go to the **Triggers** tab and press the **New...** button:



When creating a trigger in the **Begin the task** field select **At startup** option:



Confirm the trigger and then the whole task with the OK button.

From now on the CLI application will start with the system startup.

CLI application for NetWare

Introduction

These modifications make it possible to access the Opero Client software from the command line. The following actions will be implemented: addhost, backup, backupbriefcase, createconfig, delete, deletehost, dir, gethostslimit, gethostslist, getversion, getversionslimit, initkeytype, renamehost, resetaccount, restore, setversionslimit. These actions will be described in more detail in the following paragraphs. For all actions applies that a successful action is indicated by means of exit code 0. In all other cases a status code of 1 will be used.

Definitions and symbols used in manual

Definitions

User – a base system unit which represents a single account/person in the system. The user is identified by his login.

Host – a single computer on which the Opero application runs. It imposes the consistency in the directory structure in the backup processes and when restoring the data for different computers. Number of hosts is limited according to the product.

Briefcase – disk space where user files are stored. This data are encrypted with briefcase key. The contents of this directory are synchronized on each of the computer of one user where the Opero application is installed.

Backup projects – the projects represent the files that were archived by the user using Opero Backup application. The files are differentiated based on the host that performed the backup. All projects are encrypted, each with the same key (default or user-defined).

Symbols used in this document

-- parameter <parameter>- required parameter,

[--parameter <parameter>] – additional parameter, non-required

Needed parameters

Below parameters are required for each command.

Argument	Description
--login <login>	User login.
--password <password>	User password.
--server <address>	The network address of the Xopero Server specified as --server=https://app.operolab.pl

	The nertwork address and port of the Xopero server specified as: • --server=http://XOPERO_SRV:45558 - for HTTP connection • --server=https://XOPERO_SRV:45554 - for HTTPS connection
--cache-dir <no-cache>	Disable cache.

Additional parameters

Below parameter is additional and can be used for each command.

Argument	**Description**

[--help]	Command help.
[--config <path>]	Path to config file.
[--logs-dir <path>]	Path to log directory.

Create configuration file

Creates a new configuration file.

Command:

java -ns -jar cli.jar createconfig --path=/home/tim/.backup.conf

Argument	Description

--path <path>	Path to save file to. Default is 'backup_cli.conf' in user home directory.

Encryption key initialization

Initializes new encryption key for user account.

Command:

java -ns -jar cli.jar initkeytype --key=mykey

Argument	Description
[--key <key>]	Encryption key is initialized with user private key. Default is DEFAULT encryption key (generated automatically).

Encryption key/account reset

Resets user encryption key/account. **After using it all user data and host have been deleted**. To use this user account again it is required to initialize new encryption key.

Command:

java -ns -jar cli.jar resetaccount --no-confirm

Argument	Description
[--no-confrm]	Action will not need confirmation.

Get account info

Gets info about: license type, hosts limit, capacity, used space...

Command:

java -ns -jar cli.jar getaccountinfo

Set file version limit

Sets limit of file versions that are stored on backup servers.

Command:

java -ns -jar cli.jar setversionslimit --limit=15

Argument	Argument
--limit <number>	File versions limit. Default is 30.

Get file version limit

Gets limit of file versions that are stored on backup server.

Command:

java -ns -jar cli.jar getversionslimit

Get hosts list

Gets list of all hosts that are assigned to user account.

Command:

java -ns -jar cli.jar gethostslist

Get hosts limit

Gets hosts limit available for user.

Command:

java -ns -jar cli.jar gethostslimit

Add new host

Adds new host under the user account (if host limit is not reached).

Command:

```
java -jar cli.jar addhost --host-name=TIM-LAPTOP
```

Argument	Description
--host-name <name>	New host name.

Change host name

Changes given host name. Host must exists and be assigned to given user account.

Command:

```
java -ns -jar cli.jar renamehost --old-host-name=TIM-LAPTOP --new-host-name=JANE-LAPTOP --no-confirm
```

Argument	Description
--old-host-name <name>	Current host name that has to be changed.
--new-host-name <name>	New host name.
[--no-confirm]	Action will not need confirmation.

Delete host from account

Deletes host and all its data from user account.

Command:

```
java -ns -jar cli.jar deletehost --host-name=TIM-LAPTOP --no-confirm
```

Argument	Description
--host-name <name>	Host name that has to be deleted.
[--no-confirm]	Action will not need confirmation.

Get projects list

Gets list of all projects in host.

Command:

java -ns -jar getprojectlist --host-name=TIM-LAPTOP

Argument	Backup

[--host-name <name>]	Host name, which you want to get project list from. Default is current host.

Backup

Performs a backup.

Command:

```
java -ns -jar cli.jar backup --host-name=TIM-LAPTOP --project-name=Photos --path=/home/tim/photo, /home/tim/picture --key=mykey --recursive
```

Argument	Description

--path <path1, path2,...>	This argument specifies a list of files and/or directories to be backed up. Multiple pahts are separated with ','. It is the user's responsibility to properly quote any file or folder name containing embedded whitspace or other special characters. If the optional --recursive option is specified, all specified folder will be backed up recursivley. The use of relative paths is allowed and will be treated properly by the agent (this means that the agent will fully resolve any relative path into the correct absolute path and automatically compress any redudant path components).
--host-name <name>	Host name to which files will be added. This host must be firstly to user account by command *addhost*.
[--project-name <name>]	Project name to which files will be added. Default is 'commandline'.

[--recursive]	This argument specifies to set backup as recursive.
[--backup-method <method>]	Specifies backup method for files: REGULAR| DIFFERENTAL| INCREMENTAL. Default is automatic.
[--path-separator <separator>]	Path of files and/or directories list separator. Default is ','.
[--key <key>]	User encryption key used to encrypt a stored files. Required if user defined his own encryption key (not default).

Backup briefcase

Sends files to briefcase.

Command:

java -jar cli.jar backupbriefcase --path=/home/tim/ln --briefcase-dir=\\ln --recursive

Argument	Description
--path <path1, path2, ...>	This argument specifies a list of files and/or directories to be backed up. multiple paths are separated with ','. It is the user's responsibility to properly quote any file or folder name containing embedded whitespace or other special characters. If the optional --recursive option is specified, all specified folders will be backed up recursively. The use of relative paths is allowed and will be treated properly by the agent(this means that the agent will fully resolve any relative path into the correct absolute path and automatically compress any redundant path components).
[--recursive]	This argument specifies to set backup as recursive.

[--briefcase-dir <directory>]	Specifies the directory in briefcase where files will be uploaded. If it is not given files are sent to main briefcase directory.
[--path-separator <separator>]	Path separator of files and/or directories list. Default is ','.

Delete

Deletes files and directories that were sent to backup server.

Command:

java -ns -jar cli.jar delete --host-name=TIM-LAPTOP --project-name=Photos --path=\\\\home\\tim\\picture --recursive --no-confirm

Argument	Description

[--host-name <name>]	Host name which files have to be deleted from. Default is current host.
[--project-name <name>]	Project name which files have to be deleted from. Default refers to all projects from given host.
[--path <path1, path2,...>]	Paths of files and directories that have to be deleted. The name should contain the full path where the directory or file is located. Multiple files and/or folders are separated with ','.
[--version <UUID1,...>]	It is specyfing which file versions had to be deleted. Multiple versions are separated with ','. If it is not given all versions will be deleted.

[--date <YYYY-MM-DD hh:ss:mm>]	Paths/versions created after this date will not be included.
[--recursive]	This argument specifies to delete recursively from directory. If it is not given subdirectories and thier files will not be deleted, only files given in given folder.
[--no-confirm]	Action will not need confirmation.

Restore

Restores files from backup servers.

Command:

java -ns -jar cli.jar restore --host-name=TIM-LAPTOP --project-name=Photos --restore-dir=/home/tim/restore --path=\\\\home\\tim\\picture --key=mykey --recursive

Argument	Description
[--host-name <name>]	Host name which files have to be restored from. Default is current host.
[--project-name <name>]	Project name which files have to be restored from. Default refers to all project from given host.
[--path <path1,path2,...>]	Paths of files and directories that have to be restored. The name should contain the full path where the directory or file is located. Multiple files and/or folders are separated with ','.
[--version <UUID1,...>]	It is specyfing which file versions had to be downloaded. Multiple versions are separated with ','. If it will be not given parameter will be missed.

[--date <YYYY-MM-DD hh:ss:mm>]	Paths/versions created after this date will not be included.
[--recursive]	Restores all directories that are under given path.
[--restore-dir <path>]	Local directory where files will be downloaded. If not specified files will be downloaded to current directory.
[--key <key>]	User encryption key used to decrypt a downloaded files. Required if user defined his own encryption key (not default).
[--overwrite <mode>]	Specifies overwrite mode: ASK| YES| NO. Default is ASK.

[--maxThreads <number>]	Maximum number of threads to use. Default is 8.

Output

As output, the restore command prints the list of restored files and folders on standard output, one line for each file (the full path is displayed).

Get version info

Returns version number.

Command:

java -ns -jar cli.jar getversion

AD desktop application

Introduction

Active Directory Agent application is designed for installation on domain controller users accounts. This is the version of Agent dedicated to working in an Active Directory environment, it works only in the active user session Active Directory. It's not required to use AD Agent, because the regular Xopero Agent can also work in the AD environment, but the disadvantage of this solution is that the mapping in this case does not work.

More information on the integration of Xopero with the Active Directory domain can be found here.

Differences between Xopero AD and Xopero Agent

The Active Directory Agent has several differences compared to a regular Xopero Agent. The most significant of these are the following:

- Auto-complete authentication data (user, which is currently logged into system)
- Every host in Xopero is listed as **SYSTEM**,
  so you can switch between devices without changing the host in the application.
- HDD Image, VHD / SS projects require administrator privileges for proper creation.

More information on the integration of Xopero with the Active Directory domain can be found here.

The manual for the Windows desktop application can be found here.

Desktop application for Windows

Introduction

Xopero Desktop application is meant for installing on PCs with Microsoft Windows operating systems. It allows the PC user to create backup and synchronize data. Xopero works both as an application and as a service. The application provides only a graphical user interface, which can be used to configure the application and all settings reffering to backups. The service, works in the background and does not require user intervention; it is responsible for creating backups and synchronization of the Briefcase. Thanks to this solution, after creating backup sets and configuring the Briefcase there is no need to run the client application,

whereas the service will work in the background and carry out entrusted operations; everything will become transparent for the user.

Requirements

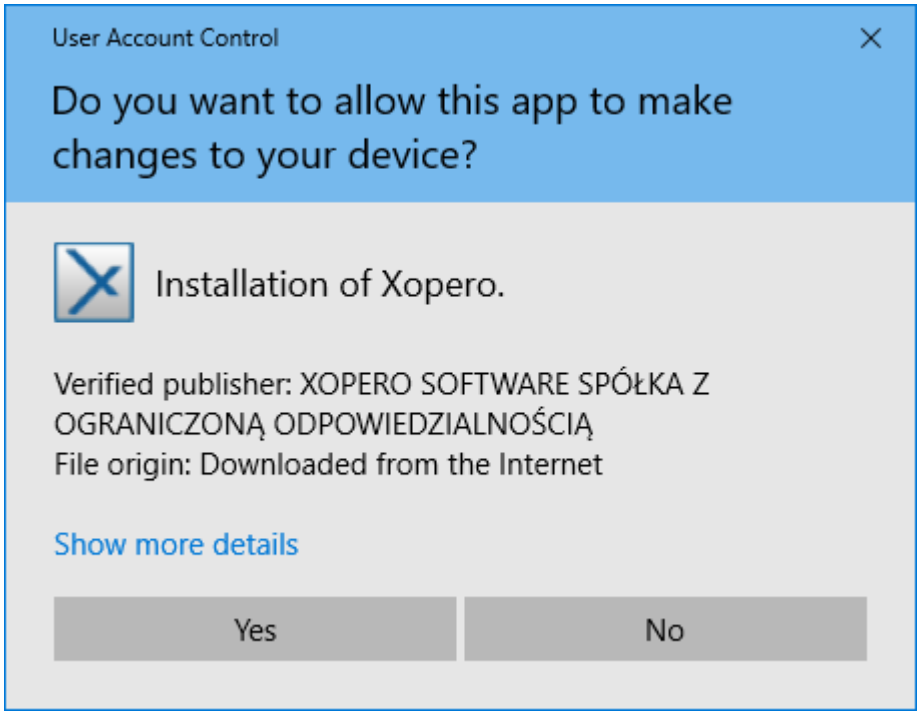
The computer user must meet the following requirements in order to download and use the Xopero application without any problems.

OS:	Windows 7 SP1 Windows 8.1 Windows 10 Windows Server 2008 SP2 Windows Server 2008 R2 SP1 Windows Server 2012 Windows Server 2012 R2

	Windows Server 2016 Windows Server 2019
RAM:	2 GB (4GB recommended)
Disc Space:	23 MB
Additional software:	.NET Framework 4.5 SP2 Microsoft Visual C++ Redistributable 2017
Other:	Internet connection (recommended minimum 512 kbps)

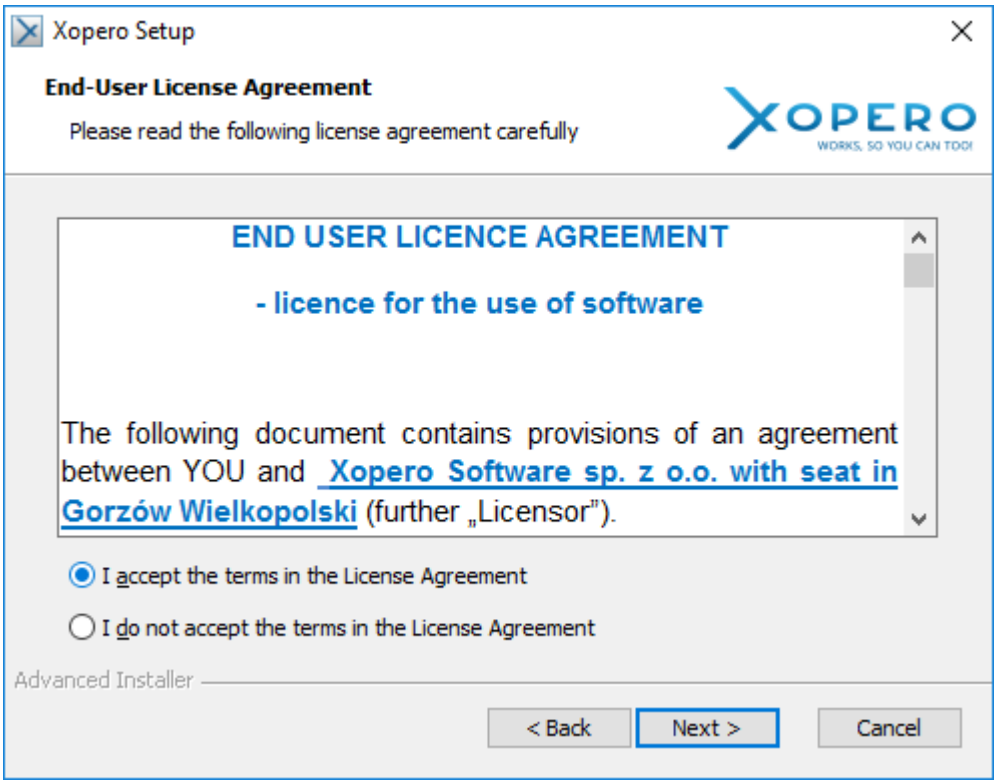
Installation Guide

After downloading the application you should go to the catalog in which the application installer is located and then run it by clicking it twice. During its launch a ***User Account Control*** might appear, where you have to click the ***Yes*** button in order to start the installation process.



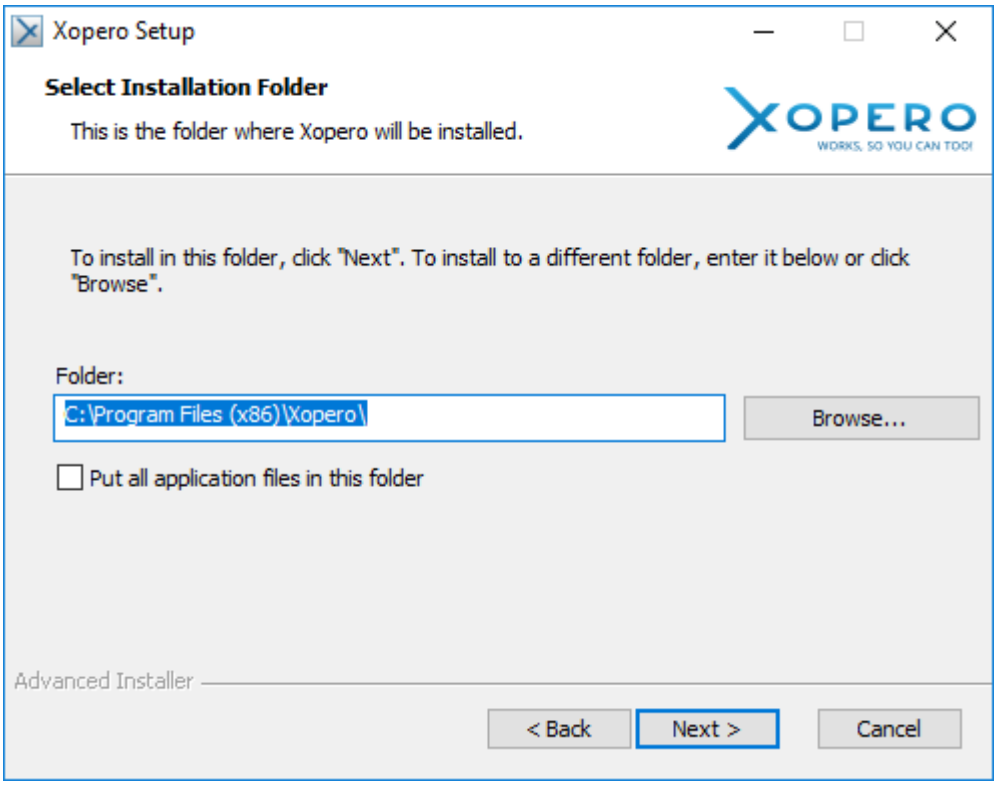
In the next step you should click the ***Next*** button, which will cause the proper Xopero installer to run.

Clicking the ***Next*** button causes the installer to enter into its next step, in which the license agreement will be shown.

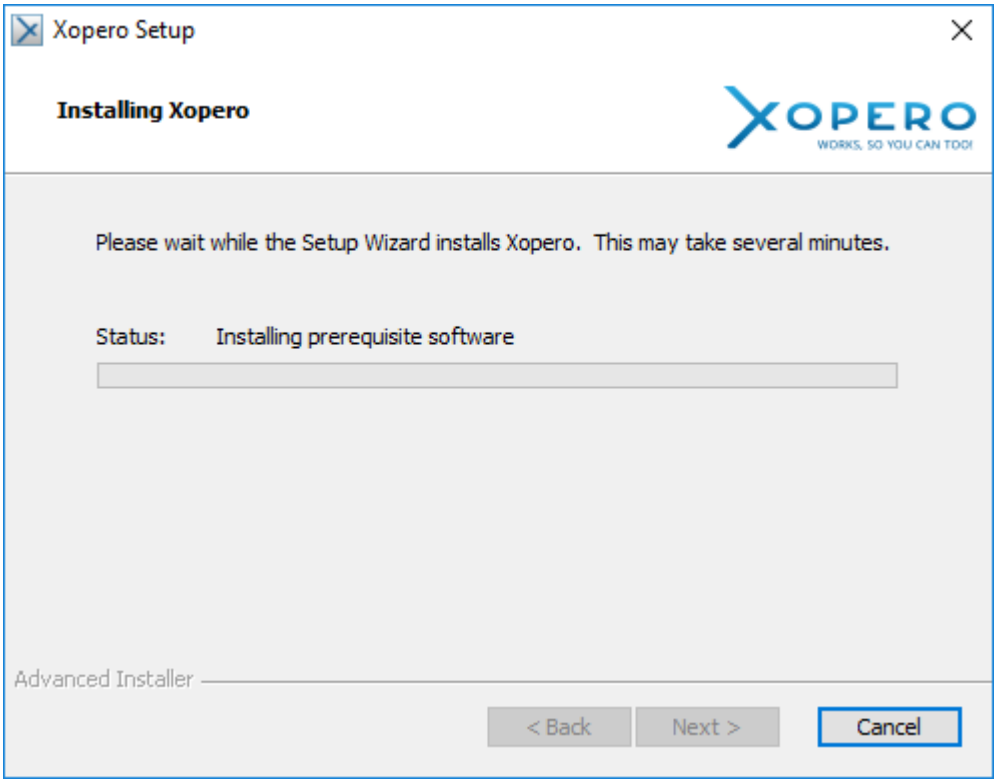


After acquainting yourself with its content, select the ***I accept terms and conditions of the License Agreement***, then click ***Next***.

In this step you can choose ***Installation Folder***. This is a folder which contains application files.



In the last step of the installer you can click on ***Back*** in order to come back to previous steps, or ***Next*** in order to start the installation process.

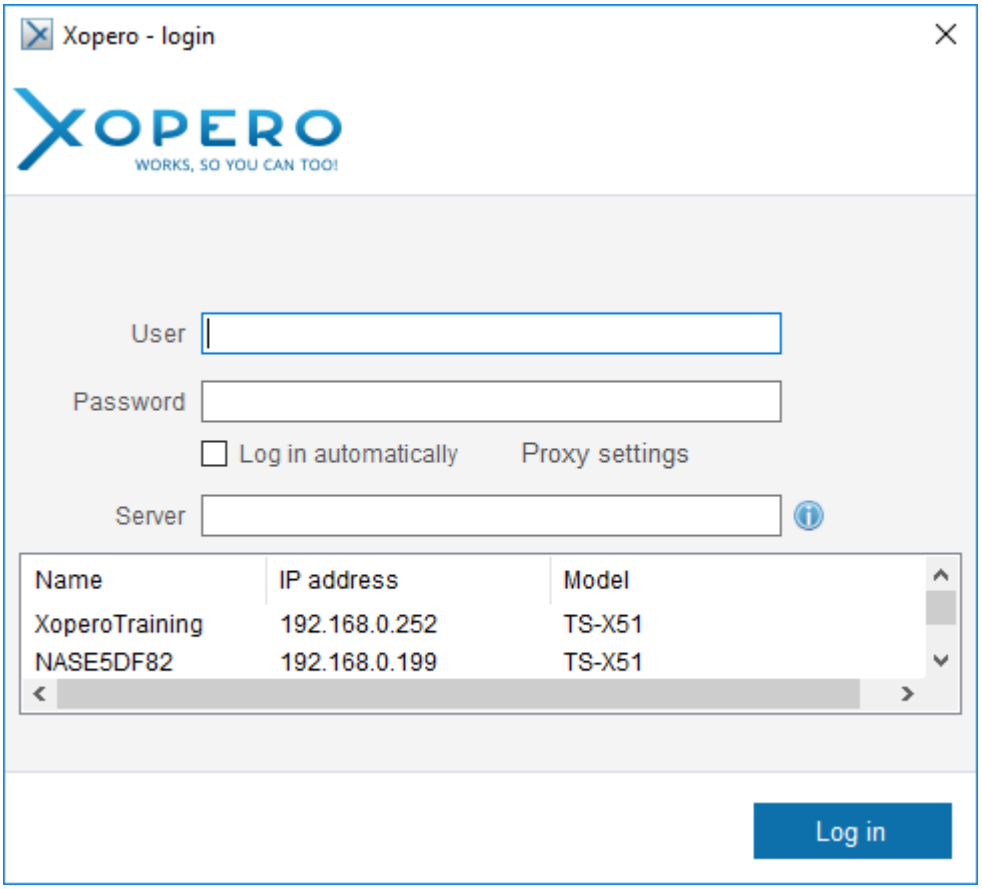


When the installer has finished its work, the user receives an appropriate message. After this window is closed an information about successful installation will appear.

Finally, the Xopero application has been installed and you can start it, log in and begin performing backups and synchronizing data.

Logging in to the application

After starting the application, a login window will appear (in case ***Log in automatically*** has not been marked earlier).



In order to log into the application it is necessary to enter a correct login, password and for the account created in the Xopero system. You will find all the information necessary to connect in the Xopero ***Control Panel***. Finally, you have to confirm by clicking ***Log in***.

The application allows the user to log in automatically so they do not have to give authentication data (login and password). In order to do this, mark ***Log in automatically*** before clicking on the ***Log in*** button.

If it is necessary, you should also enter the proxy server settings, through clicking on the ***Proxy*** settings link. A new window will appear in which you should enter the devices address as well as proxy server address through which we wish to establish connection with a Xopero server disk. If connecting with the proxy gate demands additional authorization, choose the ***Turn proxy authorization on*** option, and enter the user name and password.

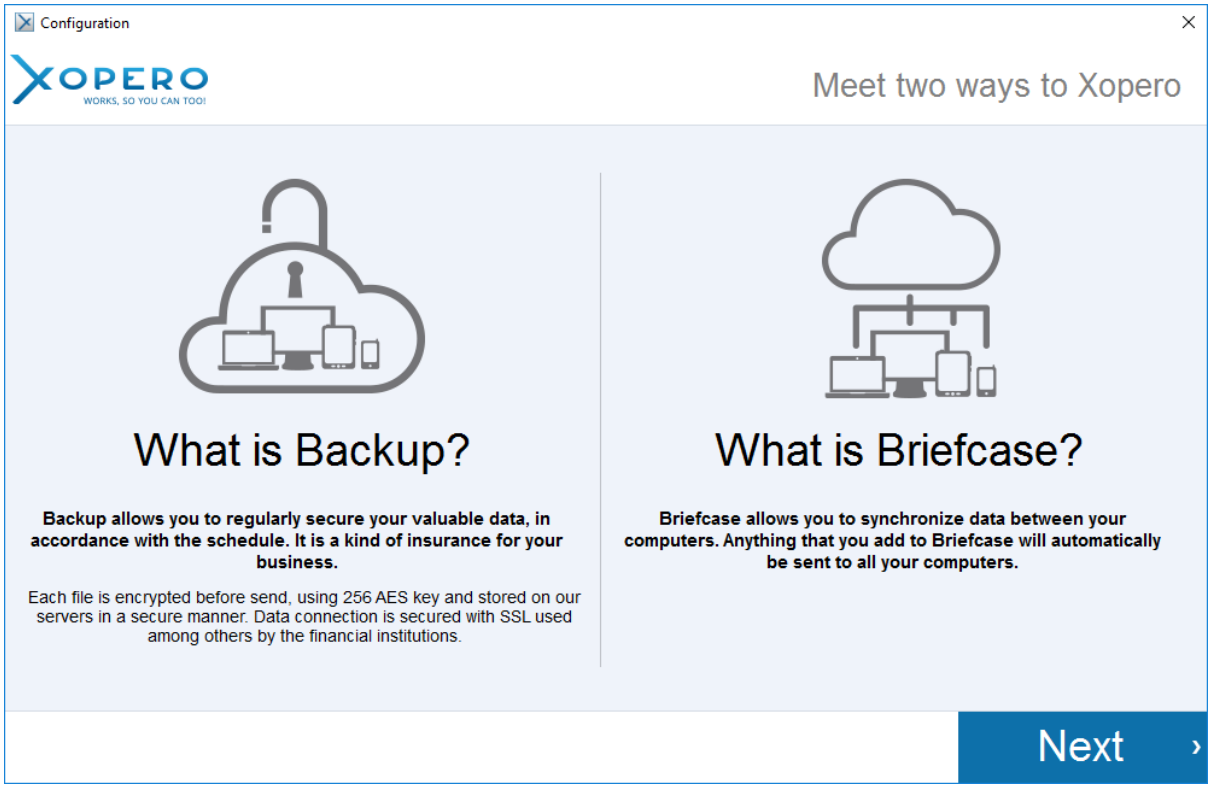
First login to the application

When you are logging in to the application, as a user, for the first time, the first run wizard, which consists of 3 steps, will run.

First run wizard – step 1

The first run wizard will begin its work with displaying basic information about two essential features of the Xopero application:

- **Backup** - a feature which allows to create backup copies of important data on Xopero server disks,
- **Briefcase** - a feature which allows to synchronize data between user's computer, thus giving access to all data from each of the devices.

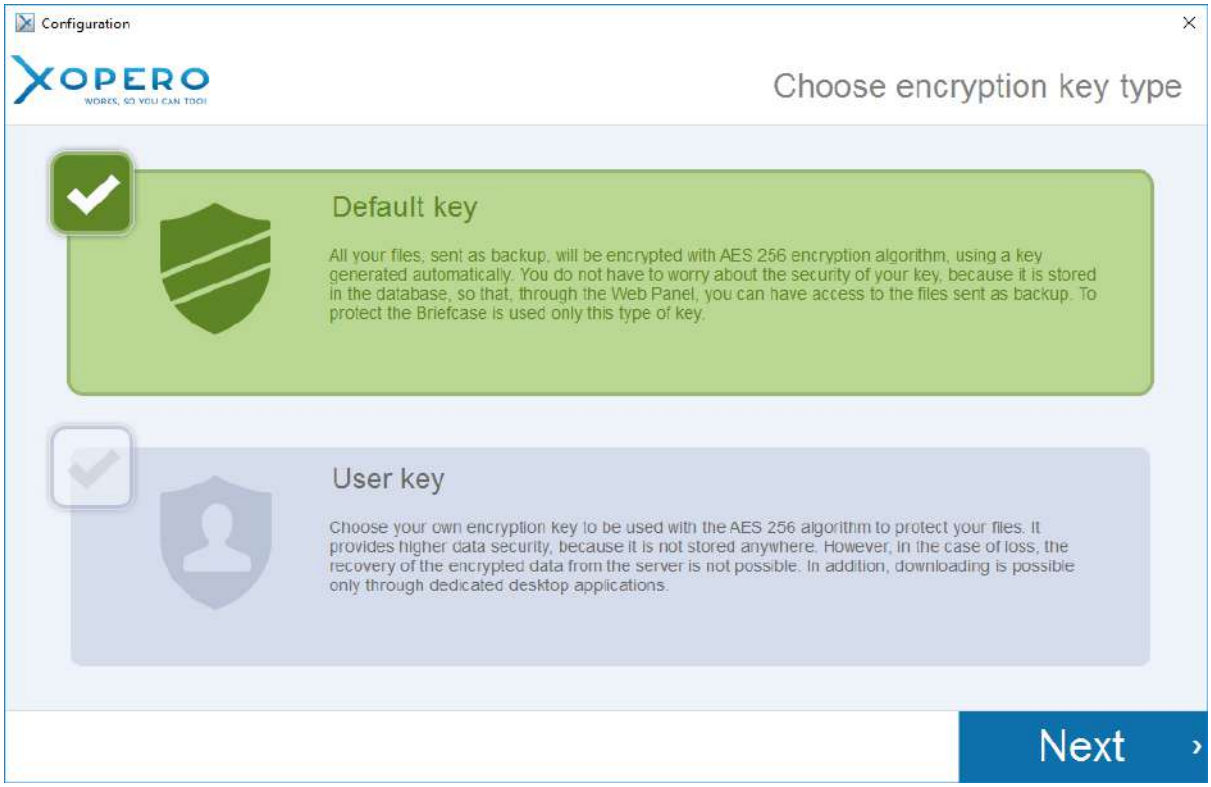


In order proceed to the next step, click on the ***Next*** button.

First run wizard – step 2

All data sent by Xopero application are encrypted before sending on the user's computer. It is encrypted using an AES 256 algorithm with one of the chosen keys – a default or user key. In the second step, the user has to define which key he wants to use for backup encryption.

Files synchronized in the Briefcase are encrypted with a seperate key, different than the one used during backups. It is generated automatically.



Default encryption key

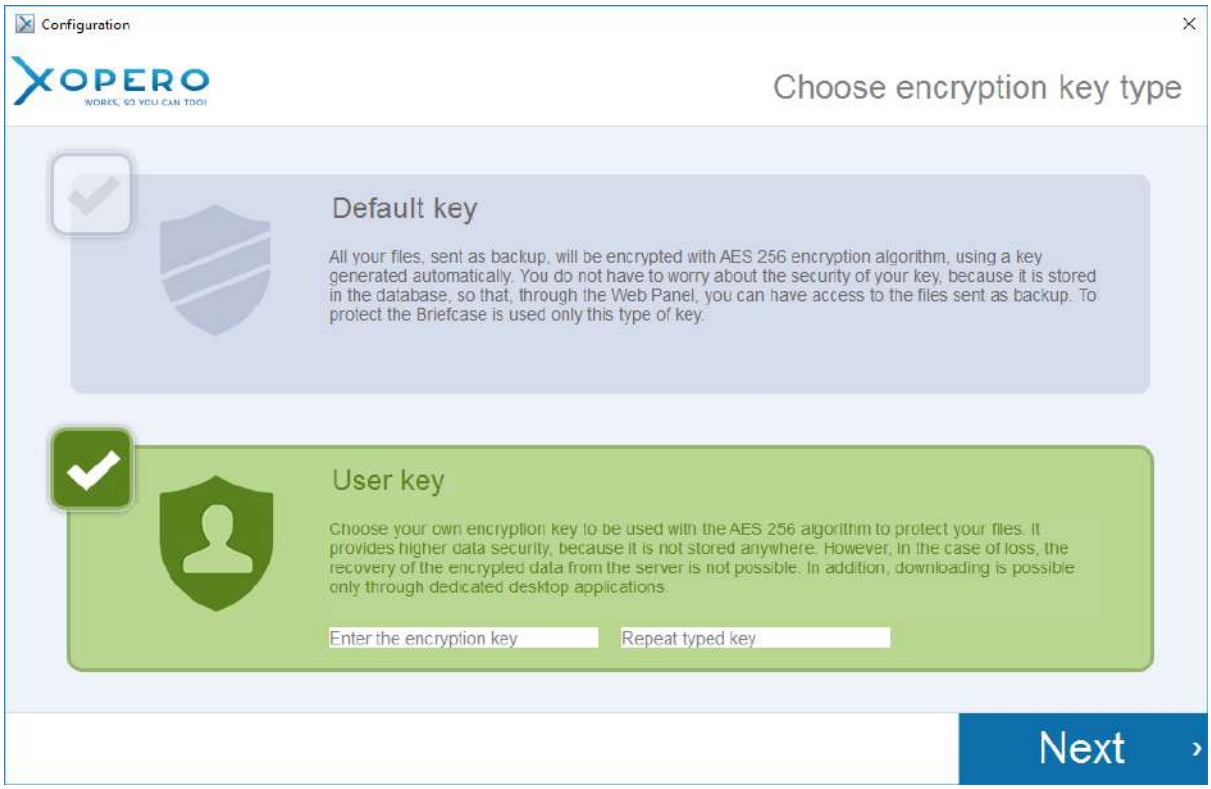
If you will choose a default encryption key it will be generated automatically and then safely stored in the Xopero application database. The user does not know this key and he does not have to care about its security.

User encryption key

The user encryption key provides higher data security than a default key. It is only known to you and it is not stored in the database. The obligation to secure it properly passes to the user.

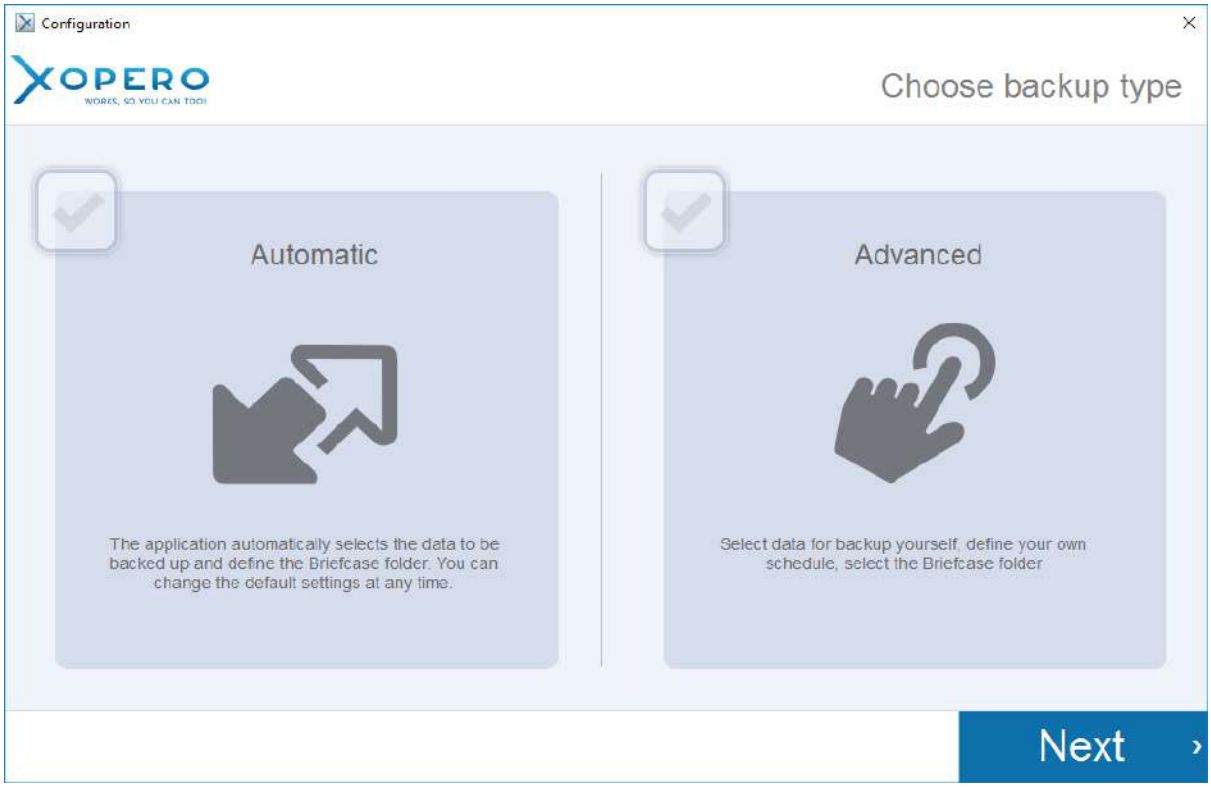
In case of losing the user encryption key, it is impossible to restore the sent data via the Xopero application.

In order to set the user key you have to click on the ***User key*** field, and then enter the same key in both text boxes.



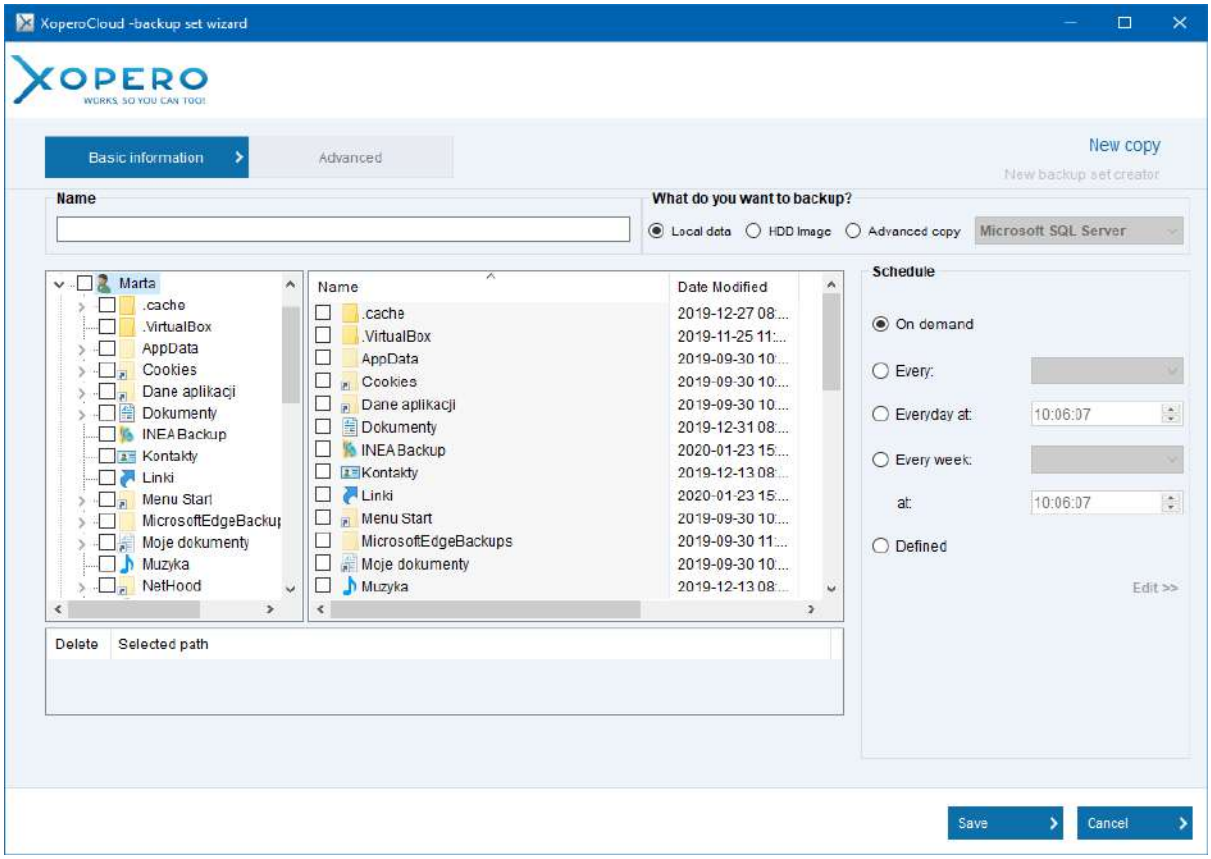
First run wizard – step 3

The last step of the ***First run wizard*** is creating a first backupset. We have the possibility of choosing between automatic and advanced backup.



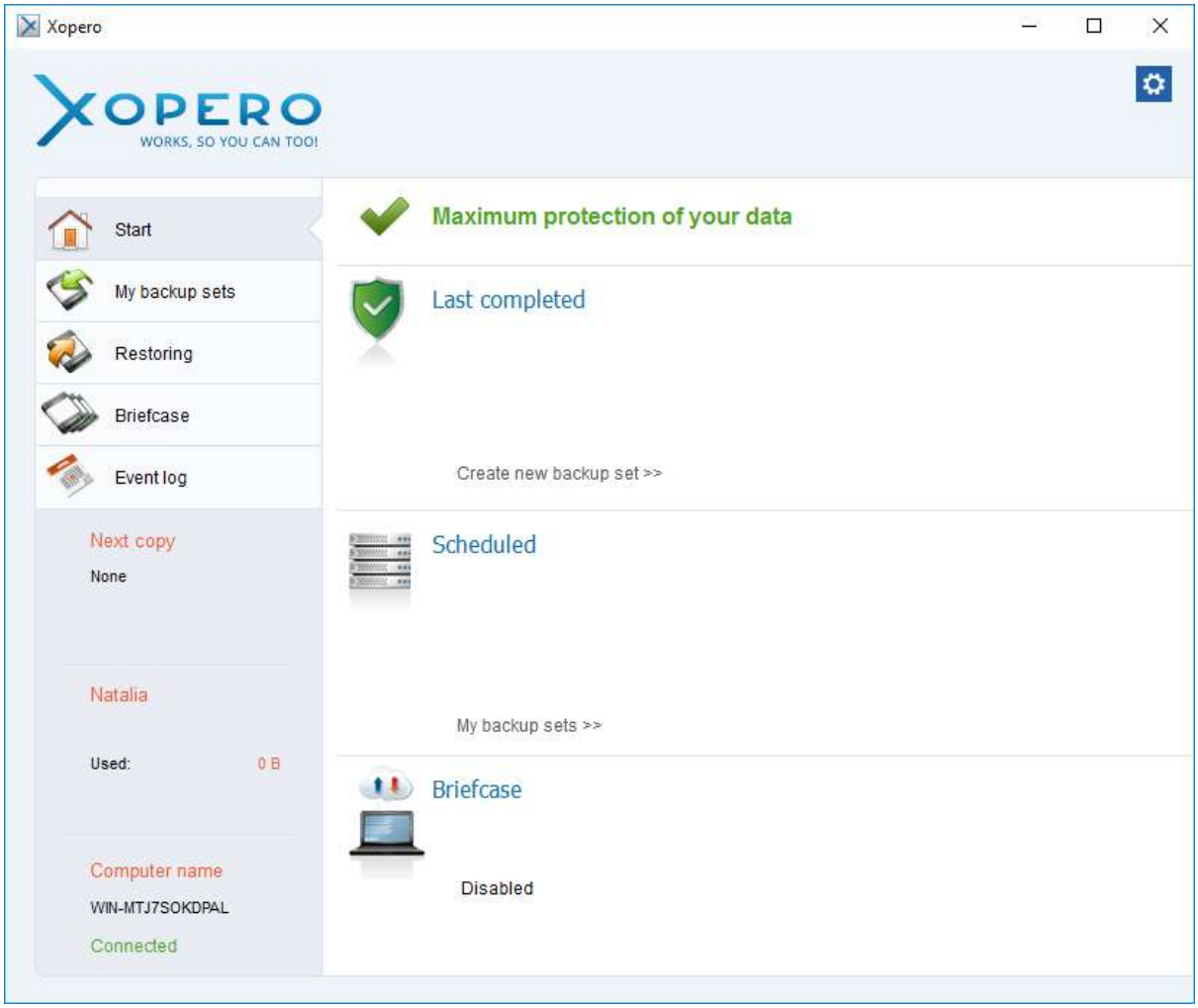
Selecting the ***Automatic*** option will cause to choose, for the first backup, the files from the User folder (ie. C:\Users\John) which size are not larger than 4GB. This limit is set by default, user can change it manually by editing the project. In the case of subsequent automatic backup or choosing an advanced type of backup, there is no file size limit.

Selecting the ***Advanced*** option will run the Backupset wizard. By choosing it, the user will have the possibility to choose the type of data to be backed up, set the backup schedule and advanced options. All the abilities of the backupset wizard are described in the ***Backupset wizard*** chapter. After setting the backup options and giving the project a unique name, click ***Save*** in order to finish the configuration and run the application. Choosing ***Cancel*** will close the wizard without saving the backupset and launch the application.



The interface of the application

While designing the new interface for our application we tried to take all the comments of our clients into account. Thanks to this, we have created a clear, intuitive and easy to use interface.



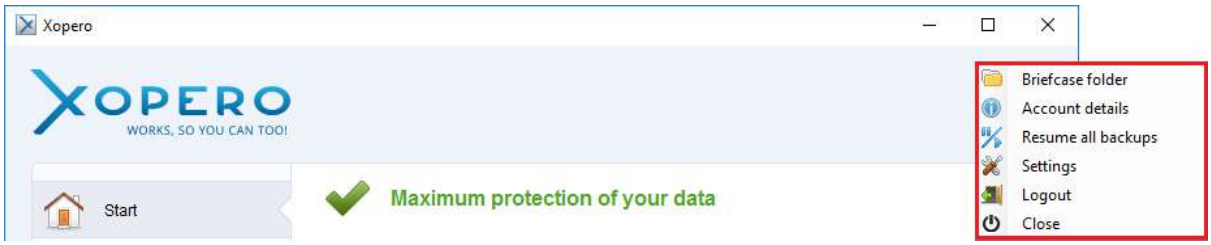
On the left side of the application window you can see a menu consisting of 5 tabs:

- **Start** - contains basic information about backups and the Briefcase,
- **My buckupsets** - contains a list of all created backupsets,
- **Restoring** - shows all files that have been sent as backup,
- **Briefcase** - contains information about the Briefcase,
- **Events log** - contains information about application performance and created backups.

Below the application menu, following information are displayed:

- the name of the backup, which is to be performed according to the schedule in the nearest future or which is currently being performed,
- the name of the user who is currently logged in to the application,
- the amount of space on the server disk, which is currently used,
- the devices, on which the application is currently running,
- the connection status, of the Xopero application.

In the right-upper corner of the application window there is an icon in a shape of an arrow, which provides an application context menu after clicking.



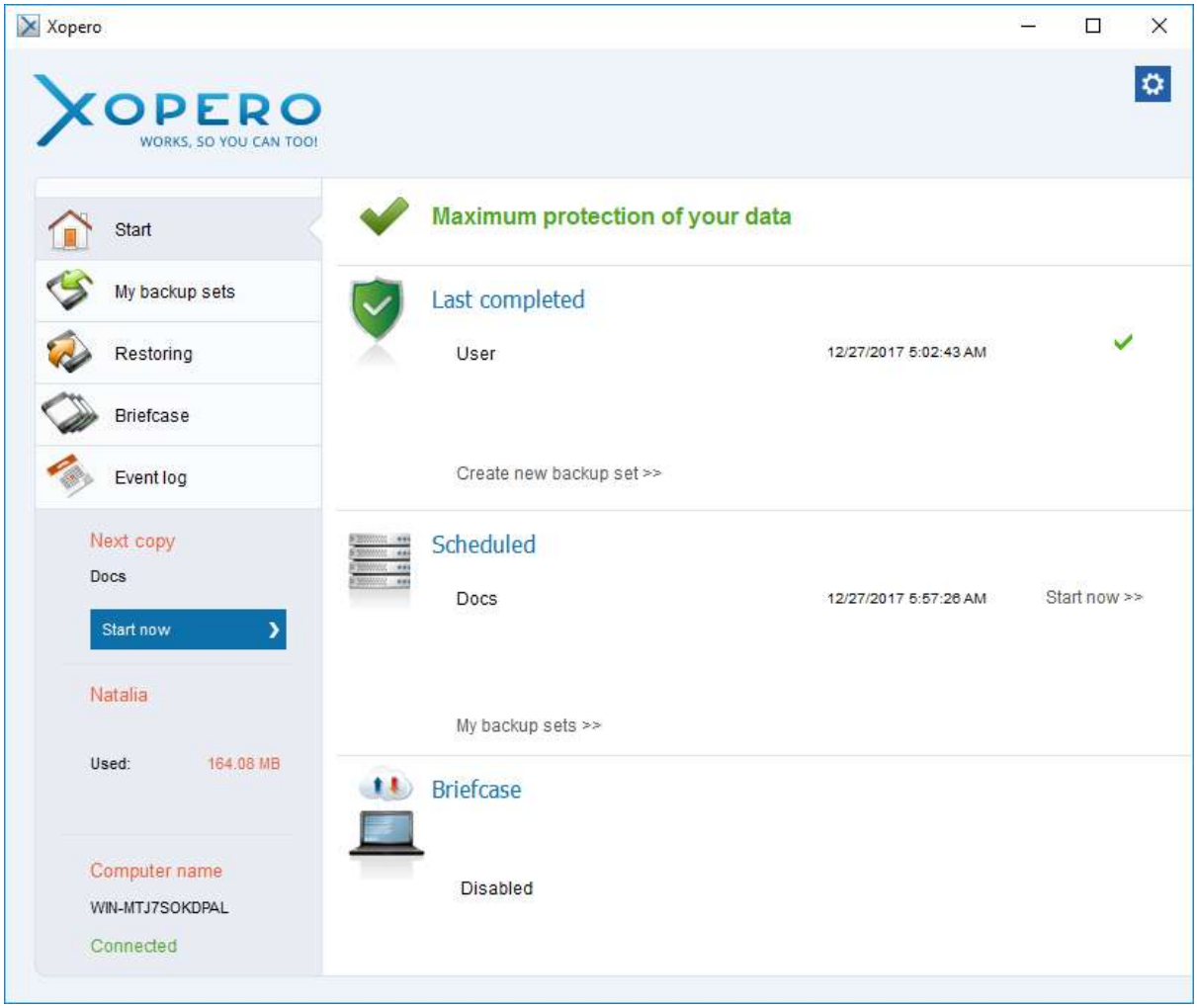
This menu contains following items:

- **Briefcase folder** - hows the Briefcase catalog in the Windows Explorer,
- **Account details** - shows information about the application and the user account,
- **Settings** - dispalys the application settings window,
- **Logout** - logs the user out of the application,
- **Close** - shuts down the application.

Closing the application will not hold performing data backup and synchronization. These are operations for which the service is responsible. In order to hold these action, you have to turn of the service, or log out of the Xopero application.

Start

Every time after turning on, the application will show the contents of the ***Start*** tab, in which you can find information about projects, both latest and planned, which are supposed to be done according to the schedule, as well as the current state of the ***Briefcase***.

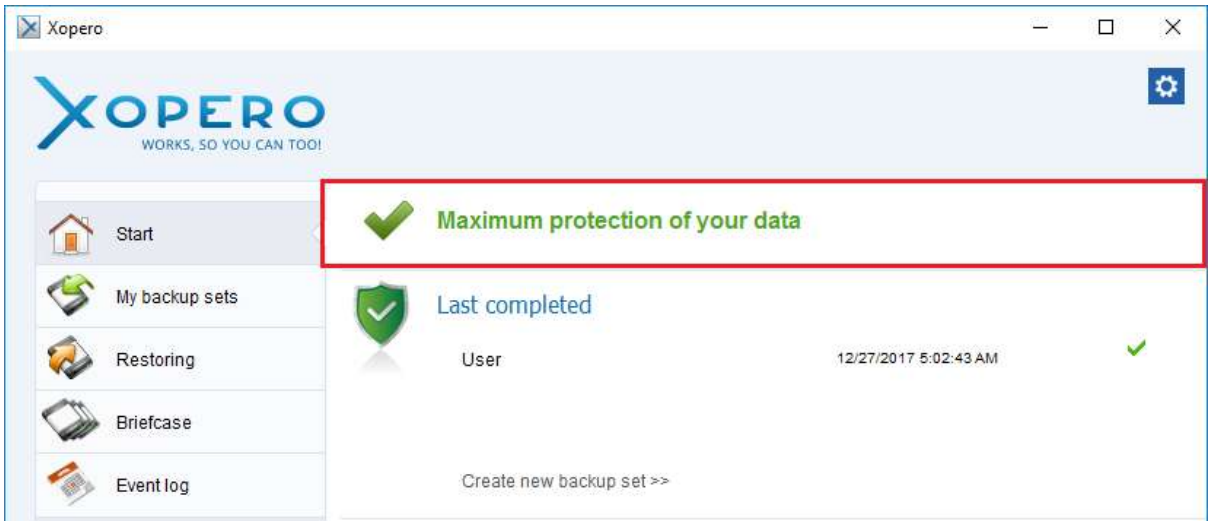


Start tab.

In the upper part of the tab there is a message bar, on which following information about the work of application, are shown:

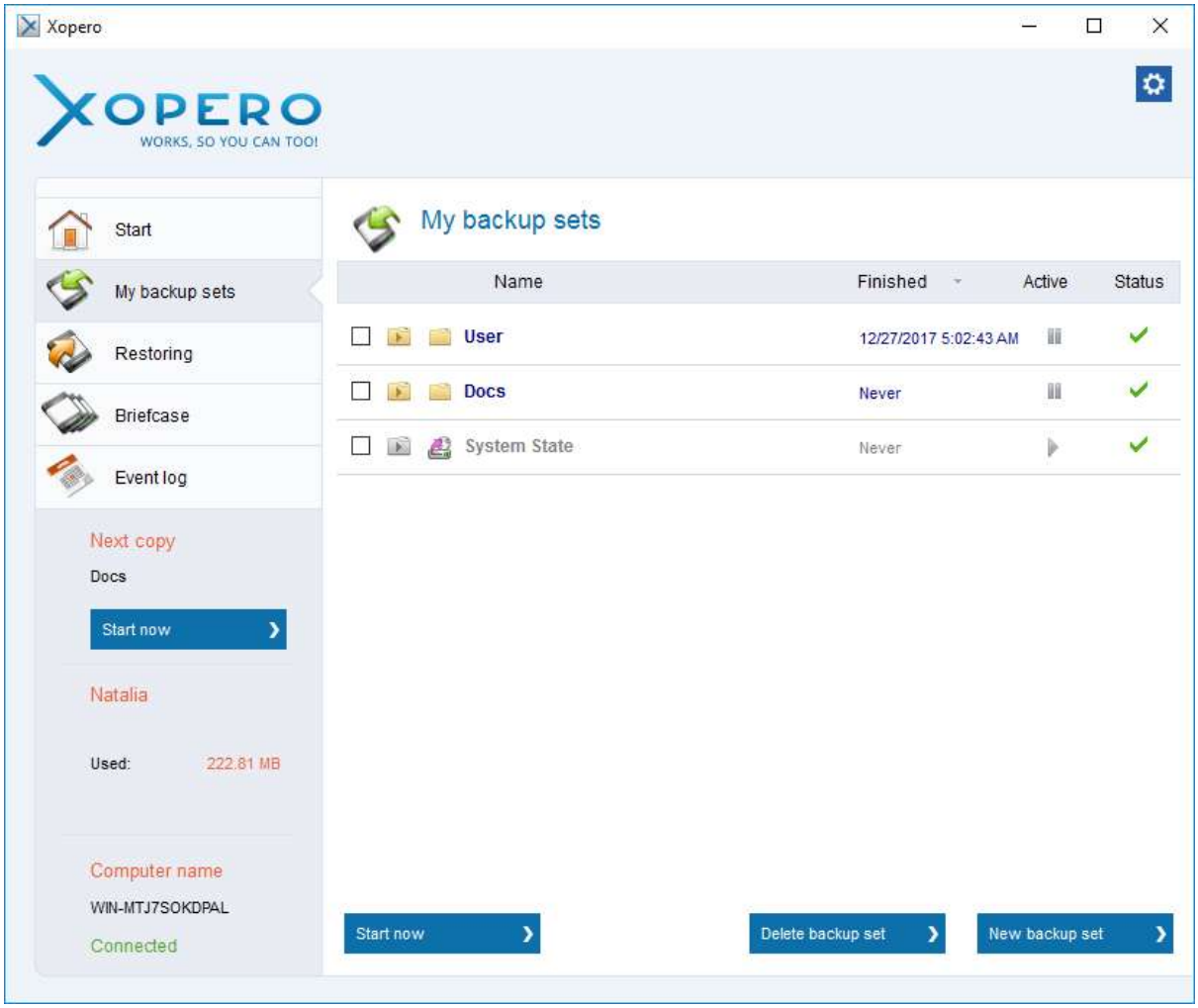
- **Maximum protection of your data** - the application is working properly, no problems are presently occurring,

- **Lost connection with the server** - application has lost its connection with the Xopero server,
- **Another devices was chosen, data for read only** - it means that another devices than the previously declared by the user was chosen in the Xopero application.



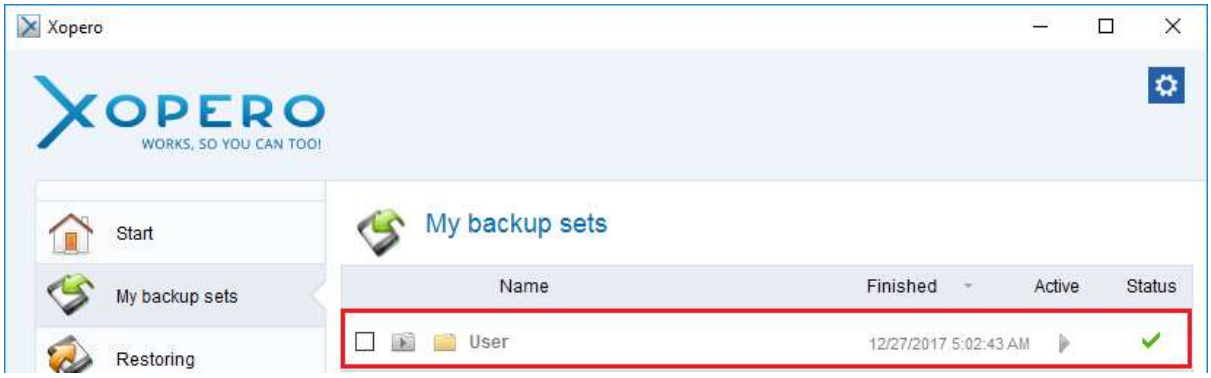
My backupsets

In the ***My backupsets*** tab all backupsets created by the user, are stored.



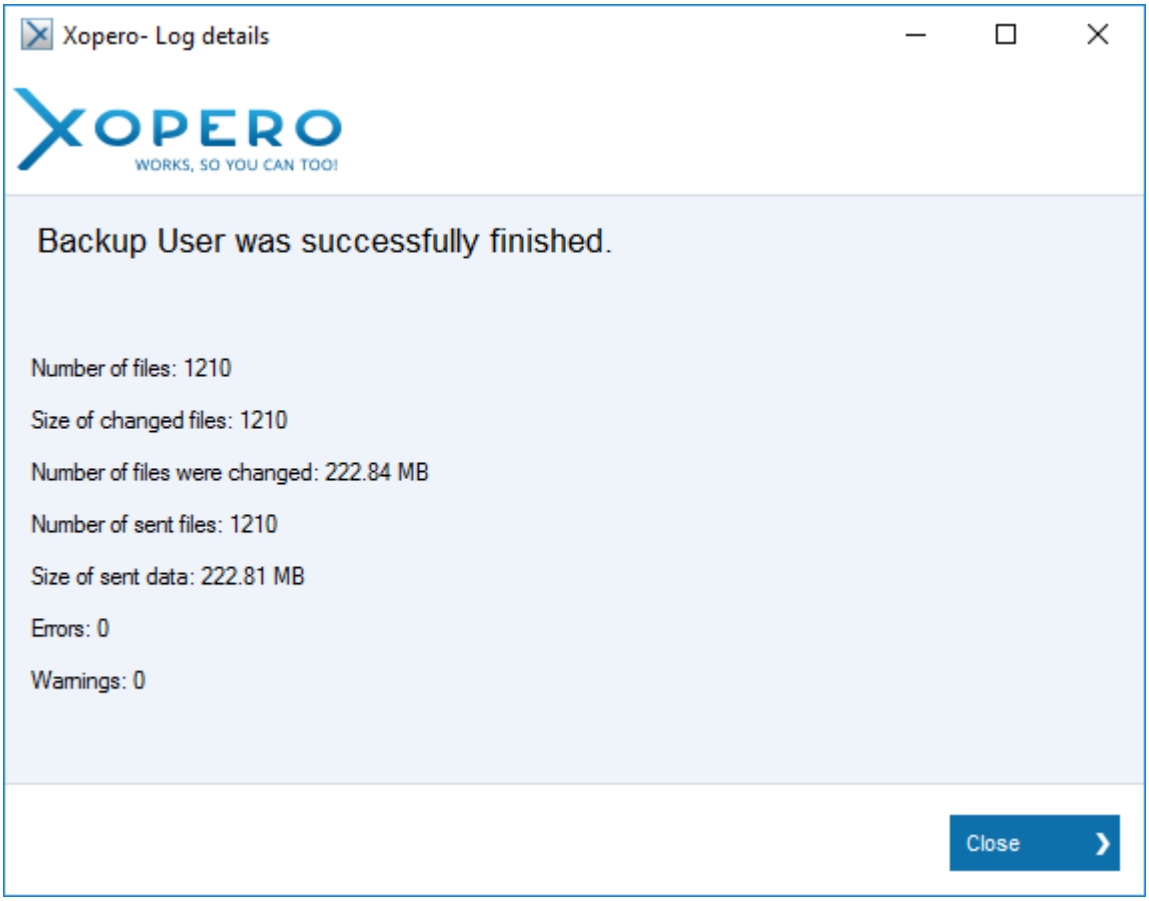
For each backup set following information are displayed: name, the date it was finished and its status (whether or not the project was successfully performed). When pressed, the icon in the ***Active*** column activates or deactivates the backup project.

If the project is inactive, it will be grayed out on the list of projects, it will not backup data automatically according to the declared schedule, but the user will still have the option to create backup manually.



The ***Status*** column includes icons that provide description of condition of each project, these include:

- all files were sent properly,
- backup ended properly, although warnings appeared,
- backup ended with failure.



Buttons at the bottom of the tab allow for:

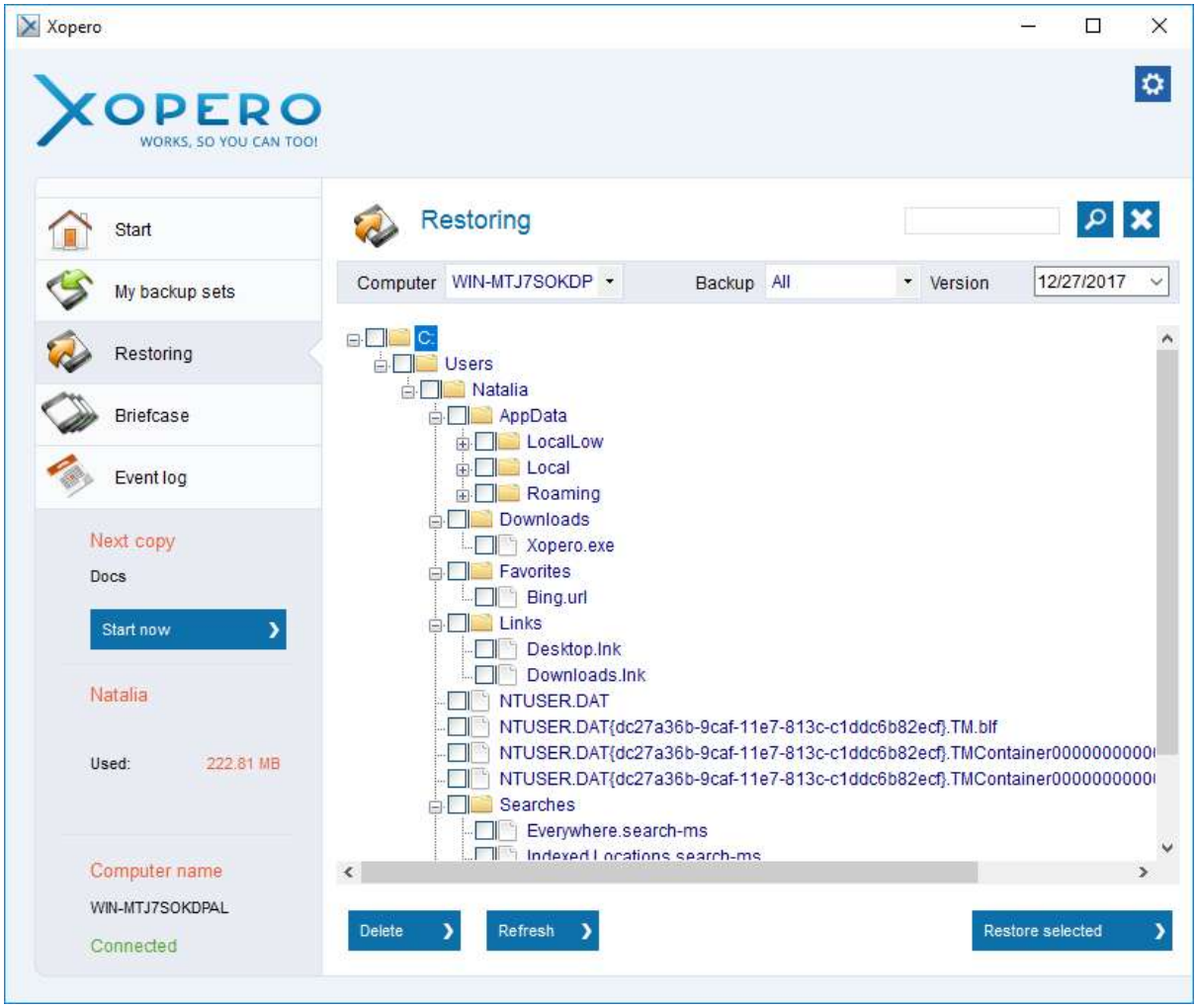
- **Start now** - performs the chosen project immediately, providing there is no other project being performed at the moment,
- **Delete backupset** - deletes the chosen project irretrievably,
- **New backupset** - starts up the project wizard, which allows you to create a new project.

Deleting the backupset by the user does not result in deletion of files already sent onto the Xopero server, these files will still be stored.

Creation of projects has been described precisely in Backup chapter.

Restoring

The ***Restoring*** tab includes a list of all the files which you have sent to server as backup, up to this point.



At the top part of the tab the user can choose a devices and a project for which he wants information to be shown. Additionally, thanks to revision control of data, he can choose a specific date for which he wants the state of file repository to be shown.

At the bottom of the tab 3 buttons are located:

- **Delete** - deletes marked files from the repository,
- **Refresh** - refreshes the contents of the window,
- **Restore selected** - after marking selected files, starts the file restoration wizard.

Data recovery has been described in the *Data restoring* chapter.

Briefcase

The Briefcase allows you to synchronize data between a selected catalog on the user's PC and the Xopero server, as well as other devices in the user's account.

Files, which will be added to the Briefcase catalog, are automatically sent to the server disk, and analogically any change in the Briefcase space from another devices is performed on the user's local PC. Thanks to this, each device has the same state of the Briefcase.

The Xopero Briefcase is also encrypted on the user's part, so all data are sent and stored in an encrypted form. However, a different key is used to encrypt data in the Briefcase than in backups.

Configuring the Briefcase folder

The Briefcase folder can be declared from the ***Application settings***. By default, the defined Briefcase folder is the User catalog, in which a directory named Xopero is created.

The Briefcase performs all operations of data synchronization automatically, without user interference, you just have to add, change or delete a file in the Briefcase catalog. In the ***Briefcase tab***, information about synchronized data is being displayed.

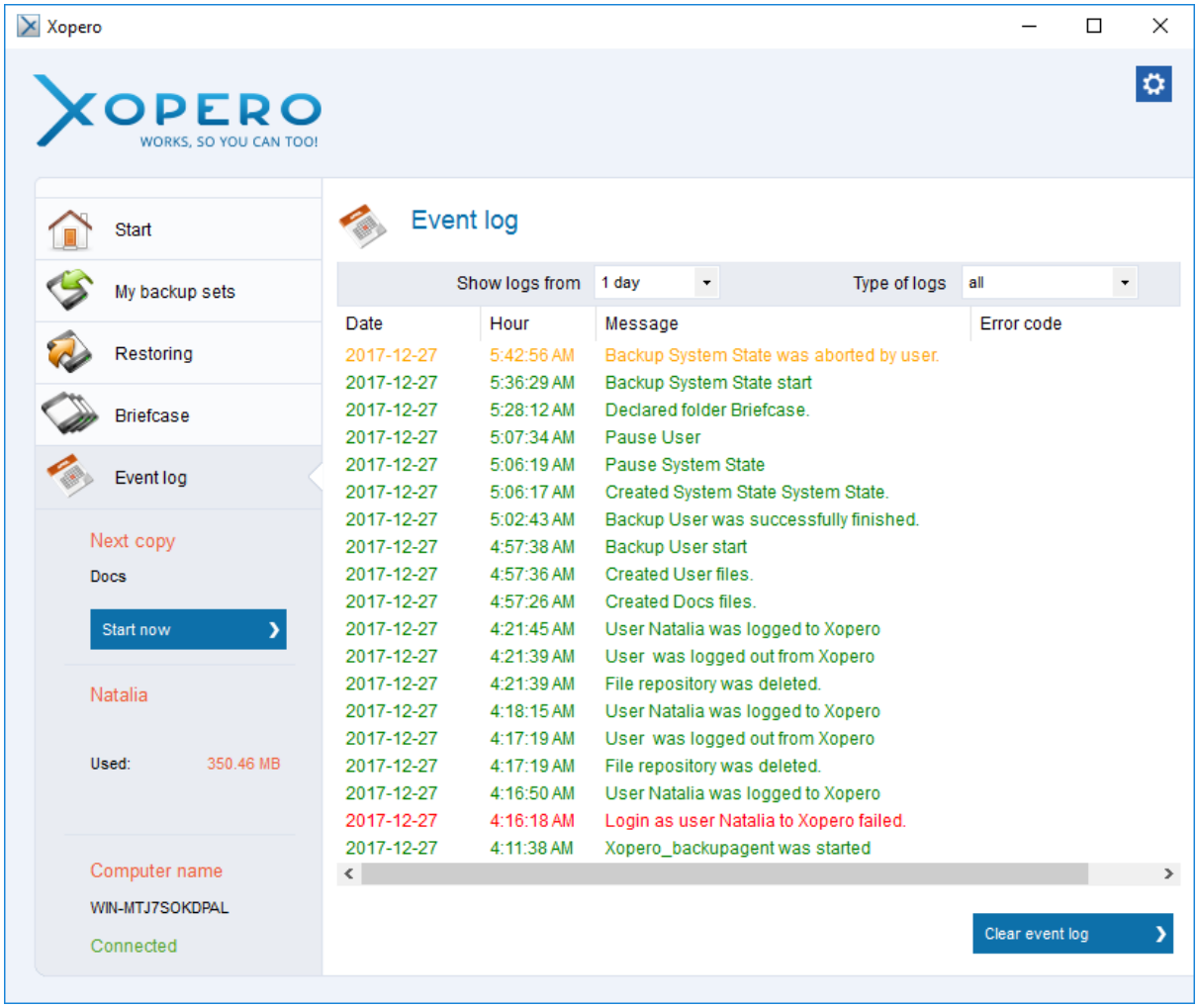
The upper section –***Files to synchronization*** - contains a list of files which wait for synchronization, which are: sending, download or deletion. The lower band contains history of changes – latest synchronized files.

The ***Pause synchronization*** button causes the process of synchronization to stop, it can be resumed at any moment.

The ***Go to Briefcase*** button causes the Briefcase catalog to be displayed in Windows Explorer.

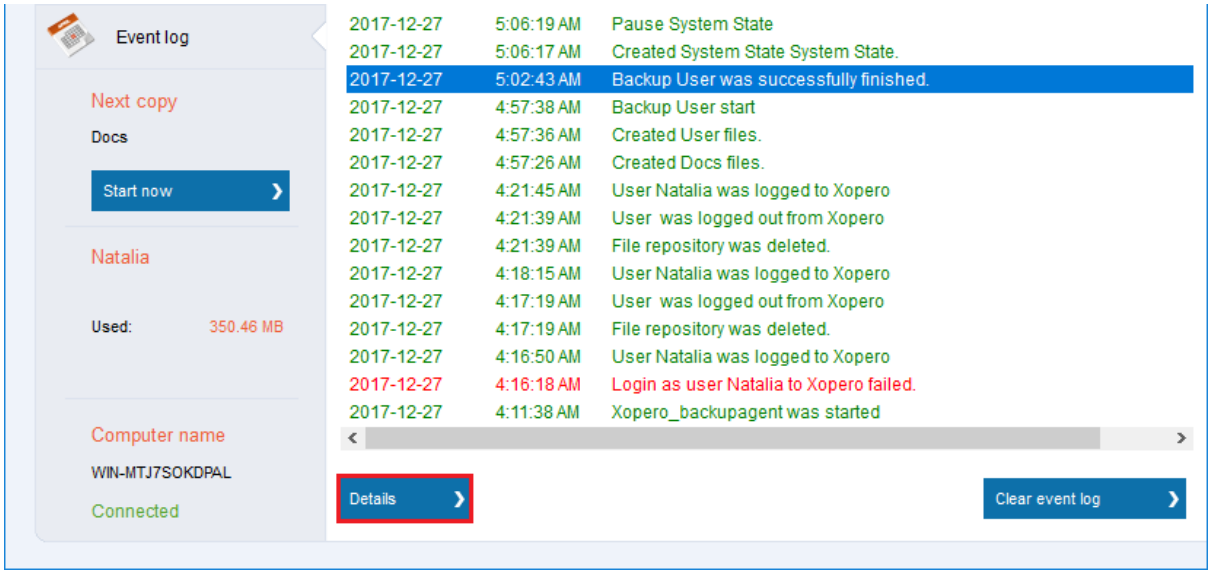
Event log

The ***Event log*** contains all information about the work of application, services, created backups and restored data.



In the top part of the event log you can choose the time period containing events which you want to see, as well as types of events.

The table containing application logs is divided into 4 columns. The first two contain time, at which the entry appeared, and the next one contains a message. If any error occurs, its code is being shown in the fourth column, which might be helpful while diagnosing the error. Moreover, you can display the details of backup performance for a backup summary log. In order to do that, you have to click on a log informing about ending a backup project, and click on the ***Details*** button, which will be displayed at the bottom of the tab.



Backup creator

Backup

Backup is a process of creating security copies of key data in order to recreate them after their loss or damage. Security copies should be stored in locations different than the original data.

All backups created by the Xopero application are incremental and differential. During first backup full data is sent, and later only differences which appeared in particular files since their last sending.

Xopero also supports data versioning, which means that the user can restore any of the previous file versions, not necessarily the last one.

Mechanism

All backups in the Xopero application are sent according to the same scheme. At the beginning - except where the Volume Shadow Copy option is enabled - each file is

individually copied to a temporary location, where it is encrypted - unless this feature is disabled while creating the project - and divided into smaller parts. It is then sent to the user's server disk. Backup can be performed using delta compression so that the application receives and sends only data modifications, or newly created documents. The Xopero application supports two types of delta backup:

- **Differential** - receives and sends only document changes, which appeared since performing the last full backup.
- **Incremental** - receives and sends only document changes which appeared since the last backup, regardless of whether it was full or incremental backup.

The use of these technologies in our application saves time and disk space while creating backups and restoring data from Xopero server.

Delta is a method of storing and sending data in a form of differences between particular file version, instead of full file versions.

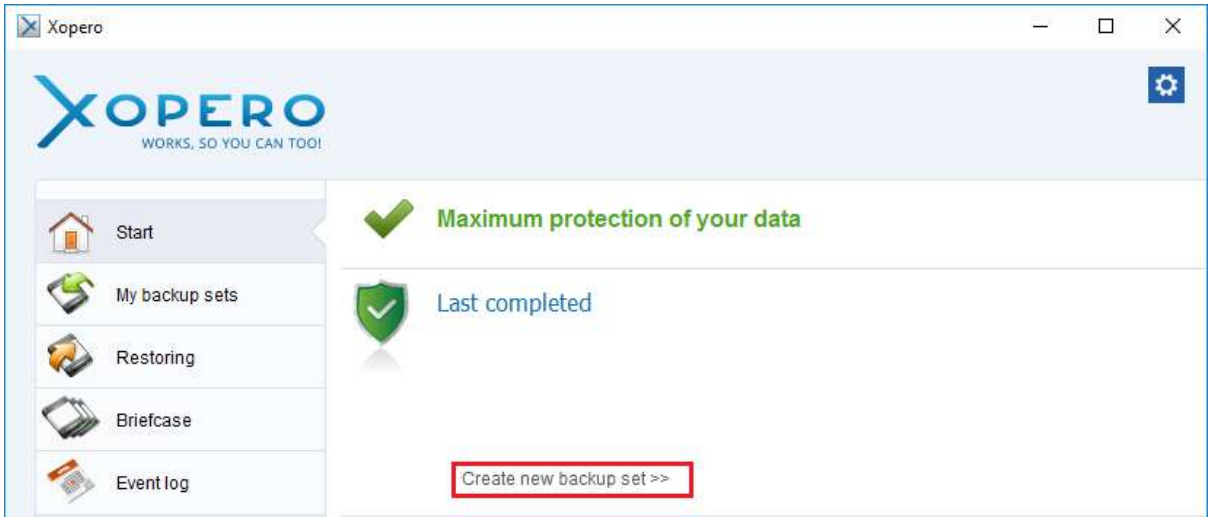
Thanks to the delta mechanism, besides reducing the amount of sent files, we have also increased their security.

Backupset wizard

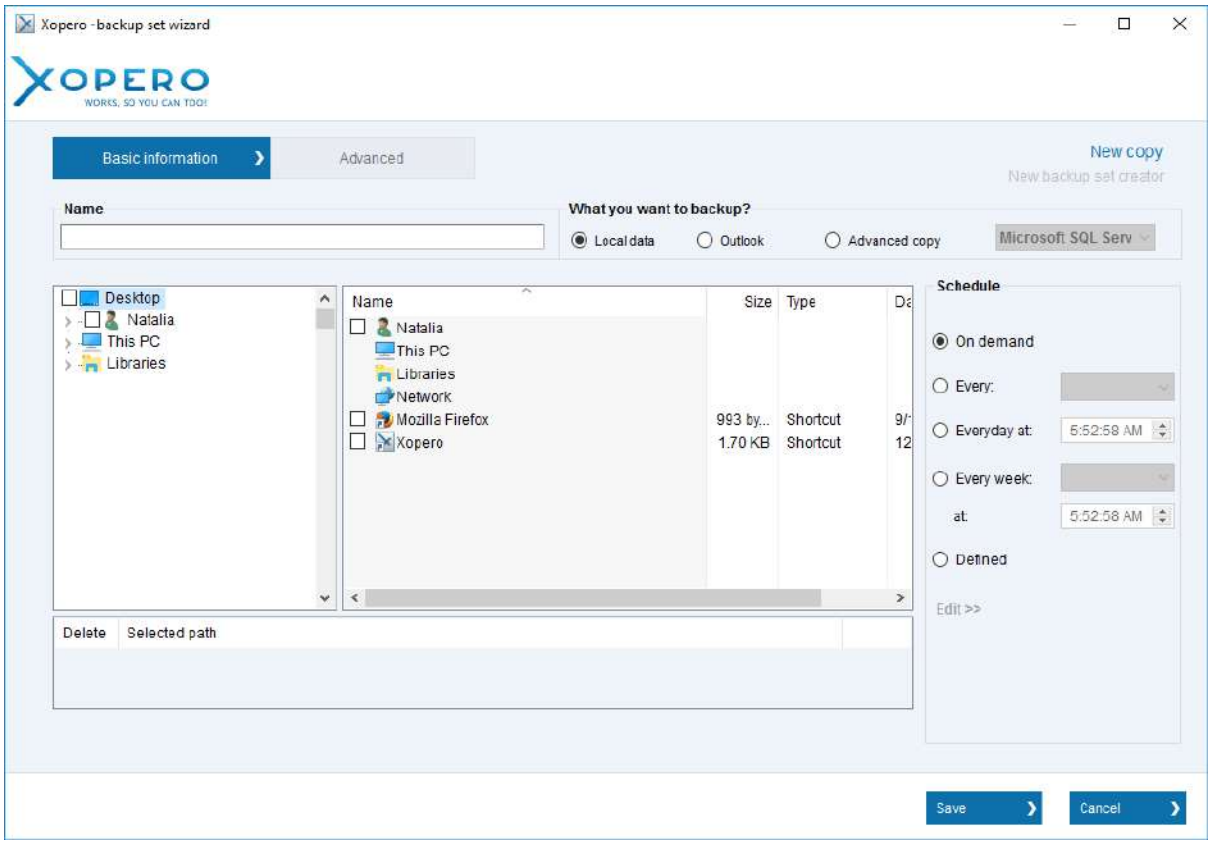
In order to create a new backup project, you have to start the backupset wizard, which can be done in 2 ways:

1. Click on ***Create new backupset*** in the ***Start*** tab in the ***Last completed*** section.

2. Click on ***New backupset*** in the ***My backupsets*** tab.



Choosing one of these options results in launching the backupset wizard, which is divided into two sections: ***Basic information*** and ***Advanced***. First of them allows you to indicate data type and data of which backup you want to create, the second one allows you to choose advanced options which are to be applied during backup creation.



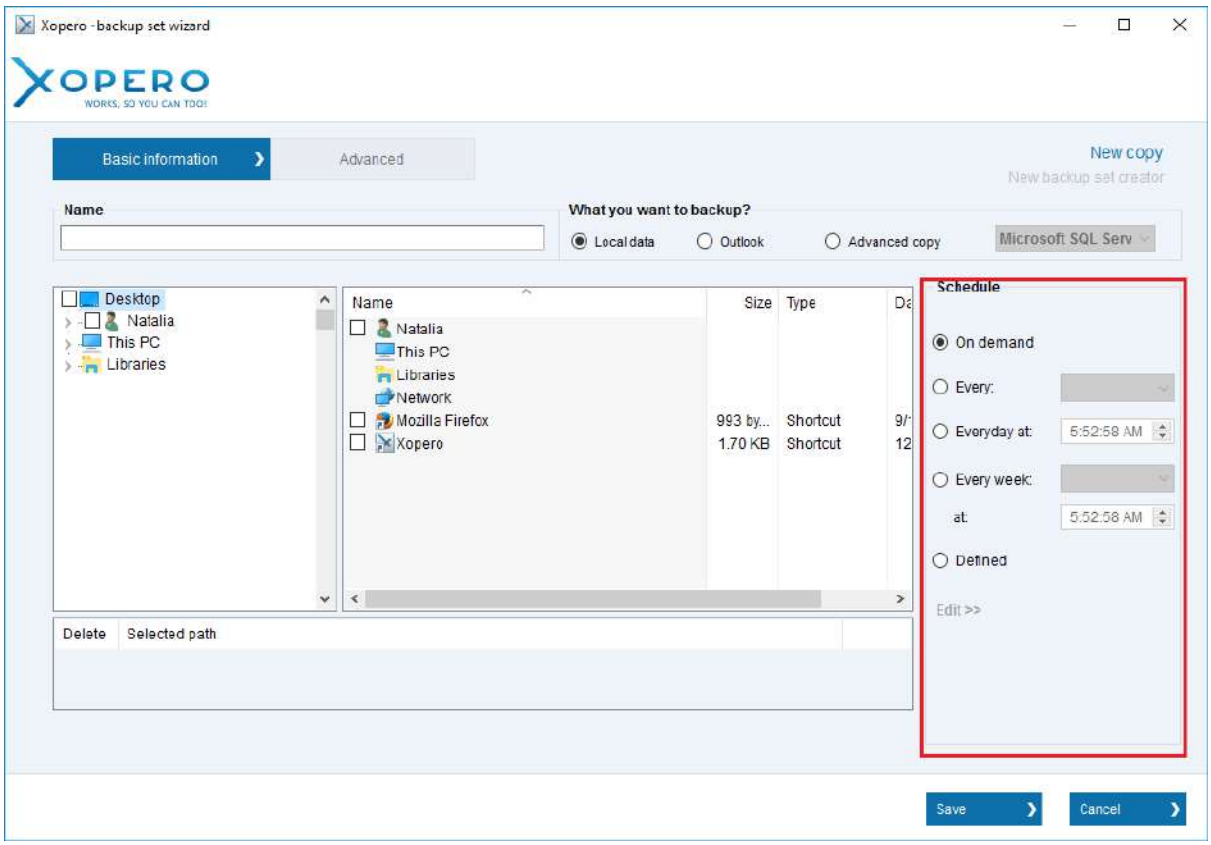
Depending on the chosen type of copy, the appearance of the Basic information tab is going to change, and some of the advanced options might be inactive.

It is required, for each project, to name it in a unique way within the user account.

Schedule

For each created backup the user can set the schedule that is, determine the frequency with which its copies will be created.

The basic schedule is declared in the backupset wizard, at the right hand side of the ***Basic information***tab in the backupset wizard.

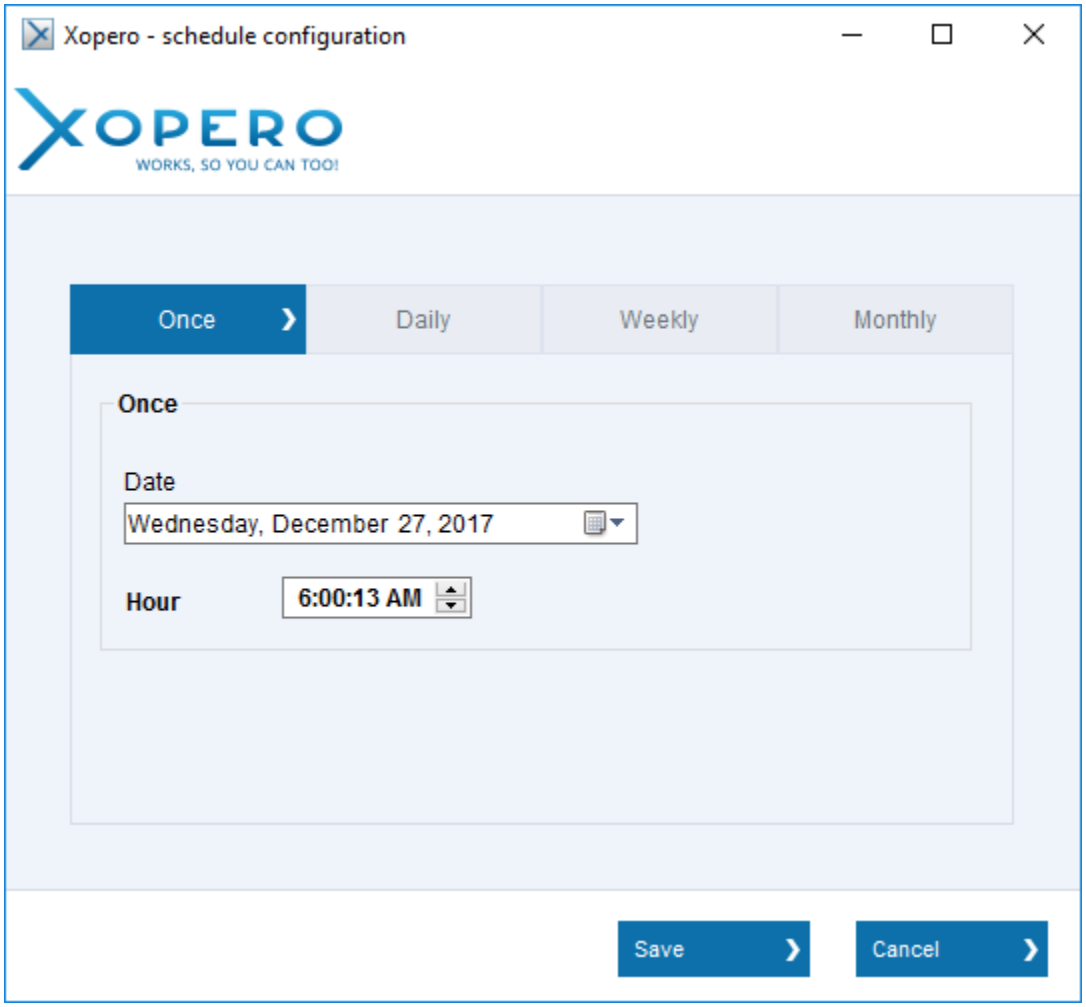


The basic backup schedule contains the following options:

- **On demand** - backup will start only manually at the request of the user,
- **Every:** - backup will be carried out at a defined (selected from the list) time,
- **Every day at:** - backup will be carried out each day at the time set by the user,
- **Every week** - on the selected day of the week, at the time set by the user,
- **Defined** - checking this option allows you to edit your own schedule.

Defined schedule

The ***Defined schedule*** expands the basic options which can be defined by the user.

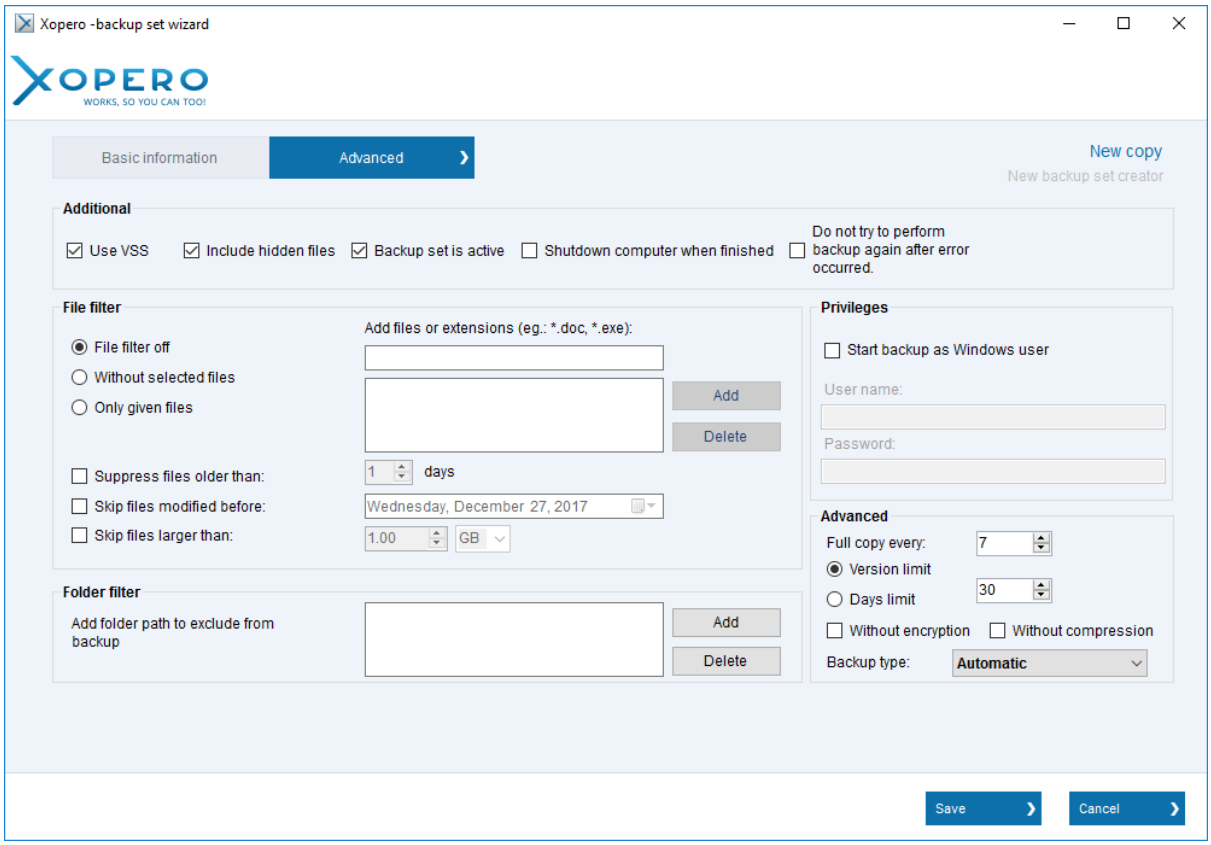


- **Once** - backup will be created only once, at the time set by the user,

- **Daily** - backup will be created only once, at the time set by the user,
- **Weekly** - backup is created at weekdays specified by the user, at declared time,
- **Monthly** - backup is created at a chosen week and day, at the time declared by the user.

Advanced options

For each project the user has the possibility to define the advanced options. Depending on the chosen type of data to backup, some of the options might be inactive. In order to set the advanced options for the project you have to enter the ***Advanced*** tab in the Backupset wizard.



The ***Advanced*** tab is divided into 5 fields. In the ***Additional*** section the following options can be turned on or off:

- **Use Volume Shadow Copy** - this option marked by default, it defines that Volume Shadow Copy mechanism is to be used during backup creation. This option allows to create backups of opened files,
- **Include hidden files** - this option defines whether files with attribute Hidden are to be included in the backup,
- **Backupset is active** - if this option is turned on, the backupset will be performed according to the schedule, if off, the user still has an option to manually turn it on,
- **Shutdown computer when finished** - after creating a backup, a 5-minute-long reminder will be displayed during which the user has the option to cancel the automatic shutdown,
- **Delete backupset** - this button appears only after the first save of the newly created backupset, it deletes the project, not files stored on the server.

The ***File filter*** field allows the user to choose which files are to be excluded (***Without selected files***), or included in the backup (Only given files). This option is available for backupsets of ***Local data*** and ***Network drives***.

The ***Folder filter*** allows you to exclude given paths and catalogs, which were declared before in the ***Basic information*** section.

The next field in the ***Advanced*** tab is ***Privileges***, where the user can provide a Windows user name and password, so that the application will be working on conditions set by this user during backup creation. This function is applied when you want to create backup of files for which you need additional authorization. In the ***User name*** and ***Password*** fields, you have to enter the Windows system user information, of whose data backup is to be performed.

By default the Xopero service works on authorization of a local Windows system service.

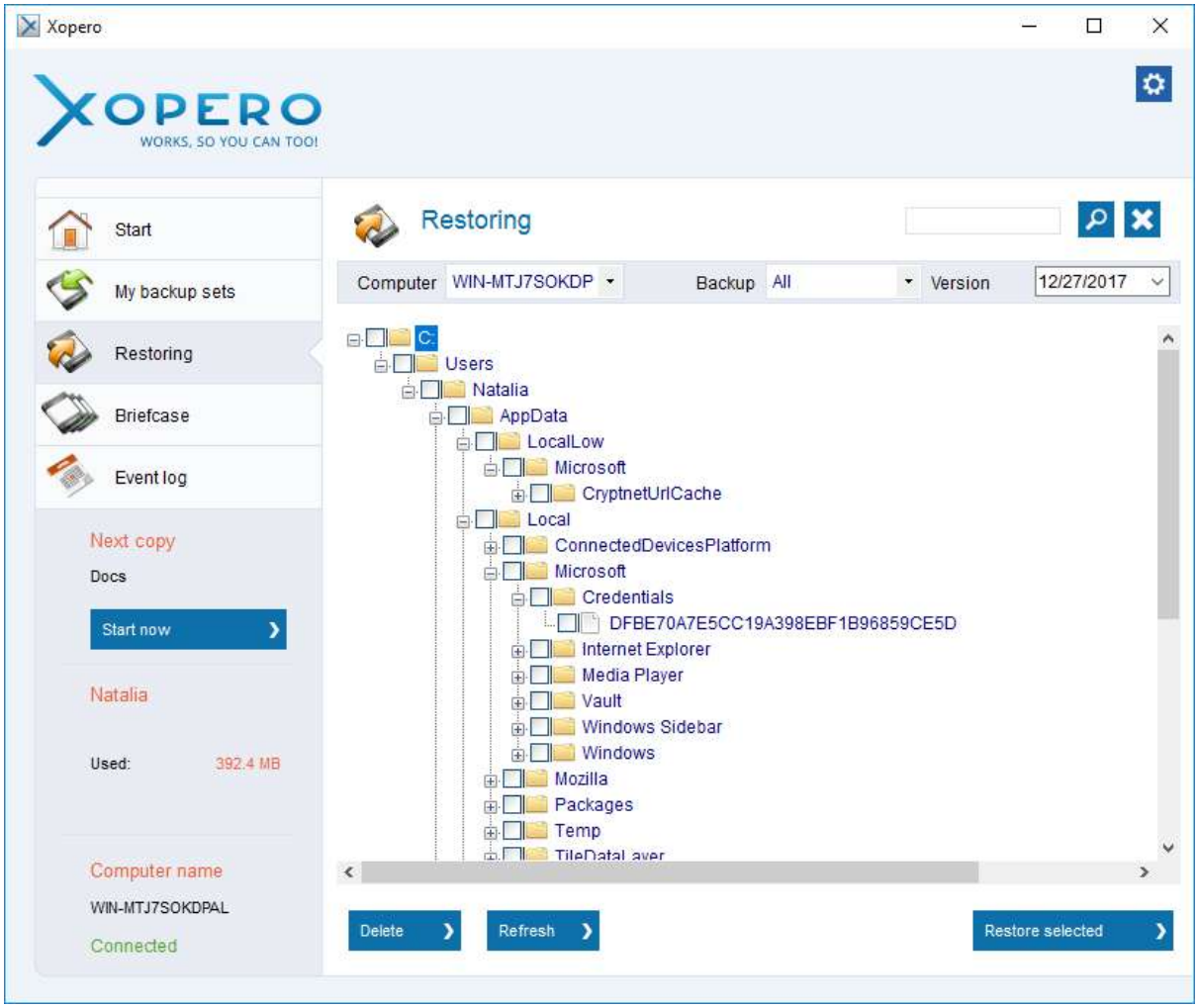
The last section in this tab are the ***Advanced*** settings. These settings allow to disable compression and encryption, as well as to set the version limit for a backupset and the frequency of full backup. Additionally, the user can choose the type of deduplication:

- **Automatic** - data deduplication will take place automatically, using the most advantageous method,
- **None** - data deduplication will be disabled, data will each time be sent in its full version,
- **Binary Delta - Incremental** - any changes in files that are subject to backup since the last full backup will be sent,
- **Binary Delta - Differential** - any changes in files that are subject to backup since any last performed backup, will be sent**.**

Deleting and restoring data

Data restoring

The Xopero application user can restore at any given moment data, which has been sent to the Xopero server disk as backup.

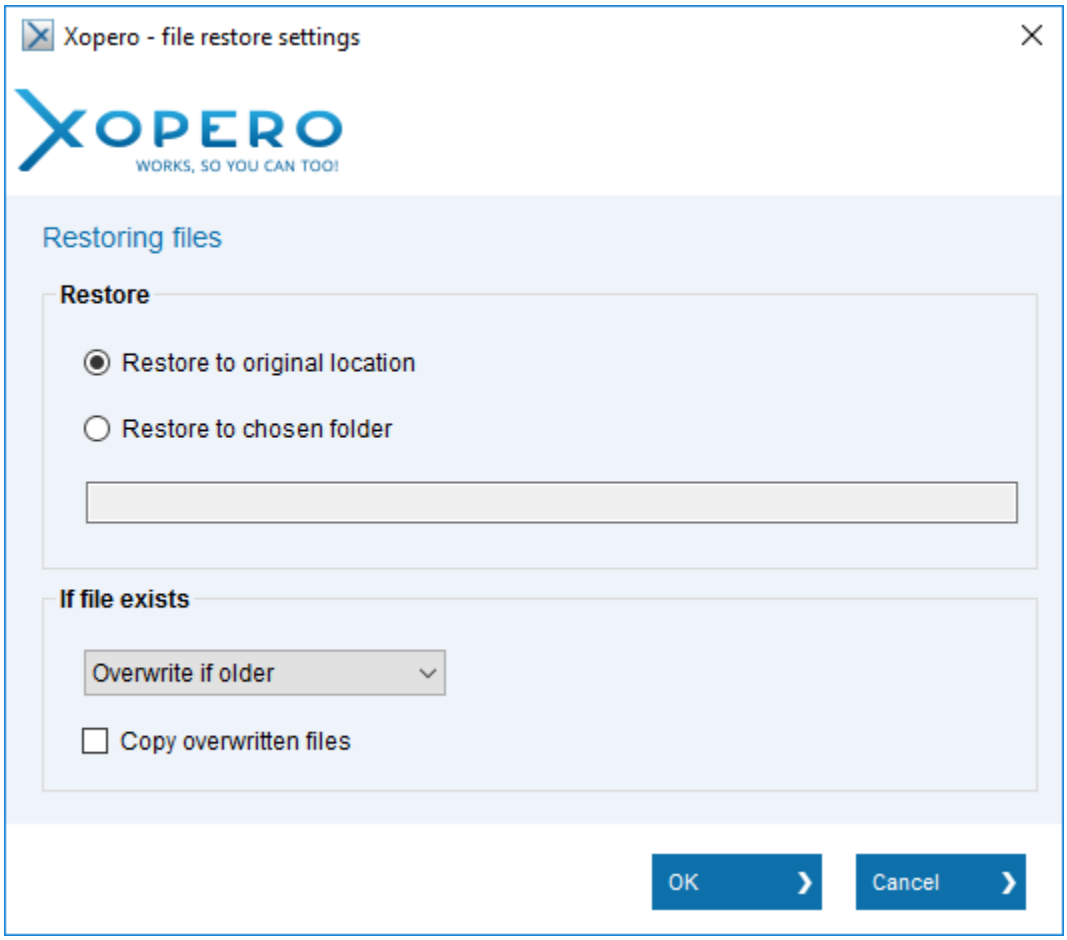


At the upper part of the *Restoring tab* there is a bar with three expandable lists:

- **Computer -if the user has more than one devices within his Xopero account, here he can choose one of them, from which he wants data to be restored. It does not have to be the very same computer which the user it using at the moment.**
- **Backupset - the user can choose one of the former projects in order to see files contained therein.**
- **Version - in case none of the projects has been chosen, the user can display the state of storage at given date, while after choosing the project, he can display versions sent at the date of sending this backupset.**

The user can also search for files, which he has sent, with a search engine located at the upper right side of the tab.

In order to restore data from the Xopero servers, you have to mark files and/or folders in the *Restoring tab*, then click the *Restore selected* button. *File restore settings* will be then displayed.



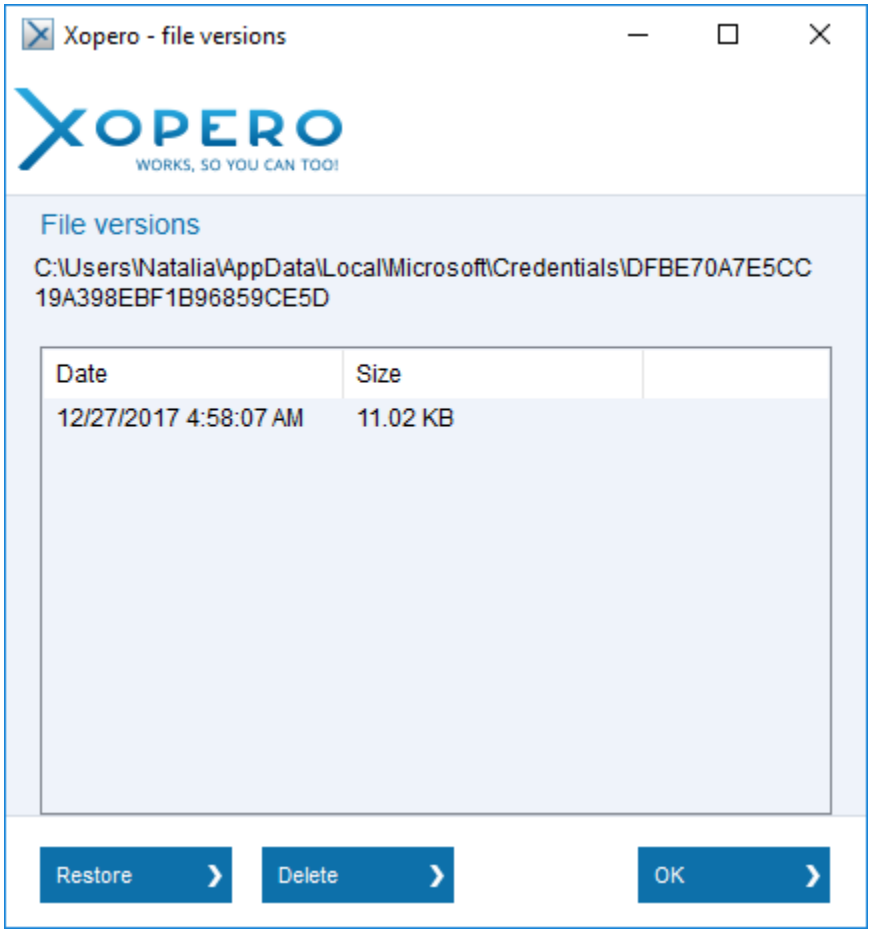
In the displayed window, choose a location for the restored data between original (from which the files were send) and chosen by the user. Additionally, you can choose operations that the application is supposed to carry out if there are files sharing the same name in the chosen localization. The application can overwrite files *always* or *never* if existing files are older. If you choose overwriting of files (*Create a copy of overwritten files*), a *.bak extension will be added to those files, and both files will be stored in the same location.

The process of data restoration in the worst case may need up to three times more disk space, than the largest file which has been selected for recovery. This case can occur only when restoring files sent using the Binary delta.

Restoring selected file versions

All sent files have their versions controlled, that is, the user can restore them in a version in which they were during one of the backups (not necessarily the last one), thanks to which you can recreate changes in the file.

In order to do that, enter the *Restoring tab*, right-click on a given file and choose the *Show file versions option*, which will display a list of backed up versions of the file.

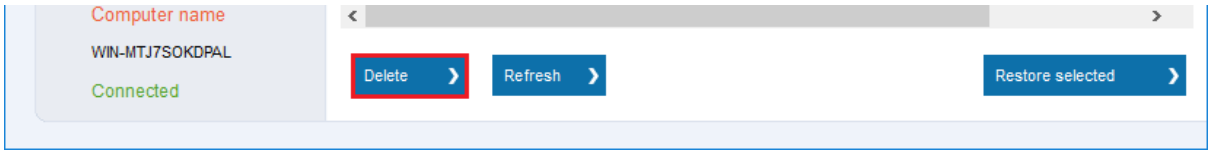


After you choose a given version from the list, you have to click on *Restore*, which will cause file restore settings, to display (this is described at the beginning of this chapter).

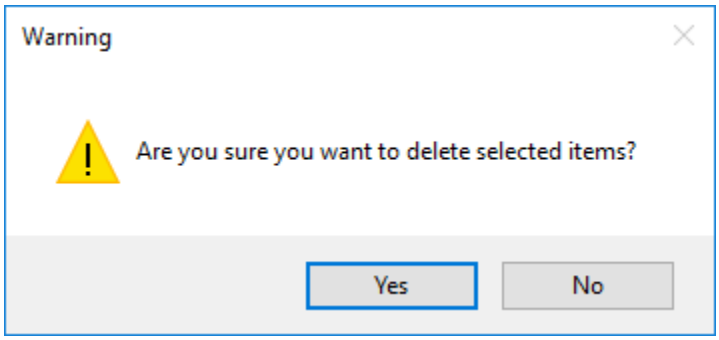
Another way to download file versions is to choose the version for the full repository or a selected backupset.

Deleting data

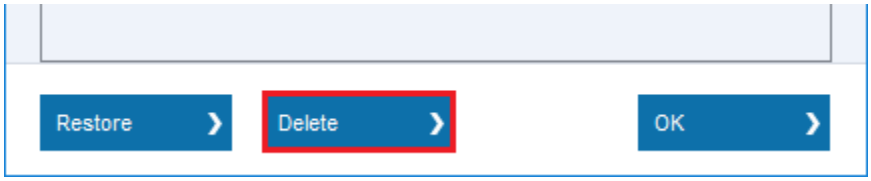
In order to delete data you have to enter the *Restoring tab* and mark files and/or folders you want to delete from the Xopero server, and click on *Delete* at the bottom of the tab.



A warning about data deletion will be shown, you have to confirm it for selected data to be deleted irreversibly.



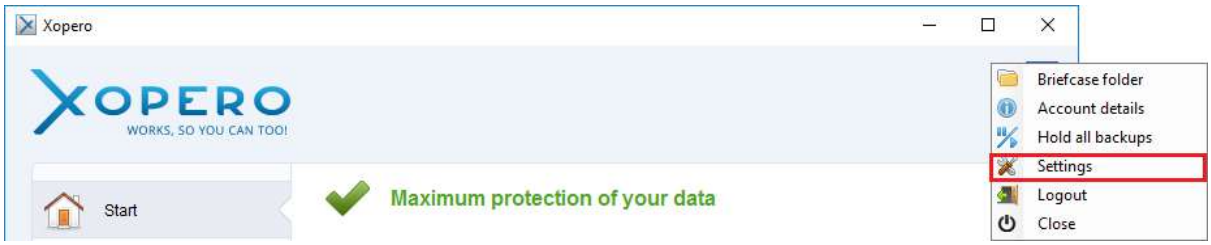
The user can also delete selected file versions. In order to do so, after displaying a list with file versions (*it was described in the earlier chapter*) and marking the selected version you have to click on *Delete*. This will cause only a version of the file to be deleted, not the whole file.



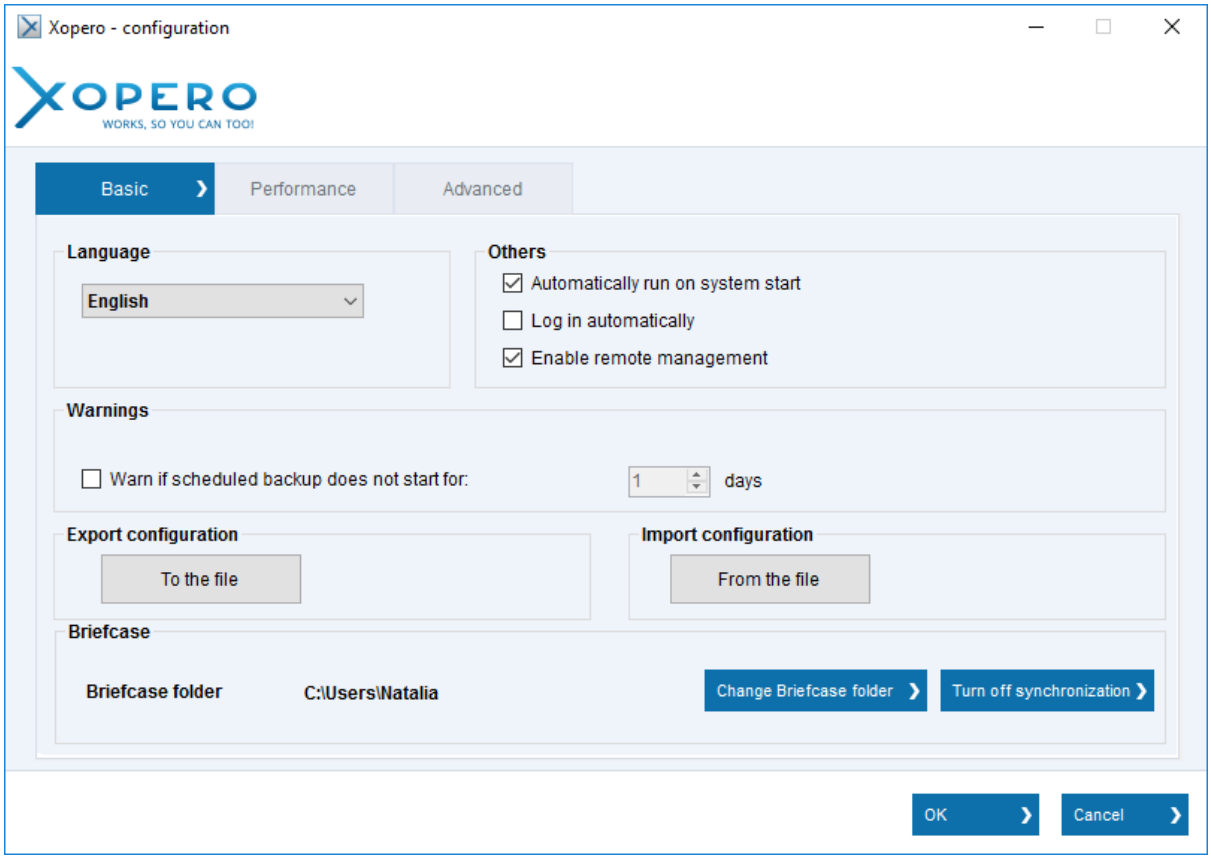
If you want to delete all the data sent by one user from all his devices, simply change the encryption key (*Changing the encryption key*).

Application settings

In order to display the window of application configuration, click on the icon in the upper right corner, which will cause a context menu to open, and choose ***Settings***.



The application settings window will be opened. It is divided into 3 tabs. In the ***Basic*** tab the user can change the language of the application, turn warnings on and off, allow automatic running and logging into the application, as well as enable remote management.



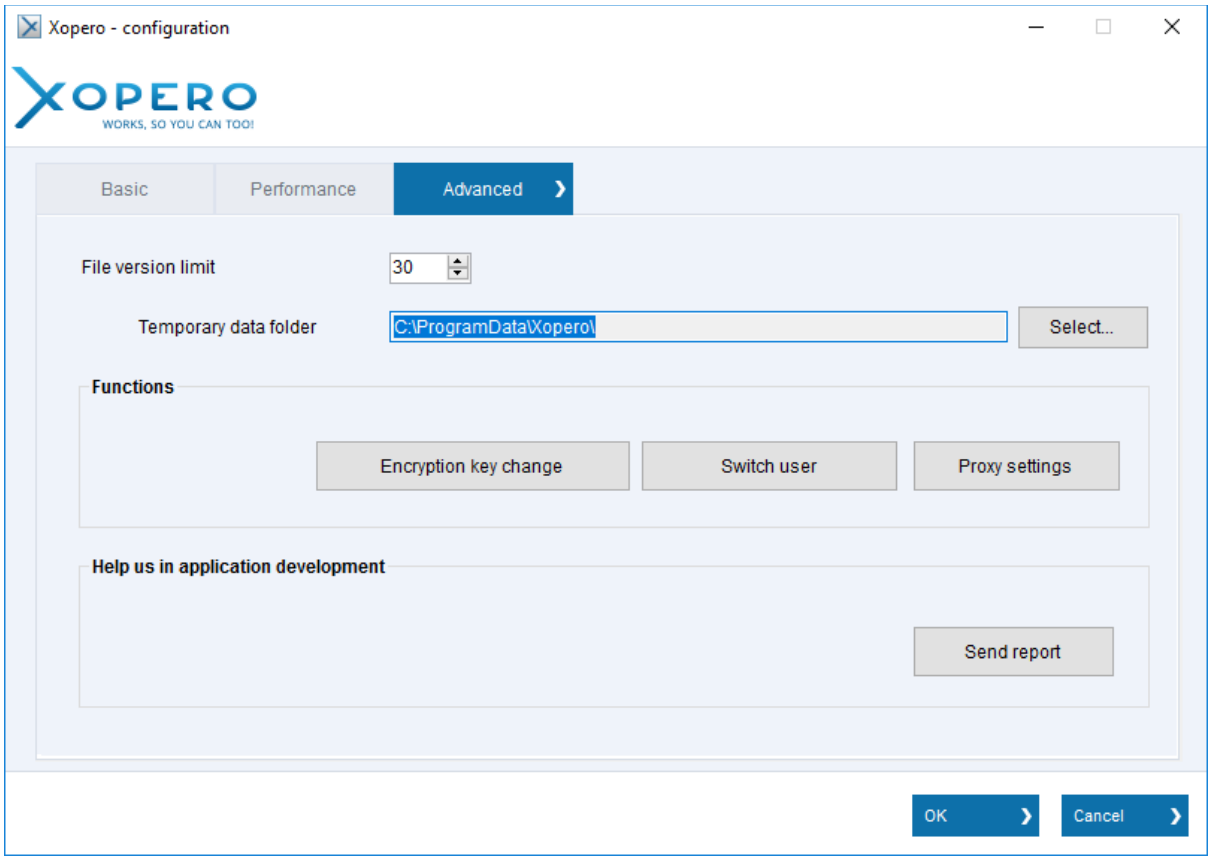
Export configuration allows you to save all application settings to a file, along with created backupsets.

Import configuration allows you to, according to your choice, import settings from the exported configuration file.

In the ***Basic*** tab you can also declare the Briefcase catalog, if it has not been declared before, or change its location if the Briefcase has not been activated yet.

The Network tab allows to limit the upload and download of data of the Xopero application, by using the sliders. There is also an option to choose the number of cores used while sending data, depending on whether computer performance or the quickness of backup is more important to us. Marking the Perform with a lower priority option will cause to slow down the backup process and speed up the work of other processes.

The ***Advanced*** tab is the last one and it contains application settings which ought to be changed in a conscious manner, because they affect application performance and user accounts.



The user can change the ***File version limit***, or the amount of versions for each of files stored on the server. 30 versions is the default option.

The ***Temporary data folder*** defines a catalog to which every file is copied before sending it to the server. In case of backup with the ***Volume Shadow Copy*** option, files are not copied to that catalog.

The option ***Encryption key change*** redirects the user to the first run wizard, where he can change his encryption key.

The option ***Switch user*** causes the currently logged in user to log out and a login window to appear, and the ***Proxy settings*** button causes to display a window, in which you can enter the proxy gate settings. The process of connecting to the server disk by a proxy server is described in the *First logging in to the application* chapter.

Changing the encryption key

The ***Encryption key change*** button allows you to change the key, with which user data is encrypted. Doing so will result in irreversible loss of all data stored on the server disk, which were sent as backup and synchronized with the Briefcase, from all user devices. While changing the encryption key, the user is asked to provide his account password, then he has to confirm the notification.

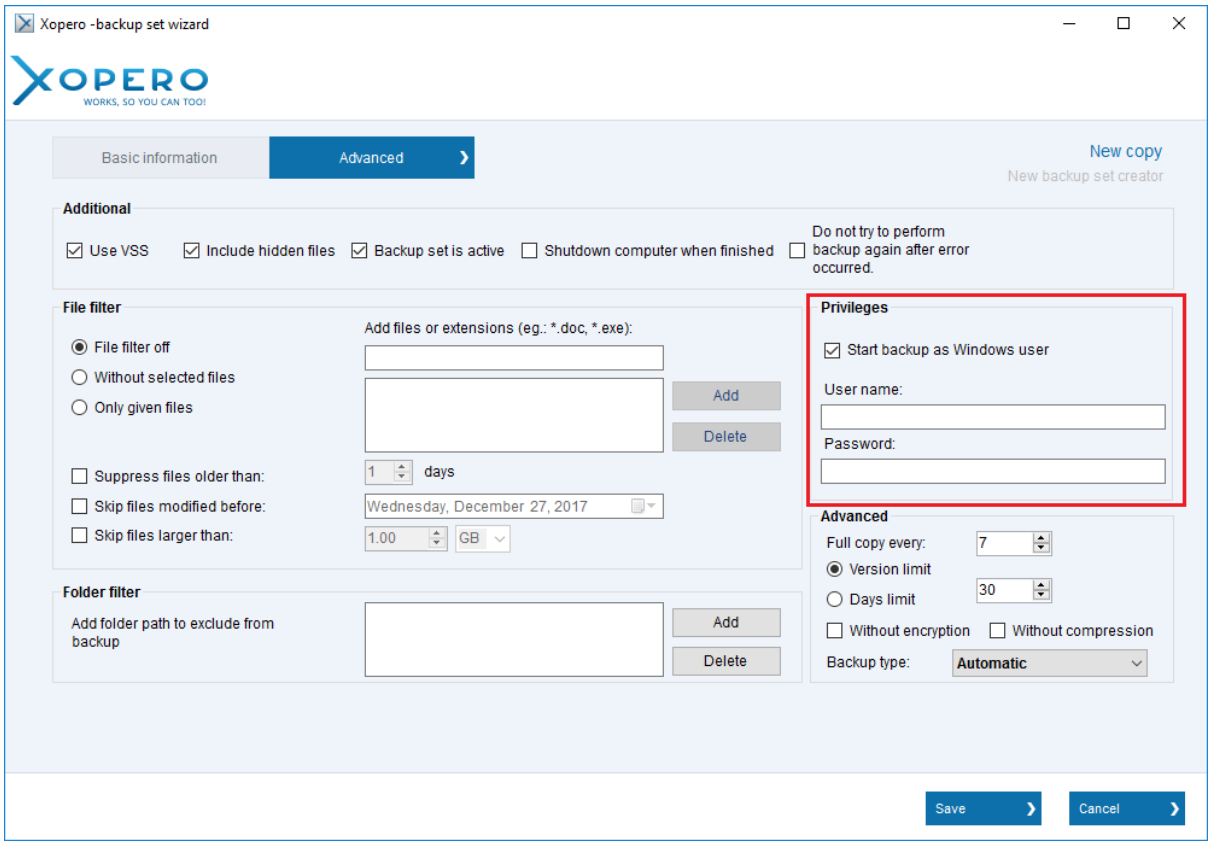
If you do not know how to go to the above window, check the instructions for application settings.

Application logs

Application logs, which are necessary to correctly diagnose existing errors and problems by the Xopero team, are located on the user's PC in the catalog **%ProgramData%\Backuplogs**.

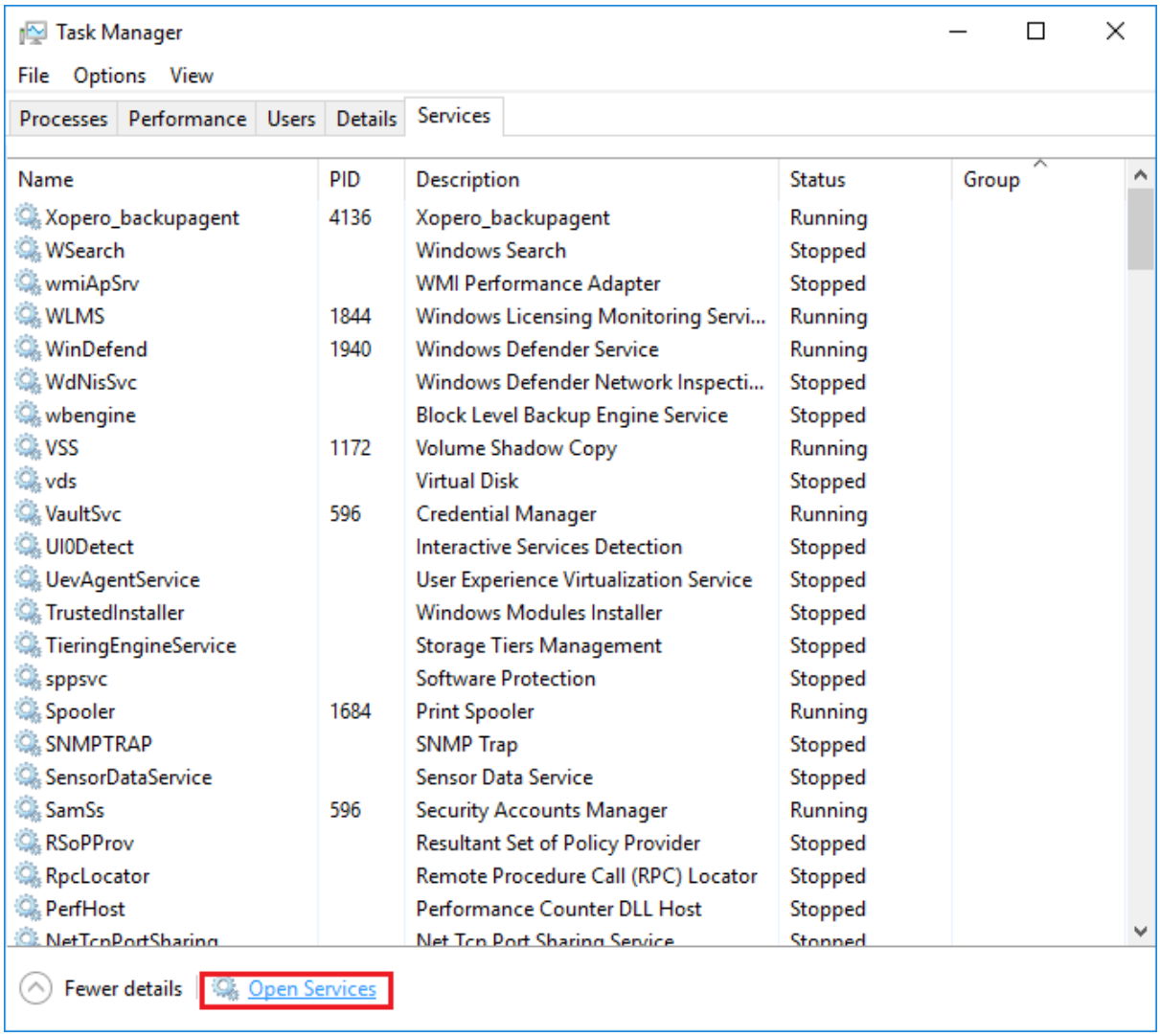
Granting system administrator rights for the Xopero service

For the most types of backup (beside VHD, SystemState and Network paths), the only setting that needs to be done, is choosing a *"Start backup as a Windows user"* option on the *Advanced* tab and enter the system administrator credentials.

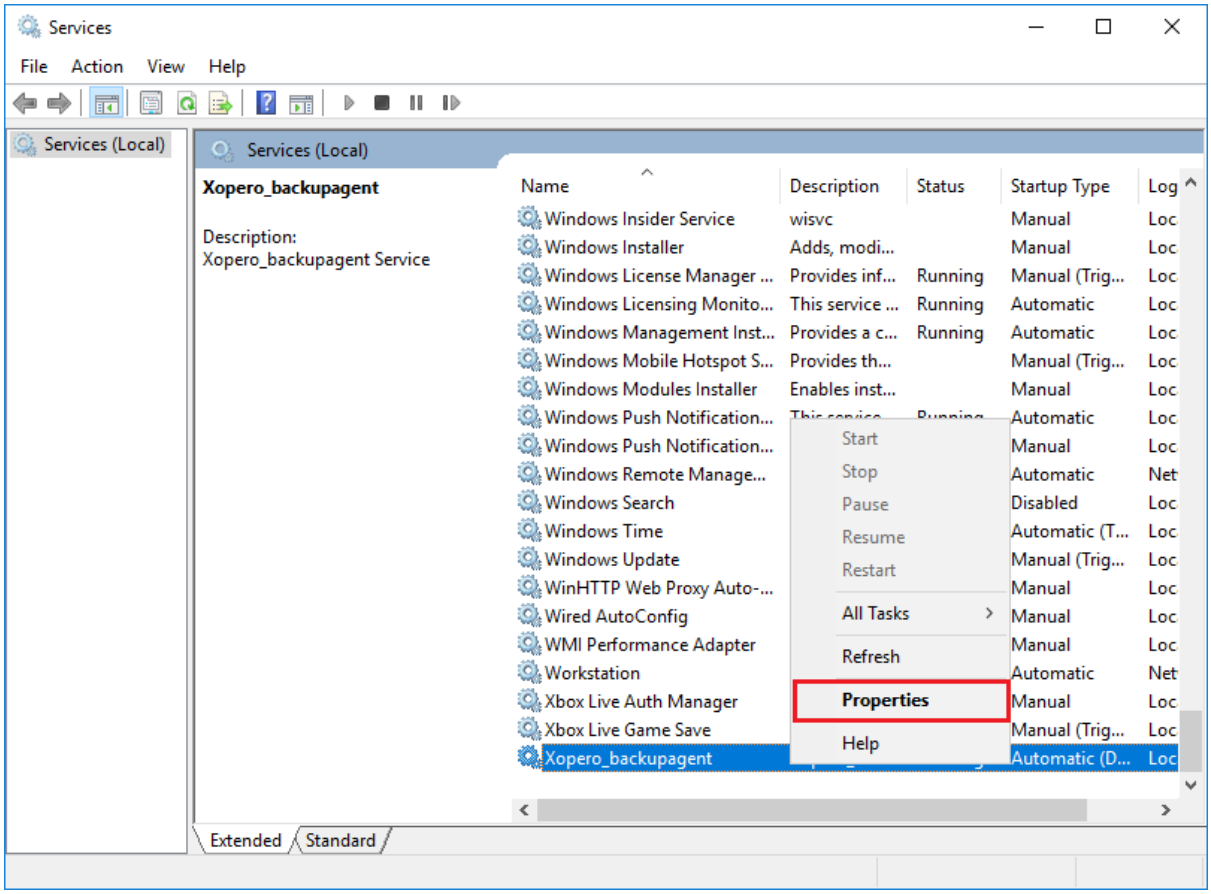


You can also edit the existing project and set this option.

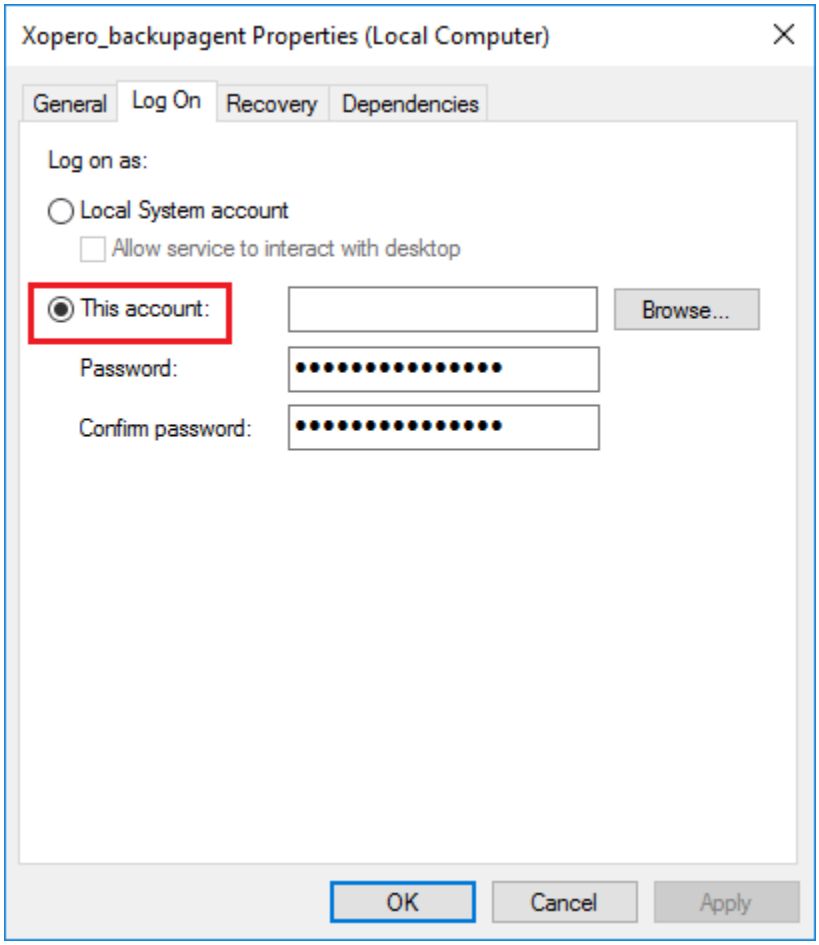
When you need to create a VHD, SystemState or Network paths backup, you need to go to system services - right-click on the tray panel and open the Task Manager. Then go to Services tab and click the **Open Services** button (the last option name can be different on various Windows versions).



In the new windows, find the *Xopero_backupagent* option. Right–click it and choose *Properties*.



In the properties window, go to *Log On* tab. There, you need to check This account option and enter login and password (twice – in both password and confirm password field) of Windows Administator.



After entering right credentials, you need to click ***Apply***. The service have to be restarted now. To do it, go to General tab and click ***Stop*** and then ***Start***. If the credentials are valid, the service will be started.

After configuring above settings, the backup service will be given needed admin rights to create a VHD and System State projects.

Glossary of terms

AES 256 - an encryption algorithm which performs 14 rounds of encryption, making it virtually impossible to break, and thus guarantees the security of transmitted data. Completely resistant to all known attacks of linear and differential cryptanalysis.

Briefcase – the space within which the files of the user are stored. The data is coded with an AES 256 algorithm. The contents of the folder is synchronized on each computer on which the Xopero application is installed, within all computers of one user.

Backup – creating a backup copy of all important data, in order to restore them later in case of their damage of loss. Backup copies should be performed periodically and stored in a location different than the original. All backupsets are encrypted with an AES 256 algorithm, unless the option is turned off in the backupset wizard.

Backupsets (projects) – they represent files, which the user has backed up, by using the Xopero application. The files are distinguished by the devices form which they were backed up. All backupsets are encrypted with an AES 256 algorithm, unless the option is turned off in the backupset wizard.

Delta - a mechanism which detect differences in files, and allows to send only the modified parts of files, instead of full files than entire files. Xopero supports two types of Delta mechanisms:

- ***Differential*** - downloads and sends only the changes in the documents appearing since performing the last full backup.
- ***Incremental*** - downloads and sends only the changes in the documents appearing since the last backup, regardless of whether it was full or incremental.

The use of these technologies has a very beneficial effect on the backup and data restore speed and allows to save space on the server disk.

Devices – it represents one computer, operated by one Xopero application. This allows to maintain a cohesive structure of folders on different PCs in the process of backup and data restore. The number of devices is limited according to the *product*.

NAS (Network Attached Storage) - a technology which allows connecting disk storage resources directly to the network. This type of solution allows for simple configuration of data access from different points of the network.

QNAP - a company which produces high-quality NAS drives and disk arrays.

Proxy server (proxy, proxy gate) - server or software which establishes a connection on behalf of the user.

Volume Shadow Copy – a Windows service that allows you to create backup of opened files. This service is not available for Windows XP users.

Versioning - a mechanism through which the user has the ability to restore a previous version of the file, not necessarily the last one.

Installation of the client application using switches

Since version 3.9.6, the Xopero Agent installation package has switches that can allow user to enter backup server address, login and user password at the application distribution/installation stage. After installation the Xopero Agent will automatically connect to the server and login to the given data.

Switches are mainly used during distribution of applications over GPO or SCCM and Agent installation in the NO GUI version.

Parameters:

- *LOGIN=""* - user login.
- *PASSWORD=""* - user password.
- *SERVER=""* - server address.
- *queit* - optional parameter, allows the so-called silent installation without displaying the user interface.

Example of using switches for the MSI installer:

Example of using switches for the EXE installer:

When logging to the account in the Xopero Cloud service, the server address should be omitted.

Example: *C:\XoperoCloud_3.9.6.exe LOGIN = "XoperoEndpoint" PASSWORD = "123456"*

Management Center for QNAP

Introduction

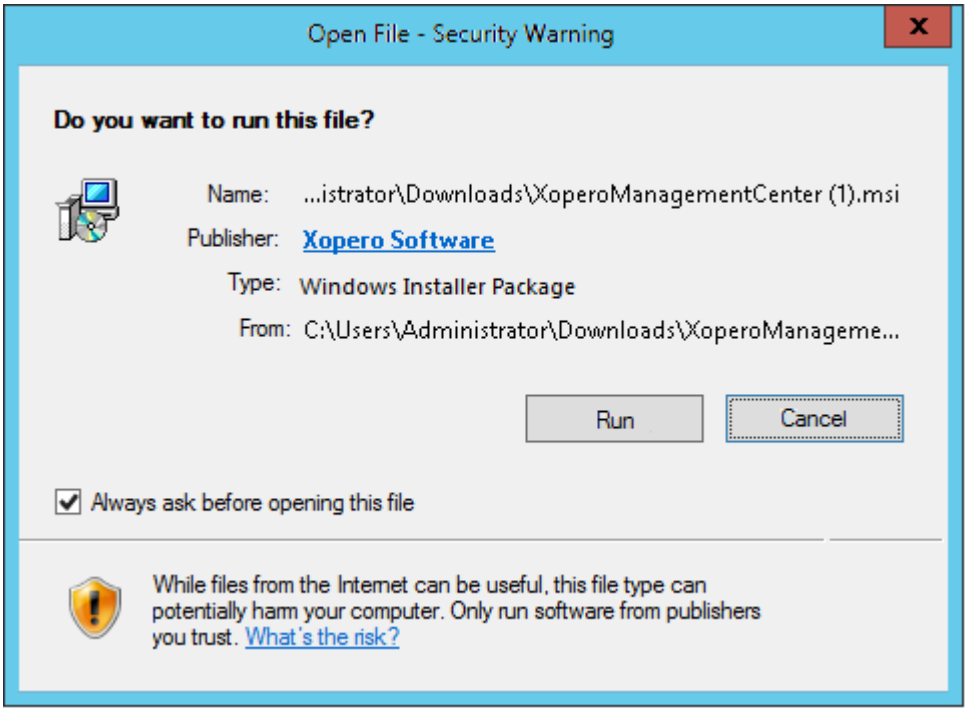
Management Center lets you manage and monitor all backups from all devices connected with QNAP NAS from a single view. It allows remote client configuration, creating new users and remote management of all Xopero services in your network. It has been mainly created for system administrators.

Key functions:

- creating and managing users and user groups,
- monitoring Xopero backup system,
- remote creating and enabling backup projects,
- data restore from every device,
- creating backup projects, that can be later sent to client applications,
- access to server logs,
- backup storage management.

Application installation

To install Management Center, you need to download it from Xopero *Control Panel*, that is available on QNAP device. When it's opened, you may see *Security warning* window.



Click *Run* to start the installation process. You must click *Next* to start the installation. If you don't want to install the product, click *Cancel*, which will stop the process.

After the installation is started, you will see a progress bar on the screen.

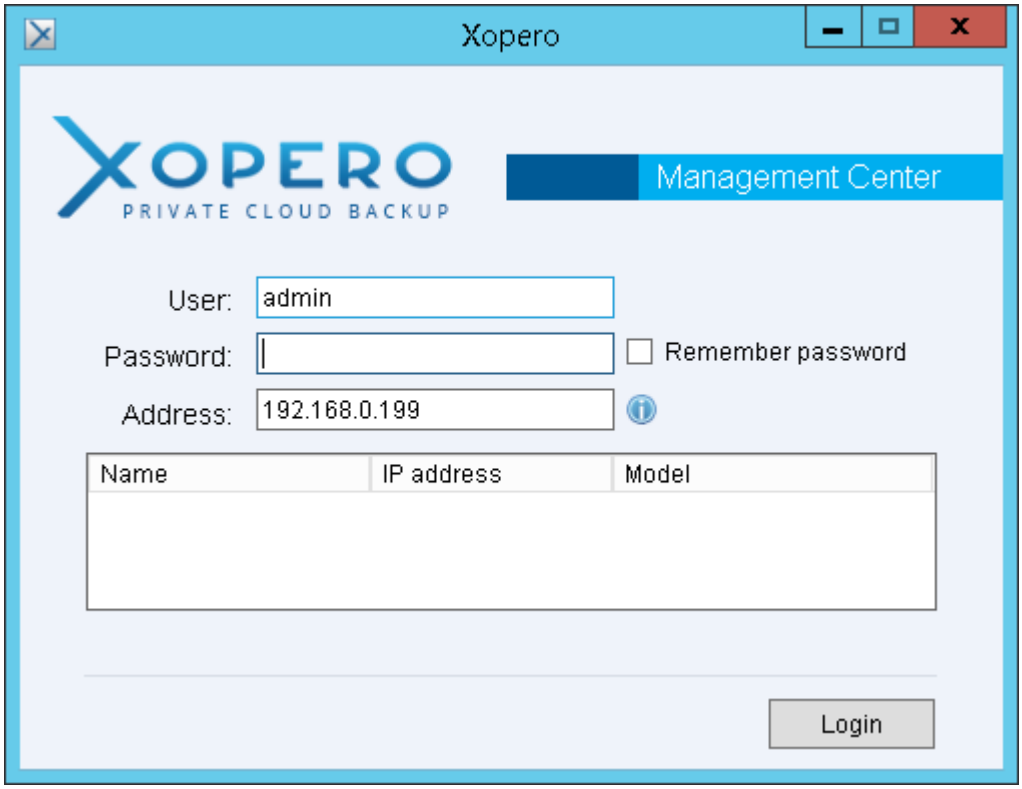
When the installation is finished, You should see summary window. To close it, click *Finish*. The Management Center should be started automatically.

First login and configuration of Xopero system

First login

To access Management Center, user needs to have system administrator's login and password. Address of the application is the same as QNAP device and it should be added automatically after logging window is opened.

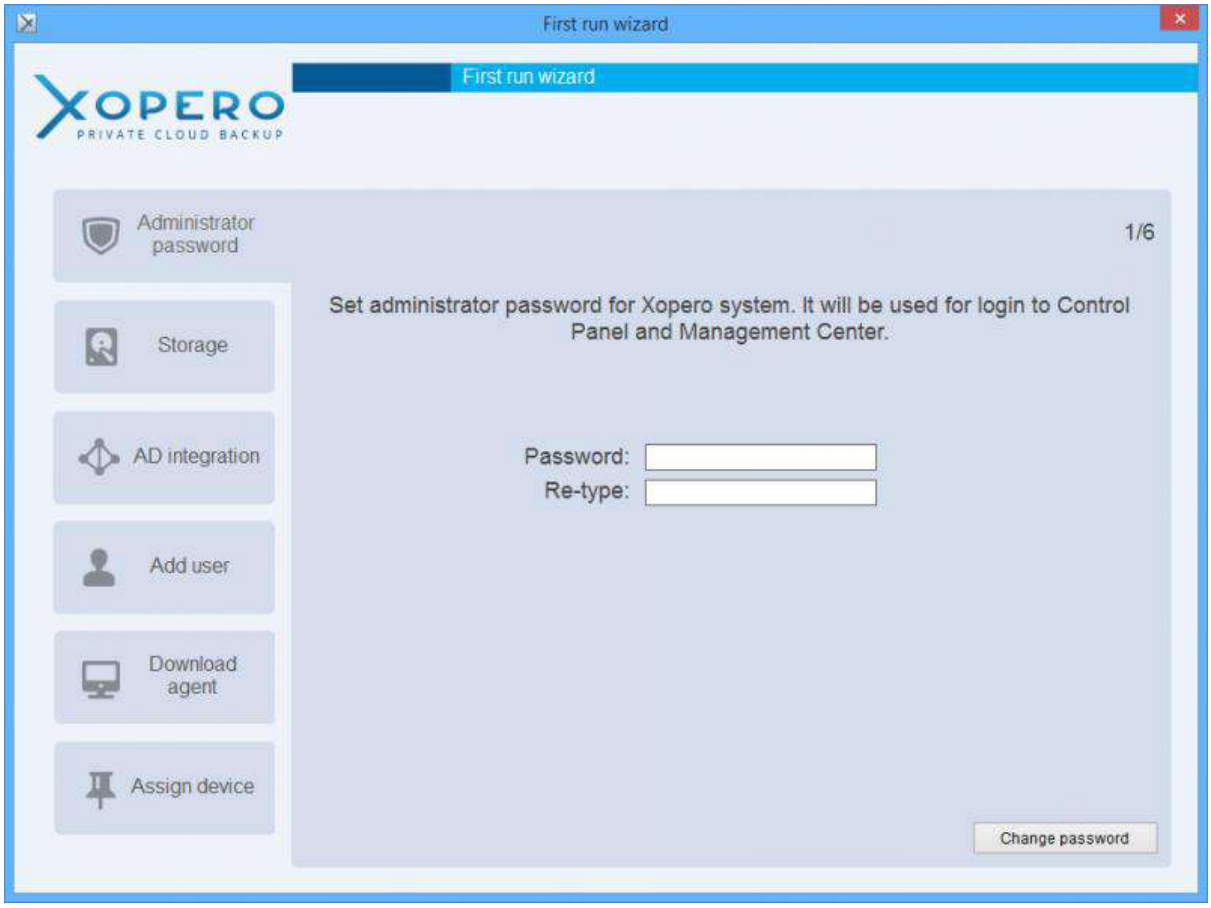
Default adminstrator username and password is *admin*. They are pasted automatically during first login.



When you are logging into the application, as a user, for the first time, the First Run Wizard will run, which consists of six following steps: *Administrator password*, *Storage*, *AD Integration, Add User*, *Download application* and *Assign host*.

First Run Wizard – step 1

At the beginning, for security reasons, it has to change the administrator password, which is necessary to log on to the *Management Center* application and to the *Control Panel*.



First Run Wizard – step 2

If the default administrator password on QNAP device has been changed, you should define the storage in which the data will be stored. If the password has not changed, the magazine will be created automatically and thereby defining storage step in the First Run Wizard, will be skipped.

The configuration of the storage are described in the section – *Storage space management (storage)*.

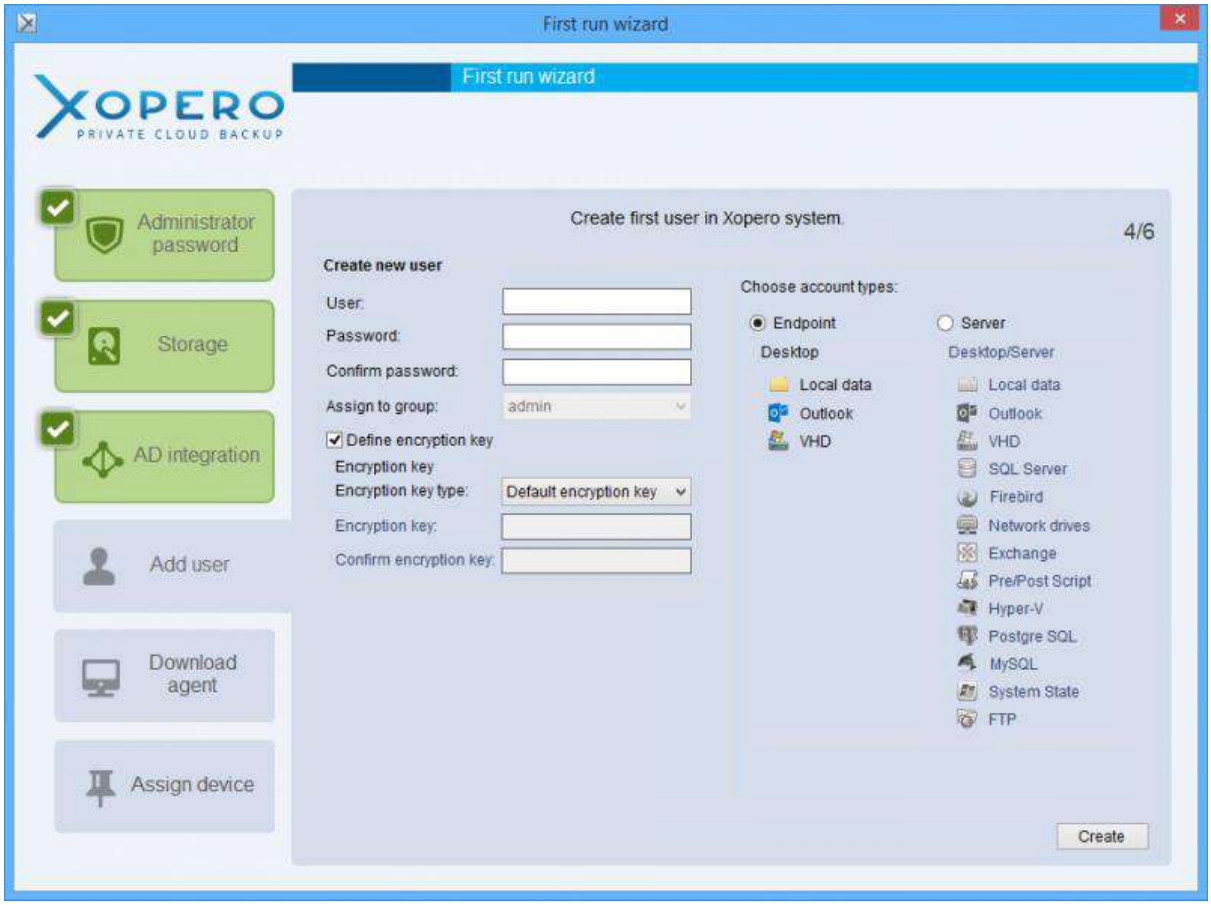
First Run Wizard – step 3

Now comes AD integration, which is available for domain controllers with Active Directory. We'll skip this step. More information about it in Mapping Active Directory users manual.

First Run Wizard – step 4

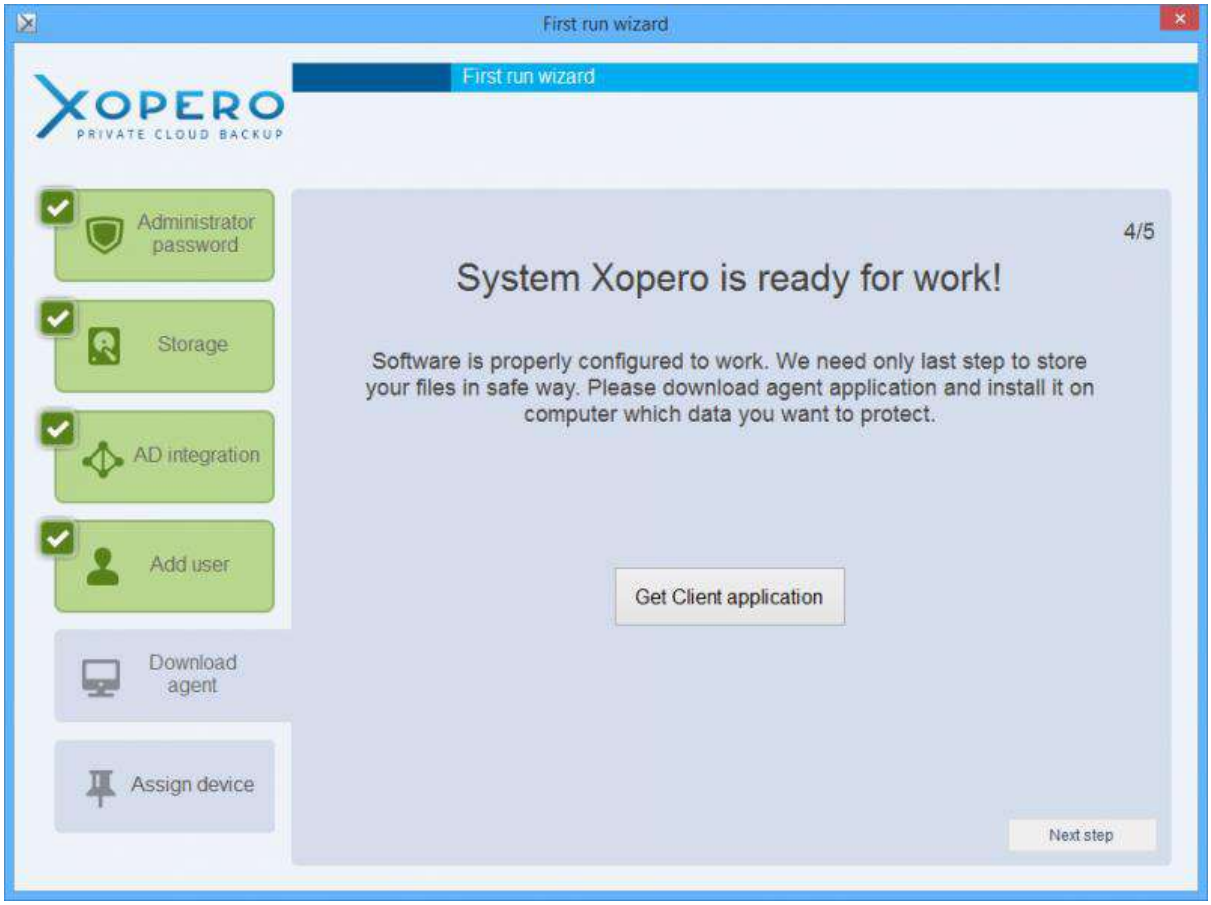
The next step is to create the first user account that will use the Xopero Client application.

The window for creating a new user are described in the section *Creating user accounts*.



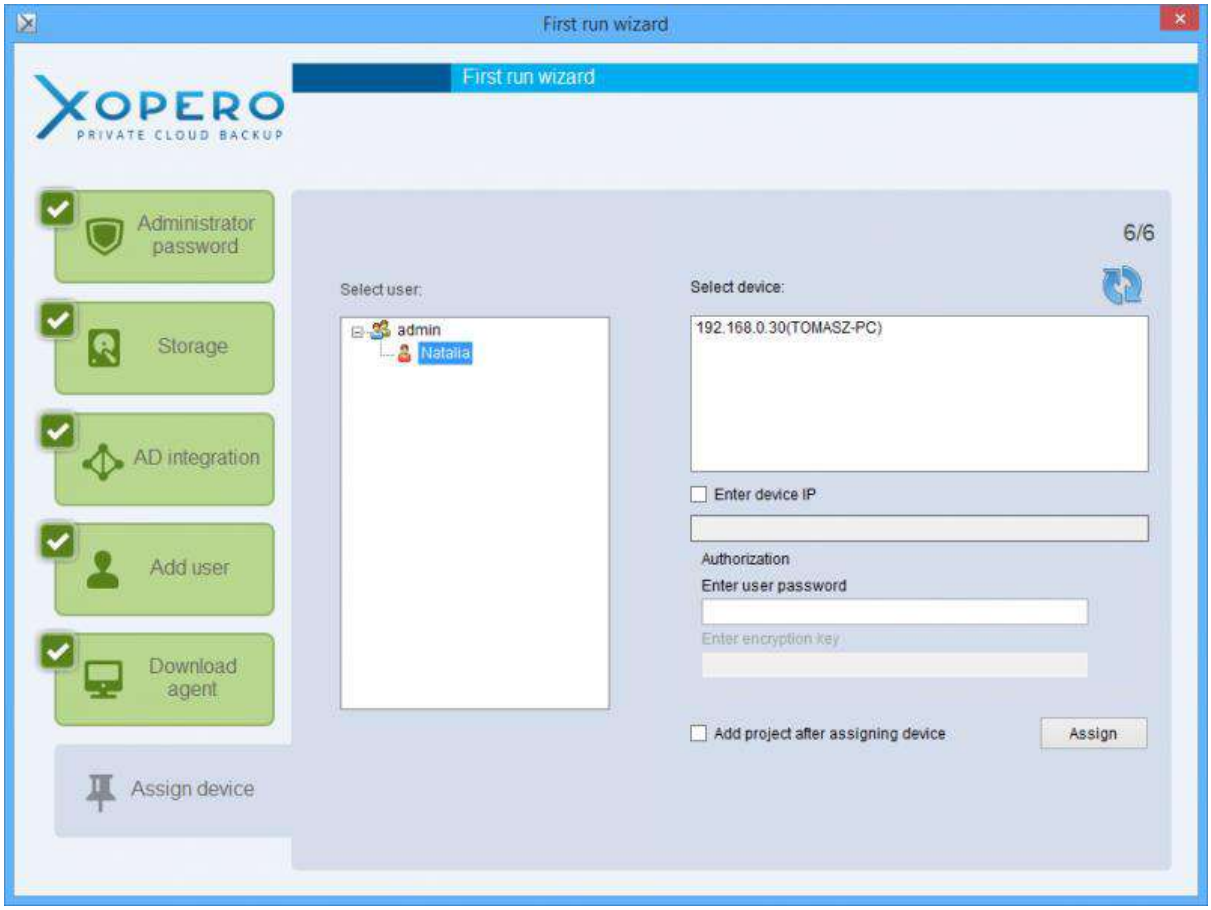
First Run Wizard – step 5

After defining the storage and creating the first user account, the administrator should download and install the Client application on the computer, on which the data is to be secured, by clicking on the button - *Get client application*.



First Run Wizard - step 6

After download client application window allowing you to assign the device to the user account appears.

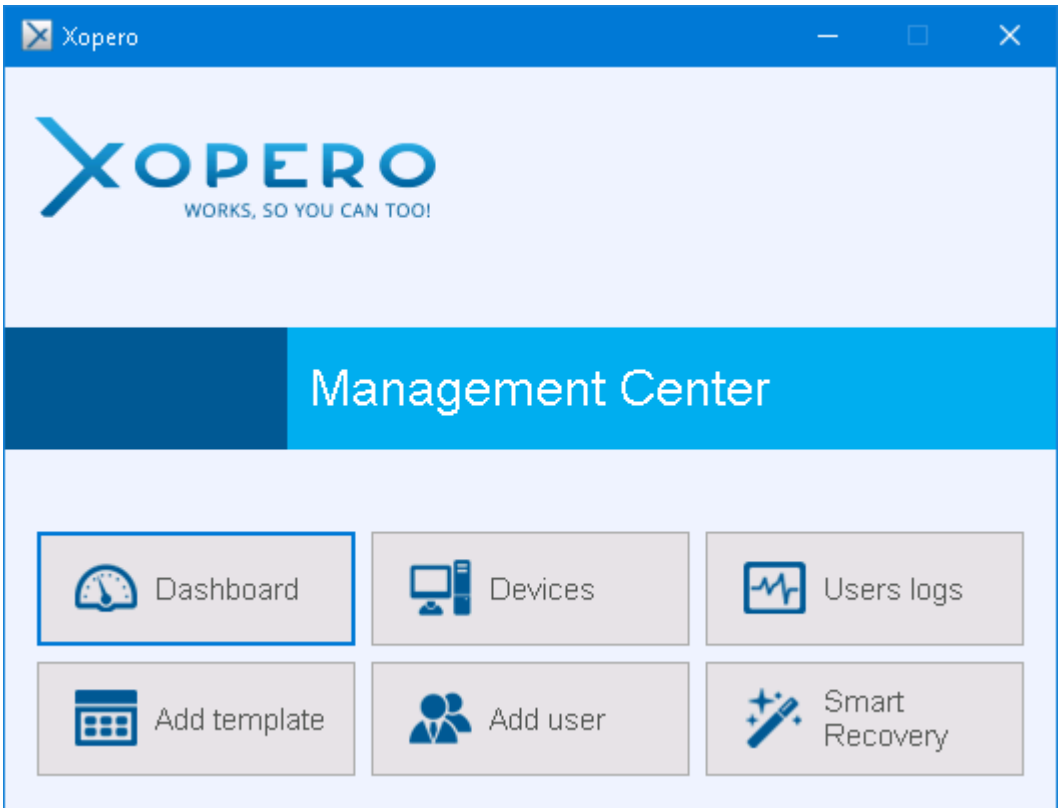


After closing the *First Run Wizard*, to run the Management Center application you have to log in to it again.

After logging into the application a window basic options of the program appears:

- **Dashboard** – click on this button takes you directly to the view the statistics of the system,
- **Devices** – selecting this option shows the list of devices on which the client application is installed and they are assigned to user accounts,
- **Users logs** – the administrator has access the user logs,
- **Add template** – click on this button move you to the window of create project templates,
- **Add user** – select this button launch window user creation,
- **Smart Recovery** – forwards to the Smart Recovery function window.

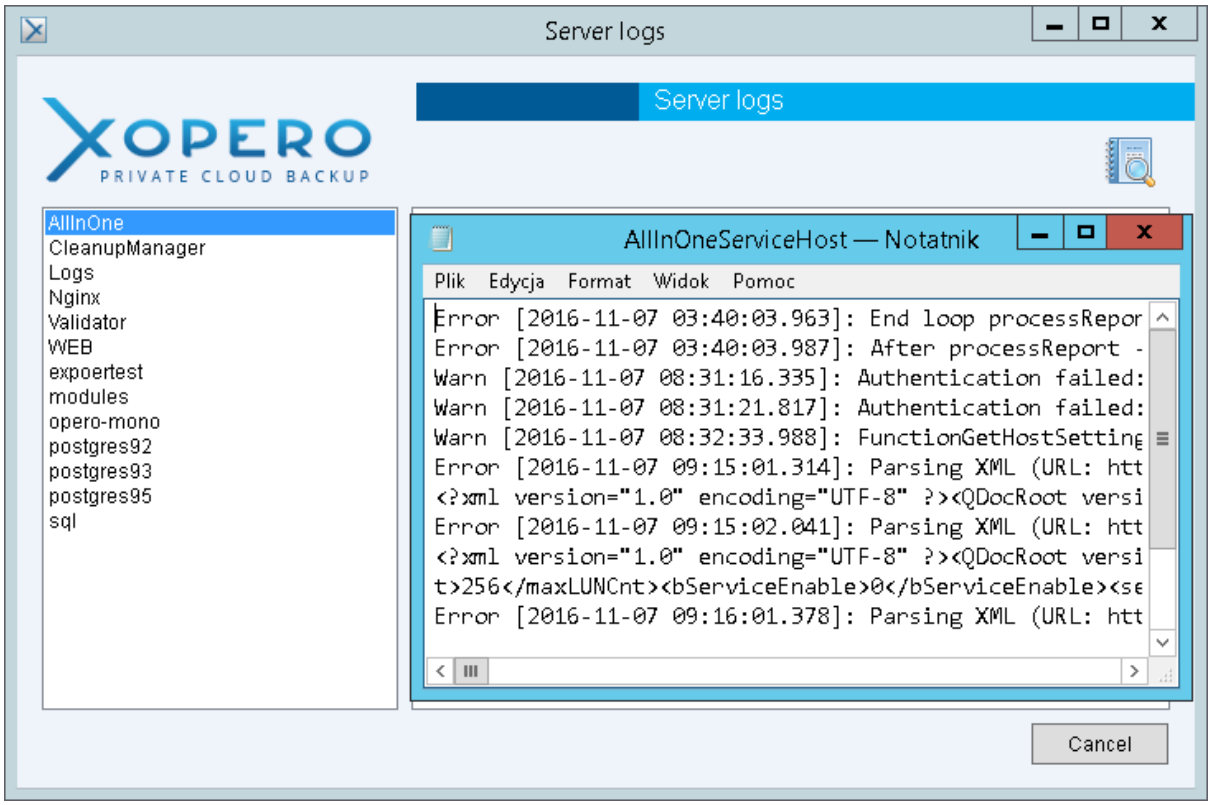
The following window appears only when you log in to an *admin* account. The reminding group administrators will be immediately redirected to the Backup Management window.



Server logs

When we enter the main window and select *Server logs*, we gain access to the server logs of the Xopero application.

Access to server logs and its associated options is available only for the main administrative account - *admin*.



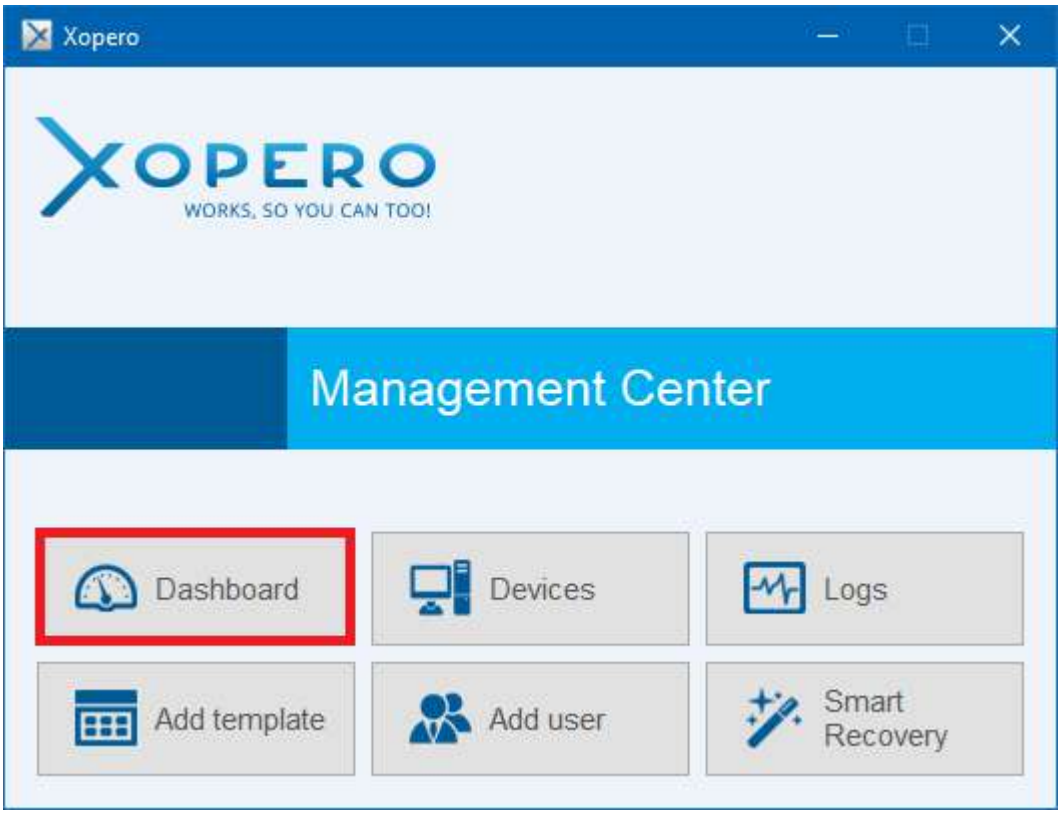
When the application is working correctly, there is no need to use this feature. If, however, there are problems with its work, it may be necessary to ask the application provider for technical assistance and send the server logs to him.

In the event of work-related errors of the Xopero services, before contacting the technical support, you should restart the Xopero software from the *App Center*.

The process of sending the application and server logs to the software provider has been described in section *Technical Support*.

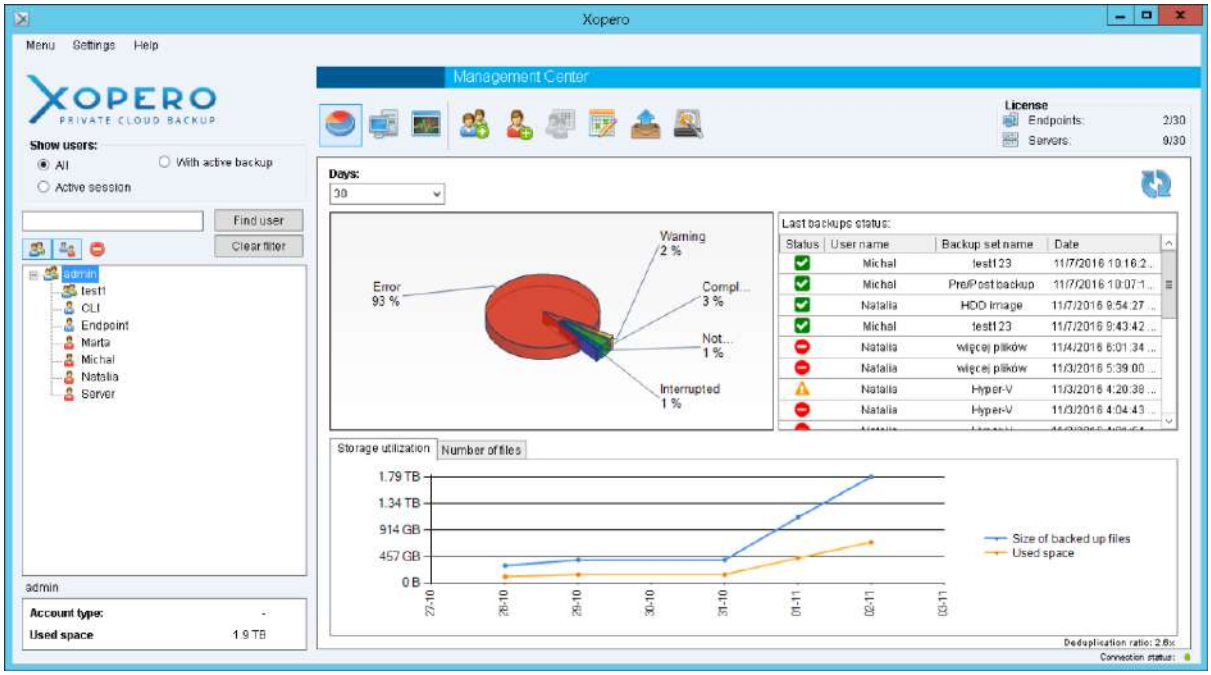
Management

After returning to the main window and selecting *Dashboard* option, we will be redirected to the accounts and backups management window (*Management Center*).



By default, the first view that we should see is the *Dashboard*.

In the chart below are shown information about completed and unenforced backups within the past 30 days for all users of Xopero.



If there has not been made a single backup, the application will not display any data.

When you click on chosen username, a graph showing the status of backups performed by that user will be displayed.

What are and how to add user groups?

What are the users groups?

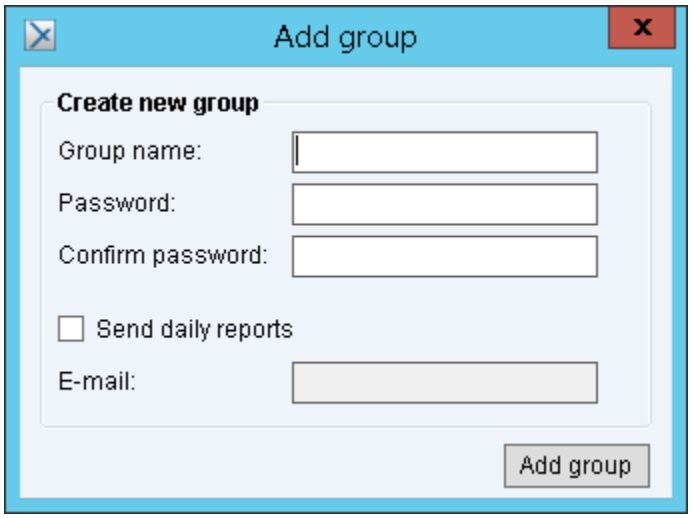
User groups allow to categorize and group users. The name and password of the group are at the same time the authorization data of its administrator, who can log into the *Control Panel* or the *Management Center* application, where he is able to manage his users.

With this solution, users can be divided into groups, which will be managed by persons responsible for them. Depending on your needs, you can set any number of groups and assign them to user accounts.

The main administrative account (*admin*) has the ability to manage all users, regardless of which group they were assigned to.

Adding user groups

In order to create a new group, click the button highlighted in the screenshot above. The *Add group* window will be displayed in which you need to define the group name and its password, which are both group administrator authorization data.



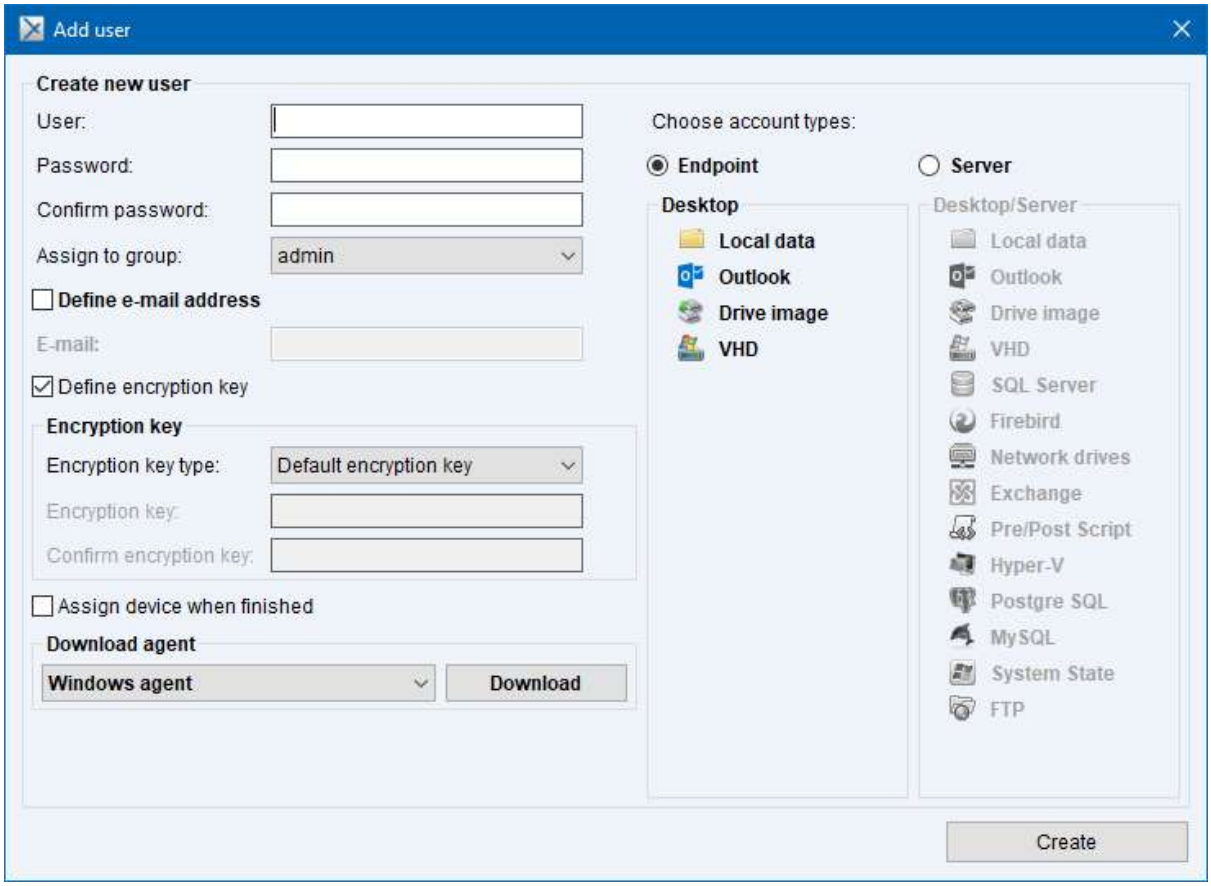
Creating user accounts

After first logging into the Xopero system, the tree of groups and users contains only the default group, named *admin*.

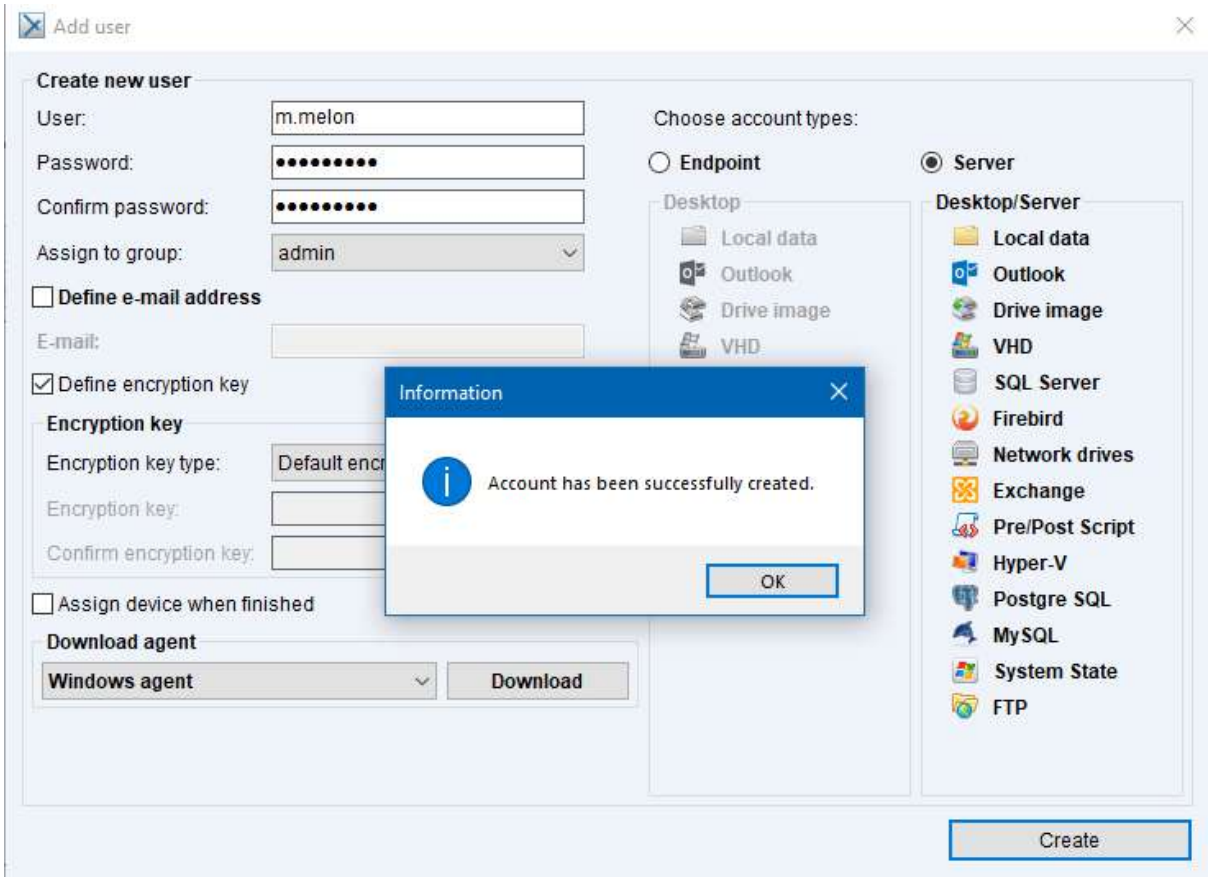
To create a user account, click the *Add user* button, which has been highlighted in the screenshot above.

Then an *Add user* window will appear, where you must define authorization data, as well as configure additional settings:

- **Choose Account type** - available account types are *Endpoint* and additionally, depending on the purchased license version, *Server*. The *Endpoint* account allows you to backup local data and the *MS Outlook* mailbox, while the *Server* account extends these capabilities with *Advanced copies* and the ability to install a client application on Windows Server systems.
- **Assign to group** - defines the group to which you want to assign the user account. You can later change the group to which the account has been assigned.
- **Locked account** – defines, whether the created account should be blocked. If this happens, the user will not be able to log into the client application, but his account in the system will still exist. The account may be unblocked at any time.
- **Encryption key type** – it allows you to choose the encryption key (default or custom encryption key) for the newly created account. In case of choosing the *Custom encryption key* and adding the account, a request for typing in a series of minimum 6 signs will appear.
- **Assign device** – describes, whether after creating an account an active device should be assigned to it (only with the Windows application installed). More information on this topic is included in the **Assigning new device** chapter.



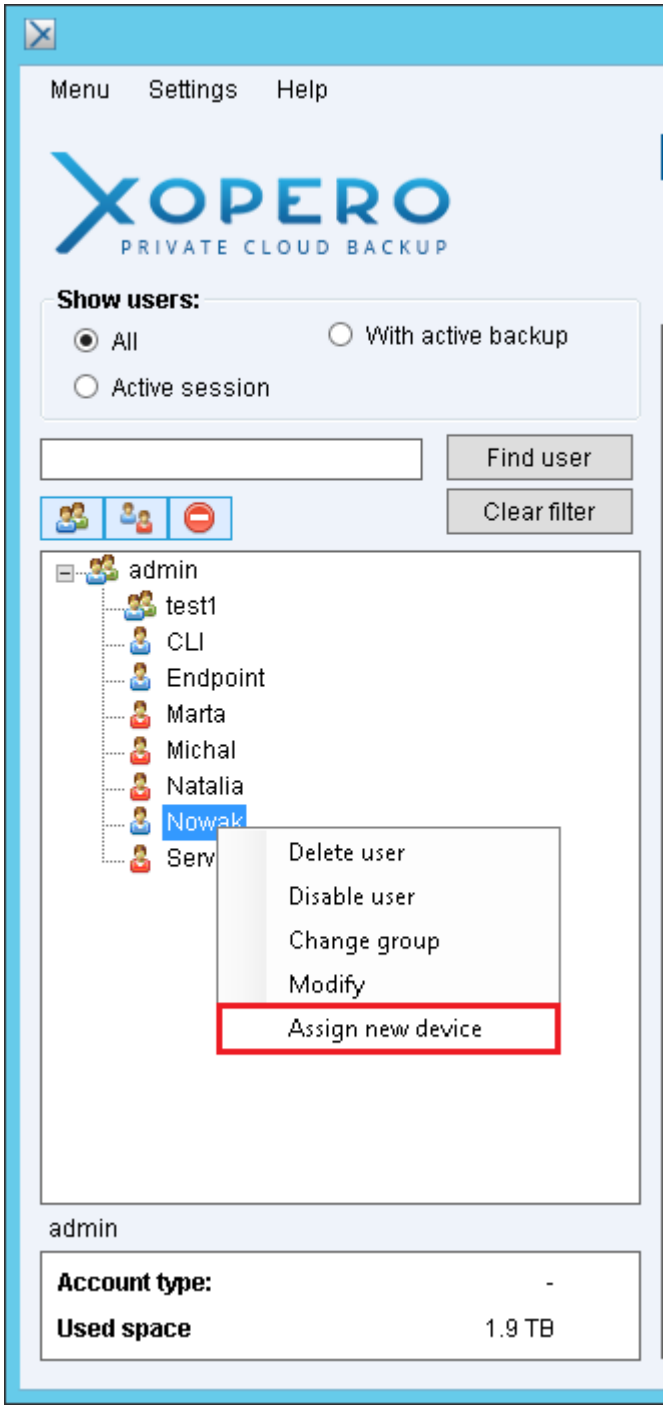
After filling in all the fields in the form, click the *Add user* button, which will create a new customer account with defined parameters.



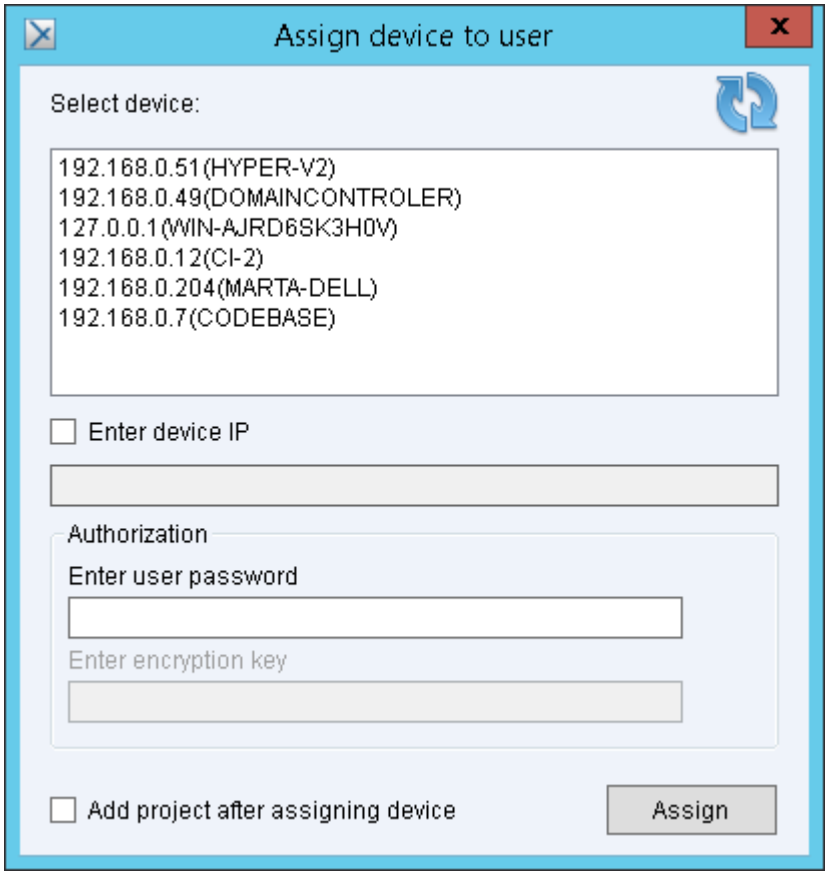
The user account will be displayed in the groups and users tree and it will be assigned to an earlier indicated group.

Assigning new device

The devices, which do not have any assigned account, inform the *Management Center* application, in a continuous mode (every 30 seconds), about it. Thanks to that you can easily connect a given device with the user account, without the need of having direct access to the chosen machine. All you need to do is find the account to which you wish to assign the given device.



If you cannot find the device on the list, you should use the *Enter device IP* option. After clicking *Add*, the information about the completed assignment of the device will appear.



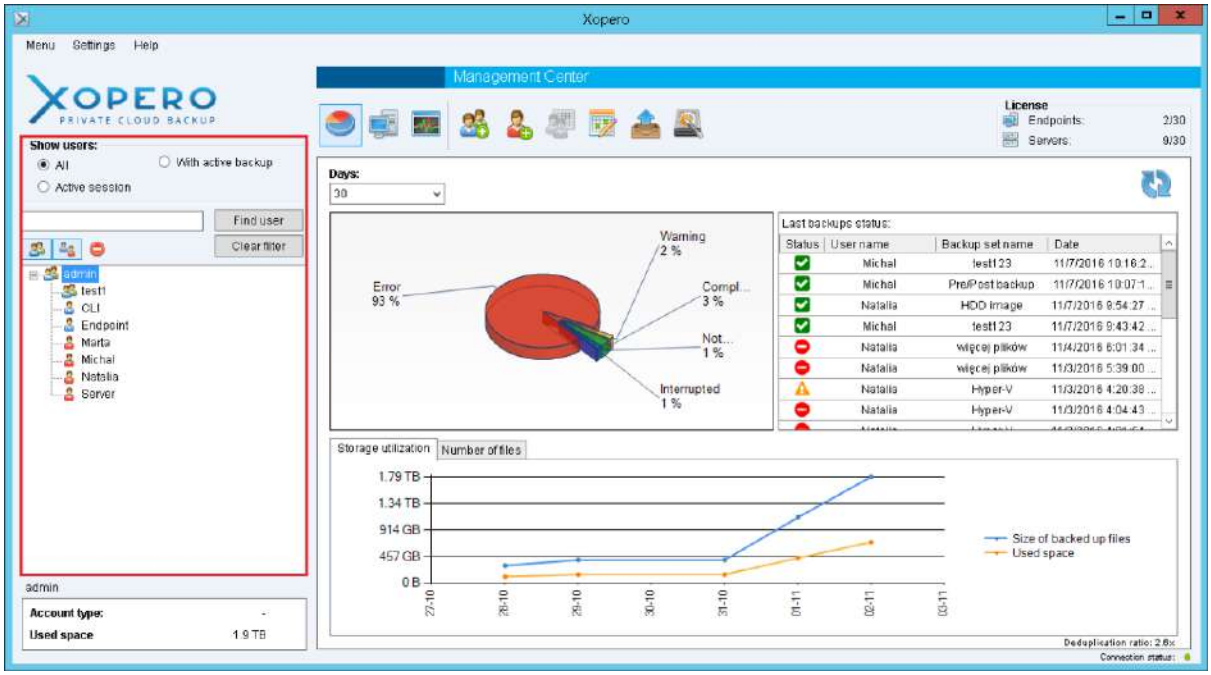
In case when entering the IP address of the device does not allow for proper assignment, you should check if the Xopero QNAP service has been launched on a remote computer. If it is, you should restart or try to log in again directly from the given device to the chosen account.

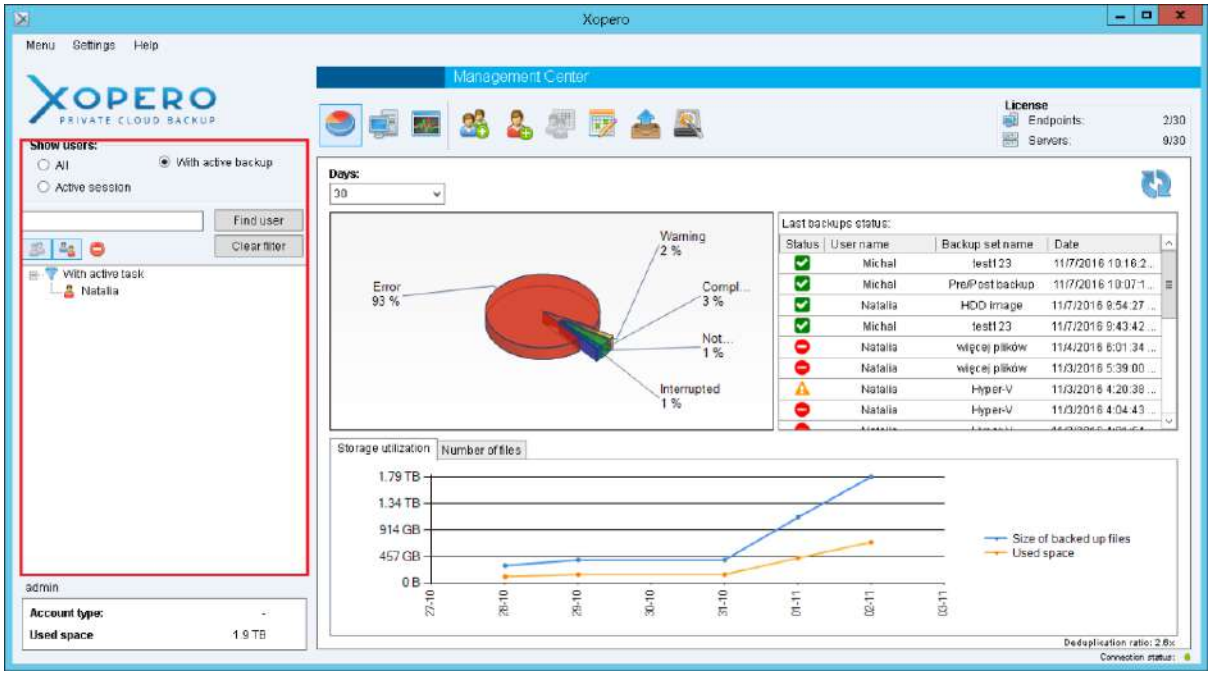
Displaying user accounts and groups

On the left side of the *Management Center* window there is a tree of groups and users. It has several filtering options which are useful in the later use of the application.

Above the tree, below the application logo the *Show users* field is located. The following options are described on it - *All, Active session, With active backup*.

- The *All* option displays all accounts available on the device, divided into groups created by the administrator. In each group an unrestricted number of accounts can be assigned, however, they will be visible only when you click on a particular group and expand it,
- With an *Active session* informs us which accounts are currently logged into the application on particular computers,
- The *With active backup* option indicates which of the accounts is currently sending backup.



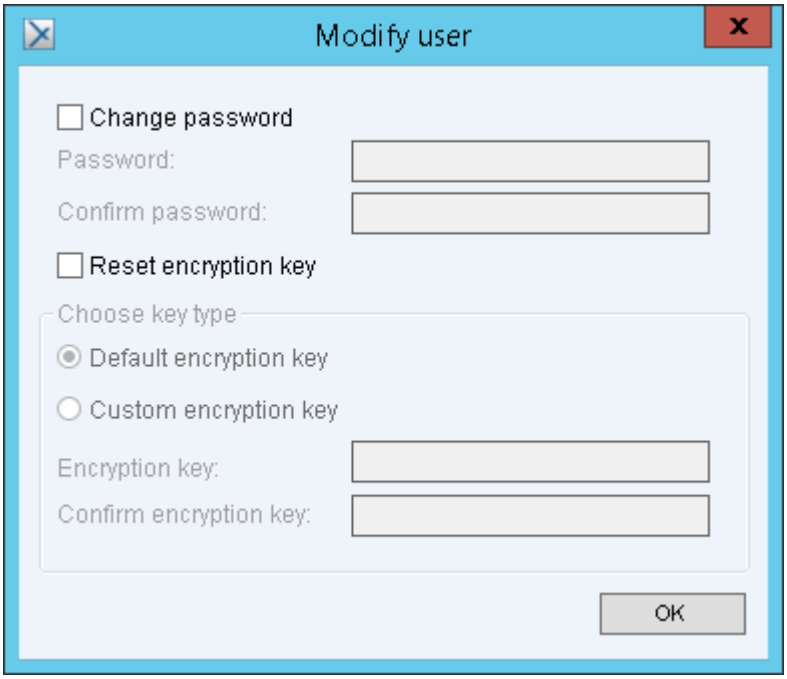


The accounts in the system may also be searched by using the login. Just enter the login in the text field and click the *Find user* button.

Using the options listed above the user three, on the left

you can enable or disable the filtering of some of its components. These are, from the left: *Group, Users, Show disabled groups and users*. This option allows you to disable the view on unnecessary for us elements of the tree in order to obtain a better overview of the application

While in the tree, by clicking the right mouse button on the name of one of the users, you can use the following options - *Delete User, Disable user, Change group, Modify*. The last option allows you to change your user account password and reset the encryption key.

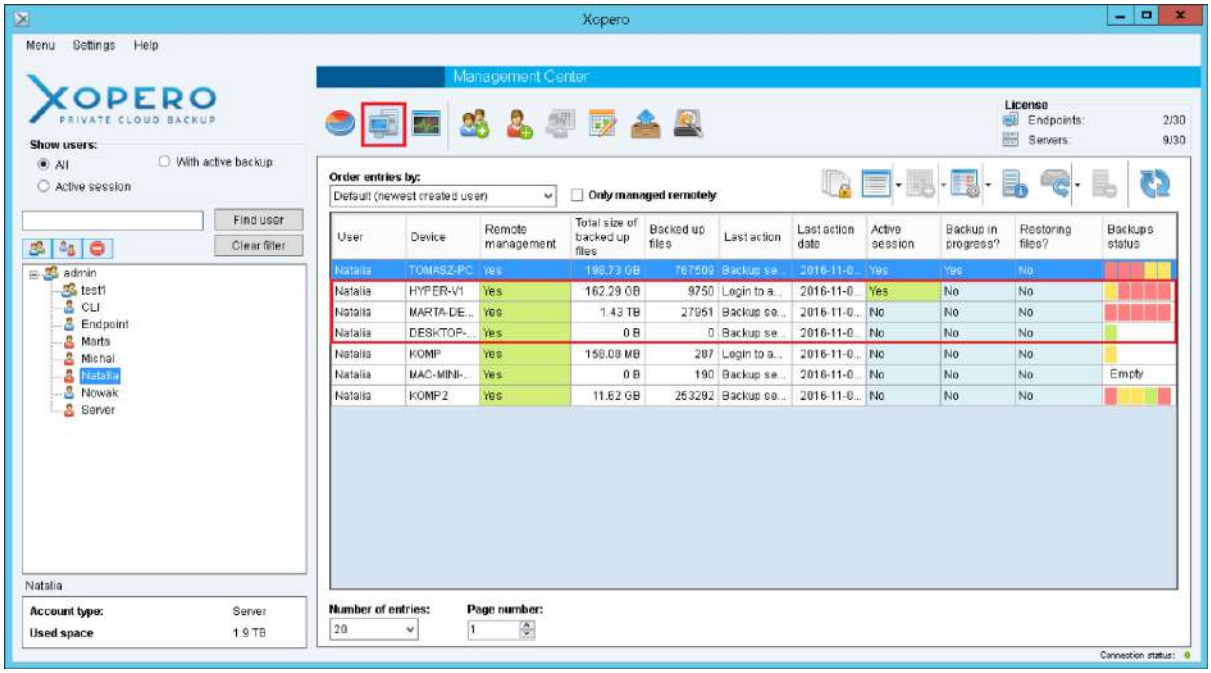


Resetting the user encryption key causes an irretrievable loss of all files that have been sent by him to the Xopero server.

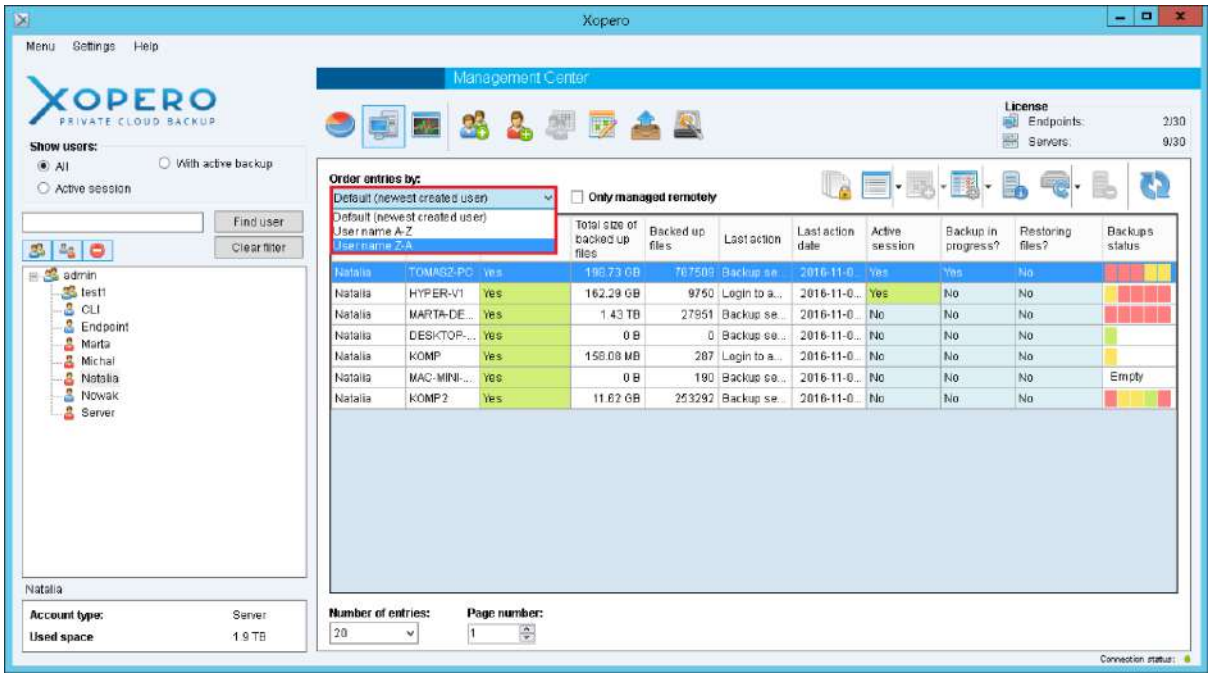
Device list

The list of devices in the *Management Center* application displays all the devices on which the Client application, from which the user at least once logged into his account, has been installed. The devices are assigned to user accounts.

Multiple users can log into their user accounts from a single computer. In this case, the same device will be assigned to each of them.



The screenshot above shows a list of devices of the users in the *Management Center* application. It can be arranged according to several schemes, using the *Order entries by*. It can be sorted alphabetically, from A to Z or from Z to A, by the username. The second option is default sorting by the date of account creation. At the top of the list the user device is situated, for which the account has been created as the last one.

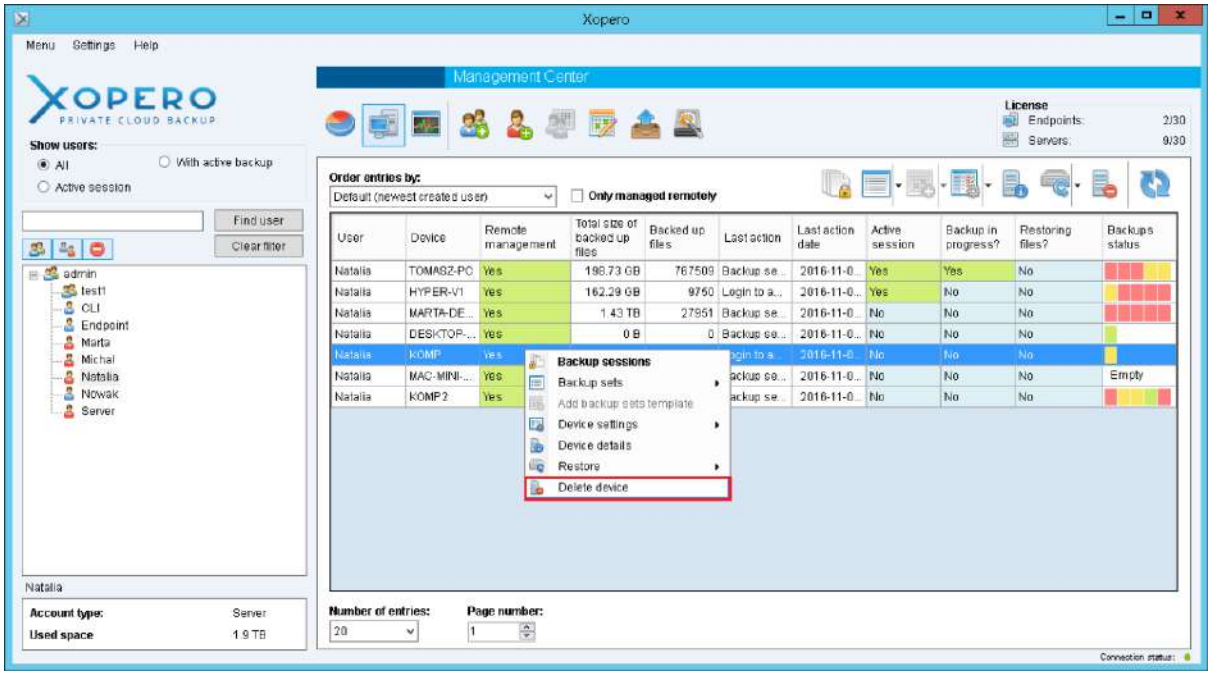


You can find the following information in the device table:

- **User** - login (name) of the user,
- **Device** – the user's device name,
- **Remote management** - information about whether the device can be controlled remotely using the Management Center application,
- **Total size of backed up files** - the total size of files that have been sent from the device as backup,
- **Backed up files** - the number of files,
- **Last action** - type of the last performed action on a given device,
- **Last action date** - the date of the last performed action,
- **Active session** – marks the users who have performed any action in the client application, during the past 30 minutes,
- **Backup in progress?** - Information about whether a backup is performed currently,
- **Restoring files?** - information about whether the files from the device are currently being restored by the Management Center application,
- **Backups status** - the status of the last five made backups.

There is also a possibility to remove a device. Just click on the selected device with the right mouse button, and an options bar will be displayed. One of these options is the removal of the device - *Delete device*. A device can only be deleted when it is inactive.

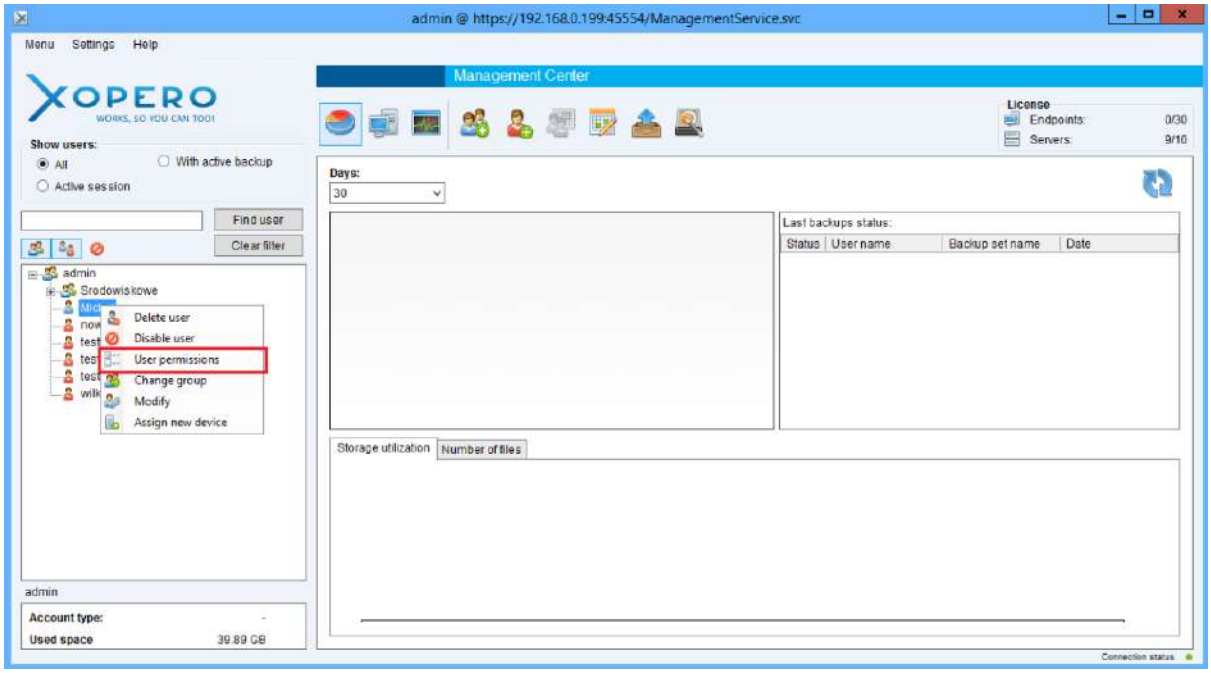
Removing a device results in deleting all data sent by it from the Xopero server.



The reminding options - *Backup sessions, List of backupsets, Add backupsets template, Device settings, Device details, Restore data* are described in the following sections of the user manual.

Grant and revoke privileges to user

You can grant or revoke privileges for users by Management Center per account, it is not possible for group. Just find the user which you want to change privileges, right-click and select User permissions option, after change permissions the user has to relogin. If multiple hosts are attached to one account, that permissions will be applied to everyone.



When you select the option, you will see a window with 4 permissions for:

- manage backup sets - user cannot add, delete, start, or abort project execution (it is not possible to check the details of your project),
- restore data - user cannot restore and delete data,
- manage encryption key - this option prevents user from changing the encryption key,
- manage device performance settings - causes blockage the Performance tab in application settings.

Project templates - backup policies for groups

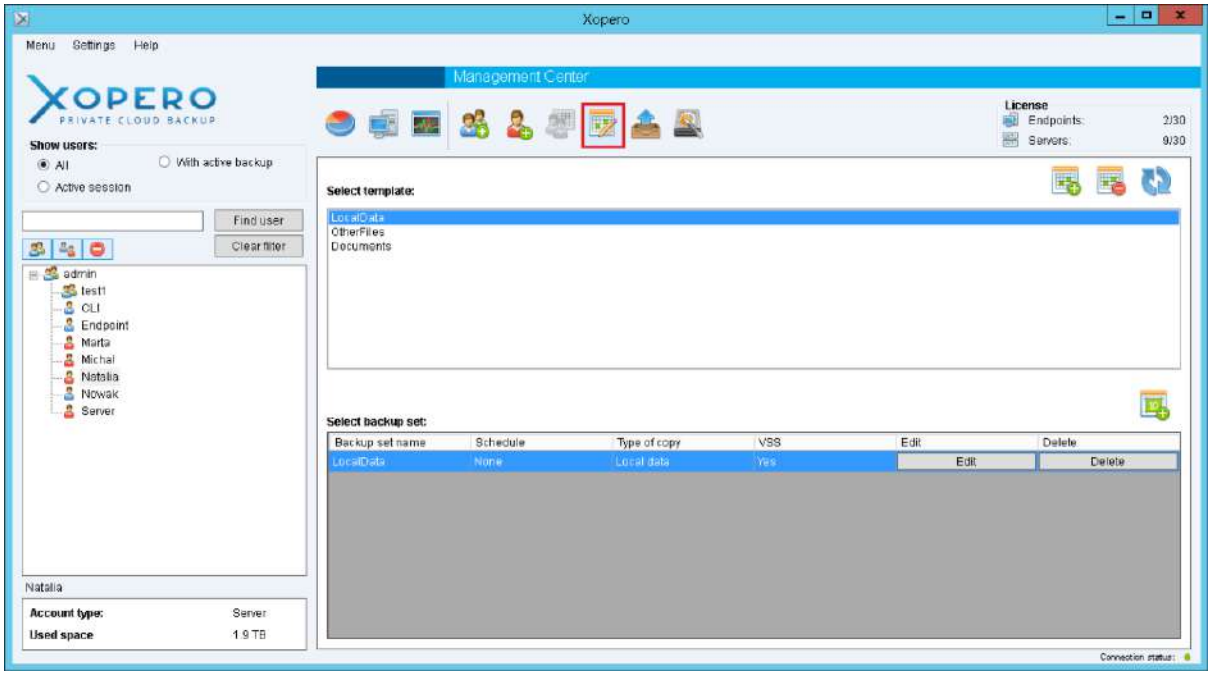
What is the project template?

A project template is a set of projects which can be sent to any device user. Each project in the template must have indicated data for backup and a name given. You can also configure additional settings, such as schedule or advanced options. Backup projects are described in detail in the *Xopero User manual*. You can edit the project after sending it to a chosen device.

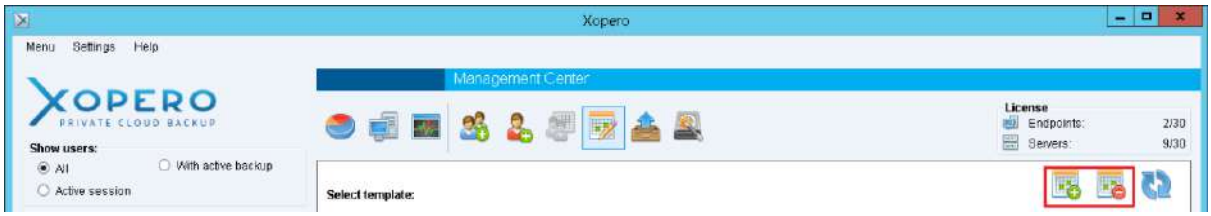
Please note that, the device to which a template will be sent, needs to have existing indicated data, otherwise, execution of the project will end with an error.

Creating and editing template

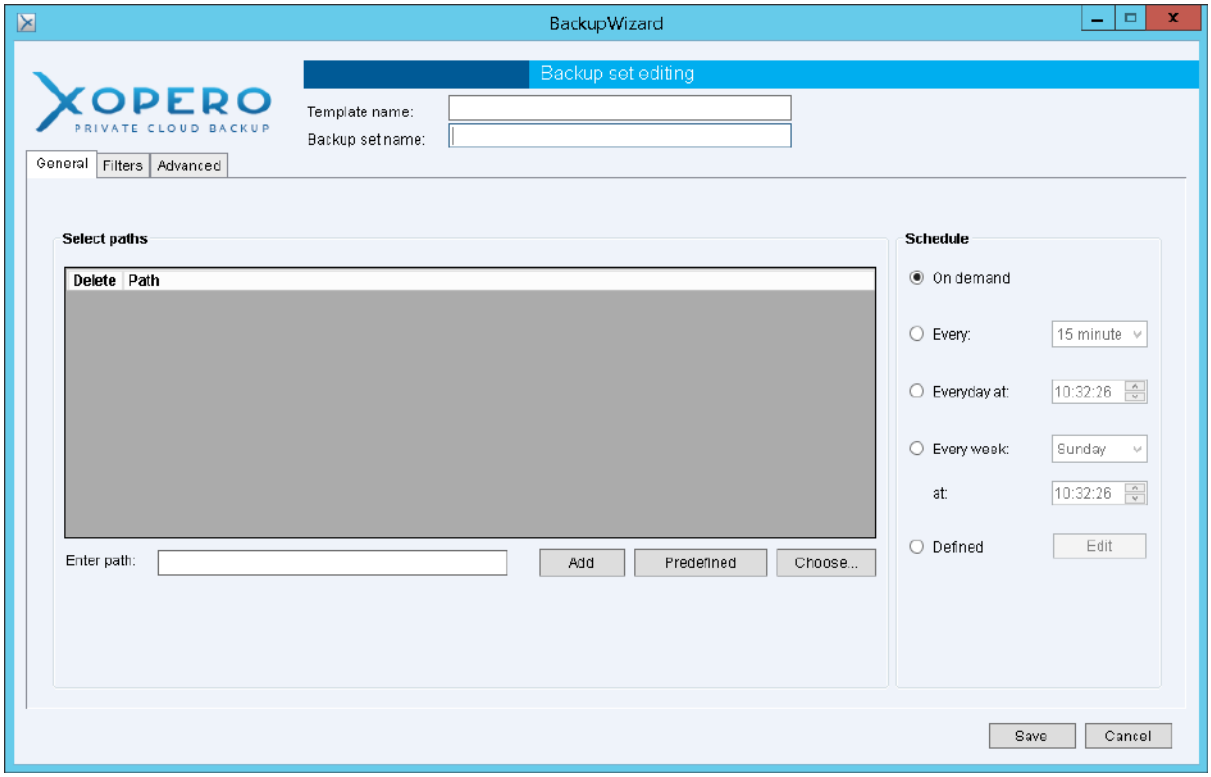
The *Manage backup templates* option is launched by clicking on the button highlighted in the screenshot above. A list of created templates will be displayed, and below a list of projects included in a chosen template.



In order to create a project template, press the *Add backupsets template* button, and in order to remove, mark a chosen template and click *Remove selected template*.



After clicking on *Add backupsets template* a *Creating new backup template* window will appear, in which you also have to specify the name of the template. Further backup configuration is related to a backup project which will be included in the created template.



Currently it is only possible to create local data backup projects. For each of the created projects, the user can define its name, set up a schedule, or choose the data he wants to backup.

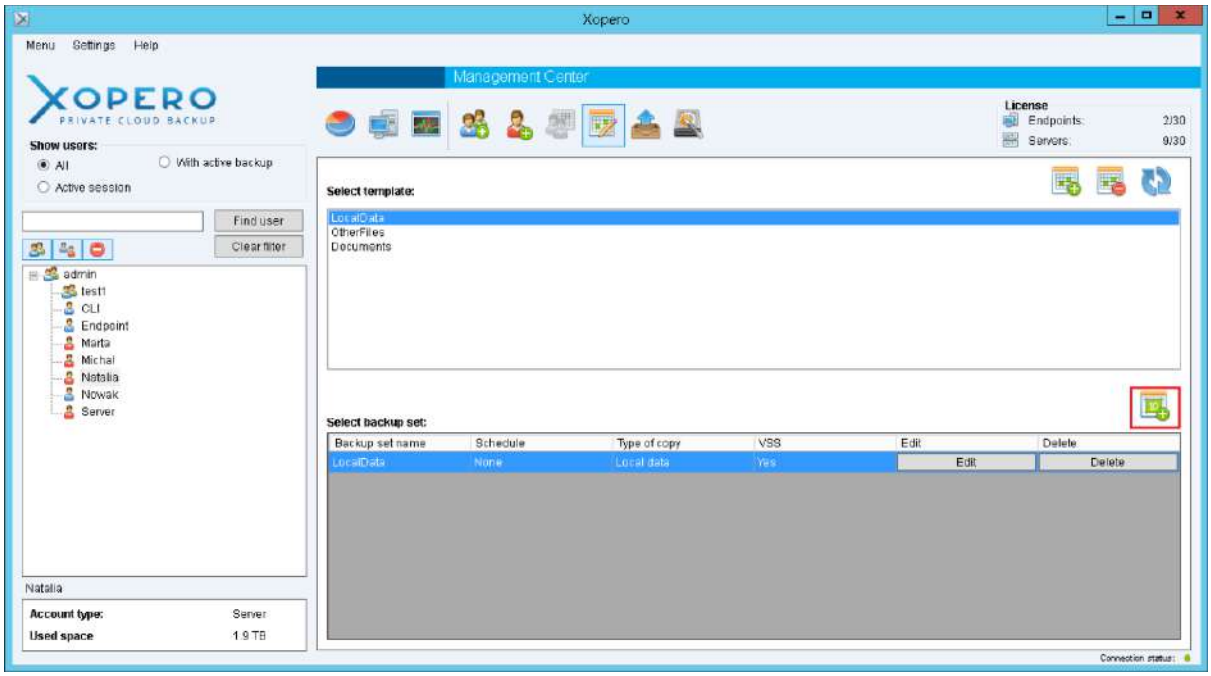
In case of project templates, after choosing the *Local* option, the catalog paths from our computer will be displayed. If we do not want to use this option, we can type in a chosen path in the text field, and click *Add*

Another possibility is to employ pre-defined paths, which can be used on different operating systems. They refer to fixed system catalogs. Choosing this option is possible after clicking the *Predefined* button, and choosing an operating system (Windows XP or later).

In addition, it is possible to apply filters to a created project, applied to: files and folders, Windows permission settings according to which the project will be created, and the following advanced options:

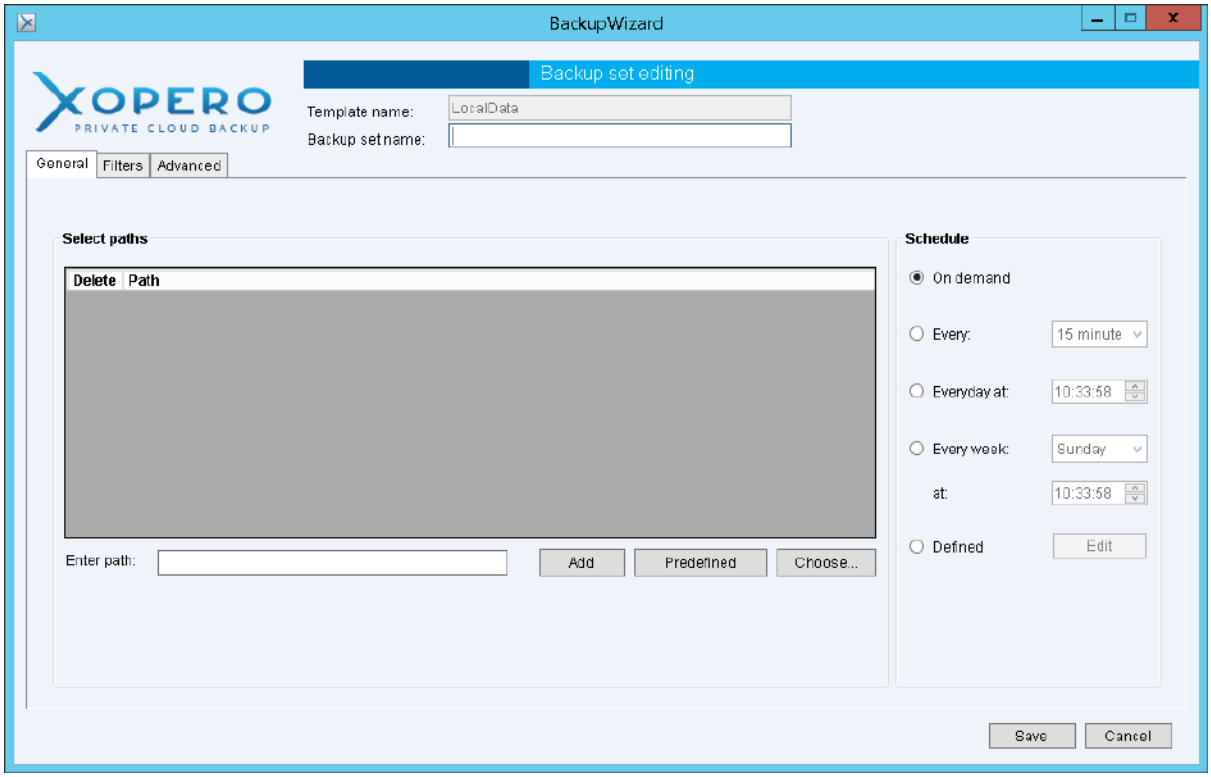
- **Without encryption** - files included in the project will be sent to the QNAP disk unencrypted,
- **Without compression** - the files will not be compressed before delivery,
- **File copies stored for:** - specifying the number of versions created for a single file in the project. An alternative option is to specify the number of days to retain the backup version.
- **Backup type** - allows you to specify how the files should be sent, whether they are to be sent in a differential or incremental way, and which method will be used during this process.

After completing the configuration of the first backup within the template and the template name, you can save it by clicking the *Save* button, which is located in the lower right corner of the *Create new backup template* window.



Each template can consist of any number of projects created by the user. In order add a new project to the template, click on the button highlighted in the screenshot above.

After clicking on it, a window appears, the same as while creating a template, except that the name of the template is already defined, and editing it becomes impossible.

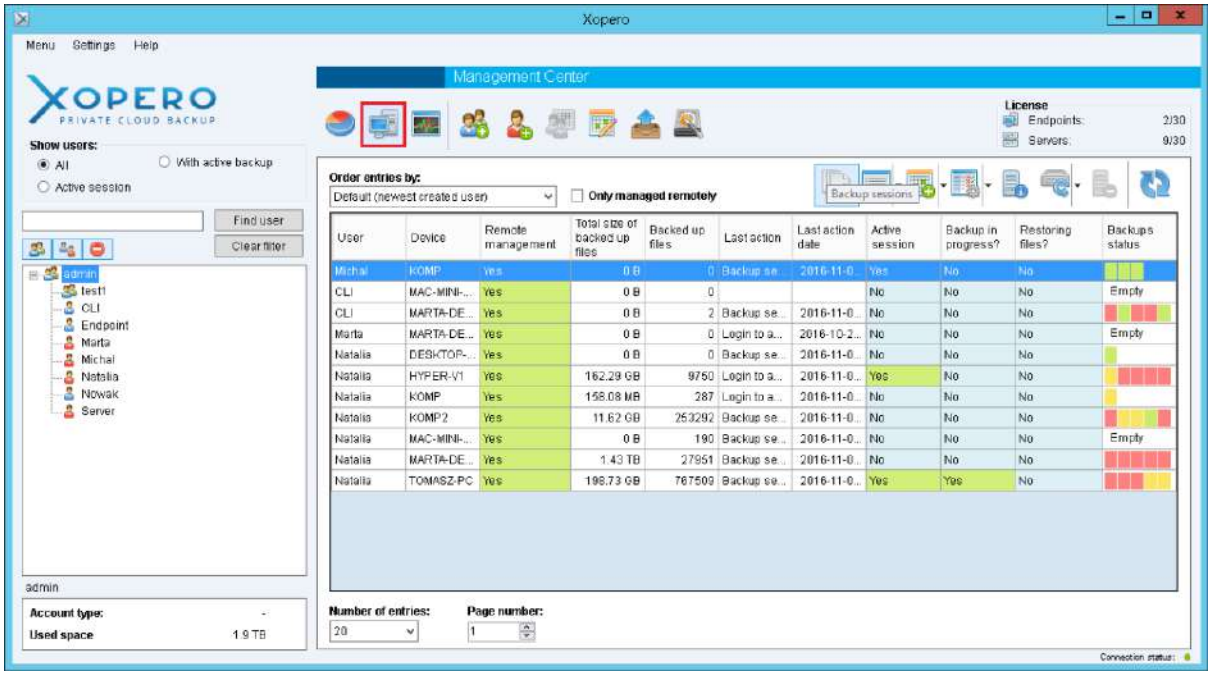


Each template can consist of any number of projects created by the user. In order add a new project to the template, click on the button highlighted in the screenshot above.

After clicking on it, a window appears, the same as while creating a template, except that the name of the template is already defined, and editing it becomes impossible.

Sending a template to the client application

Sending a template to the client application is possible via the *Devices* tab, which can be accessed by clicking on the button marked in the screenshot below.

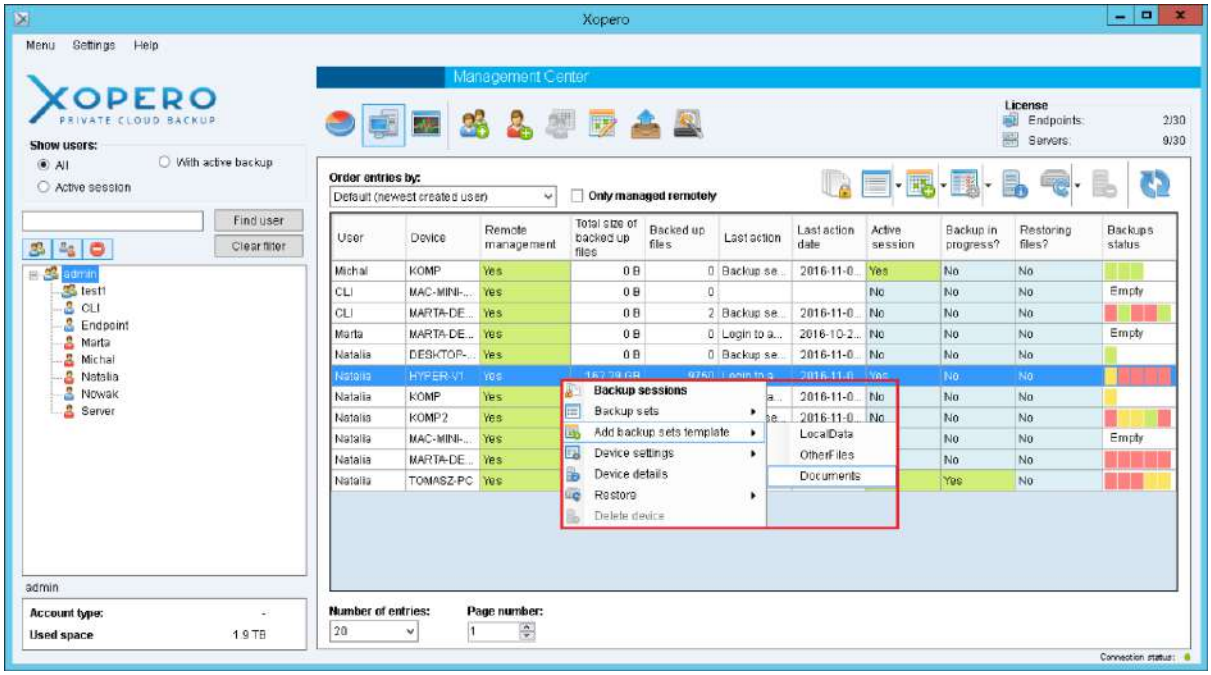


Next, you need to find the device to which you want to send a template on the list. By selecting a user, or a group from the tree on the left side of the application, we can view only the devices, which are assigned to the position chosen by us, for example, the devices of only one user.

There is a possibility of sending a template to multiple devices at the same time. To do this, select multiple devices from the device list by holding down the *CTRL* key.

Project templates can be sent only to devices which have remote management enabled, and are currently synchronized.

After selecting the devices to which you want to send a template, click the right mouse button on one of them and select *Add backupsets template* from the context menu, and finally select a desired template.

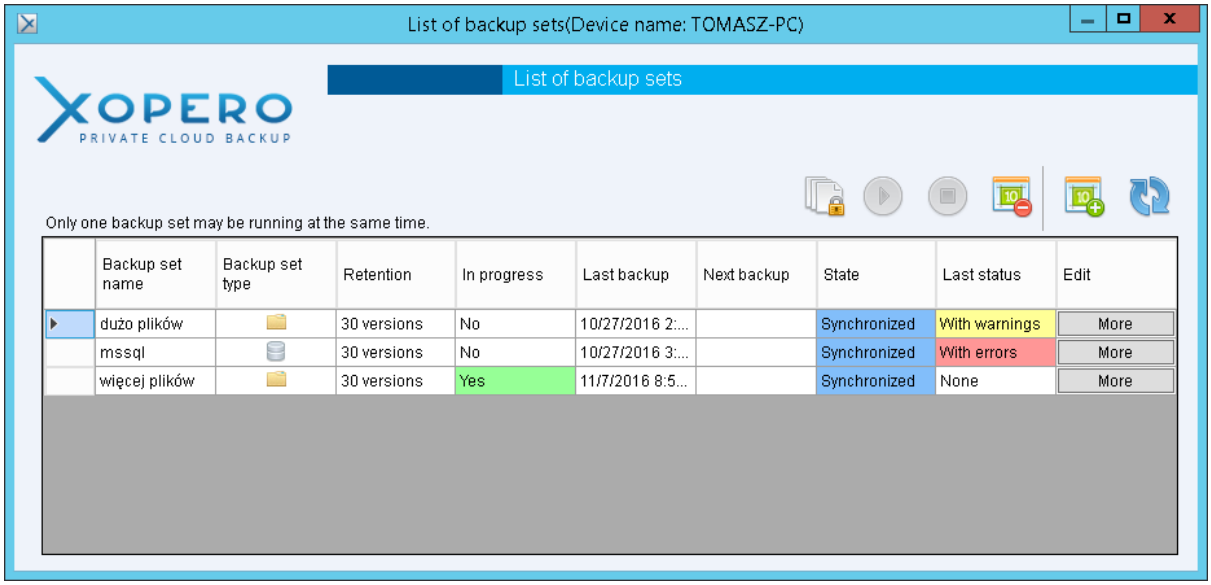


Clicking on the name of a template causes to send the template to specified devices, except situations the projects from the template already exist on your computer.

Project management

Through the *Management Center* application you are able create new projects, as well as editing and deleting existing ones. Existing projects can be remotely started or stopped, if one of them is currently being performed. In order to view the list of projects on a given device, from where it is possible to manage them, please right-click on the selected device, and then select *List of backupsets*.

Displaying the list of projects is only possible for devices which have *Remote management* enabled and have been synchronized with the *Management Center* application.

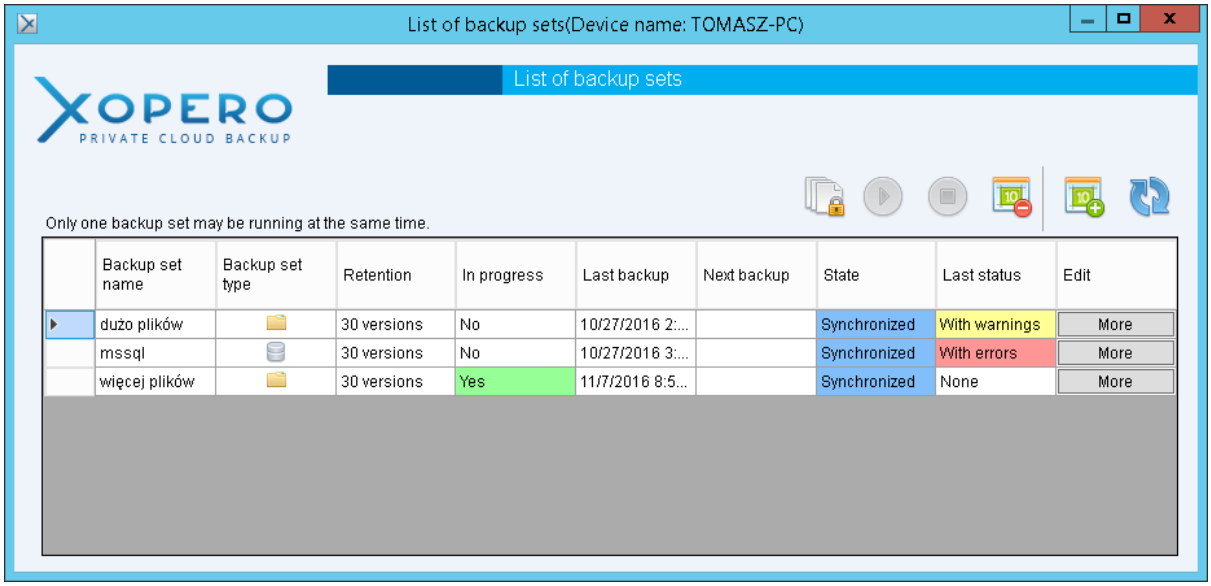


The List if backupsets consists of the following fields:

- **Backupset name** - the project name defined by the user,
- **Number of files** - the number of files, which so far have been sent within a chosen project,
- **Next backup** - the date of the next backup performed in accordance with the schedule,
- **Last backup** - the date of the last performed backup project,
- **Status** - the current status of the project,
- **Version limit:** - a limit of versions set for the selected backup project,
- **Changed files** - the number of files that have been modified between the two previous backups,
- **Changed data** - the size of the data that have been modified between the last two backups,
- **Sent files** - the number of files, which were sent during the last backup,
- **Sent data** - the size of data that were sent during the last backup,
- **Errors** – the number of errors that occurred during the last performed backup,
- **Warnings** - the number of warnings that occurred during the last performed backup,
- **Edit** - this column contains a button that allows to edit the project.

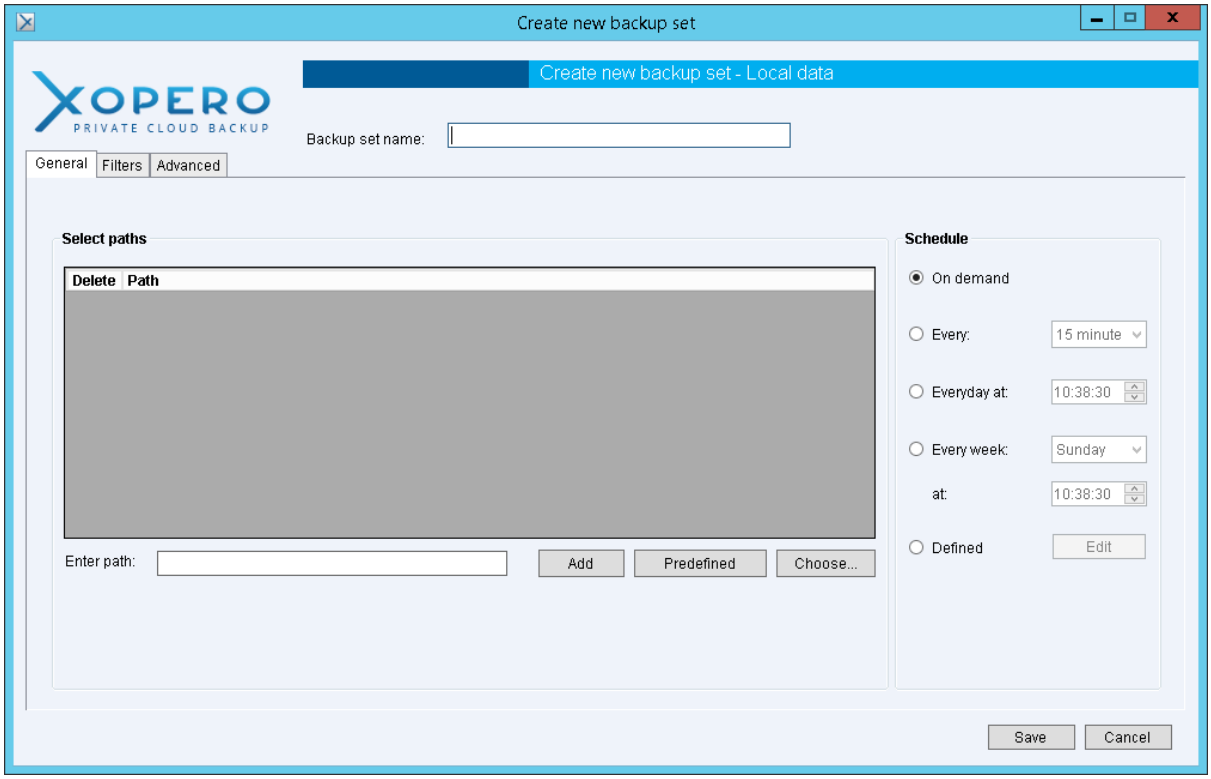
Creating and editing a project

To create a new project for a given device, go to the *List of backupsets*, and then click the *Add backupset*icon, which is displayed in the screenshot below.

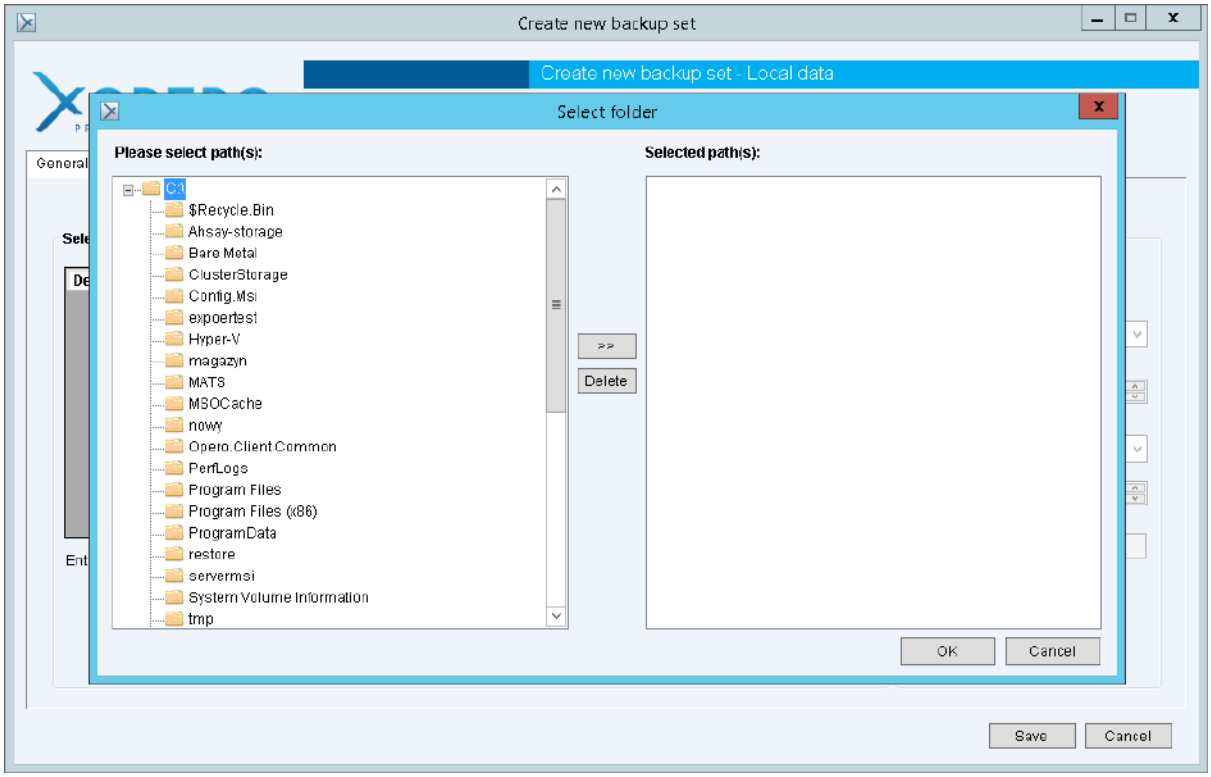


After you click window select the type of project appears.

After clicking, a window for project edition will be displayed, the same as the add the project to the template window, but in this case there is no template *Backupset name*.



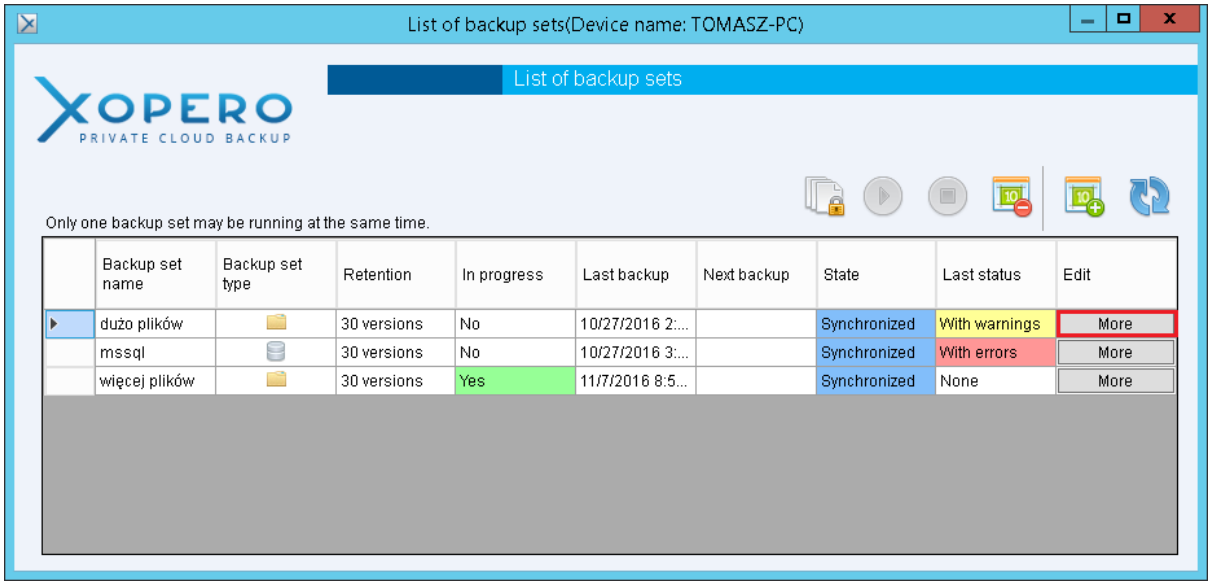
If the selected device is at the given time active, it is possible to remotely select a path intended for backup, that is to indicate the path directly on the device. To do this, click on the *Remote* button.



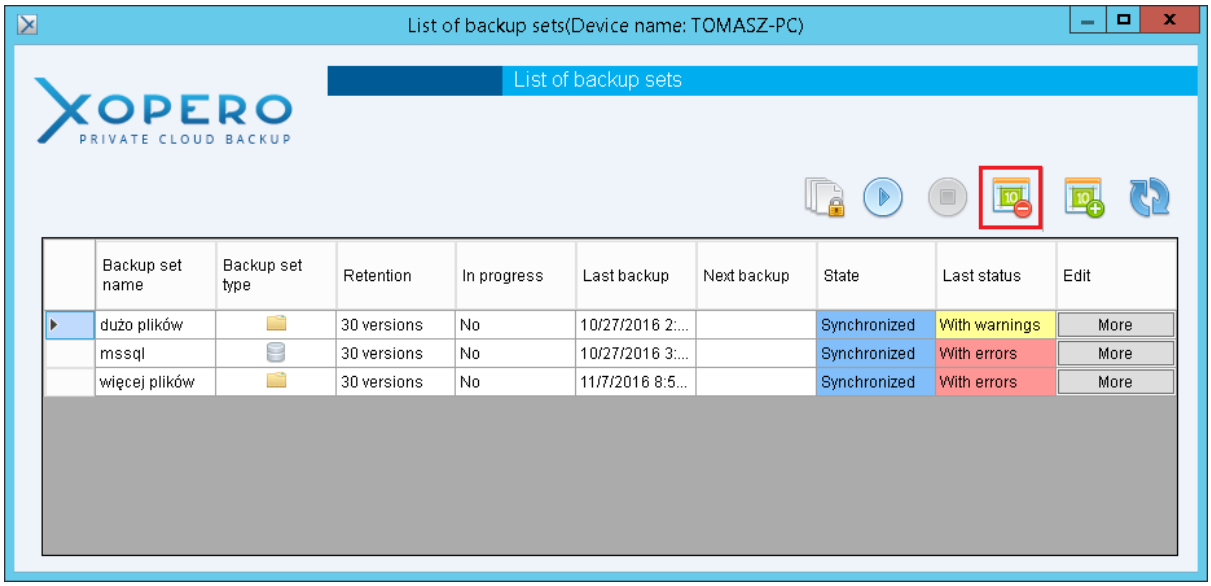
The particular fields of the new project wizard are described in the *Project templates* chapter.

After setting all the parameters of the project, in order to save it, click the Save button in the lower right corner of the screen.

You can also edit an existing project. To do that, click the *More* button in the *Edit* column. for a chosen project from the project list.



When you click the aforementioned button, the project edition window will appear, which will contain the settings for a selected project. They can be freely altered except for *Backupset name* and *Type of copy*fields. After making the modifications, click the *Save* button in the lower right corner of the displayed window.

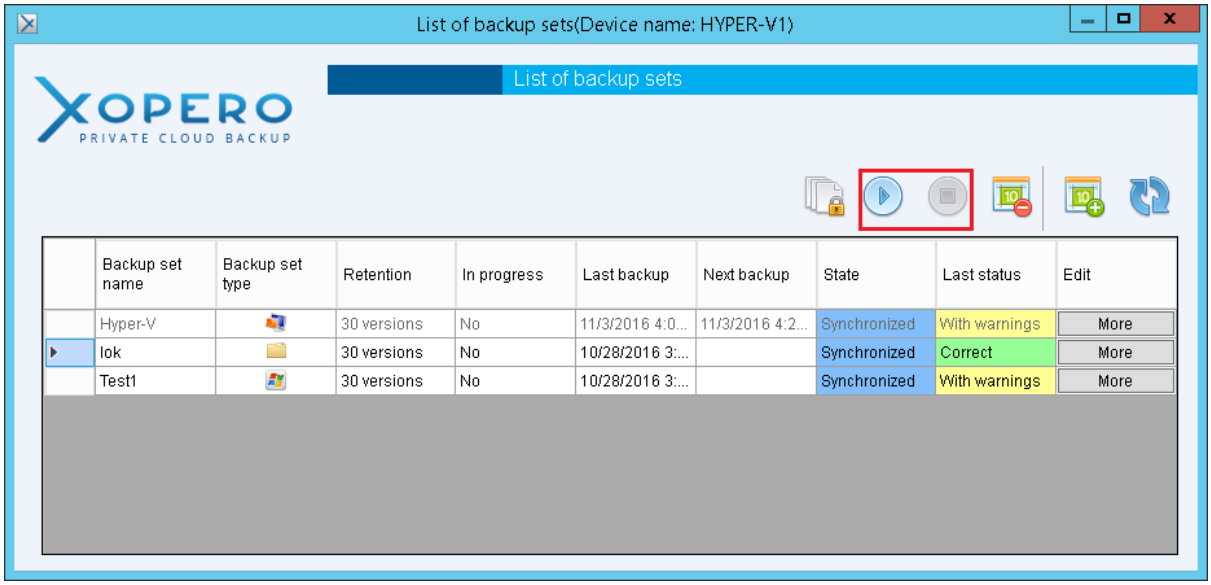


To remove an existing project, click the *Delete* button located in the upper right corner of the *List of backup sets*.

After you create or edit a project, the client application must synchronize the introduced changes. This process takes up to 30 seconds. If after this time, the status in the upper right corner of the Project list will not change to *Synchronized*, you need to refresh the list of projects.

Performing and stopping backups

By using the *Management Center* application it is possible to manually start and stop backups on users' computers. To do this, go to the project list, and then find the project you want to run or stop.



In order to launch the project, make sure that its status is *Not running*, and click on the *Start* button.

Performing a *Running project* can be stopped at any time. To do this, simply tick a chosen project and click on the *Stop* icon.

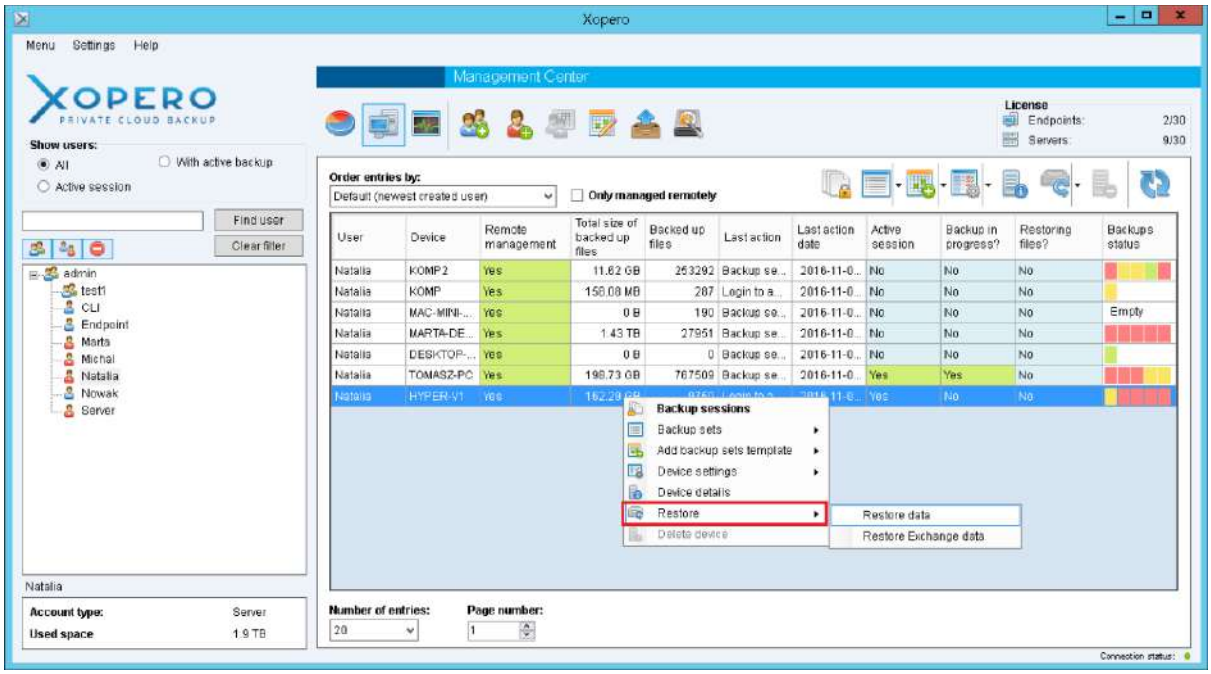
After you stop or start the project, the client application must synchronize the introduced changes. This process takes up to 30 seconds. If after this time, the status in the upper

right corner of the Project list will not change to *Synchronized*, you need to refresh the list of projects.

Restoring files

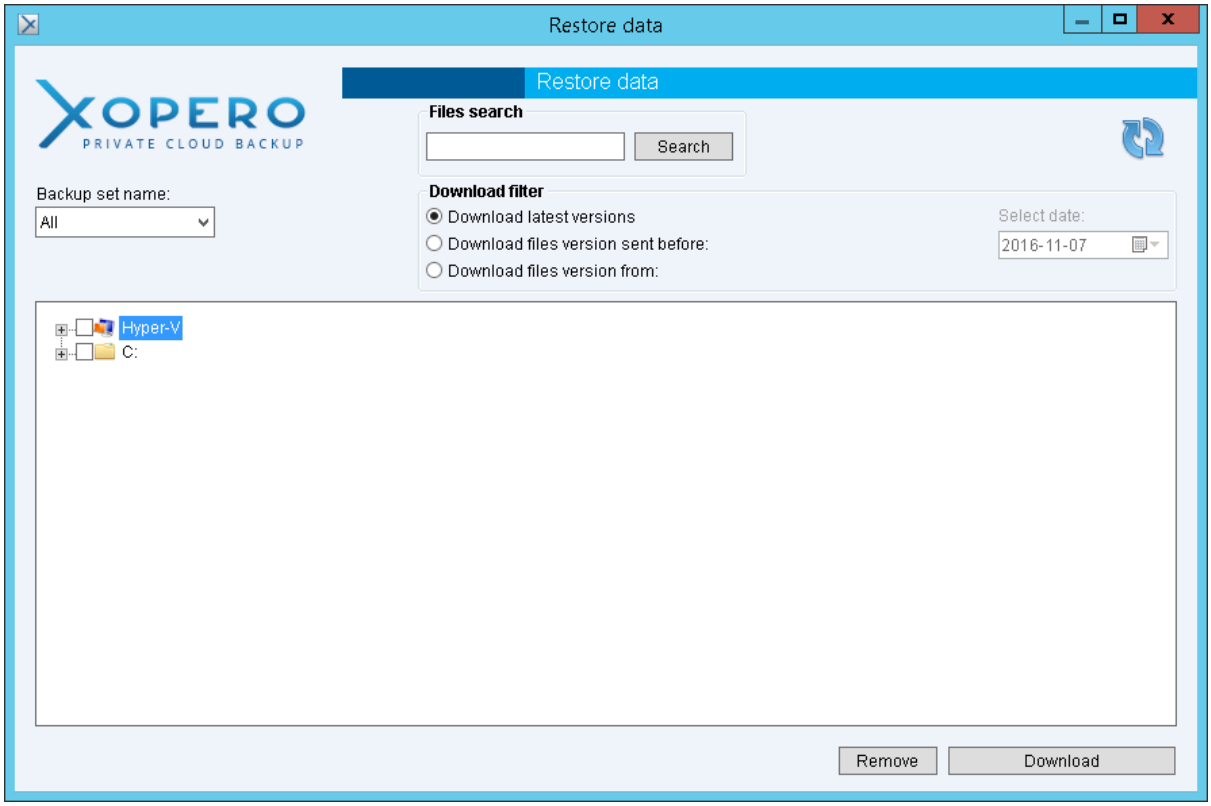
The Management Center allows administrators to restore data sent by its users as backup. Files can be restored to the administrator's or user's computer.

Data can be restored to the user's computer when the device has the *Remote management* option enabled and is *Active*.



In order to run the *Data restore Wizard*, you must go to the *Devices* tab, and then find a device on the list from which you want the data to be restored. After you right-click on a given device, a context menu will be displayed, from which you need to select *Restore data*.

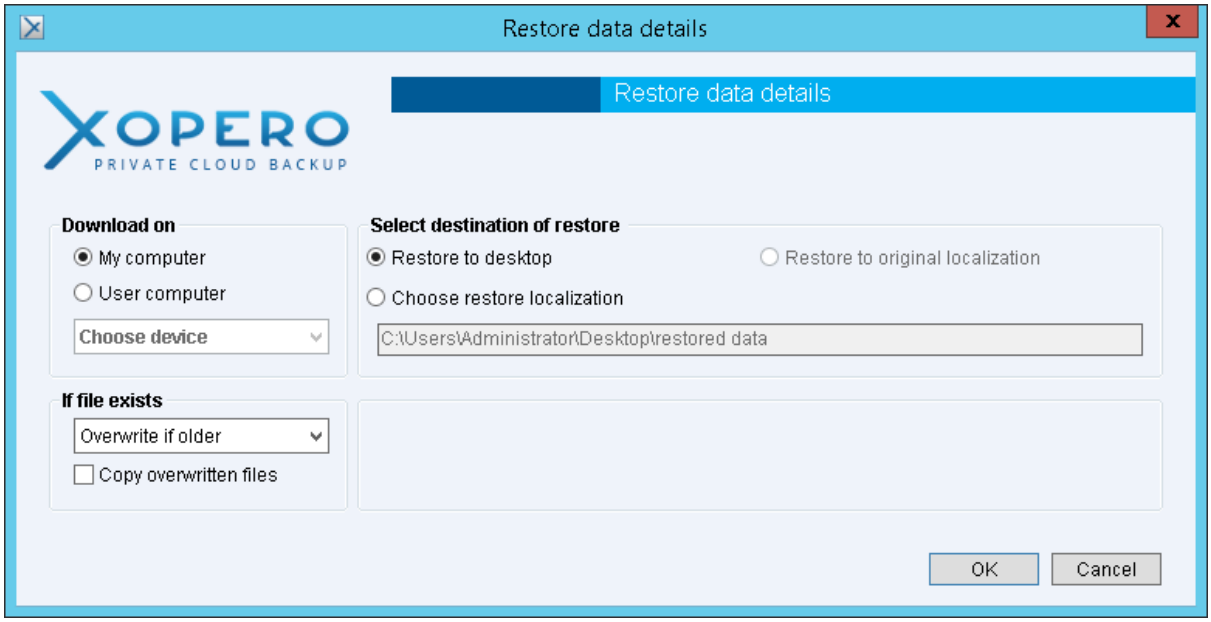
The screen will display the *Restore data* window, which contains a list of files uploaded by the user as a backup.



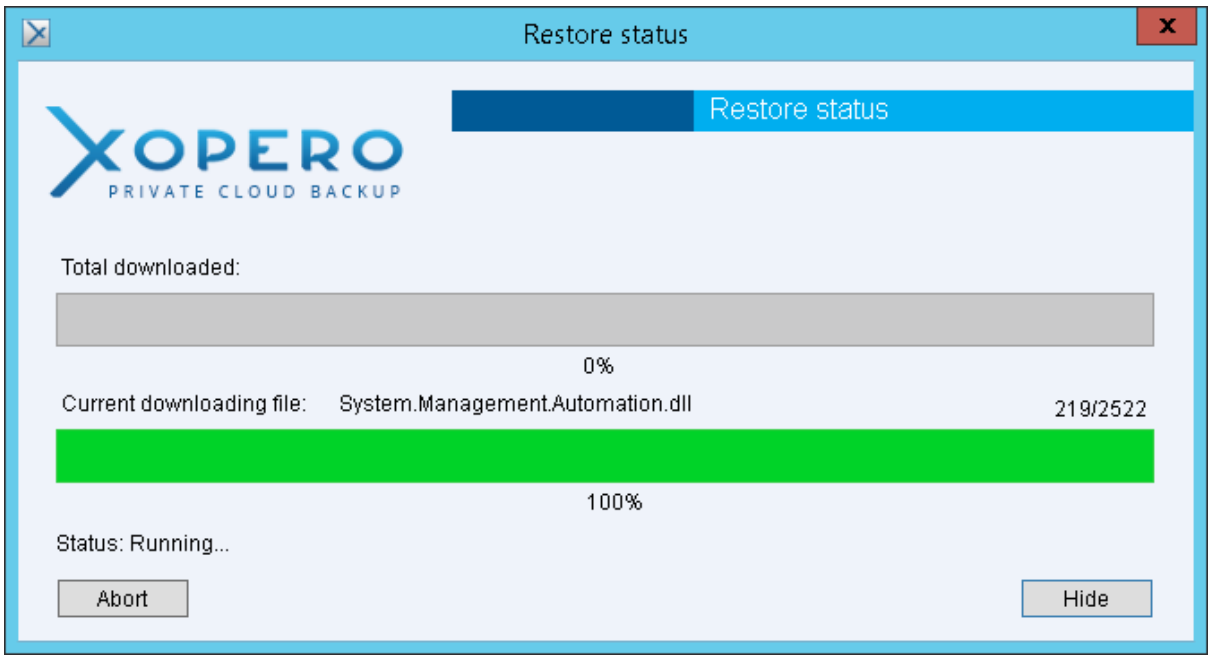
If there are many files on the user's account, loading the window may take a while. This process is indicated by a progress bar.

The administrator has the ability to filter the File in view of the project from which they were sent, or the latest version from or before the selected date.

After selecting the files you want to restore, click the *Download* button. This will display the *Restore data details* window, where you can specify the device (the administrator's or client's computer), on which they are to be downloaded, as well as the location of the restored files. Additionally, you can specify the action that is to be taken by the application, in case when in the selected location there is a file with the same name as the restored one.



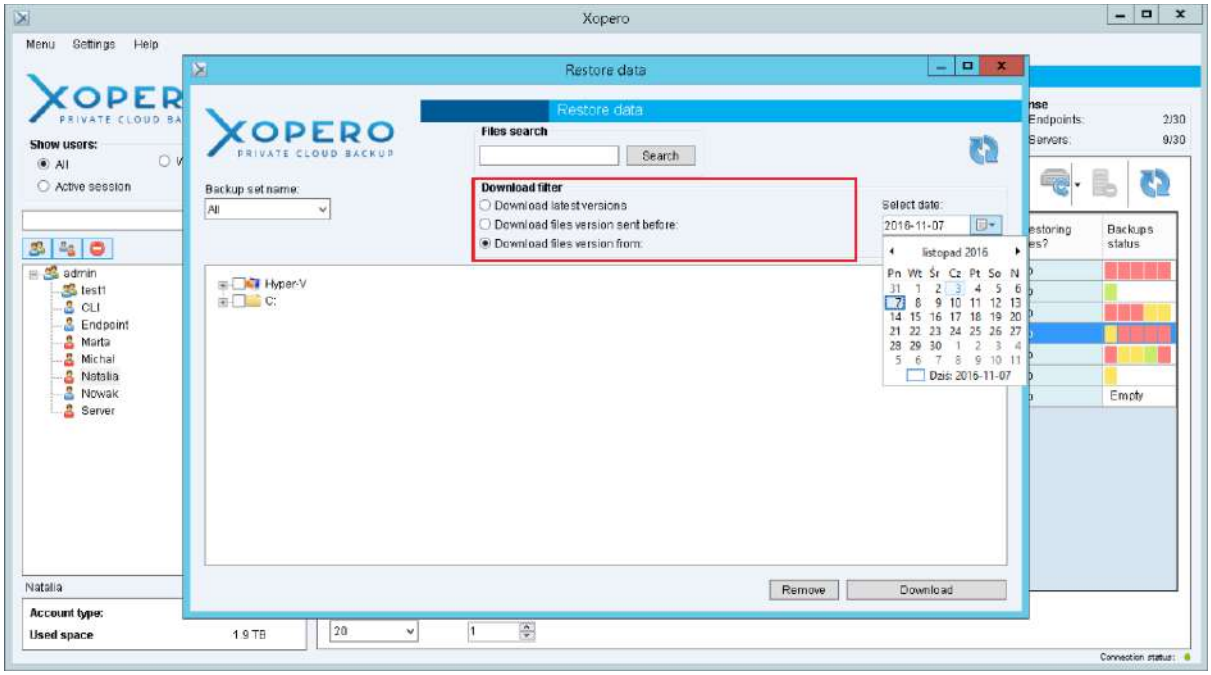
After configuring the settings of the restored data location, click *OK* to begin the restoration process.



If the user whose data are restored, uses a personal encryption key, the application will ask to enter it. If the key is unknown for the user, downloading files will be impossible.

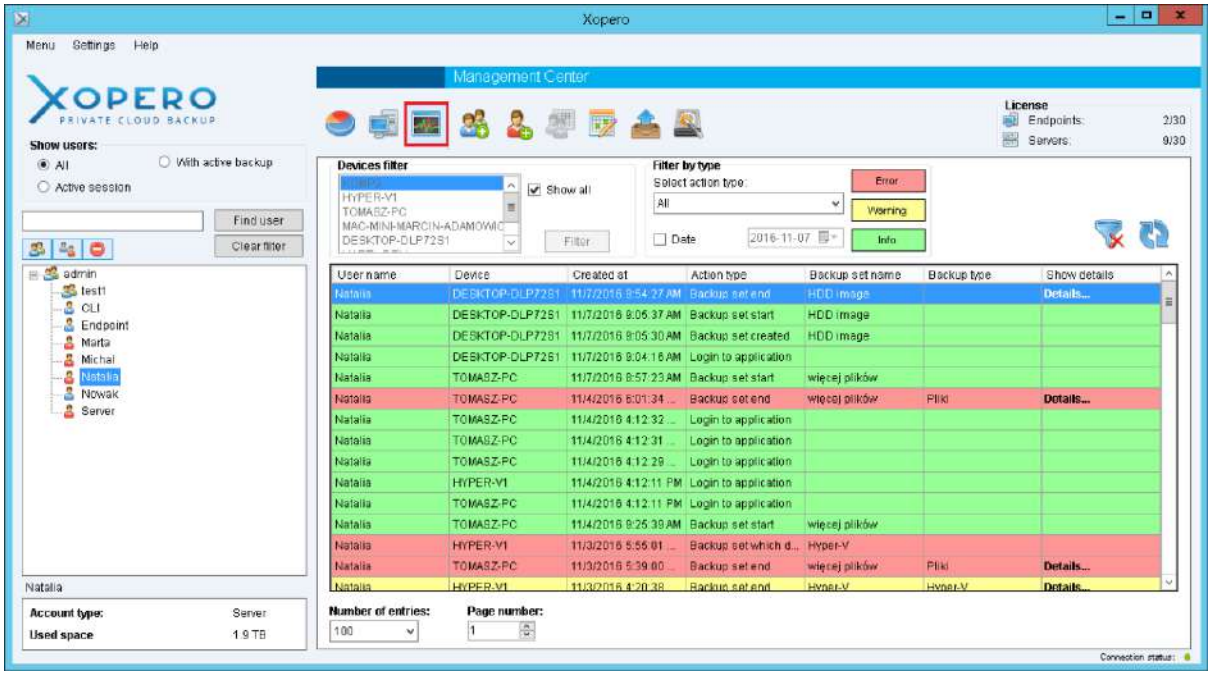
Management Center application allows administrators to restore data version (*following screen*) uploaded by their users as a backup. Files can be restored to administrator computer or user computer.

Data can be restored to your computer when the device is active and has enabled Remote Management.



User logs

Client application logs are available by clicking on the *Users logs* button, which has been marked in the screenshot below.

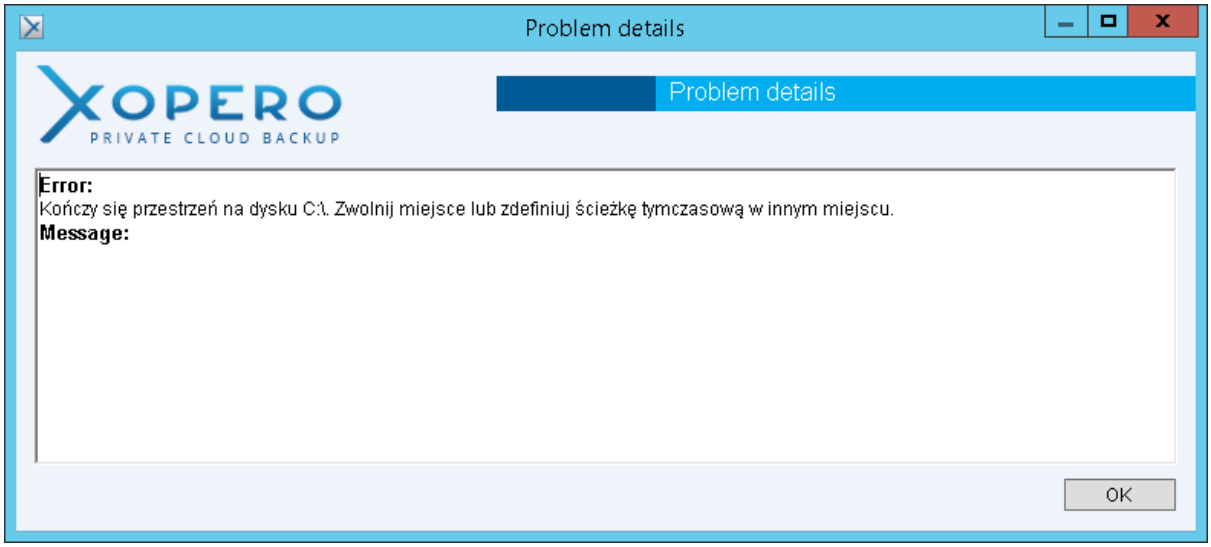


Application errors are marked in *red*. Warnings in *yellow*, and actions performed correctly in *green*.

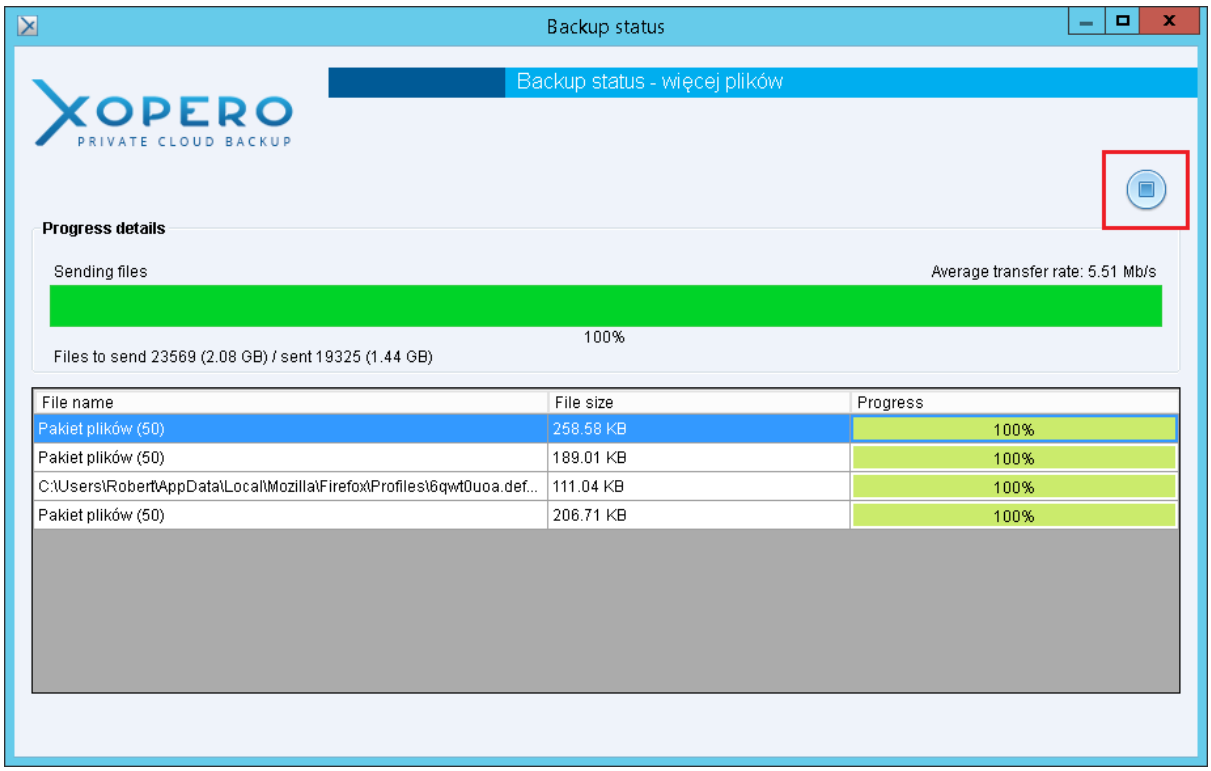
Above the list of logs filters are located, by which you can specify which logs are to be displayed. The available filters are: type of action, type of logs (error, warning, information) and the date from which you want them to be viewed.

If the type of the log has a gray background, it means that this type of logs are not currently displayed on the list.

After selecting a desired account from the tree on the left side of the window, the device filter will be activated, which is by default set to *All*. If you clear the selection button, by clicking on the device list, you can choose the ones that interests you, and then click on *Filter*. Only selected logs will be displayed.



When you click on *Details…* in the log table, the application will display detailed information about a particular event. If the *Show details* column field is empty, this means that the log details are not available.

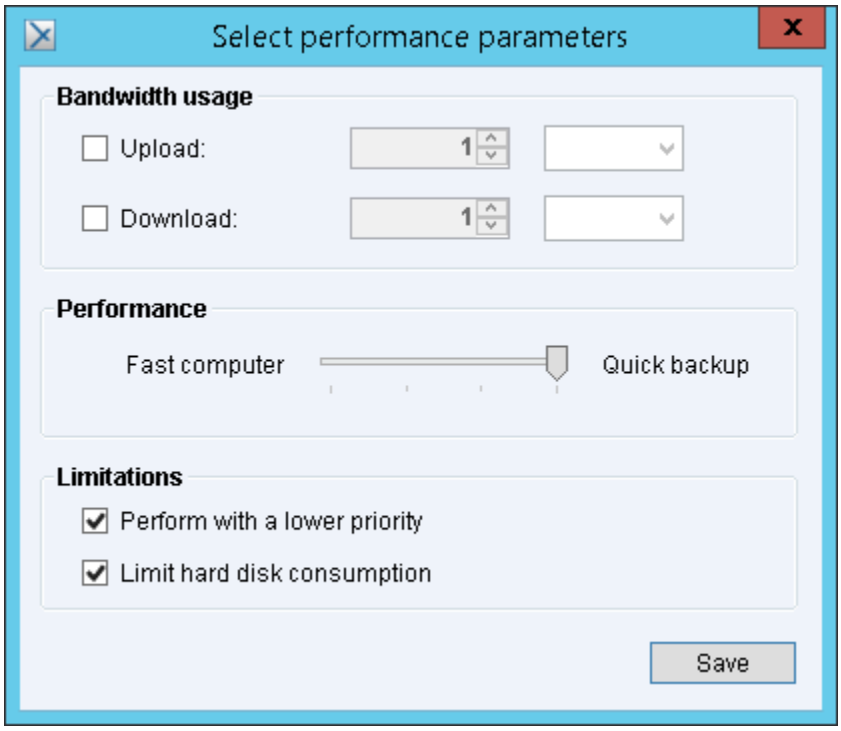


While being in the *Backup sessions* window you can stop the currently performed project by clicking the *Stop* ( ) button.

Host management

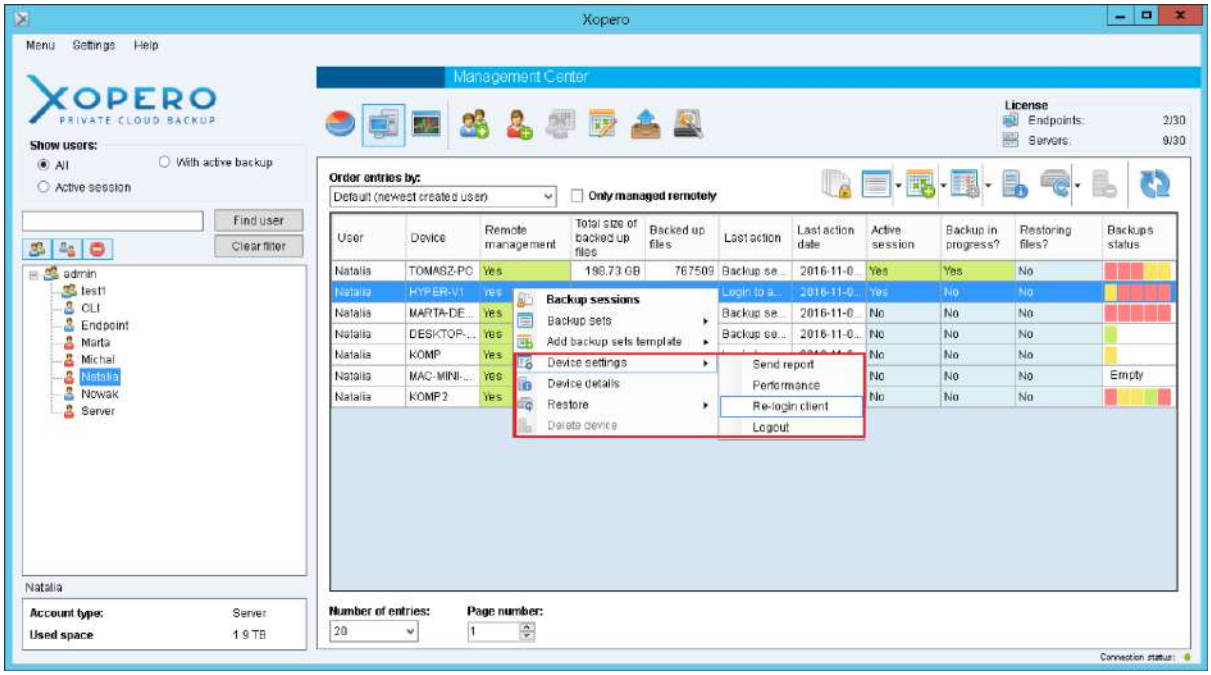
Remote setting the core limit and the bandwidth of an account

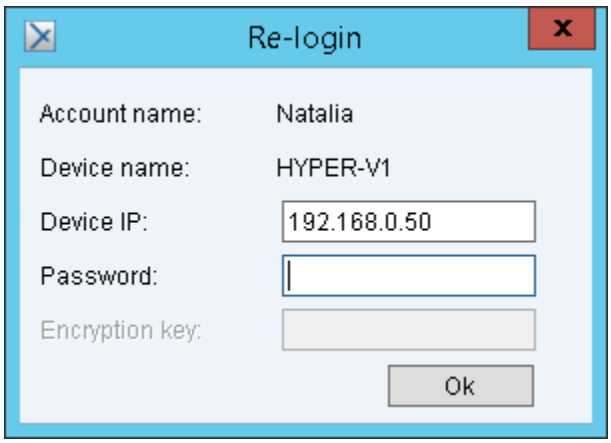
Client applications installed on users' computers may have set bandwidth limits as well as the number of cores, which they can use during backup. In order to set the limits of the device on which the application is installed, go to the *Devices* tab, and click the right mouse button on a given device, and select *Device settings*. From the menu, which will be expanded, you are able to select the *Efficency* option.



Remote device re-logging

The administrator has the ability to remotely re-log the device to a chosen user account, which means that he can log out the device from one user account and log it into another. In order to do that, you have to find a chosen device on the user account, and choose the *Re-login client* option.





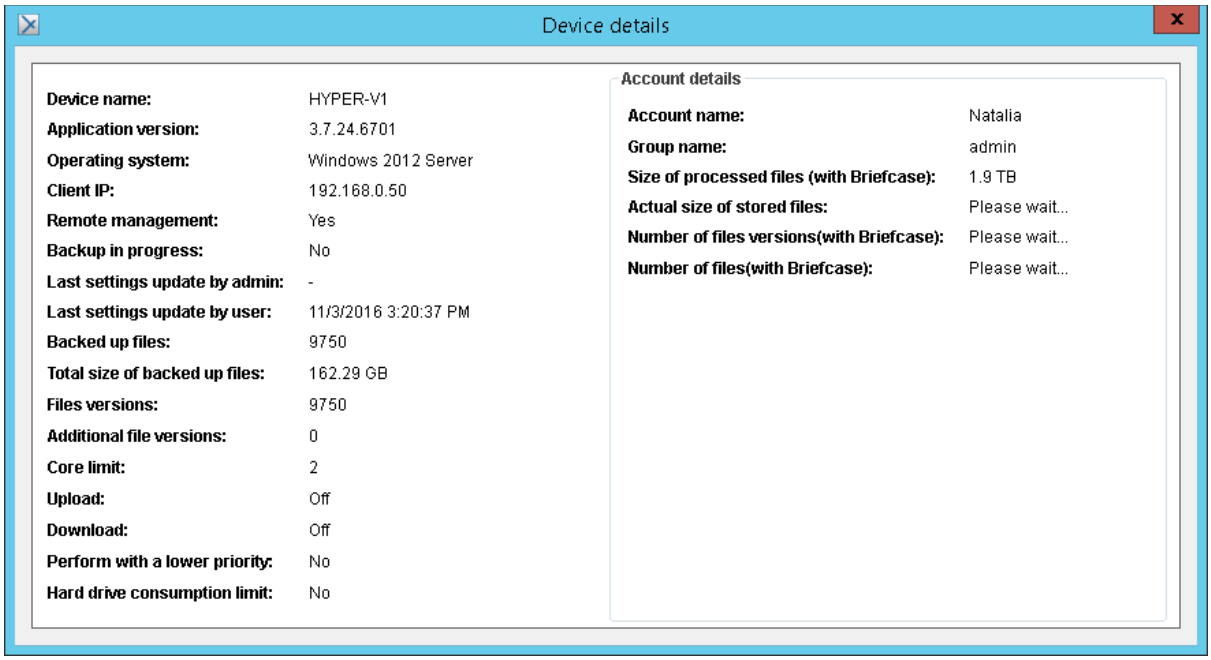
If a given device is already logged into a different account, the client application will be automatically re-logged, in accordance to the administrator's choice.

In case if the last logging in had place a certain time ago, it is possible that the IP address of the device has been changed. In this case you should enter a new IP address.

Device details

The Administrator, who uses the *Management Center* application has the ability to access detailed information about the user's device and the client application installed on it.

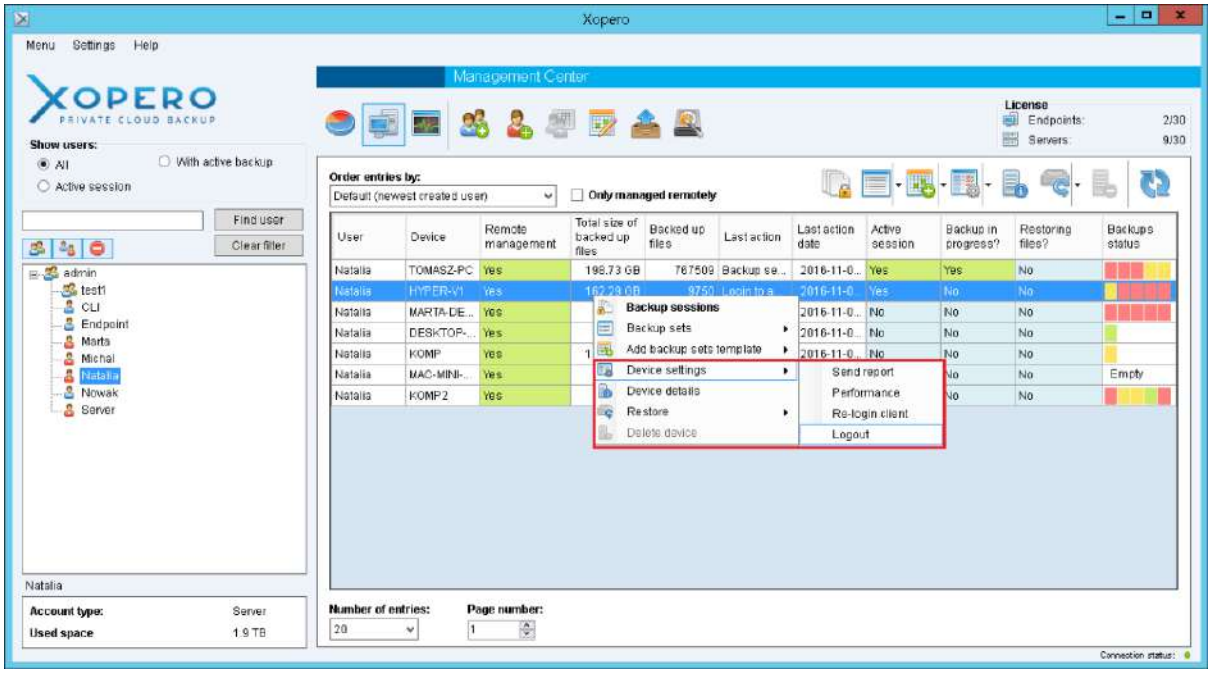
To view the details, go to the *Devices* tab, and then right-click on the selected device and choose the *Device details* option.



In the appearing window you will find the information about the selected device and user account to which it is assigned.

Logging out the device

In the Management Center application, the administrator can log out the device assigned to the user. For this purpose, go to the *Device* tab and right-click on the chosen device, subsequently press the *Device settings* option and then *Log out*.

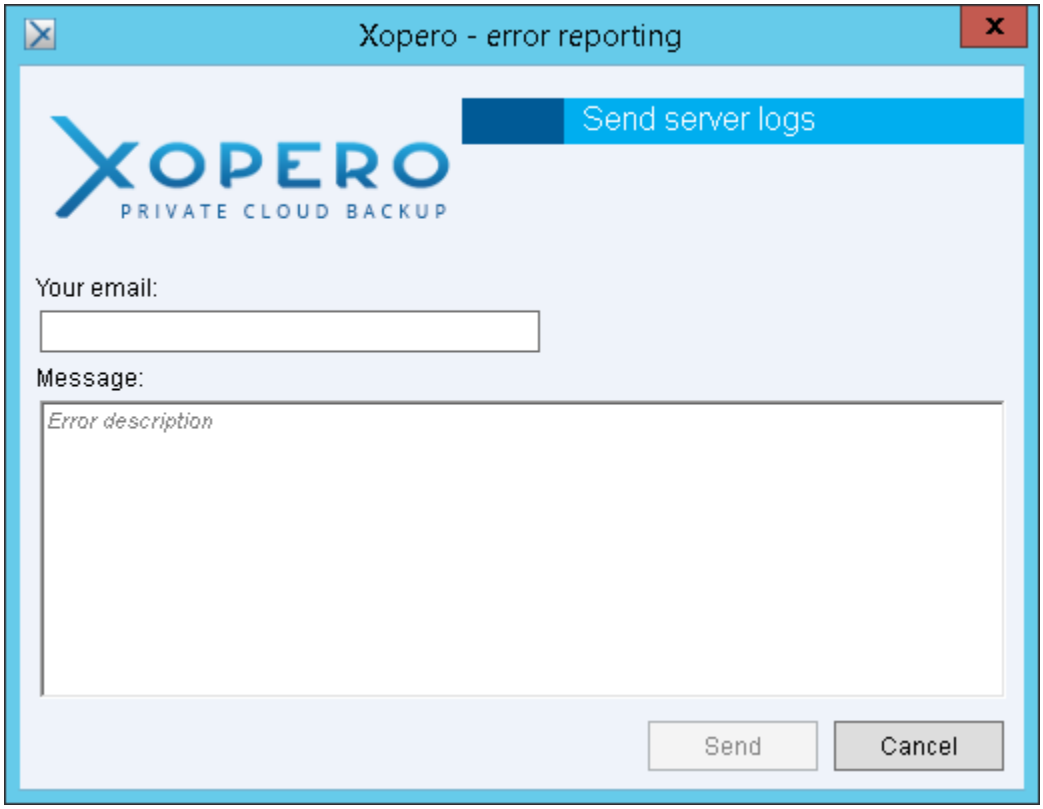


Technical Support

In case of any problems with the application, go to the *Dashboard* window, choose from the *Help* tab, next *Support* and the *Report error* option. The Web page, where you can create an account on the system used for reporting bugs, will open. After creating an account and describing the problem, the system will present you the possibility to solve the problem. However, you may be asked to send the server logs and\ or application logs.

Sending server logs

In order to send the server logs, go to the *Dashboard* window, and then select *Help* tab and choose the *Send server logs* option. After downloading the required information, the window will appear where you can enter your e-mail address and provide the description of the problem. By clicking on the Send button, the logs will be sent to the manufacturer of the software.

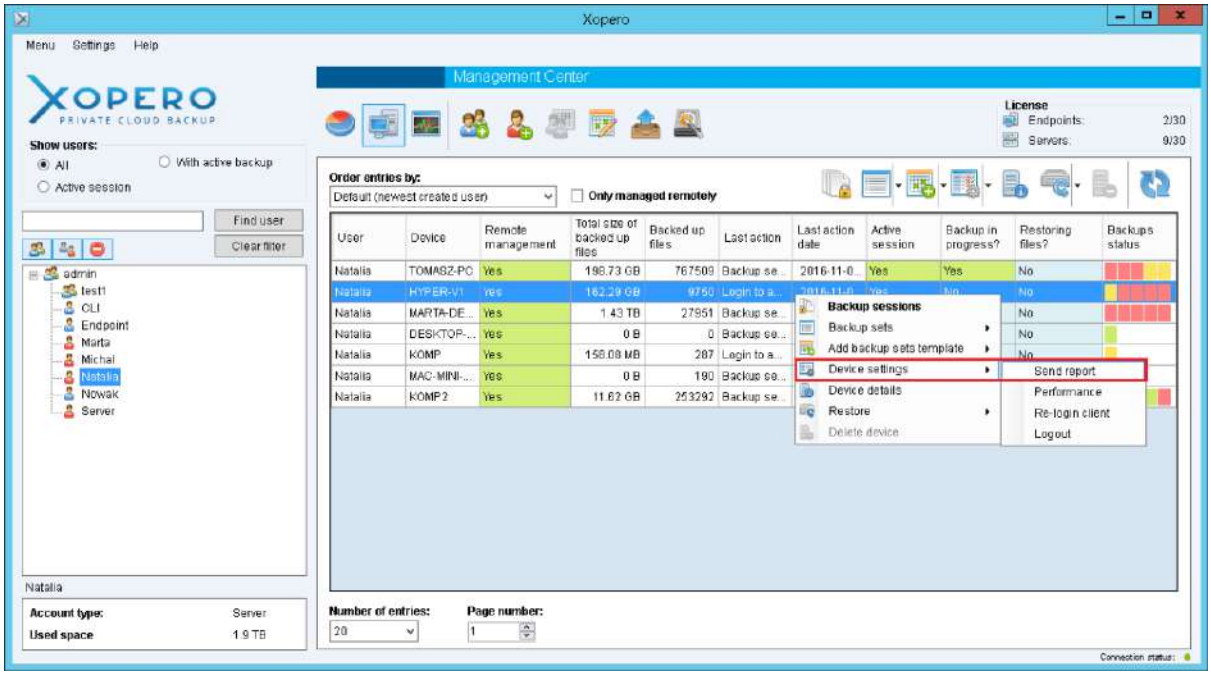


Remote sending application logs

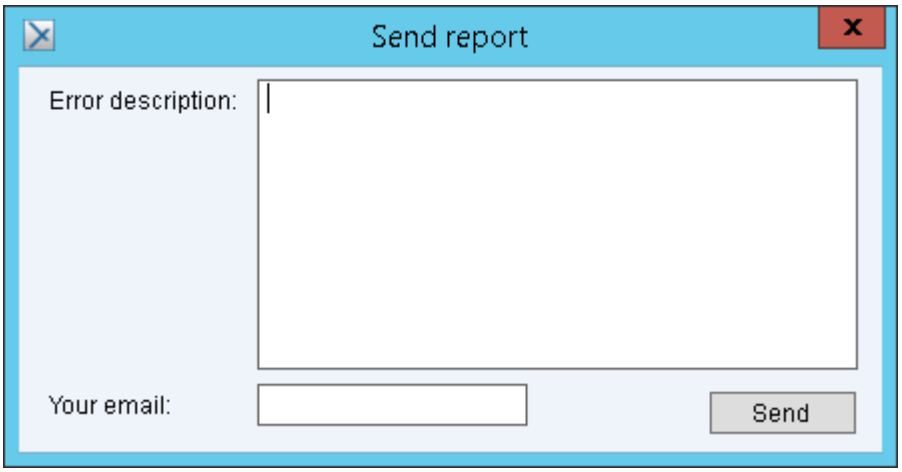
In case of a malfunctioning Client application of Xopero, the administrator has the ability to inform the software producer about the problems by e-mail or by using the bug reporting system.

If it is necessary to send the Client application logs, you should:

- On the list, find the device on which the problem occurred,
- Select the option *Device settings*,
- Use the option *Send report*.



After displaying this option, a request for additional information, necessary to report the problem, will appear.



Delivery of the report or the client application logs should be performed only on the request of employees from the software support team.

After clicking the Send button, the data will be sent to the software producer.

Glosarry of terms

Project template – the project template is a set of backup projects. Each project may indicate other data and have unique features. The project template can be sent to any user device on which **Allow remote management** option is marked.

Backup project – a data set and the type of data which is to be the subject to backup. For each project, it is also possible to specify the frequency of performing it, as well as additional advanced options.

Data Storage - defined space on the QNAP network drive, in which the user data, sent through the Xopero application is stored.

Automatic data storage - an automatic data storage is a storage that automatically adapts its space to the space occupied on your QNAP disk. Thanks to it, if the space on the QNAP disk will be occupied and less space than it was previously defined will be available, the Xopero software will reduce the size of the storage by itself. If the space will be released the storage will be enlarged

Active device - a device which has performed any action within the last 30 minutes. This may lead to the situation where the Management Center device will be marked as active, while in reality it was turned off for less than 30 minutes from performing the last action.

Host - the device on which the client application is installed and from which the user has, at least once logged into his account. During the first login, the device is being assigned to the user account.

Management Center for Cloud

Introduction

An application that allows you to comprehensively manage and monitor backups performed on all devices that are assigned to your Xopero Cloud account. It allows you to remotely

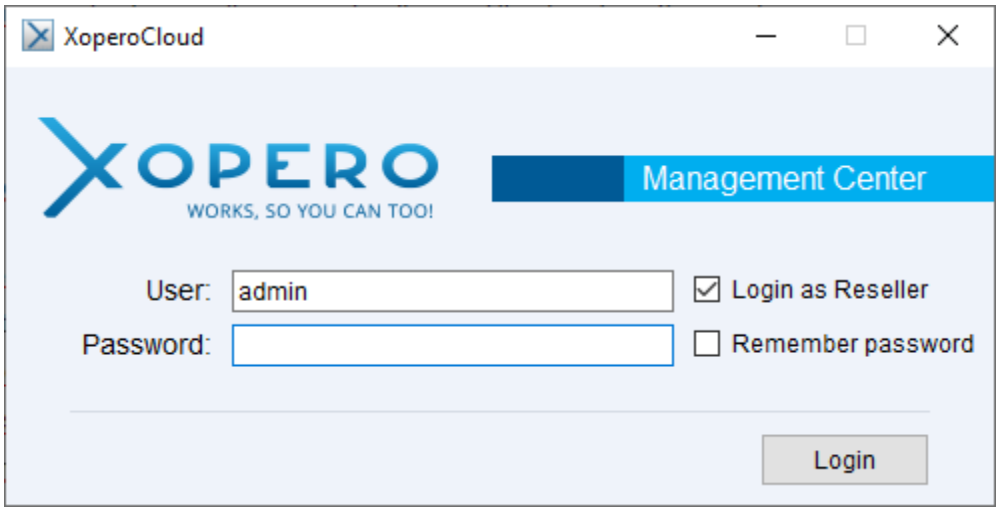
configure client applications, create new resellers, customers, users, and manage XoperoCloud service.

Key features of the application:

- Creating resellers, customers, and users,
- Xopero system monitoring,
- Remote creation and launch of backup projects,
- Restore data from any device,
- Create project templates that can be uploaded to client applications

First login

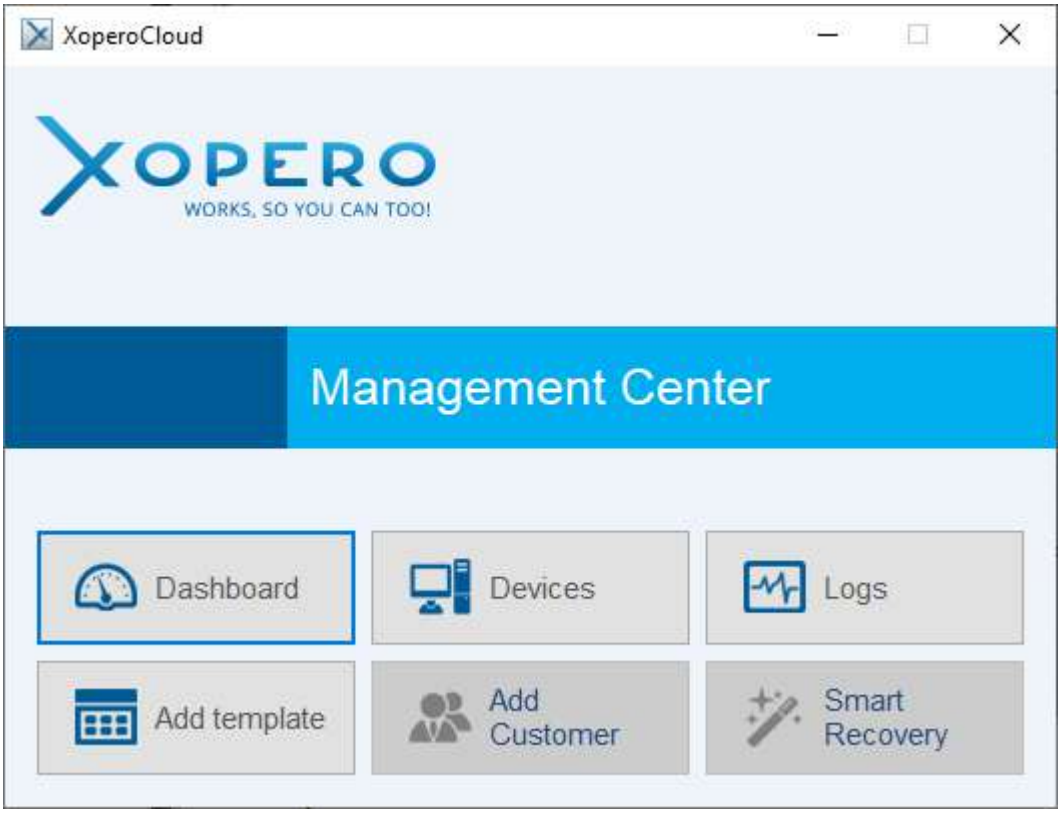
To log into the Management Center, you must have a client or reseller account in Xopero Cloud system. You can log in using the login and password.



When you log into the Management Center application, you will see the basic features of the program:

- **Dashboard** – clicking on the button takes us directly to the view of system performance statistics,
- **Devices** – when this option is selected, the list of devices on which the client application is installed is displayed. These devices must be linked to user accounts,
- **Users logs** – possibility to view user logs,
- **Add template** – moves to the project template creation window,

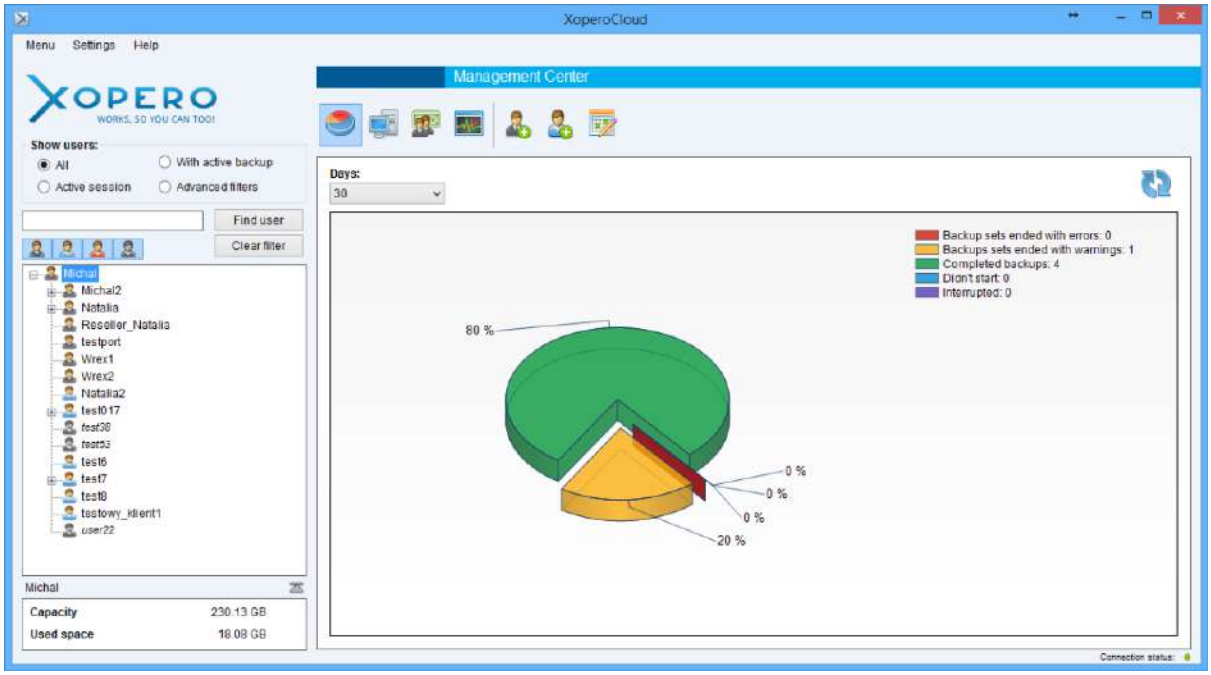
The following window appears only when logged on reseller account. Customers logging in to the Management Center will be redirected to the Backup Manager window immediately.



Management

By default, the first view that we should see is Dashboard.

The graph below shows the backup information for the last 30 days of all users and clients assigned to the reseller and reseller resellers.



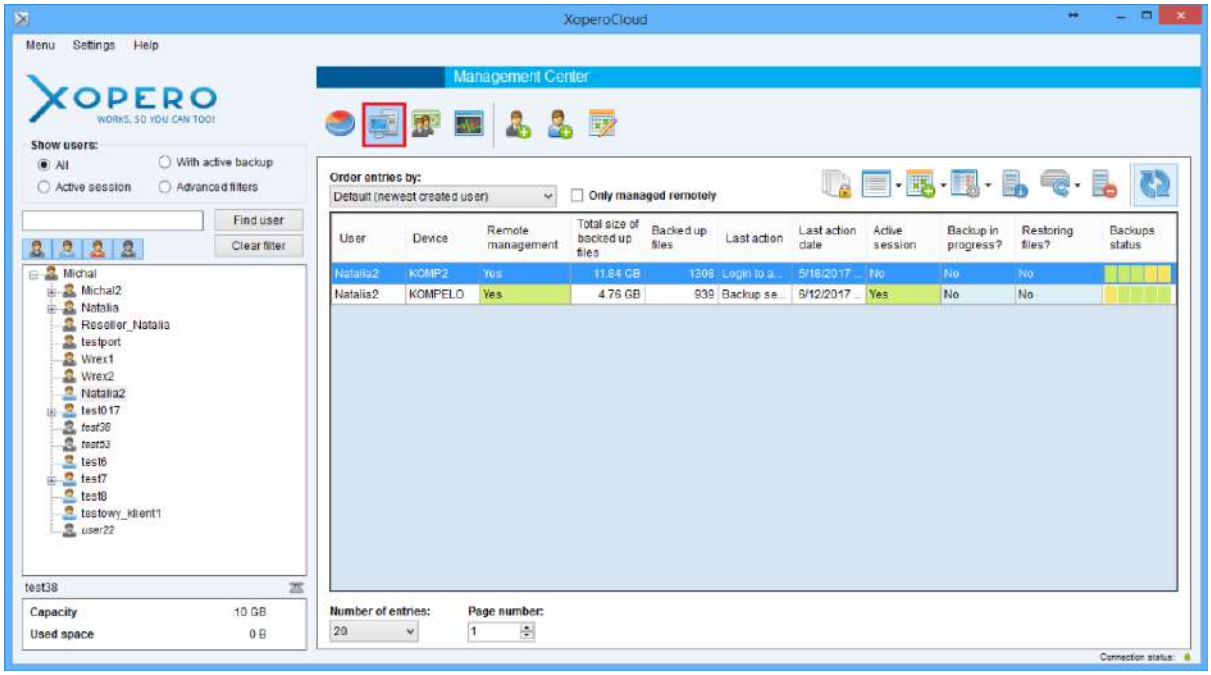
If you have not yet made one backup, the application does not display any data here.

When you click on the user name you will be presented with a graph showing the status of backups performed by the specified user.

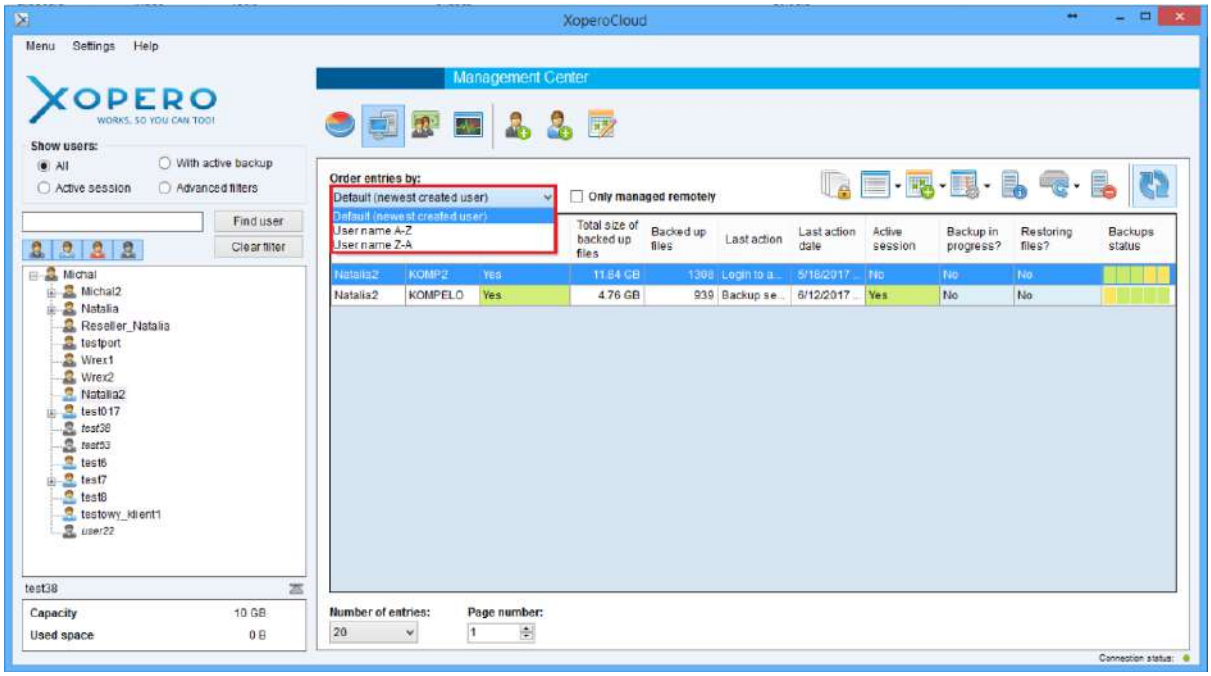
Devices list

The list of devices in the *Management Center* application displays all the devices on which the Client application, from which the user at least once logged into his account, has been installed. The devices are assigned to user accounts.

Multiple users can log into their user accounts from a single computer. In this case, the same device will be assigned to each of them.



The screenshot above shows a list of devices of the users in the *Management Center* application. It can be arranged according to several schemes, using the *Order entries by*. It can be sorted alphabetically, from A to Z or from Z to A, by the username. The second option is default sorting by the date of account creation. At the top of the list the user device is situated, for which the account has been created as the last one.

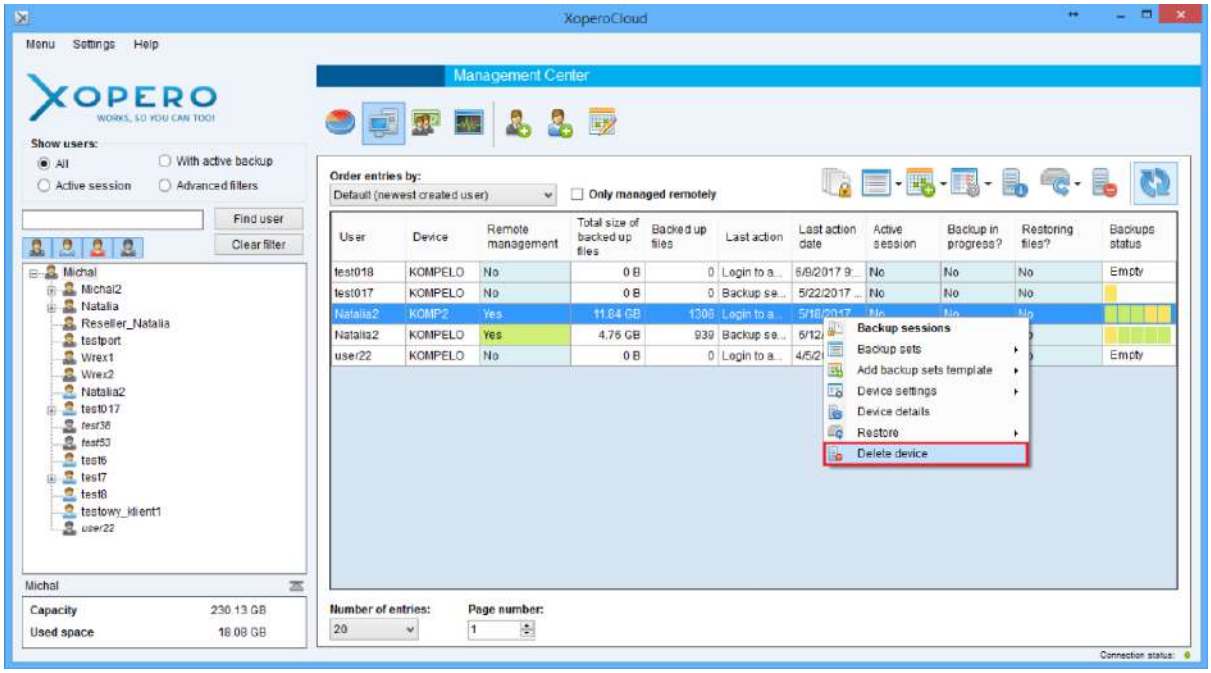


You can find the following information in the device table:

- **User** - login (name) of the user,
- **Device** – the user's device name,
- **Remote management** - information about whether the device can be controlled remotely using the Management Center application,
- **Total size of backed up files** - the total size of files that have been sent from the device as backup,
- **Backed up files** - the number of files,
- **Last action** - type of the last performed action on a given device,
- **Last action date** - the date of the last performed action,
- **Active session** – marks the users who have performed any action in the client application, during the past 30 minutes,
- **Backup in progress?** - Information about whether a backup is performed currently,
- **Restoring files?** - information about whether the files from the device are currently being restored by the Management Center application,
- **Backups status** - the status of the last five made backups.

There is also a possibility to remove a device. Just click on the selected device with the right mouse button, and an options bar will be displayed. One of these options is the removal of the device - *Delete device*. A device can only be deleted when it is inactive.

Removing a device results in deleting all data sent by it from the Xopero server.



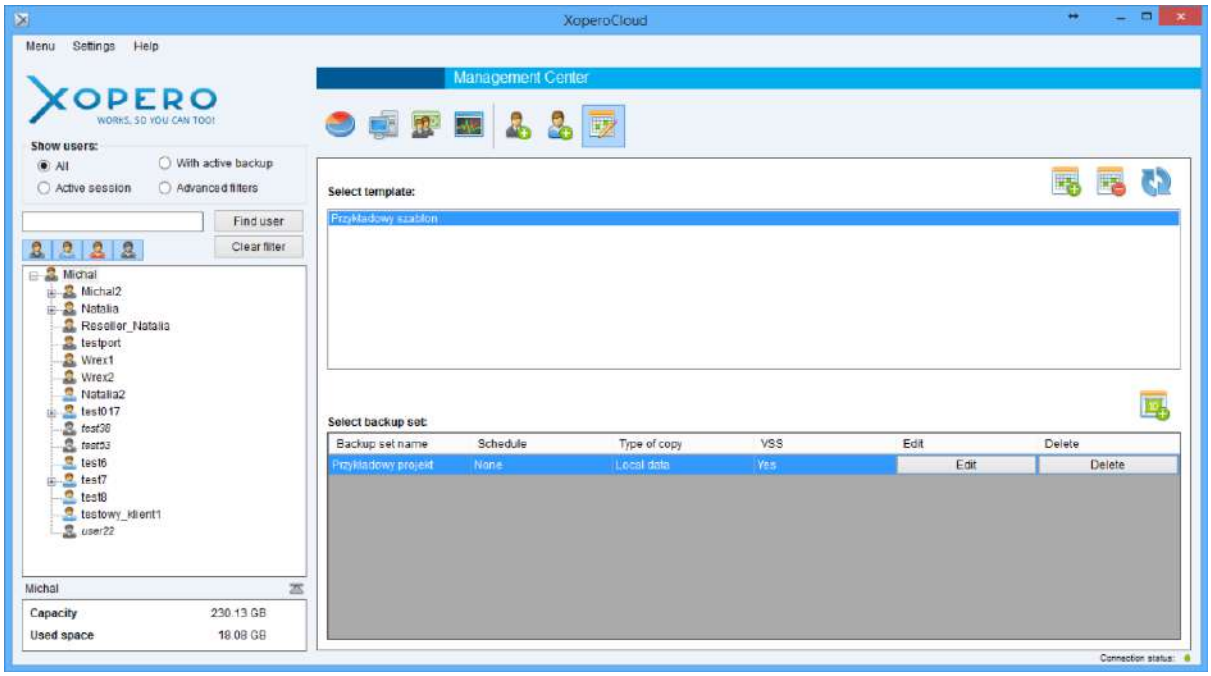
The reminding options - *Backup sessions, List of backupsets, Add backupsets template, Device settings, Device details, Restore data* are described in the following sections of the user manual.

Project templates

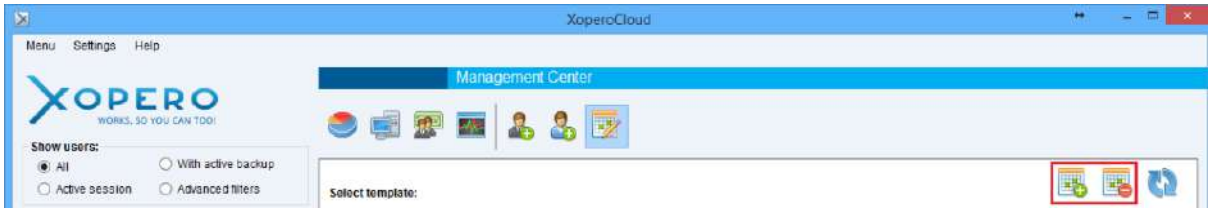
A project template is a set of projects which can be sent to any device user. Each project in the template must have indicated data for backup and a name given. You can also configure additional settings, such as schedule or advanced options. You can edit the project after sending it to a chosen device.

Please note that, the device to which a template will be sent, needs to have existing indicated data, otherwise, execution of the project will end with an error.

The *Manage backup templates* option is launched by clicking on the button highlighted in the screenshot above. A list of created templates will be displayed, and below a list of projects included in a chosen template.

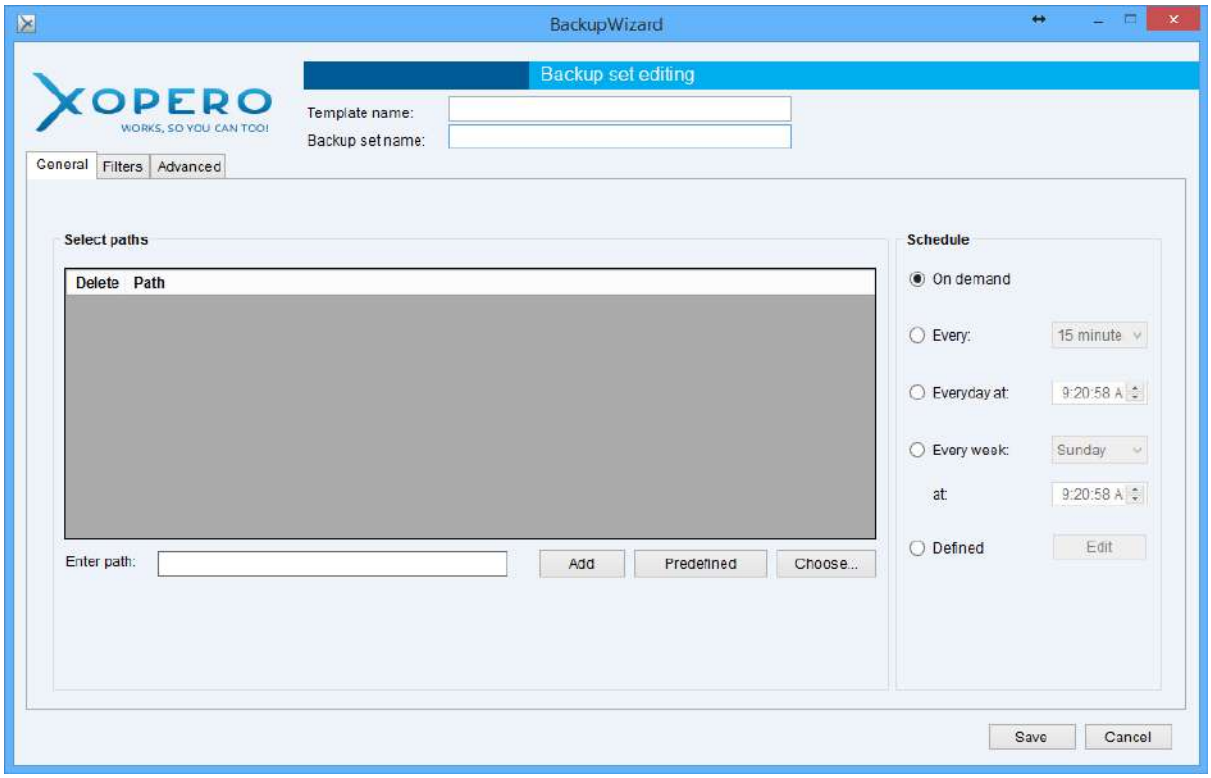


In order to create a project template, press the *Add backupsets template* button, and in order to remove, mark a chosen template and click *Remove selected template*.



After clicking on *Add backupsets template* a *Creating new backup template* window will appear, in which you also have to specify the name of the template. Further backup

configuration is related to a backup project which will be included in the created template.



Currently it is only possible to create local data backup projects. For each of the created projects, the user can define its name, set up a schedule, or choose the data he wants to backup.

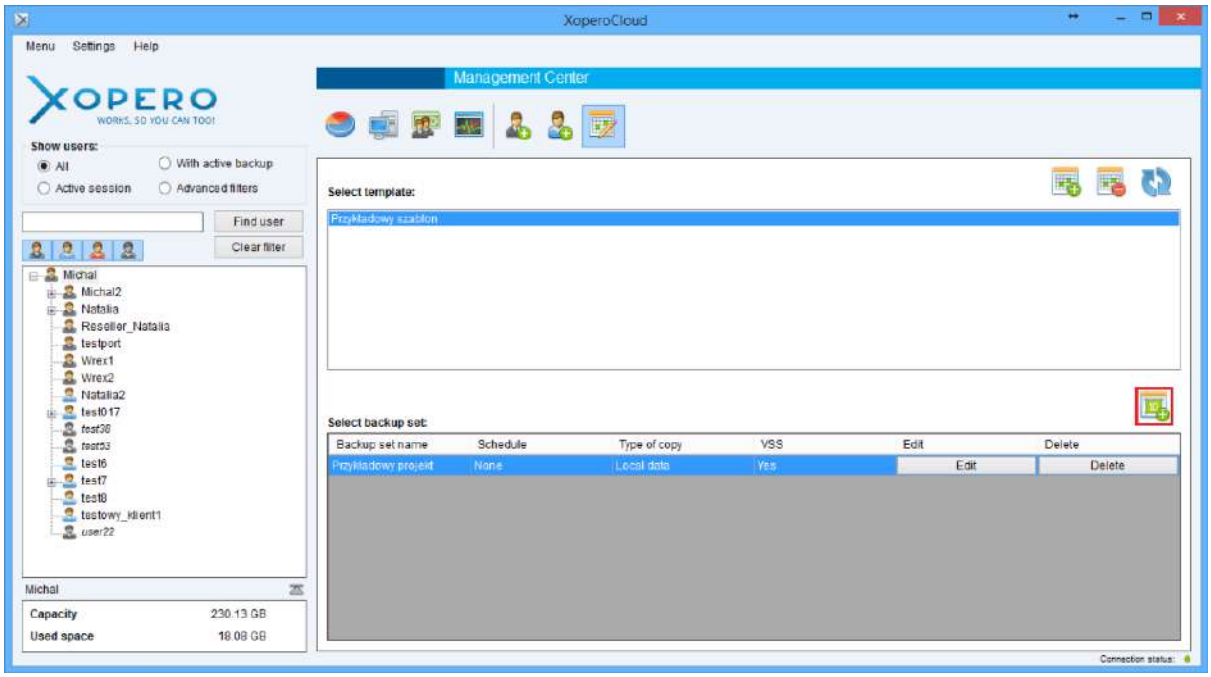
In case of project templates, after choosing the *Local* option, the catalog paths from our computer will be displayed. If we do not want to use this option, we can type in a chosen path in the text field, and click *Add*

Another possibility is to employ pre-defined paths, which can be used on different operating systems. They refer to fixed system catalogs. Choosing this option is possible after clicking the *Predefined* button, and choosing an operating system (Windows XP or later).

In addition, it is possible to apply filters to a created project, applied to: files and folders, Windows permission settings according to which the project will be created, and the following advanced options:

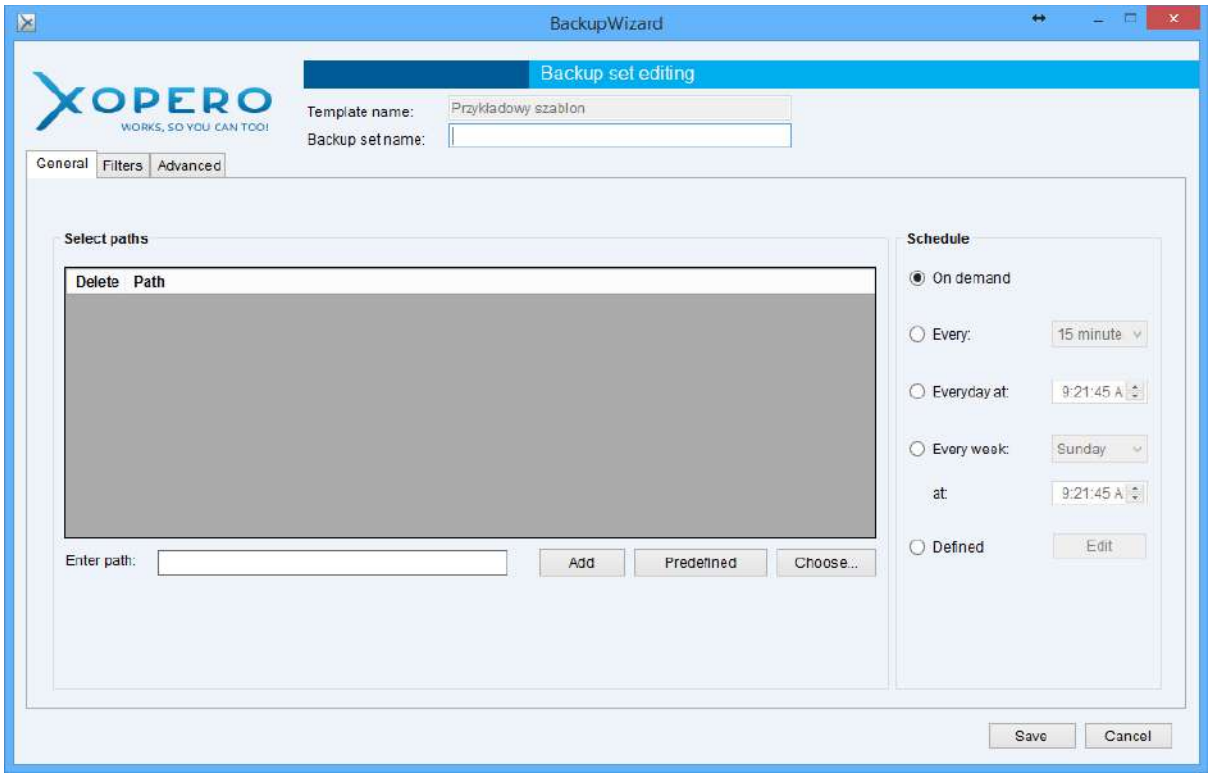
- **Without encryption** - files included in the project will be sent to the Cloud unencrypted,
- **Without compression** - the files will not be compressed before delivery,
- **File copies stored for:** - specifying the number of versions created for a single file in the project. An alternative option is to specify the number of days to retain the backup version.
- **Backup type** - allows you to specify how the files should be sent, whether they are to be sent in a differential or incremental way, and which method will be used during this process.

After completing the configuration of the first backup within the template and the template name, you can save it by clicking the *Save* button, which is located in the lower right corner of the *Create new backup template* window.



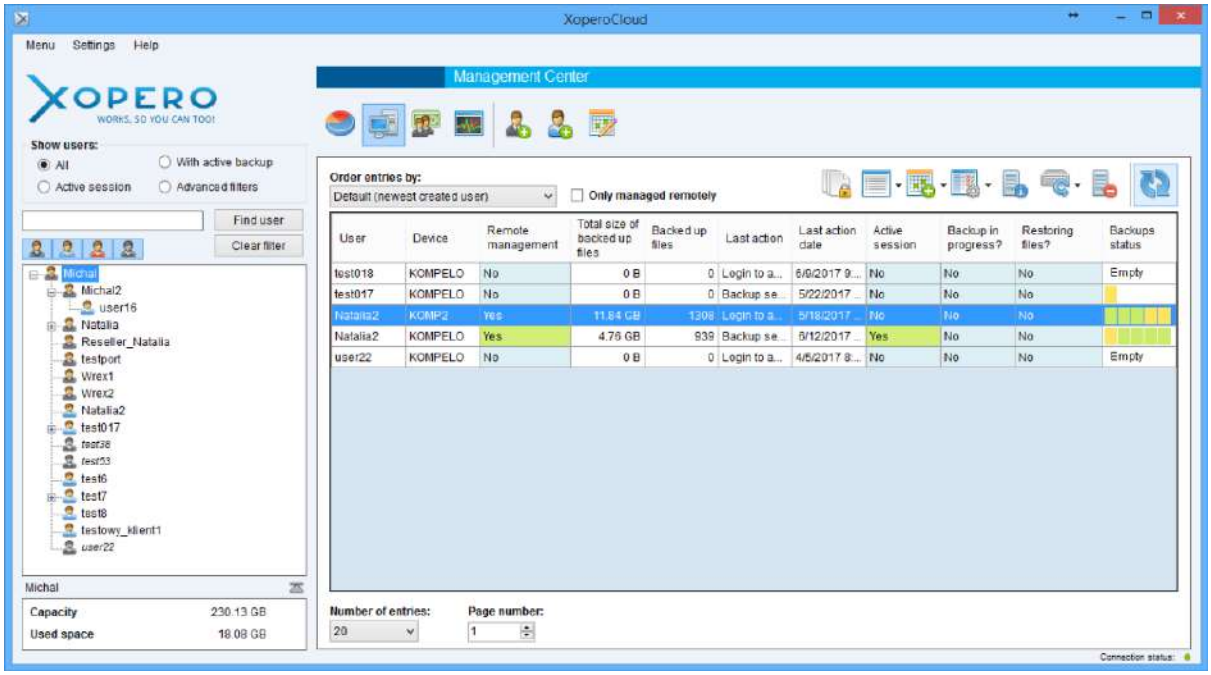
Each template can consist of any number of projects created by the user. In order add a new project to the template, click on the button highlighted in the screenshot above.

After clicking on it, a window appears, the same as while creating a template, except that the name of the template is already defined, and editing it becomes impossible.



Sending a template to a client application

Sending a template to the client application is possible via the *Devices* tab, which can be accessed by clicking on the button marked in the screenshot below.

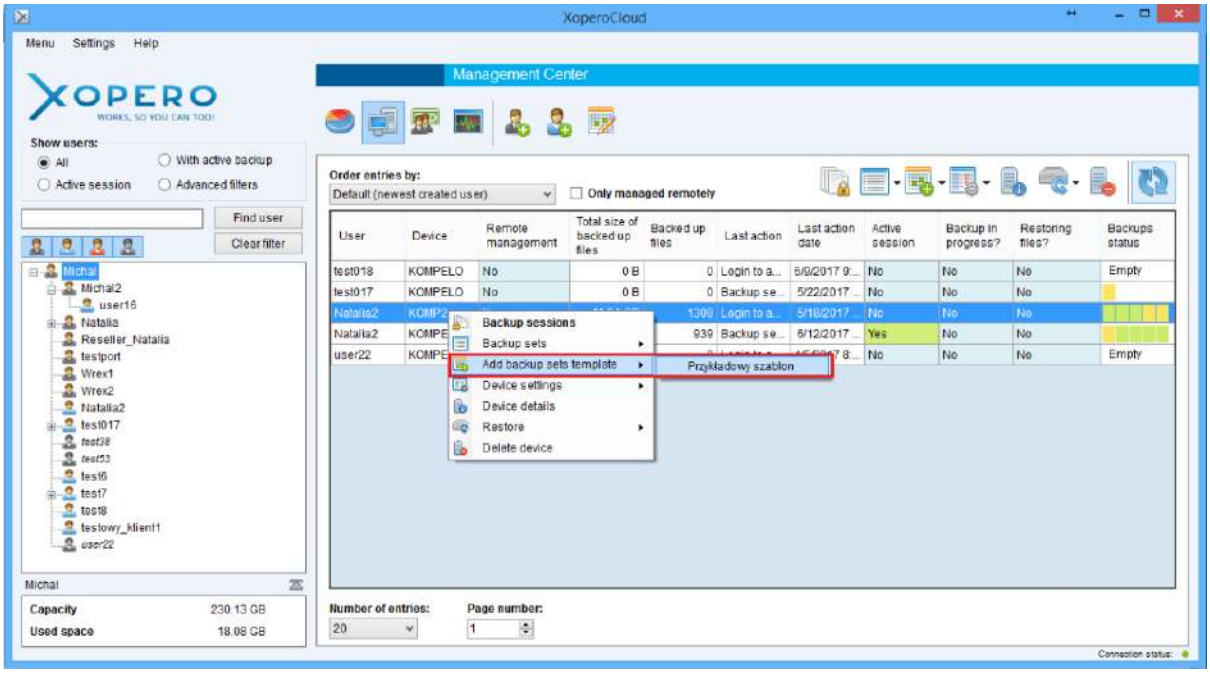


Next, you need to find the device to which you want to send a template on the list. By selecting a user, or a group from the tree on the left side of the application, we can view only the devices, which are assigned to the position chosen by us, for example, the devices of only one user.

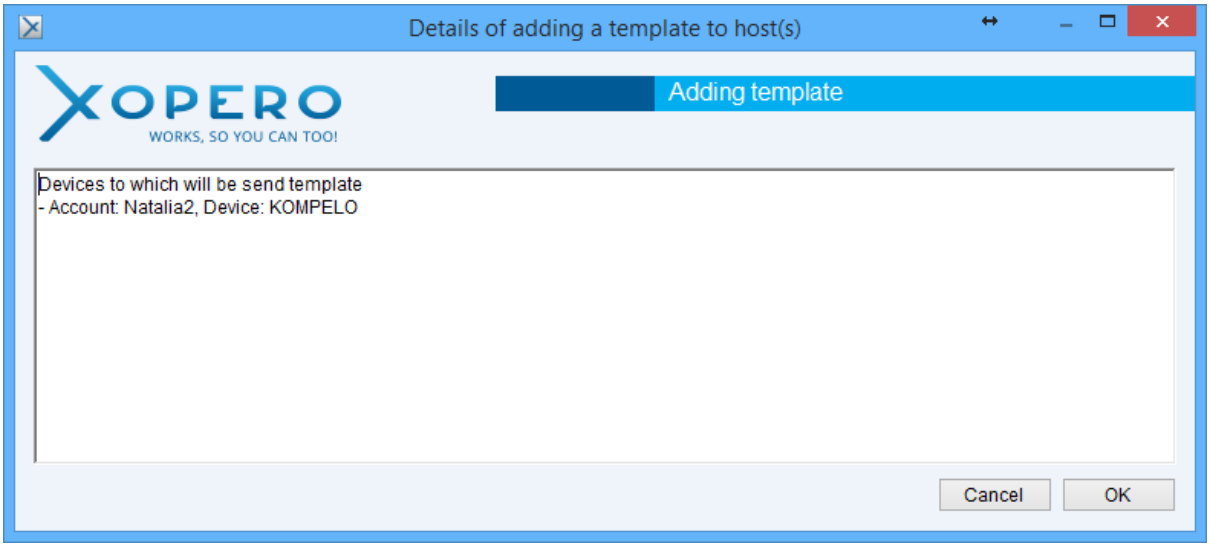
There is a possibility of sending a template to multiple devices at the same time. To do this, select multiple devices from the device list by holding down the *CTRL* key.

Project templates can be sent only to devices which have remote management enabled, and are currently synchronized.

After selecting the devices to which you want to send a template, click the right mouse button on one of them and select *Add backupsets template* from the context menu, and finally select a desired template.



Clicking on the name of a template causes to send the template to specified devices, except situations the projects from the template already exist on your computer.



Project management

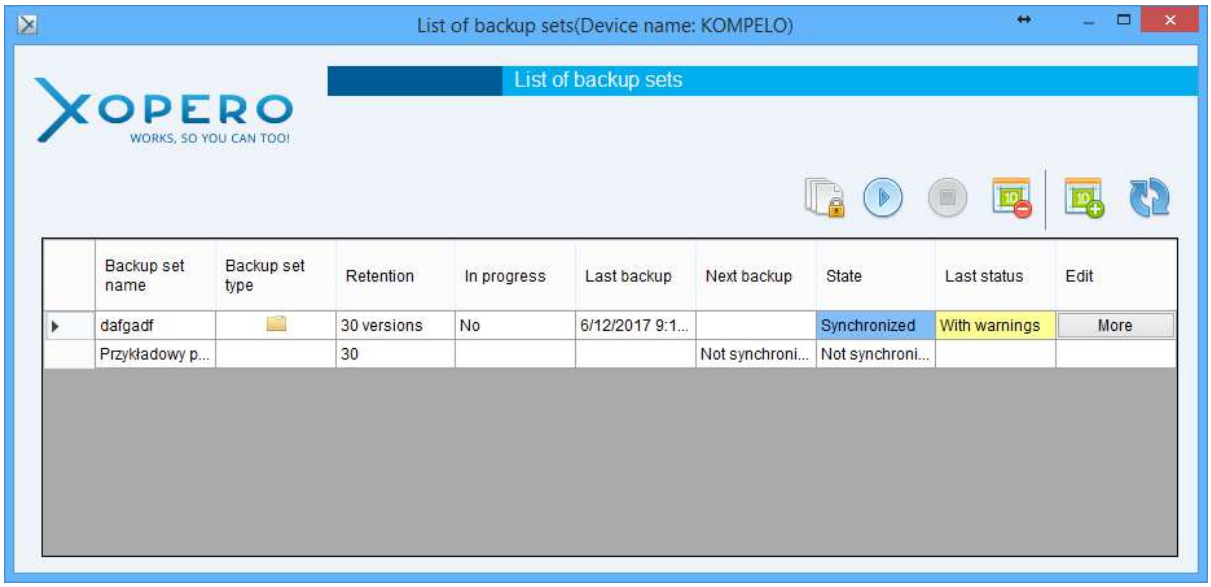
Remote backups management

The Management Center allows you to remotely manage user backups as well as their projects.

Project management

Through the *Management Center* application you are able create new projects, as well as editing and deleting existing ones. Existing projects can be remotely started or stopped, if one of them is currently being performed. In order to view the list of projects on a given device, from where it is possible to manage them, please right-click on the selected device, and then select *List of backupsets*.

Displaying the list of projects is only possible for devices which have *Remote management* enabled and have been synchronized with the *Management Center* application.



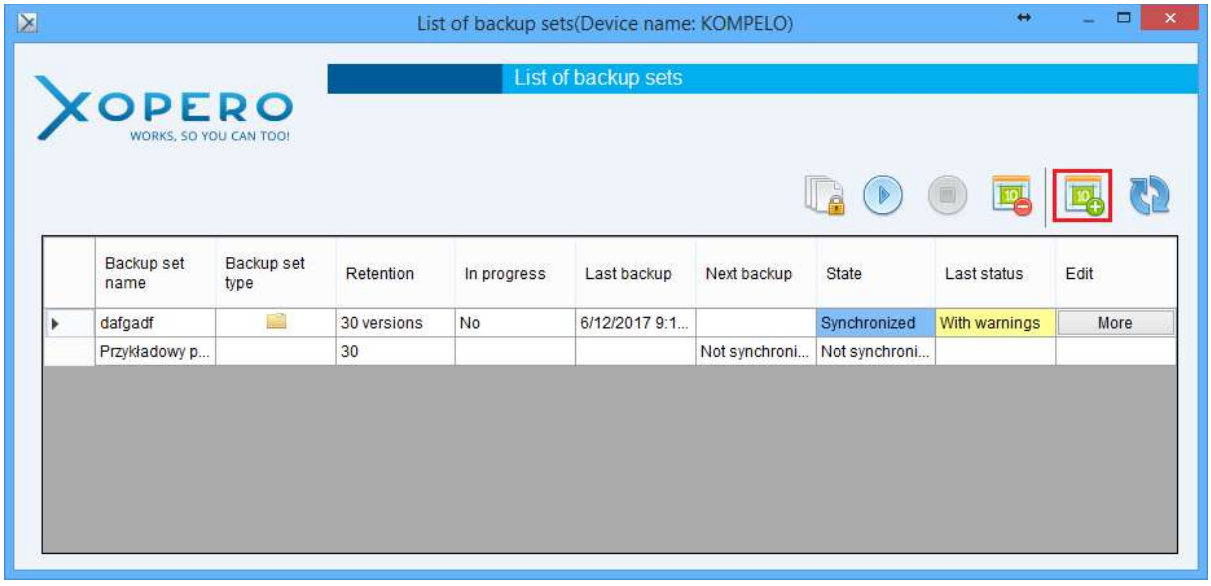
The List if backup set consists of the following fields:

- **Backup set name** - the project name defined by the user,

- **Next backup** - the date of the next backup performed in accordance with the schedule,
- **Last backup** - the date of the last performed backup project,
- **State** - the current status of the project,
- **Retention** - a limit of versions set for the selected backup project,
- **Last status** - status of last backup performance,
- **In progress** - shows if backup is currently in progress,
- **Backup set type** - type of defined backup set,
- **Edit** - this column contains a button that allows to edit the project.

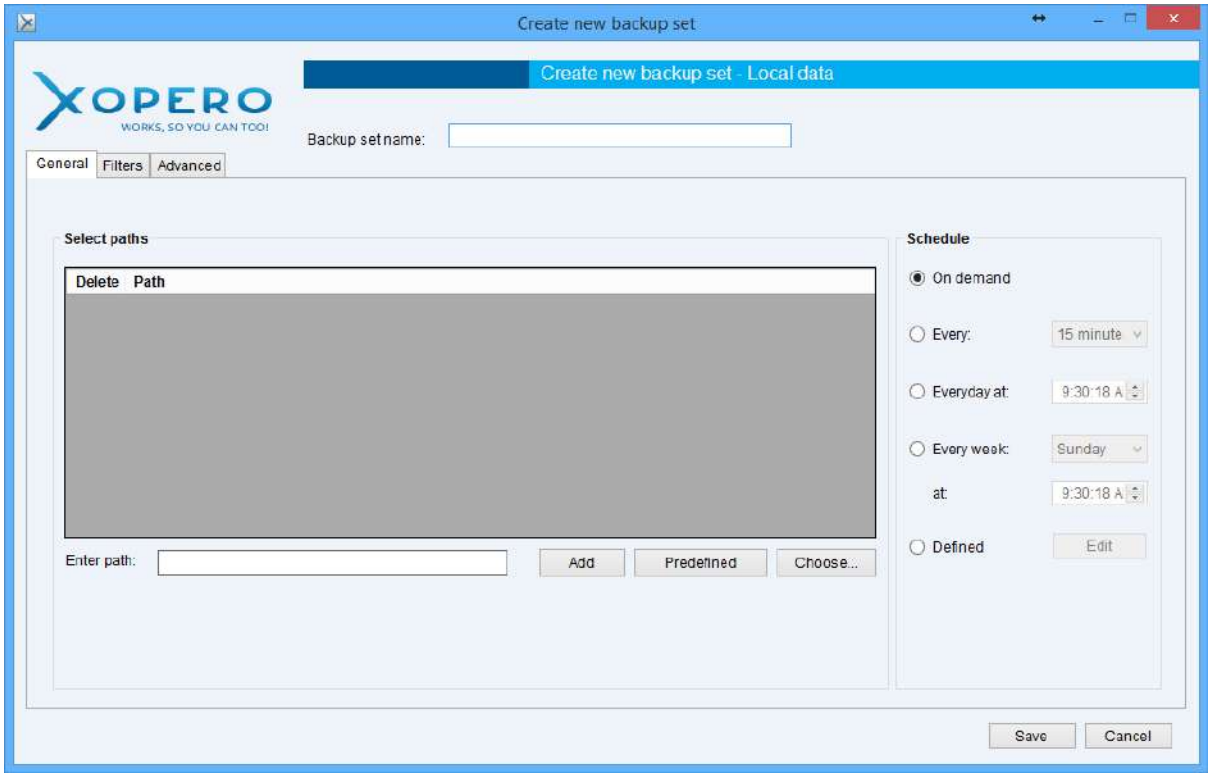
Create and edit a project

To create a new project for a given device, go to the *List of backupsets*, and then click the *Add backupset* icon, which is displayed in the screenshot below.

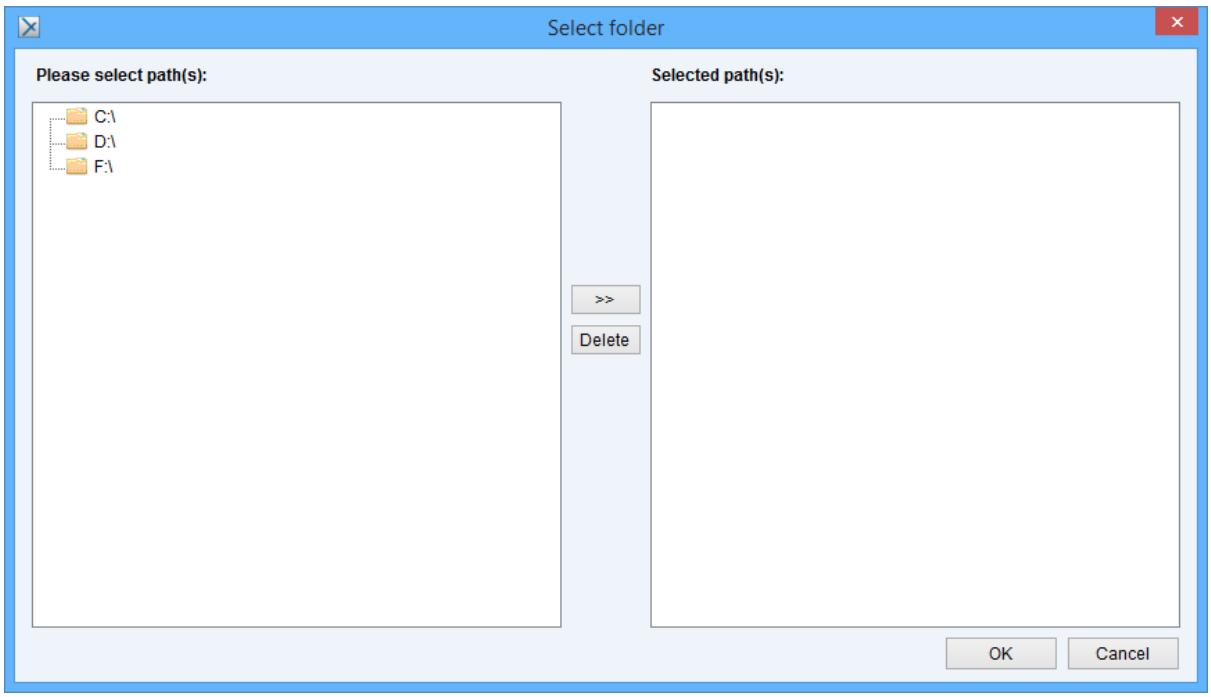


After you click window select the type of project appears.

After clicking, a window for project edition will be displayed, the same as the add the project to the template window, but in this case there is no template *Backupset name*.



If the selected device is at the given time active, it is possible to remotely select a path intended for backup, that is to indicate the path directly on the device. To do this, click on the *Remote* button.

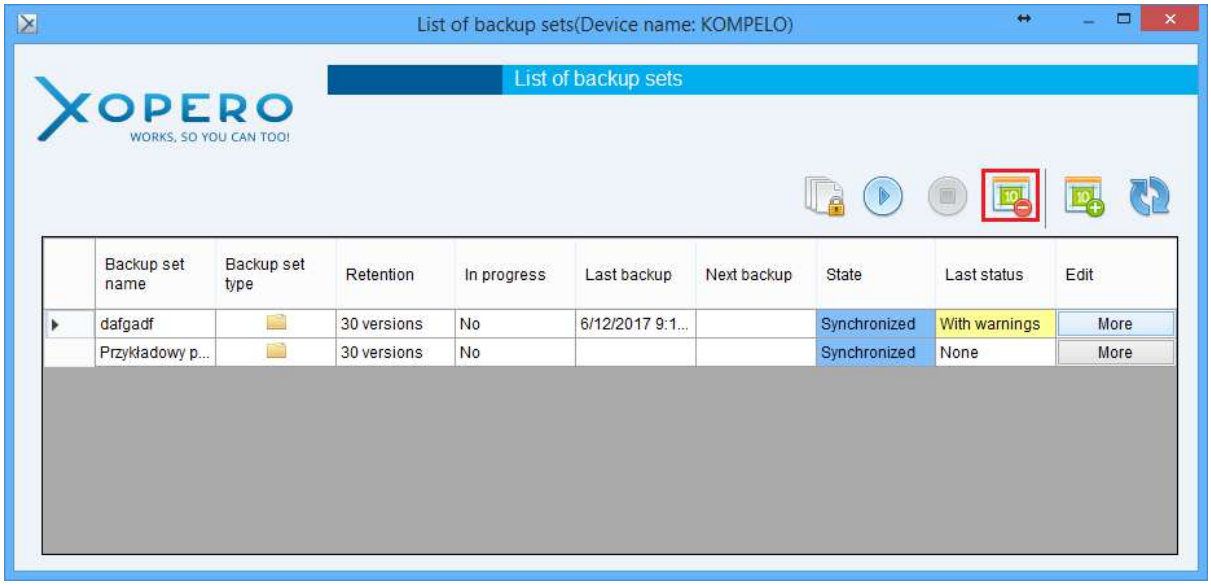


The particular fields of the new project wizard are described in the *Project templates* chapter.

After setting all the parameters of the project, in order to save it, click the Save button in the lower right corner of the screen.

You can also edit an existing project. To do that, click the *More* button in the *Edit* column. for a chosen project from the project list.

When you click the aforementioned button, the project edition window will appear, which will contain the settings for a selected project. They can be freely altered except for *Backupset name* and *Type of copy*fields. After making the modifications, click the *Save* button in the lower right corner of the displayed window.

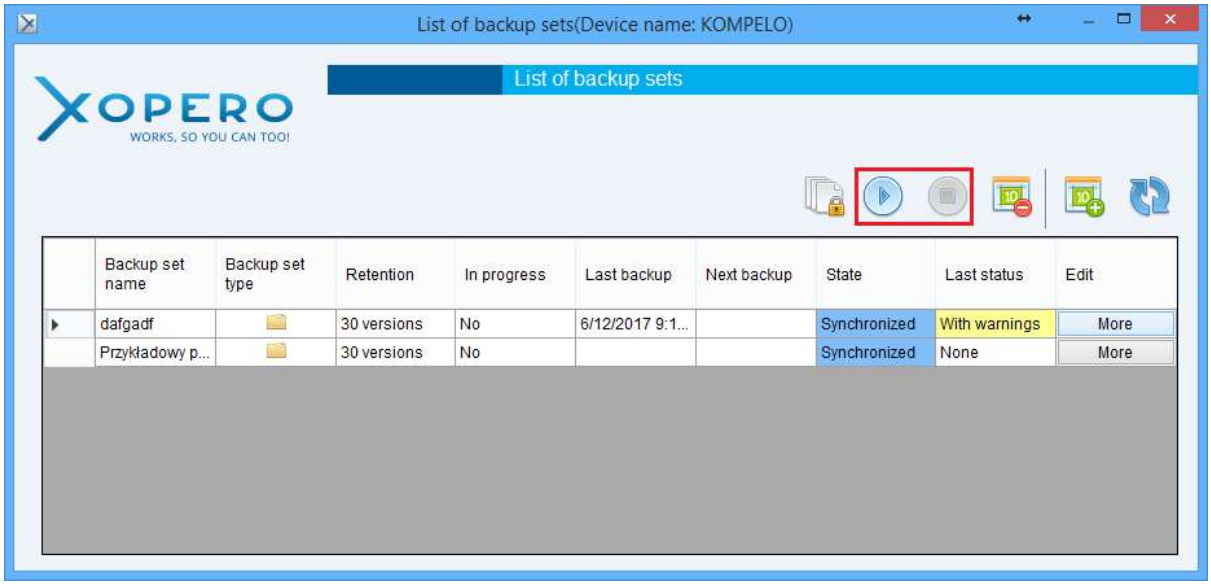


To remove an existing project, click the *Delete* button located in the upper right corner of the *List of backup sets*.

After you create or edit a project, the client application must synchronize the introduced changes. This process takes up to 30 seconds. If after this time, the status in the upper right corner of the Project list will not change to *Synchronized*, you need to refresh the list of projects.

Performing and stopping backups

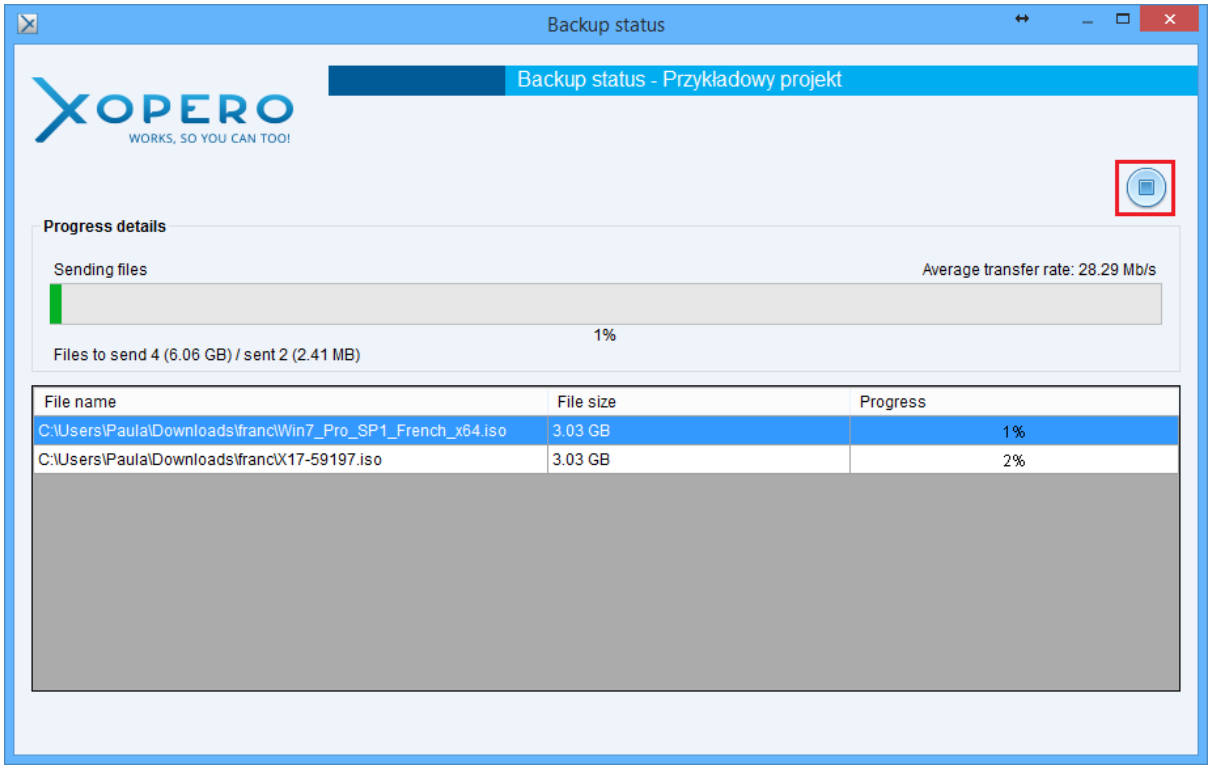
By using the *Management Center* application it is possible to manually start and stop backups on users' computers. To do this, go to the project list, and then find the project you want to run or stop.



In order to launch the project, make sure that its status is *Not running*, and click on the *Start* button.

Performing a *Running project* can be stopped at any time. To do this, simply tick a chosen project and click on the *Stop* icon.

After you stop or start the project, the client application must synchronize the introduced changes. This process takes up to 30 seconds. If after this time, the status in the upper right corner of the Project list will not change to *Synchronized*, you need to refresh the list of projects.

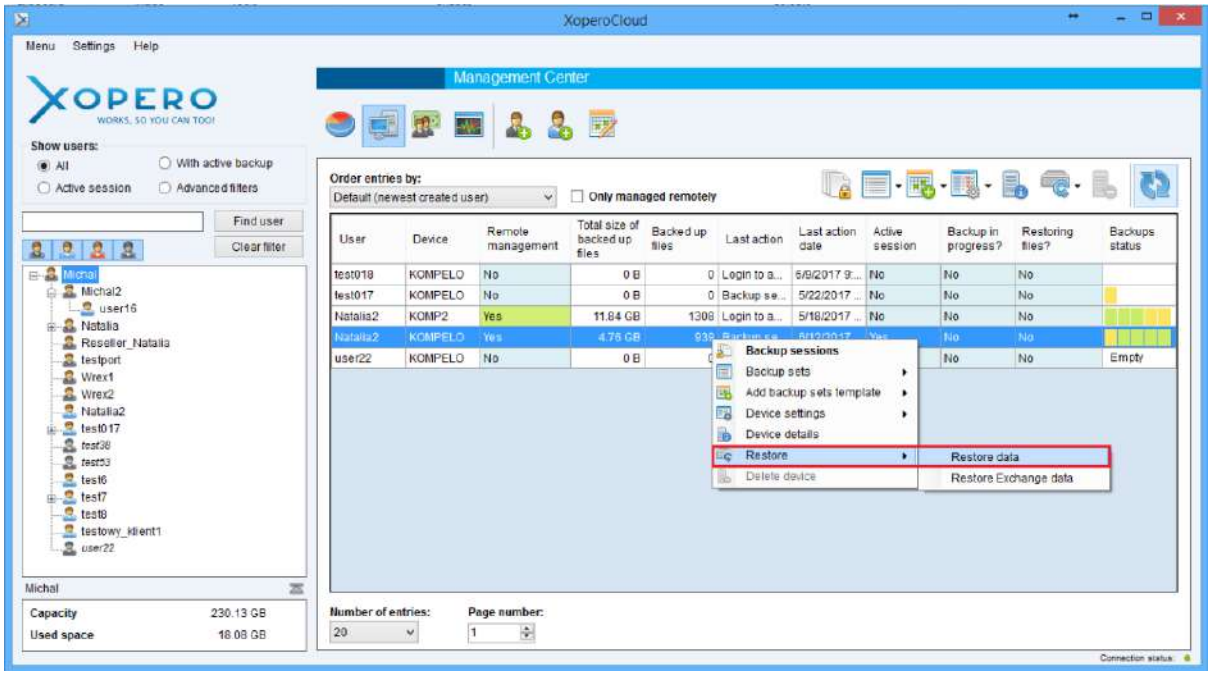


While being in the *Backup sessions* window you can stop the currently performed project by clicking the *Stop* ( ) button.

Restoring files

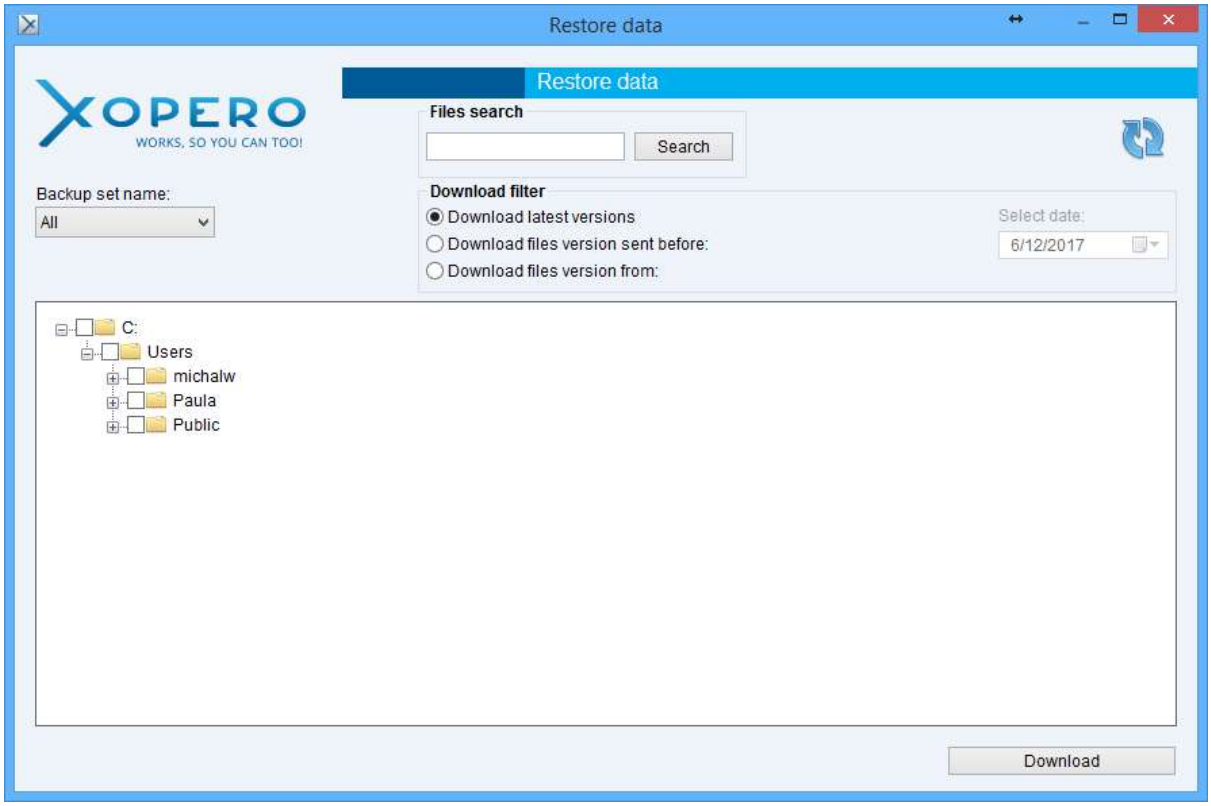
The Management Center allows administrators to restore data sent by its users as backup. Files can be restored to the administrator's or user's computer.

Data can be restored to the user's computer when the device has the *Remote management* option enabled and is *Active*.



In order to run the *Data restore Wizard*, you must go to the *Devices* tab, and then find a device on the list from which you want the data to be restored. After you right-click on a given device, a context menu will be displayed, from which you need to select *Restore data*.

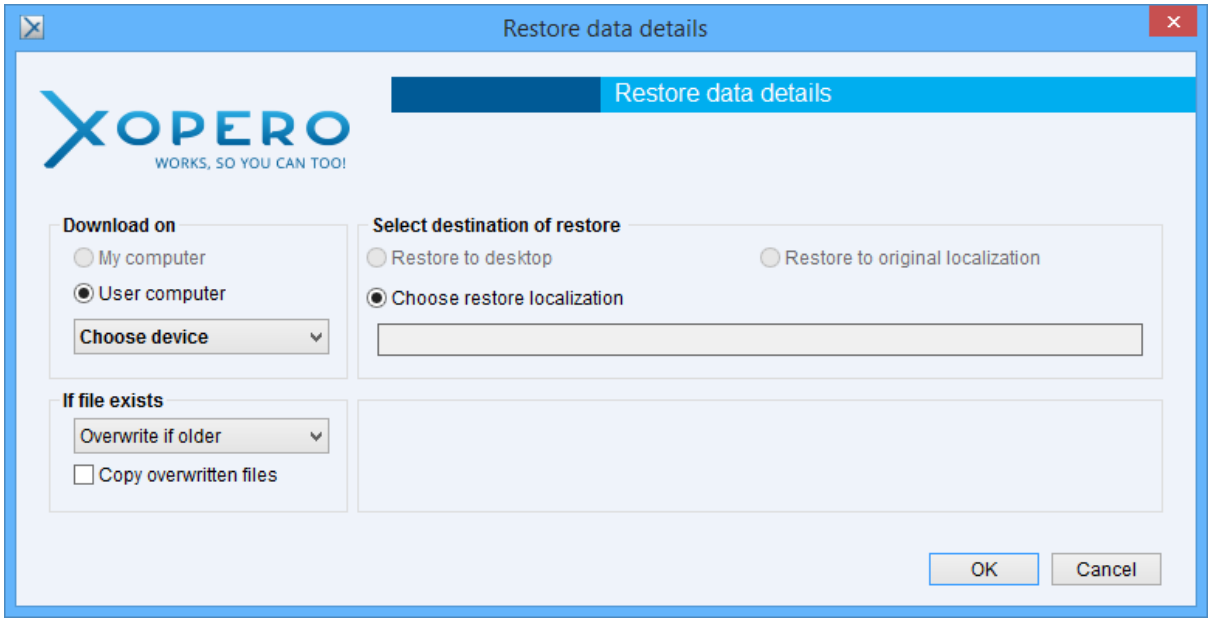
The screen will display the *Restore data* window, which contains a list of files uploaded by the user as a backup.



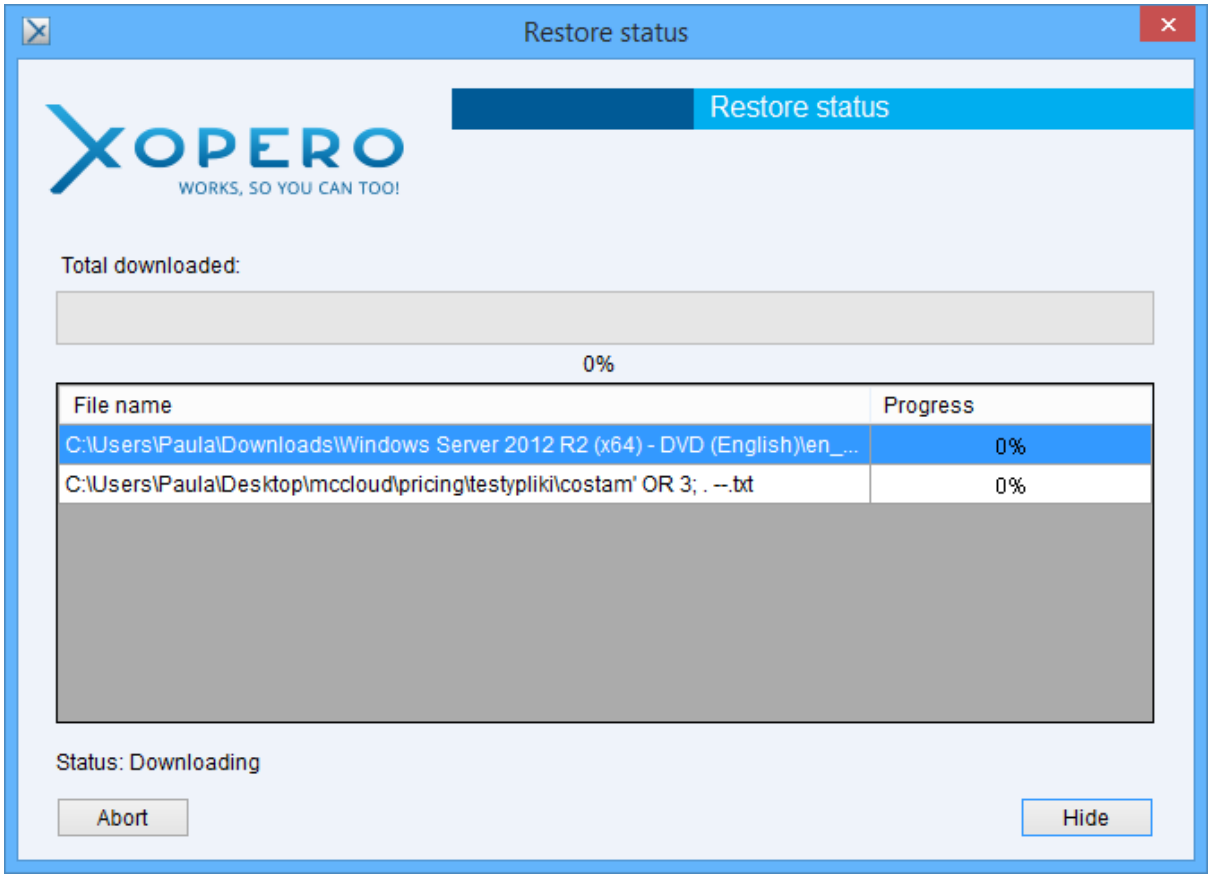
If there are many files on the user's account, loading the window may take a while. This process is indicated by a progress bar.

The administrator has the ability to filter the File in view of the project from which they were sent, or the latest version from or before the selected date.

After selecting the files you want to restore, click the *Download* button. This will display the *Restore data details* window, where you can specify the device (the administrator's or client's computer), on which they are to be downloaded, as well as the location of the restored files. Additionally, you can specify the action that is to be taken by the application, in case when in the selected location there is a file with the same name as the restored one.



After configuring the settings of the restored data location, click *OK* to begin the restoration process.

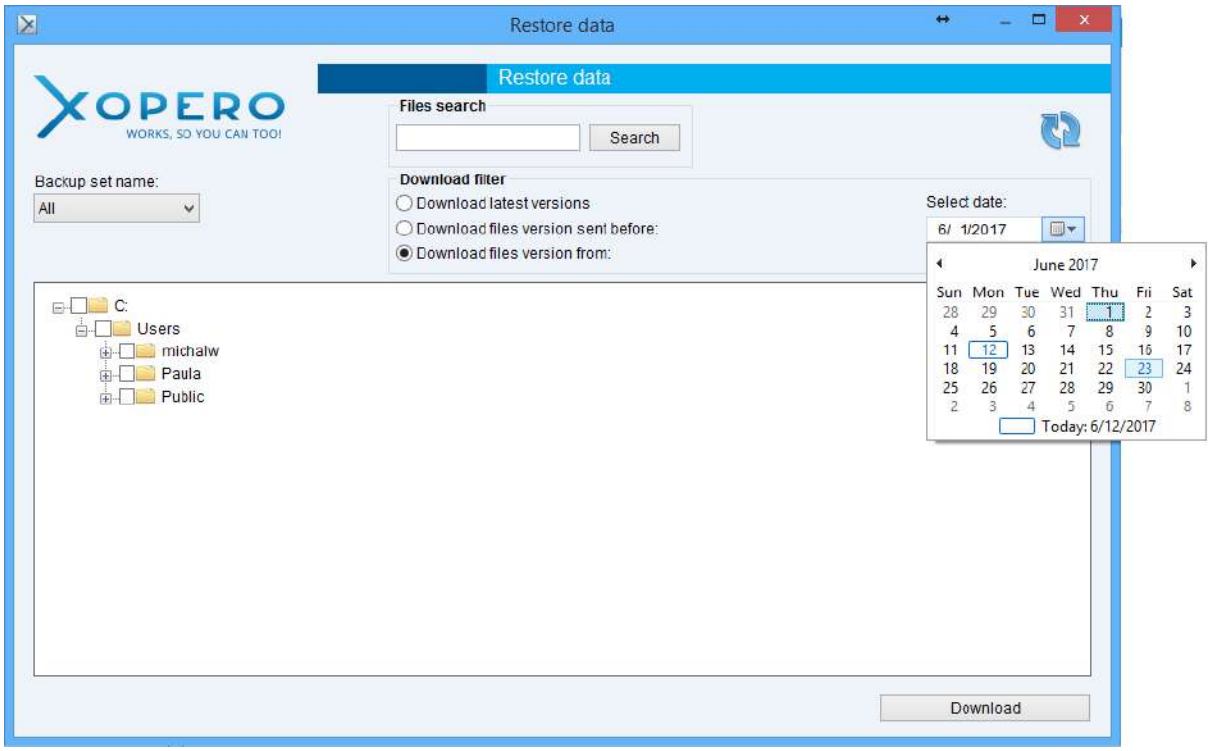


If the user whose data are restored, uses a personal encryption key, the application will ask to enter it. If the key is unknown for the user, downloading files will be impossible.

Restoring file versions

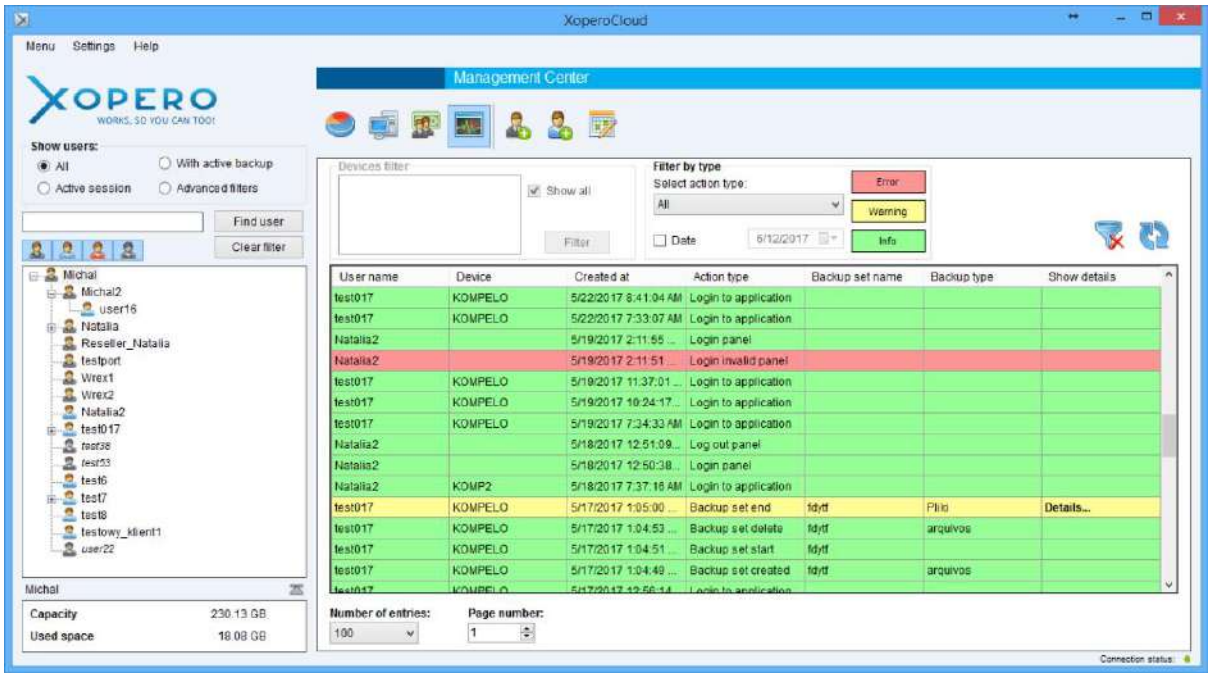
Management Center application allows administrators to restore data version (*following screen*) uploaded by their users as a backup. Files can be restored to administrator computer or user computer.

Data can be restored to your computer when the device is active and has enabled Remote Management.



Users logs

Client application logs are available by clicking on the *Users logs* button, which has been marked in the screenshot below.



Application errors are marked in *red*. Warnings in *yellow*, and actions performed correctly in *green*.

Above the list of logs filters are located, by which you can specify which logs are to be displayed. The available filters are: type of action, type of logs (error, warning, information) and the date from which you want them to be viewed.

If the type of the log has a gray background, it means that this type of logs are not currently displayed on the list.

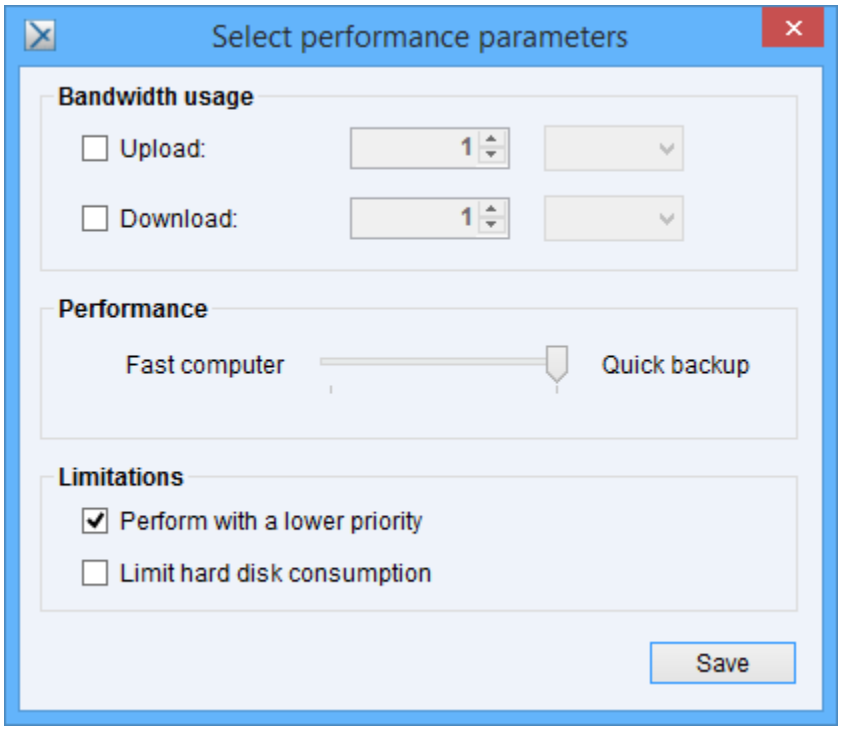
After selecting a desired account from the tree on the left side of the window, the device filter will be activated, which is by default set to *All*. If you clear the selection button, by clicking on the device list, you can choose the ones that interests you, and then click on *Filter*. Only selected logs will be displayed.

When you click on *Details…* in the log table, the application will display detailed information about a particular event. If the *Show details* column field is empty, this means that the log details are not available.

Hosts management

Remote device performance setting

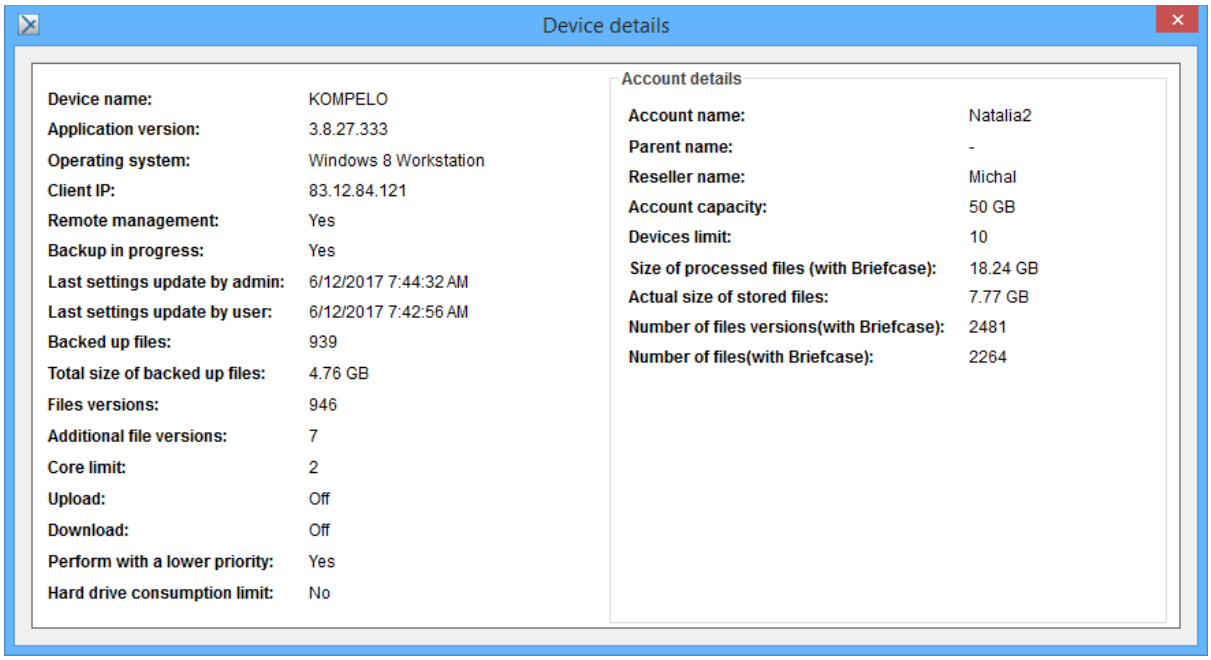
Client applications installed on users' computers may have set bandwidth limits as well as the number of cores, which they can use during backup. In order to set the limits of the device on which the application is installed, go to the *Devices* tab, and click the right mouse button on a given device, and select *Device settings*. From the menu, which will be expanded, you are able to select the *Efficency* option.



Device details

The Administrator, who uses the *Management Center* application has the ability to access detailed information about the user's device and the client application installed on it.

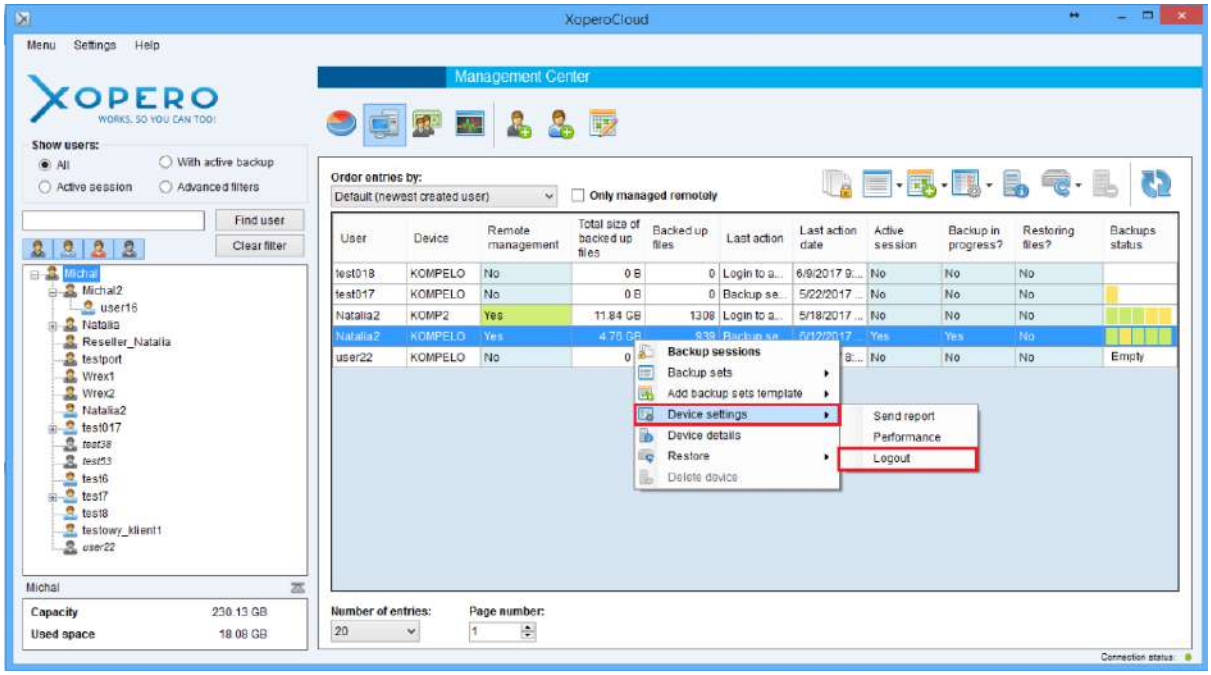
To view the details, go to the *Devices* tab, and then right-click on the selected device and choose the *Device details* option.



In the appearing window you will find the information about the selected device and user account to which it is assigned.

Log off device

In the Management Center application, the administrator can log out the device assigned to the user. For this purpose, go to the *Device* tab and right-click on the chosen device, subsequently press the *Device settings* option and then *Log out*.



Technical support

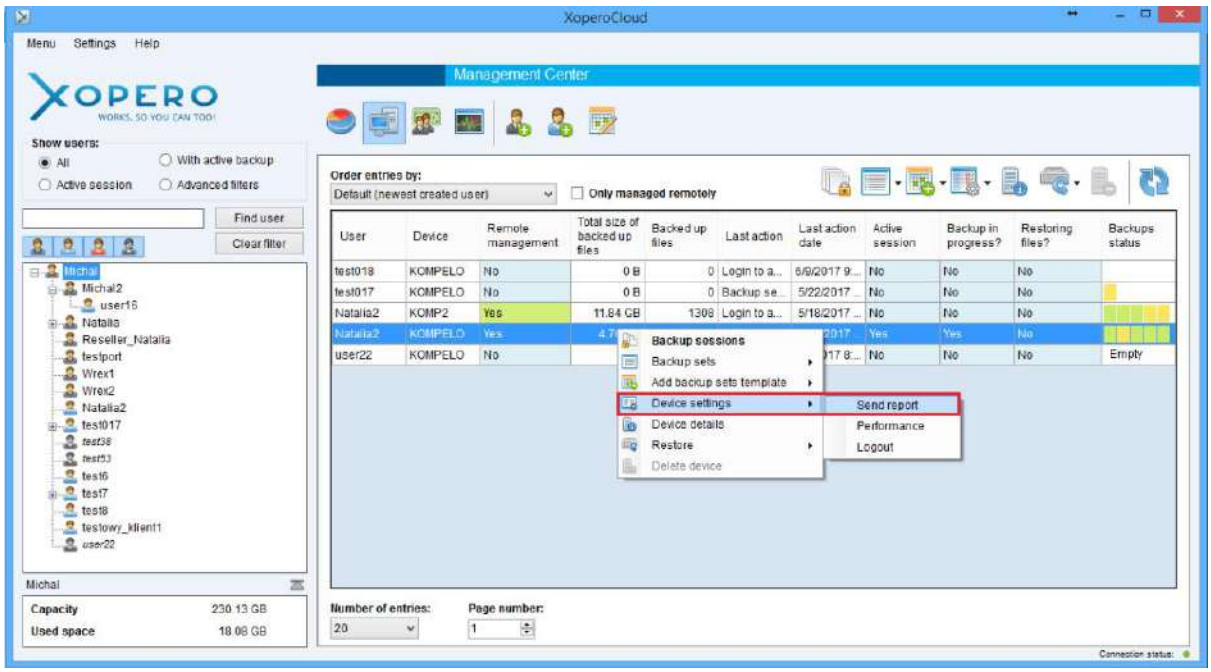
In case of any problems with the application, go to the *Dashboard* window, choose from the *Help* tab, next *Support* and the *Report error* option. The Web page, where you can create an account on the system used for reporting bugs, will open. After creating an account and describing the problem, the system will present you the possibility to solve the problem. However, you may be asked to send the server logs and\ or application logs.

Sending report

In case of a malfunctioning Client application of Xopero, the administrator has the ability to inform the software producer about the problems by e-mail or by using the bug reporting system.

If it is necessary to send the Client application logs, you should:

- On the list, find the device on which the problem occurred,
- Select the option *Device settings*,
- Use the option *Send report*.



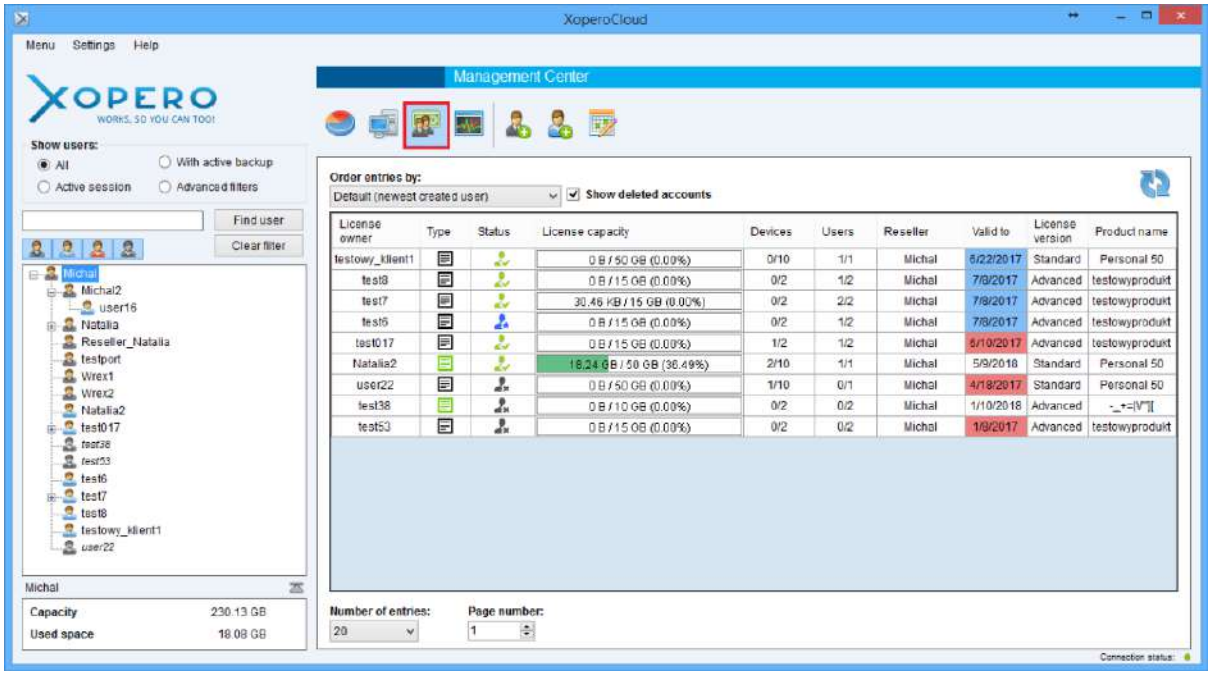
After displaying this option, a request for additional information, necessary to report the problem, will appear.

Delivery of the report or the client application logs should be performed only on the request of employees from the software support team.

After clicking the Send button, the data will be sent to the software producer.

Licences

The Management Center also allows you to verify the license and their status for each client account.



Licenses consist of the following fields:

- **Owner** – the name of the customer to whom the license is assigned,
- **Type** - type of license(for example, trial version, full version),
- **Status** - specifies the status of the account(active, deleted, new),
- **License capacity** – specifies maximum size of all uploaded files, including briefcase.
- **Devices** – number of devices that can be assigned to the client and its users, defined by the assigned product.
- **Users -** The number of accounts that can be assigned to the license, the client account is counted as one, the next accounts are the users assigned to the client, the quantity is also defined by the product.
- **Reseller** – parent to which the customer is assigned,
- **Duration** – the term to which the license is valid,
- **License version** – the license version specifies access to the different types of backups.
- **Product name** – product name assigned to the customer.

Glossary of terms

Project template – the project template is a set of backup projects. Each project may indicate other data and have unique features. The project template can be sent to any user device on which **Allow remote management** option is marked.

Backup project – a data set and the type of data which is to be the subject to backup. For each project, it is also possible to specify the frequency of performing it, as well as additional advanced options.

Active device - a device which has performed any action within the last 30 minutes. This may lead to the situation where the Management Center device will be marked as active, while in reality it was turned off for less than 30 minutes from performing the last action.

Host - the device on which the client application is installed and from which the user has, at least once logged into his account. During the first login, the device is being assigned to the user account.

Management Center for B&R

Introduction

Management Center lets you manage and monitor all backups from all devices connected with your server from a single view. It allows remote client configuration, creating new users and remote management of all Xopero services in your network. It has been mainly created for system administrators.

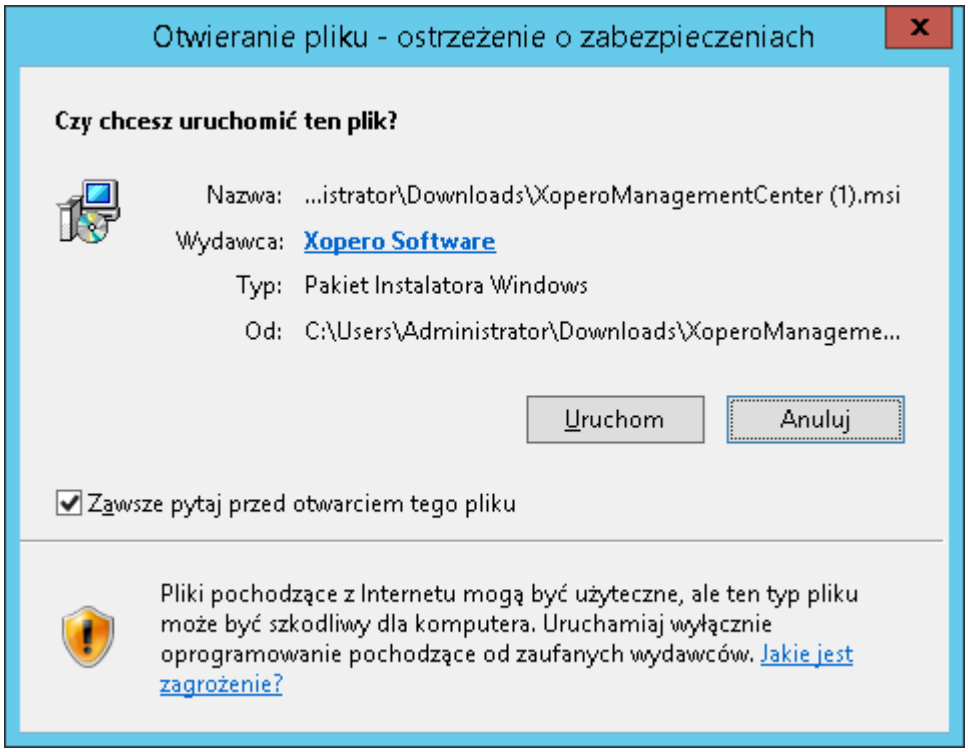
Key functions:

- creating and managing users and user groups,
- monitoring Xopero backup system,
- remote creating and enabling backup projects,
- data restore from every device,
- creating backup projects, that can be later sent to client applications,
- access to server logs,

- backup storage management.

Application installation

In order to install Management Center, you need to download it from Xopero B&R *Panel*, that is available on your server . When it's opened, you may see *Security warning* window.



Click *Run* to start the installation process. You must click *Next* to start the installation. If you don't want to install the product, click *Cancel*, which will stop the process.

After the installation is started, you will see a progress bar on the screen.

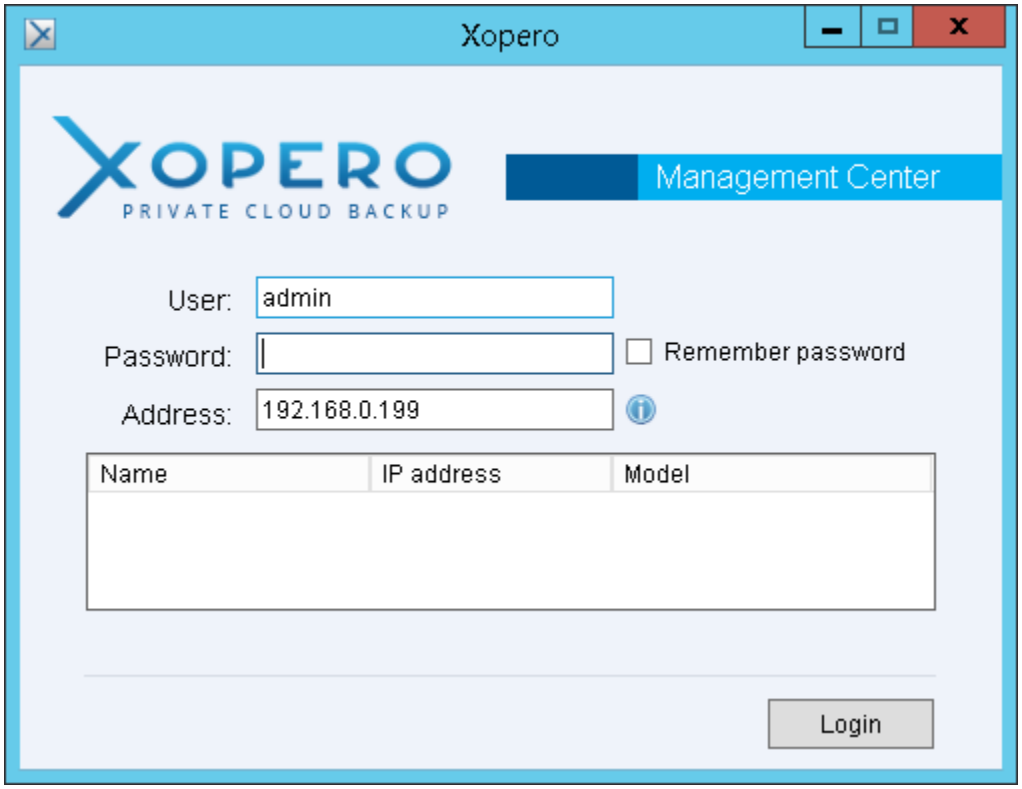
When the installation is finished, You should see summary window. To close it, click *Finish*. The Management Center should be started automatically.

First login and configuration of Xopero system

First login

To access Management Center, user needs to have system administrator's login and password. Address of the application is the same as server and it should be added automatically after logging window is opened.

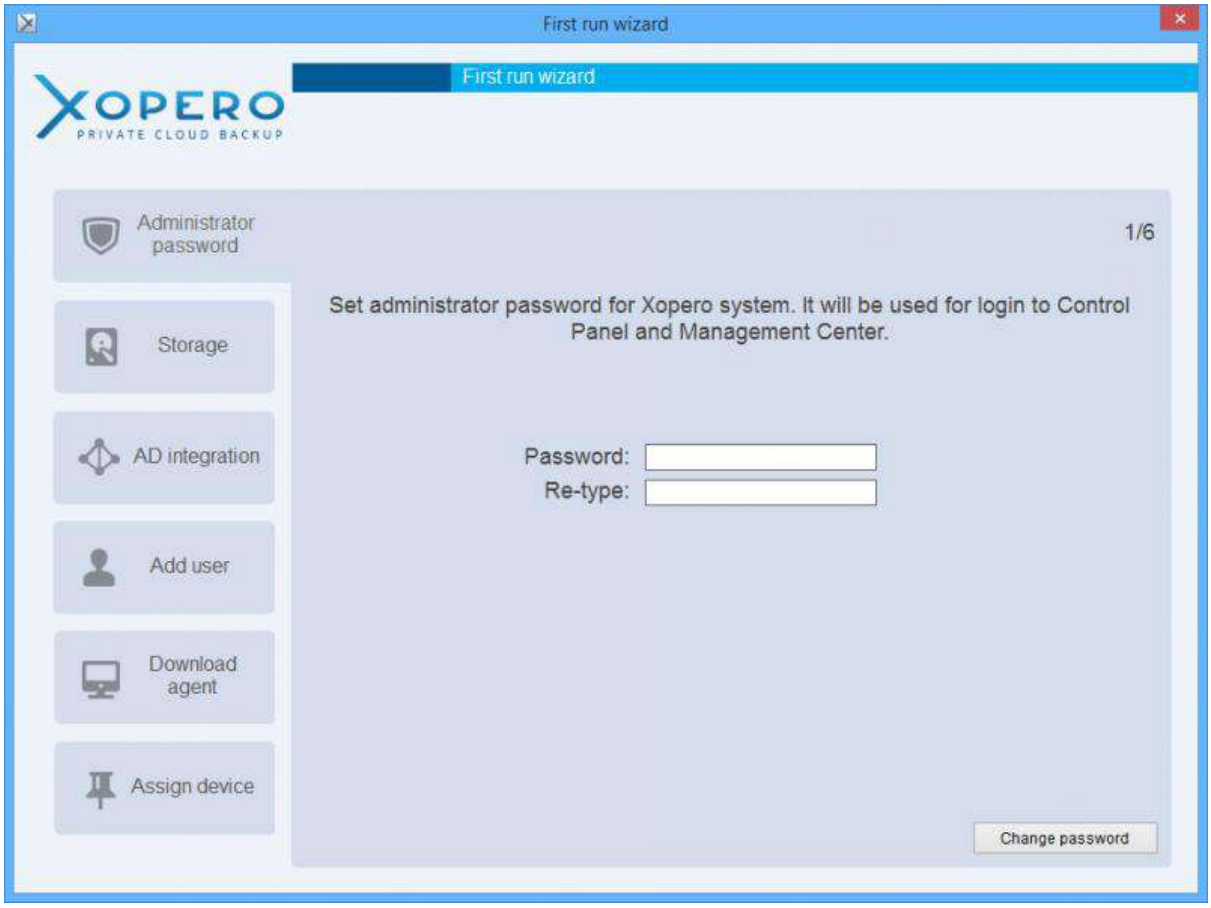
Default adminstrator username and password is *admin*. They are pasted automatically during first login.



When you are logging into the application, as a user, for the first time, the First Run Wizard will run, which consists of four following steps: *Administrator password*, *Storage*, *Add User*, *Download application* and *Assign host*.

First Run Wizard – step 1

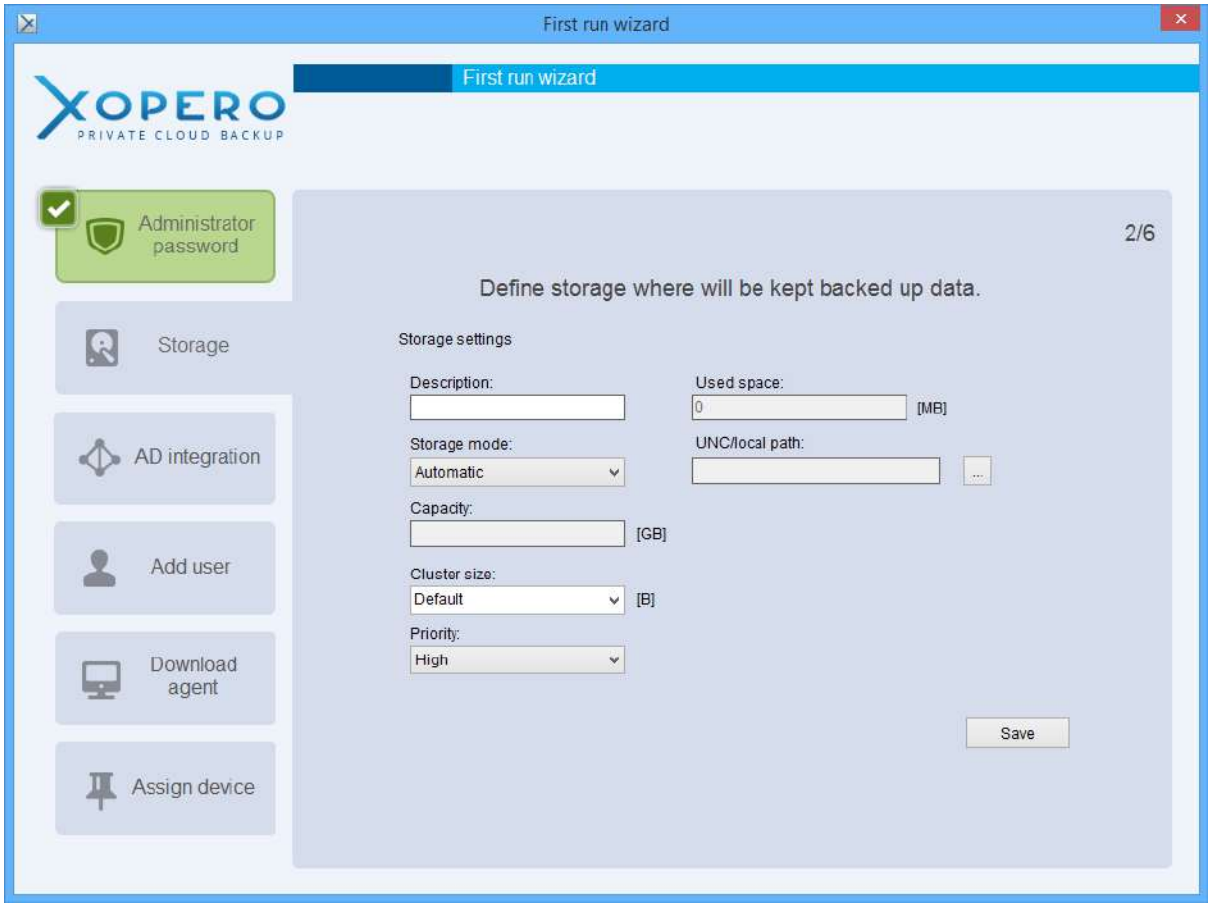
At the beginning, for security reasons, it has to change the administrator password, which is necessary to log on to the *Management Center* application and to the *Control Panel*.



First Run Wizard – step 2

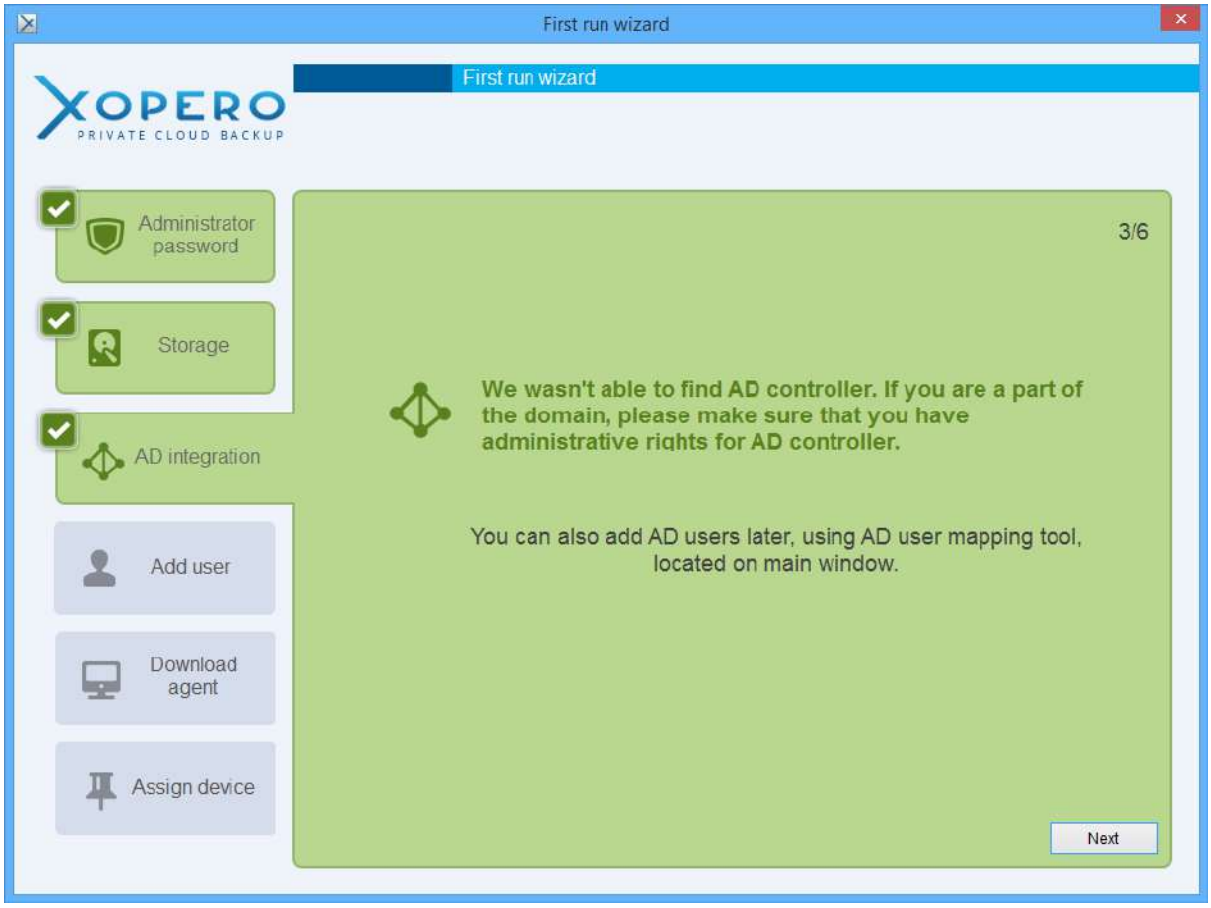
At second step you should define the storage, in which the data will be stored.

The configuration of the storage is described in the section – *Storage space management (storage)*.



First Run Wizard – step 3

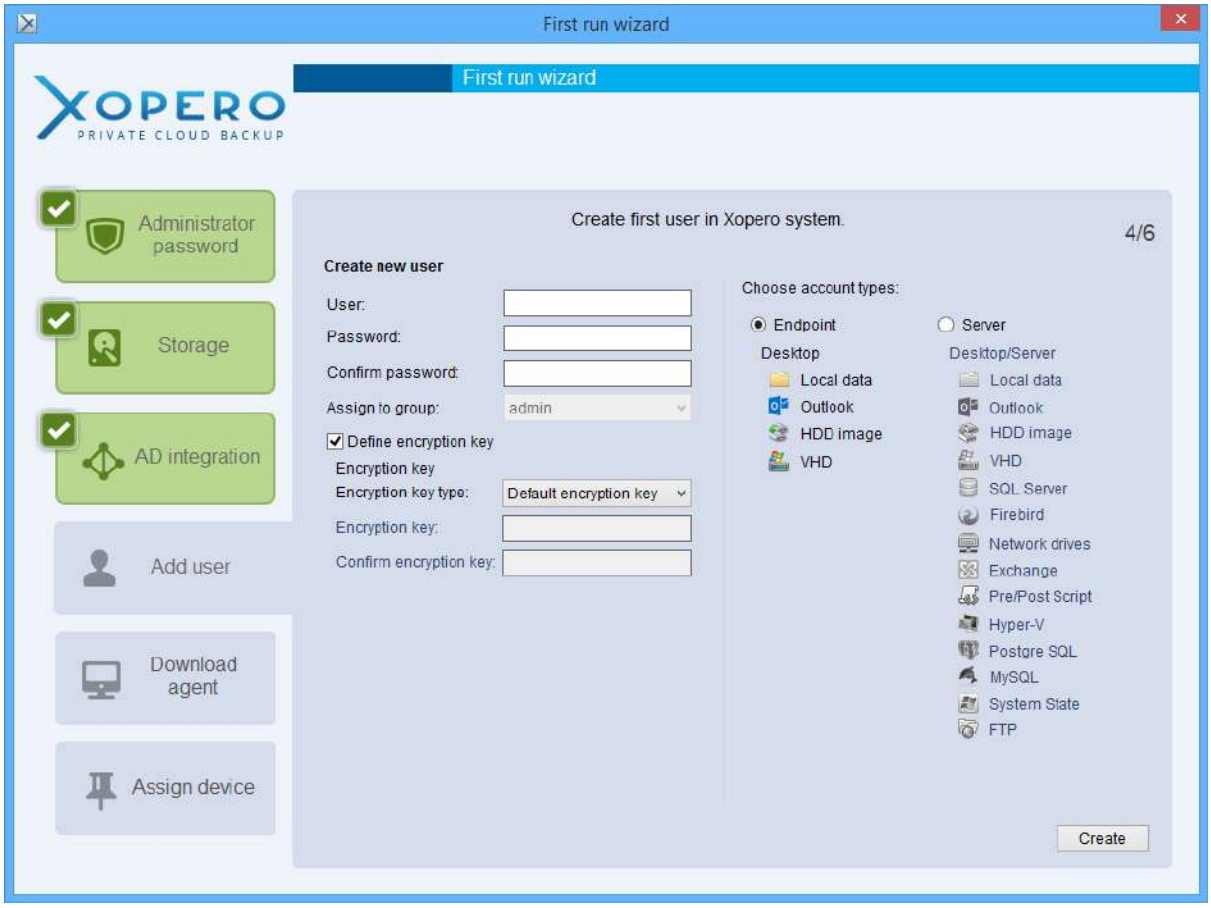
Now comes AD integration, which is available for domain controllers with Active Directory. We'll skip this step. More information about it in Mapping Active Direcotry users manual.



First Run Wizard – step 4

The next step is to create the first user account that will use the Xopero Client application.

The window for creating a new user are described in the section *Creating user accounts*.

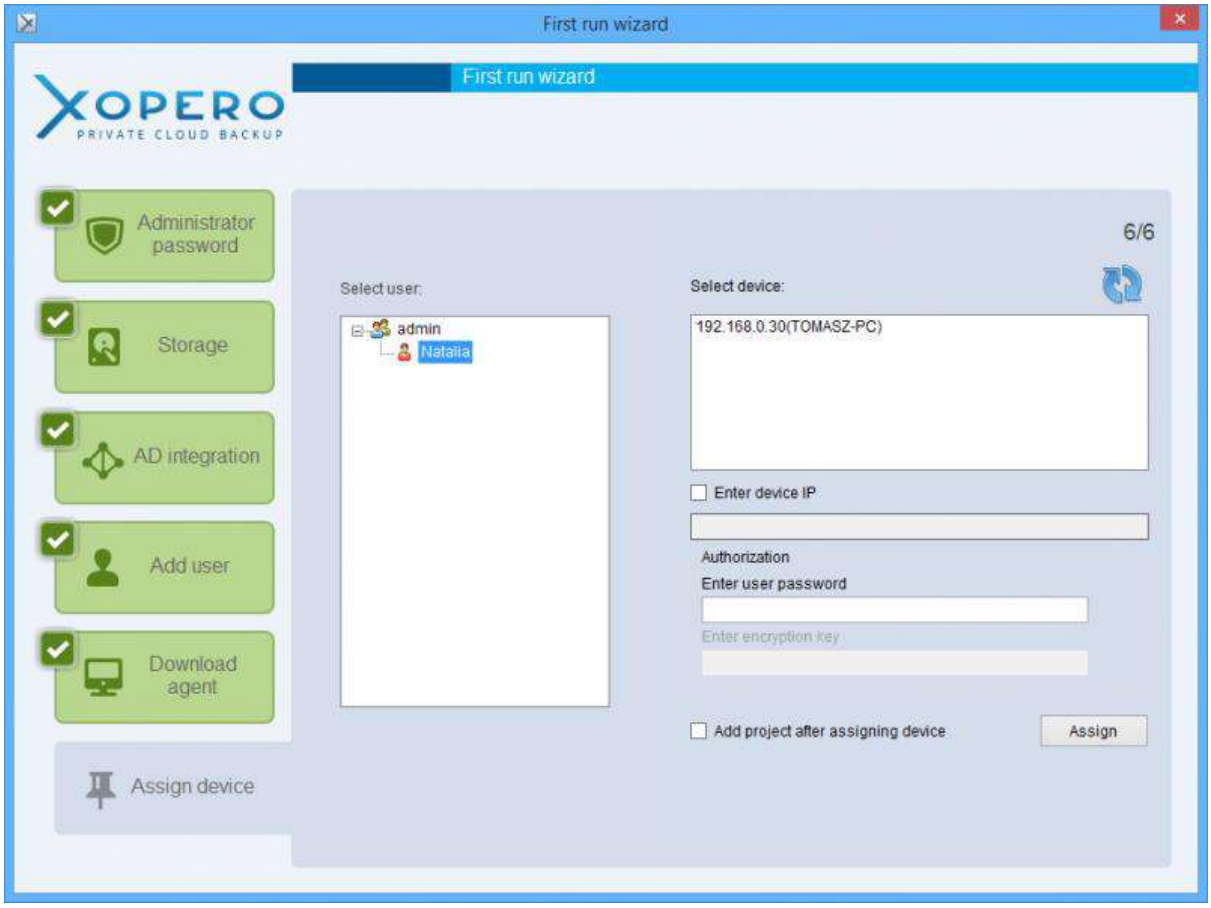


First Run Wizard – step 5

After defining the storage and creating the first user account, the administrator should download and install the Client application on the computer, on which the data is going to be secured, by clicking on the button - *Get client application*.

First Run Wizard - step 6

After download client application window allowing you to assign the device to the user account appears.

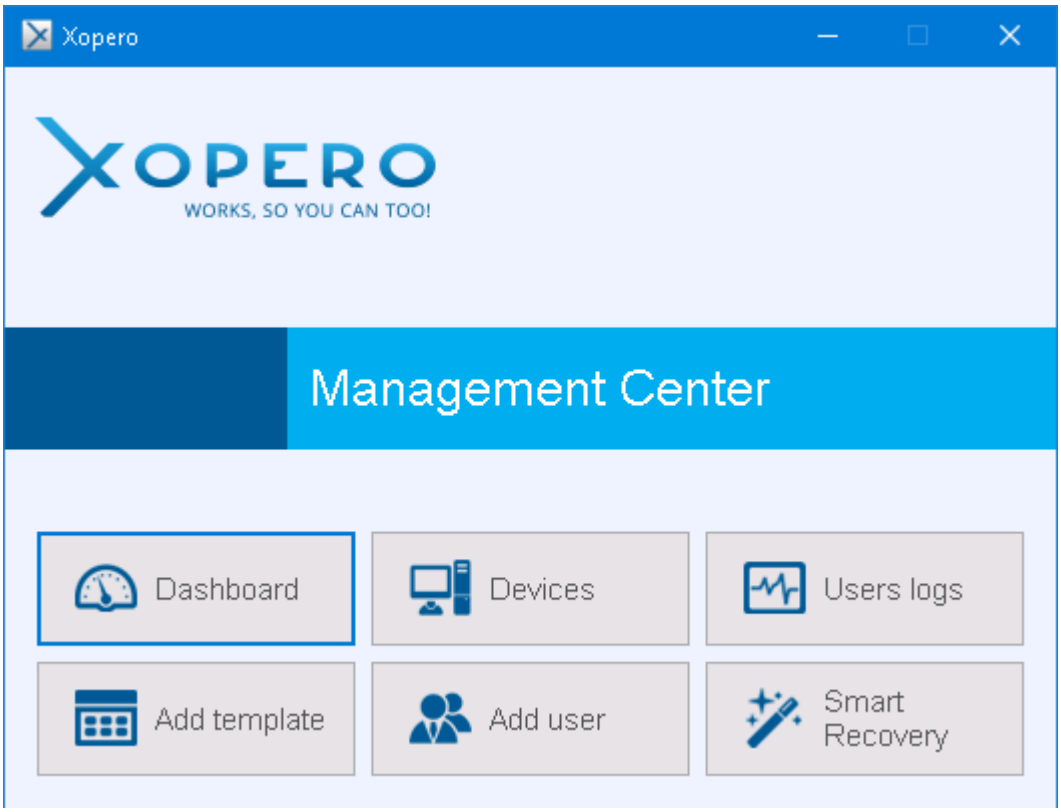


After closing the *First Run Wizard*, to run the Management Center application you have to log in to it again.

After logging into the application a window basic options of the program appears:

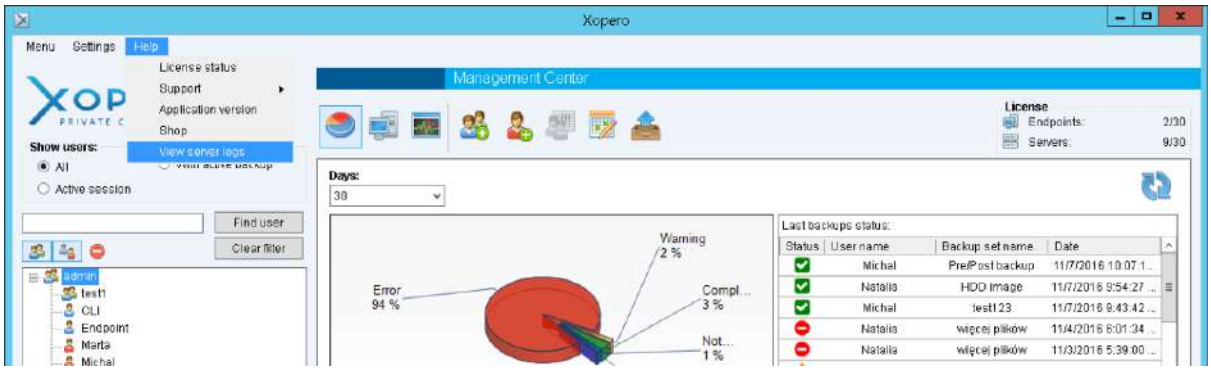
- **Dashboard** – click on this button takes you directly to the view the statistics of the system,
- **Devices** – selecting this option shows the list of devices on which the client application is installed and they are assigned to user accounts,
- **Users logs** – the administrator has access the user logs,
- **Add template** – click on this button move you to the window of create project templates,
- **Add user** – select this button launch window user creation,
- **Smart Recovery** – forwards to the Smart Recovery function window.

The following window appears only when you log in to an *admin* account. The reminding group administrators will be immediately redirected to the Backup Management window.



Server logs

When we enter the main window and select *Server logs*, we gain access to the server logs of the Xopero application.



Access to server logs and its associated options is available only for the main administrative account - *admin*.

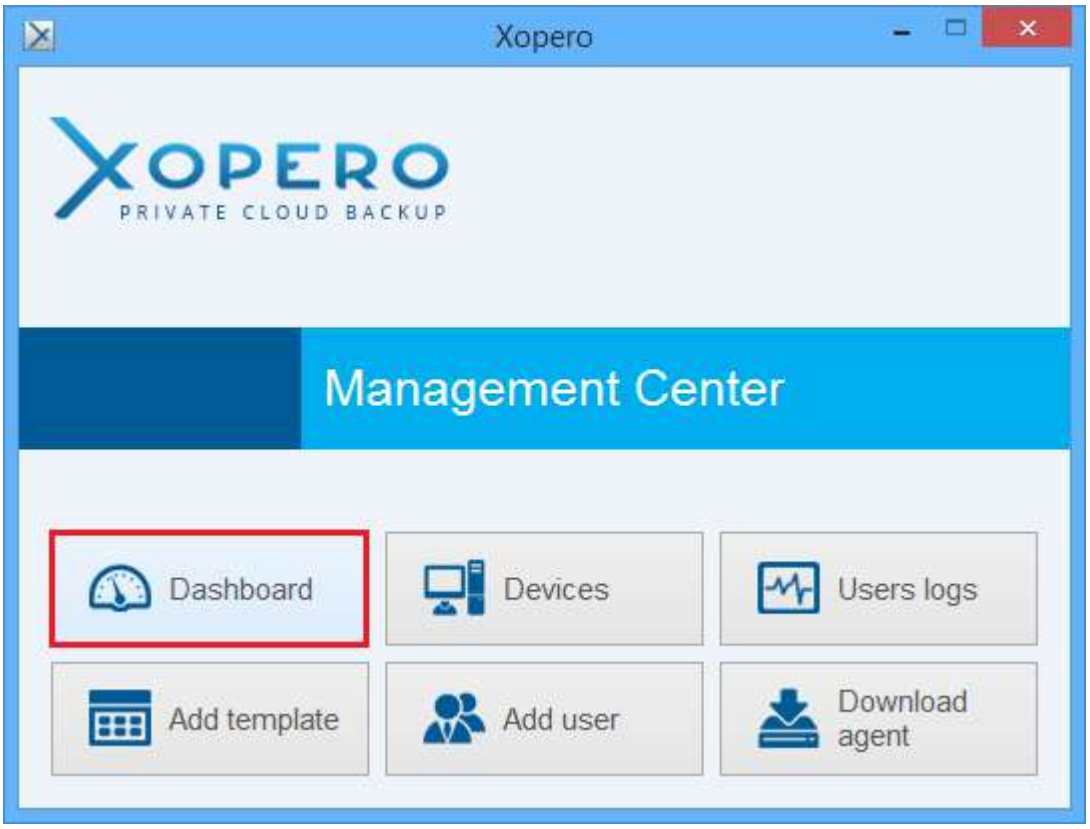
When the application is working correctly, there is no need to use this feature. But if there are problems with its work, it may be necessary to ask the application provider for technical assistance and send the server logs to him.

In the event of work-related errors of the Xopero services, before contacting the technical support, you should restart them and also B&R server.

The process of sending the application and server logs to the software provider has been described in section *Technical Support*.

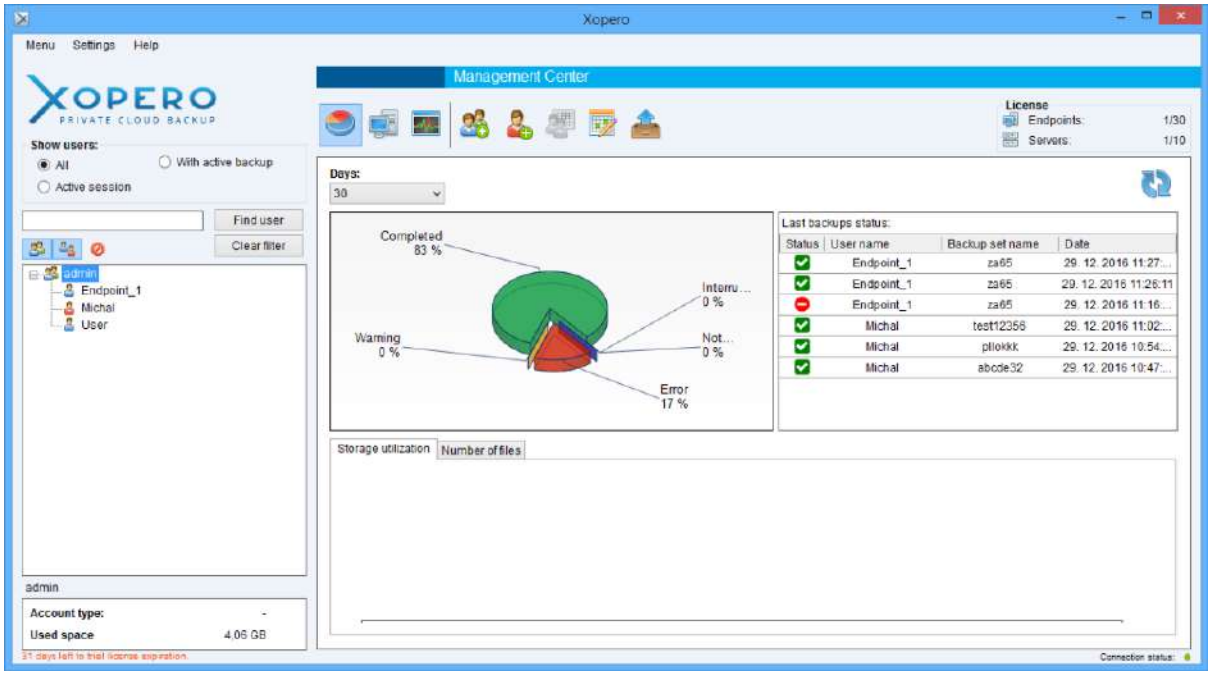
Management

After returning to the main window and selecting *Dashboard* option, we will be redirected to the accounts and backups management window (*Management Center*).



By default, the first view that we should see is the *Dashboard*.

In the chart below are shown information about completed and unenforced backups within the past 30 days for all users of Xopero.



If there has not been made a single backup, the application will not display any data.

When you click on chosen username, a graph showing the status of backups performed by that user will be displayed.

What are and how to add users groups?

What are the users group?

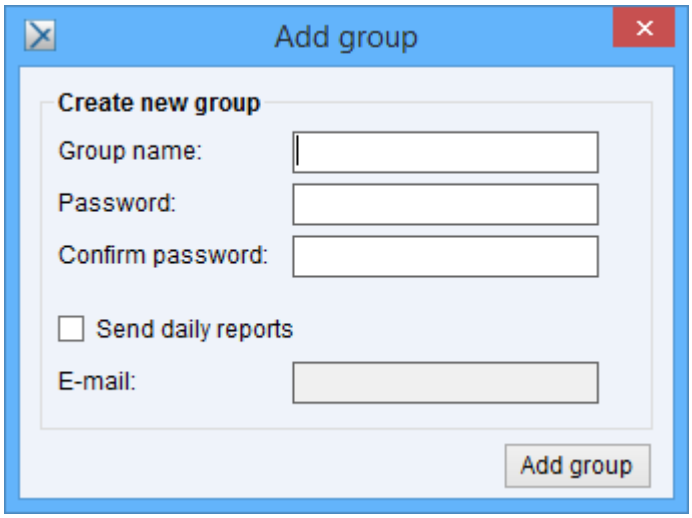
User groups allow to categorize and group users. The name and password of the group are at the same time the authorization data of its administrator, who can log into the *B&R Control Panel* or the *Management Center* application, where he is able to manage his users.

With this solution, users can be divided into groups, which will be managed by persons responsible for them. Depending on your needs, you can set any number of groups and assign them to user accounts.

The main administrative account (*admin*) has the ability to manage all users, regardless of which group they were assigned to.

Adding user groups

In order to create a new group, click the button highlighted in the screenshot above. The *Add group*window will be displayed in which you need to define the group name and its password, which are both group administrator authorization data.



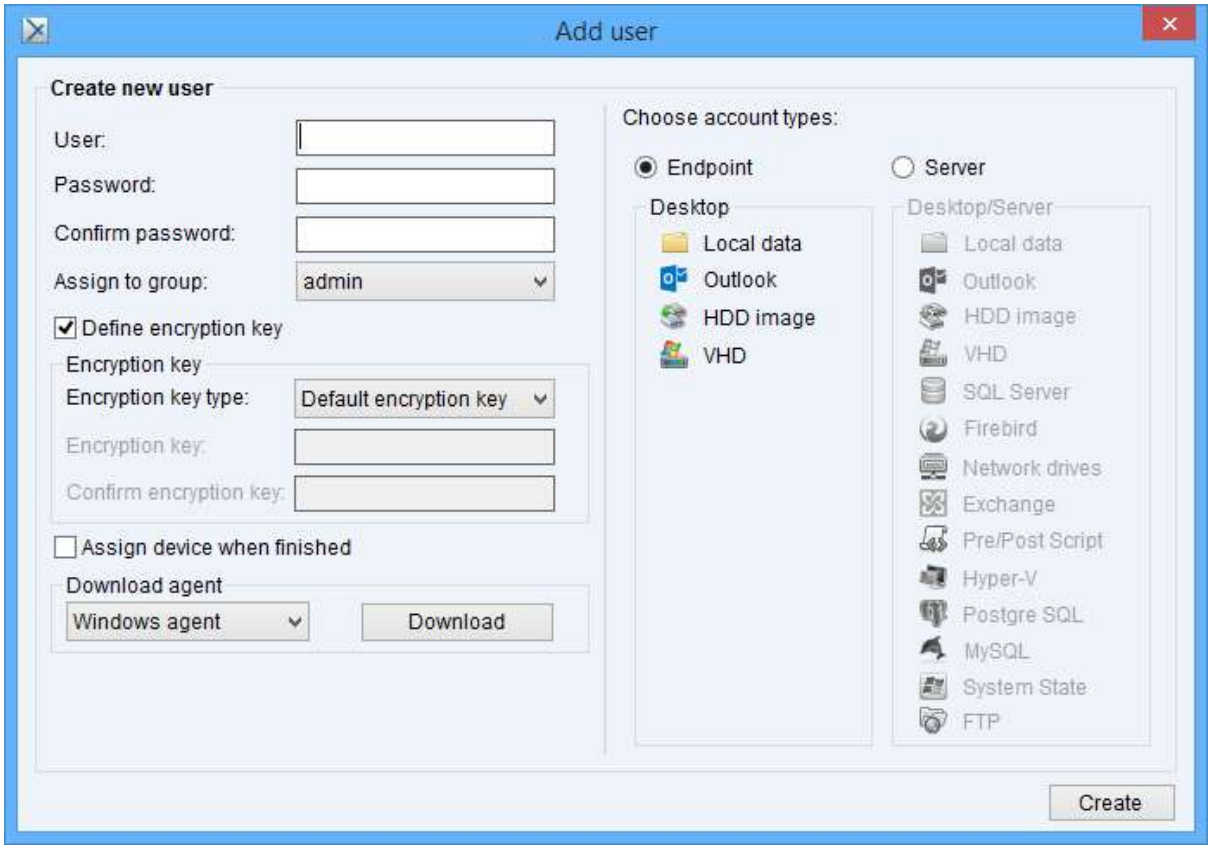
Creating user accounts

After first logging into the Xopero system, the tree of groups and users contains only the default group, named *admin*.

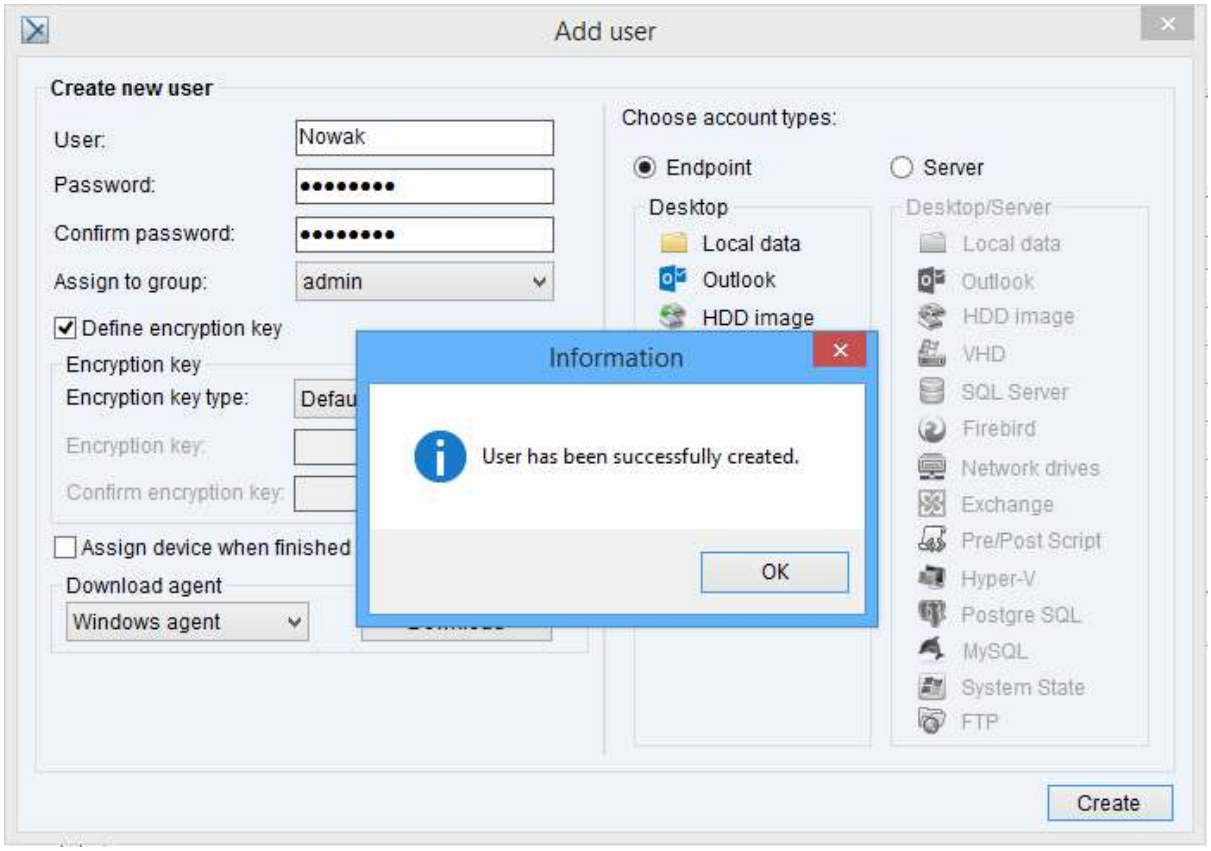
To create a user account, click the *Add user* button, which has been highlighted in the screenshot above.

Then an *Add user* window will appear, where you must define authorization data, as well as configure additional settings:

- **Choose Account type** - available account types are *Endpoint* and additionally, depending on the purchased license version, *Server*. The *Endpoint* account allows you to backup local data and the *MS Outlook* mailbox, while the *Server* account extends these capabilities with *Advanced copies* and the ability to install a client application on Windows Server systems.
- **Assign to group** - defines the group to which you want to assign the user account. You can later change the group to which the account has been assigned.
- **Locked account** – defines, whether the created account should be blocked. If this happens, the user will not be able to log into the client application, but his account in the system will still exist. The account may be unblocked at any time.
- **Encryption key type** – it allows you to choose the encryption key (default or custom encryption key) for the newly created account. In case of choosing the *Custom encryption key* and adding the account, a request for typing in a series of minimum 6 signs will appear.
- **Assign device** – describes, whether after creating an account an active device should be assigned to it (only with the Windows application installed). More information on this topic is included in the **Assigning new device** chapter.



After filling in all the fields in the form, click the *Add user* button, which will create a new customer account with defined parameters.



The user account will be displayed in the groups and users tree and it will be assigned to an earlier indicated group.

Displaying user accounts and groups

On the left side of the *Management Center* window there is a tree of groups and users. It has several filtering options which are useful in the later use of the application.

Above the tree, below the application logo the *Show users* field is located. The following options are described on it - *All, Active session, With active backup*.

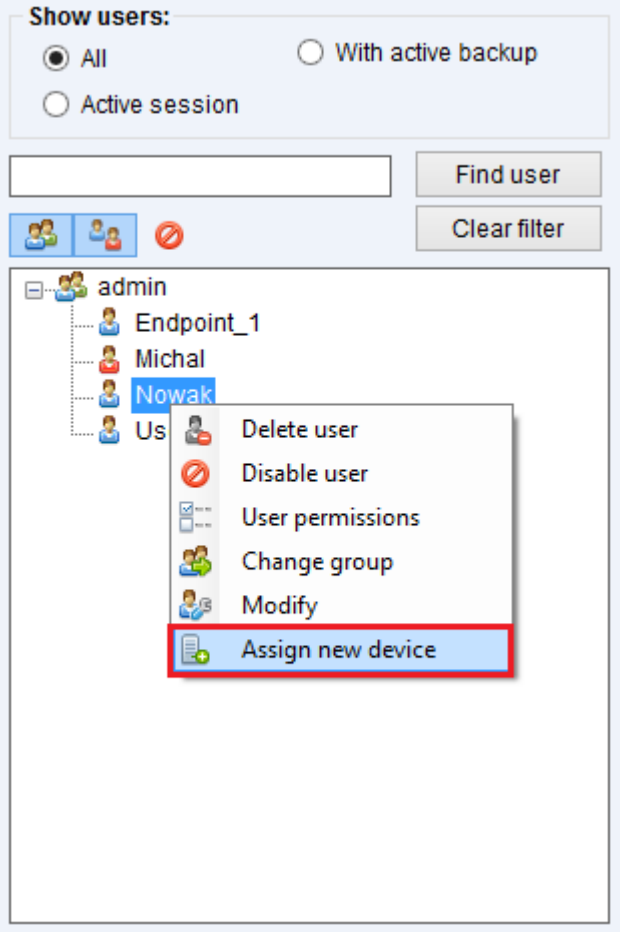
- The *All* option displays all accounts available on the device, divided into groups created by the administrator. In each group an unrestricted number of accounts

can be assigned, however, they will be visible only when you click on a particular group and expand it,
- With an *Active session* informs us which accounts are currently logged into the application on particular computers,
- The *With active backup* option indicates which of the accounts is currently sending backup.

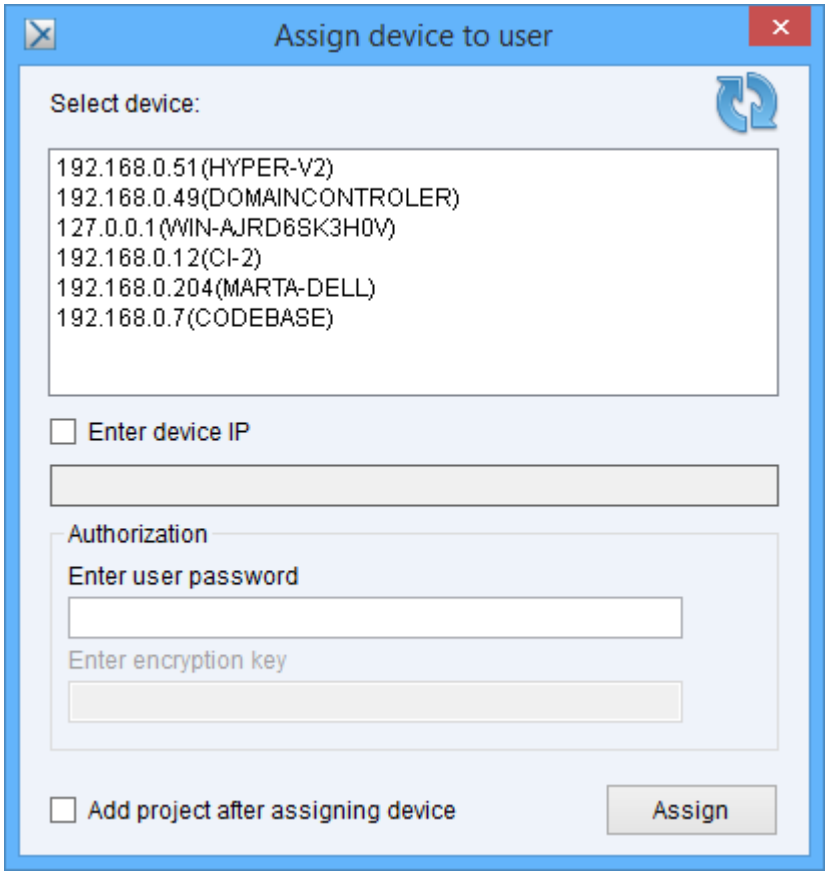
Assigning new device

Note! If Management Center is installed on the same host as Xopero Backup & Restore server please do not provide *127.0.0.1* or *localhost* as server address while logging in. It may cause issues with remote device assignment.

The devices, which do not have any assigned account, inform the *Management Center* application, in a continuous mode (every 30 seconds), about it. Thanks to that you can easily connect a given device with the user account, without the need of having direct access to the chosen machine. All you need to do is find the account to which you wish to assign the given device.

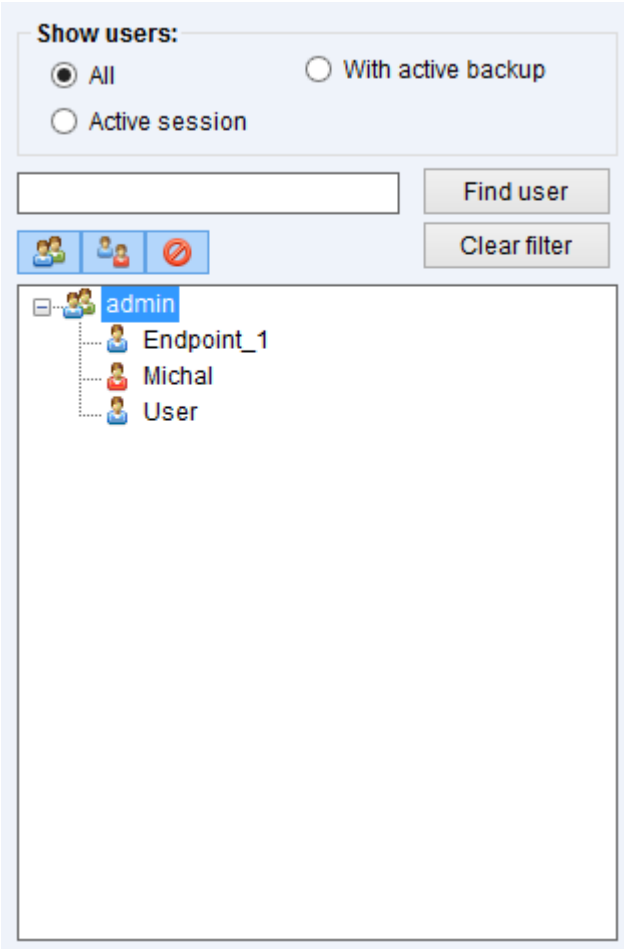


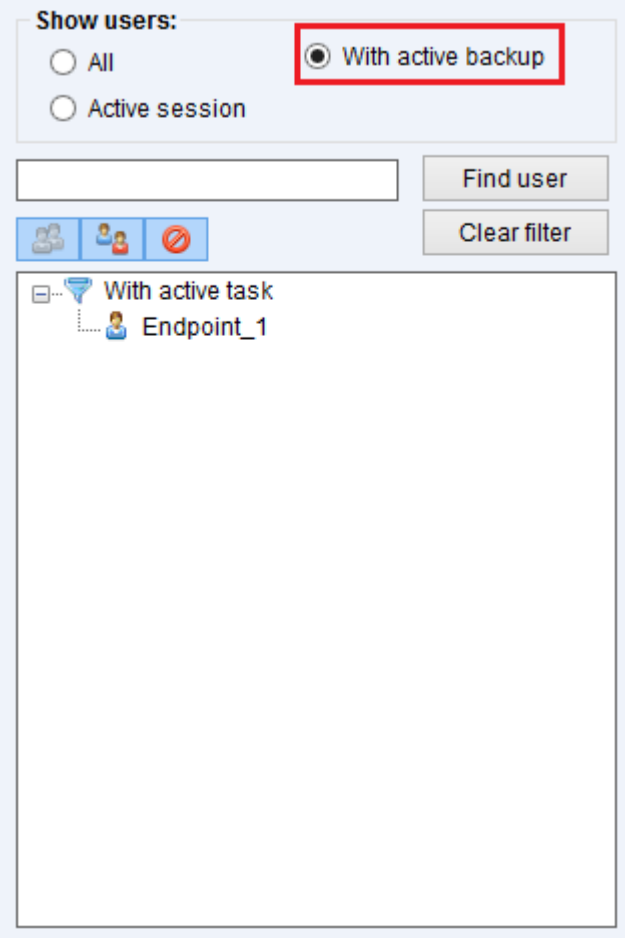
If you cannot find the device on the list, you should use the *Enter device IP* option. After clicking *Add*, the information about the completed assignment of the device will appear.



Now you can select the device from list or enter its IP address. Enter user password for authorization and encryption key if it's defined. Click Assign to confirm your choice.

In case when entering the IP address of the device does not allow for proper assignment, you should check if the Xopero B&R service has been launched on a remote computer. If it is, you should restart or try to log in again directly from the given device to the chosen account.


Show users:
All
With active backup
Active session
Find user
Clear filter
admin
Endpoint_1
Michal
User



The accounts in the system may also be searched by using the login. Just enter the login in the text field and click the *Find user* button.

Using the options listed above the user three, on the left you can enable or disable the filtering of some of its components. These are, from the left: *Group, Users, Show disabled groups and users*. This option allows you to disable the view on unnecessary for us elements of the tree in order to obtain a better overview of the application

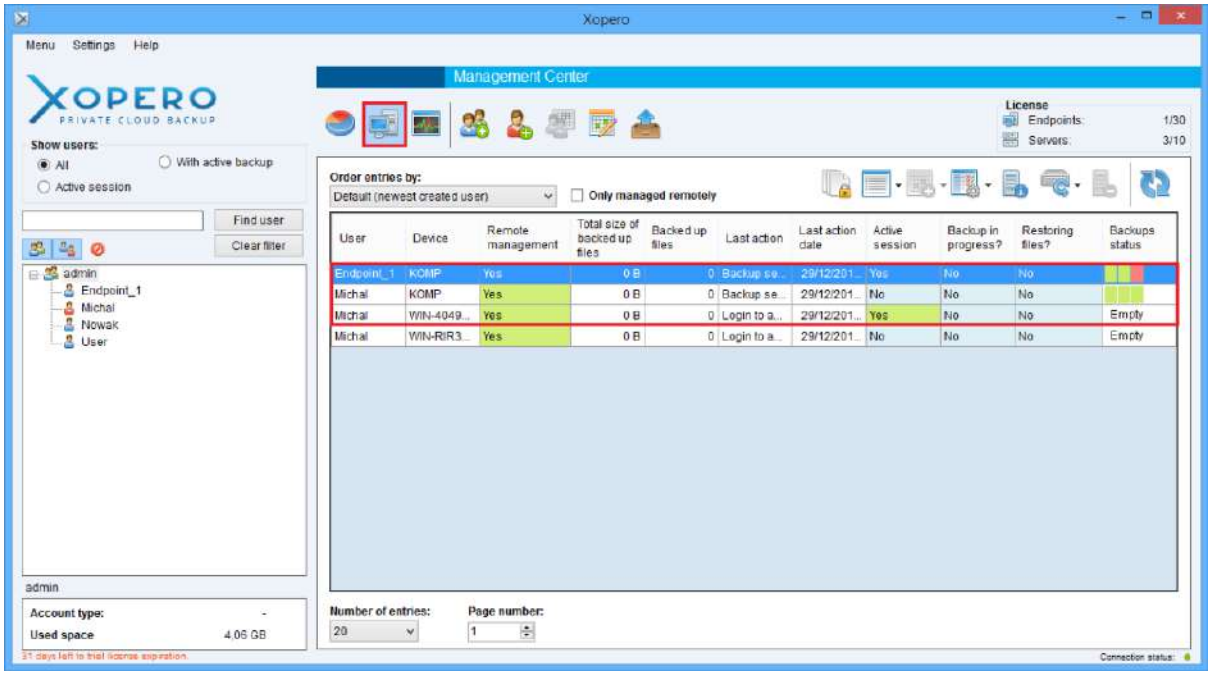
While in the tree, by clicking the right mouse button on the name of one of the users, you can use the following options - *Delete User, Disable user, Change group, Modify*. The last option allows you to change your user account password and reset the encryption key.

Resetting the user encryption key causes an irretrievable loss of all files that have been sent by him to the Xopero server.

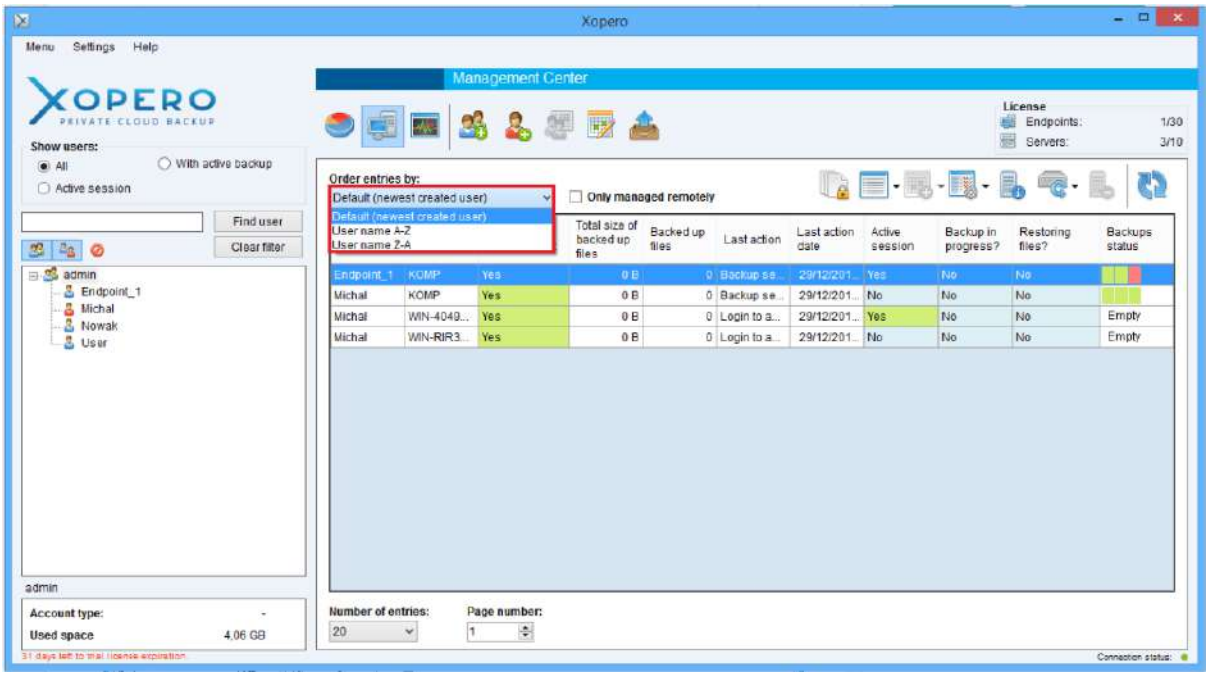
Device list

The list of devices in the *Management Center* application displays all the devices on which the Client application, from which the user at least once logged into his account, has been installed. The devices are assigned to user accounts.

Multiple users can log into their user accounts from a single computer. In this case, the same device will be assigned to each of them.



The screenshot above shows a list of devices of the users in the *Management Center* application. It can be arranged according to several schemes, using the *Order entries by*. It can be sorted alphabetically, from A to Z or from Z to A, by the username. The second option is default sorting by the date of account creation. At the top of the list the user device is situated, for which the account has been created as the last one.

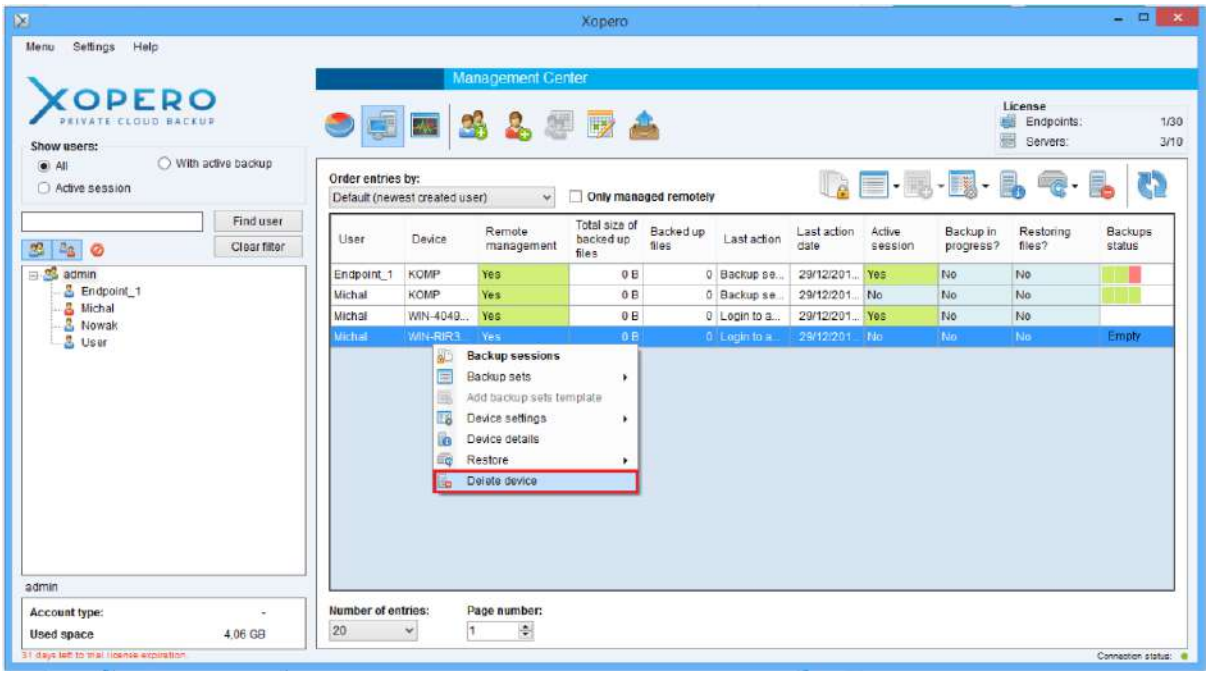


You can find the following information in the device table:

- **User** - login (name) of the user,
- **Device** – the user's device name,
- **Remote management** - information about whether the device can be controlled remotely using the Management Center application,
- **Total size of backed up files** - the total size of files that have been sent from the device as backup,
- **Backed up files** - the number of files,
- **Last action** - type of the last performed action on a given device,
- **Last action date** - the date of the last performed action,
- **Active session** – marks the users who have performed any action in the client application, during the past 30 minutes,
- **Backup in progress?** - Information about whether a backup is performed currently,
- **Restoring files?** - information about whether the files from the device are currently being restored by the Management Center application,
- **Backups status** - the status of the last five made backups.

There is also a possibility to remove a device. Just click on the selected device with the right mouse button, and an options bar will be displayed. One of these options is the removal of the device - *Delete device*. A device can only be deleted when it is inactive.

Removing a device results in deleting all data sent by it from the Xopero server.



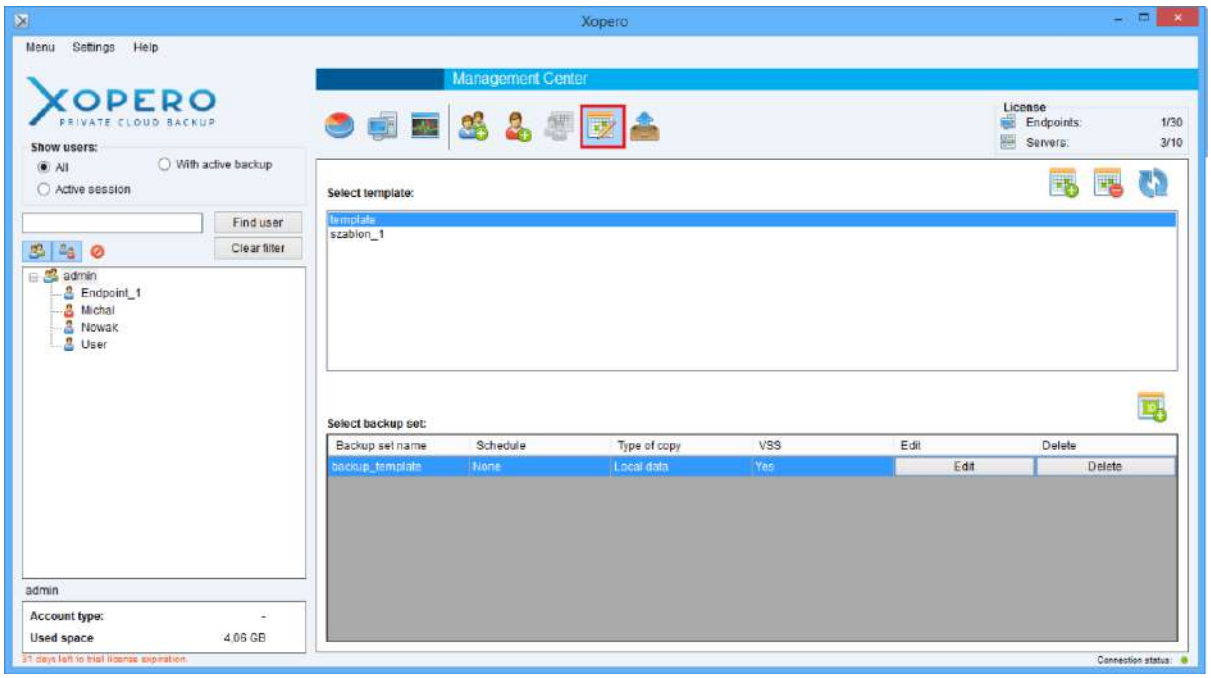
The reminding options - *Backup sessions, List of backupsets, Add backupsets template, Device settings, Device details, Restore data* are described in the following sections of the user manual.

Project templates - backup policy for groups

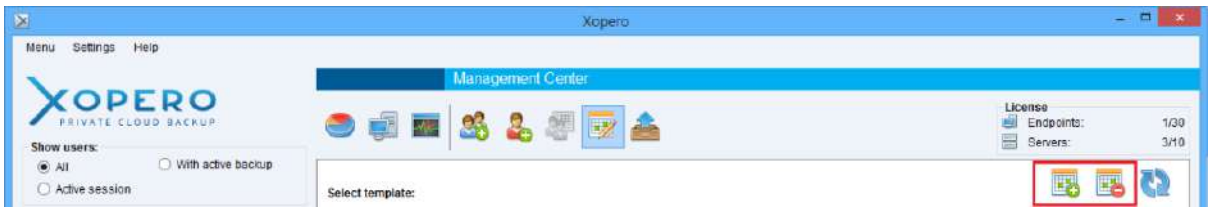
A project template is a set of projects which can be sent to any device user. Each project in the template must have indicated data for backup and a name given. You can also configure additional settings, such as schedule or advanced options. Backup projects are described in detail in the *Xopero User manual*. You can edit the project after sending it to a chosen device.

Please note that, the device to which a template will be sent, needs to have existing indicated data, otherwise, execution of the project will end with an error.

The *Manage backup templates* option is launched by clicking on the button highlighted in the screenshot above. A list of created templates will be displayed, and below a list of projects included in a chosen template.

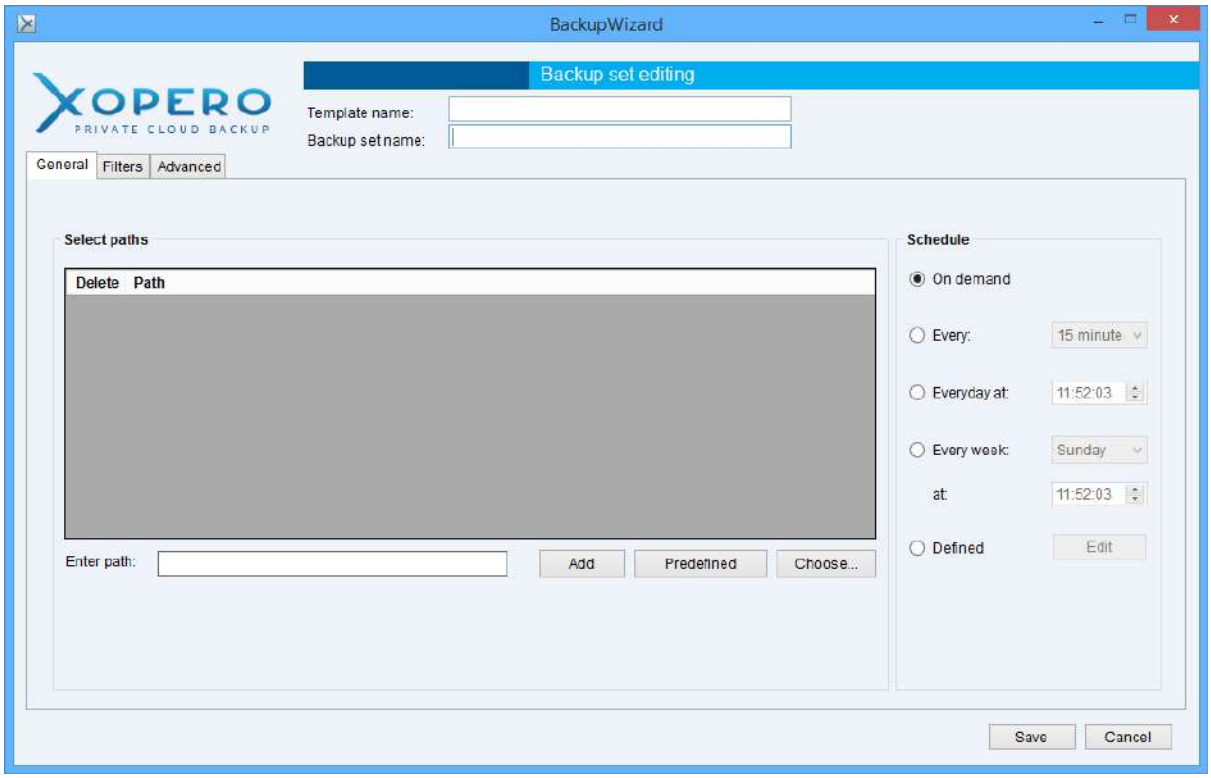


In order to create a project template, press the *Add backupsets template* button, and in order to remove, mark a chosen template and click *Remove selected template*.



After clicking on *Add backupsets template* first you'll have to choose backup set type and then a *Creating new backup template* window will appear, in which you also have to

specify the name of the template. Further backup configuration is related to a backup project which will be included in the created template.



Currently it is only possible to create local data backup projects. For each of the created projects, the user can define its name, set up a schedule, or choose the data he wants to backup.

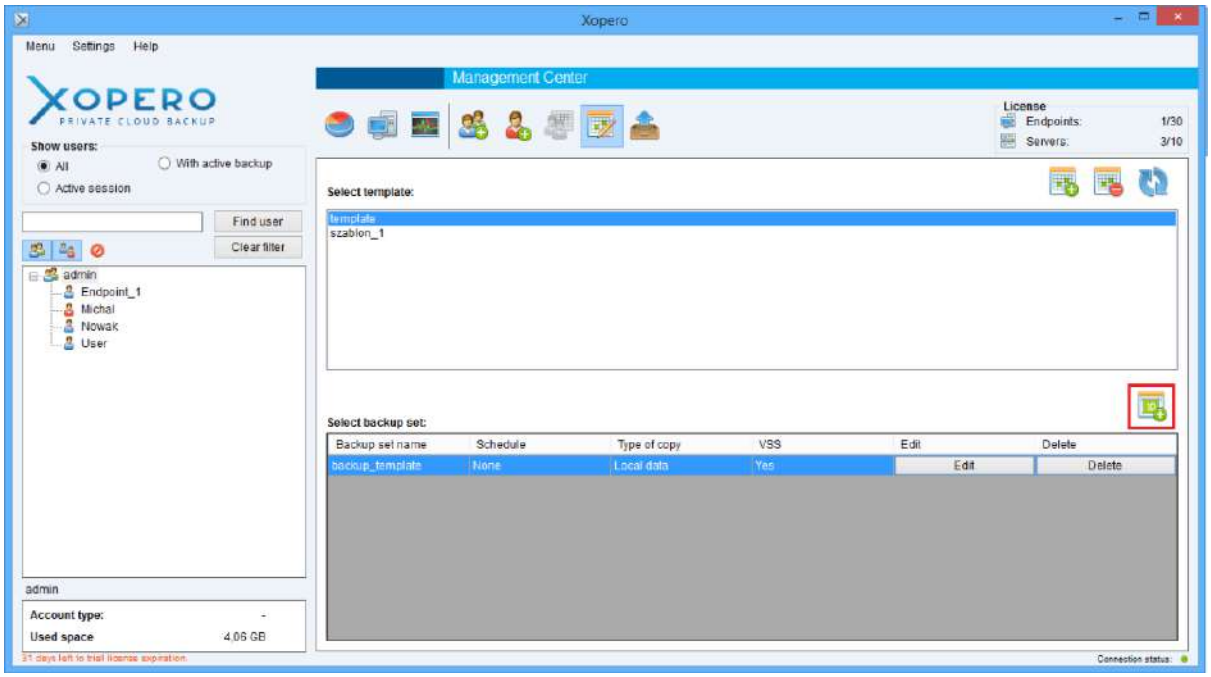
In case of project templates, after choosing the *Local* option, the catalog paths from our computer will be displayed. If we do not want to use this option, we can type in a chosen path in the text field, and click *Add*

Another possibility is to employ pre-defined paths, which can be used on different operating systems. They refer to fixed system catalogs. Choosing this option is possible after clicking the *Predefined* button, and choosing an operating system (Windows XP or later).

In addition, it is possible to apply filters to a created project, applied to: files and folders, Windows permission settings according to which the project will be created, and the following advanced options:

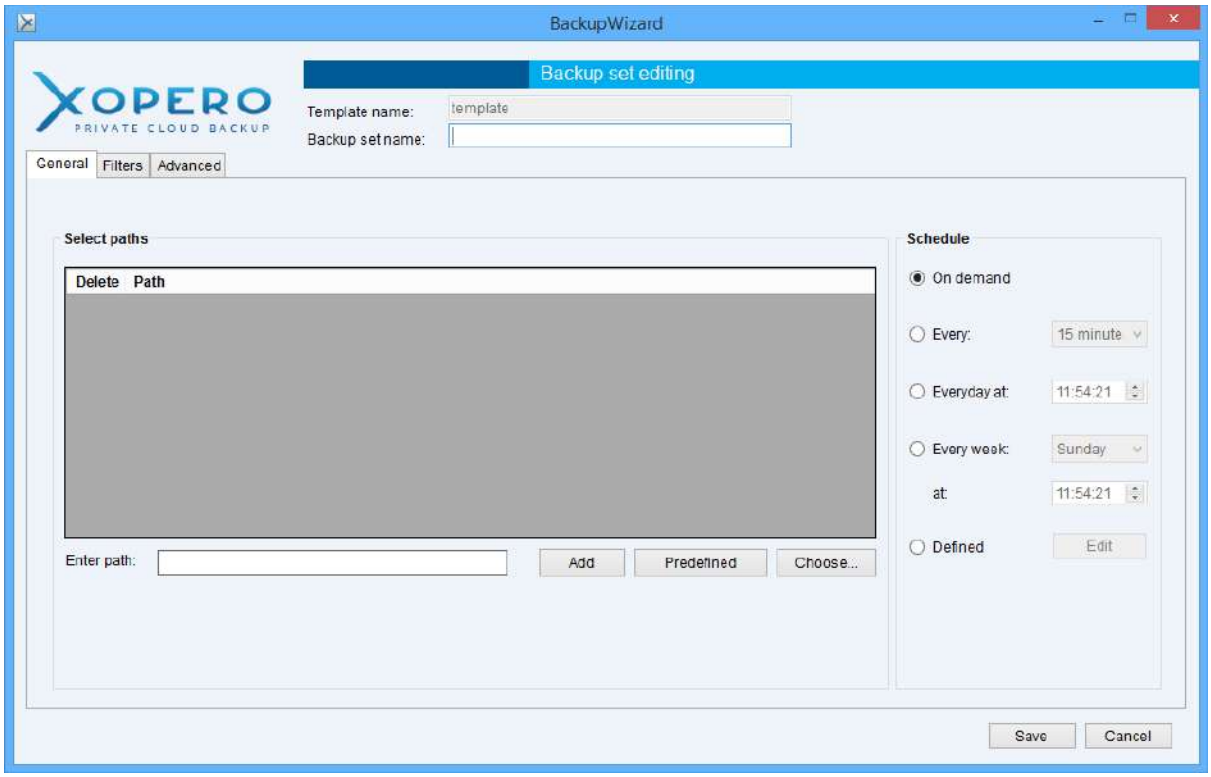
- **Without encryption** - files included in the project will be sent to the server disk decrypted,
- **Without compression** - the files will not be compressed before delivery,
- **File copies stored for:** - specifying the number of versions created for a single file in the project. An alternative option is to specify the number of days to retain the backup version.
- **Backup type** - allows you to specify how the files should be sent, whether they are to be sent in a differential or incremental way, and which method will be used during this process.

After completing the configuration of the first backup within the template and the template name, you can save it by clicking the *Save* button, which is located in the lower right corner of the *Create new backup template* window.



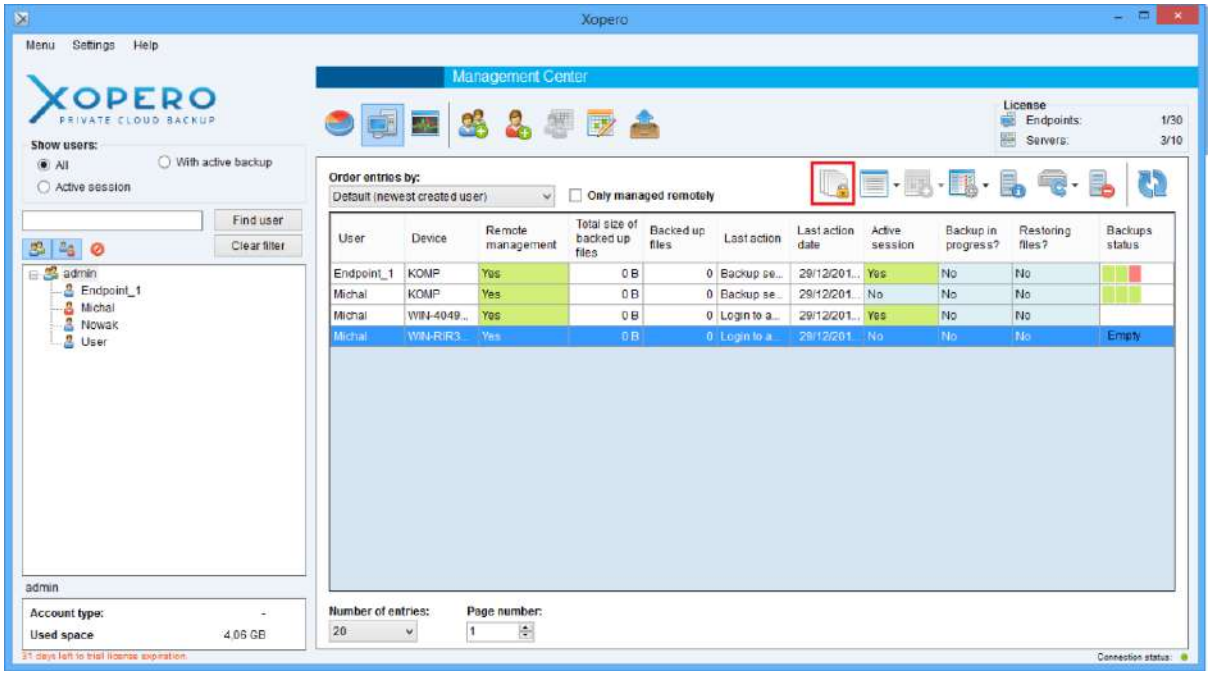
Each template can consist of any number of projects created by the user. In order add a new project to the template, click on the button highlighted in the screenshot above.

After clicking on it, a window appears, the same as while creating a template, except that the name of the template is already defined, and editing it becomes impossible.



Sending a template to the client application

Sending a template to the client application is possible via the *Devices* tab, which can be accessed by clicking on the button marked in the screenshot below.

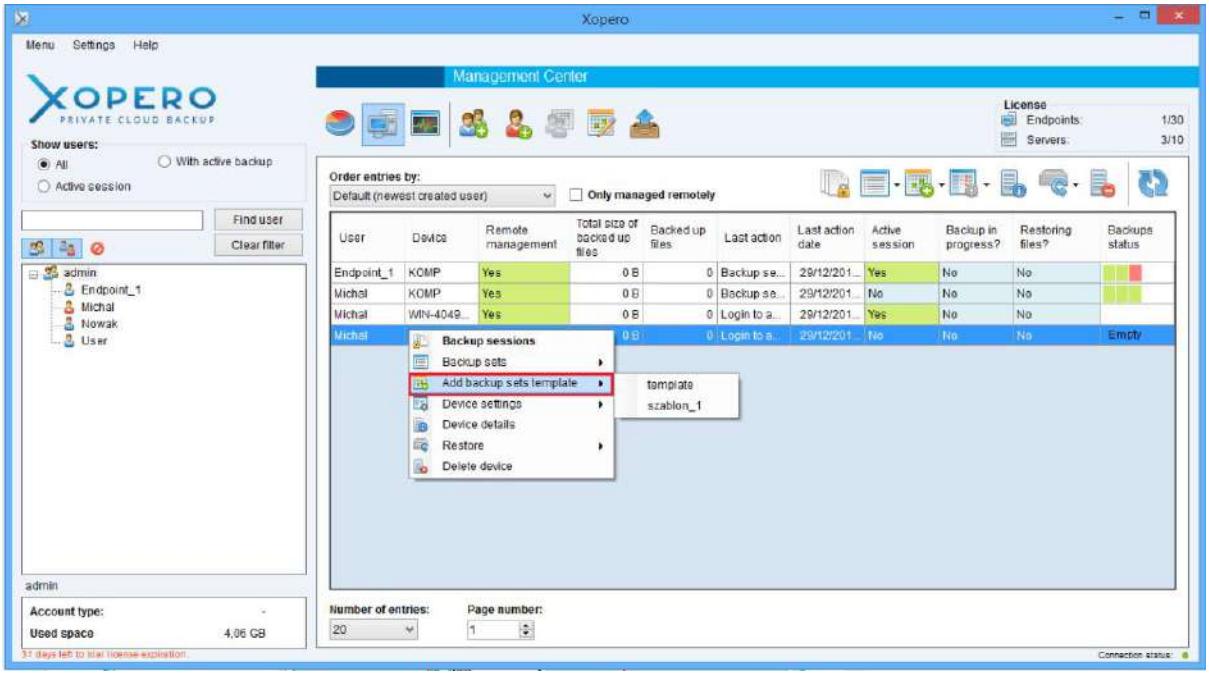


Next, you need to find the device to which you want to send a template on the list. By selecting a user, or a group from the tree on the left side of the application, we can view only the devices, which are assigned to the position chosen by us, for example, the devices of only one user.

There is a possibility of sending a template to multiple devices at the same time. To do this, select multiple devices from the device list by holding down the *CTRL* key.

Project templates can be sent only to devices which have remote management enabled, and are currently synchronized.

After selecting the devices to which you want to send a template, click the right mouse button on one of them and select *Add backupsets template* from the context menu, and finally select a desired template.



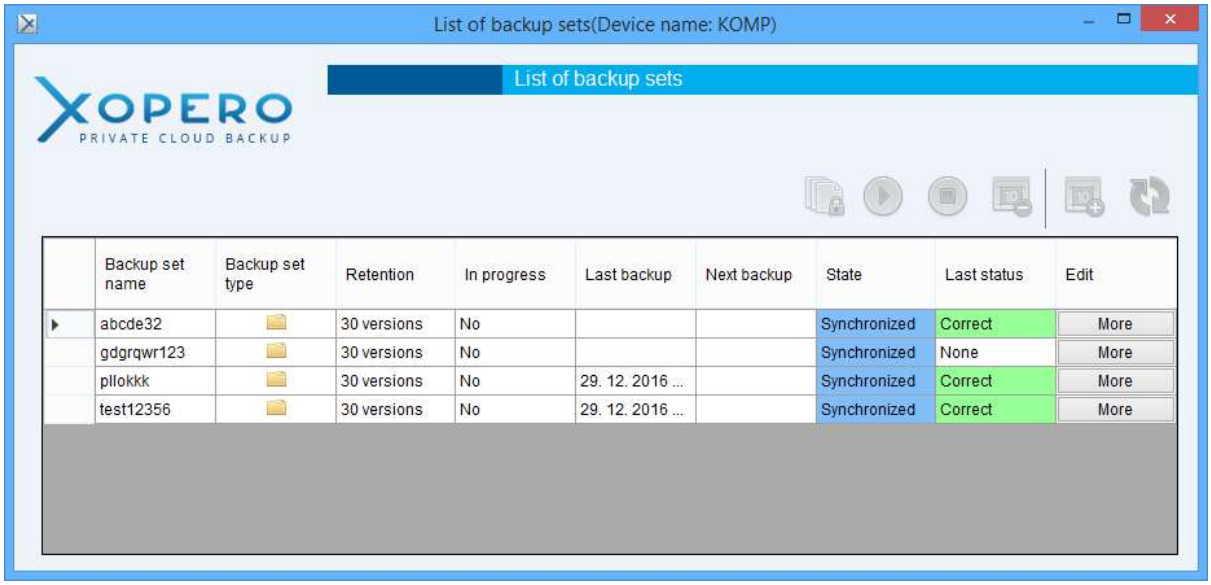
Clicking on the name of a template causes to send the template to specified devices, except situations the projects from the template already exist on your computer.

Project management

The Management Center allows you to remotely manage user backups as well as their projects.

Through the *Management Center* application you are able create new projects, as well as editing and deleting existing ones. Existing projects can be remotely started or stopped, if one of them is currently being performed. In order to view the list of projects on a given device, from where it is possible to manage them, please right-click on the selected device, and then select *List of backupsets*.

Displaying the list of projects is only possible for devices which have *Remote management* enabled and have been synchronized with the *Management Center* application.

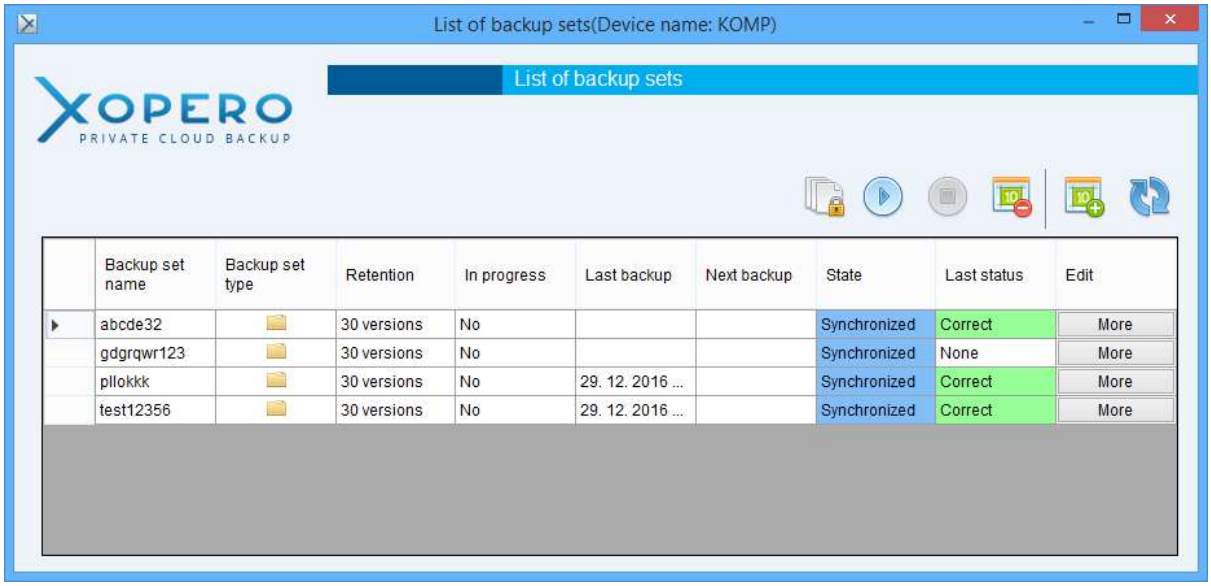


The List if backup sets consists of the following fields:

- **Backup set name** - the project name defined by the user,
- **Number of files** - the number of files, which so far have been sent within a chosen project,
- **Next backup** - the date of the next backup performed in accordance with the schedule,
- **Last backup** - the date of the last performed backup project,
- **Status** - the current status of the project,
- **Version limit:** - a limit of versions set for the selected backup project,
- **Changed files** - the number of files that have been modified between the two previous backups,
- **Changed data** - the size of the data that have been modified between the last two backups,
- **Sent files** - the number of files, which were sent during the last backup,
- **Sent data** - the size of data that were sent during the last backup,
- **Errors** – the number of errors that occurred during the last performed backup,
- **Warnings** - the number of warnings that occurred during the last performed backup,
- **Edit** - this column contains a button that allows to edit the project.

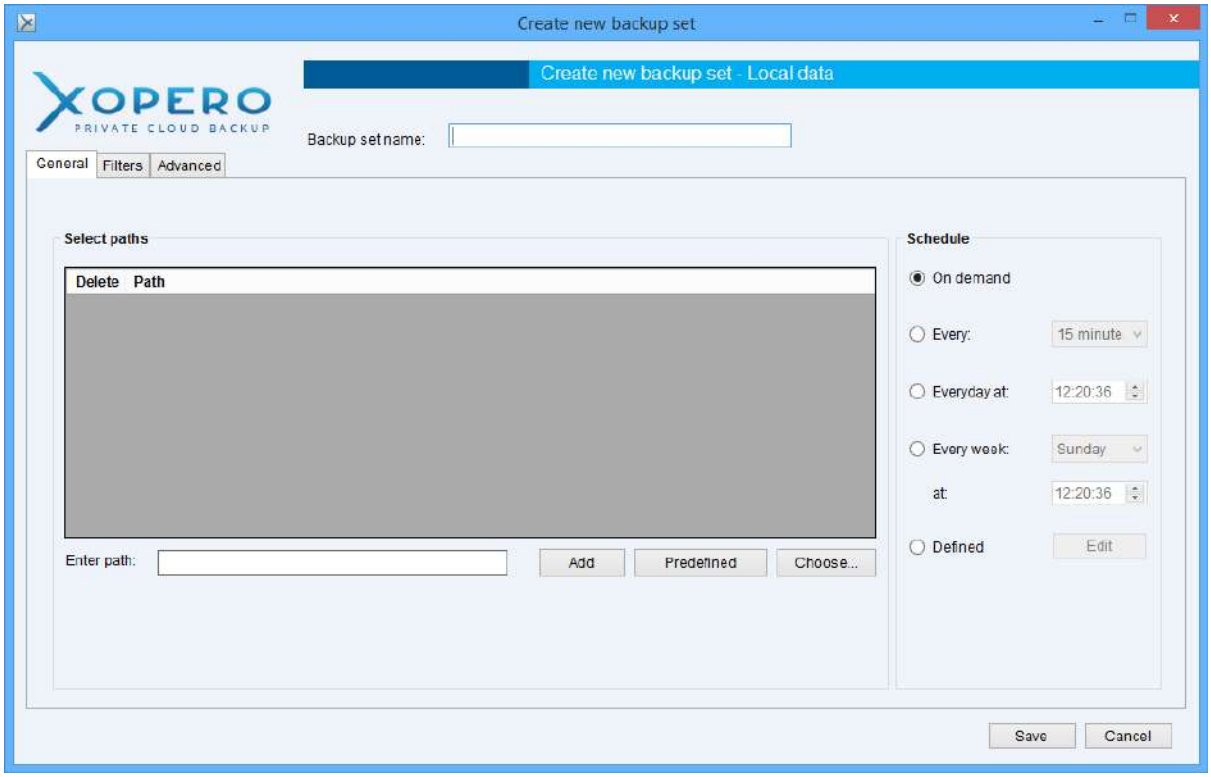
Creating and editing a project

To create a new project for a given device, go to the *List of backupsets*, and then click the *Add backupset*icon, which is displayed in the screenshot below.

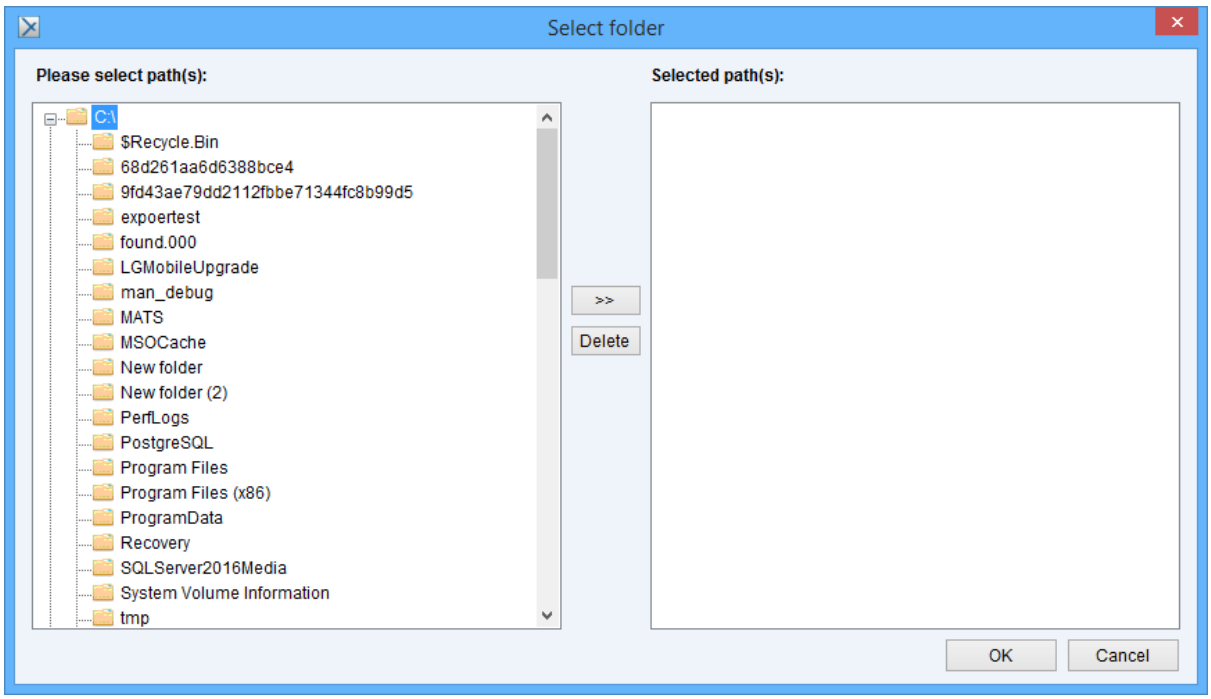


After you click window select the type of project appears.

After clicking, a window for project edition will be displayed, the same as the add the project to the template window, but in this case there is no template *Backup set name*.



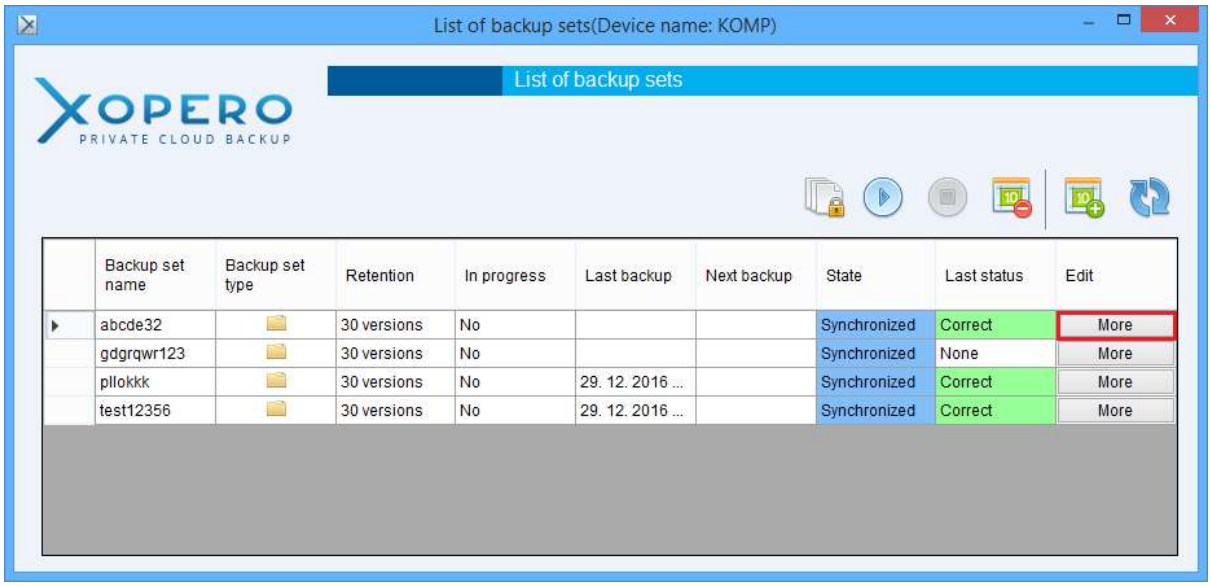
If the selected device is at the given time active, it is possible to remotely select a path intended for backup, that is to indicate the path directly on the device. To do this, click on the *Remote* button.



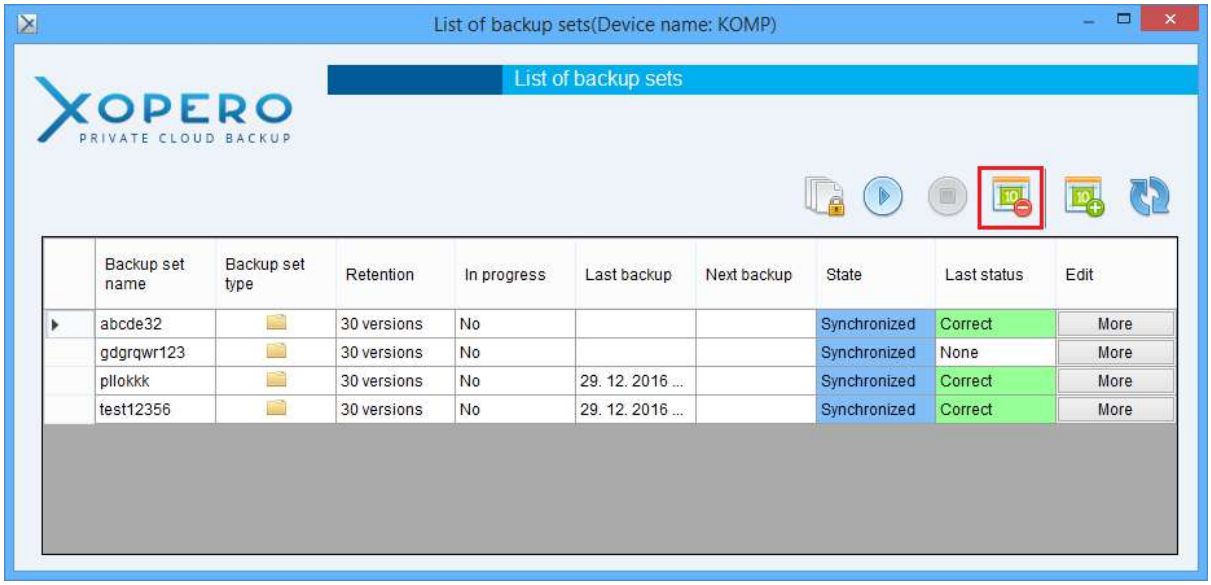
The particular fields of the new project wizard are described in the *Project templates* chapter.

After setting all the parameters of the project, in order to save it, click the Save button in the lower right corner of the screen.

You can also edit an existing project. To do that, click the *More* button in the *Edit* column. for a chosen project from the project list.



When you click the aforementioned button, the project edition window will appear, which will contain the settings for a selected project. They can be freely altered except for *Backup set name* and *Type of copy*fields. After making the modifications, click the *Save* button in the lower right corner of the displayed window.

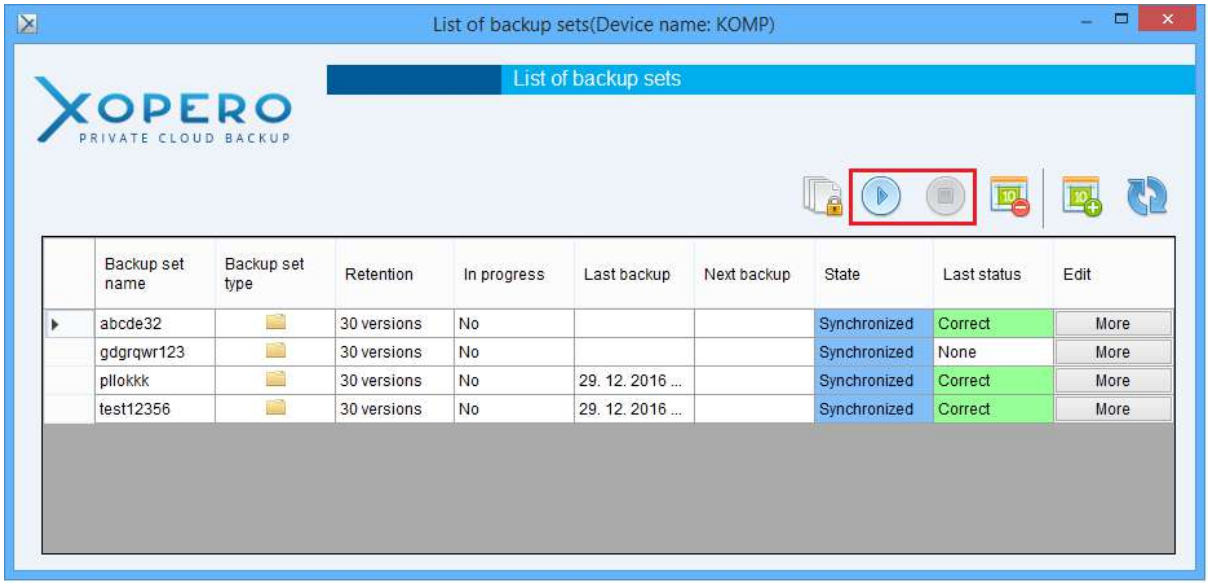


To remove an existing project, click the *Delete* button located in the upper right corner of the *List of backup sets*.

After you create or edit a project, the client application must synchronize the introduced changes. This process takes up to 30 seconds. If after this time, the status in the upper right corner of the Project list will not change to *Synchronized*, you need to refresh the list of projects.

Performing and stopping backups

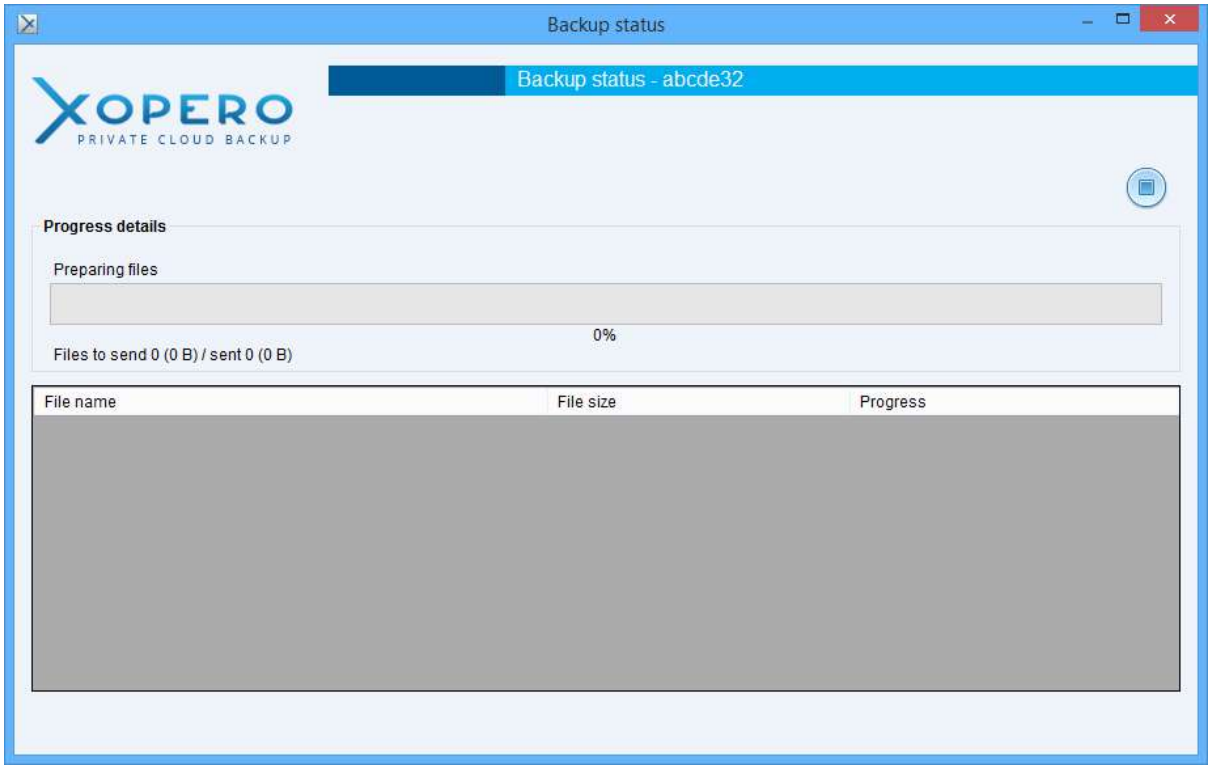
By using the *Management Center* application it is possible to manually start and stop backups on users' computers. To do this, go to the project list, and then find the project you want to run or stop.



In order to launch the project, make sure that its status is *Not running*, and click on the *Start* button.

Performing a *Running project* can be stopped at any time. To do this, simply tick a chosen project and click on the *Stop* icon.

After you stop or start the project, the client application must synchronize the introduced changes. This process takes up to 30 seconds. If after this time, the status in the upper right corner of the Project list will not change to *Synchronized*, you need to refresh the list of projects.

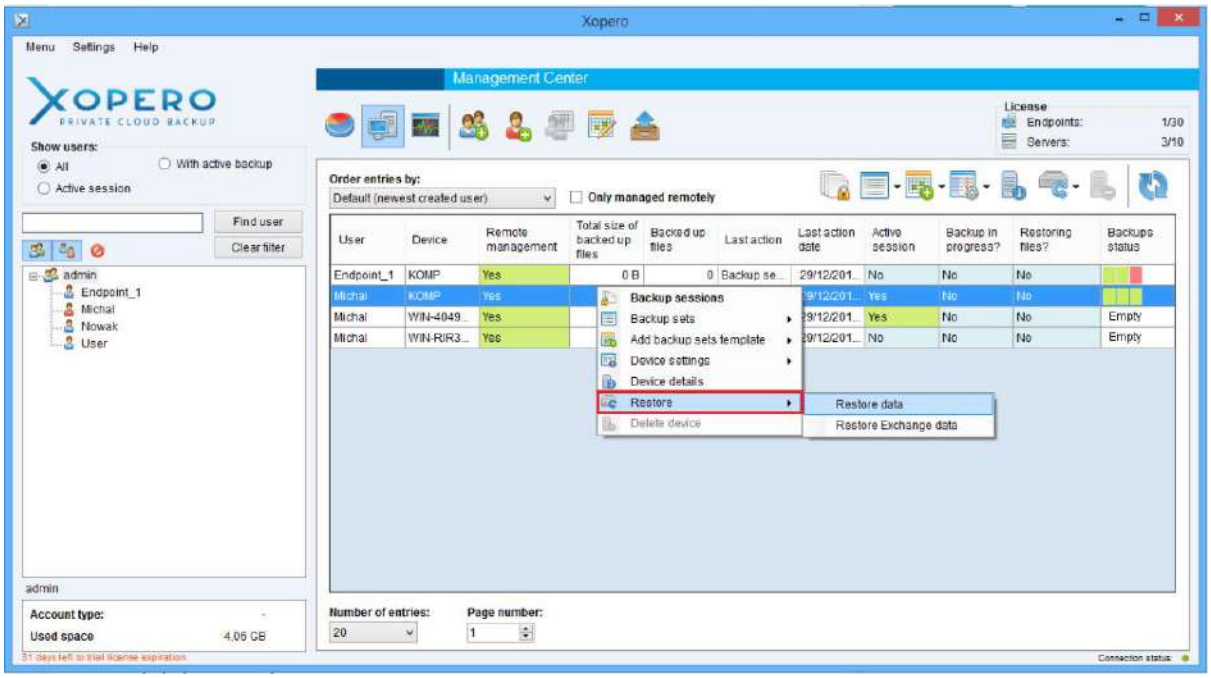


While being in the *Backup sessions* window you can stop the currently performed project by clicking the *Stop* ( ) button.

Restoring files

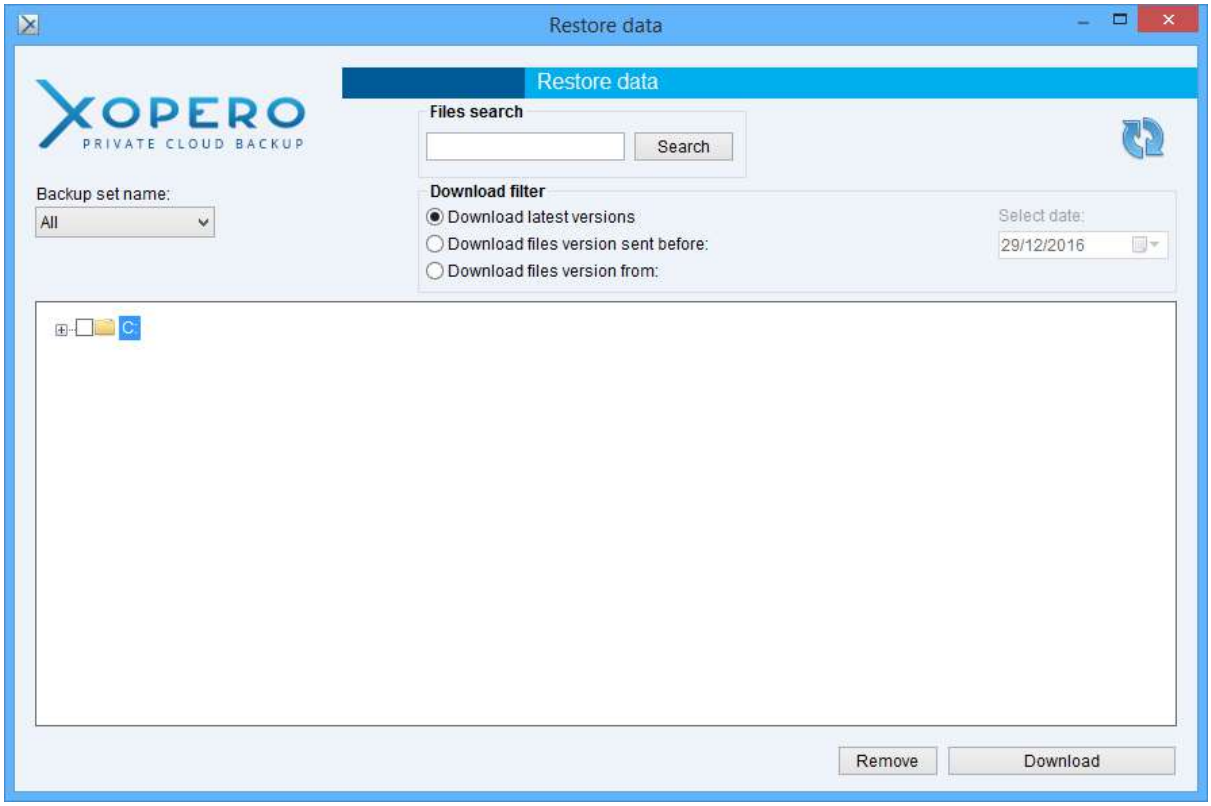
The Management Center allows administrators to restore data sent by its users as backup. Files can be restored to the administrator's or user's computer.

Data can be restored to the user's computer when the device has the *Remote management* option enabled and is *Active*.



In order to run the *Data restore Wizard*, you must go to the *Devices* tab, and then find a device on the list from which you want the data to be restored. After you right-click on a given device, a context menu will be displayed, from which you need to select *Restore data*.

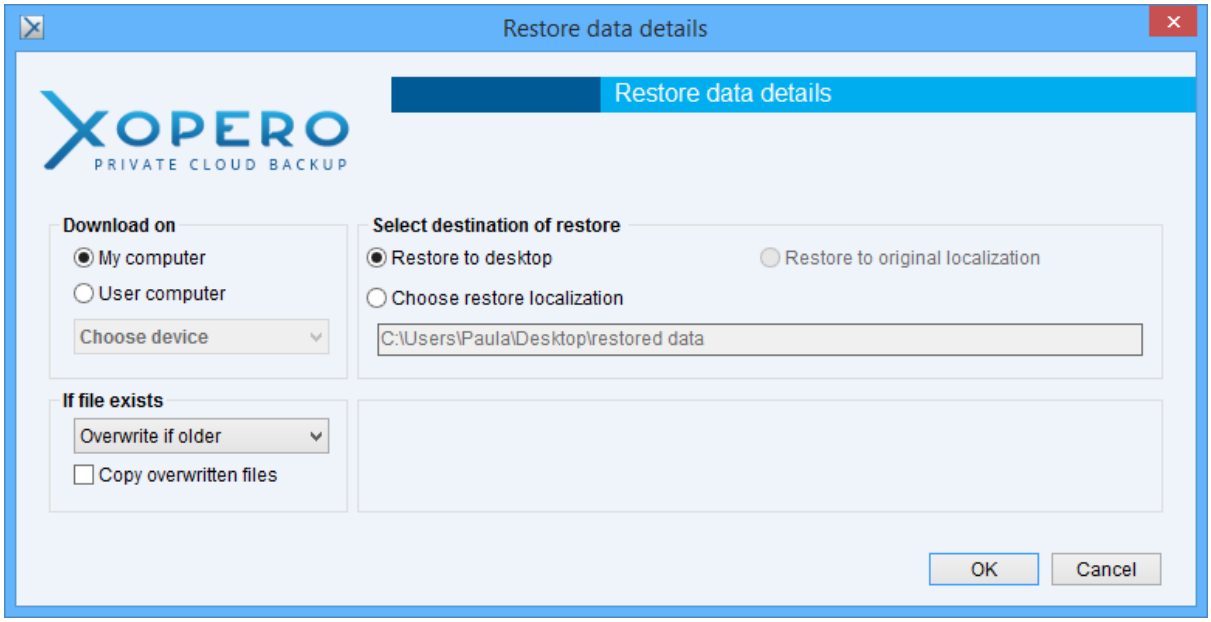
The screen will display the *Restore data* window, which contains a list of files uploaded by the user as a backup.



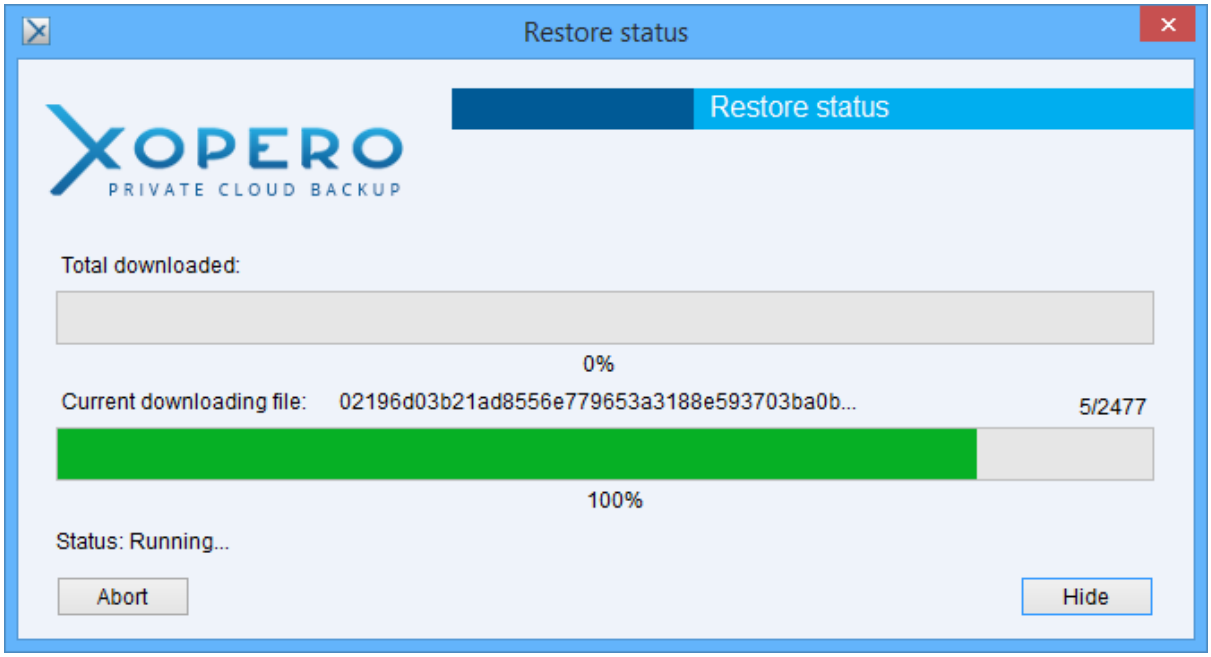
If there are many files on the user's account, loading the window may take a while. This process is indicated by a progress bar.

The administrator has the ability to filter the File in view of the project from which they were sent, or the latest version from or before the selected date.

After selecting the files you want to restore, click the *Download* button. This will display the *Restore data details* window, where you can specify the device (the administrator's or client's computer), on which they are to be downloaded, as well as the location of the restored files. Additionally, you can specify the action that is to be taken by the application, in case when in the selected location there is a file with the same name as the restored one.



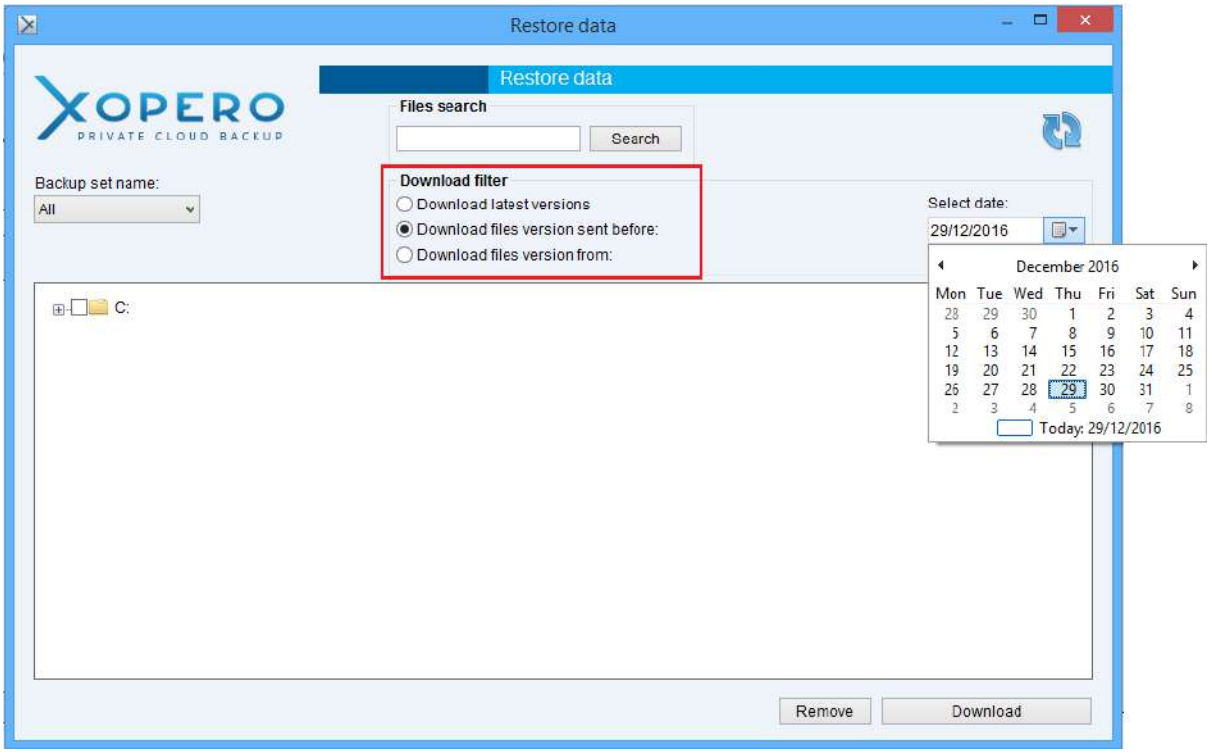
After configuring the settings of the restored data location, click *OK* to begin the restoration process.



If the user whose data are restored, uses a personal encryption key, the application will ask to enter it. If the key is unknown for the user, downloading files will be impossible.

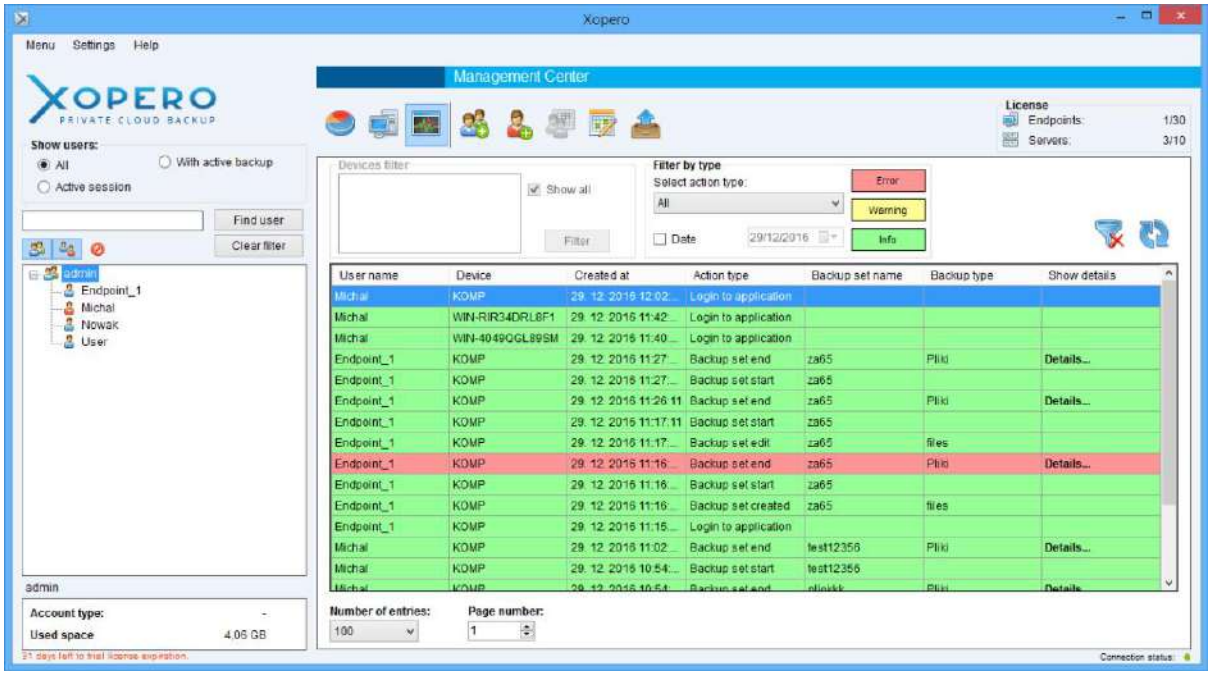
Management Center application allows administrators to restore data version (*following screen*) uploaded by their users as a backup. Files can be restored to administrator computer or user computer.

Data can be restored to your computer when the device is active and has enabled Remote Management.



User logs

Client application logs are available by clicking on the *Users logs* button, which has been marked in the screenshot below.

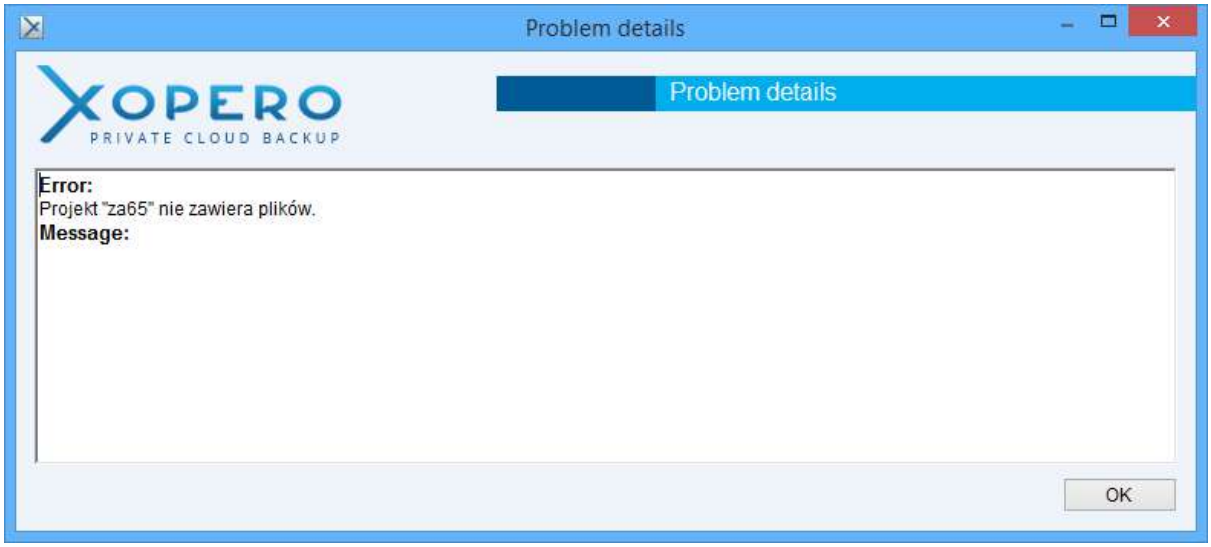


Application errors are marked in *red*. Warnings in *yellow*, and actions performed correctly in *green*.

Above the list of logs filters are located, by which you can specify which logs are to be displayed. The available filters are: type of action, type of logs (error, warning, information) and the date from which you want them to be viewed.

If the type of the log has a gray background, it means that this type of logs are not currently displayed on the list.

After selecting a desired account from the tree on the left side of the window, the device filter will be activated, which is by default set to *All*. If you clear the selection button, by clicking on the device list, you can choose the ones that interests you, and then click on *Filter*. Only selected logs will be displayed.

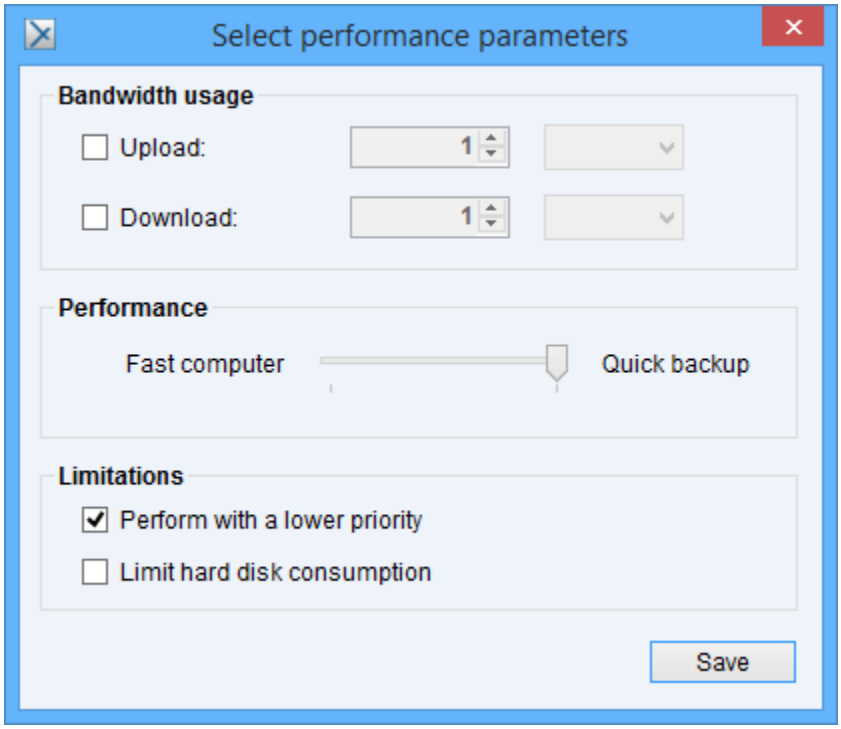


When you click on *Details…* in the log table, the application will display detailed information about a particular event. If the *Show details* column field is empty, this means that the log details are not available.

Hosts management

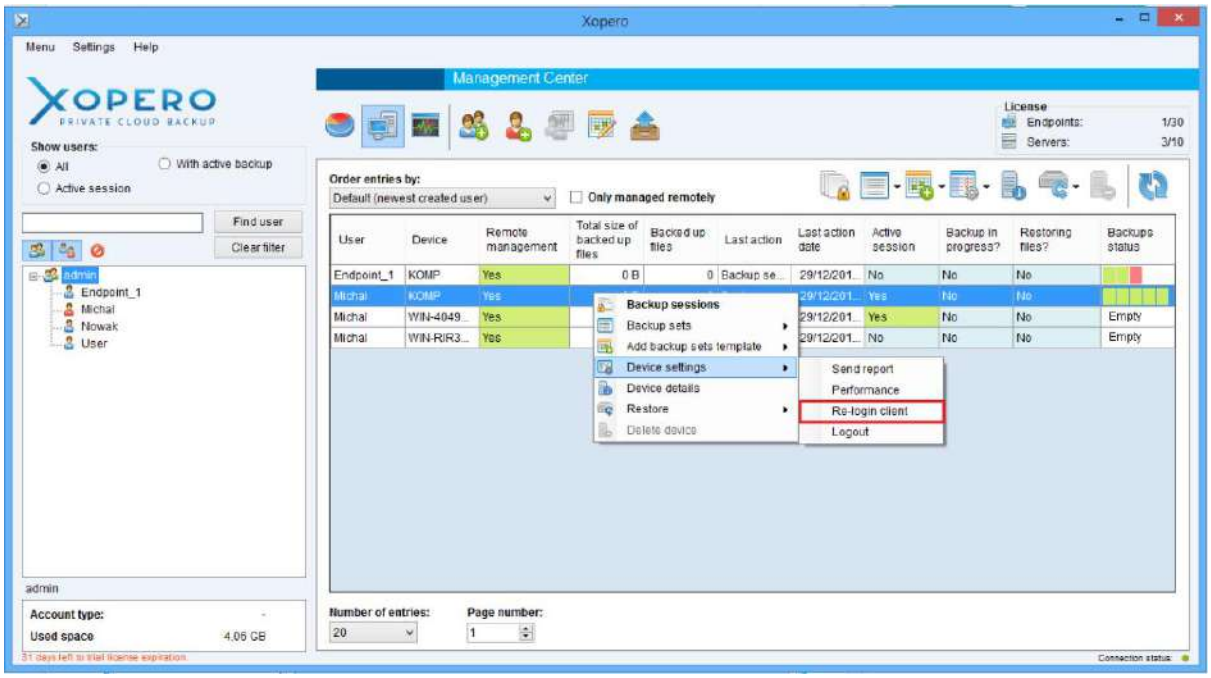
Remote setting the core limit and the bandwidth of an account

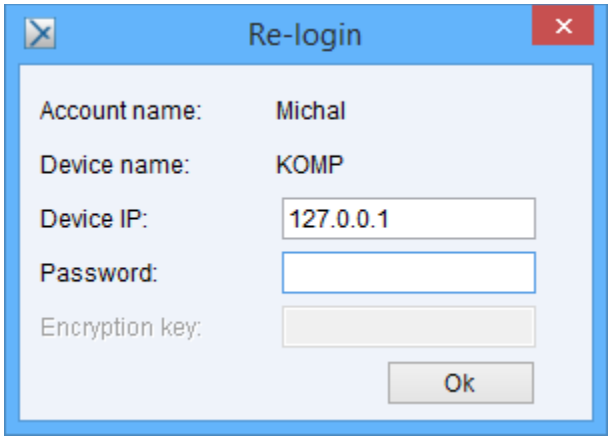
Client applications installed on users' computers may have set bandwidth limits as well as the number of cores, which they can use during backup. In order to set the limits of the device on which the application is installed, go to the *Devices* tab, and click the right mouse button on a given device, and select *Device settings*. From the menu, which will be expanded, you are able to select the *Efficency* option.



Remote device re-logging

The administrator has the ability to remotely re-log the device to a chosen user account, which means that he can log out the device from one user account and log it into another. In order to do that, you have to find a chosen device on the user account, and choose the *Re-login client* option.





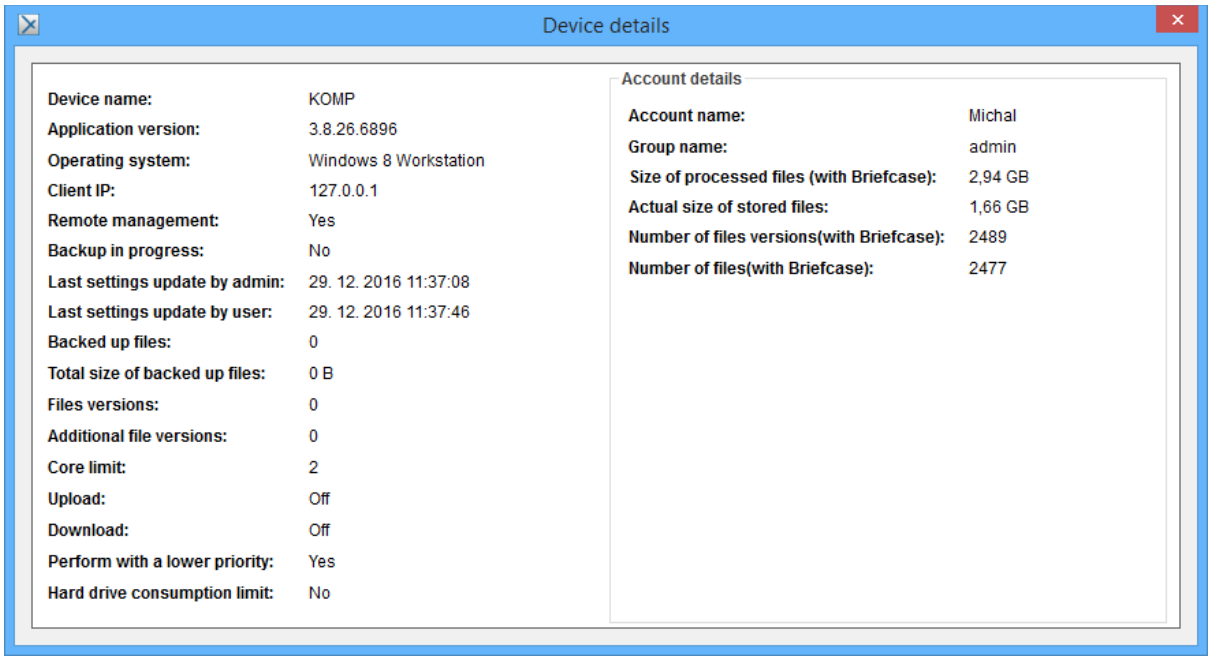
If a given device is already logged into a different account, the client application will be automatically re-logged, in accordance to the administrator's choice.

In case if the last logging in had place a certain time ago, it is possible that the IP address of the device has been changed. In this case you should enter a new IP address.

Device details

The Administrator, who uses the *Management Center* application has the ability to access detailed information about the user's device and the client application installed on it.

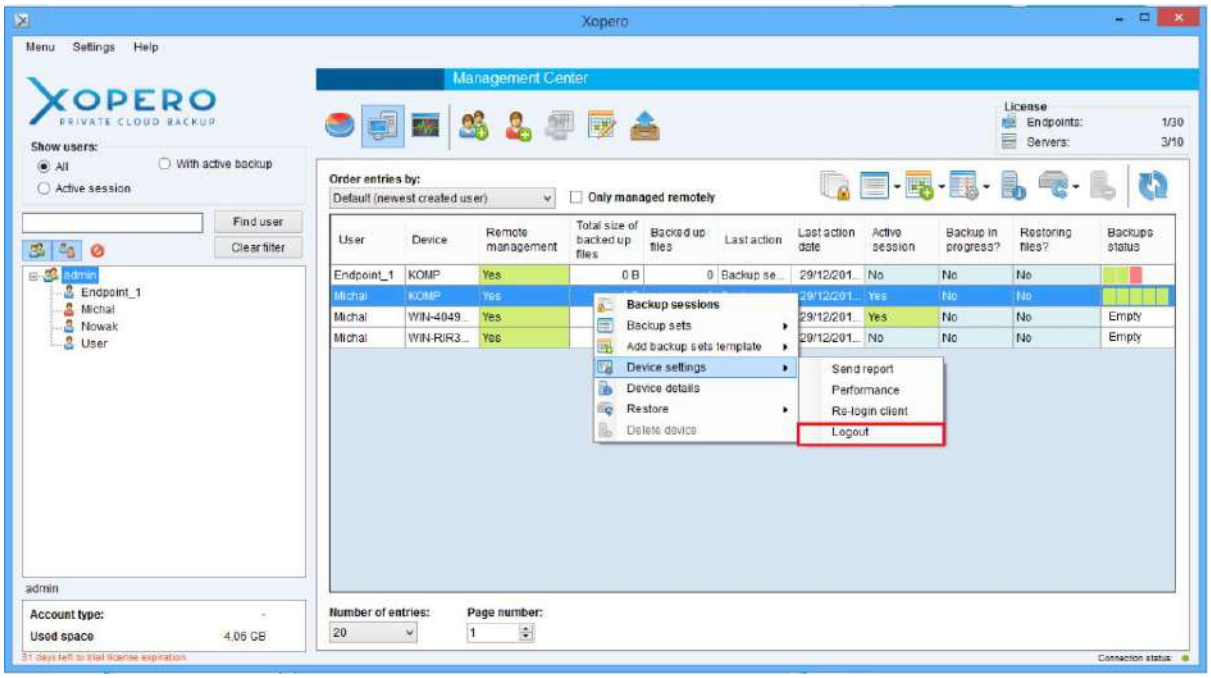
To view the details, go to the *Devices* tab, and then right-click on the selected device and choose the *Device details* option.



In the appearing window you will find the information about the selected device and user account to which it is assigned.

Logging out the device

In the Management Center application, the administrator can log out the device assigned to the user. For this purpose, go to the *Device* tab and right-click on the chosen device, subsequently press the *Device settings* option and then *Log out*.



Technical Support

In case of any problems with the application, go to the *Dashboard* window, choose from the *Help* tab, the *Report problem* option. The Web page, where you can create an account on the system used for reporting bugs, will open. After creating an account and describing the problem, the system will present you the possibility to solve the problem. However, you may be asked to send the server logs and\ or application logs.

Sending server logs

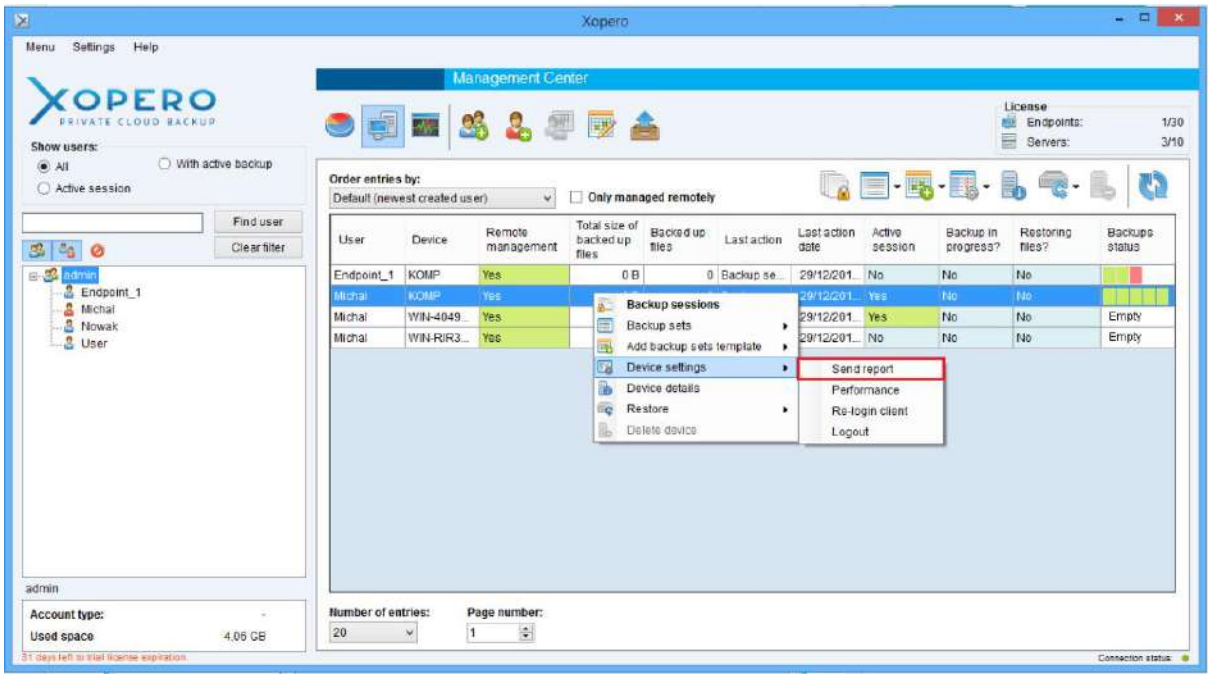
In order to send the server logs, go to the *Dashboard* window, and then select *Help* tab and choose the *Send server logs* option. After downloading the required information, the window will appear where you can enter your e-mail address and provide the description of the problem. By clicking on the Send button, the logs will be sent to the manufacturer of the software.

Remote sending application logs

In case of a malfunctioning Client application of Xopero, the administrator has the ability to inform the software producer about the problems by e-mail or by using the bug reporting system.

If it is necessary to send the Client application logs, you should:

- On the list, find the device on which the problem occurred,
- Select the option *Device settings*,
- Use the option *Send report*.



After displaying this option, a request for additional information, necessary to report the problem, will appear.

Delivery of the report or the client application logs should be performed only on the request of employees from the software support team.

After clicking the Send button, the data will be sent to the software producer.

Glossary of terms

Project template – the project template is a set of backup projects. Each project may indicate other data and have unique features. The project template can be sent to any user device on which **Allow remote management** option is marked.

Backup project – a data set and the type of data which is to be the subject to backup. For each project, it is also possible to specify the frequency of performing it, as well as additional advanced options.

Data Storage - defined space on the server hard drive, in which the user data, sent through the Xopero application is stored.

Active device - a device which has performed any action within the last 30 minutes. This may lead to the situation where the Management Center device will be marked as active, while in reality it was turned off for less than 30 minutes from performing the last action.

Host - the device on which the client application is installed and from which the user has, at least once logged into his account. During the first login, the device is being assigned to the user account.

Backup

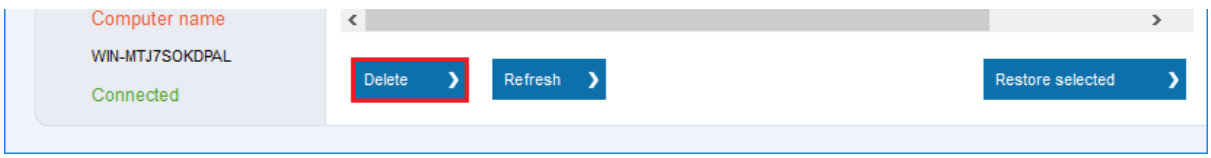
Deleting backup files

Deleting backup files

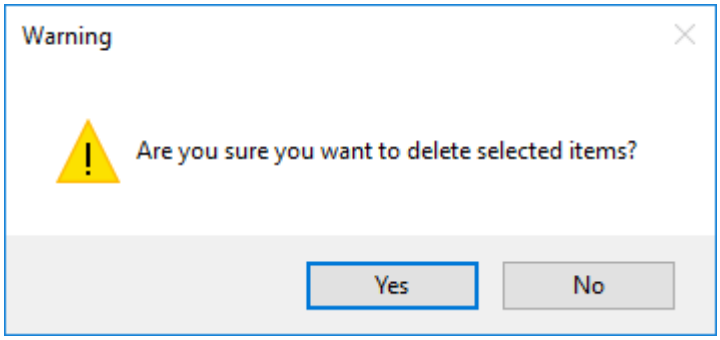
How to delete backup files?

If you delete the project, the files that you have uploadedto the Xopero server will not be deleted, they will still be stored.

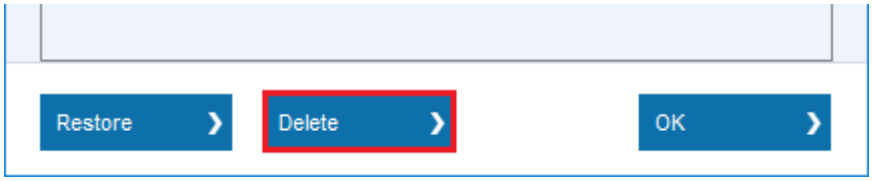
To delete data you have to enter the ***Restoring tab*** and mark files and/or folders you want to delete from the Xopero server, and click on ***Delete*** at the bottom of the tab.



A warning about data deletion will be shown, you have to confirm it for selected data to be deleted irreversibly.



The user can also delete selected file versions. In order to do so, after displaying a list with file versions (*it was described in the earlier chapter*) and marking the selected version you have to click on ***Delete***. This will cause only a version of the file to be deleted, not the whole file.



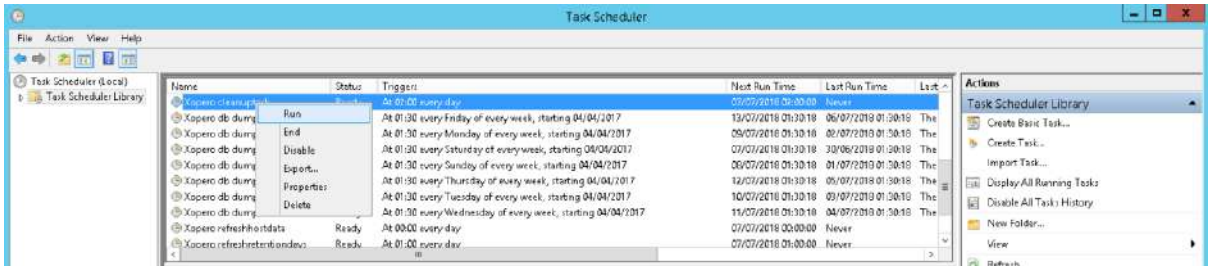
If you want to delete all the data sent by one user from all his devices, simply change the encryption key (*Changing the encryption key*).

Cleanup - permanent files deletion from storage

Do not delete files manually from the data storage directory, this may lead to problems with the operation of the infrastructure.

Removing files from the Xopero application does not immediately delete them from the repository directory, they are only marked as files to delete. Then Cleanup finally deletes the files from the storage, it is started once a day. If 24 hours elapse between deleting files and running Cleanup, the files are permanently deleted.

You can check the cleanup operation for Xopero Backup&Restore in Task Scheduler, there should find Xopero Cleanuptask and see the result of the last run - (0x0) means that operation performed by the cleanup was successful and if there is (0x1) means that cleanup operation resulted an error. You can also started Cleanup manually from the Windows Task Schedule.

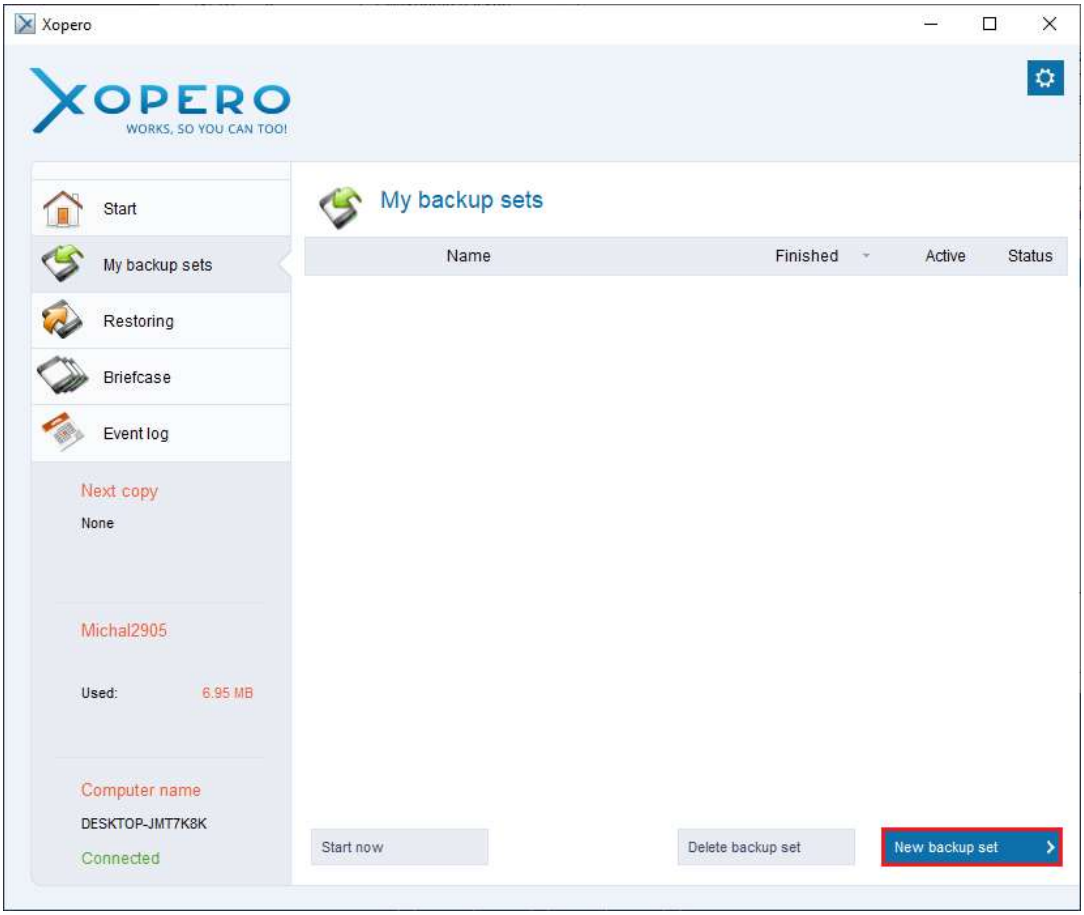


You can check the cleanup operation for Xopero QNAP Applicance in the logs. Log in to QNAP via SSH, go to /share/CACHEDEV1_DATA/.qpkg/Xopero/CleanupManager/Logs/ and check the latest log file, which will contain information about Cleanup launches. When you are connected via SSH it is possible to start Cleanup manually using the command: */etc/init.d/XoperoServer.sh clean_repo*.

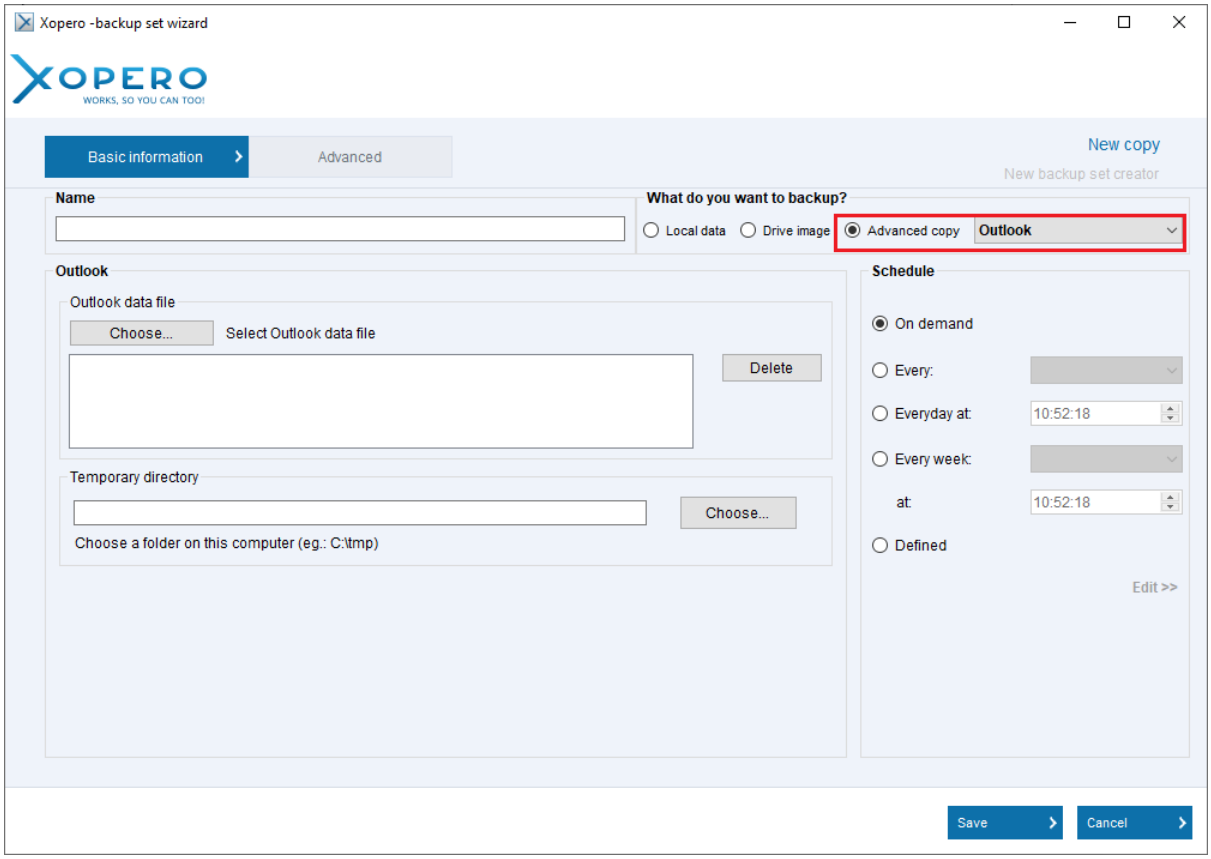
Outlook backup

Creating and performing backup

To create the Outlook backup set you need to open Xopero and run the ***Backup set*** wizard by clicking on ***New backup set*** button in ***My backup sets*** tab.

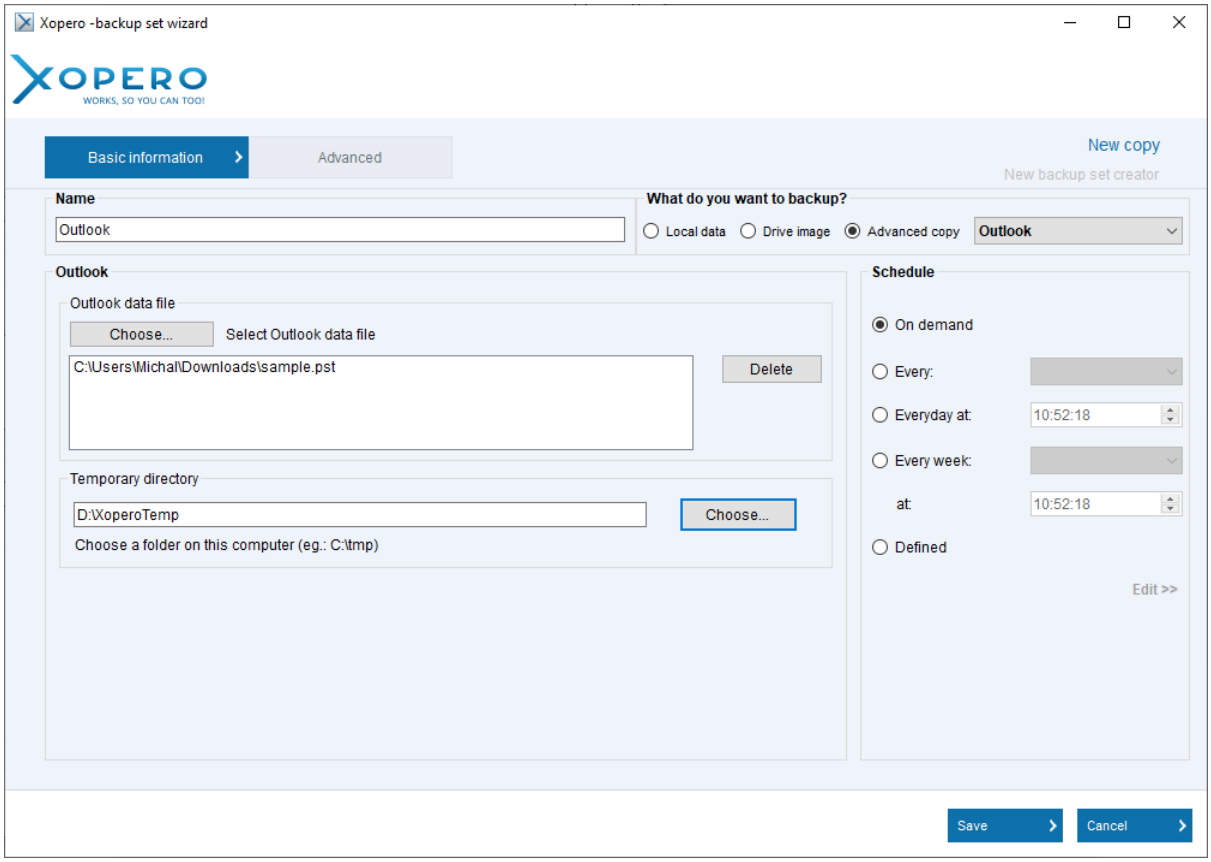


In the ***Backup set*** wizard select **Advanced copy** and choose ***Outlook*** in ***What you want to backup?*** field. Don't forget to define the backup set name.



In the ***Outlook*** panel what you need to do is to select Outlook data file. Click on ***Choose..*** button and select location of .pst file.

After that choose ***Temporary directory***. Click ***Save*** to create new backup set.

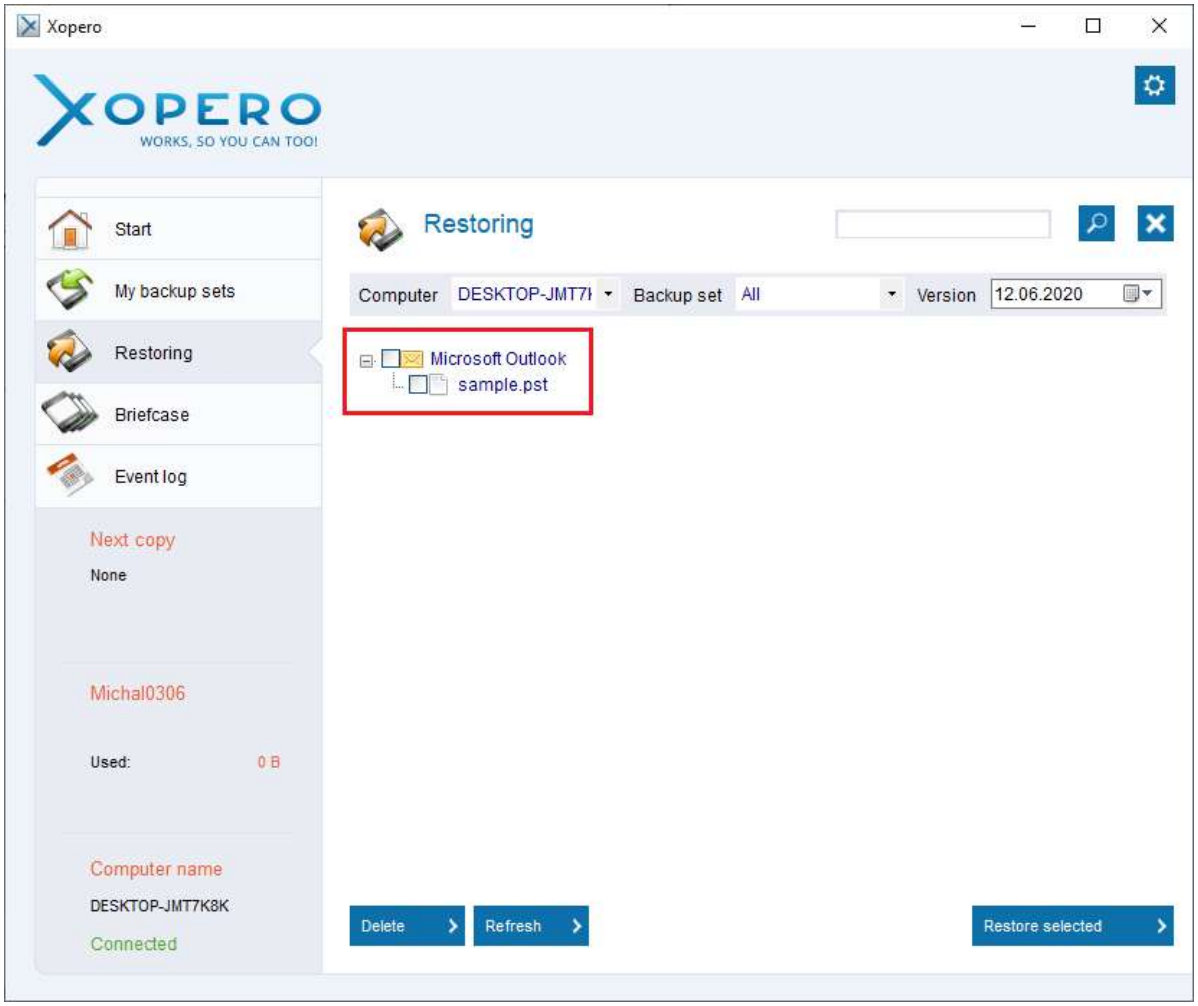


Restoring

The restore process of Outlook data file is a two-step process. First, you need to download the backup data to a local machine using Xopero application. In the second step, you need to import restored file to Outlook.

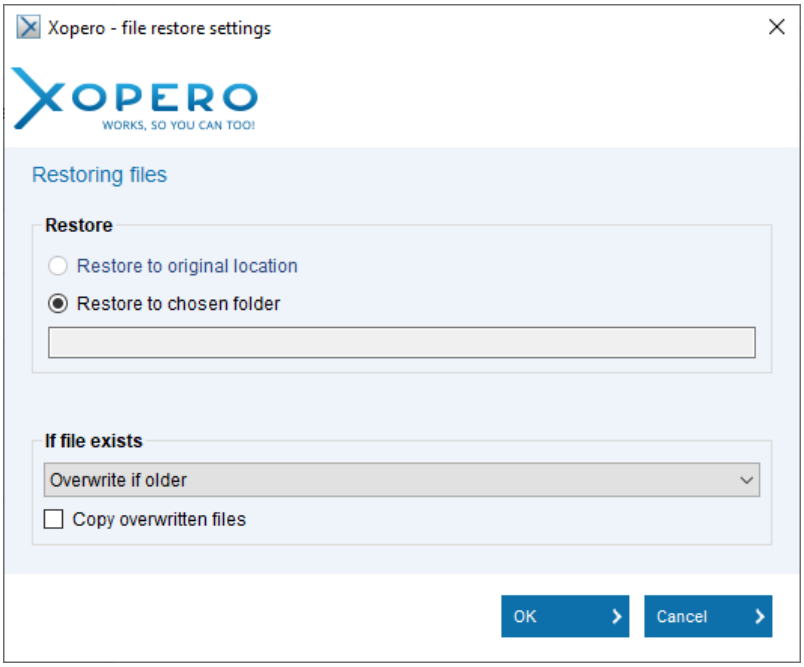
Restoring the data file from a backup

To download the Outlook data file run the Xopero application and go to the ***Restoring*** tab. All backed up data files will be available in the ***Outlook*** branch.



Expand the branch and mark the checkbox next to the file which has to be restored. Then click on the ***Restore selected*** button.

To restore previous version of the file right click on its name and from context menu select ***Show file versions***.



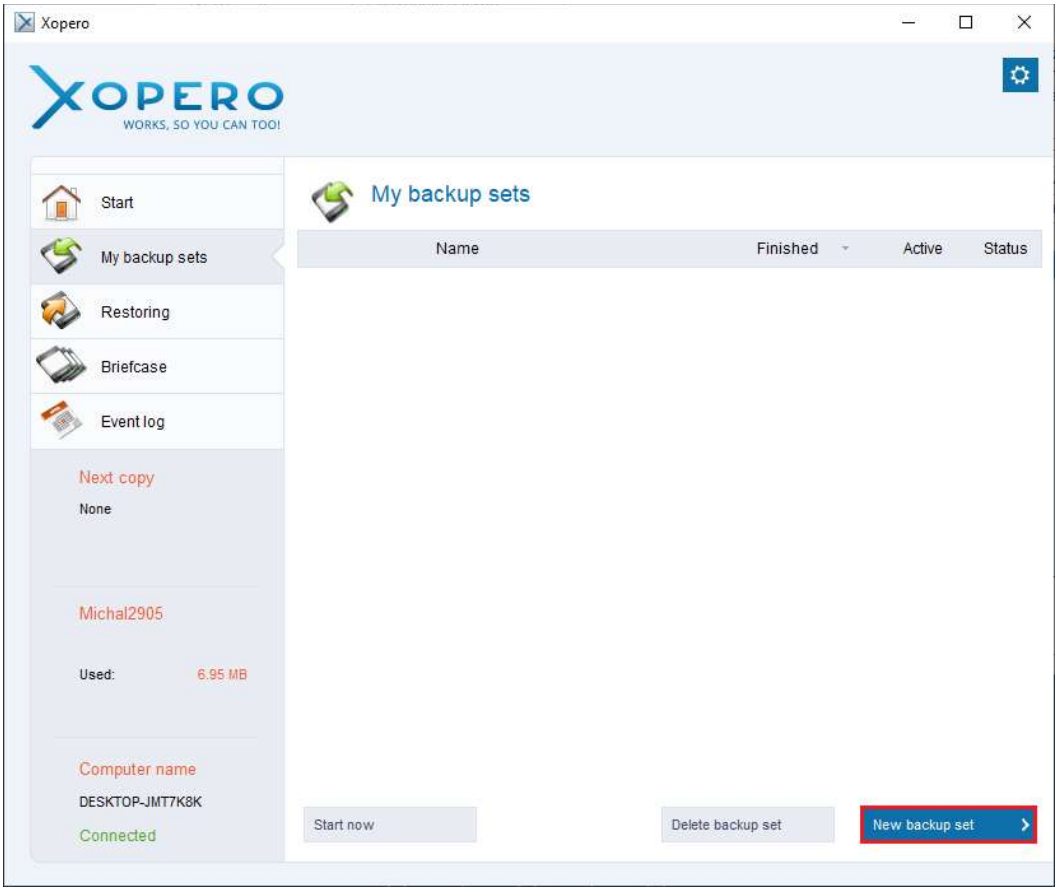
The file restore settings window will be displayed where you have to select the location where the backup file will be saved. From this directory it will be also imported to the Outlook.

HDD image backup

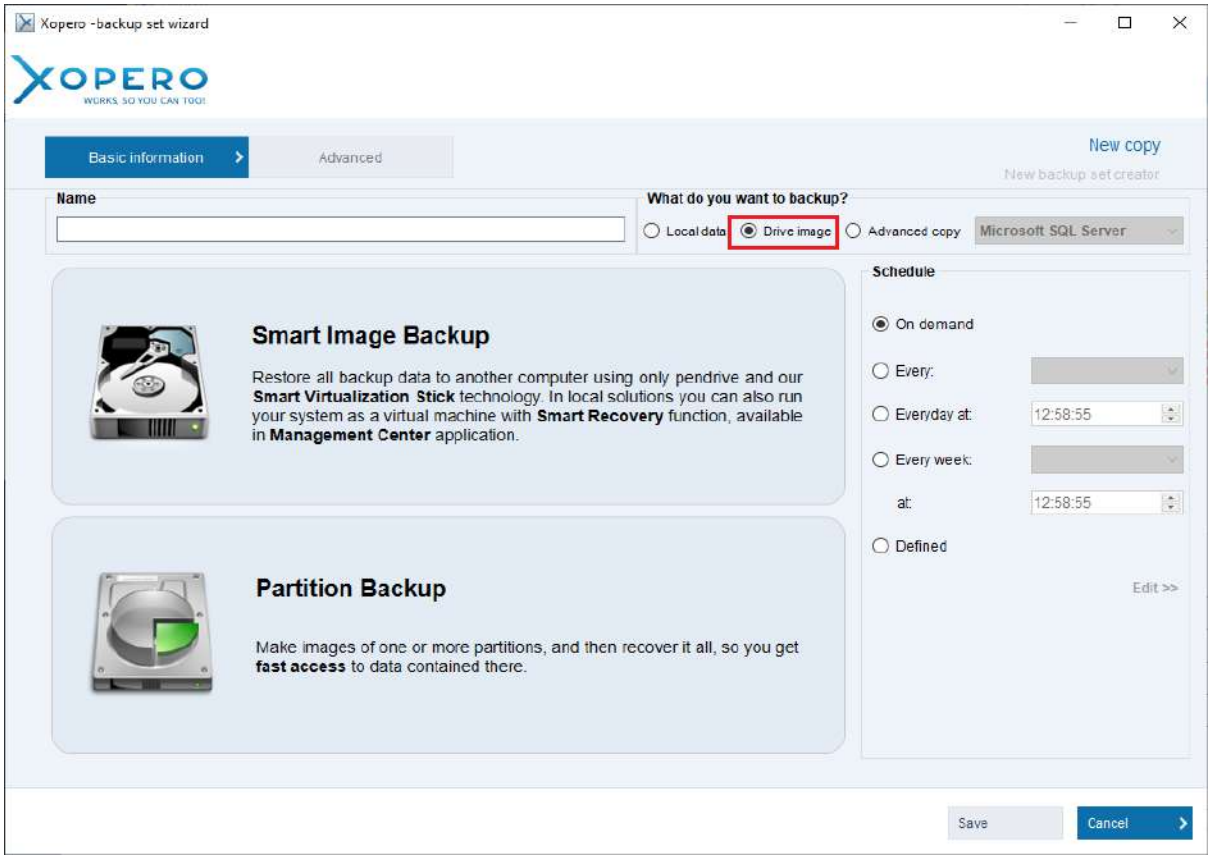
Creating and performing backup

Xopero application allows the user to backup entire physical computer disk by HDD Image backup. With this feature, if operating system fails, it is possibly to quickly restore without having to select a folders to backup and the launch of a virtual machine based on the whole image of the physical disk.

To create a HDD Image backup set, you need to open Xopero and run the ***Backup set***, wizard by clicking on ***New backup set*** button in ***My backup sets*** tab.



In the ***What you want to backup?*** field, you need to choose **Drive image** from the drop-down list. Remember to set the name for this backup set.

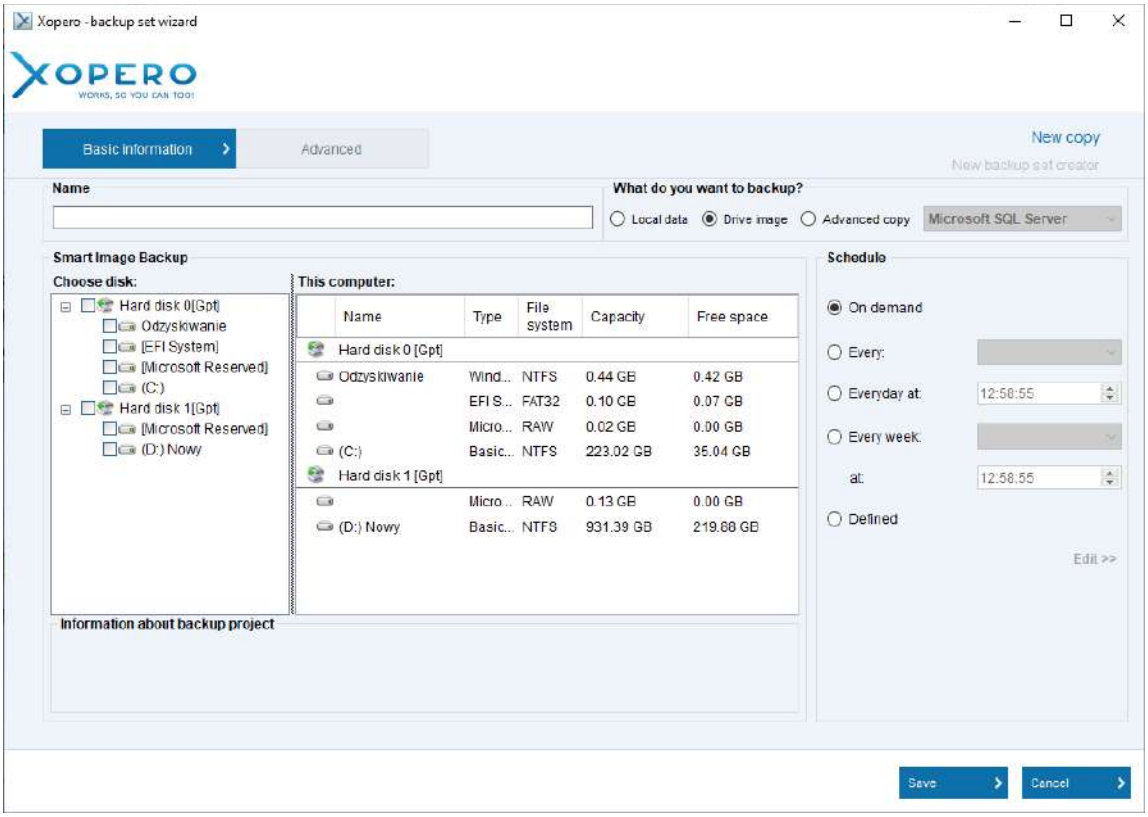


HDD image backup

Smart Image Backup option is dedicated for the drives with operating systems installed, it will allow you to restore all backup data to another computer using only pendrive or you can also restore your backup as a virtual machine in Smart Recovery function.

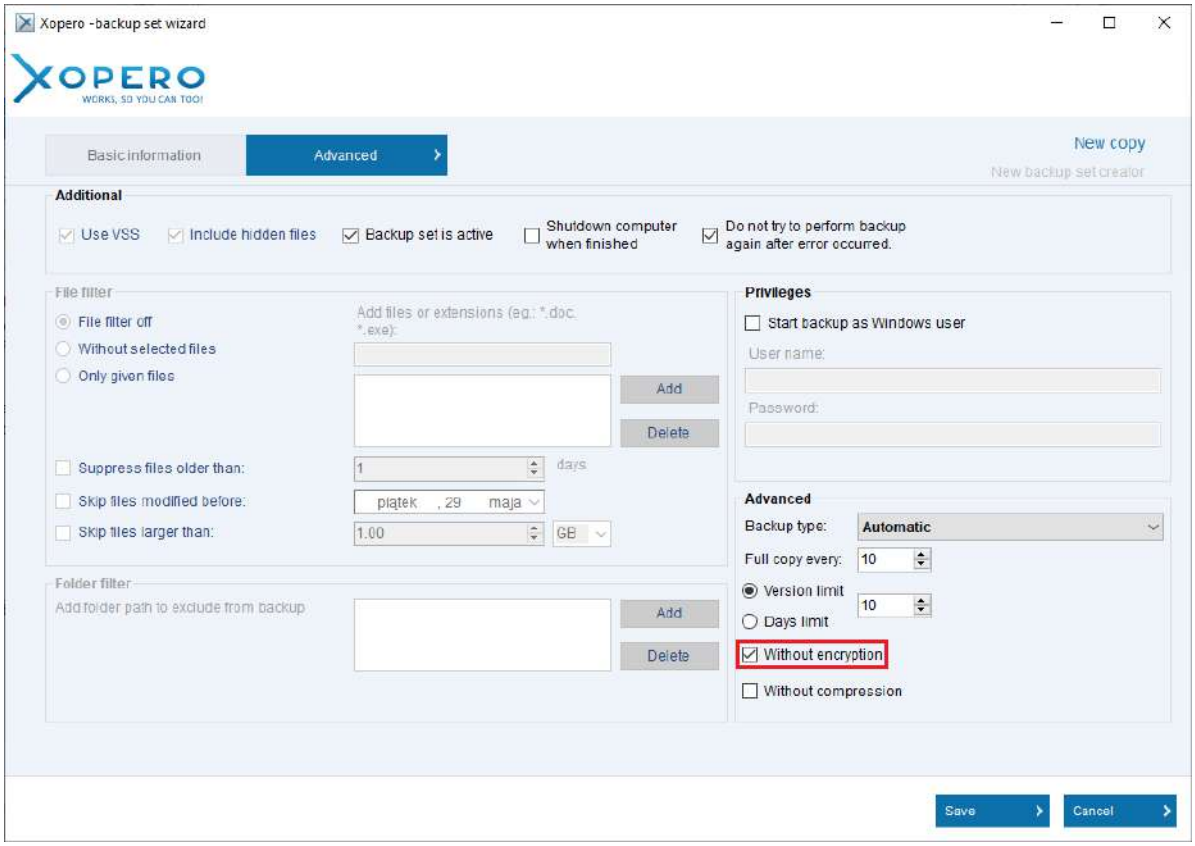
Partition Backup dedicated for drives, which doesn't contain OS, but only data, it makes image of one or more partitions and it lets you recover it all.

To create HDD image backup set, choose the type of backup and then decide, which disk/partitions will be included in it.



HDD Image Backup is available for Windows 7 systems and higher. In the current version of application only full system image will be always executed

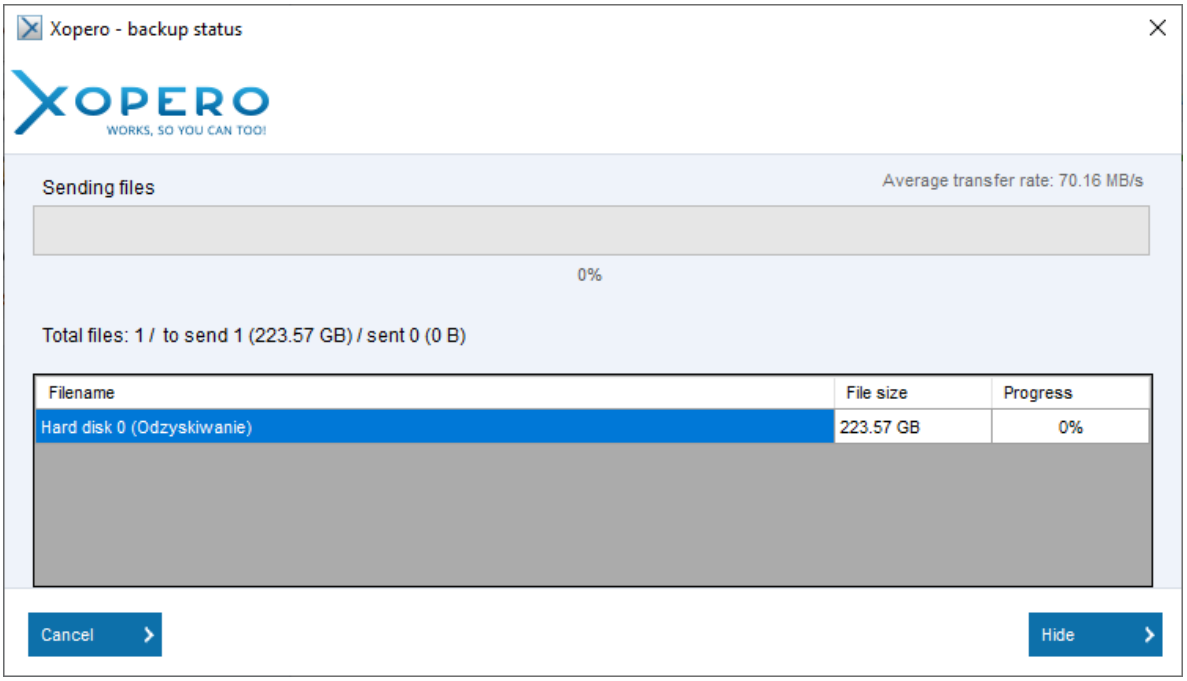
If user is using **custom encryption key** and would like to use the **Smart Recovery** feature in the future, then he should disable encryption process in the **Advanced** settings of the project.



Performing backup

Performing HDD Image backup start from preparing data to send in initialization process. At this time VSC shutter is created, it ensures consistency of data, which is copied from hard disk in backup process.

Backup project can be started manually by user or automatically, according to defined schedule.



This process can take few minutes, **the lack of progress bar during the initialization process does not indicate a malfunction of application**.

Restoring

There are 3 ways to restore HDD Image backup:

1. Smart Recovery:

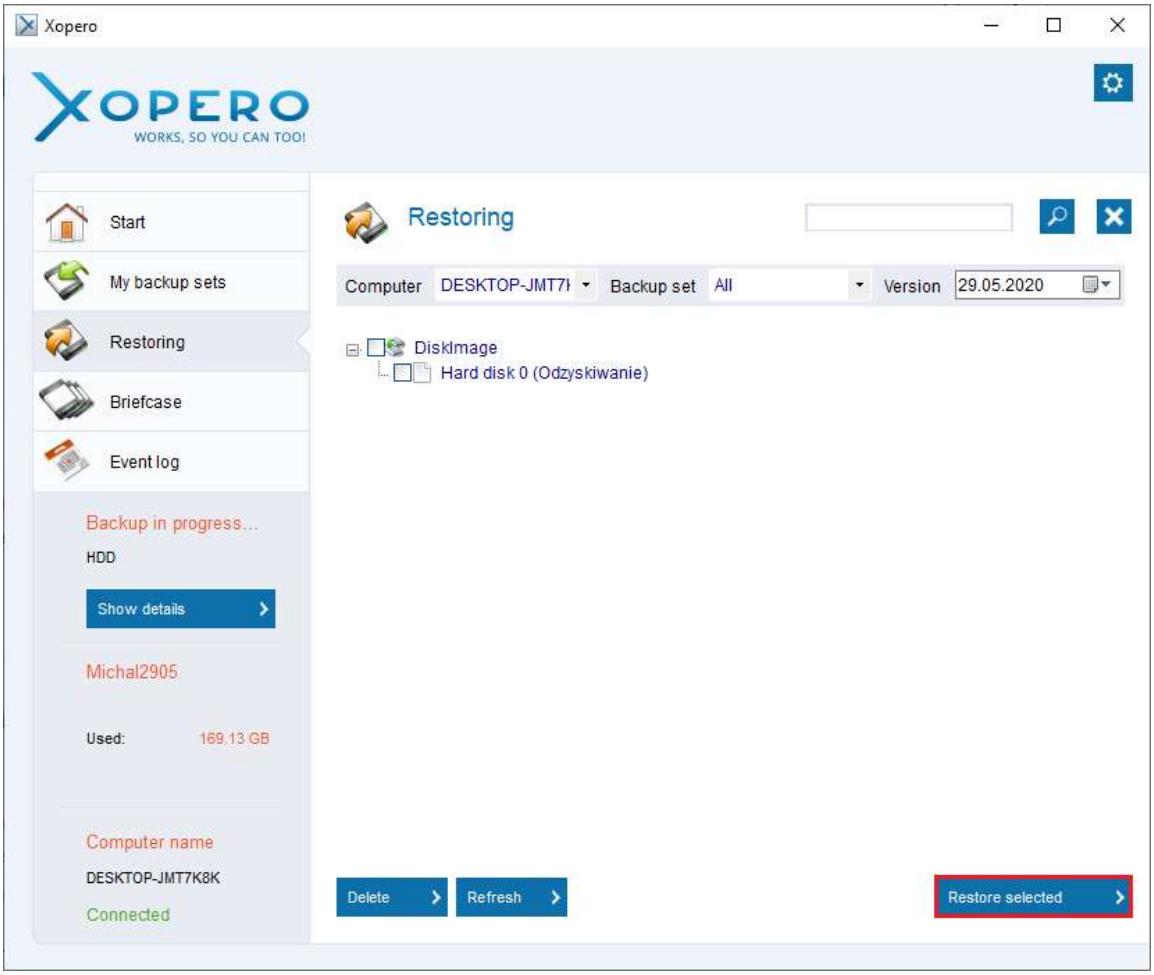
- if a partition with the system was backed up(as Smart Image Backup), then it is possible to run the system as a virtual machine in Management Center - an option is available for QNAP and Xopero Backup&Restore.

2. Smart Virtualization Stick:

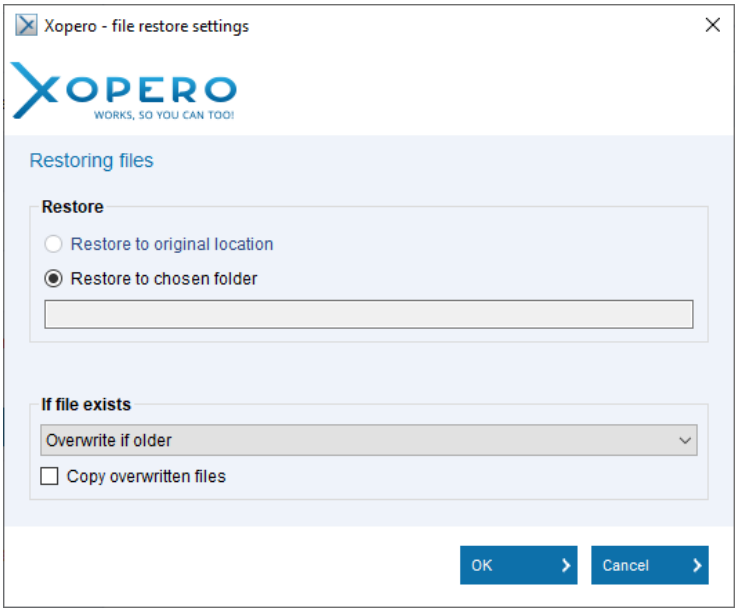
- the tool allows you to restore your disk backup to another computer (eg after a failure).

3. File restoration:

Backup HDD Image may be restored at any moment to users computer. To do it in Xopero agent, open ***Restoring*** tab and find catalog ***DiskImage*** at displayed list of files.

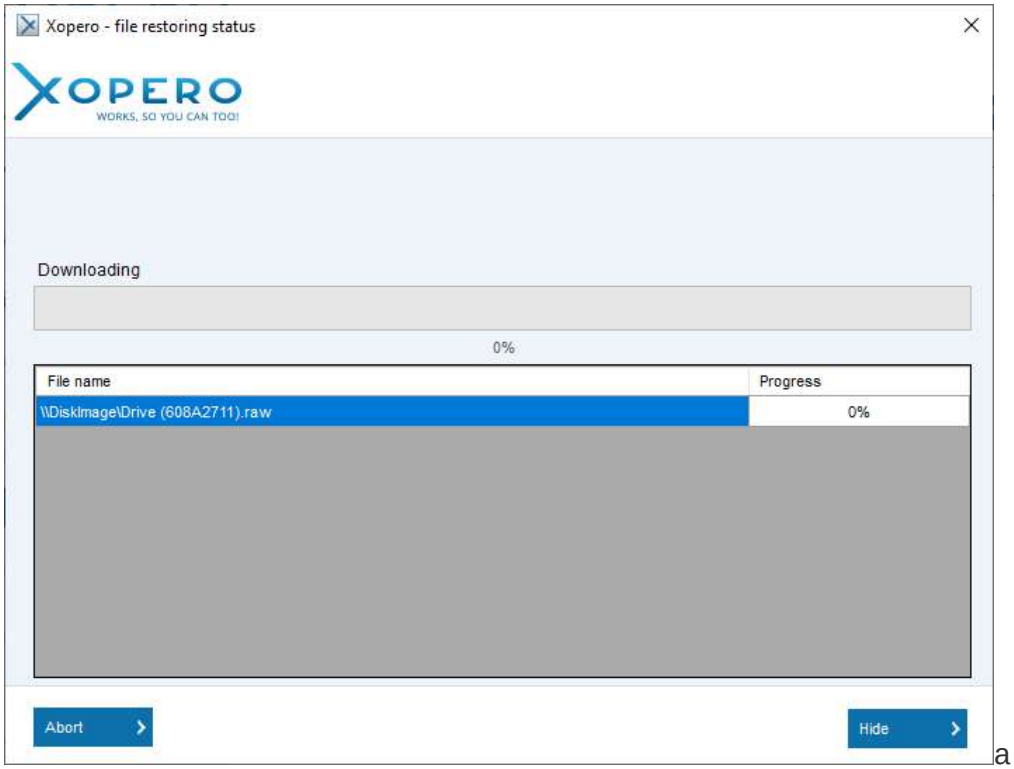


At next step select catalog correct to your computer name or choose specified files, which you want to restore.



After clicking ***Restore selected*** button ***File restore settings*** window will be displayed, at this point you have to select path to restore data and also define application behavior in case if restored file exist in the indicated location. Data restore will start by pressing ***OK*** button.

In current version of application, Image of HDD will take the same amount of space as capacity of hard disk.



a

After downloading backup files on users computer, use tools adapted for mounting RAW system images, for example OSFmount: Producer Website.

HDD Image backup performance

Specification

Host	• i5-7400@3.0GHz - 2 cores, • 3GB RAM - WIN7 x64, • HTTP connection, • HDD Drive.
Network	1Gb/s
QNAP	• XEON E3-1245 v3@3.4GHz, • 4GB RAM, • QTS4.3, • RAID6, • Xopero_3.9.789054_x86_64.qpkg

Backup

40GB data

	1.	2.
Type	Encrypted HDD Image backup on host - with compression	Unencrypted HDD Image backup on host - with compression
HDD (GB)	40	40
Amount of data	25,28	25,28
Data/HDD ratio	0,632	0,632
Time (minutes)	6,3	4,75

Speed (MB/s)	108,36	143,72
Data processing speed	68,48	90,83
Storage data size (GB)	12,4	12,4

Restore on QNAP

40GB data

	1.	**2.**

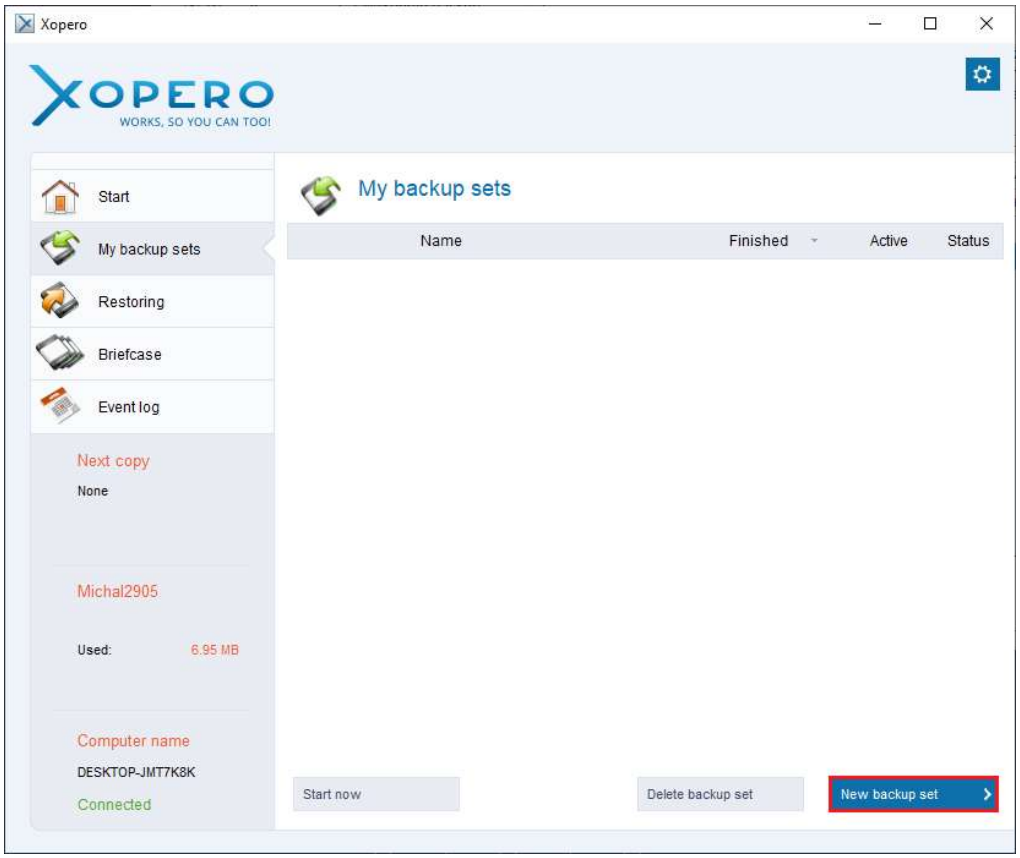
Type	Encrypted HDD Image restore on host - with compression	Unencrypted HDD Image restore on host - with compression
HDD (GB)	40	40
Amount of data	25,28	25,28
Data/HDD ratio	0,632	0,632
Time (minutes)	13,5	8,35
Speed (MB/s)	50,57	81,76

Data processing speed	31,96	51,67

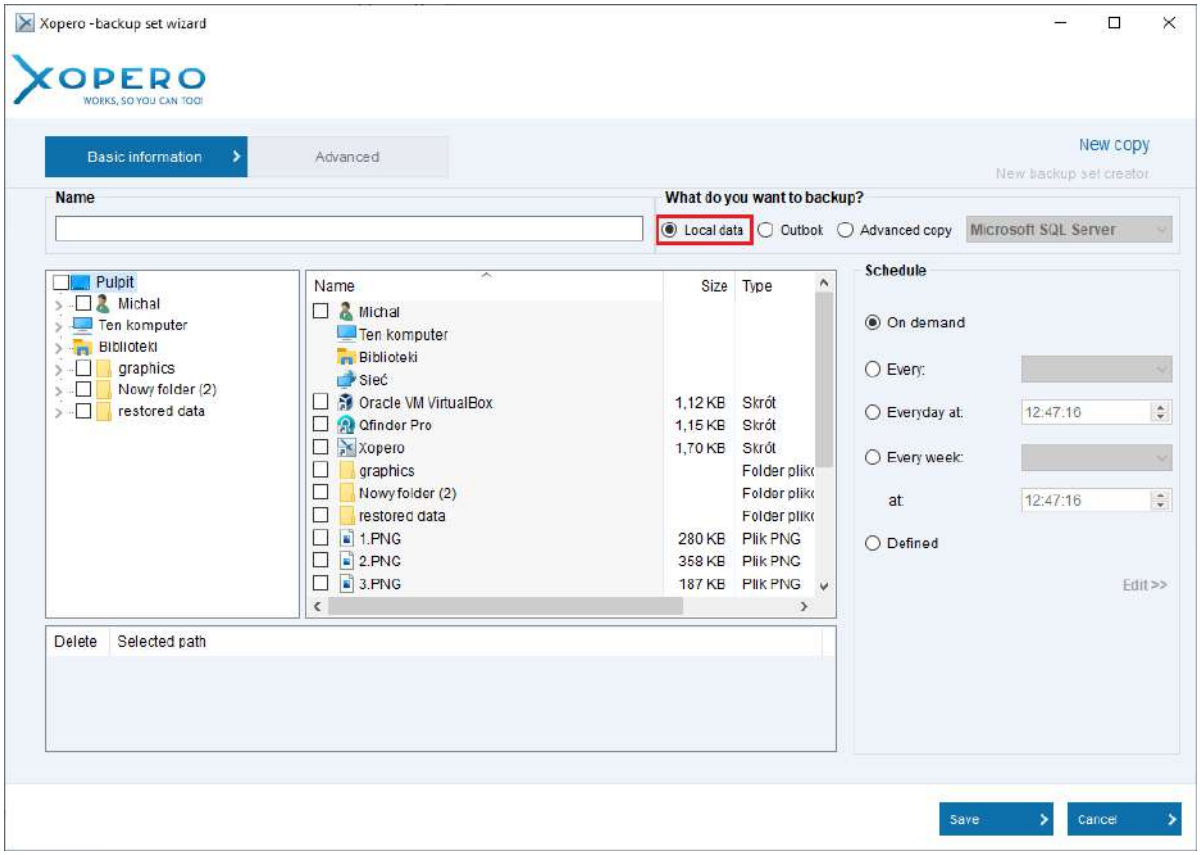
Local data backup

Creating and performing backup

To create the Local data backup set you need to open Xopero and run the Backup set wizard by clicking on "New backup" set button in "My backup sets" tab.



In the Backup set wizard select "Local data" in "What you want to backup"? field. Don’t forget to define the backup set name.

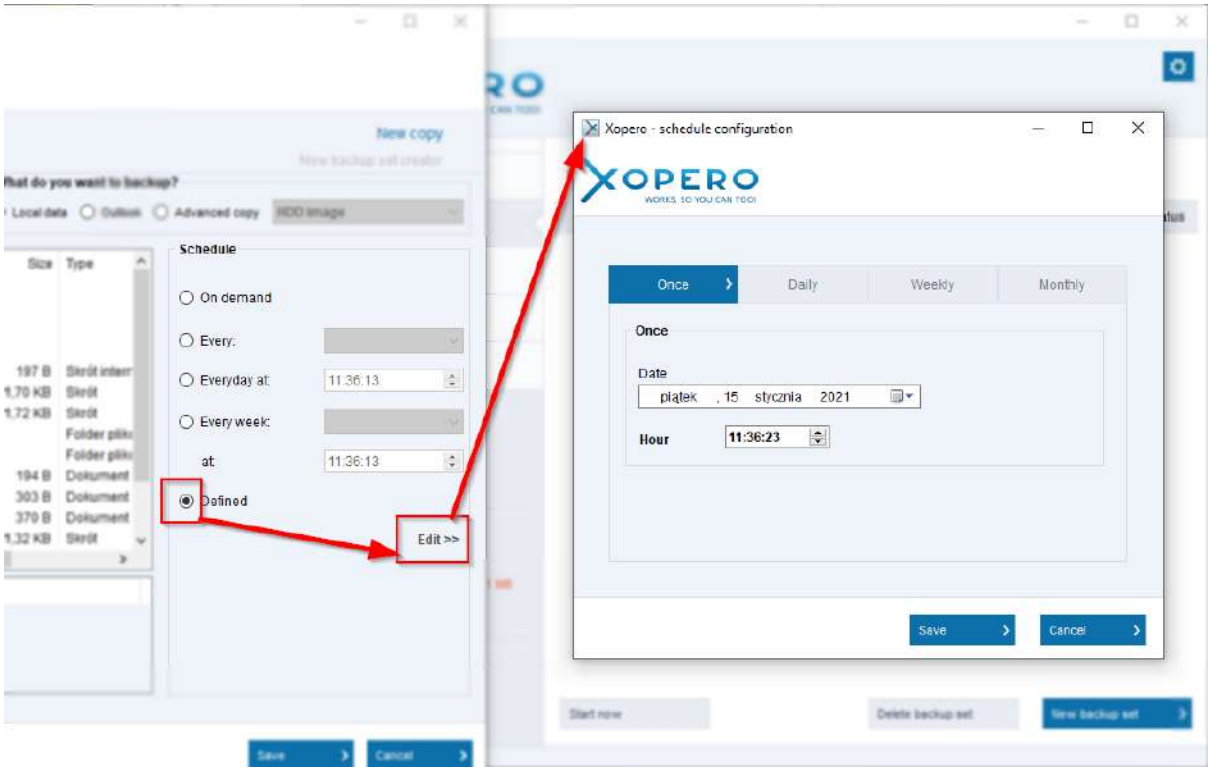


In the "Local data" panel what you need to do is to select files or catalogs to backup. Just mark checkbox next to the data you want to backup.

"Schedule" field is used for setting how frequently the backup plan will be performed:

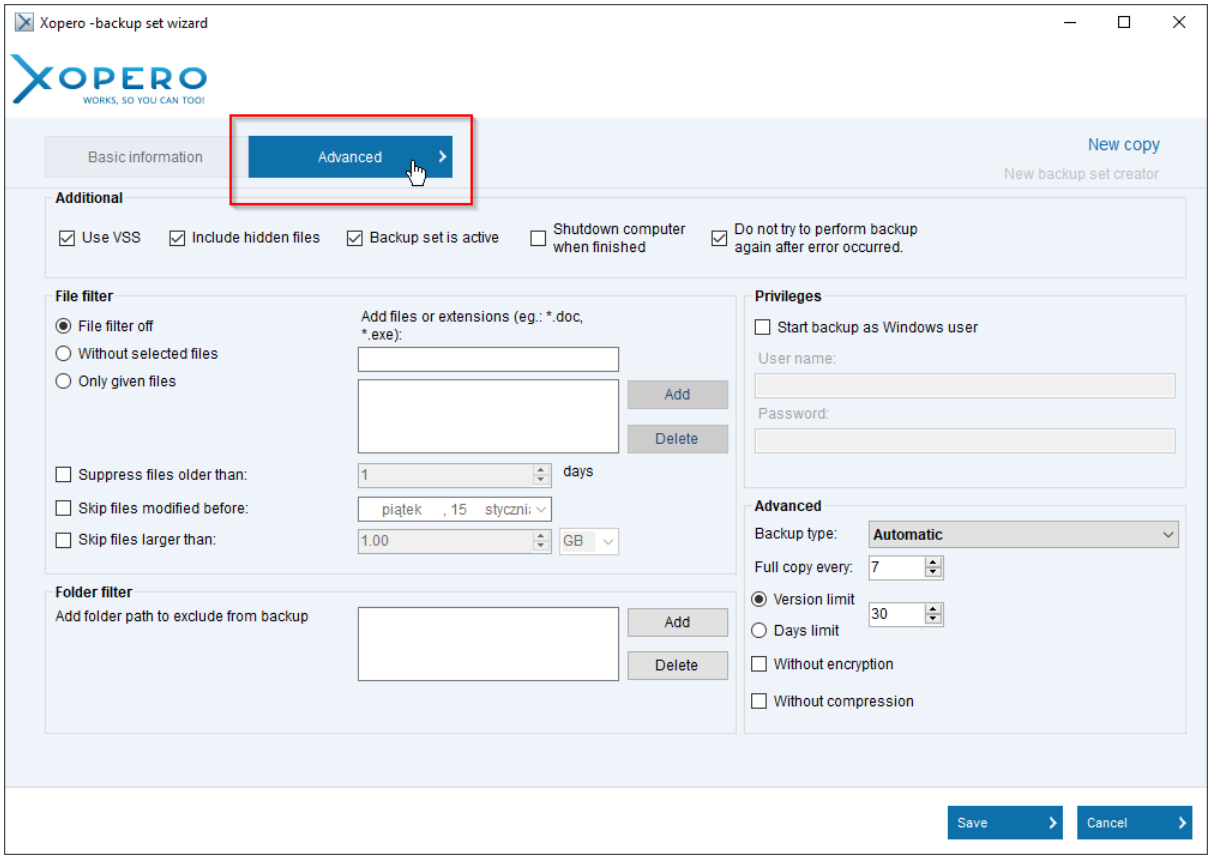
- "On demand" - user, by onself and extemporaneously decides at which moment backup will be induced - backup will be performed ony when user chooses "Start now" of chosen backup set
- "Every" - backup executed after specified time lapse
- "Everyday at" - backup will be performed every 24 hours, counting from specified hour
- "Every week" - backup executed every 7 days, at specified day of the week, and at certain time

- "Defined" - additional schedule options available after clicking on "Edit >>"



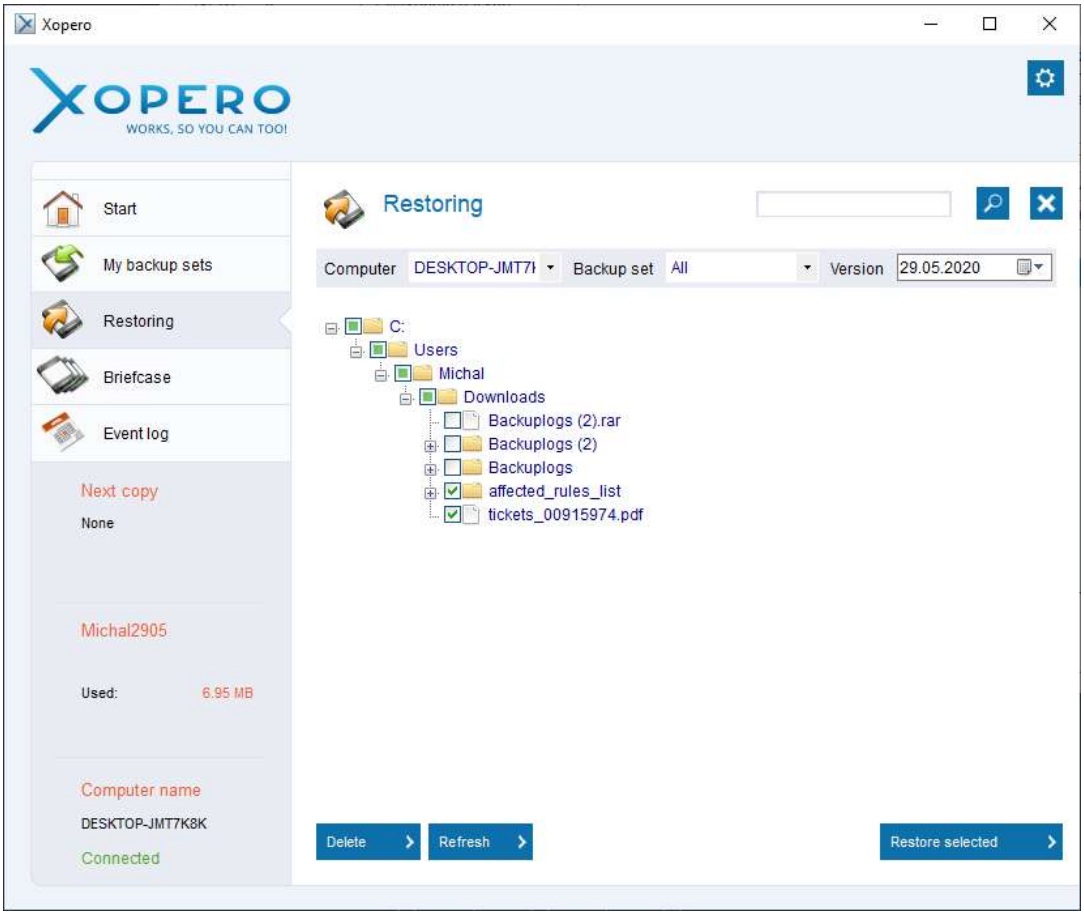
After that, click "Save" to create new backup set.

If or backup needs additional configuration, choose "Advanced" tab":



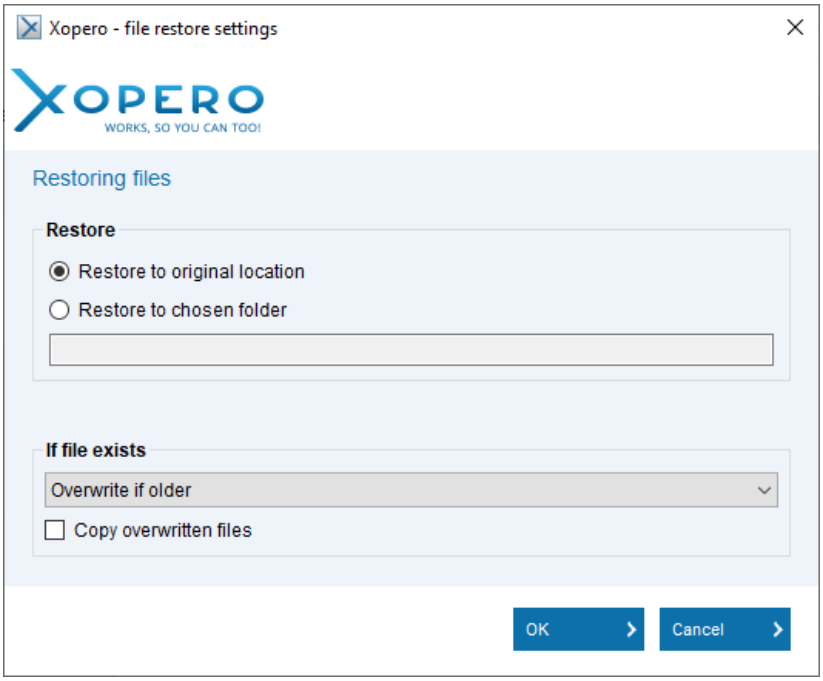
Restoring

To download the ***Local data*** files run the Xopero application and go to the ***Restoring*** tab. All backed up data files will be available in the partition name branch.

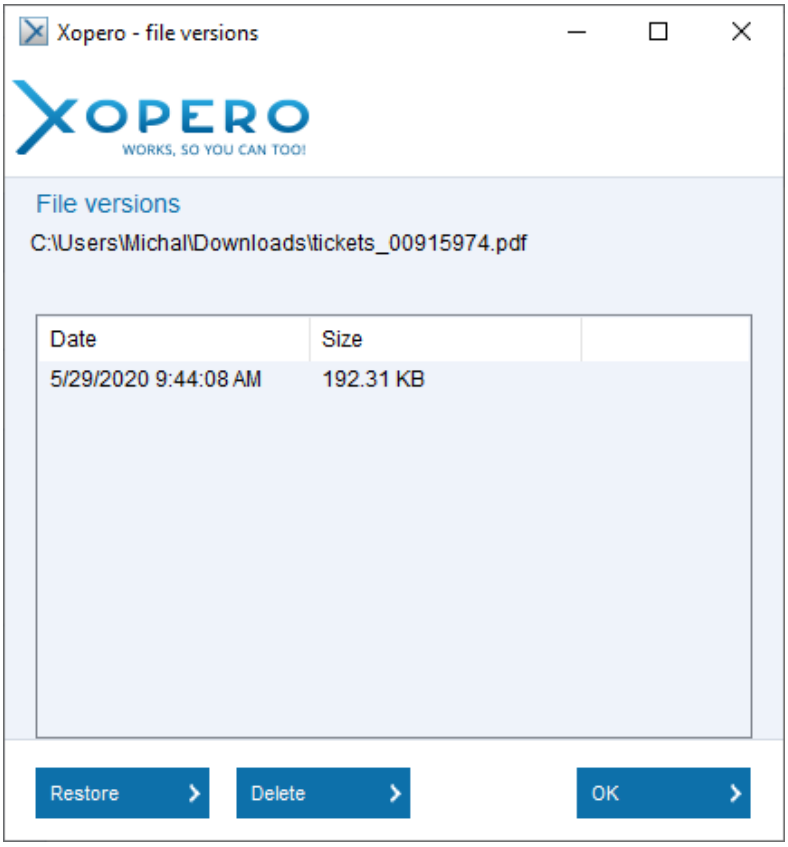


Expand the branch and mark the checkbox next to the file which has to be restored. Then click on the ***Restore selected*** button.

The file restore settings window will be displayed where you have to select the location where the backup file will be saved.



To restore previous version of the file right click on its name and from context menu select ***Show file versions***.



Pre/Post script mechanism

Creating scripts

The Xopero Pre/Post scripts are written in *PowerShell* and can be launched before or after the backup is created.

Xopero users can create their own scripts, that can be used during the backup process. Each script consists two files::

- *PS1* - a PowerShell script,
- *XML* - backup set configuration file.

Both files for each script should be copied into *Script* folder in Xopero installation location, for example: *C:\Program Files(x86)\Xopero\Script*.

PowerShell Scripts

A *PowerShell* script should have a PS1 extension and it can be launched before the backup is created (PRE script) or after the backup is finished (POST script). Pre scripts are mostly used to prepare data for being backed up. Post scripts can be then used to delete temporary files that were created by pre script for the time of backup.

Each of the *PowerShell* scripts must contain a *backup_path* parameter which indicates the location where files to backup are stored.

More information about PowerShell scripts can be found here:
https://technet.microsoft.com/en-us/scriptcenter/dd742419.aspx

XML file

To use a PowerShell script in Xopero, each PS1 file needs corresponding *XML*, where all the script information is stored, such as name of the script shown in application, its location and other parameters required to run the script.

The *XML* file's content has to be restricted in <*script*> tag, which has two parameters:

- *name* - the name of the script which will be displayed in application,
- *file* - path to the *PowerShell* script.

Each of user's parameter have to be written as a <*param* /> tag with parameters:

- *name* - name of the parameter, the same name preceded with *$* tag is used in the *PowerShell* script,
- *description* - name of the parameter displayed in the application,
- *help* - description of the parameter, that is displayed in the application when you click that parameter,
- *value* - default value of the parameter.

Sample scripts

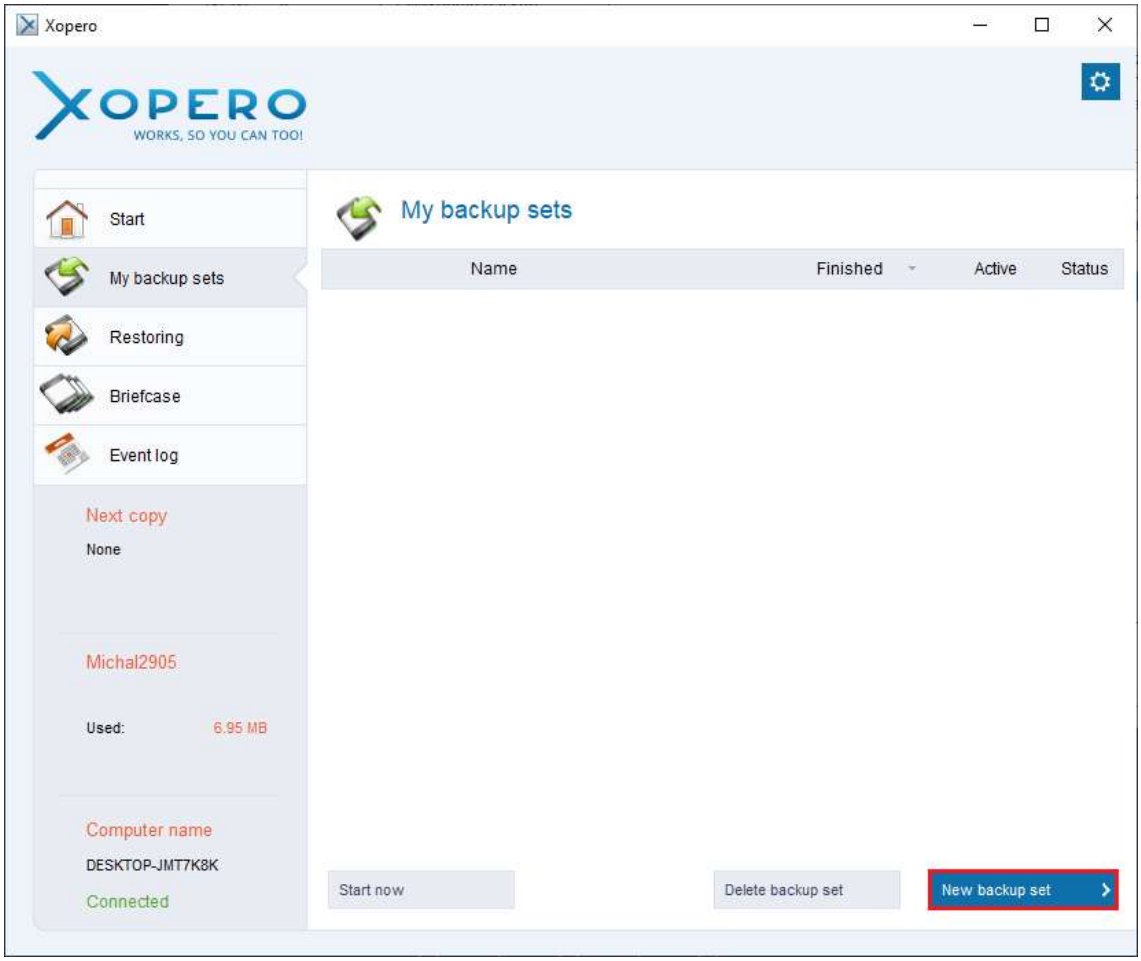
Some sample pre and post scripts can be found using below attachments:

- clean_backup_tmp.zip - pre script, creates an archive of selected folder, then backs it up,
- compress_db.zip - post script, deletes temporary files in given path.

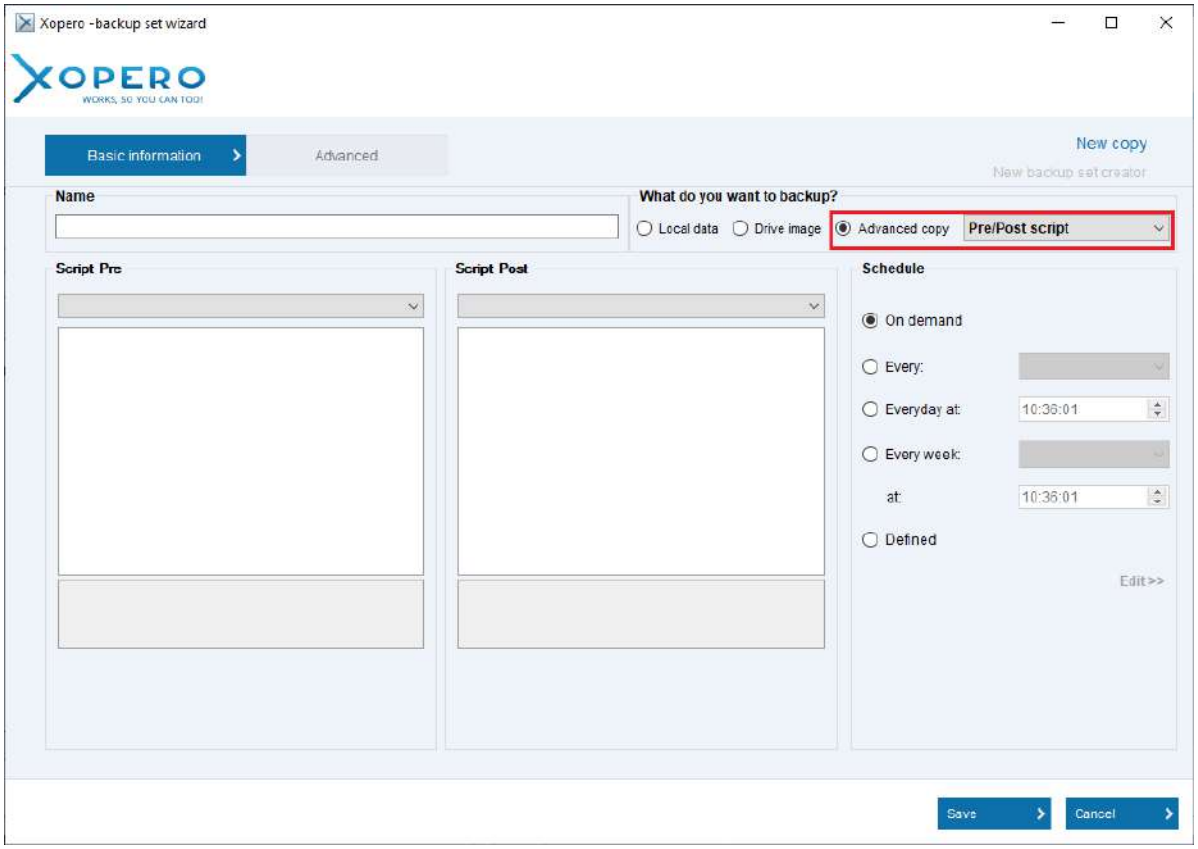
- compress_db.zip
  807 Bytes Download
- clean_backup_tmp.zip
  777 Bytes Download

Creating and performing backup

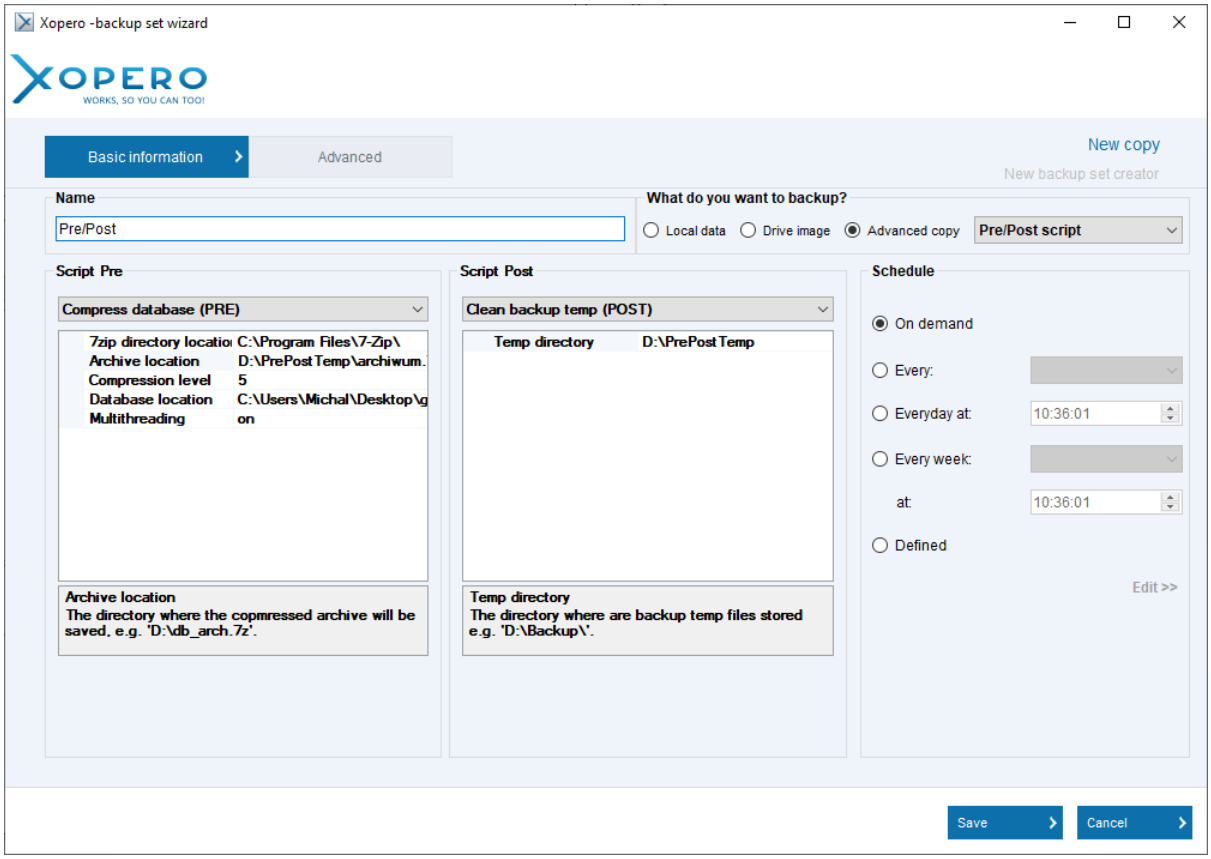
To create a backup set that uses pre and post scripts, you need to open Xopero and run the ***Backup set***wizard by clicking on *New backup set* button in *My backup sets* tab.



In the ***Backup set*** wizard mark ***Advanced copy*** and select ***Pre/Post Scripts*** from dropdown list. Don’t forget to define the backup set name.

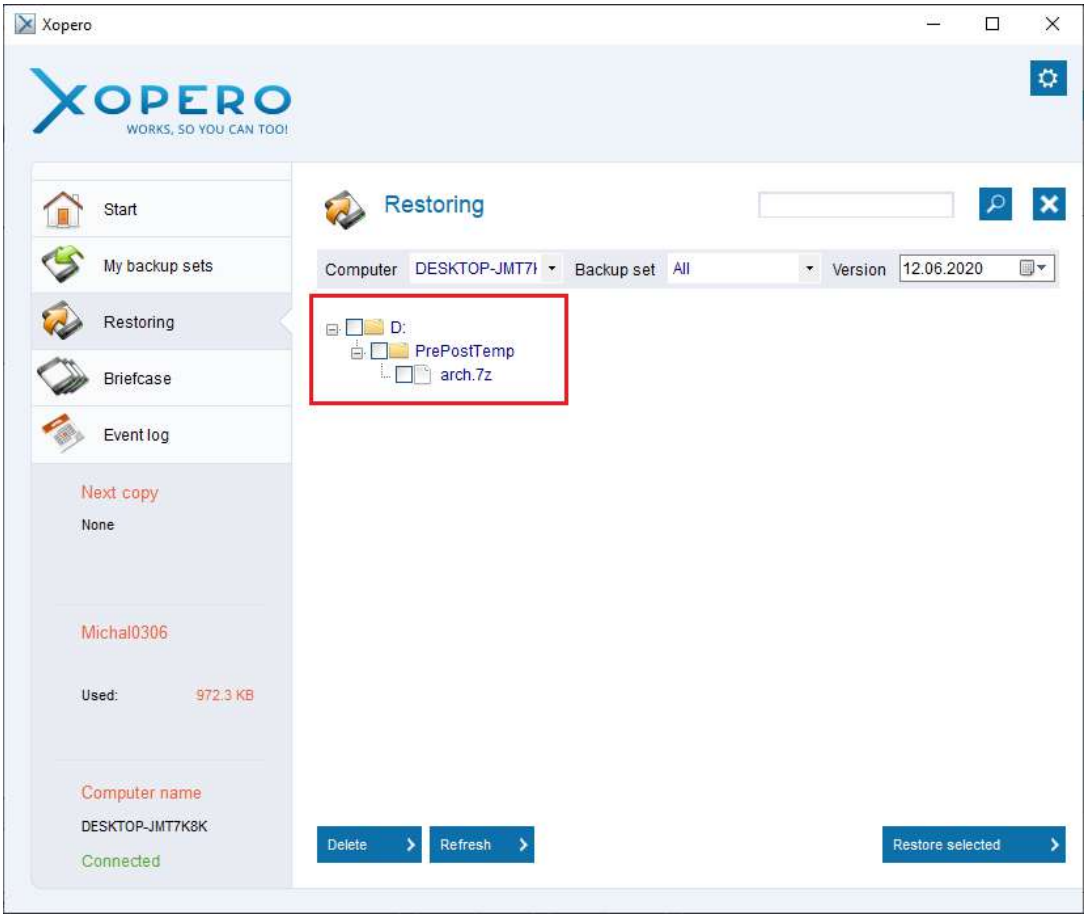


Next, you need to select scripts from the dropdown list, that will be run before/after backup is created and fill required fields.



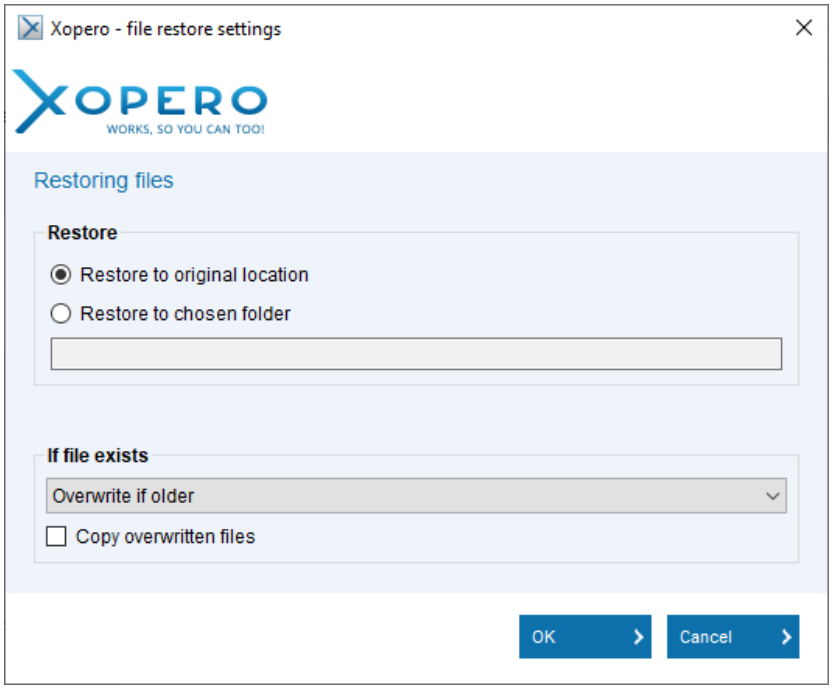
Restoring

To restore data that has been previously backed up by Pre/Post backup set, you need to open Xopero application, then go to *Restoring* tab. All the files that have been backed up, will be in location given by *backup_path* parameter.



In order to restore selected version of the database right click on its name and from context menu select ***Show file versions*.**

In the displayed file tree, you need to navigate to proper location and then check the field next to the files, you want to restore. When you click *Restore selected*, a settings window will be displayed, where you need to select destination and choose what the application shall do, if a file with the same name is present in that location.



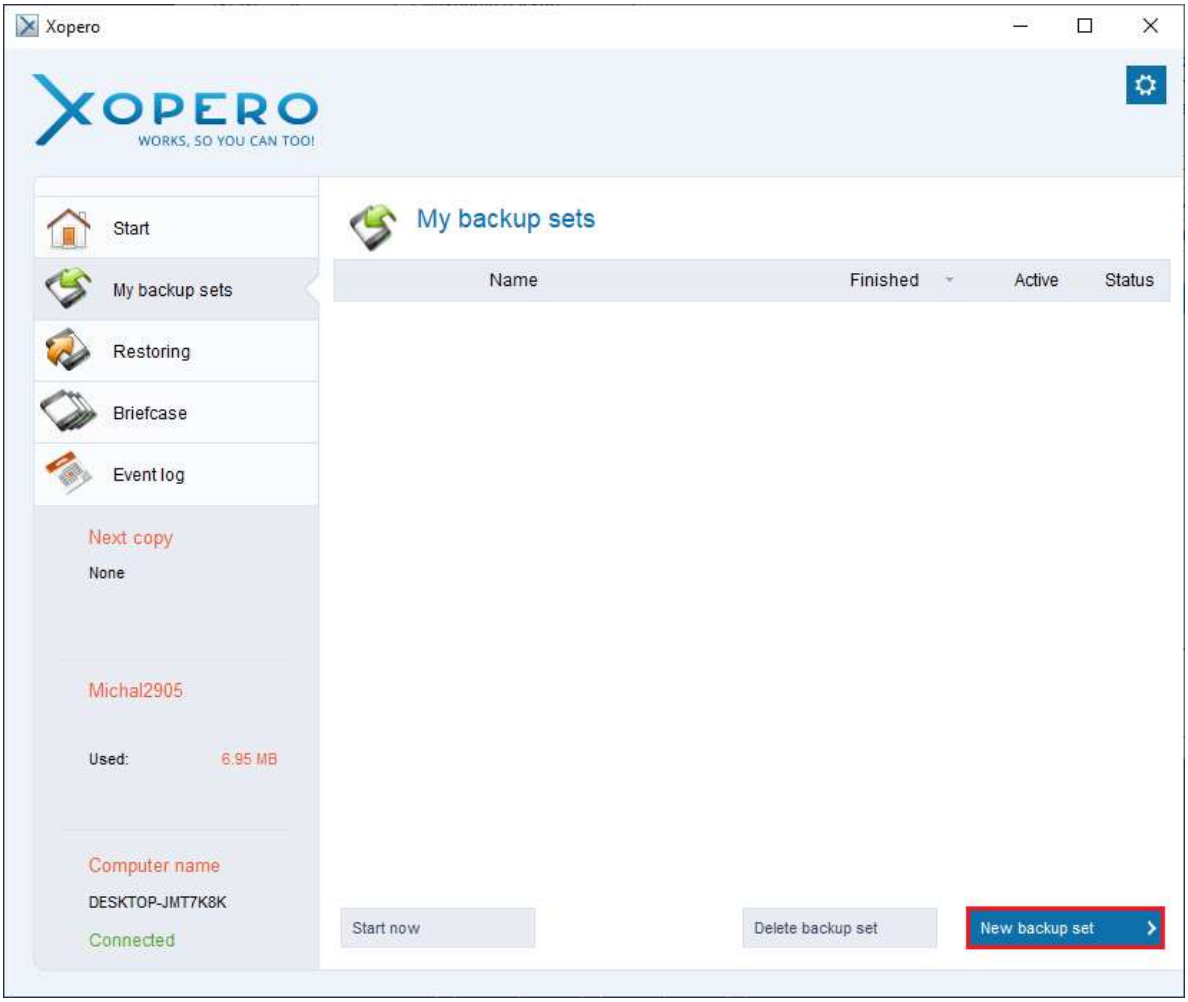
VMware environment backup

Creating and performing backup

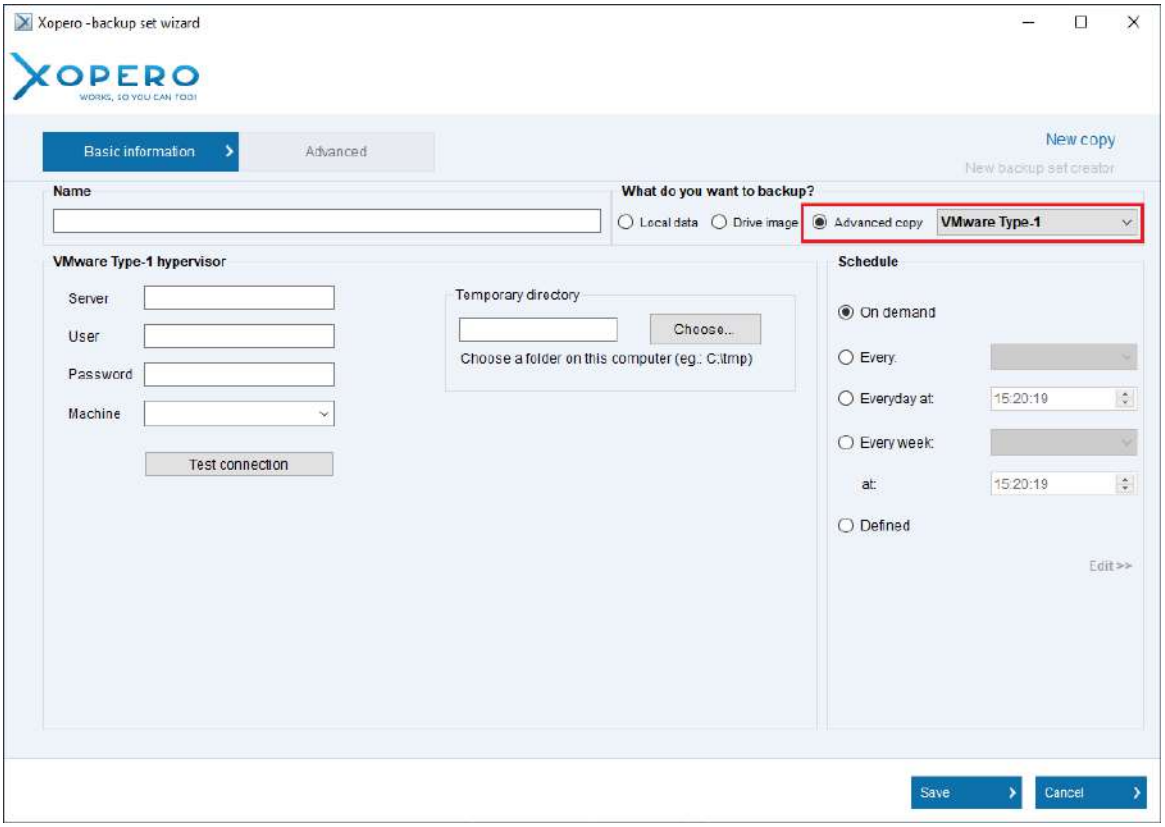
Xopero can make a direct backup of the virtual machine in VMware ESXi 5.0 or newer. Xopero also supports the free version of VMware ESXi.

Xopero doesn't support backup of VMware 6.7, 7.0 version and also VMware with cluster!

To create a VMware backup set, you have to launch a ***Backup wizard***, by clicking on ***New backup*** set in ***My backup sets*** tab.

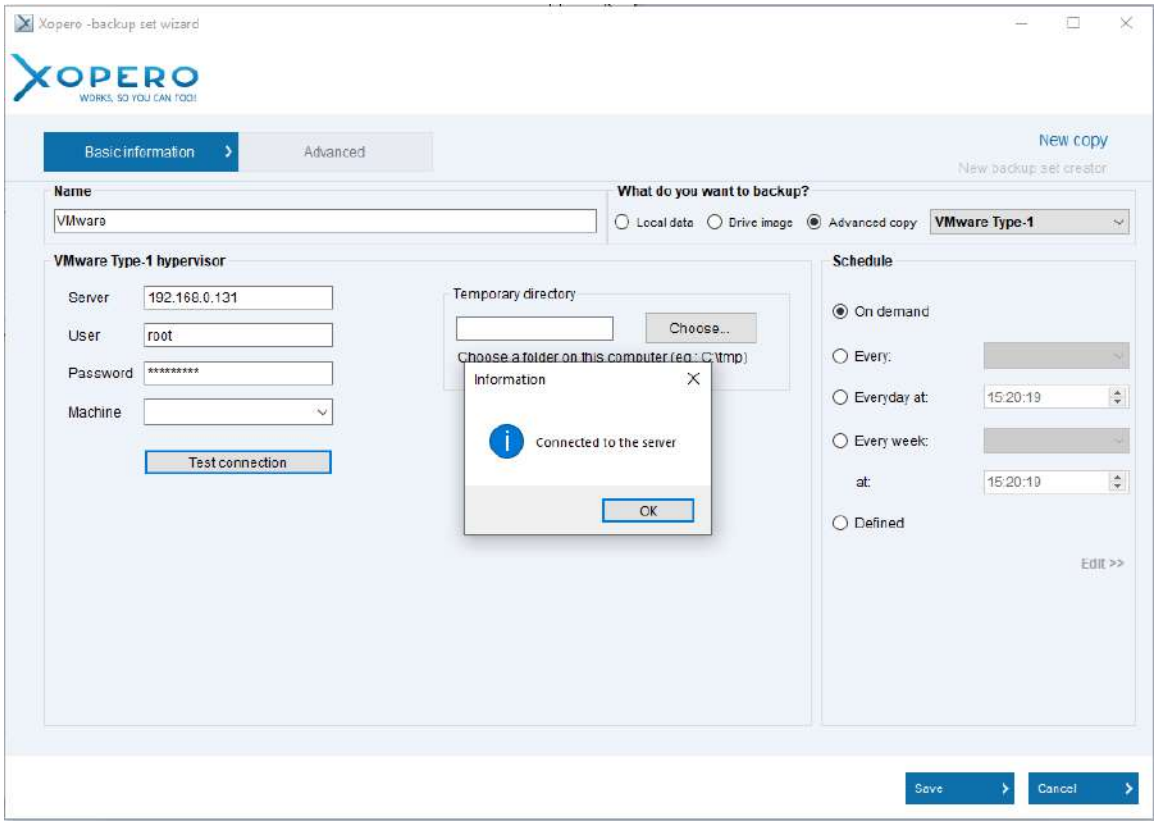


In the ***What you want to backup?*** field, you need to choose ***Advanced copy*** and then ***VMware*** from the dropdown list. Name this backup set.

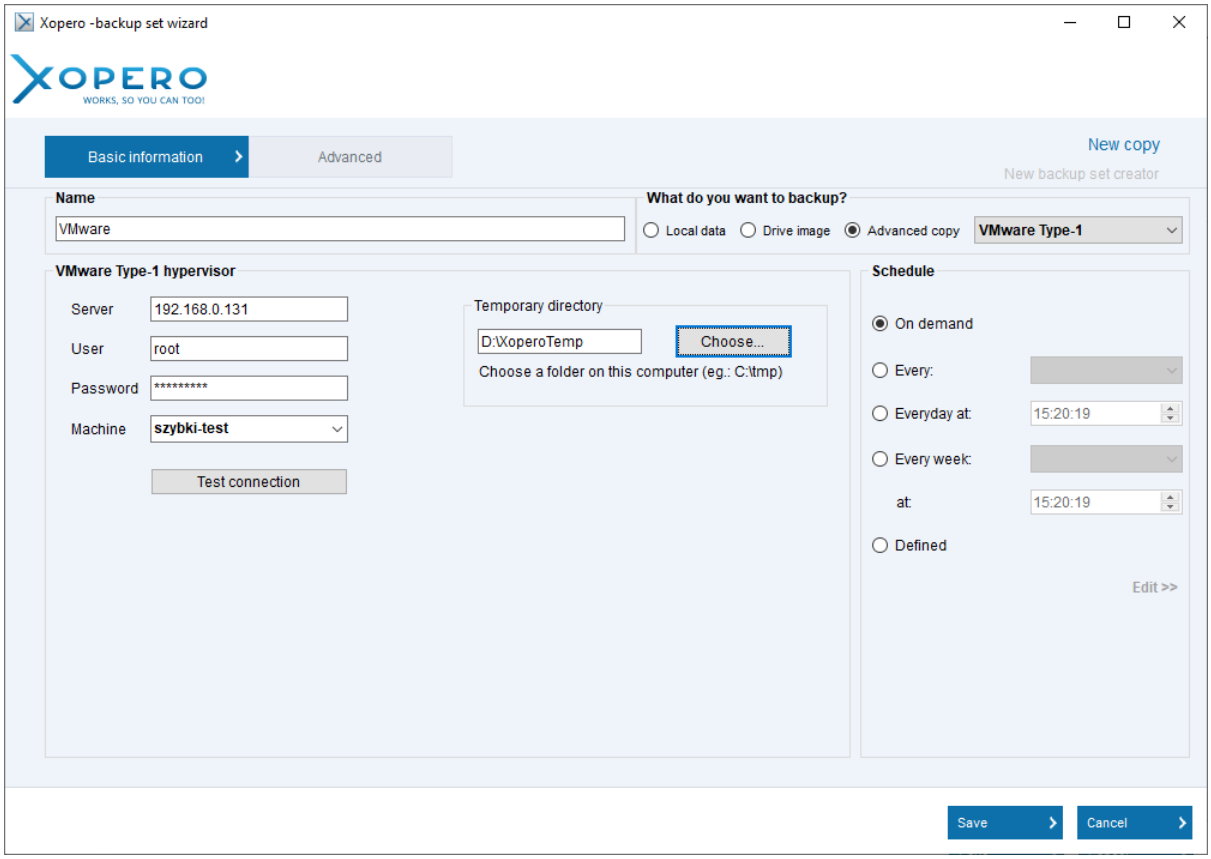


In the ***VMware Type-1 hypervisor*** filed, you have to define credentials for the hypervisor and choose a machine that will be backed up::

- **Server** - VMware hypervisor IP,
- **User** - VMware user with backup previleges,
- **Password** - password for entered user.



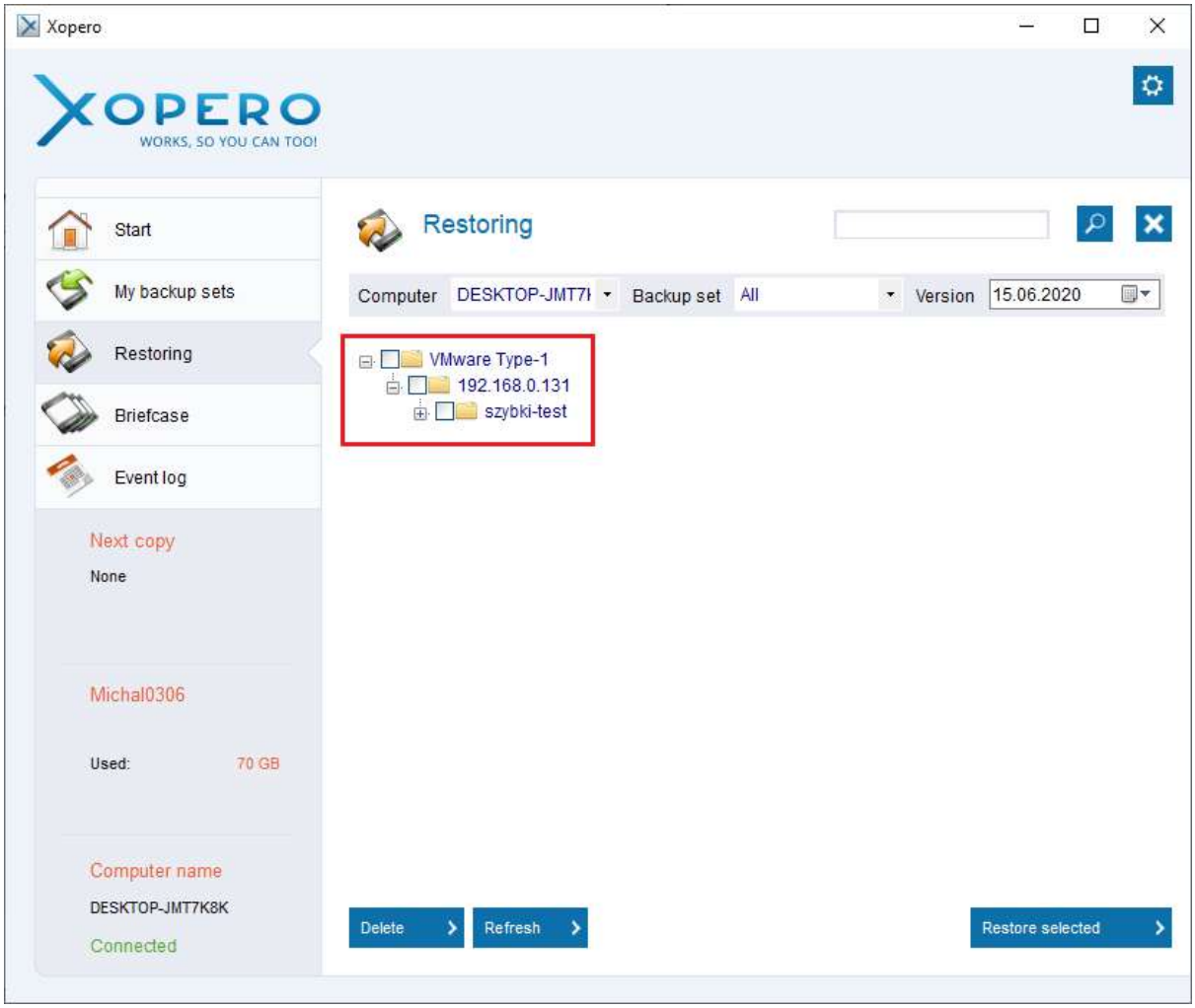
Valid credentials will allows Xopero to connect with the VMware – click ***Test connection*** and then choose one of the available virtual machines from the ***Machine*** dropdown list.



Finally, you have to define ***temporary directory***, where virtual machine temporary files will be saved before being send to the server. Temp folder must be located on the same machine, where Xopero has been installed. Click ***Save*** backup set and the backup will be created.

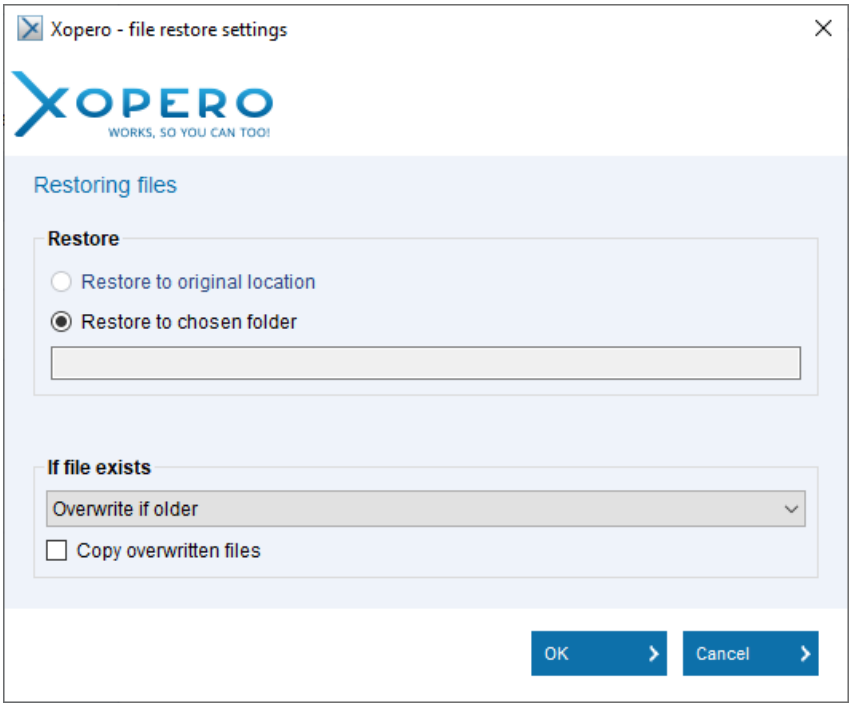
Restoring

To restore a VMware virtual machine backup, start the Xopero application and go to ***Restoring*** tab. All the virtual machines that have been backed up are available in the ***VMware*** branch.



Expand that Hyper-V branch and select the virtual machine that will be restored. Then click the ***Restore selected*** button.

A restore settings window will be opened, where you need to select a location, where VM files will be saved.

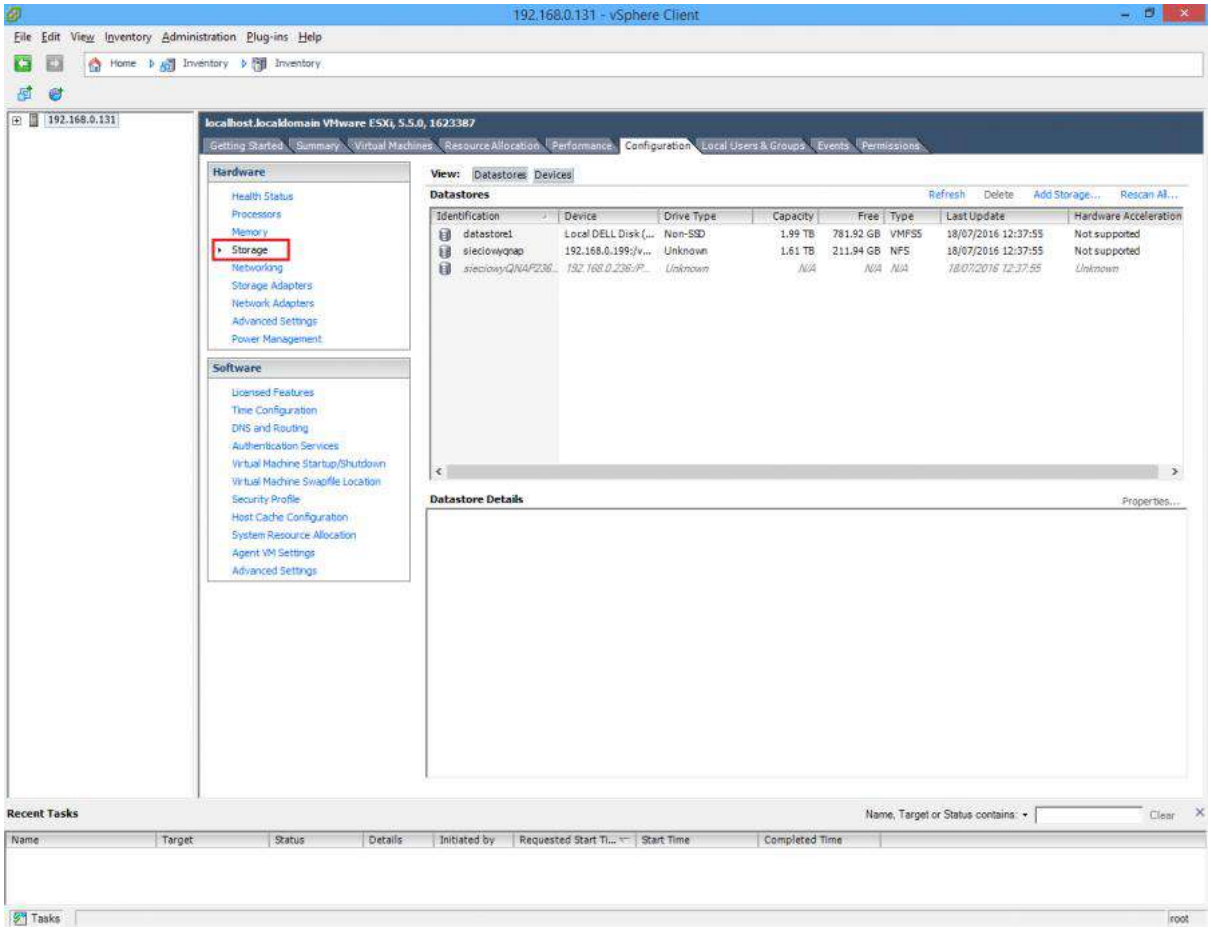


Restore Virtual Machine to a VMware ESXi host

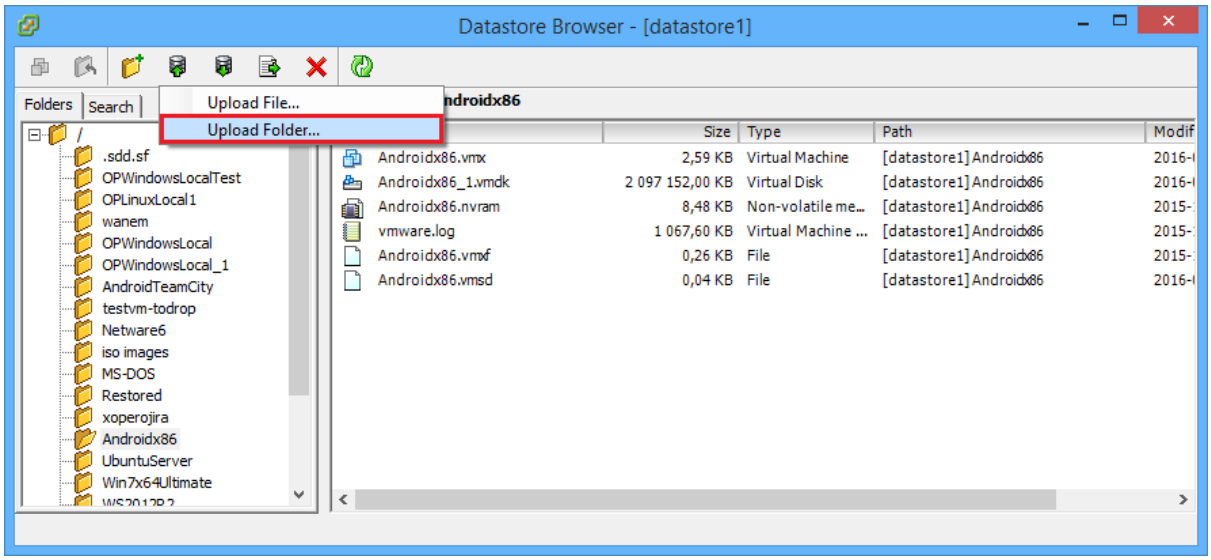
Downloaded virtual machine can be imported again the VMware ESXi server. To do that, you need to use *VMware vSphere Client*.

Below process has been described using VMware ESXi 5.5 Standard

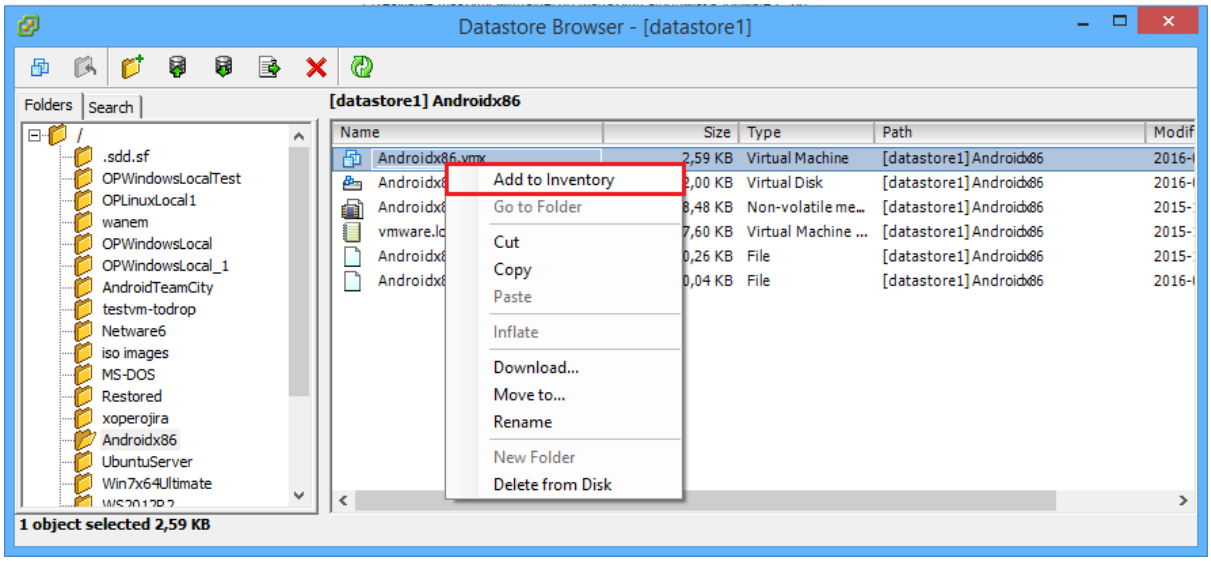
Using this tool, log into VMware environment and go to *Configuration* tab. In the *Hardware* menu, that is available on the left side of the window, select *Storage* – you should see all the defined datastores.



Right-click the selected datastore, where the machine will be uploaded, and choose *Browse data*. In the window with datastore content, click the icon visible on below screenshot and select the folder, where previously restored machine is saved. It will place the VM's files on the selected VMware datastore.



After uploading the VM files to the datastore, in the opened window go to the folder and find the main configuration file of that machine wth the **.vmx* extension. Right-click that file and choose the *Add to Inventory* option. After that the machine will be imported. You can now start that machine on VMware ESXi host.



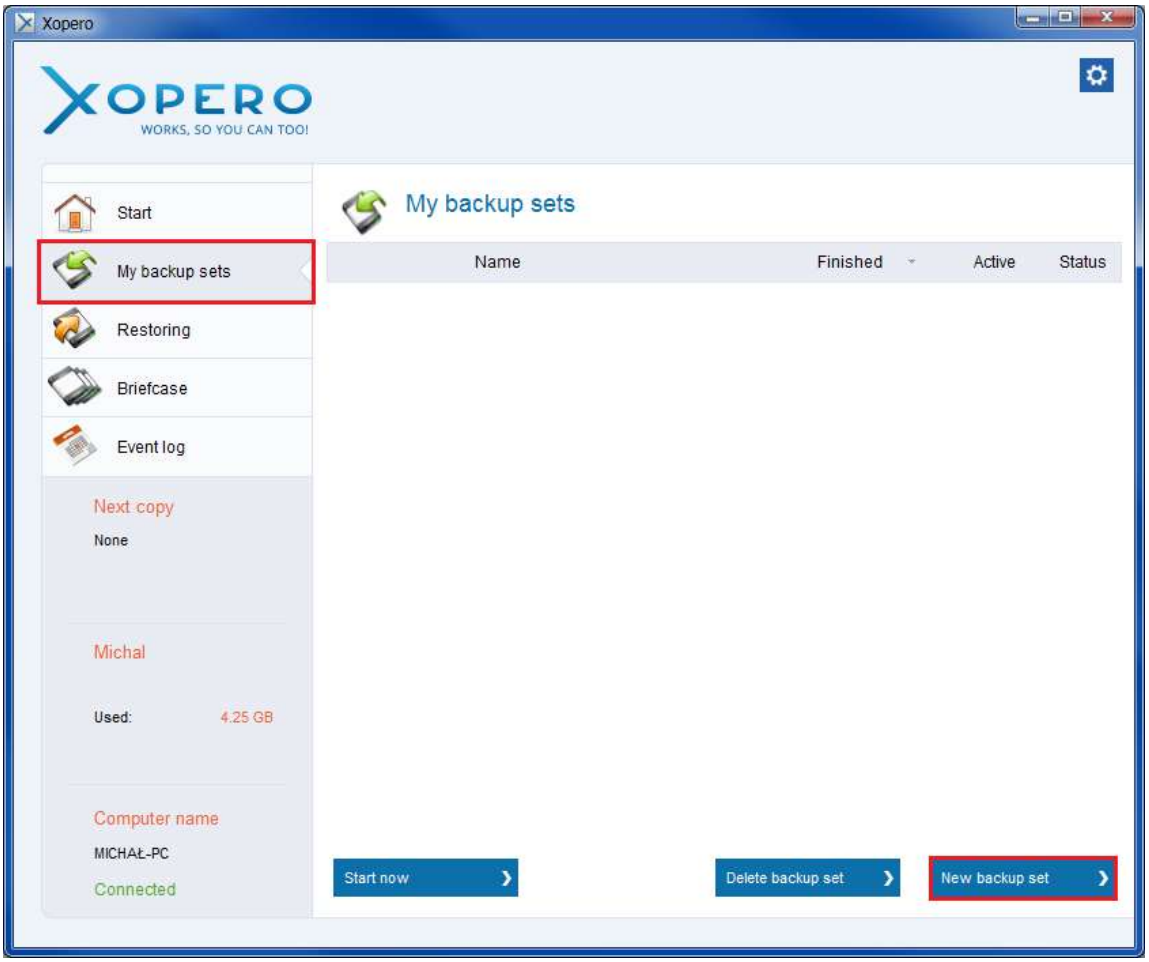
System State/VHD backup

Creating and performing System State backup

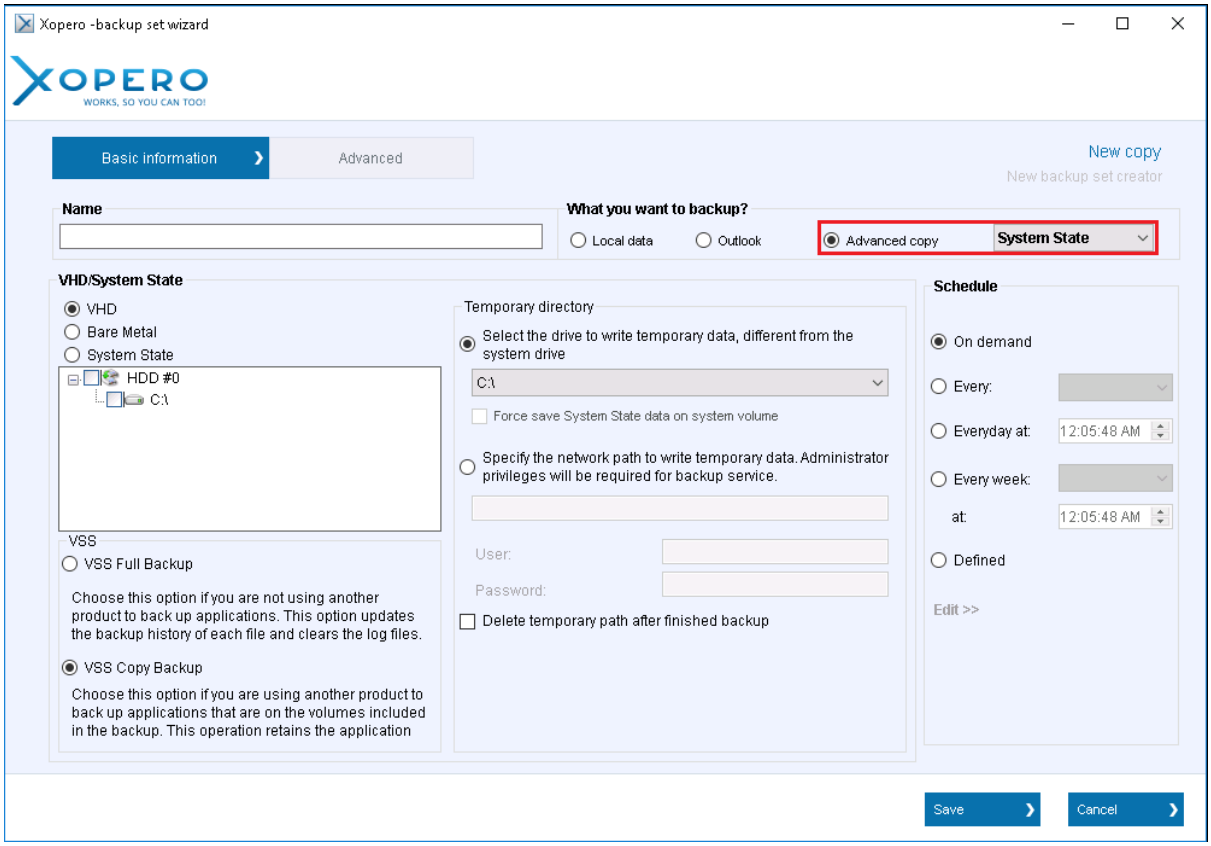
By System State and VHD backup Xopero allows user to backup whole system with configuration, critical data and also partitions specified by user.

In case of operating system breakdown, there's a possibility to quick restore of computer, without losing important data and necessity to reinstall or configuration of system.

To create the System State backup set, in client application, you should run the ***Backup set*** wizard by clicking on ***New backup set*** button in ***My backup sets tab***.



In the Backup set wizard mark ***Advanced copy*** and select ***System State*** from dropdown list. Remember to define the backup set name.



Backup System State

To create the System State backup set, you need to choose ***System state*** option in ***Backup type*** field.

System State backup consists of perform backup of system registry, Active Directory, databases, system certifications, SysVol(contains network log in scripts, users log in for domains, group policy and files replication service) and also IIS Metabase(which stores information about Microsoft internet services in internal database).

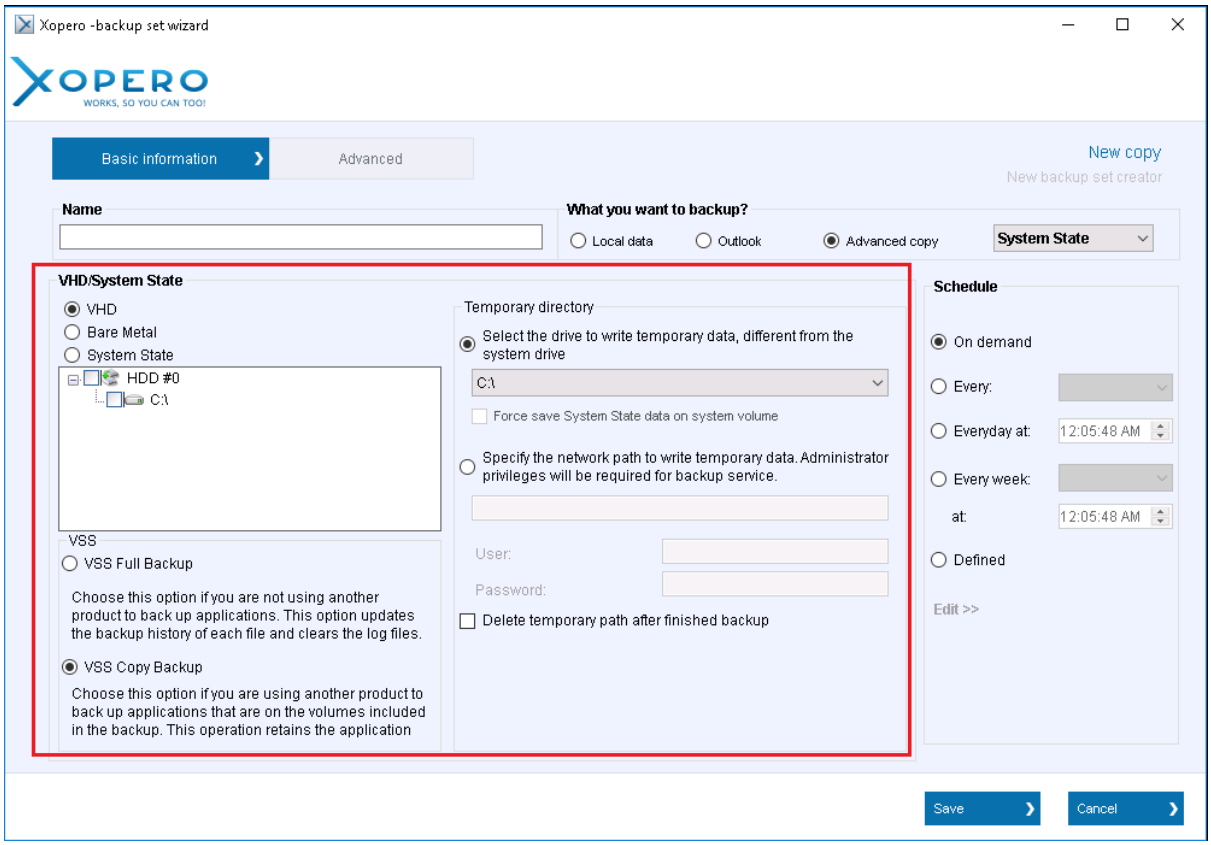
Backup System State is available only for Windows Server 2008 or newer

To properly perform backup System State you have to install Windows Server Backup Features. Information about installation of this function are here: https://technet.microsoft.com/library/cc732081.aspx

Now user has to choose localization to write temporary data between:

- **Local discs** - it is necessary to select the partition, different from the system and other partitions, which contains data for VHD backup.
- **Network path** - there's a possibility to write temporary data on network path defined by user. In this case it is important to give the service privilege of system Windows user. This option is available only for Windows operating systems with version higher than home and also for Windows Server systems.

If you choose network path as a temporary data location, it is required to give the service privilege of system Windows user. This user must have access to selected network location and administrator rights.



Data specified by user will be saved in temporary location as disc image in VHDX format.

If you check ***Delete temporary path after finished backup***. option, created System State file will be automatically deleted. Otherwise, it will stay in selected network path, what means that it can be used as local copy.

To perform System State backup properly it is necessary to give Windows user privileges to the service.

Performing backup

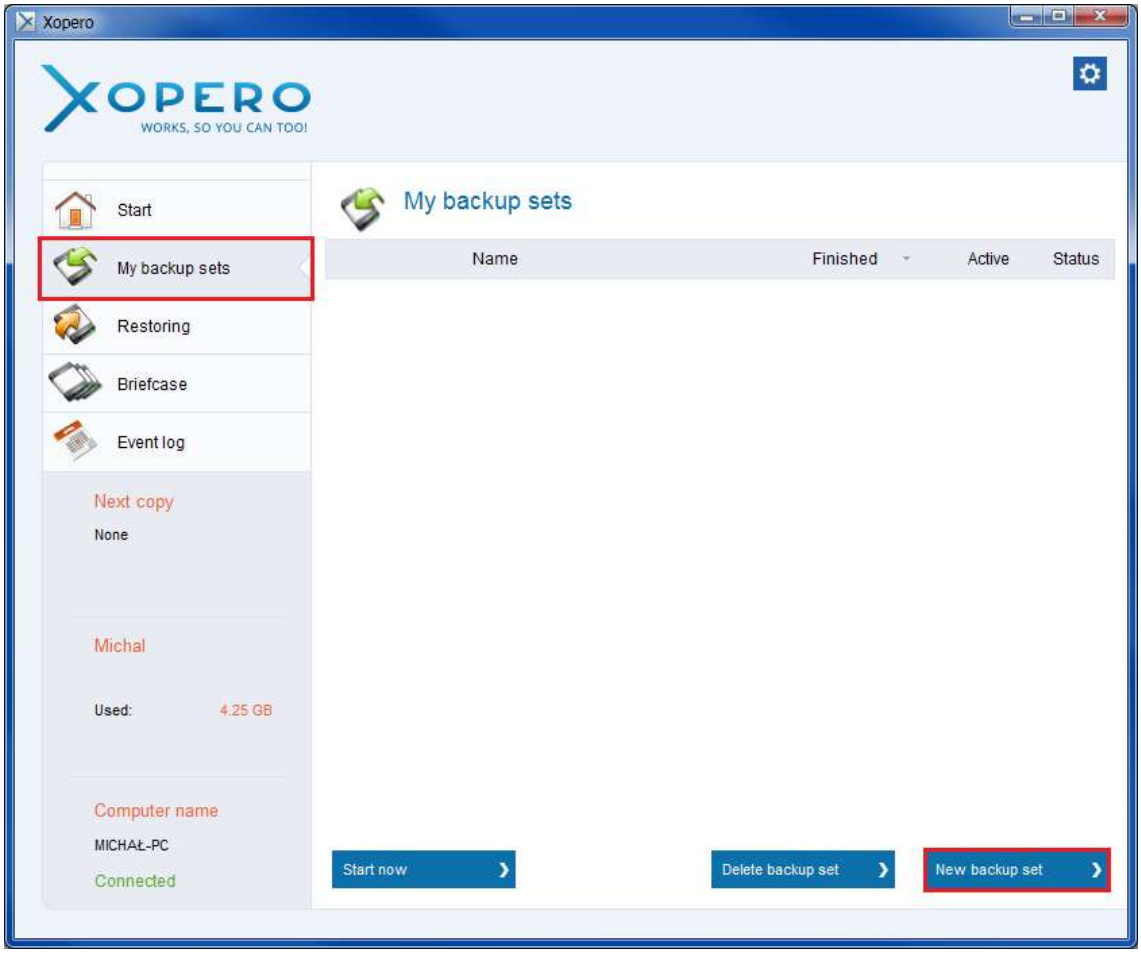
Performance of ***System State*** backup starts with preparing data to send it in initialization process. At this moment ***Virtual Hard Disk*** is being created. In this file data to backup from users computer is being placed.

Backup set can be started manually by user or automatically, with defined schedule.

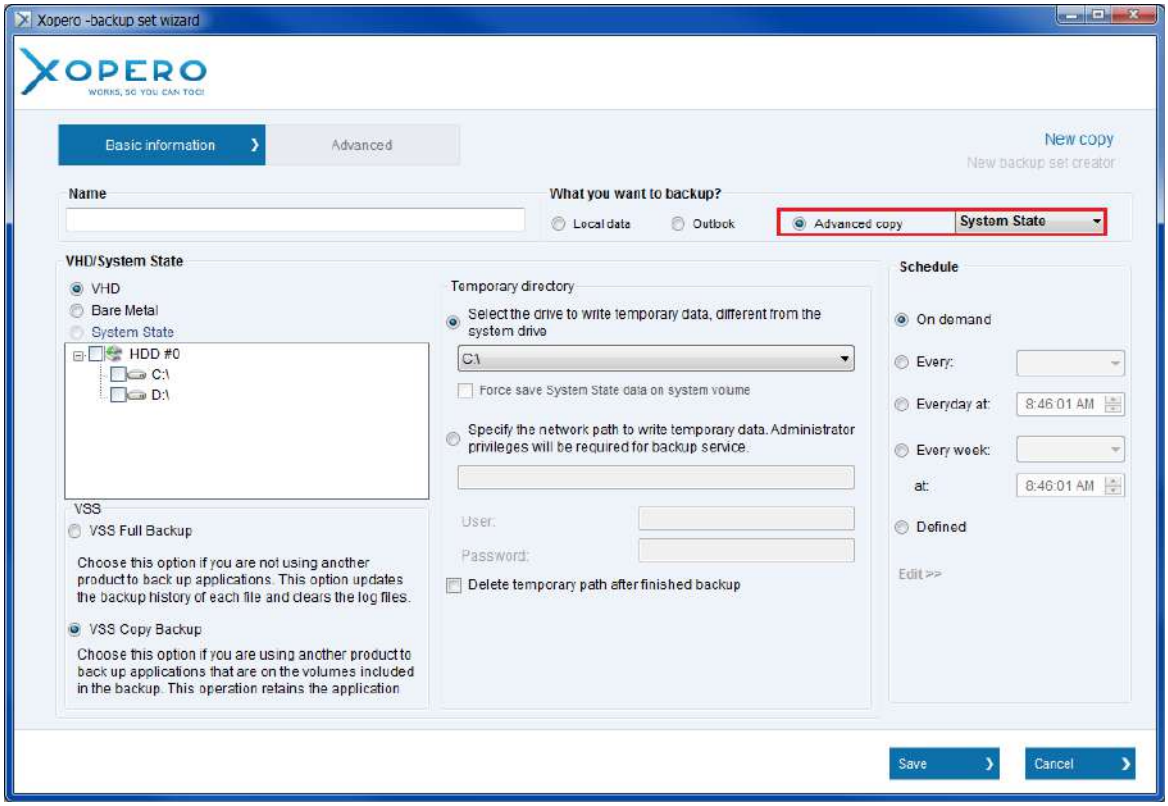
This process can take comparatively long time, **lack of progression on progress bar** during initialization process does not provide about malfunction of application.

Creating and performing VHD backup

To create the VHD backup set, in client application, you should run the ***Backup set*** wizard by clicking on ***New backup set*** button in ***My backup sets tab***.



In the Backup set wizard mark ***Advanced copy*** and select ***System State*** from dropdown list. Remember to define the backup set name.



Backup VHD system image

To create the VHD backup set, you need to choose ***Create VHD image*** option in ***Backup type*** field. Then define data, which have to be added to VHD backup. To do this check specified options in ***Data to backup***:

- **Bare Metal** - contains the system image necessary to restore it in case of failure
- **VHD** - it includes partitions specified by users.

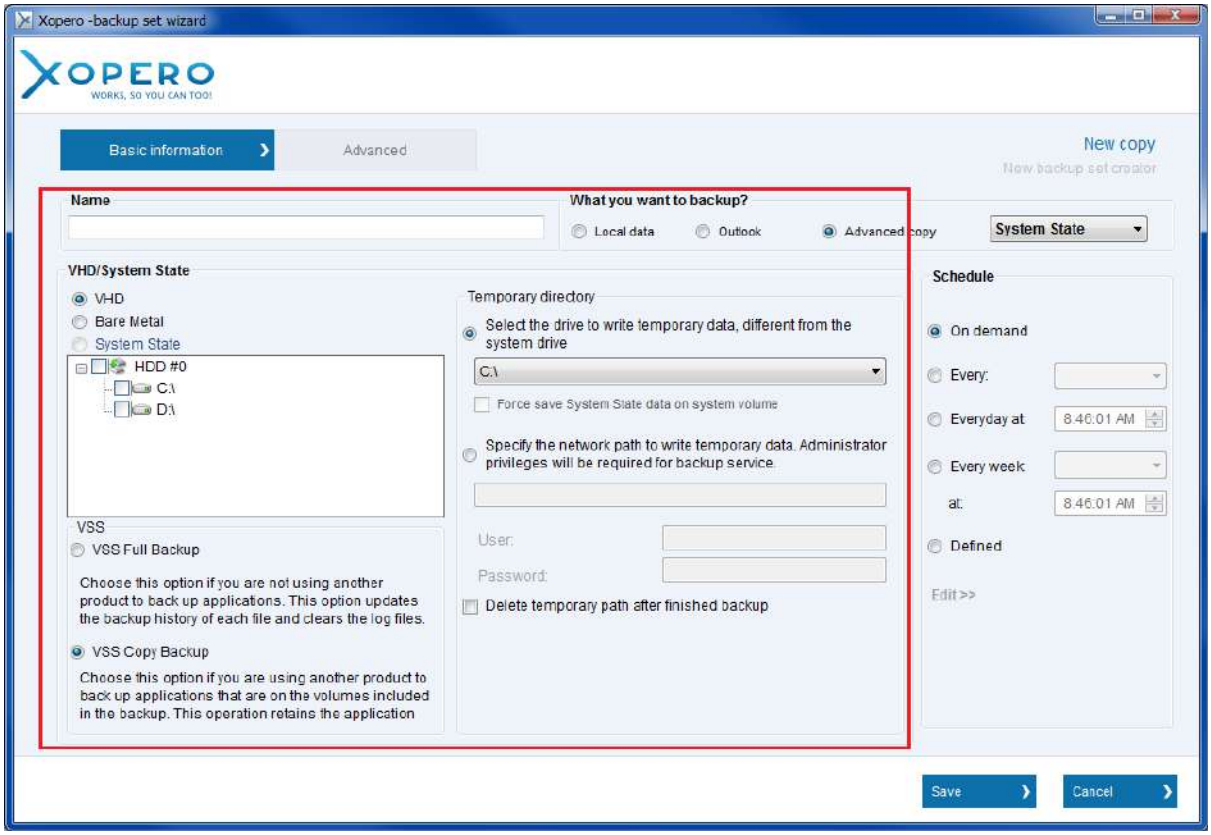
VHD backup is available for Windows Vista or higher and Windows Server 2008 or newer.

At next step user has to choose localization to write temporary data between:

- **Local discs** - it is necessary to select the partition, different from the system and other partitions, which contains data for VHD backup.
- **Network path** - there's a possibility to write temporary data on network path defined by user. In this case it is important to give the service privilege of system Windows user. This option is available only for Windows operating systems with version higher than home and also for Windows Server systems.

Temporary data can be written on network path only for Windows operating systems with version higher than home and also for Windows Server systems.

If you choose network path as a temporary data location, it is required to give the service privilege of system Windows user(Admin rights to service).



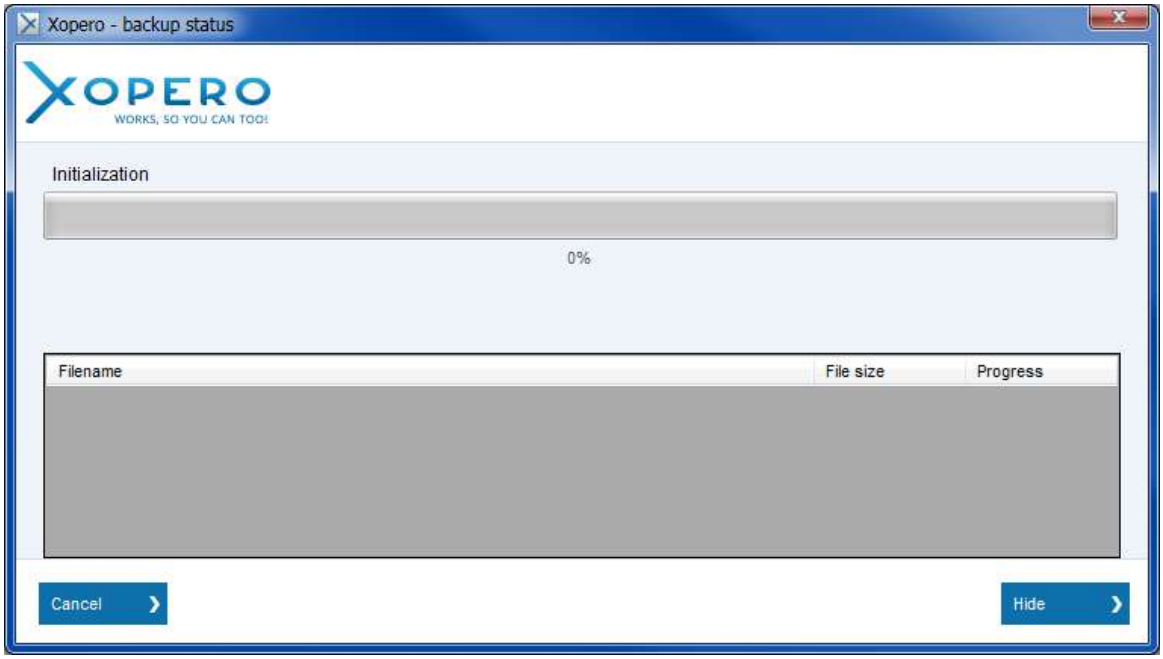
Data selected by user will be saved at chosen location as disc image in Virtual Hard Disk(VHD) format.

If you check ***Delete temporary path after finished backup***. option, created VHD file will be automatically deleted. Otherwise, it will stay in selected network path, what means that it can be used as local copy.

Performing backup

Performance of ***VHD*** backup starts with preparing data to send it in initialization process. At this moment ***Virtual Hard Disk*** is being created. In this file data to backup from users computer is being placed.

Backup set can be started manually by user or automatically, with defined schedule.



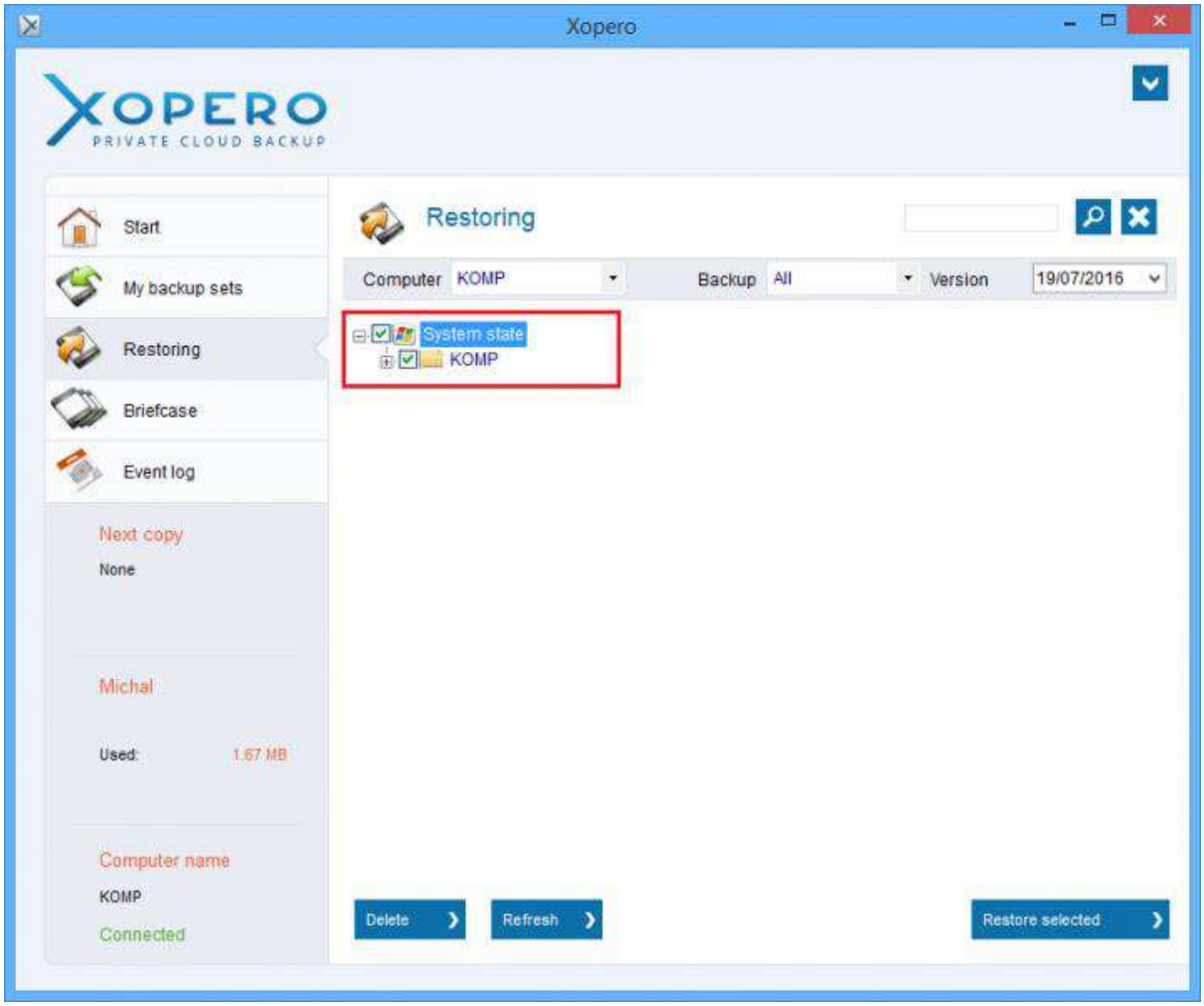
This process can take comparatively long time, **lack of progression on progress bar** during initialization process does not provide about malfunction of application.

Creating and performing System State/VHD in AD application

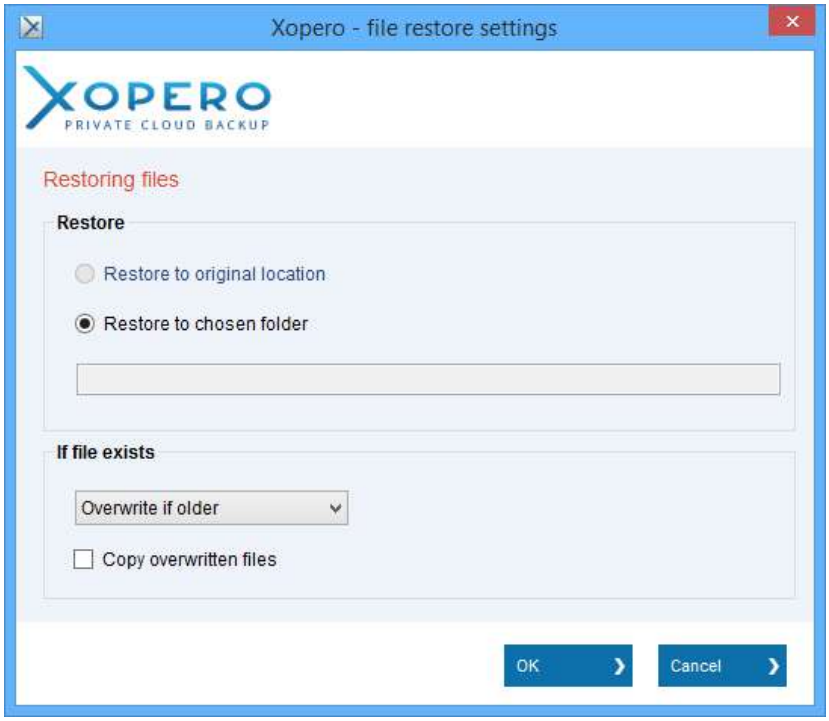
An AD user who does not have the appropriate Administrator privileges and tries to create or run one of the projects: HDD Image, VHD / SystemState will receive a disk loading error. To execute one of these projects, run the application as Administrator (which should also be a mapped user in Xopero) and then enter the user data that has the appropriate permissions.

Restoring

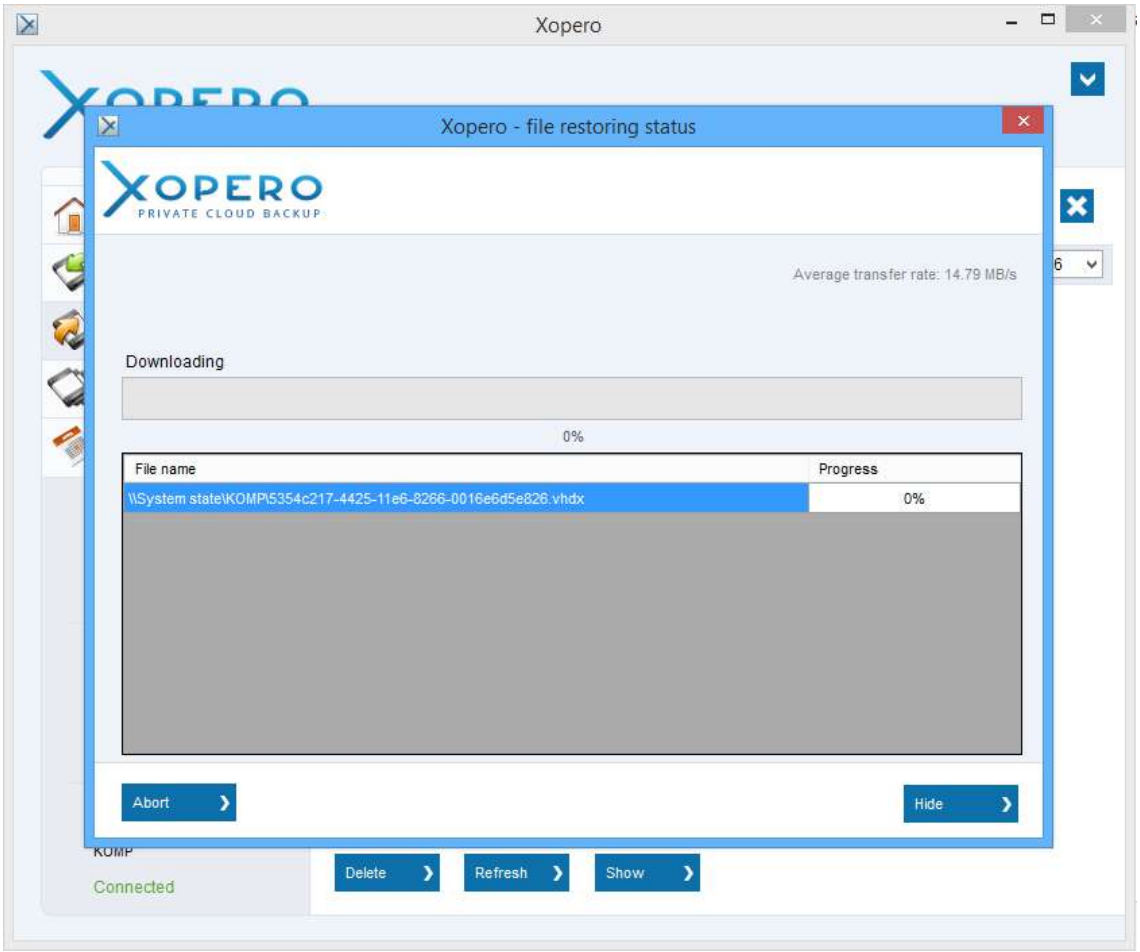
System State and VHD backups might be restored to users computer at any time. To do this, you need to restore tab and find ***System State*** catalog on displayed files list.



Now check catalog, which contains users computer name or choose specific files to restore.



Click on ***Restore selected***, so ***File restore settings*** window will show up. Now select location to download files and define what application should do, if the same file exists in this location. Process of restoring will start after pressing ***OK*** button.

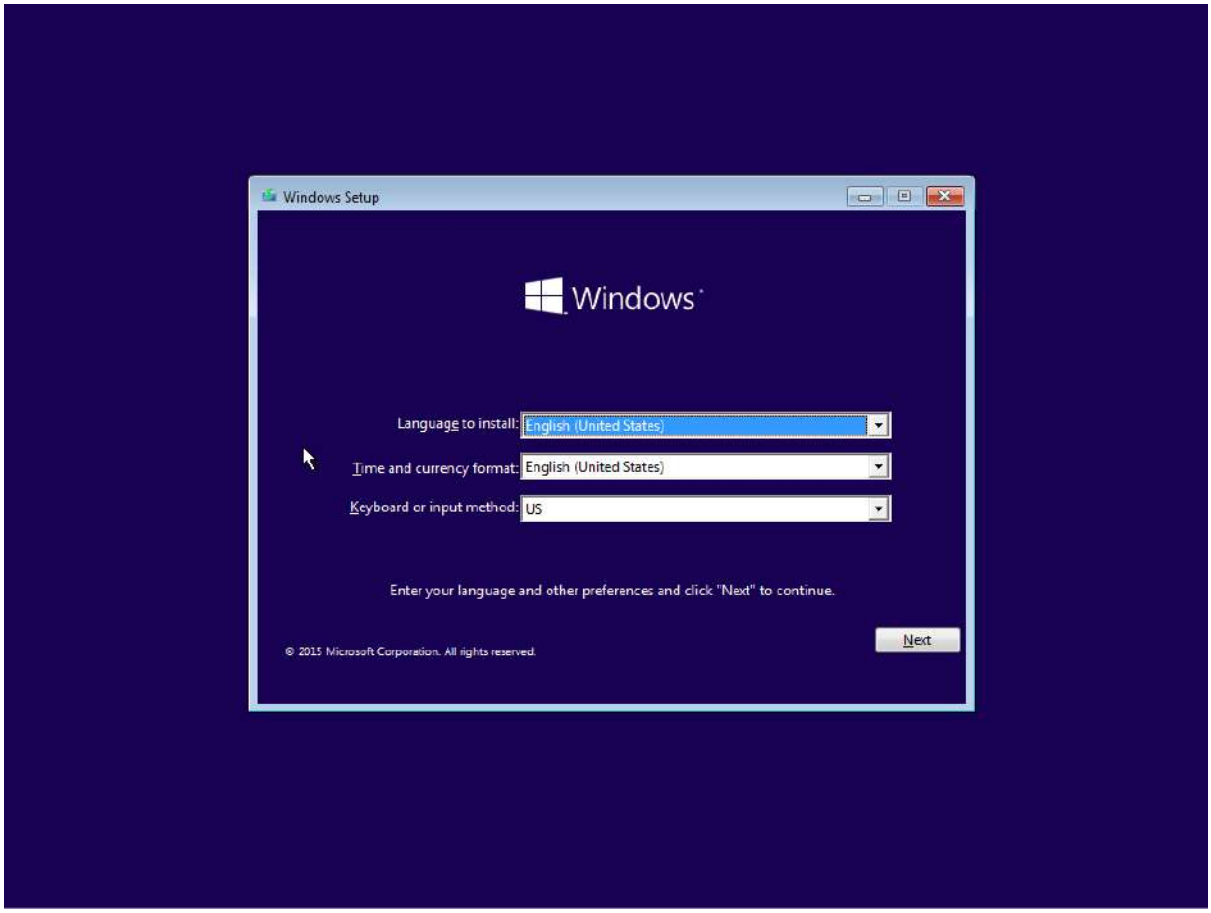


After downloading files use Microsoft tools to restore operating system.

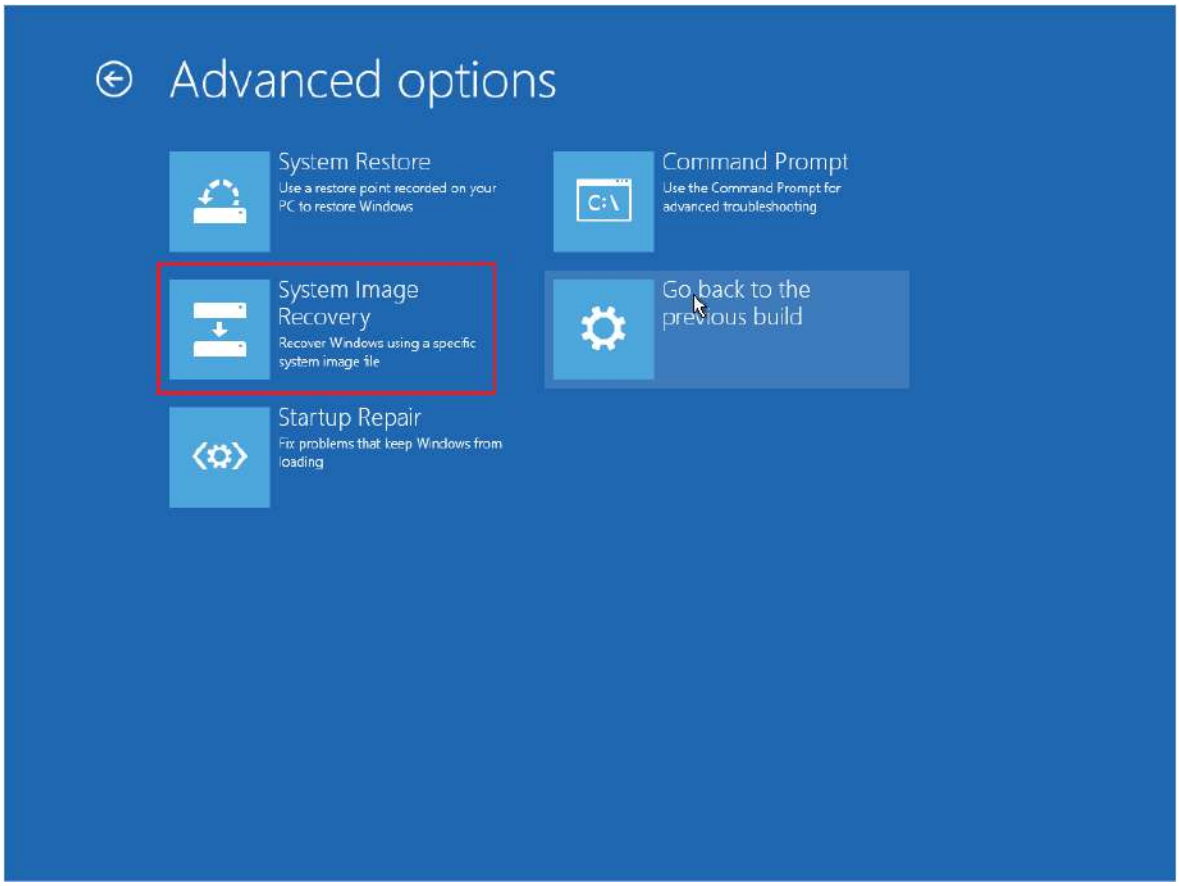
Restoring from VHD image

To restore system using VHD image you need to insert CD/DVD disc to your optical drive or plug in another external drive with system image to your computer. Remember to set boot priority properly (e.g USB-HDD)

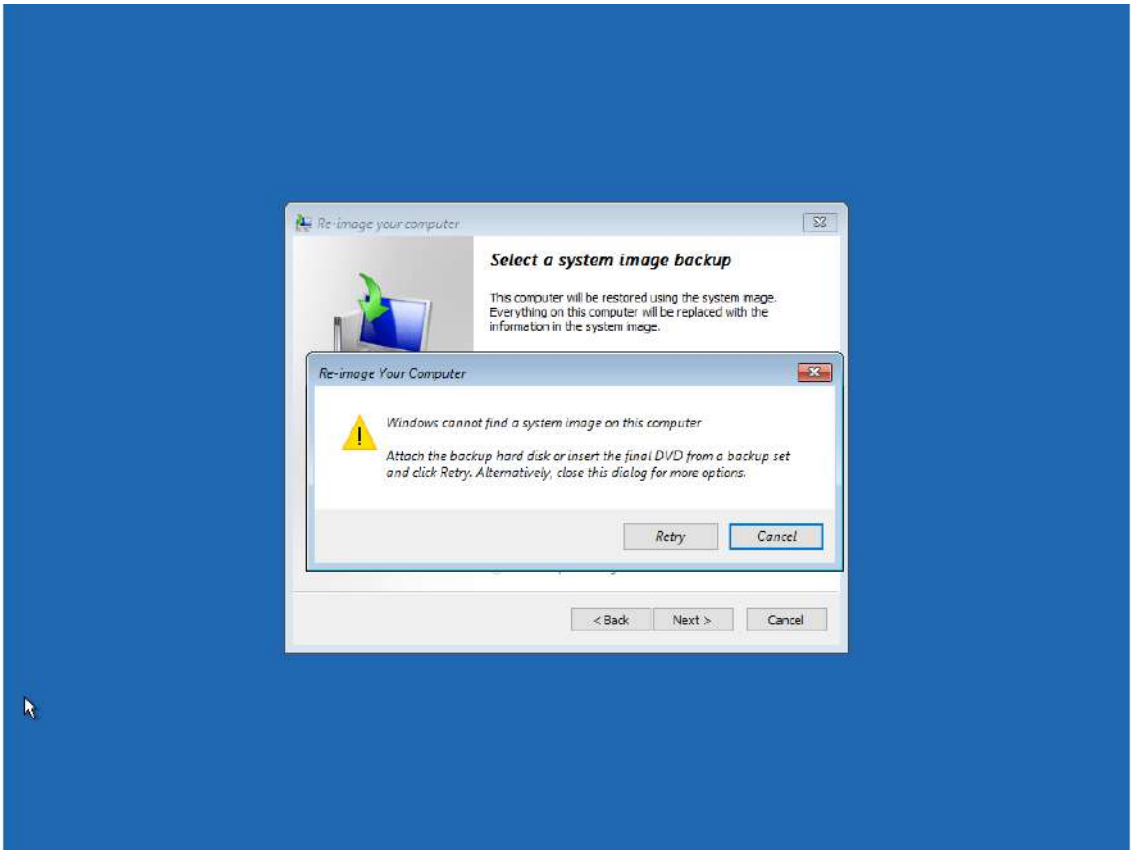
Now system installer will start. Then choose language and click *Next*.



At next window choose option *Repair computer*. Next step is to use *System image recovery* (If you are using Windows 8, Windows 8.1 or Windows 10 you need to click *Troubleshoot -> Advanced options -> System image recovery*).

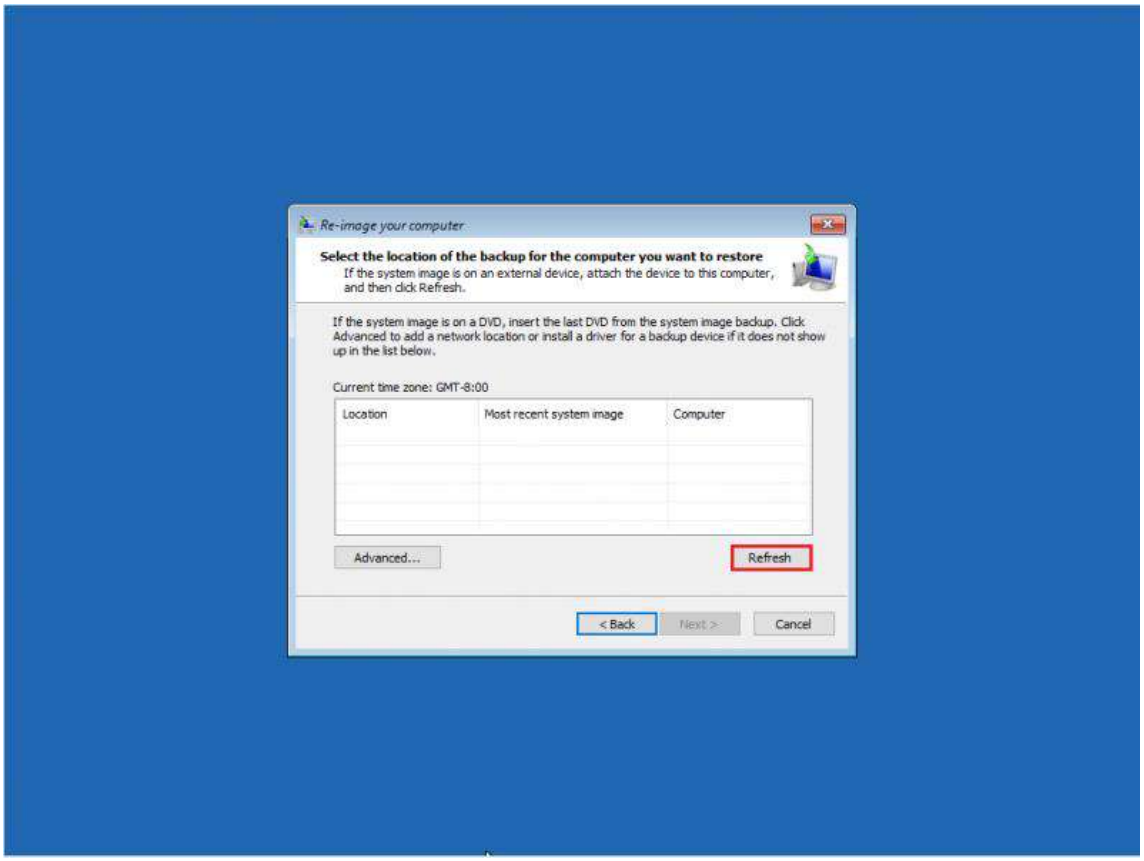


Now the information is displayed that system image is not found. Just close the message.



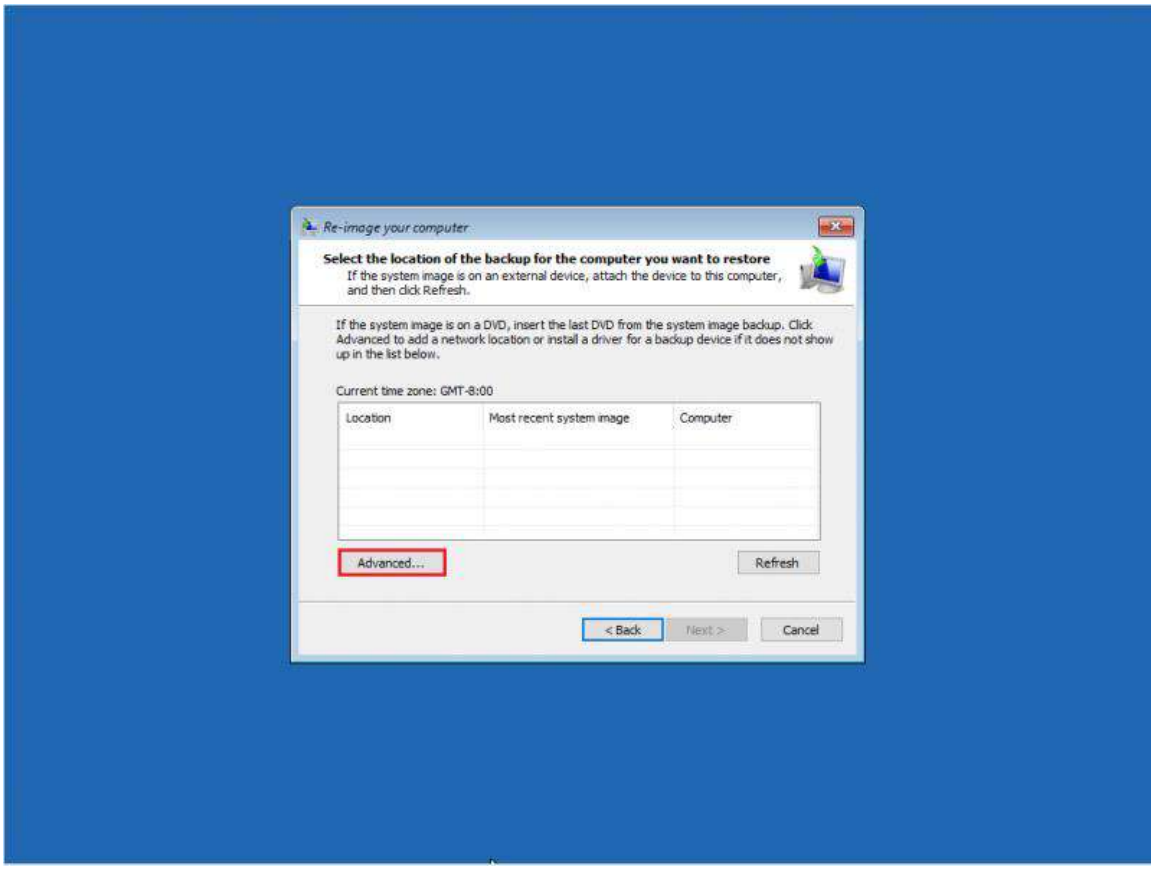
External drive

Click *Next* button, if system image won't show up on the list, just refresh it.



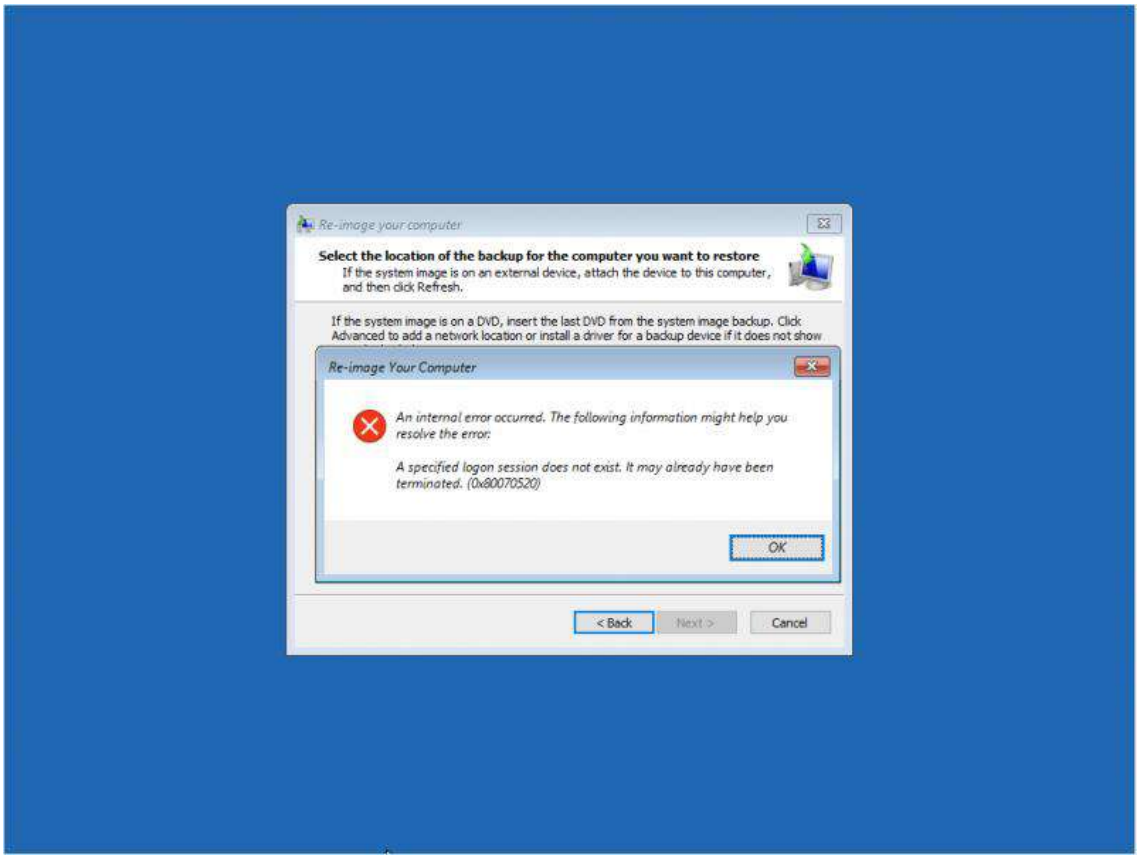
Network localization

After that click *Next*, choose *Advanced -> Search for a system image on the network*. Then accept message, enter network localization, authorization data and select system image.

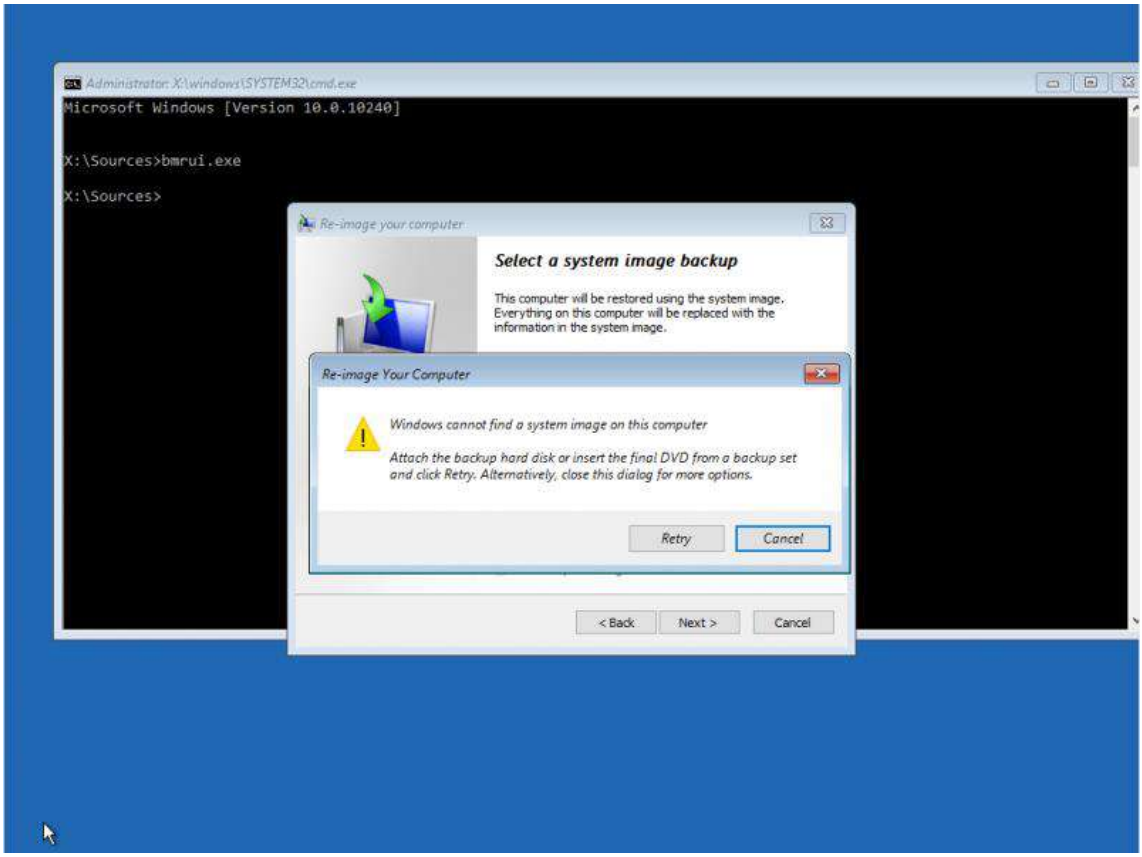


Issue with restoring VHD - Windows 10

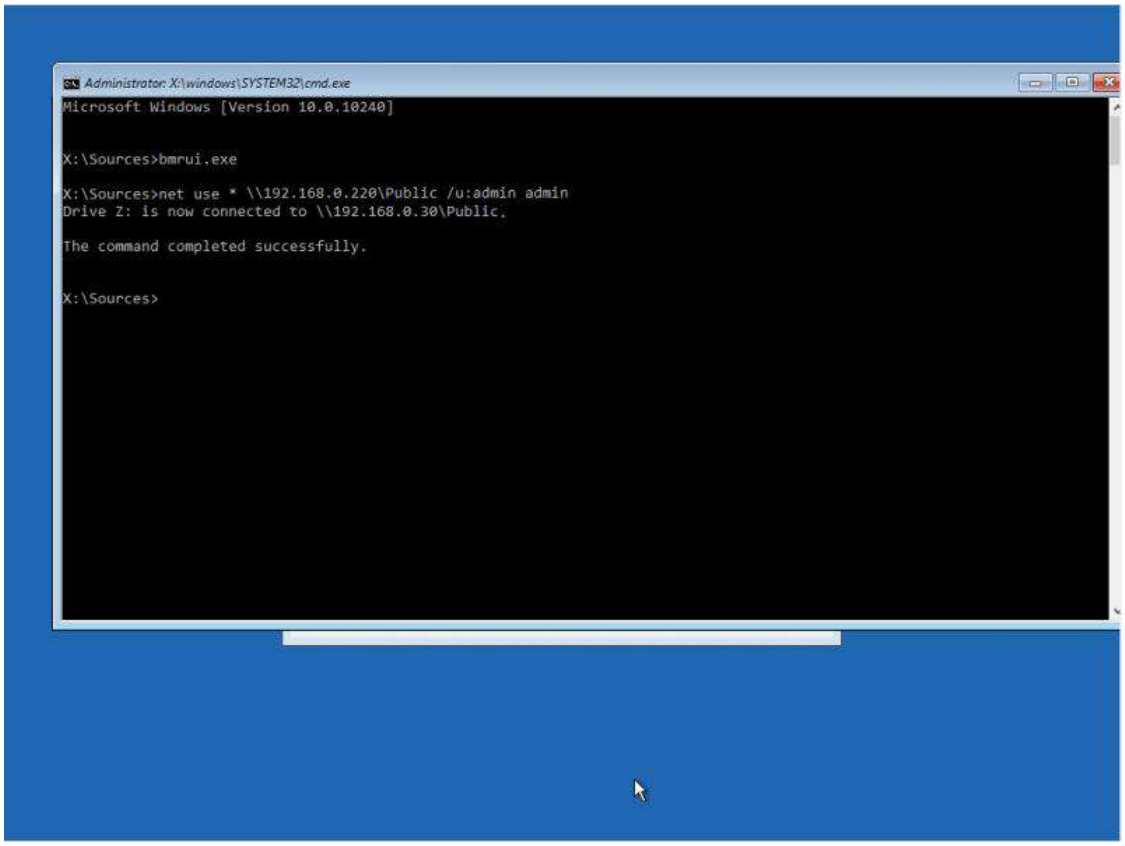
While selecting system image localization, there might be an internal error with following content: “An internal error occurred. The following information might help you resolve the error; It may already have been terminated. (0x80070520)”



Closing the restoring program might be linked with an error revealing a complete lack of interface. That's why it is recommended to use cmd(Command-line interface) and turning on bmrui.exe in there.



After opening the program you need to choose *Cancel* option and then click *Next*. At next step go to *Advanced -> Search for a system image on the network*(Confirm message). After all those actions open cmd and attach network localization using *net use* command (for example: *net use * \\192.168.0.220\Public /u:admin admin* - where admin admin is username and password).



Remember, WindowsImageBackup catalog cannot be in any subdirectory.

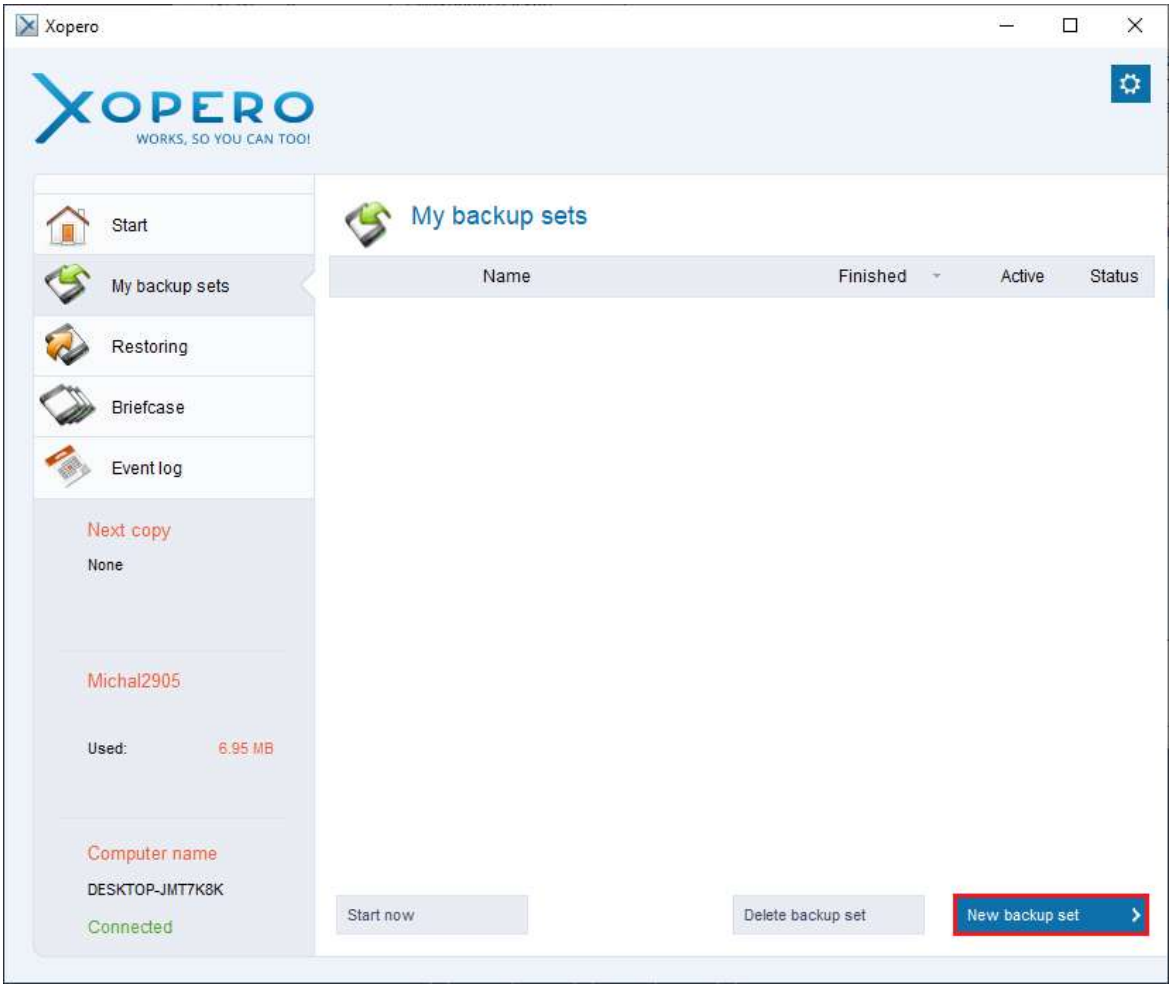
PostgreSQL database backup

Creating and performing backup

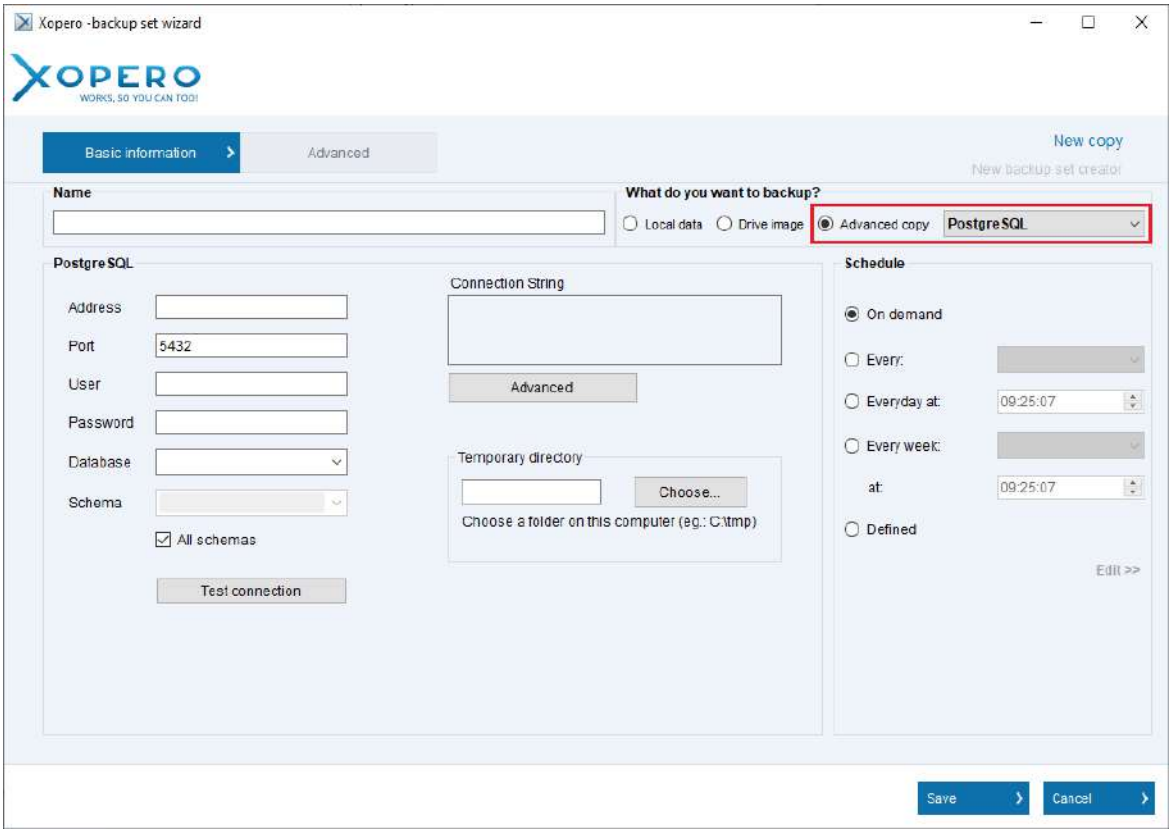
Xopero allows you to create PostgreSQL backup without additional components installed. To configure valid backup set, you need rights to database server.

Supported versions from 9.0 to 11.8.

To create the PostgreSQL database backup set you need to open Xopero and run the ***Backup set*** wizard by clicking on ***New backup set*** button in ***My backup sets*** tab.



In the *Backup set* wizard mark ***Advanced copy*** and select ***PostgreSQL*** from drop-down list. Don't forget to define the backup set name.

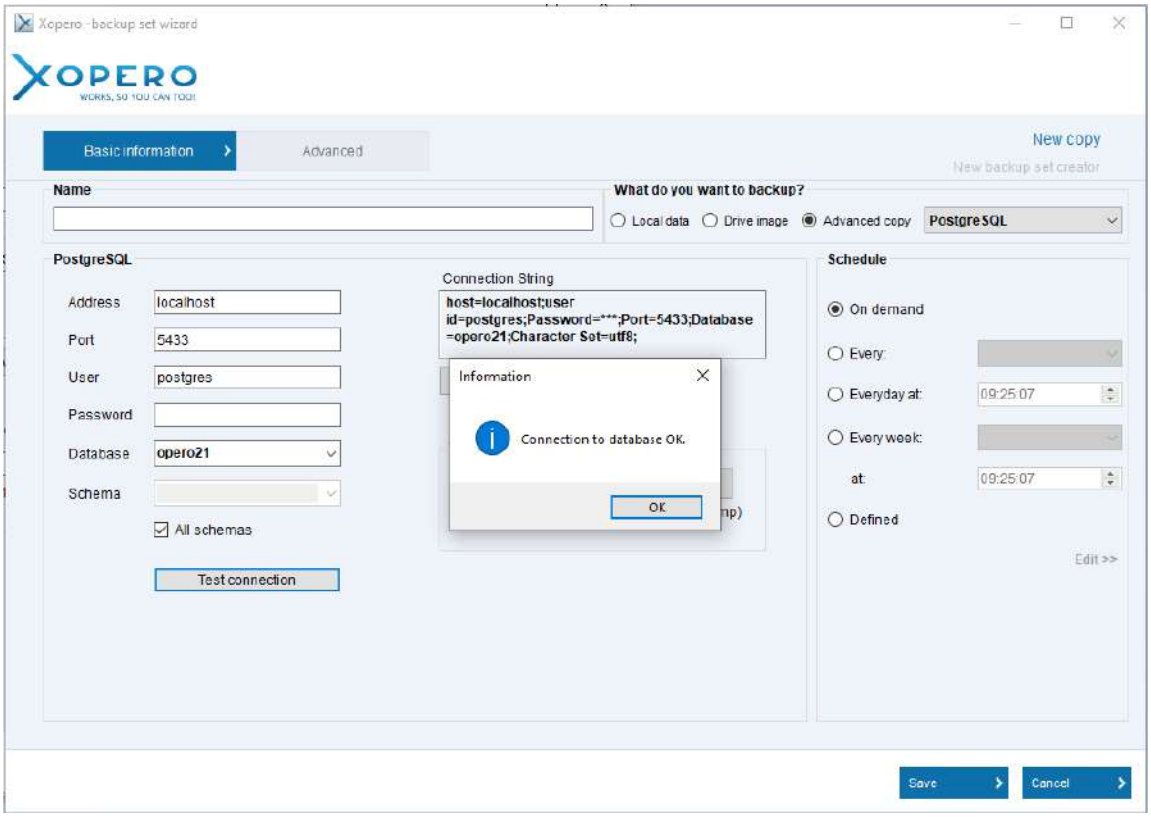


In the ***PostgreSQL*** panel you need to define parameters that are necessary to connect with the database server:

- **Address** - IP address of the PostgreSQL database server,
- **Port** - port, on which the database server is listening,
- **User** - PostgreSQL database username,
- **Password** - password for user above.

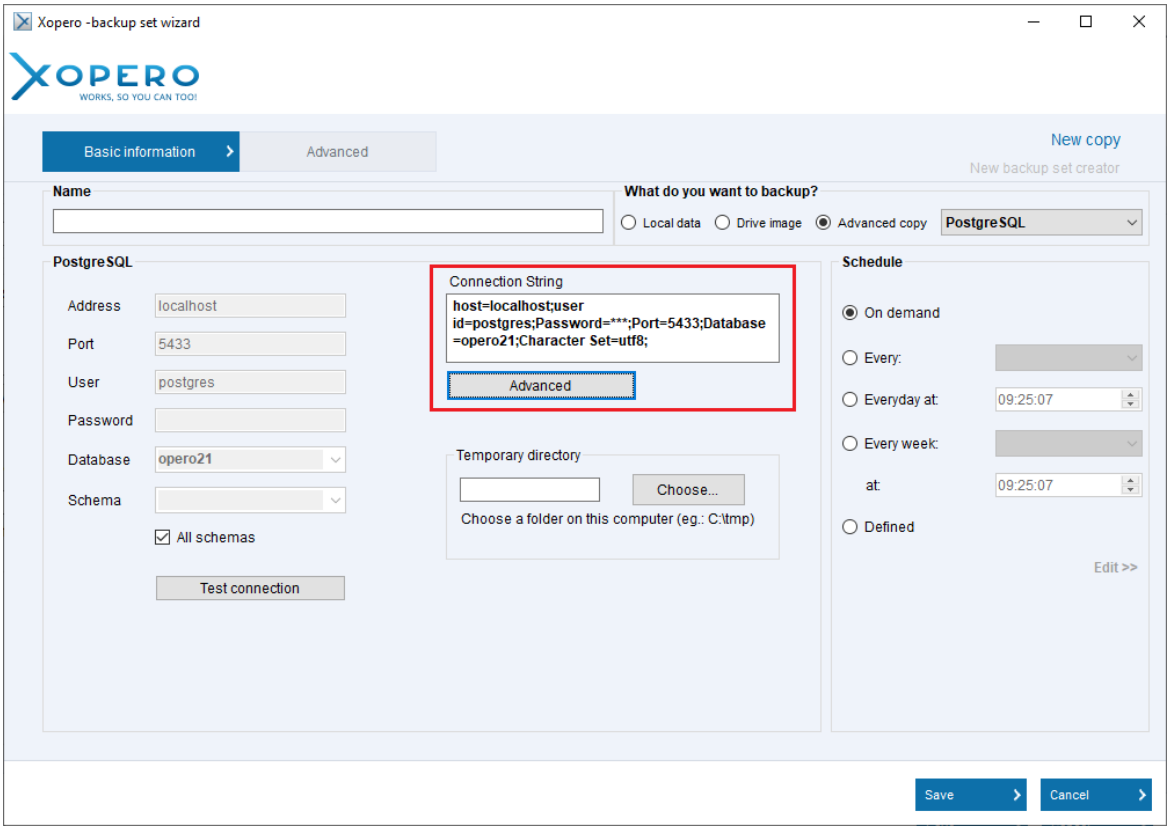
If parameters above are valid, Xopero will connect with the database and list of available databases will be displayed in the ***Database*** field. After you choose a database, you can also select schema that will be backed up in the ***Schema*** field. If you don't choose one, all the databases schemas will be backed up.

When you fill all the required fields, click ***Test connection*** to verify connection with the database.



To set additional parameters for database connection (like *timeout*), you should click ***Advanced*** button, what will caused *Connection String*, where required parameters can be entered.

If you choose to edit *Connection String*, you have to replace *** next to the *Password* parameter.



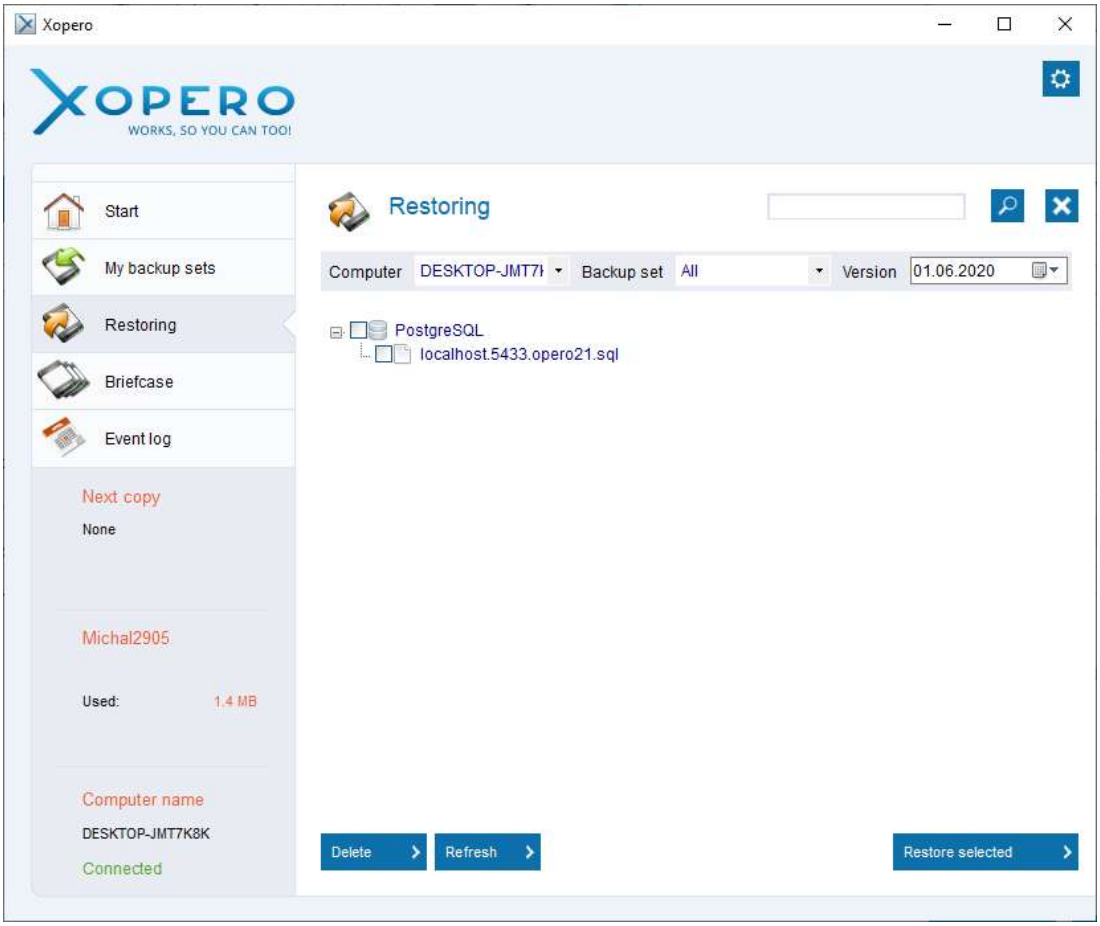
Before you finish, define ***Temporary directory***, which is a folder, where database dump will be made to. Click ***Save*** to create new backup set.

Restoring

The Restore process of PostgreSQL database is a two-step process. First, you need to download the database backup to a local machine using Xopero application. In the second step, the PostgreSQL database will be restored to a PostgreSQL server using ***pgAdmin*** or ***psql***.

Restoring the database file from a backup

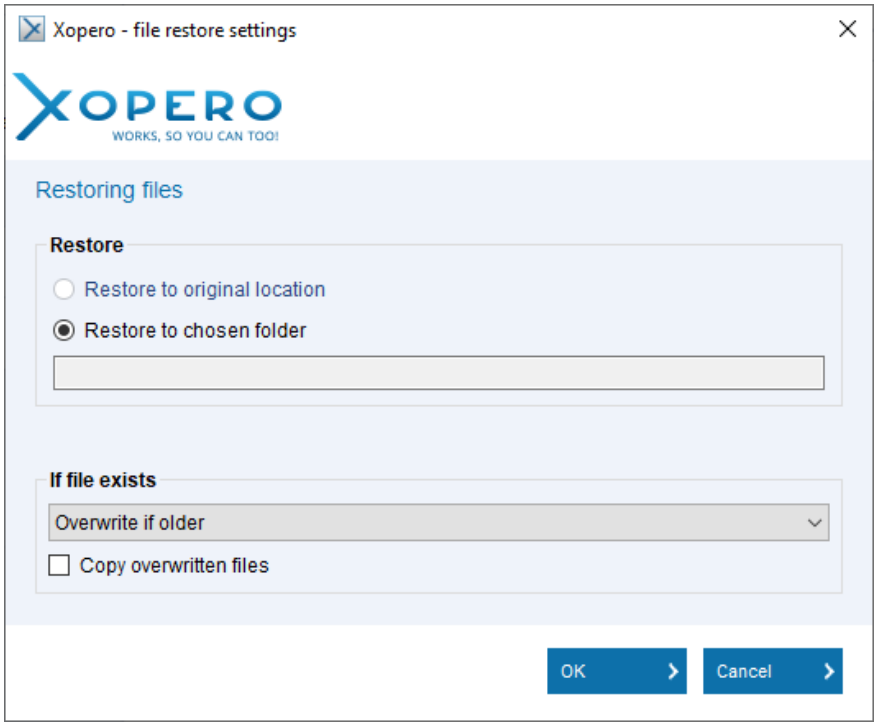
To download the PostgreSQL database backup run the Xopero application and go to the ***Restoring*** tab. All backed up databases will be available in the ***PostgreSQL*** branch.



Expand the branch and mark the checkbox next to the database which has to be restored. Then click on the ***Restore selected*** button.

To restore previous version of the database right click on its name and from context menu select ***Show file versions***.

The file restore settings window will be displayed where you have to select the location where the database backup file will be saved. From this directory it also will be restored to the PostgreSQL database server.

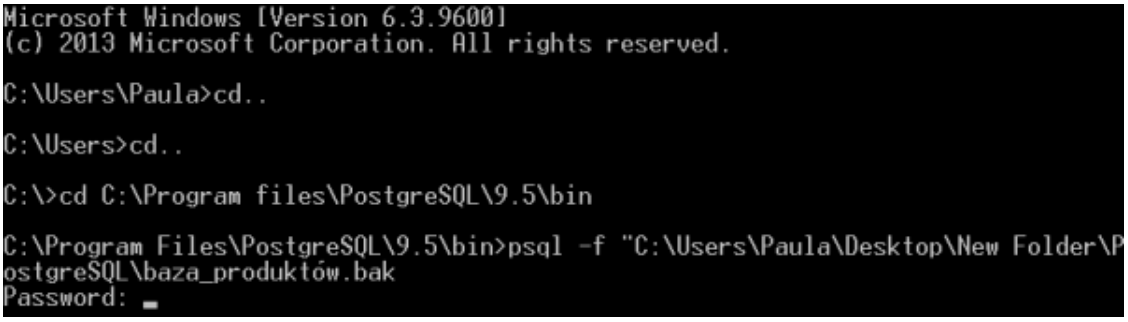


Database restore using command prompt

To restore PostgreSQL database to destination server from previously restored file, open command prompt. Then go to *psql* location and enter: ***psql –f „path to a file" database name user***, where:

- **Path to a file** – is a path of database file restored using Xopero application,
- **Database name** – name of the database, where the backup will be restored,
- **User** - PostgreSQL user.

The *psql* tool will ask for PostgreSQL user's password. If a valid password is entered, the restore process will be launched.



psql tool is part of the PostgreSQL server and *pgAdmin*.

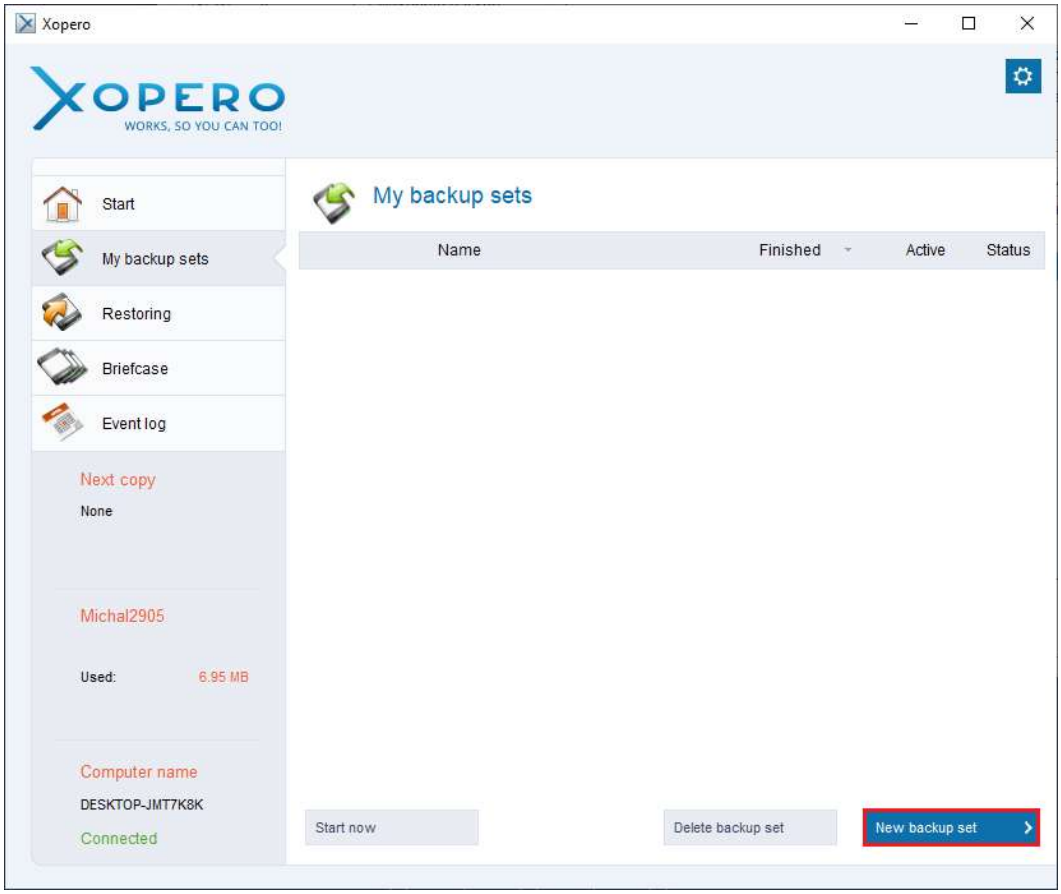
MS SQL database backup

Creating and performing backup

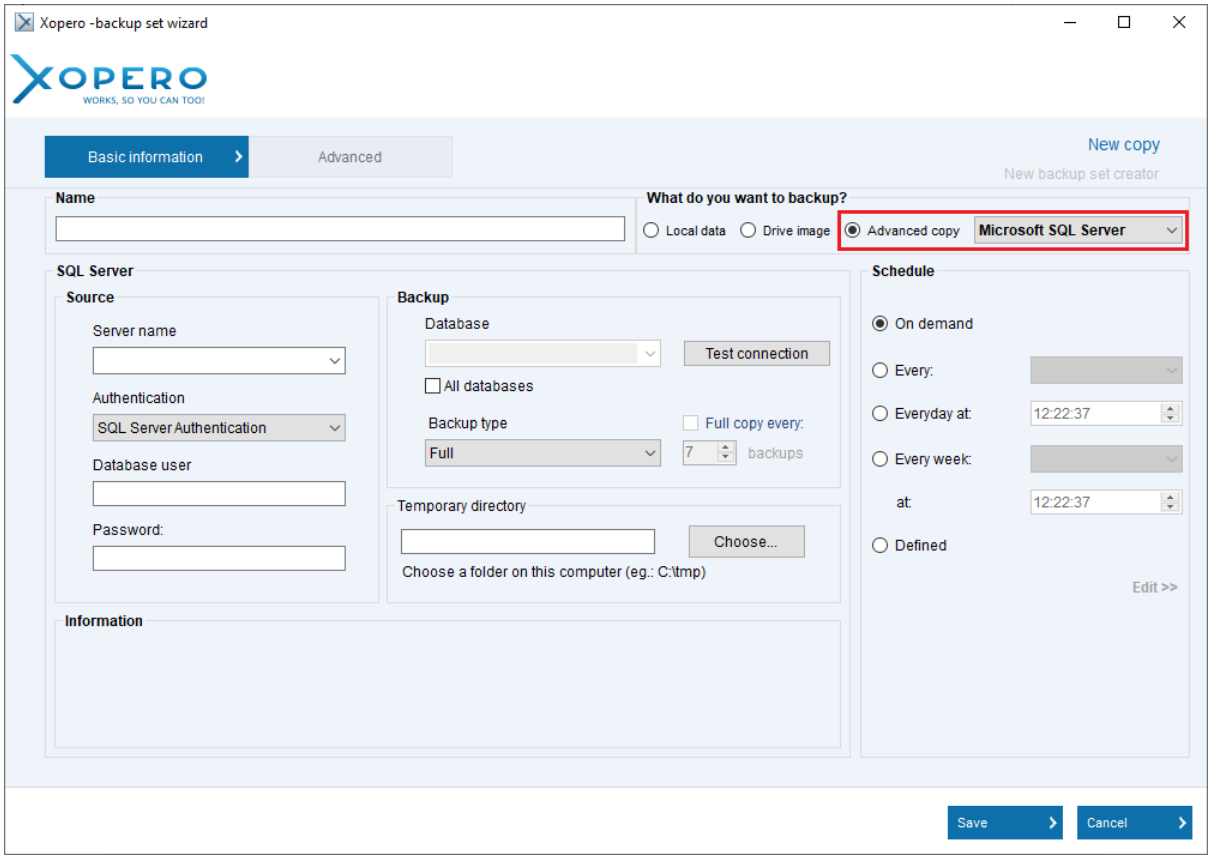
The Xopero application allows to direct backup of Microsoft SQL databases for users of Advanced license. It is possible to backup only local Microsoft SQL server - both the database server and Xopero application must be installed on the same computer.

Xopero supports versions Microsoft SQL Server from 2005 to 2016.

In order to create the Microsoft SQL database backup set, in client application, you should run the Backup set wizard by clicking on New backup set button in My backup sets tab.



In the ***Backup set wizard*** mark ***Advanced copy*** and select ***Microsoft SQL Server*** from drop-down list. Don’t forget to define the backup set name.



Then in ***SQL Server*** section define following parameters which are required to connect to the database server:

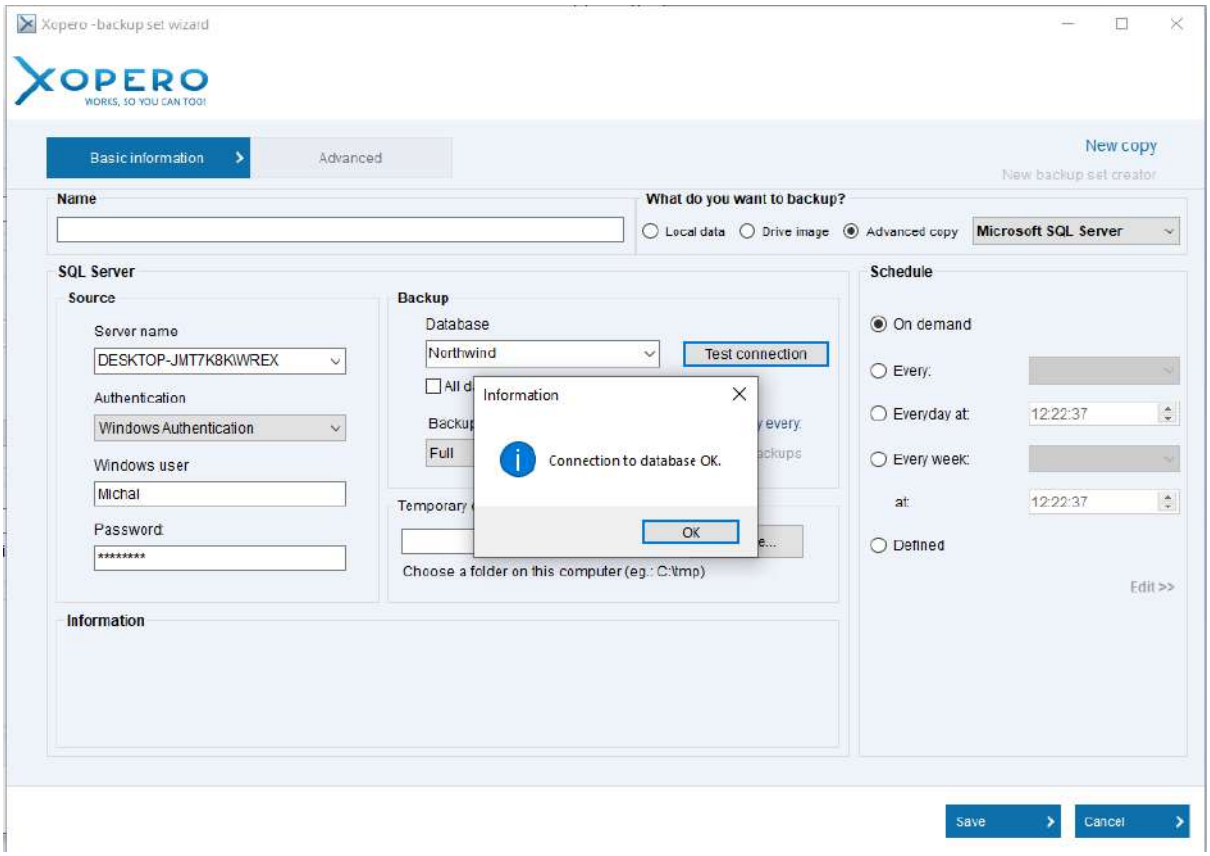
- **Server name** – select from drop-down list name of the Microsoft SQL server instance that has to be backed up.
- **Authentication -** the type of authentication that will be used to connect with SQL Server. Available options are SQL Server Authentication and Windows authentication.
- **User** – the Microsoft SQL username or Windows username. The user must have permissions to database backup on Microsoft SQL server.
- **Password** – the password for provided user.
- **Database** - select a database from the drop-down list or select option: *All databases*. When *all databases* option is checked each new database from the server will be included automatically to backup.

System databases are not included in the backup of all databases. For databases: *master, model* and *msdb*, the name must be entered manually in the field: Database. Backup of *tempdb* and *Resource Database* databases is not supported by our tools.

The master database contains the configuration of the MS SQL server. If it is not present, it may not be possible to start the SQL server.

If above data has been provided properly the application will connect automatically to database server and will display all available database as drop-down list in Database field. Select one of them or check the All databases what will cause that all databases from the server will be included to backup.

When all data are set correctly click on the ***Test connection*** button to check connection to the database.



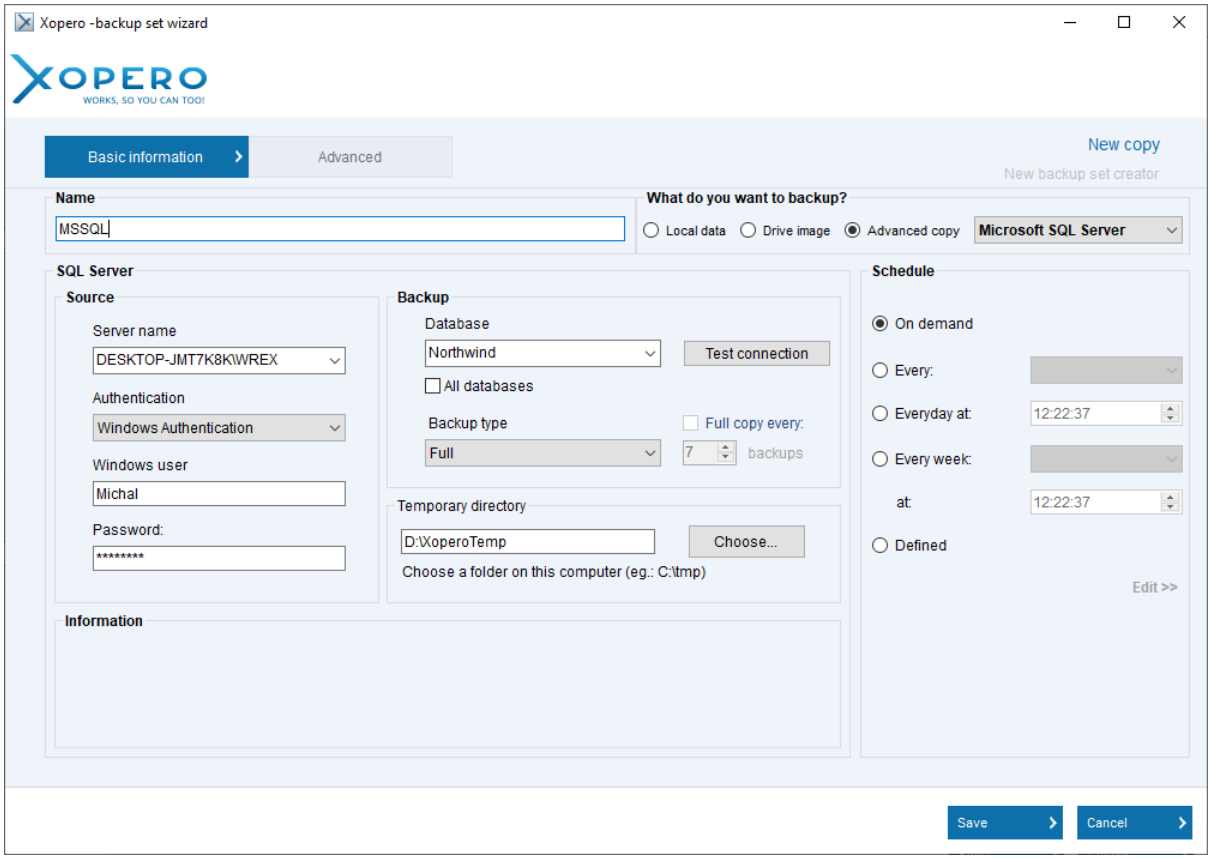
Next define ***Temporary directory***, it is a local path where the database dump, from Microsoft SQL Server, will be stored. Select also one of the following ***Backup type*** that defines the type of database dump:

- **Full** - every backup will create a full dump of the database,
- **Differential** - the database dump will contain only the differences that have been made since the last full database dump from server,
- **Transaction log** - contains all records of transaction log which have been generated since its last copy or last full database backup. It lets to restore the database to given point in the time.

In case of select the ***differential*** dump of database select whether and how often the full dump of database has to be made.

We recommend to perform full database dumps, its frequency depends on database size and differences that are made between backups.

The transaction log is an incremental backup, so when the database is restored from transaction log it is necessary to have all the transaction log records to given point in time. These records are included in the chain of log backups.

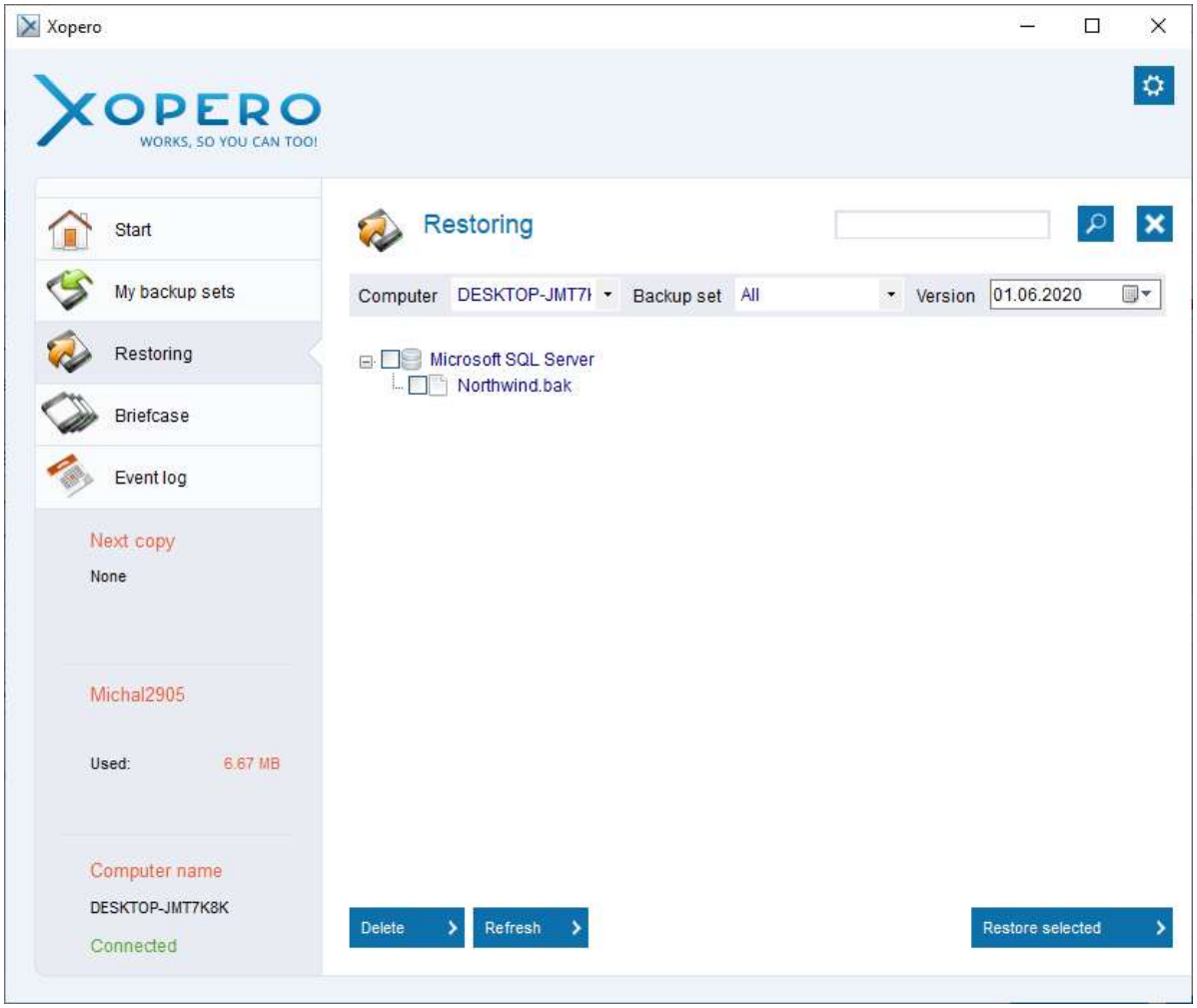


Restoring

To restore the Microsoft SQL database, in addition to the Xopero application, it is also necessary tool for database management - Microsoft SQL Server Management Studio Express which is available to download under: https://www.microsoft.com/en-us/download/details.aspx?id=29062.

Download the database backup

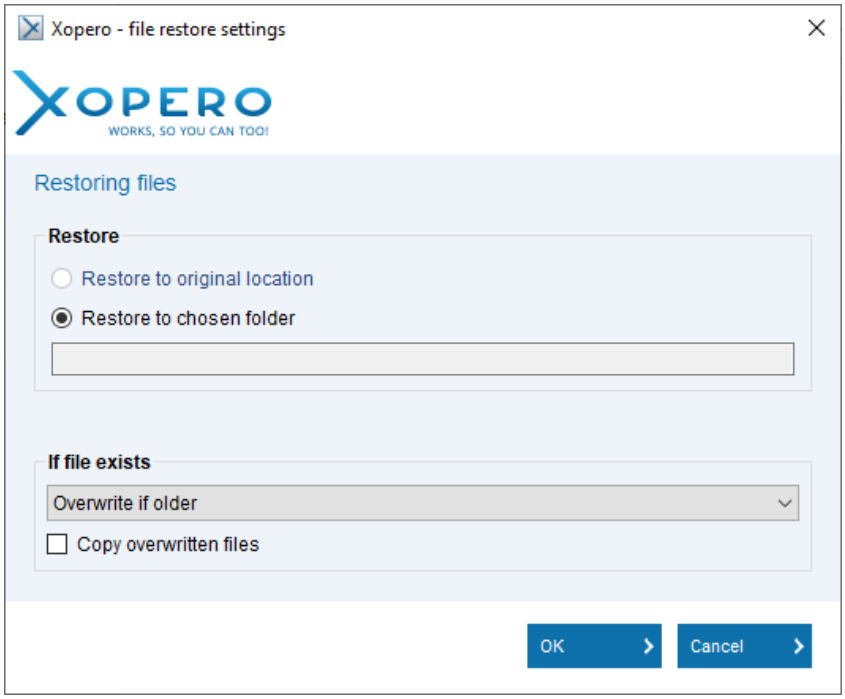
In order to download the Microsoft SQL database backup run the Xopero application and then go to the ***Restoring*** tab. All backed up databases will be in Microsoft SQL Server branch.



Expand the branch and mark the checkbox at the database which has to be restored and the click on the ***Restore selected*** button.

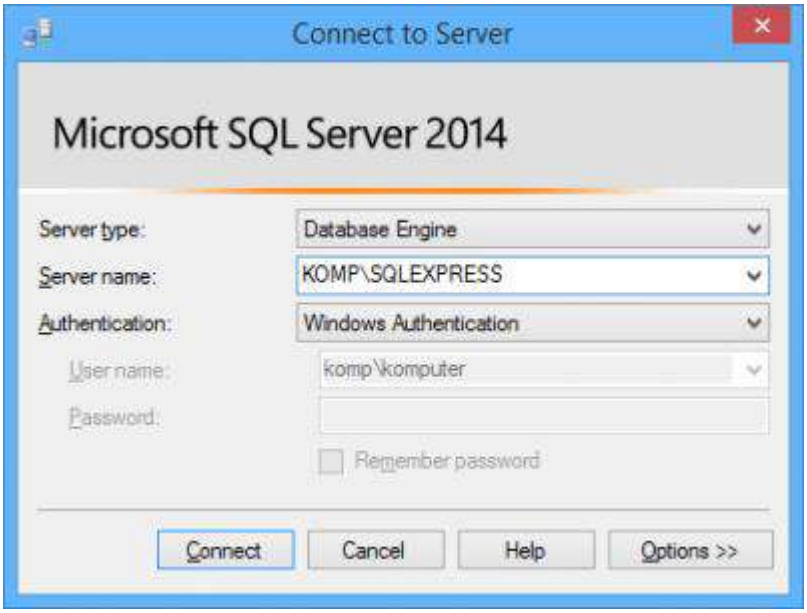
In order to restore selected version of the database right click on its name and from context menu select *Show file versions*.

The ***file restore settings*** window will be displayed where you have to select the location where the database backup file has to be saved. From this directory it will be also restored to the database server.



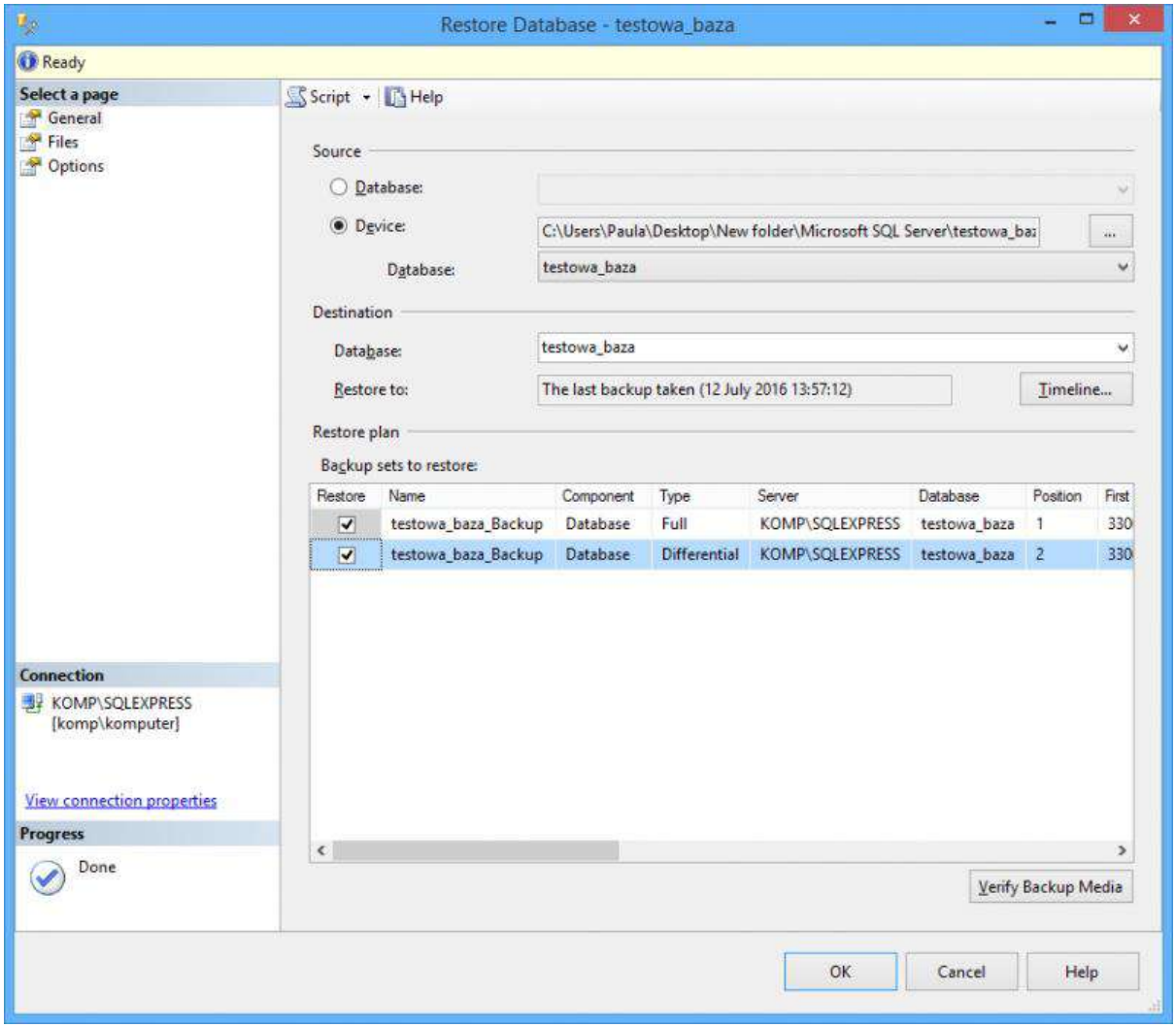
Restore the database from downloaded file

In order to restore the downloaded Microsoft SQL database, to the database server run *Microsoft SQL Server Management Studio*.



After correct login to the Microsoft SQL server right click on *Databases* branch and, from context menu, select *Restore Database* option.

In displayed window select *Device* option and then choose previously downloaded database backup. Then in *Destination* field select the database to which backup will be restored (it is necessary). If the database does not exist, it is required to create it.



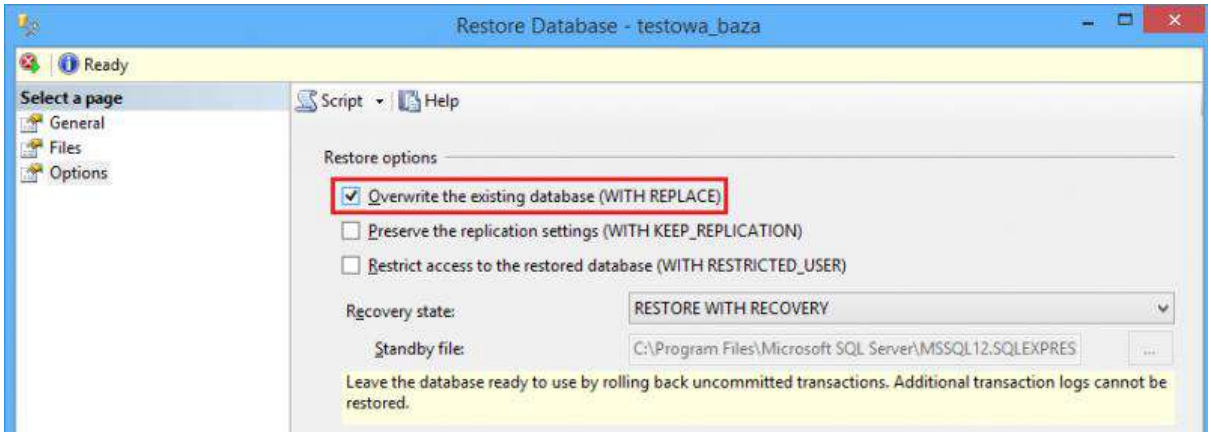
If the restored database file contains incremental backup, there will be available list of included backups. They correspond to each version of the database, making it possible to restore previous state of the database.

Click *OK* in the bottom part of the window to start the restore process to the Microsoft SQL server.

The transaction log can be restored only after restoration of the full database version from given period of time or by using all transaction logs since last full database copy. It is required to restore them in order from oldest to newest. It could be necessary to use option *RESTORE WITH NORECOVERY*.

System.Data.SqlClient.SqlError: The backup set holds a backup of a database other than the existing 'testowa_baza' database

The error occurs while trying to restore the database which already exists in the database server. To solve it go to *Options* page in the database restore window and select the *Overwrite the existing database*. It **overwrites the existing database**.

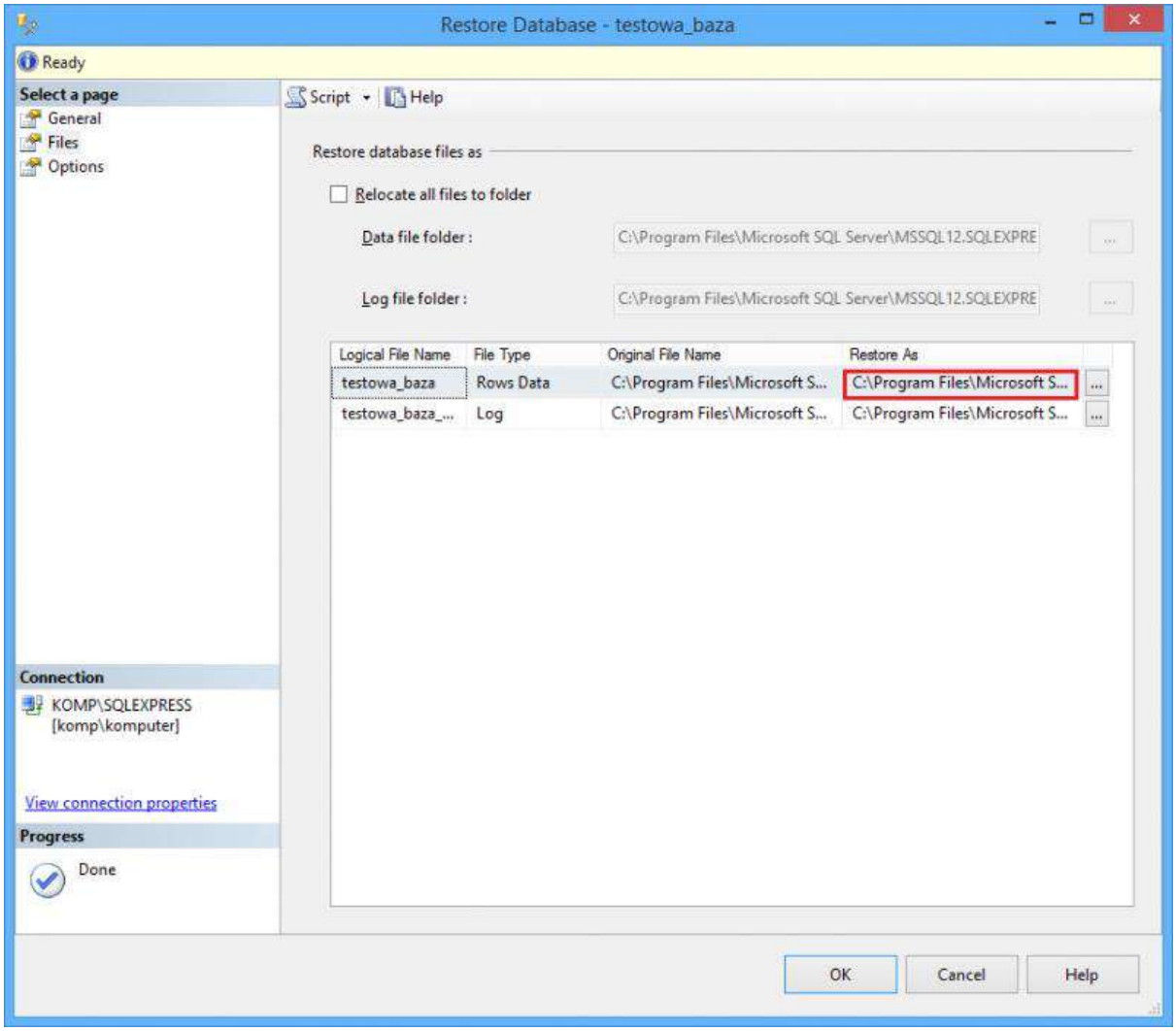


System.Data.SqlClient.SqlError: This differential backup cannot be restore because the database Has been restored to the correct earlier state.

The error occurs when Xopero application has been made the differential database dump and another application made full dump the database. To restore the database it is required to use its last full dump and then the differences could be restored from Xopero backup file.

System.Data.SqlClient.SqlError: The file: 'C:\....' cannont be overwritten. It is beign used by database 'BazaDanych'.

The error occurs while database file could not be overwritten, because it is still in use. To solve this problem go to the *Files* page in the database restore window and change the file name to which database has to be saved. Click on field *Restore As* and provide new filename.



Tips

In case when Xopero application performs differential database dump and user wants to make additional backup using other software, it is possible only when the software lets to copy the database in *COPY_ONLY* mode. It cause performing full copy without changing the data that is necessary for Xopero application to backup the database.

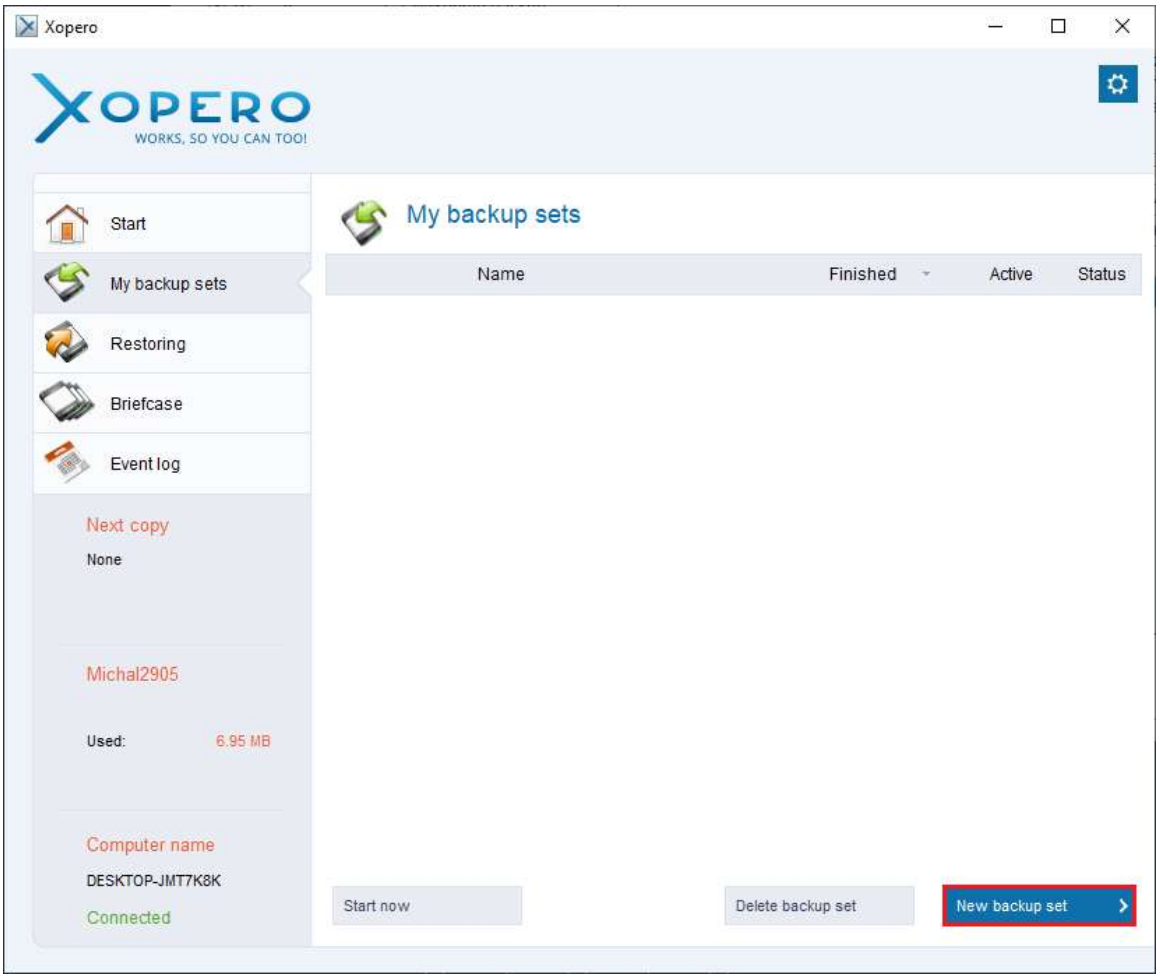
Network drives backup

Creating and performing backup

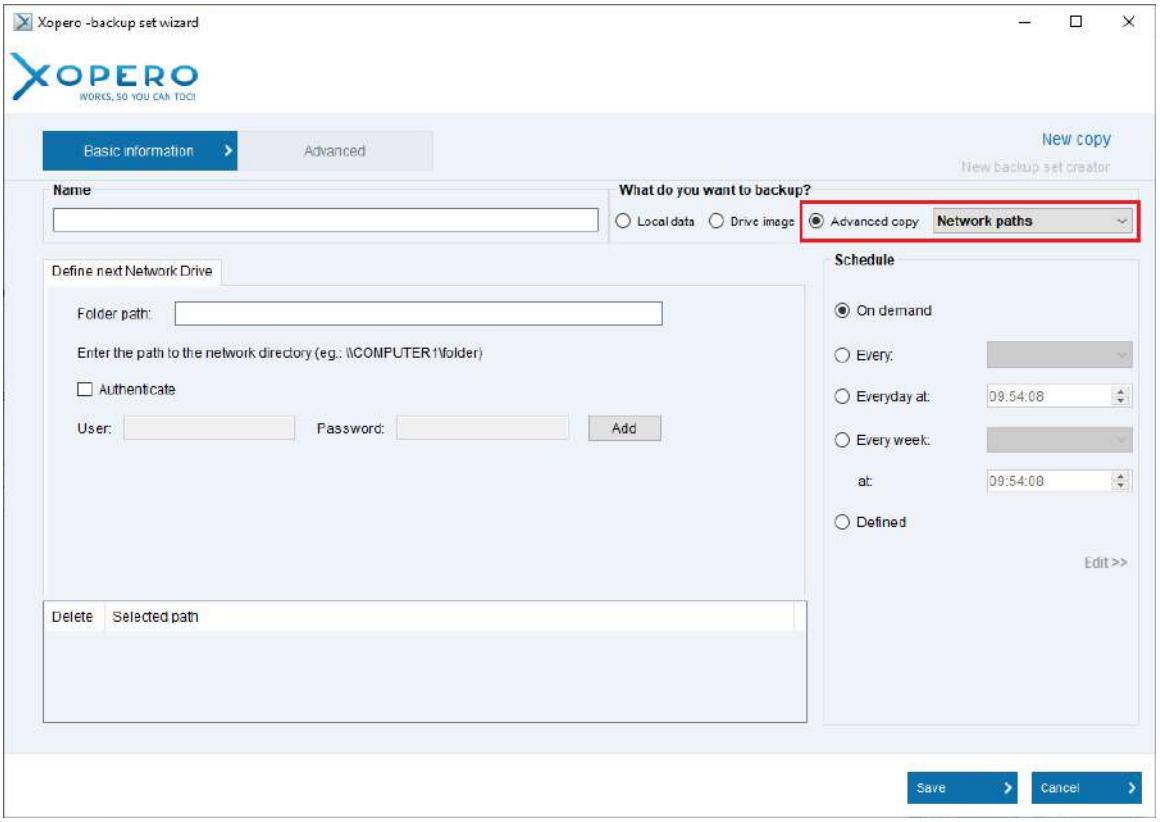
Xopero can make a backup of shared data on local network. To create a valid backup set, you need an address to the resources in UNC format as well as valid access credentials.

Network drives backup requires adding Windows user rights to the Xopero_backupagent service: Admin rights to the service.

Within a single backup set you can configure a backup of more than one network locations. To create a network data backup set, launch a ***Backup set*** wizard by clicking ***New backup set*** in ***My backup sets*** tab.

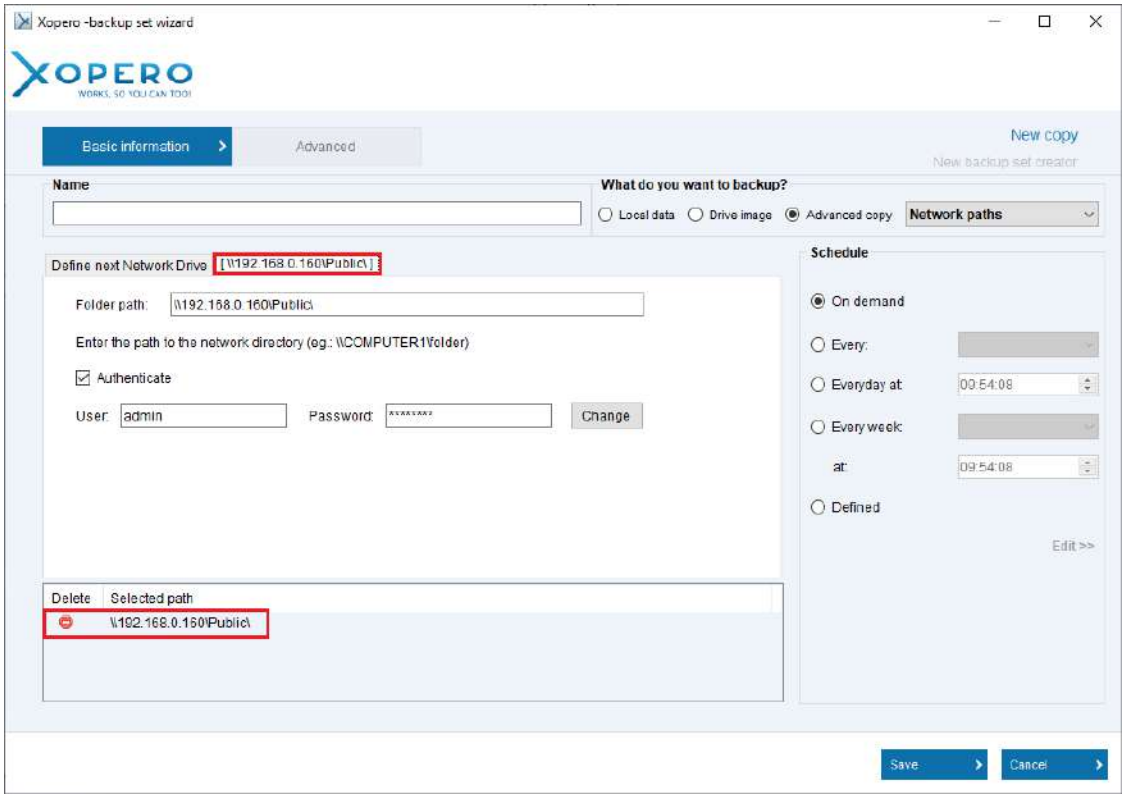


In the field ***What you want to backup?*** select ***Advanced copy*** and then ***Network paths*** from the drop-down list. Remember to *Name* your backup set.



To configure backup of a single network location, go to ***Define next Network Drive*** area and enter the UNC path (ex. \\192.168.1.30\documents) in the Folder path field. If selected network share requires autentication, check the ***Authenticate*** option and enter credentials (username and password) of a user, who has rights to this share.

By clicking ***Add***, selected path will be added to the backup set. If you enter wrong path or credentials, application will show you an error.



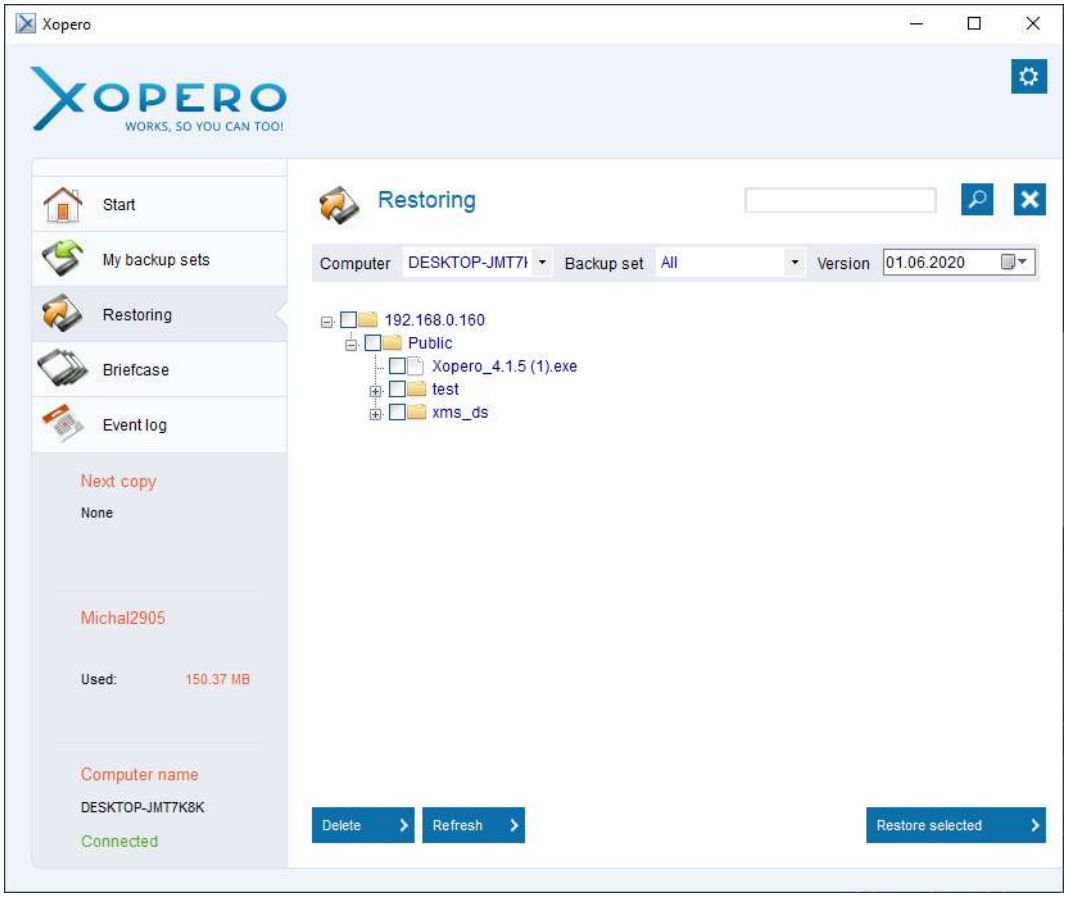
The new share will be shown on the list of added paths as well as new tab will be shown, where you can edit its configuration.

To create the new backup set, click ***Save***

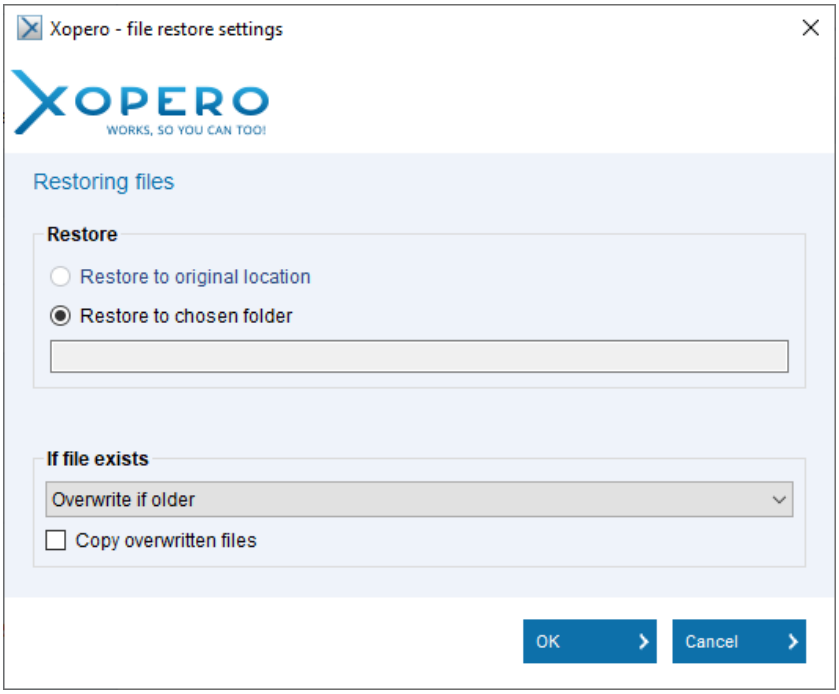
Restoring

To restore data from backup, you need to open Xopero and go to ***Restoring***. On the file list you will see folders that are bind with previously backed up network drives.

Xopero allows only to restore network data to a local computer. If you want them to be located on source machine, you need to copy them to that machine after restore process



You can either restore all the files by selecting the whole branch or restore only single files by selecting them within the folder. By clicking ***Restore selected*** you will open restore options window, where you can select destination folder where all the files will be saved.



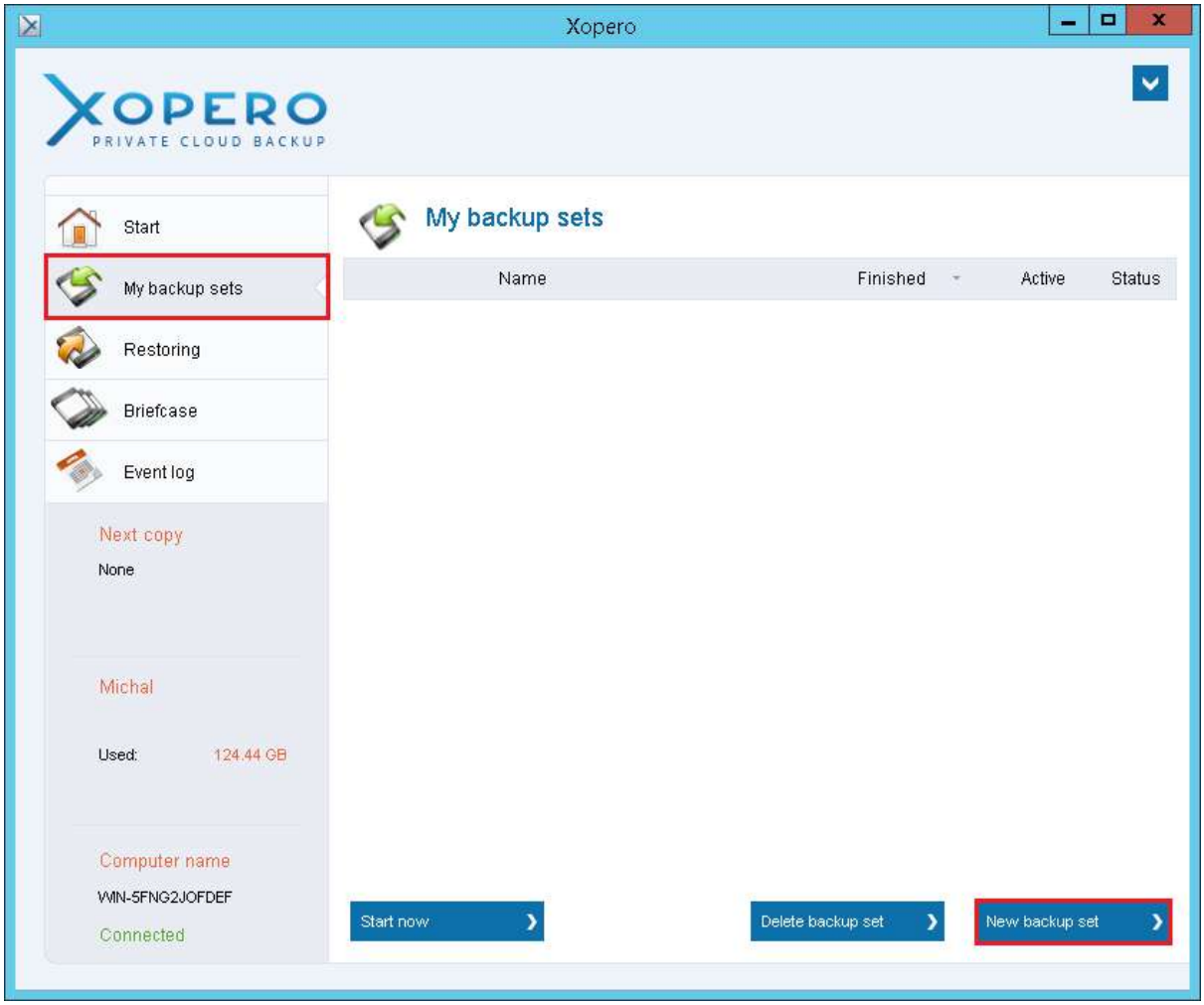
Hyper-V environment backup

Creating and performing backup

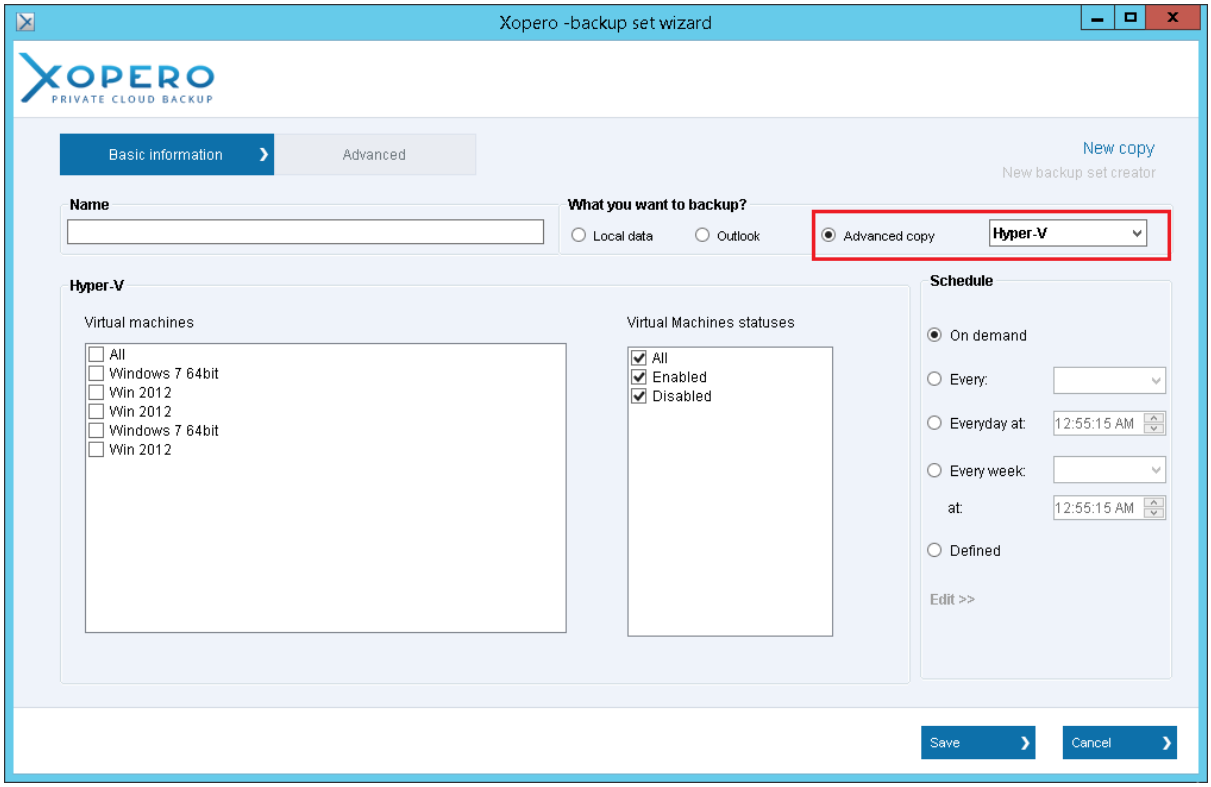
The Xopero application allows to backup virtual machines of Hyper-V server for users of Advanced license. To perform a backup, Xopero application must be installed on host which contains Hyper-V.

Xopero doesn't support backup of Hyper-V with cluster, Microsoft Hyper-V Server 2016 and Hyper-V on Windows 10.

To create the Hyper-V database backup set, in client application, you should run the ***Backup set*** wizard by clicking on ***New backup set*** button in ***My backup sets*** tab.



In the Backup set wizard mark ***Advanced copy*** and select ***Hyper-V*** from dropdown list, then define the backup set name.



Xopero will automatically connect with the Hyper-V server and list existing virtual machines. In the Virtual machines filed you need to choose machines that will be added to the backup set. By clicking the ***All*** you will add all of the machines to current backup set.

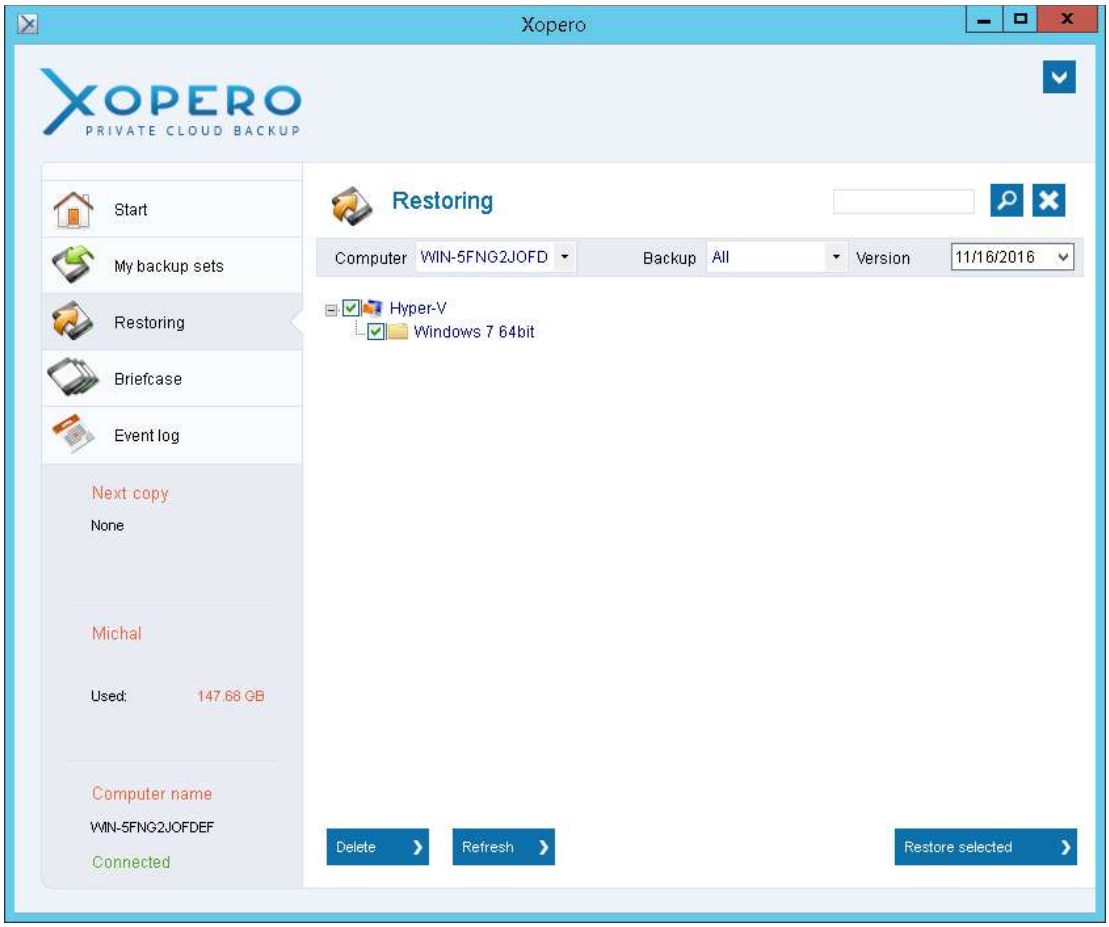
Next, you have to define in which status the machine must be when the backup process starts in the field ***Virtual machines statuses***. If the VM's status is different than defined, it will not be backed up.

Restoring

The Xopero Hyper-V virtual machine restore process is can be done in two ways. The first way requires getting the VM's files from the backup while the second one is the virtual machine restore process to the Hyper-V server.

Restore a virtual machine backup

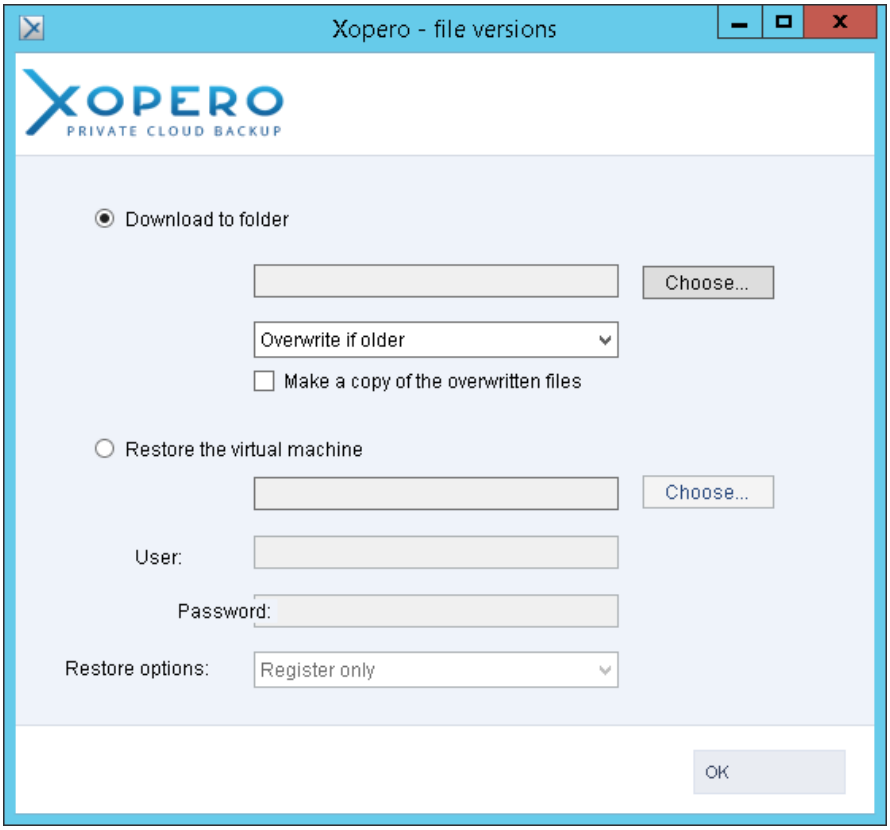
To restore a Hyper-V virtual machine backup, start the Xopero application and go to ***Restoring*** tab. All the virtual machines that have been backed up are available in the ***Hyper-V*** branch.



Expand that Hyper-V branch and select the virtual machine that will be restored. Then click the ***Restore selected*** button.

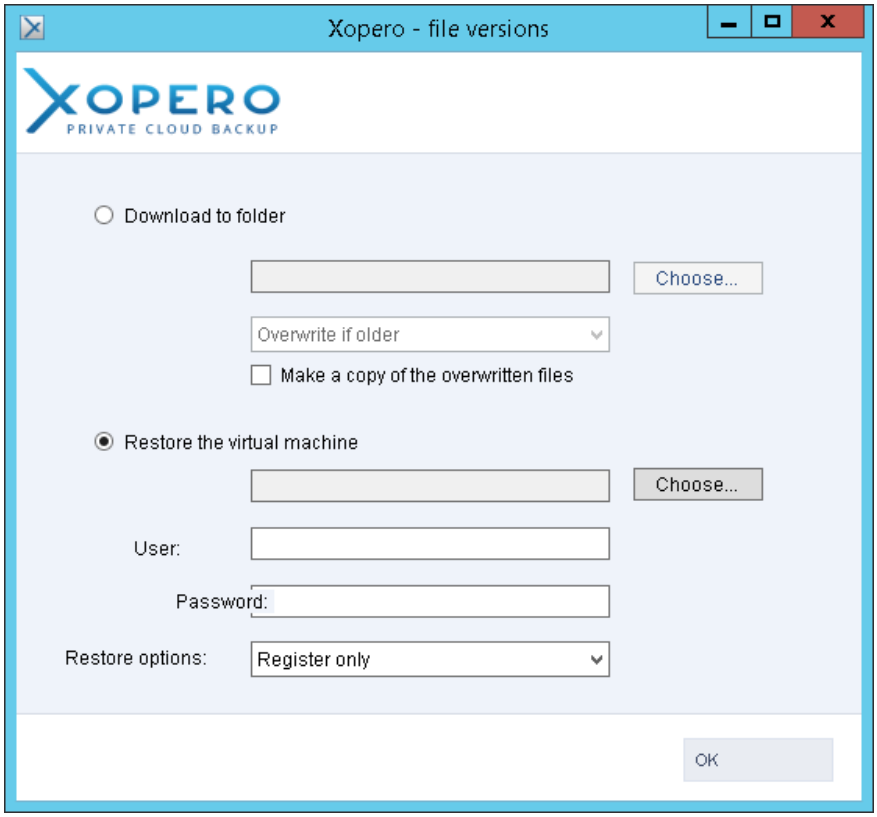
If you want to restore one of the previous versions of selected virtual machine, right-click on its name and select ***Show file versions***.

In the new window with restore settings, you have to select destination, where the VM's backup folder will be created.

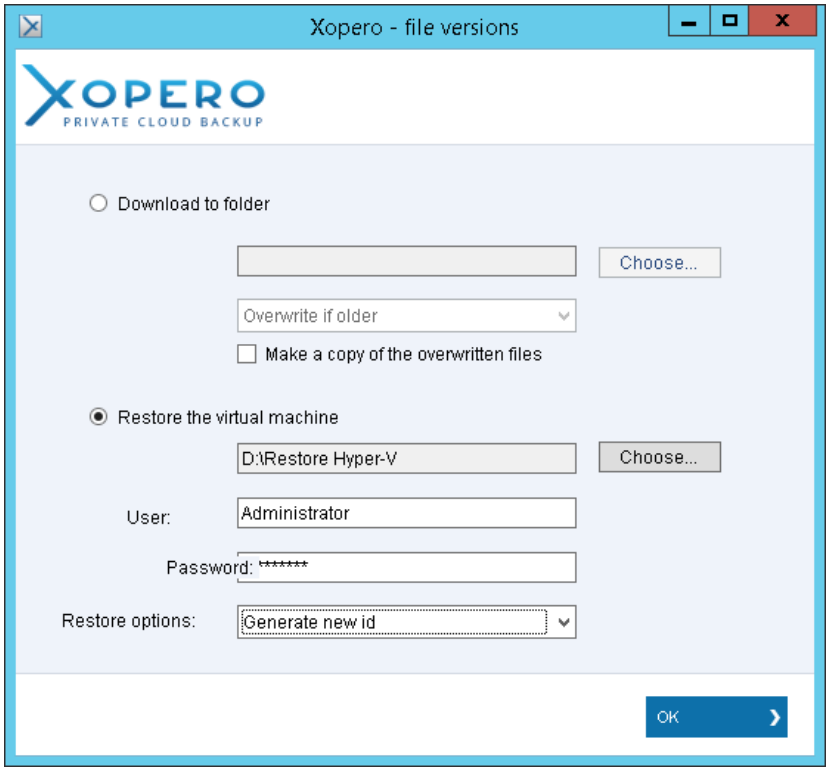


Restore the virtual machine

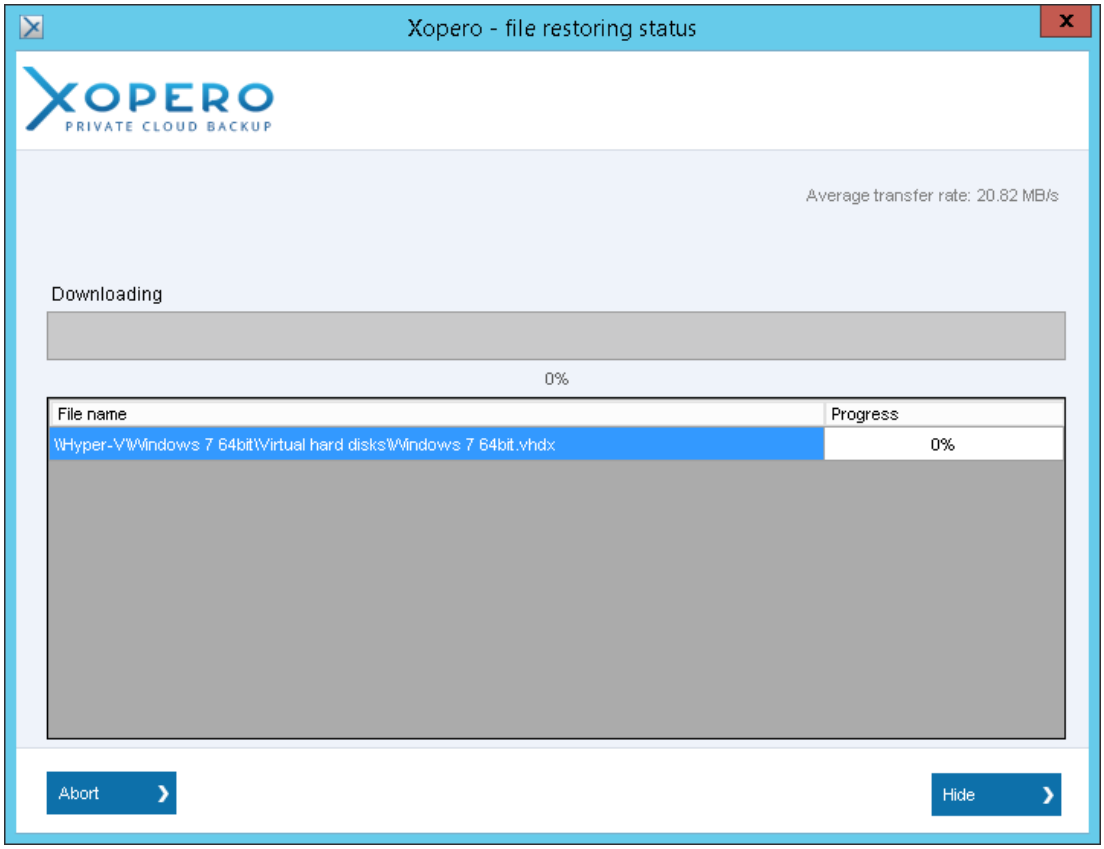
To restore a Hyper-V virtual machine per server you have to choose ***Restore the virtual machine*** option.



In the next step select folder, to which machine filse will be downloaded, enter the Windows user name and password and also choose is the machine be restored with the old id number - ***Register only*** (which causes it to restore to the place backed up machine) or do you want to create new id - ***Generate new id***.



After doing following steps will being download machine and then restore it to the server.

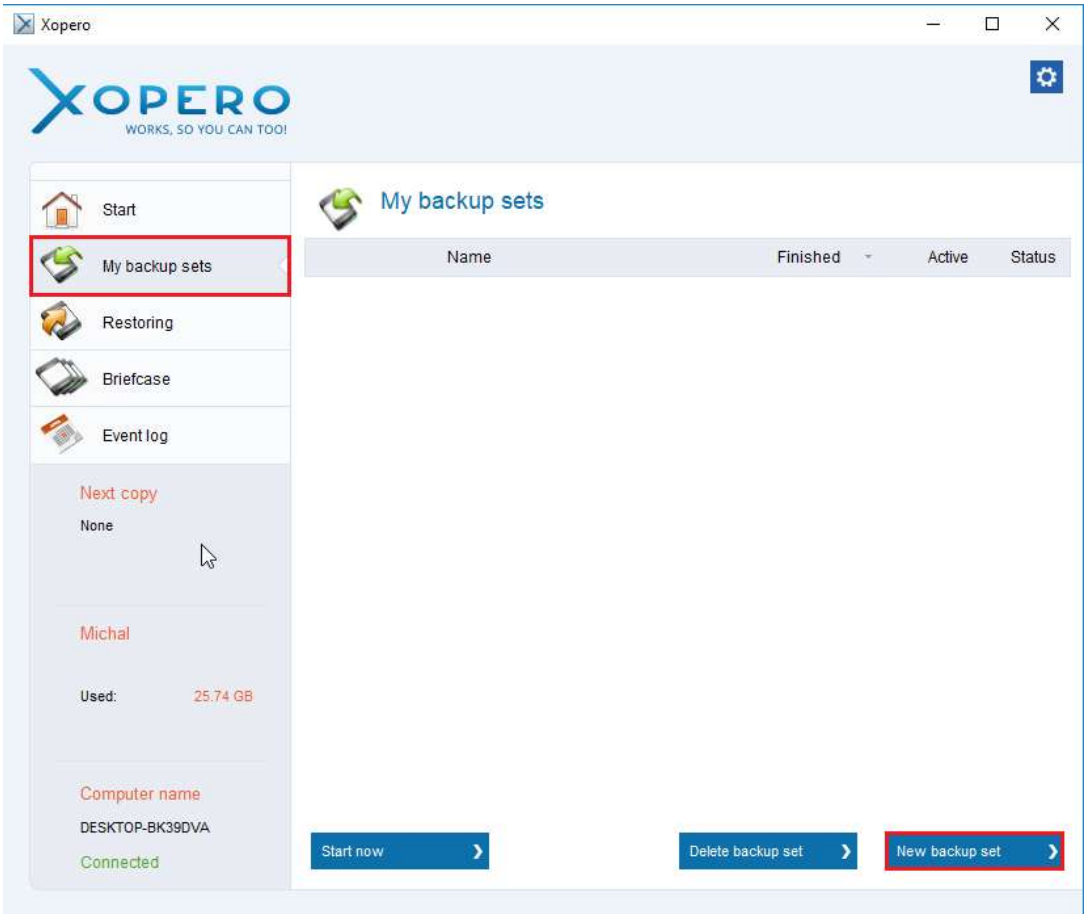


FTP backup

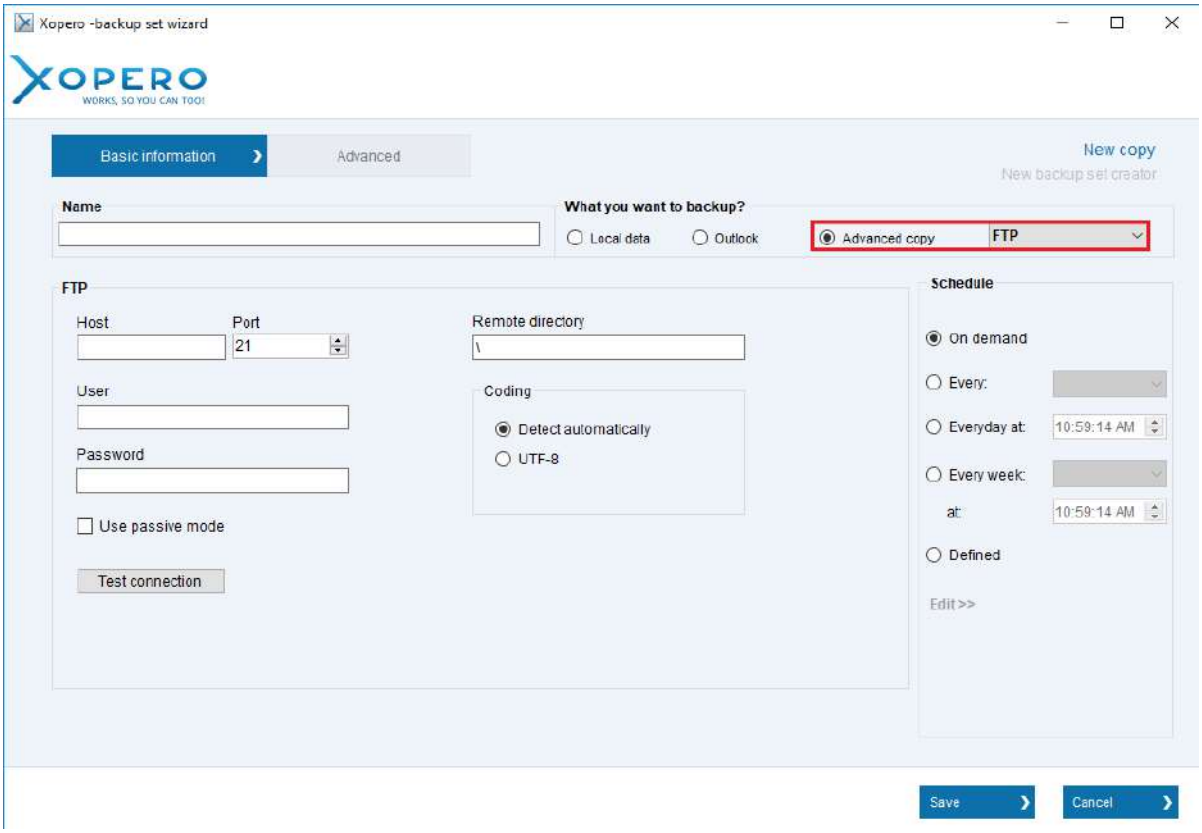
Creating and performing backup

Xopero application allows you to backup FTP server. To create a valid backup set, you need FTP server address, port, user name and password.

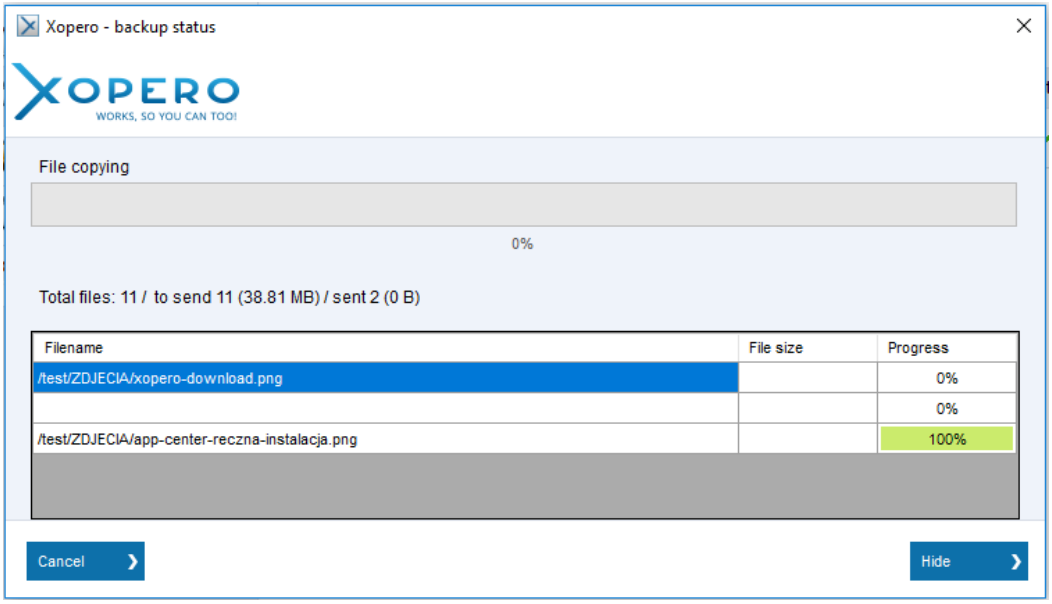
To create a ***FTP*** backup set, you need to open Xopero and run the ***Backup set***, wizard by clicking on ***New backup set***button in ***My backup sets*** tab.



In the ***What you want to backup?*** field, you need to choose ***Advanced copy*** and then ***FTP*** from the dropdown list. Name this backup set.

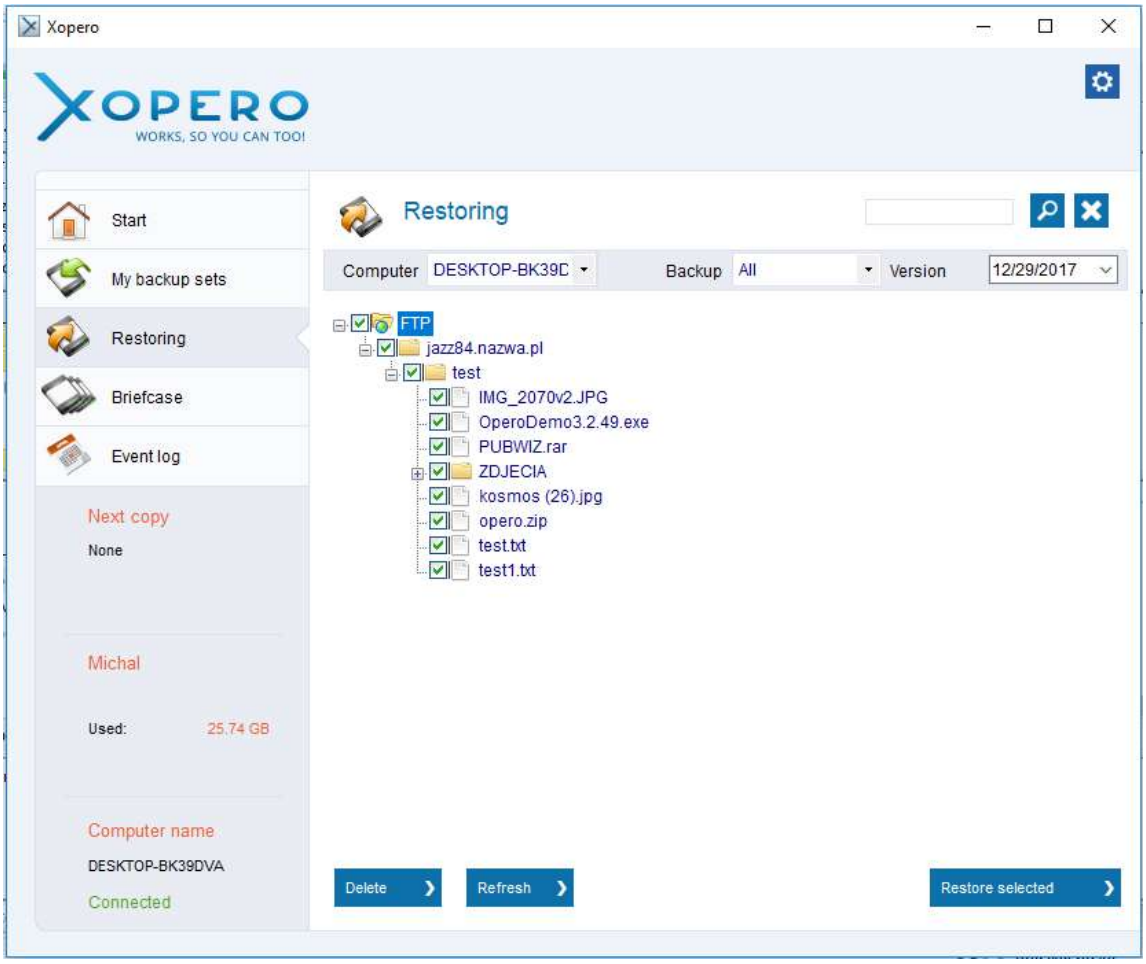


To properly configure backup set in ***Host*** field enter the FTP address (like name_server.domain.com), next select the port on which server is running and enter the name and password of user who has permission to log on the server. You can also enter the path to directory in ***Remote directory*** field - then will be performed only backup of this folder, else backup includes all server resources.



Restoring

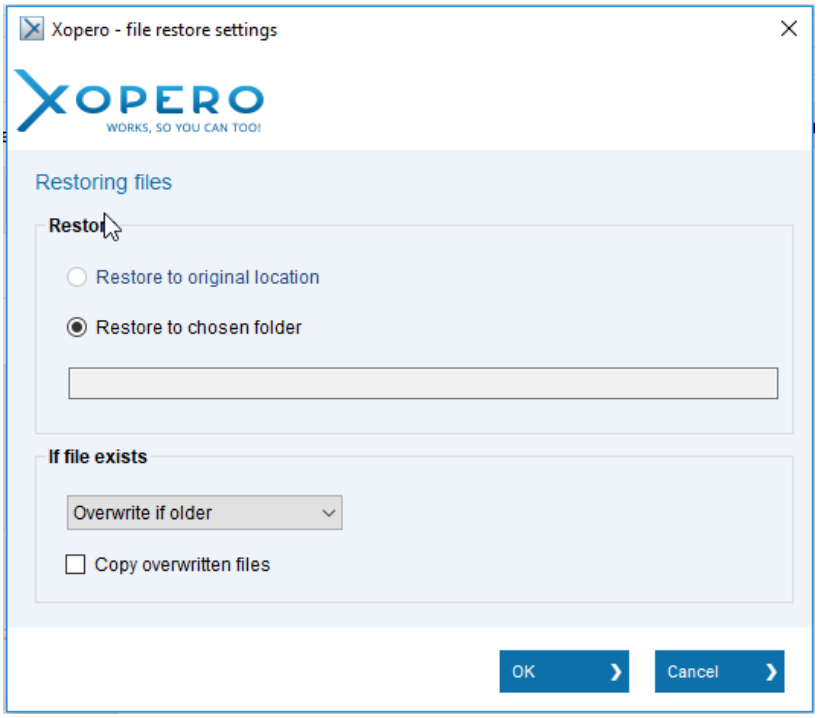
To restore data from backup, you need to open Xopero and go to ***Restoring***. All backed up files will be available in the ***FTP*** branch.



Expand the branch and mark the checkbox next to the files which has to be restored. Then click on the ***Restore selected*** button.

To restore previous version of the database right click on its name and from context menu select ***Show file versions***.

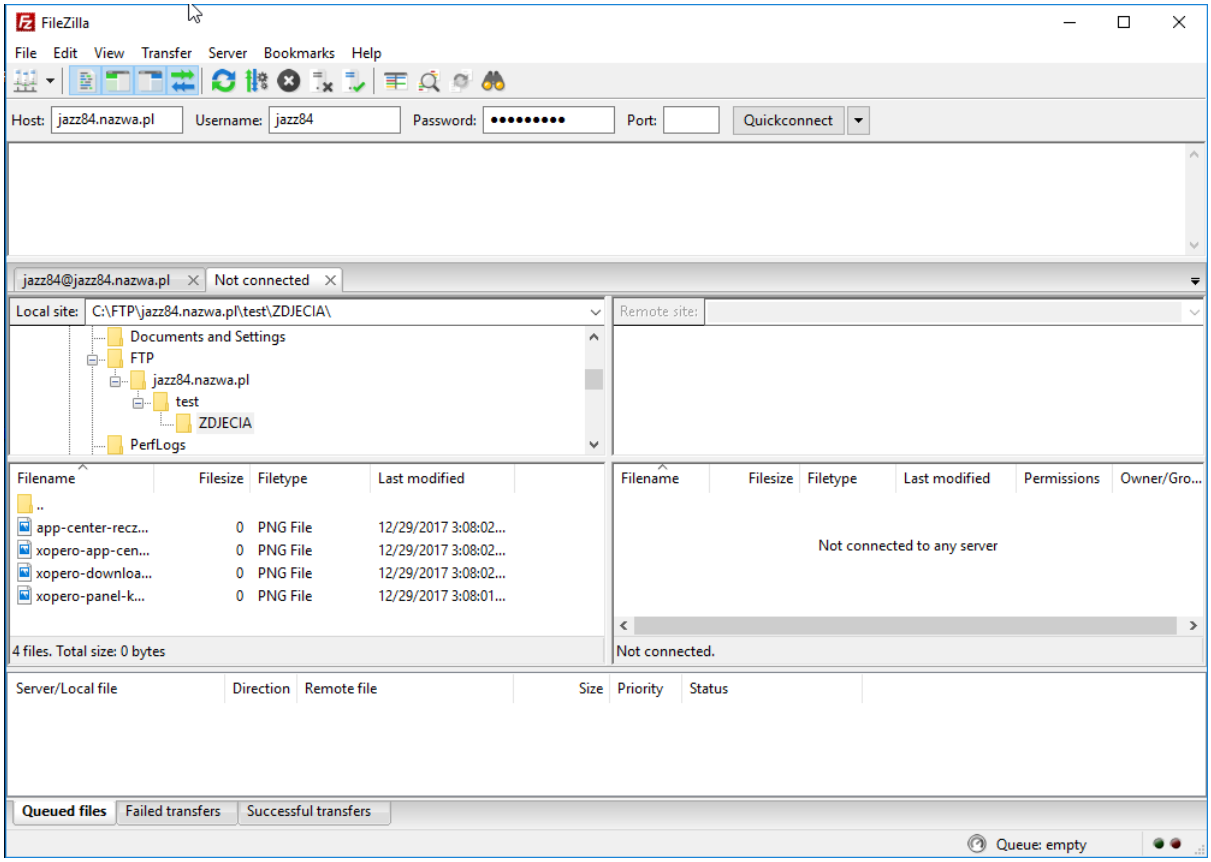
The files restore settings window will be displayed where you have to select the location where the backup files will be saved.



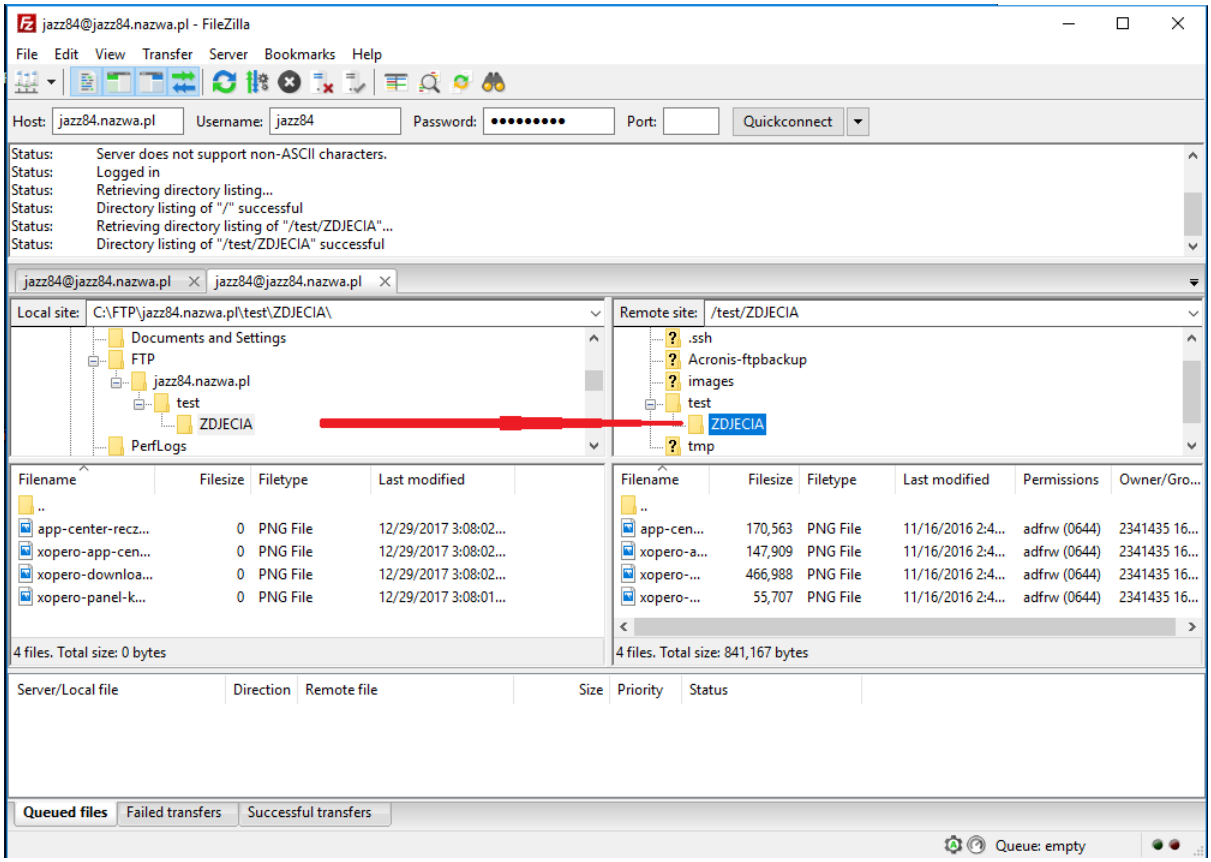
Files restore using FileZilla Client

To restore backed up files to an FTP server use external software, in this case FileZilla.

First you have to log in to your FTP server by FileZilla Client. In Host field field enter the FTP address next enter the name and password of user who has permission to log on the server and port on which server is running. Then click*Quickconnect.*



To transfer data from directory, to which you have previously downloaded, to a remote location just drag it between local side and remote side.



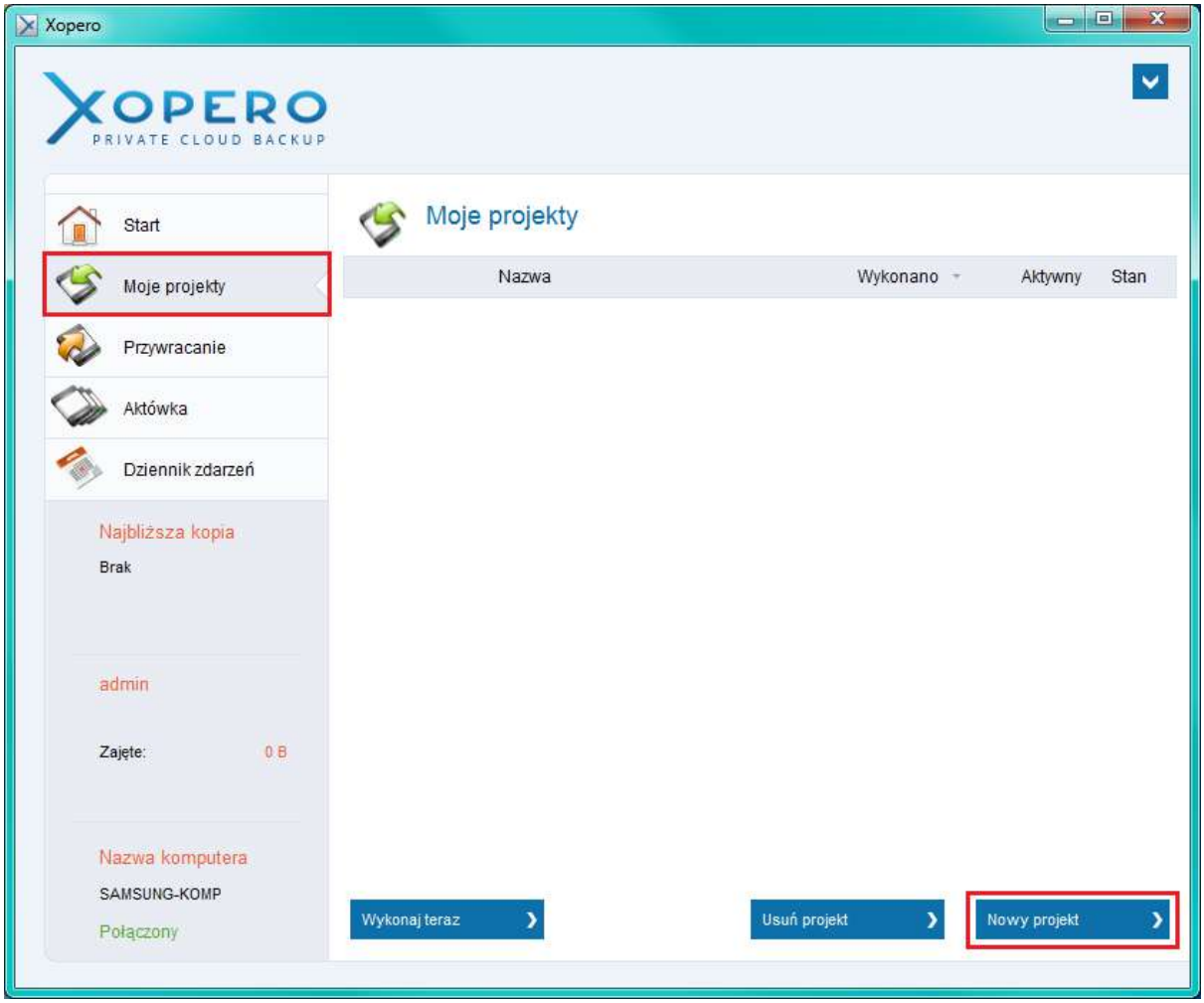
MS Exchange backup

Creating and performing backup

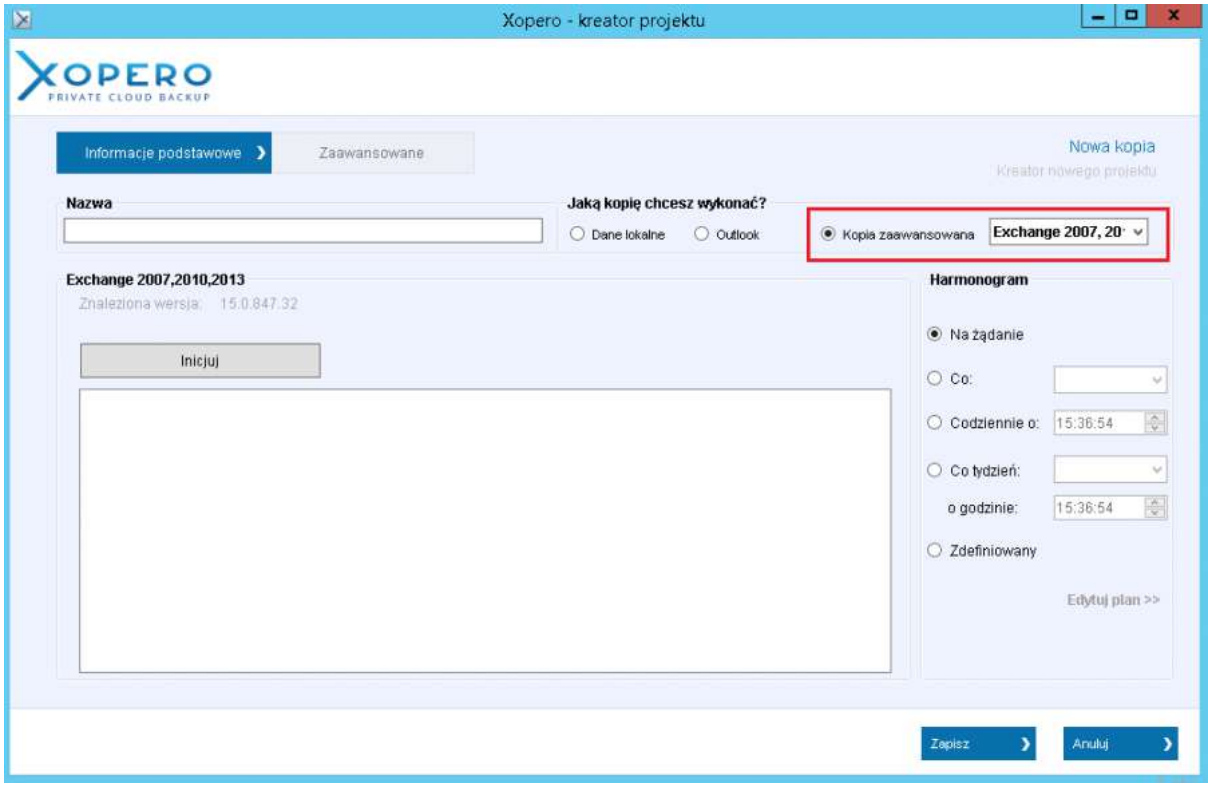
Xopero software allows you to make a direct backup of a whole Exchange 2013 - 2016 database or selected mailboxes.

Xopero backup client has to be installed on the same system, where Microsoft Exchange resides.

To create a Microsoft Exchange backup set, you need to open Xopero and run the ***Backup set***, wizard by clicking on ***New backup set*** button in ***My backup sets*** tab.

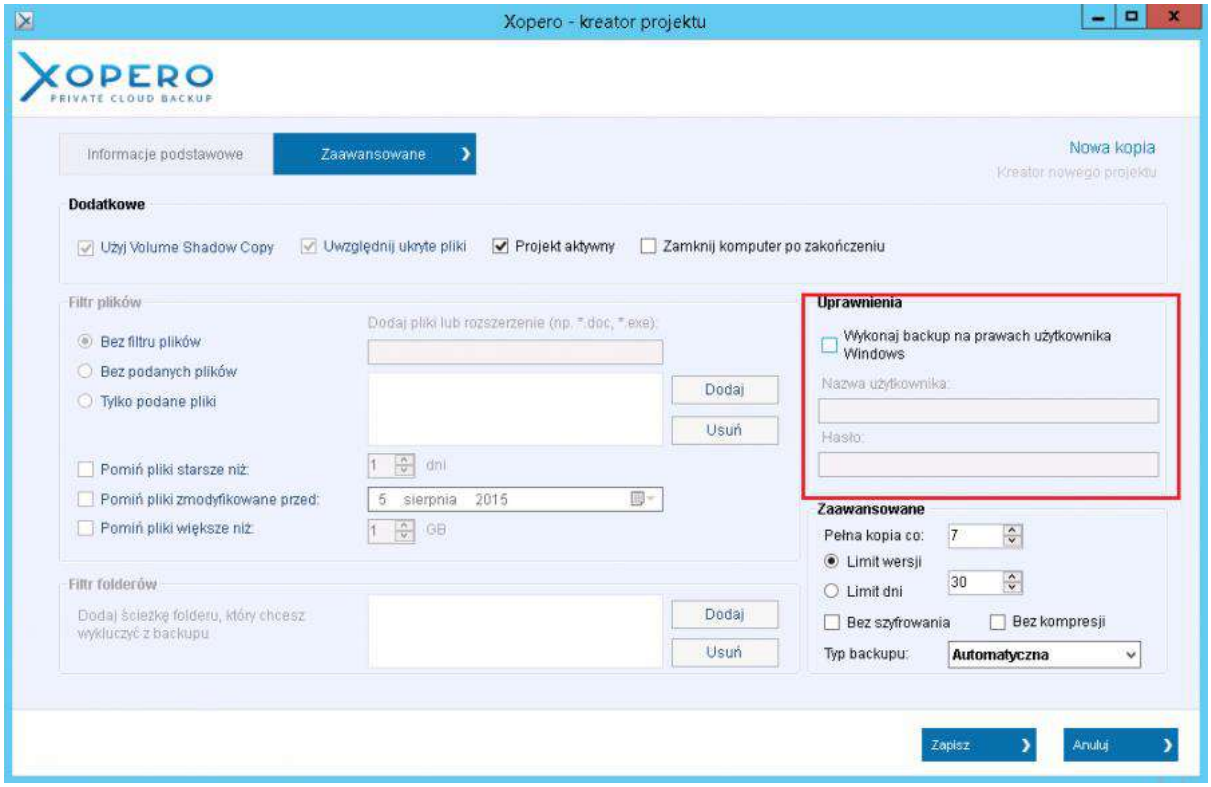


In the Backup set wizard mark ***Advanced copy*** and select ***Exchange 2007, 2010, 2013*** from dropdown list. Don't forget to define the backup set name.



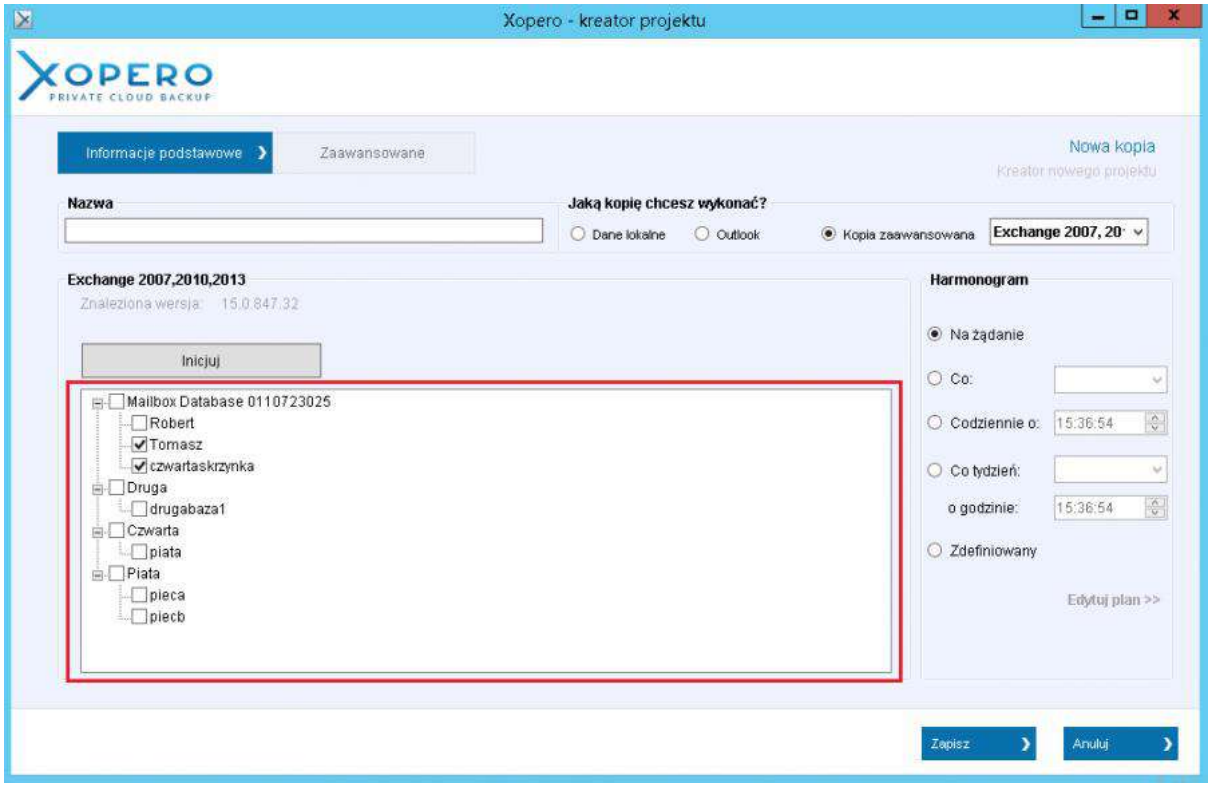
To create a valid backup, Xopero service must have Microsoft Exchange's Windows user rights set for the time of creating backup.

Required rights can be added for the Xopero service in Backup Wizard, where on *Advanced* tab you can mark option ***Create backup using Windows user rights*** and enter Username and password.



When the required rights are set, go back to Basic information tab and click ***Initiate***. As a result, Xopero will connect with the Exchange Server and list all available mailboxes.

You can select single mailboxes or the whole database to backup.



Backup of the single mailboxes creates PST files..

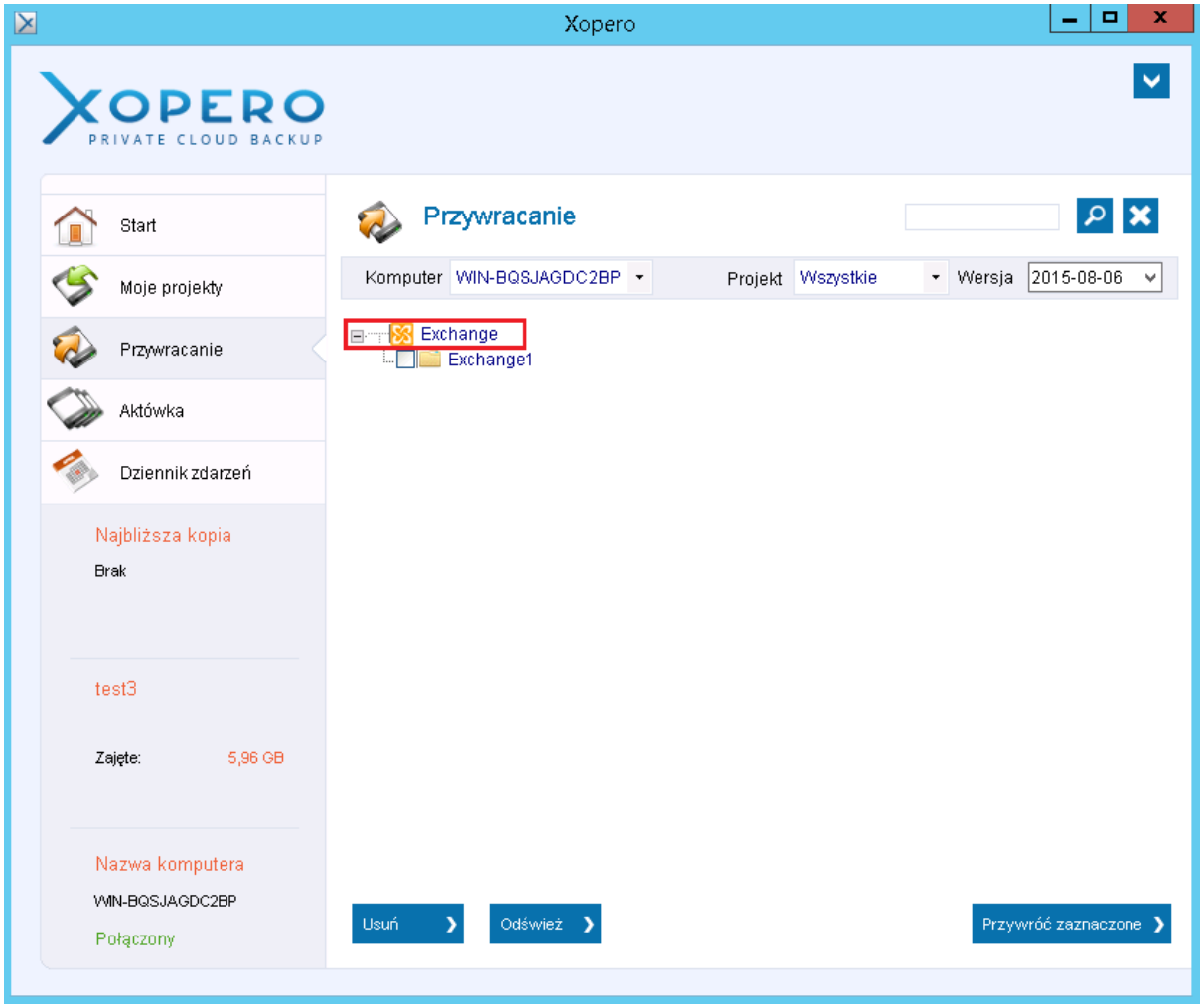
Backup of the whole Exchange database creates copy of all the database files, including logs.

Restoring

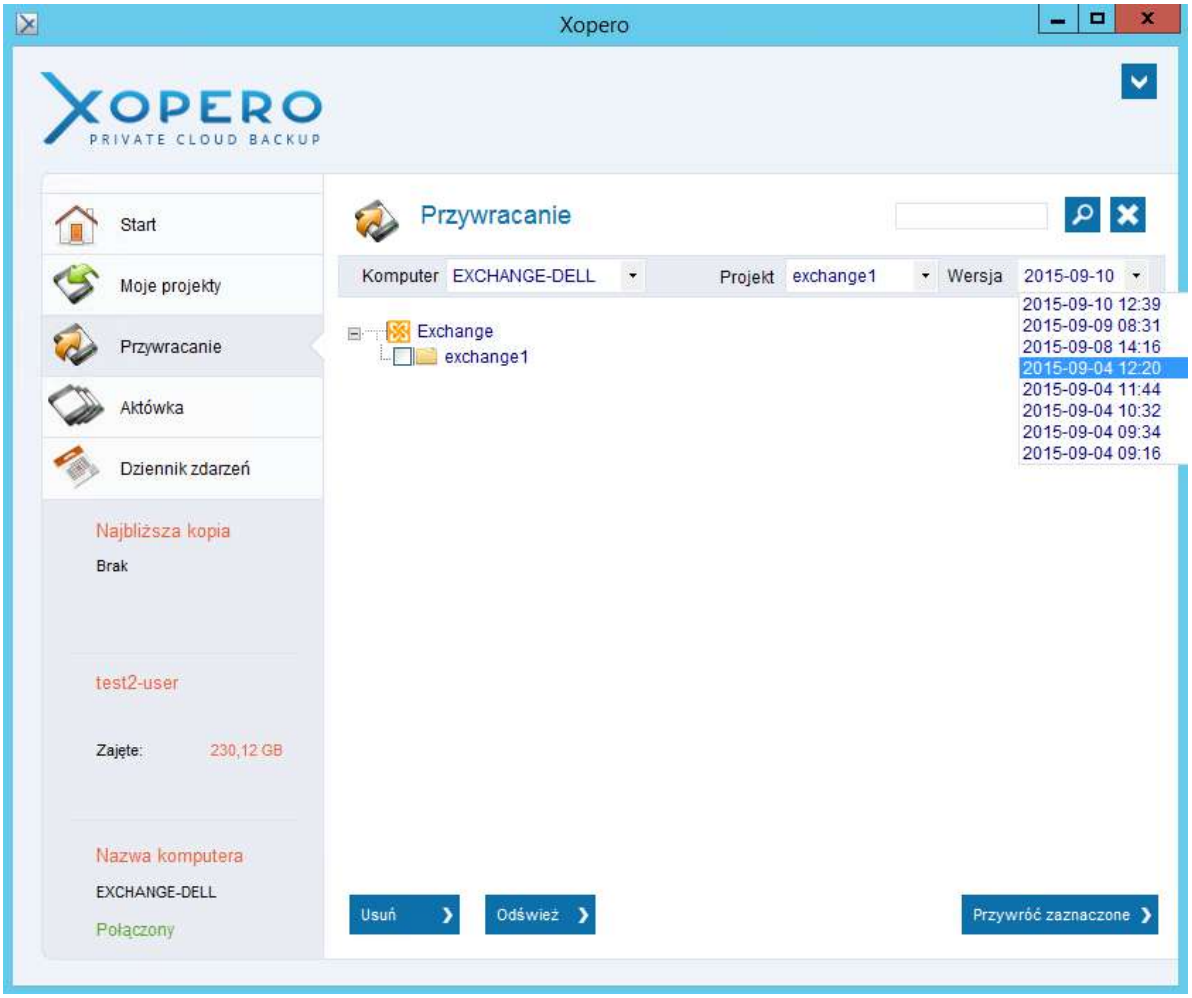
Xopero application allows you to restore either the whole Microsoft Exchange database or single mailboxes directly to a mail server. The restore is being done in two steps. First, you need to download a backup file. Then, the downloaded database is restored directly onto the Microsoft Exchange server.

Restore database file from backup

Restore database file from backup ***Restoring*** tab. All the backed up databases and mailboxes will be present in the ***Exchange server*** branch.

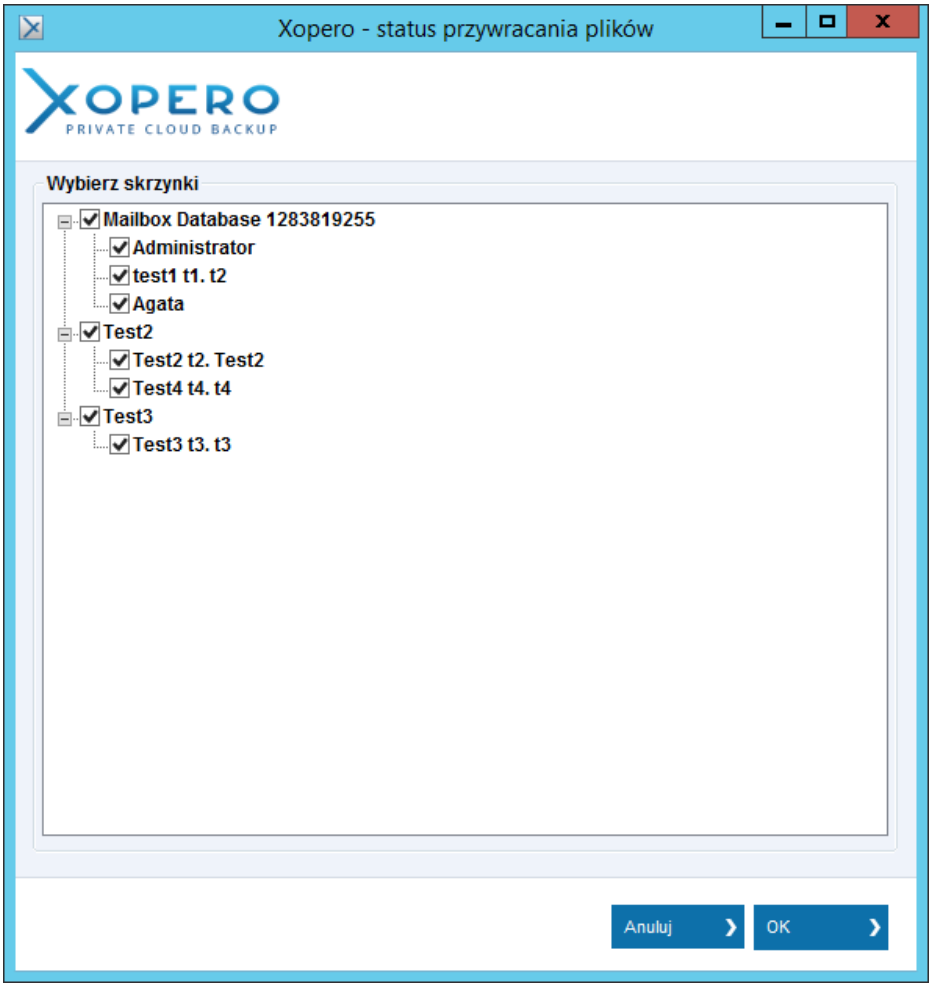


To restore selected version of the database, in the field *Project* you need to choose project's name and then date of the project in *Version filed.*

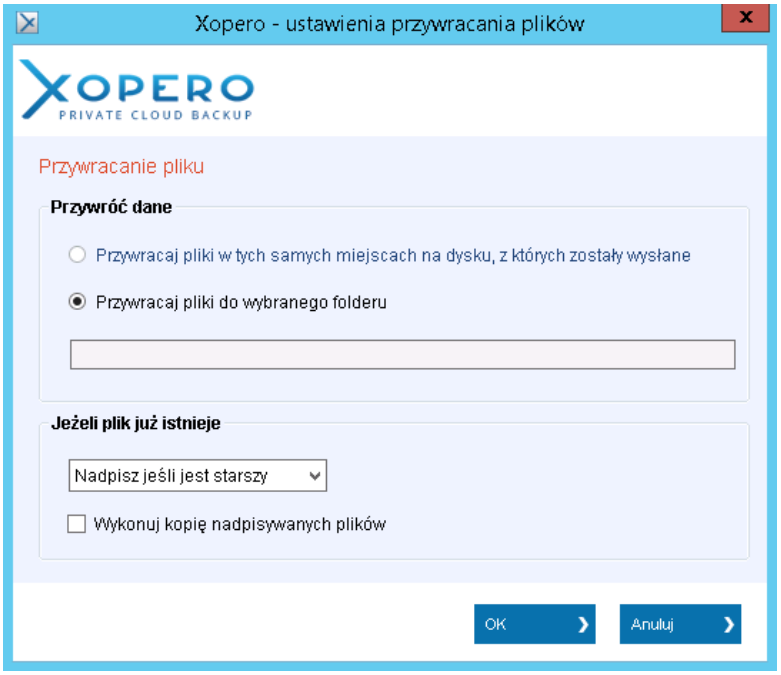


Expand selected branch and mark the filed next to backup sets name, from which the Exchange data will be restored, then click ***Restore selected***.

A window with the backup's content will be displayed. You need to choose either the whole database or single mailboxes to be restored.



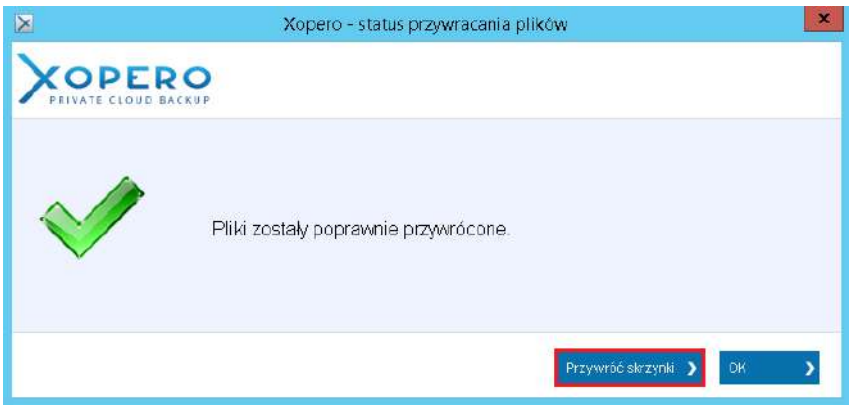
After you select mailboxes to restore and click ***OK***, you will be asked, where the data should be restored to and what the application shall do, if restored data's duplicates are present in that location.



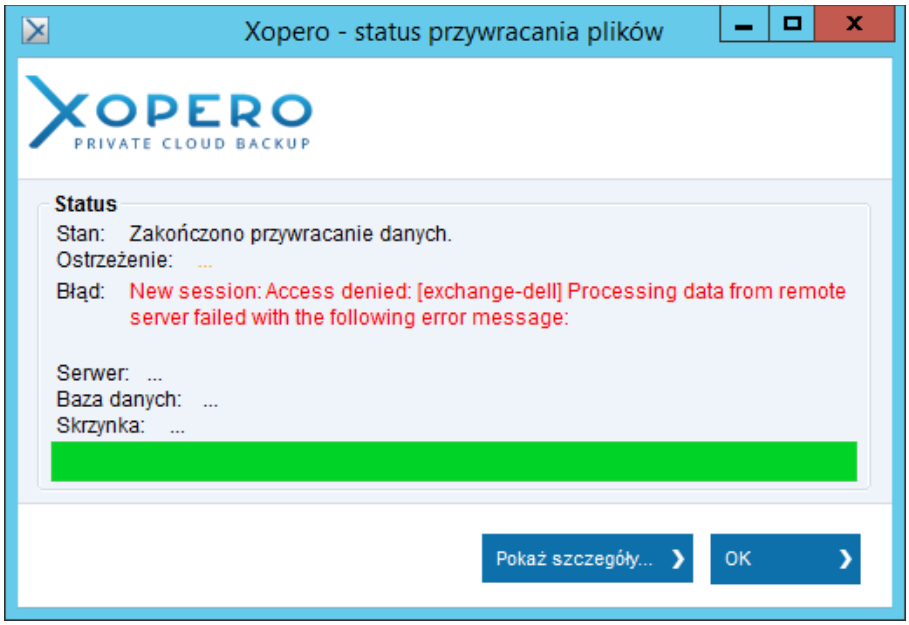
By clicking ***OK***, you start the Exchange backup restore process.

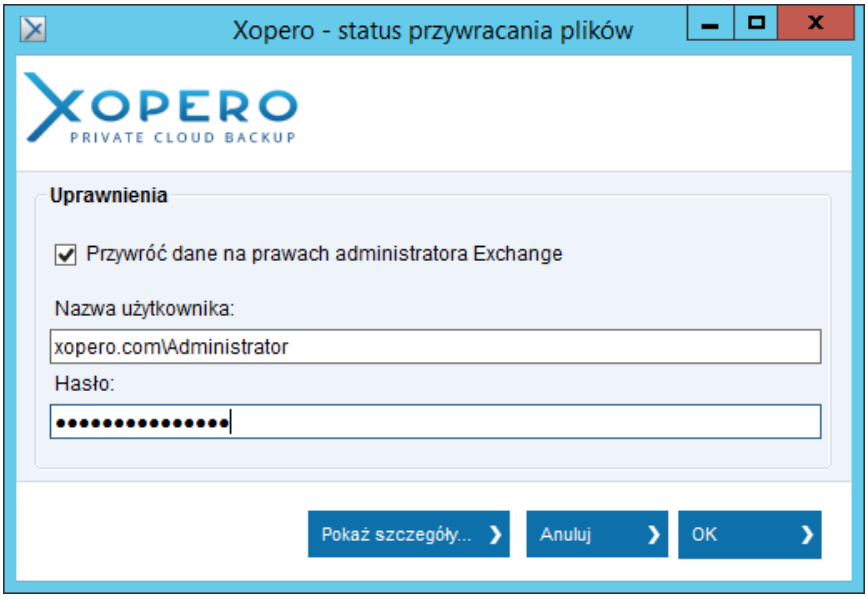
Restore of single mailboxes

When Microsoft Exchange files restore is finished, a windows with restore status will be shown. In order to start restoring email mailboxes to the Microsoft Exchange server, you need to click ***Restore mailbox*** button.

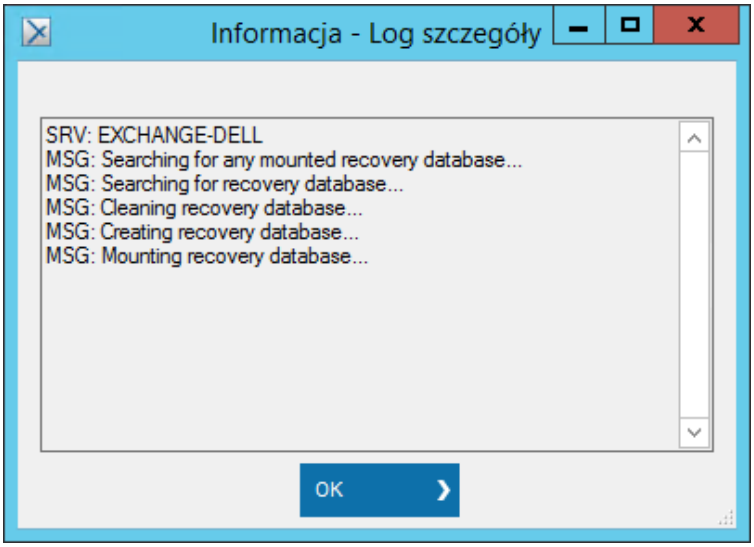


If a *New session: Access denied* error is shown during mailbox restore process, valid Exchange server Administrator's credentials are required. By clicking ***OK*** you will be prompt to enter it.

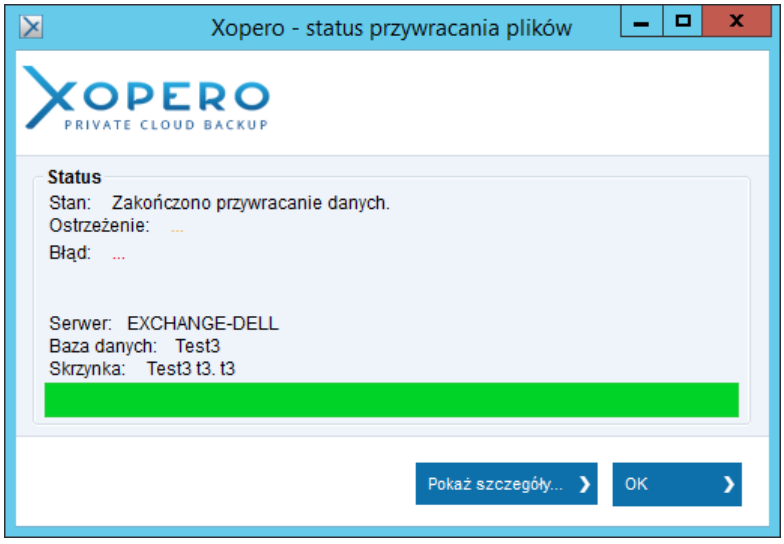




During mailbox restore you can click ***Show details...***, which will show you additional information about current restore process.



The restore of Microsoft Exchange mailboxes ends with a ***Data restore is finished*** message.



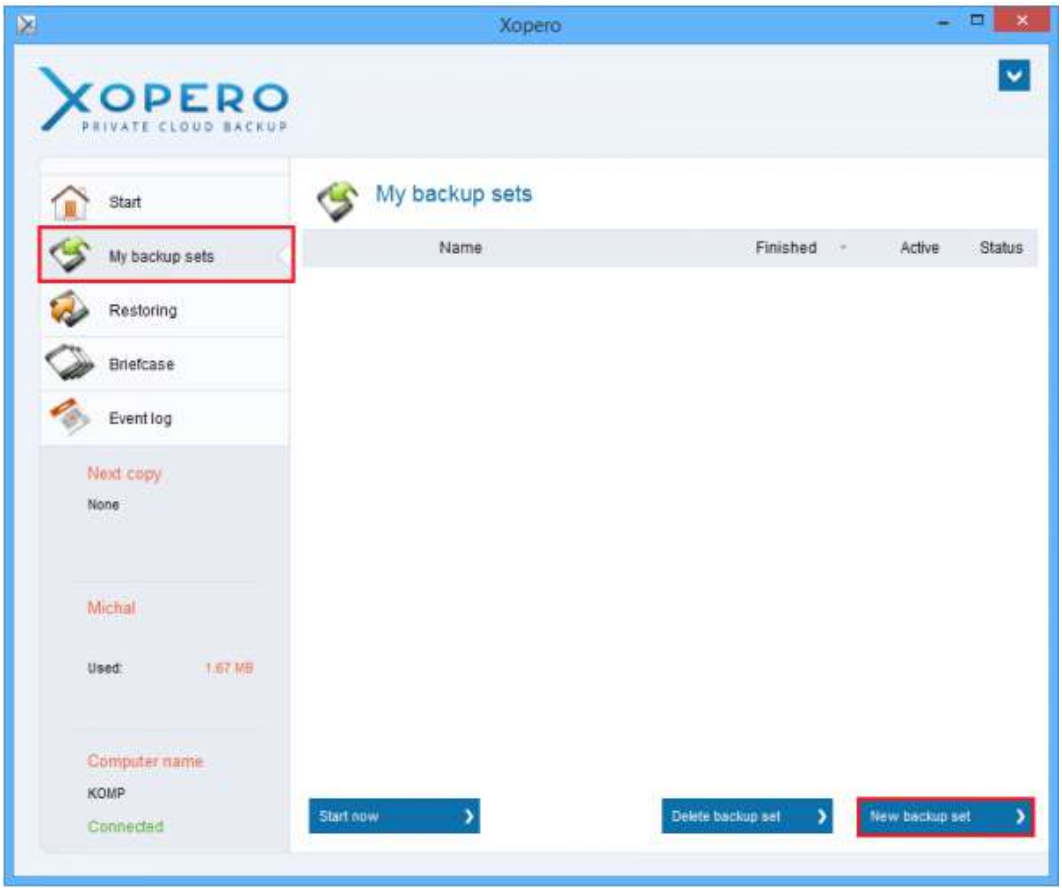
MySQL database backup

Creating and performing backup

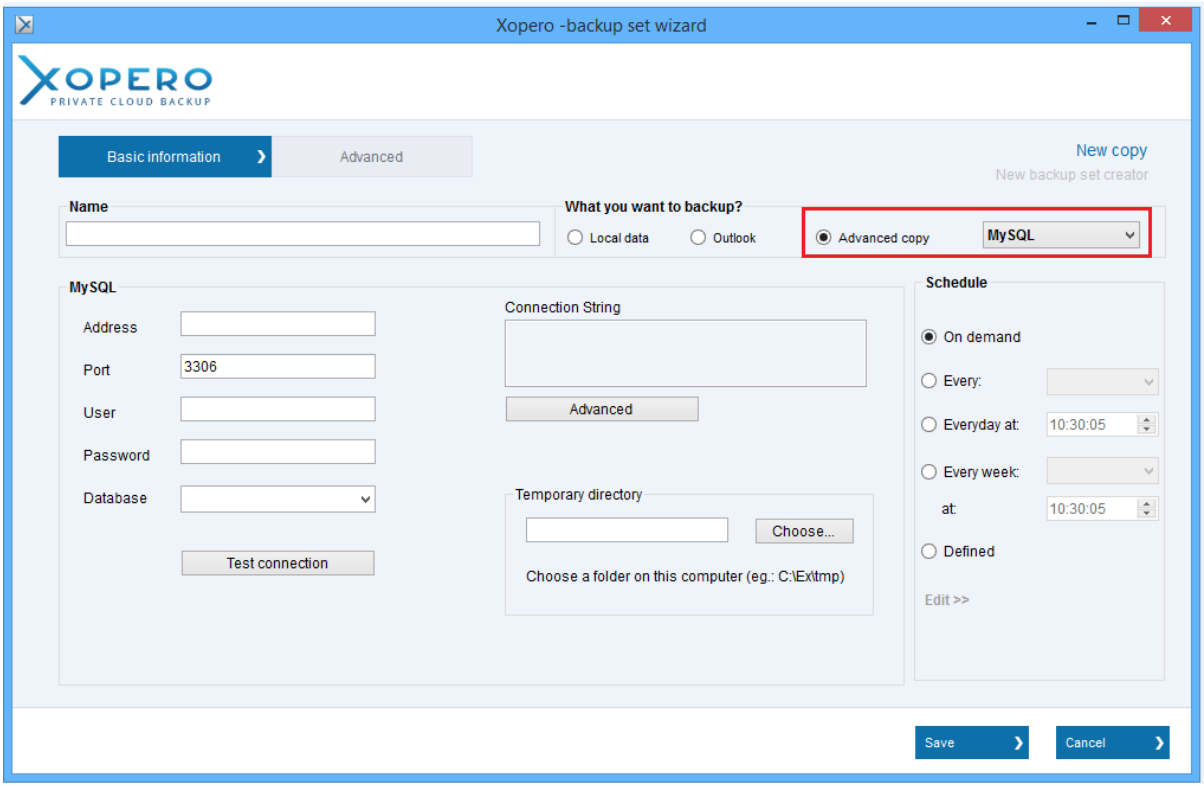
The Xopero application allows to direct backup of MySQL databases for users of Advanced license without having to install additional components. To correctly configure the project of backup is necessary to have access data to the server.

Supported versions from 5.0 and above.

In order to create the MySQL database backup set you need to open Xopero and run the ***Backup set wizard*** by clicking on **New backup set** button in ***My backup sets*** tab.



In the ***Backup set*** wizard mark ***Advanced copy*** and select ***MySQL*** from dropdown list. Don't forget to define the backup set name.



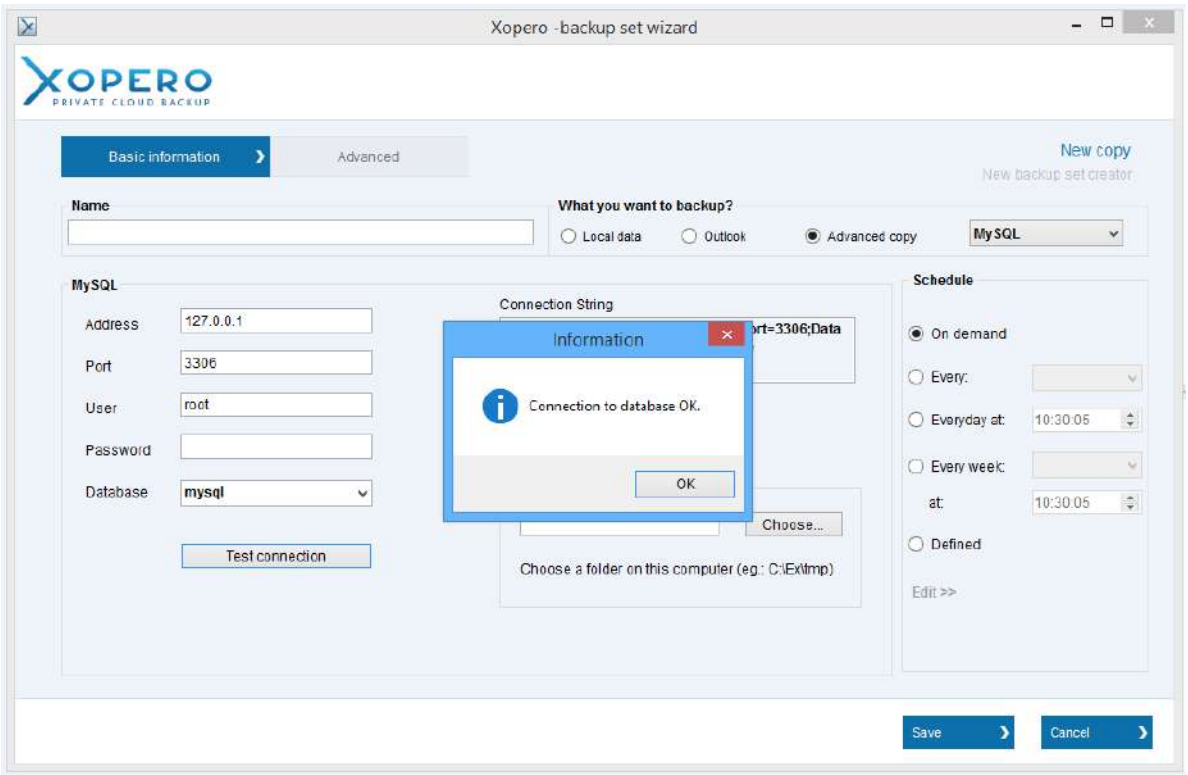
In the ***MySQL*** panel you need to define parameters that are necessary to connect with the database server:

- **Address** - address IP of the computer with MySQL server,
- **Port** - port, on which the database server is listening,
- **User** - MySQL database username,
- **Password** - password for user above.

The user indicated in the application Xopero must have the necessary privileges to backup databases to MySQL server. Information about the required permissions are available at https://dev.mysql.com/doc/mysql-enterprise-backup/4.0/en/mysqlbackup.privileges.html

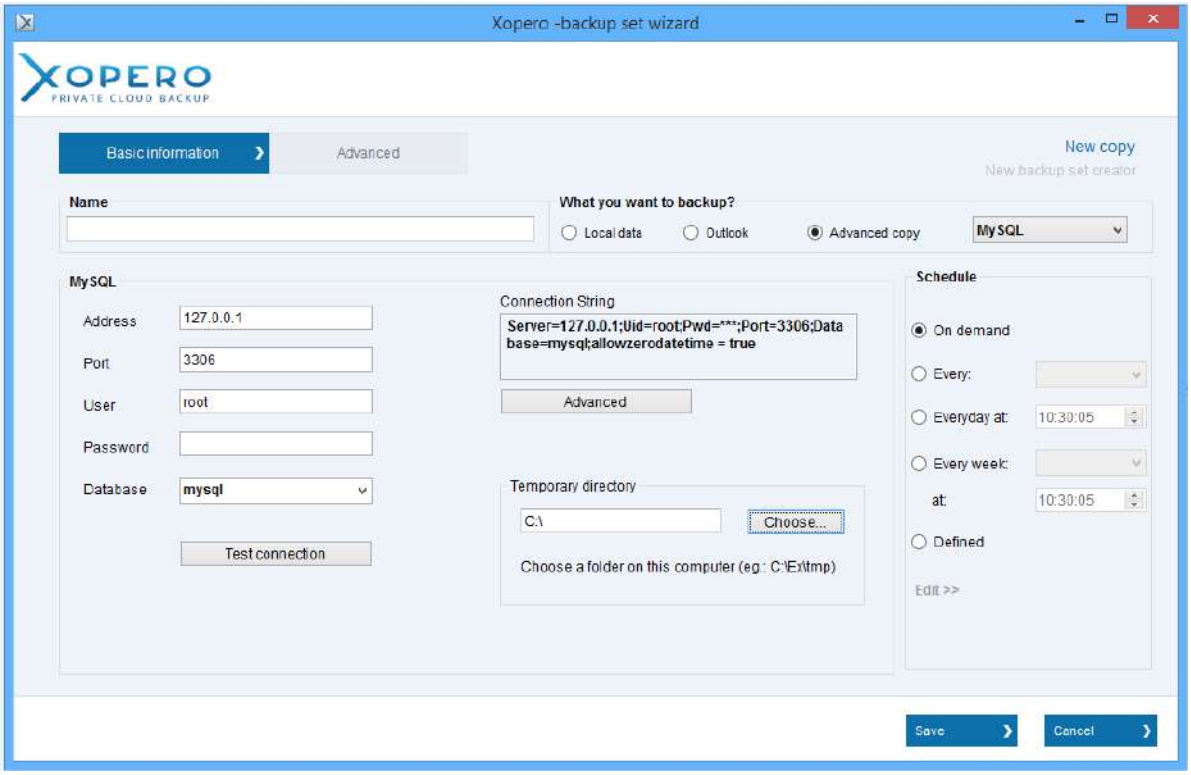
If the above data are correctly entered, the Xopero application connect to the database server and in the field ***Database*** will be available list containing all accessible databases. You have to choose one of them.

After the correct configuration of connections to the database server and indicating the database backup, click on the button ***Test Connection*** to check the connection to the database.



To enter additional connection parameters to the database server, such as timeout, mark Advanced which create an Connection String where you can enter the required parameters.

In case of editing *Connection String* enter the the correct password MySQL user in place *** specified with parameter *Pwd*.



In the end define ***Temporary directory***, that is the directory to which will be dump the database. Clicking on the button ***Save*** creates a new project of backup.

Restoring

To download MySQL database file, you have to start the Xopero application, then go to the tab ***Restoring***. All databases, which have been backed up are located on branch ***MySQL***.

Expand the aforementioned branch, then check the box next to the database which you want restore and click ***Restore selected***.

To restore a previous version of the selected database, click on its name, right-click and select ***Show file versions***.

Settings window restoring will be displayed, where should specify the location to which you want to save the database backup file. Then this file will be used to restore the database on MySQL server.

Restoring the database from the downloaded file

To restore the database on MySQL server you have to use the tool for manage database. For the purposes of this instruction used tool ***mysql*** available from the command line.

The tool *mysql* is available for download: https://dev.mysql.com/downloads/utilities

To restore the database, you need to log in to the database server via the command: ***msql -h SERVER_ADDRESS -u USER -p***, where:

- **SERVER_ADDRESS** - MySQL server address to which you want to restore the database
- **USER** - name of the user who has the privilege to restore the database.

The tool *mysql* requests entry of password the user specified in the command. Correct password implementation will log on to the database server, where you should select the database to which you want to restore the backup, the command ***USE database_name***.

Restore the backup of database is executed by command ***source FILE_PATH***, where in place of ***FILE_PATH*** must indicate the exact location of the previously restored the database file.

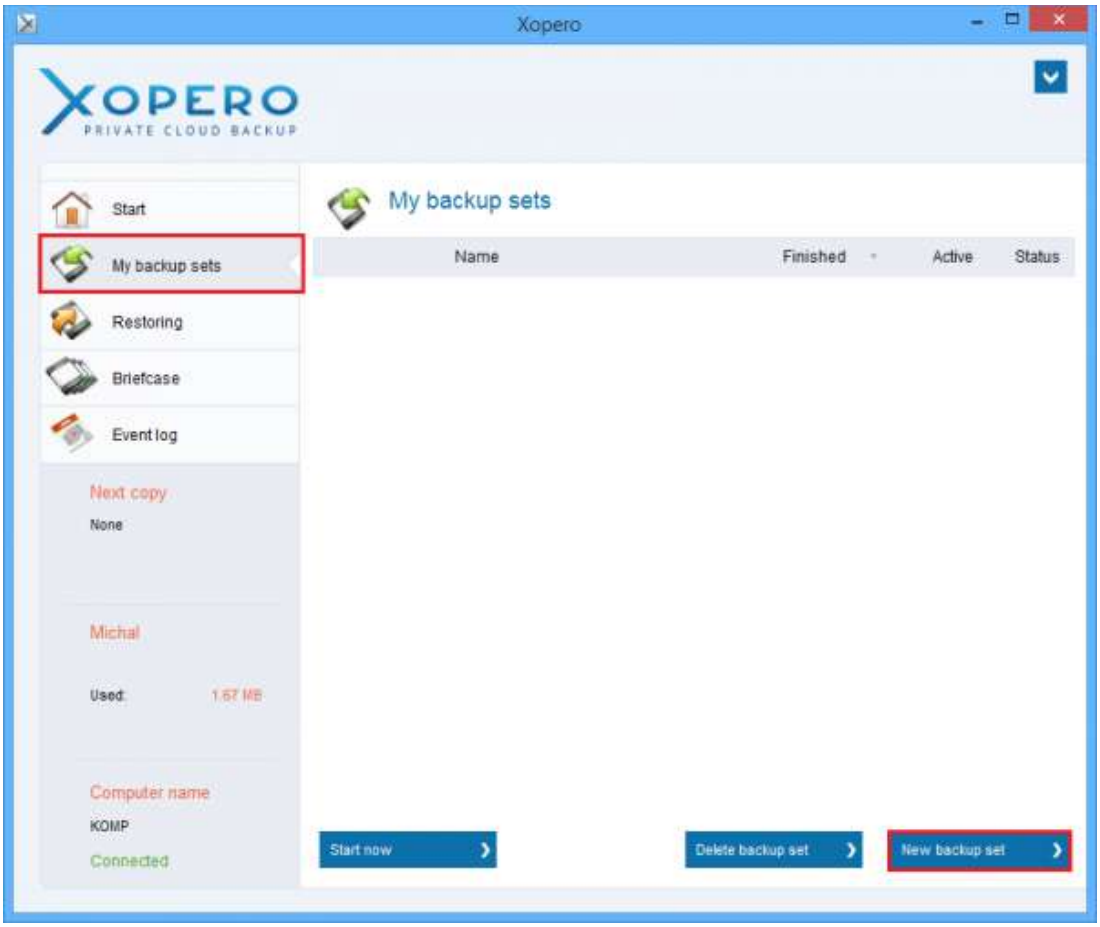
Firebird database backup

Creating and performing backup

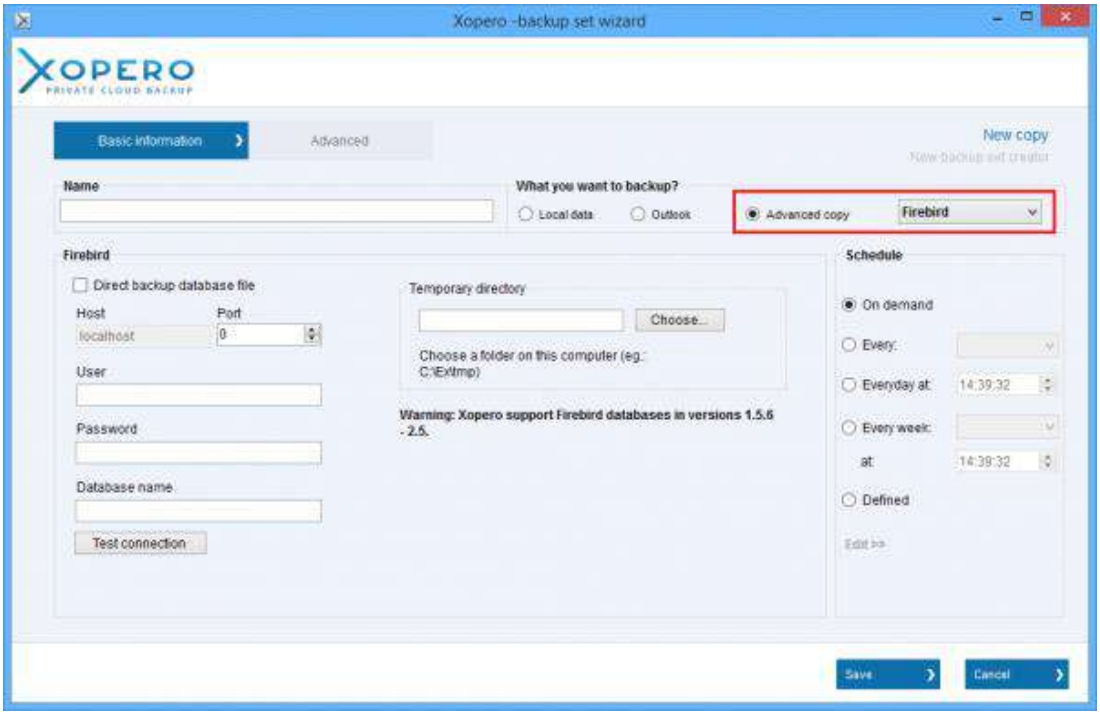
Xopero can make a backup of Firebird databases in versions **1.5.6** to **2.6** without the need to install additional components. Client application has to be installed on database server or on the machine, where the database file is stored in case of direct backup. To create a backup set, you need valid credentials to the database.

During the preparation of Firebird database dump, the database is being compressed what will result in much smaller file than the database itself.

To create the Firebird database backup set you need to open Xopero and run the ***Backup set*** wizard by clicking on ***New backup set*** button in ***My backup sets*** tab.



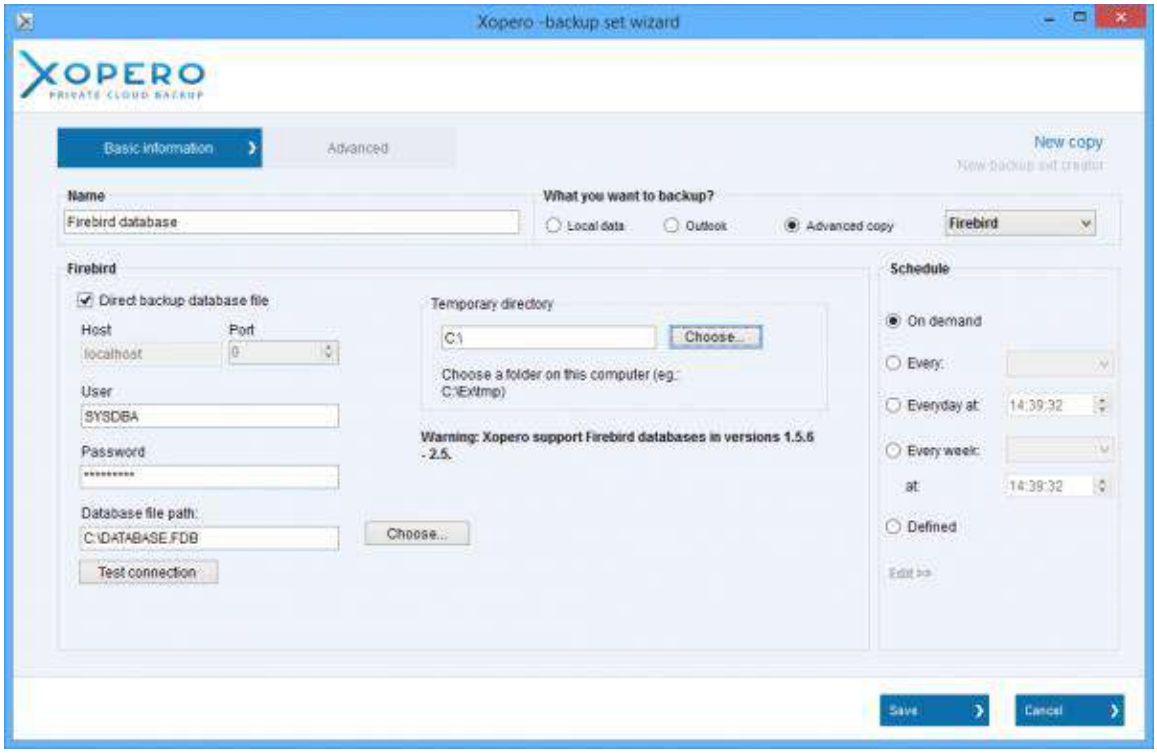
In the ***Backup set*** wizard mark ***Advanced copy*** and select ***Firebird*** from dropdown list. Don't forget to define the backup set name.



In the ***Firebird*** section, parameters needed to connect with the database:

- ***Direct backup database file*** – if you select this option, a direct backup database file will be made - without the database server. Using this option requires entering path to a database file,
- ***Port*** – a port that the database is listening on. This field is inactive, when direct backup database file is selected,
- ***User*** – a Firebird user with proper rights,
- ***Password*** – a password for above user,
- ***Database name*** – name of the database that will be backed up. If direct backup database file option is checked, this field's name is changed to Path to database file, where you need to eneter full path to that file.

When all the fields are filled, you should click ***Test connection***, which will start the automatic connection with the database test as well as it will verify the credentials. If any error is displayed, you should verify all the fields and restart the test. You also need to define location in field ***Temporary directory*** where the database dump will be stored for the time of backup. By clicking ***Save*** you will create a new backup set.

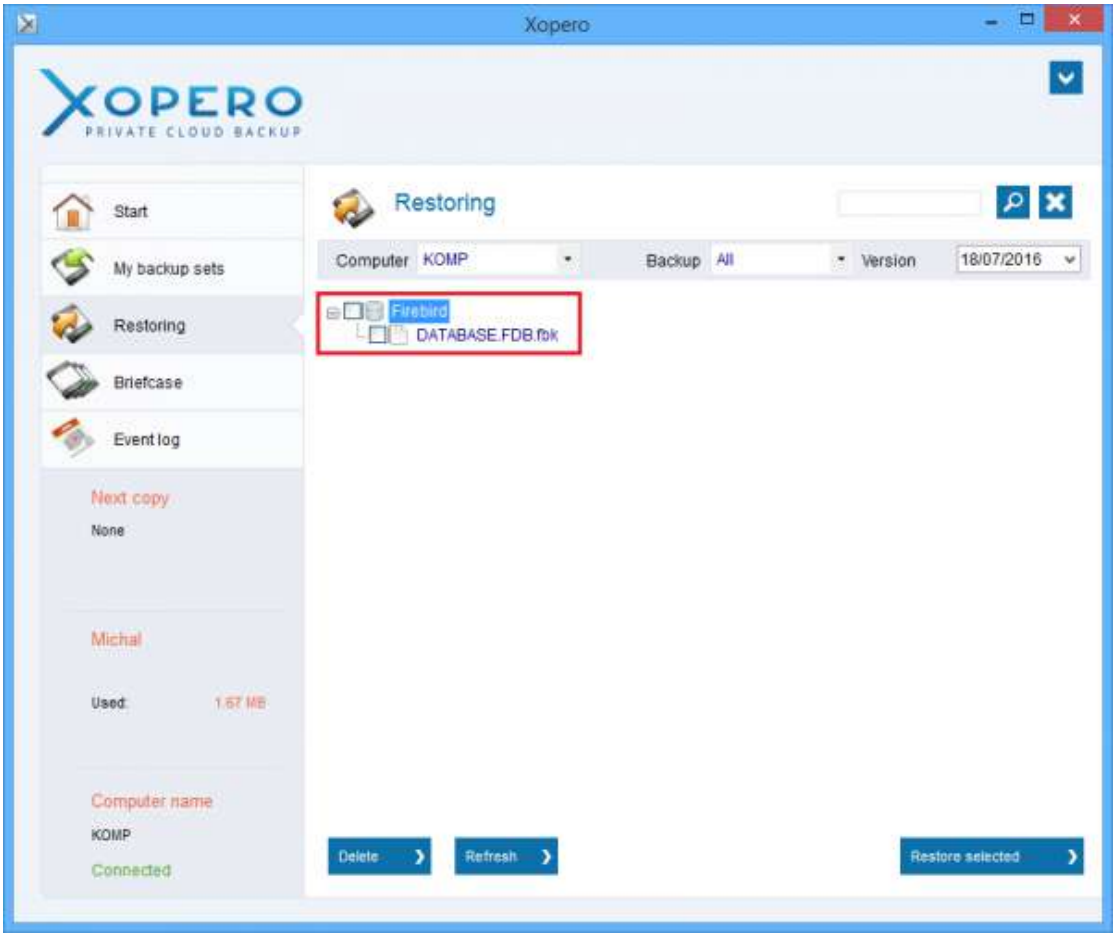


Restoring

The Restore process of Firebird database is a two-step process. First, you need to download the database backup to a local machine using Xopero application. In the second step, the database will be restored to a Firebird server using Firebird database management tools.

Restoring the database file from a backup

To download the Firebird database backup, run the Xopero application and go to the ***Restoring*** tab. All backed up databases will be available in the ***Firebird*** branch.



Expand the branch and mark the checkbox next to the database which has to be restored. Then click on the ***Restore selected*** button.

To restore previous version of the database right click on its name and from context menu select ***Show file versions***.

The file restore settings window will be displayed. You have to select the location where a database backup file will be saved. From this directory it will also be restored to the Firebird database server.

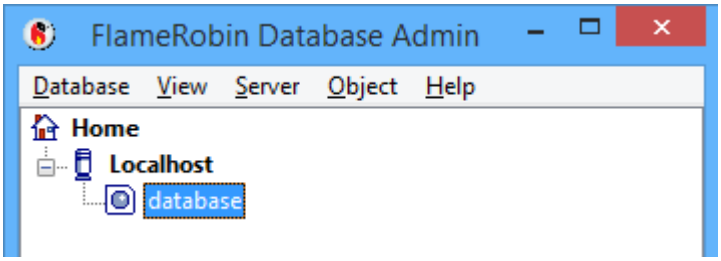
Restoring database backup

To restore the downloaded file to a Firebird database server, you need to use a database management tool. Following instruction will use the ***FlameRobin Database Admin*** tool.

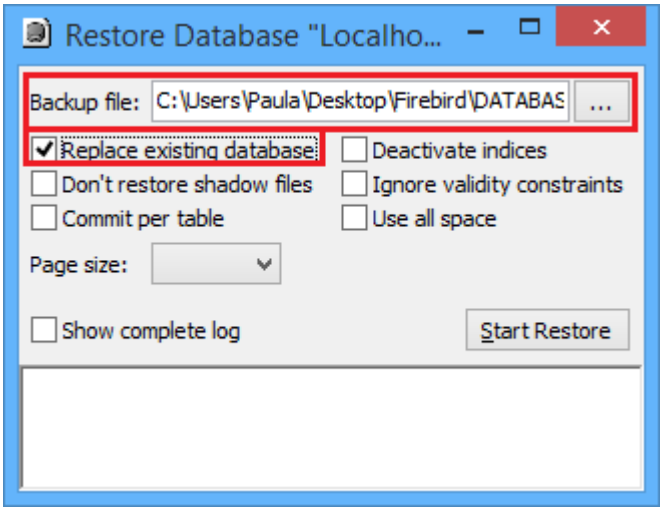
You can download *FlameRobin Database Admin* tool from: http://www.flamerobin.org

Restoring to an existing database

To restore database to an existing one, you need to open ***FlameRobin*** and connect with database server. You should see a list of available databases.



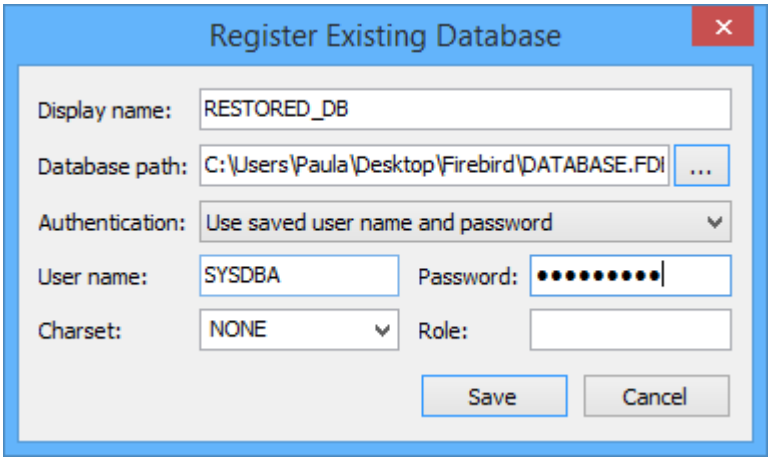
Right-click on the database, where the backup will be restored to and select ***Restore database…***, from ***Actions*** menu. A window with restore settings should be displayed, where you should enter path to restored db file in ***Backup file*** field and check ***Replace existing database*** option.



The restore process starts after you click ***Start Restore*** Details can be seen in the white filed down the window. Successful restore should end with ***Database restore finished*** message.

Restoring to a new database

To restore the backup to a new database, connect with the database server using *FlameRobin*, and click ***Register existing database*** option from the ***Database***, menu. A window with configuration for new database will be displayed.



Enter the name for new database in ***Display name*** filed as well as path to the new database file in ***Database path***. Additionally, you need to set authentication. Click ***Save*** and set the configuration as decribed in Restore to an existing database.

Functionalities

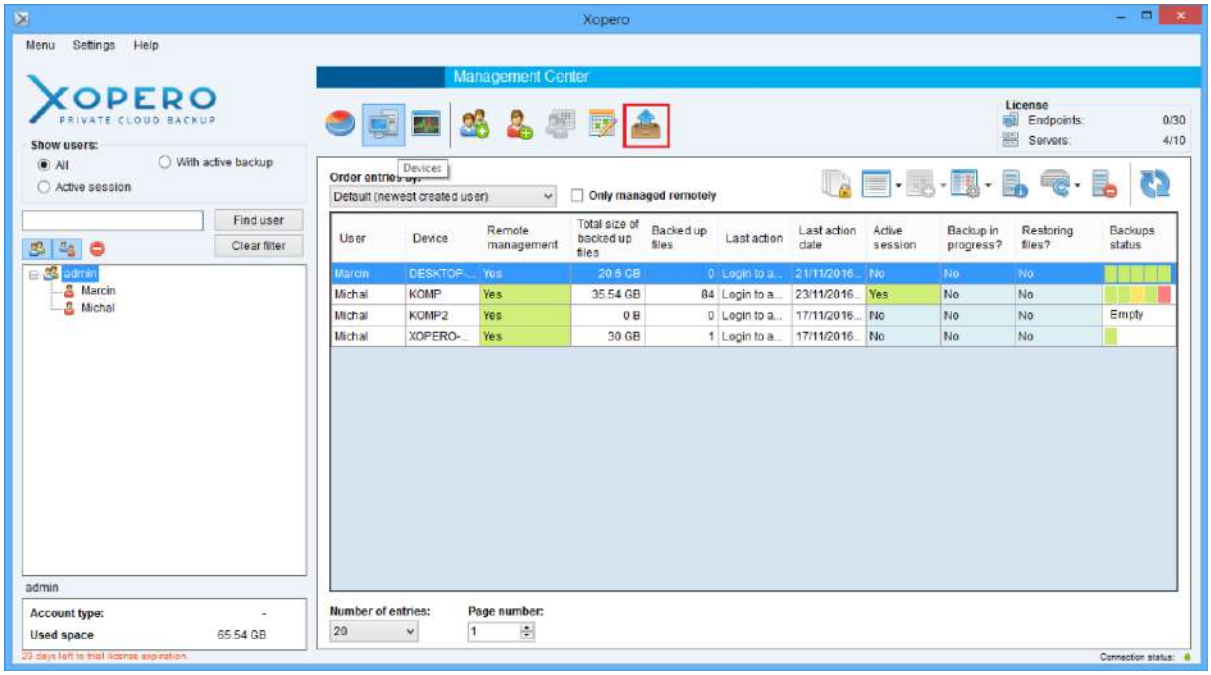
Running VMware machine in Virtualization Station on QNAP

Export task

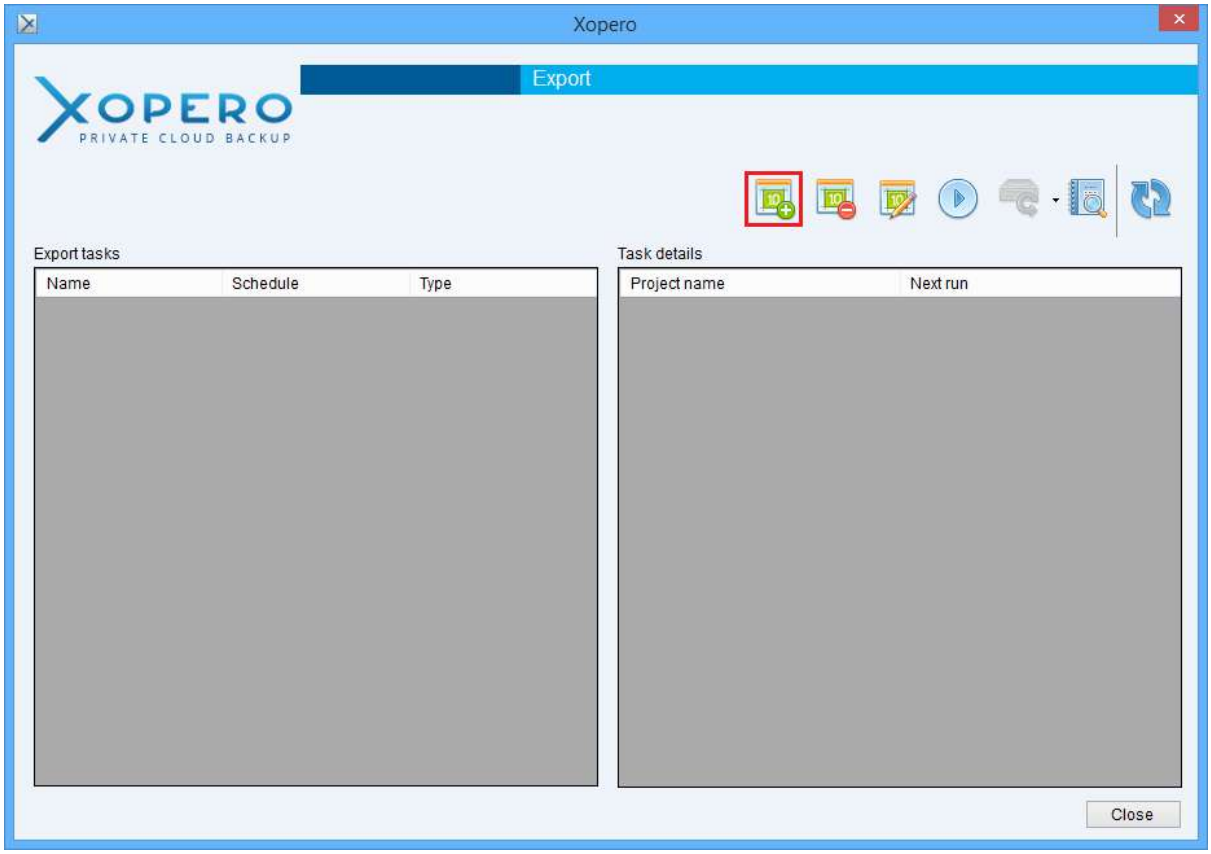
To import previously backed up by Xopero system machines VMware environment to the application Virtualization Station, it is necessary to export them. Export allows you to restore backed up data to the desired location on the server.

The export task is defined from the application Xopero Management Center. In selected location the exported data are stored not encrypted form. The export function does not include versioning, and export files are overwritten or ignore (depending on the selected option). Export tasks are executed automatically, like backups, according to a defined schedule. Execution the task of exports does not delete the exported data from the backup location.

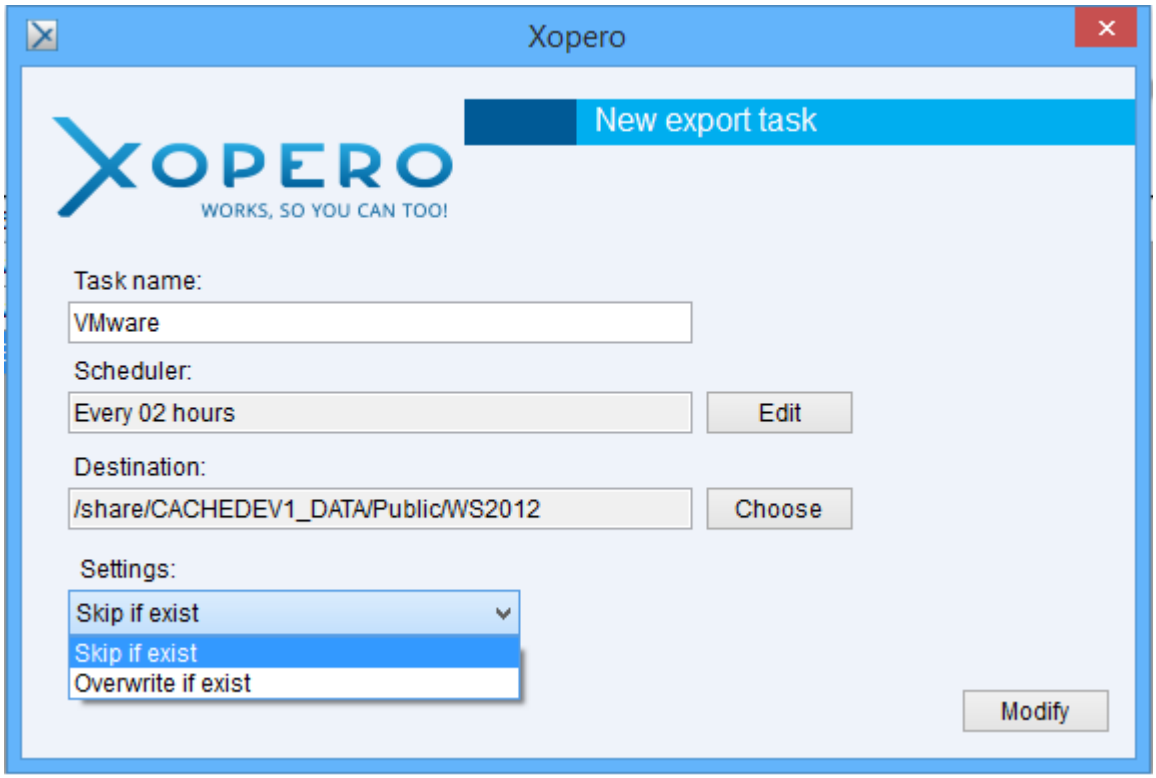
Before performing backup VMware machines must create the export task. In this order, from the ribbon in the application Xopero Management Center, select ***Export***.



Then a window will be displayed with a list of defined tasks Export. In order add new export task click the button ***Add task***.

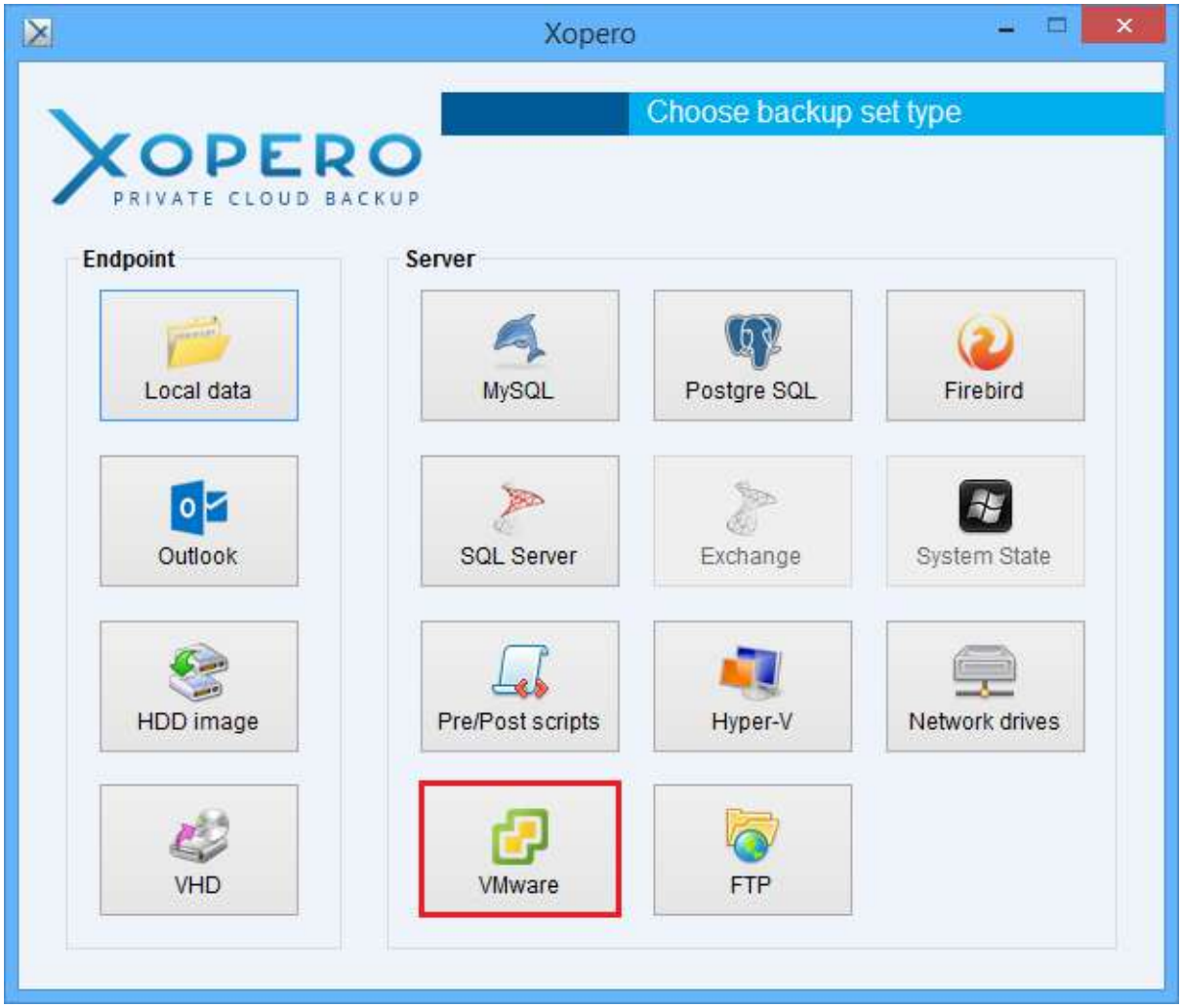


In the next step you have to complete form which allows you to add new export task. After entered name of the task, you have to define a schedule for him. In this order on the form you have to choose the button ***Edit***. Then new window will appear which allowing you to add schedule. After you save and re going to the define the export task, select the storage location for the exported data. After a successful completing to the entire form, you can save a new export task selecting button ***Create***. **Export may take several hours!**

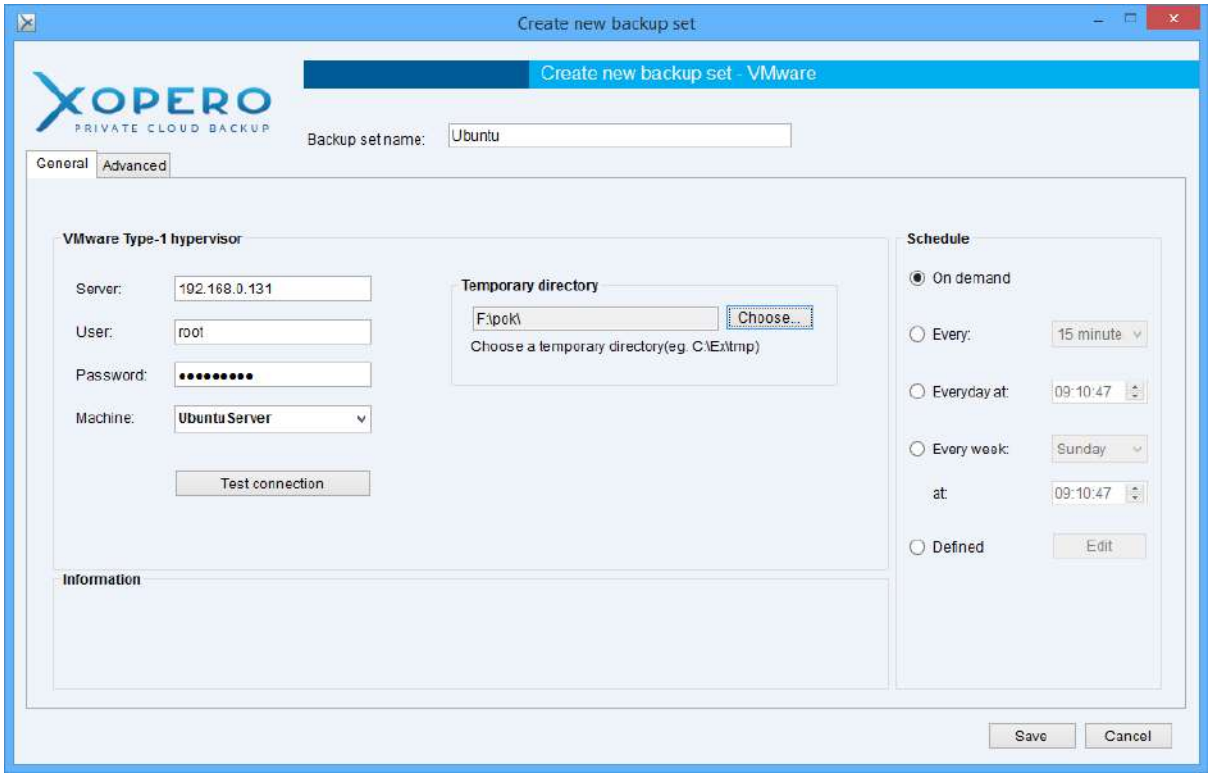


Performing backup

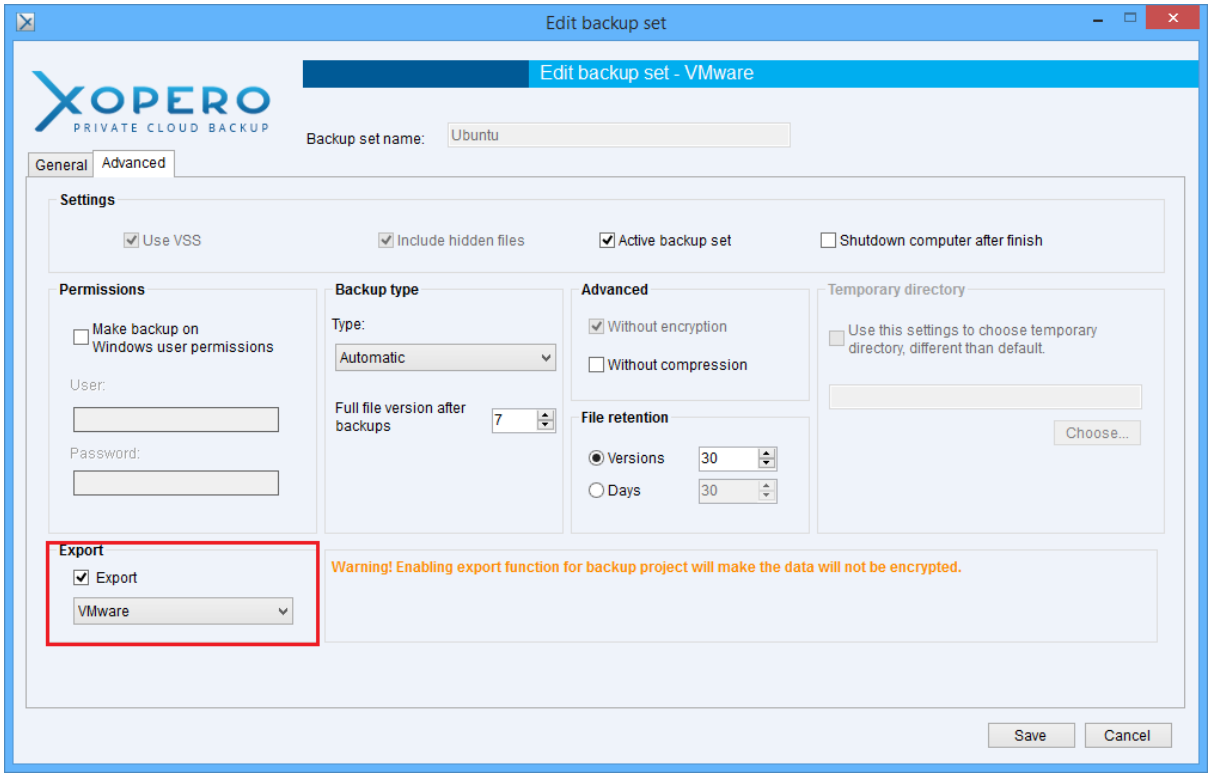
To perform VMware backup you have, in window ***Choose backup set type***, choose project ***VMware***.



In the next step you have to define the name of backup project and temporary directory, enter the server address, authorization data and choose the machine for backup. A detailed description of the project form VMware is located in a separate instruction VMware backup.

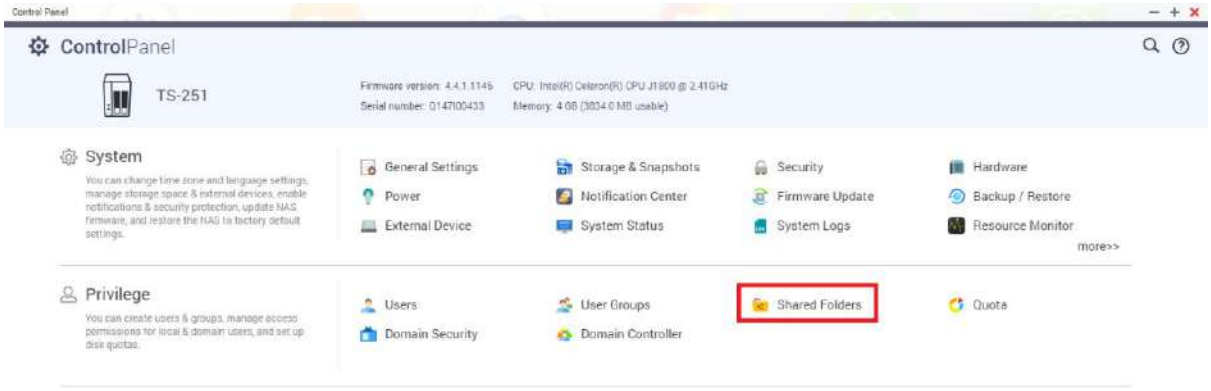


To assign project to export task, go to the ***Advanced***, choose option ***Export*** and name of task, and save the project.

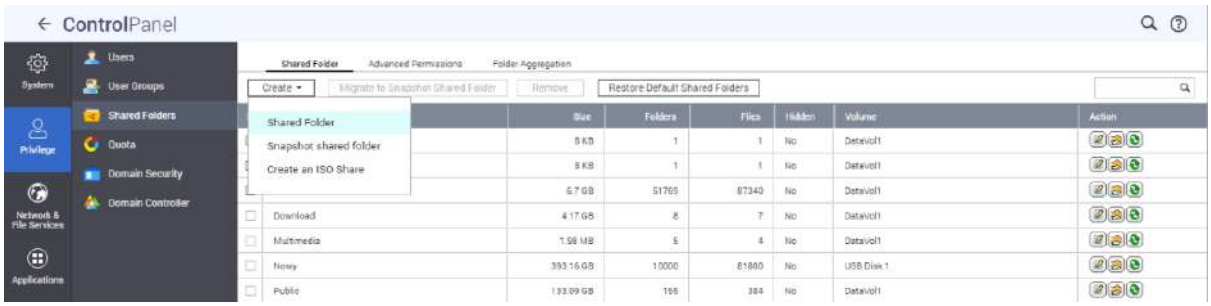


Sharing a folder on QNAP

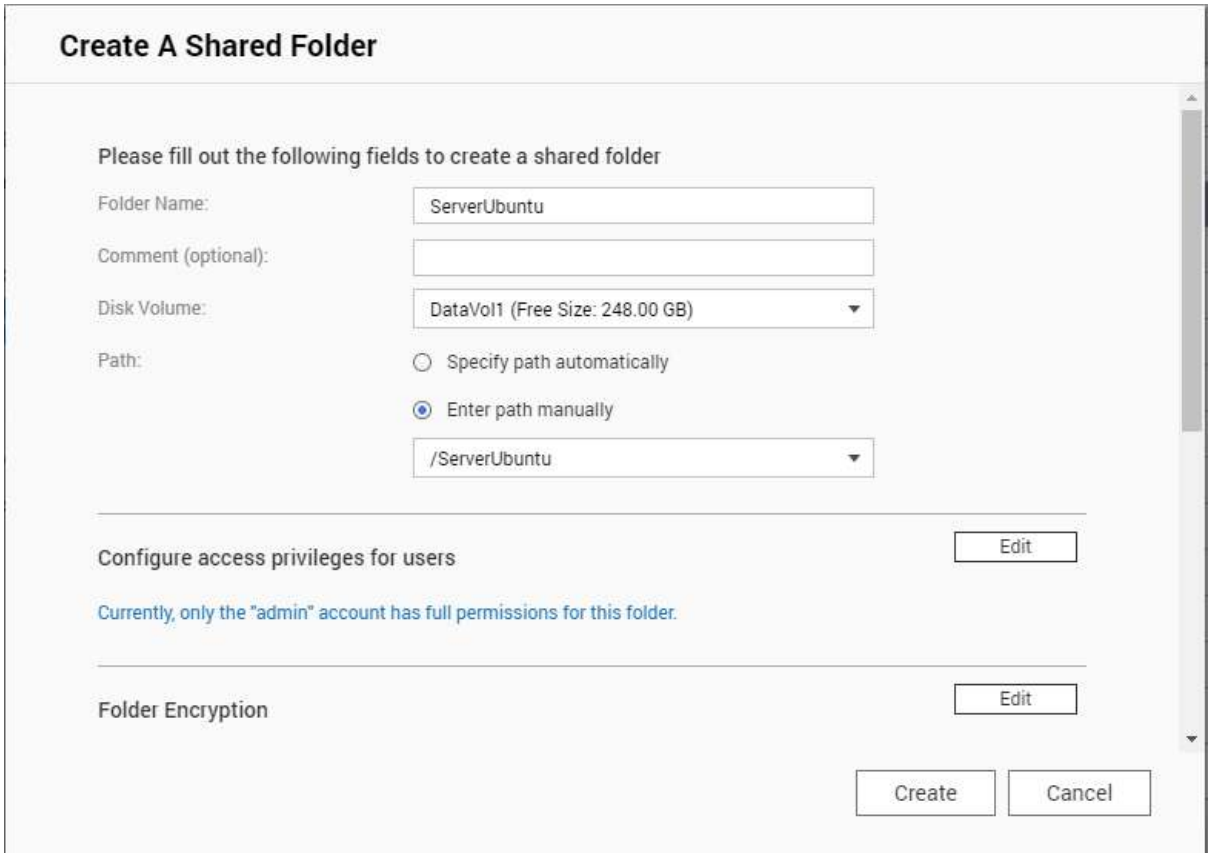
To share the directory, run the Control Panel on QNAP, then select ***Shared Folders***.



Next you have to choose option ***Create -> Shared Folder***, shown in the illustration below.



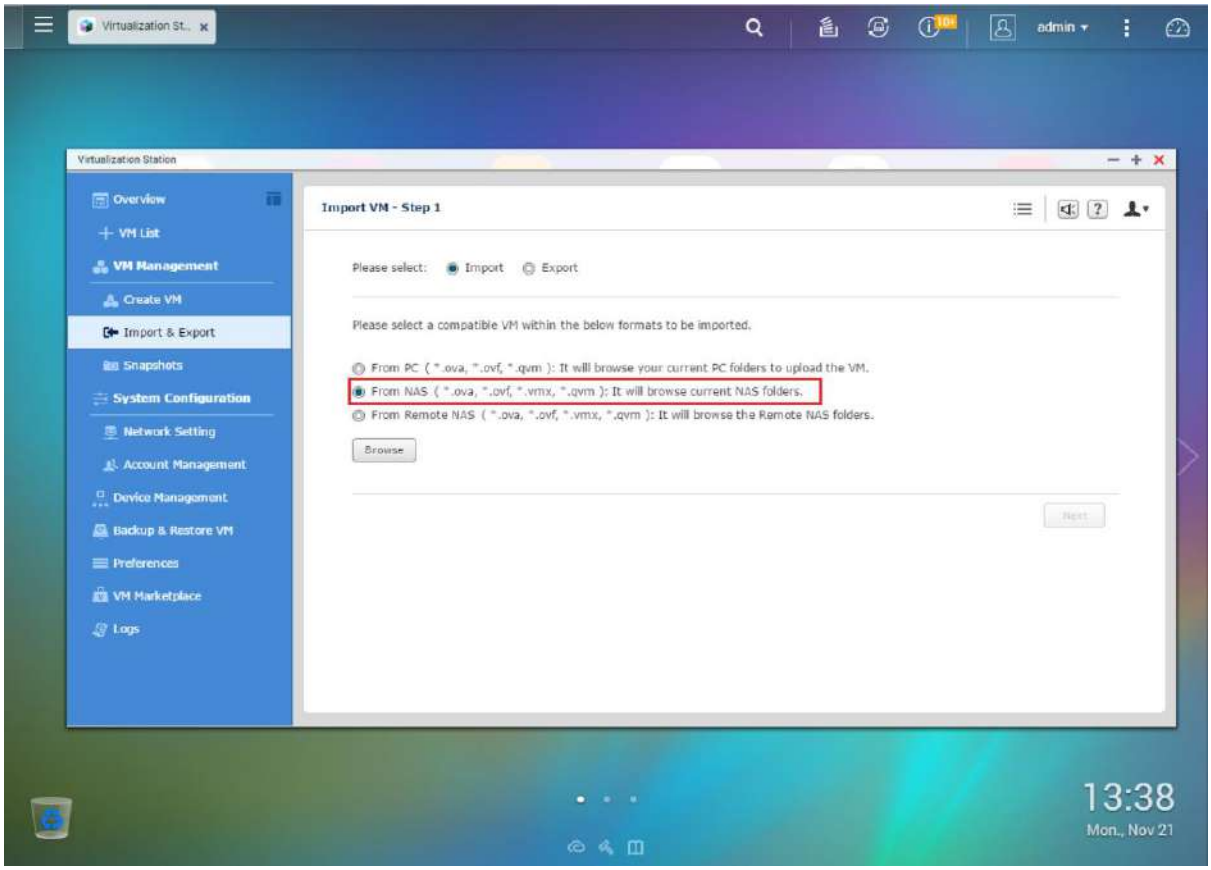
Create A Shared Folder window will be displayed , where you give a name for the shared folder, then select the folder path and click ***Create***.



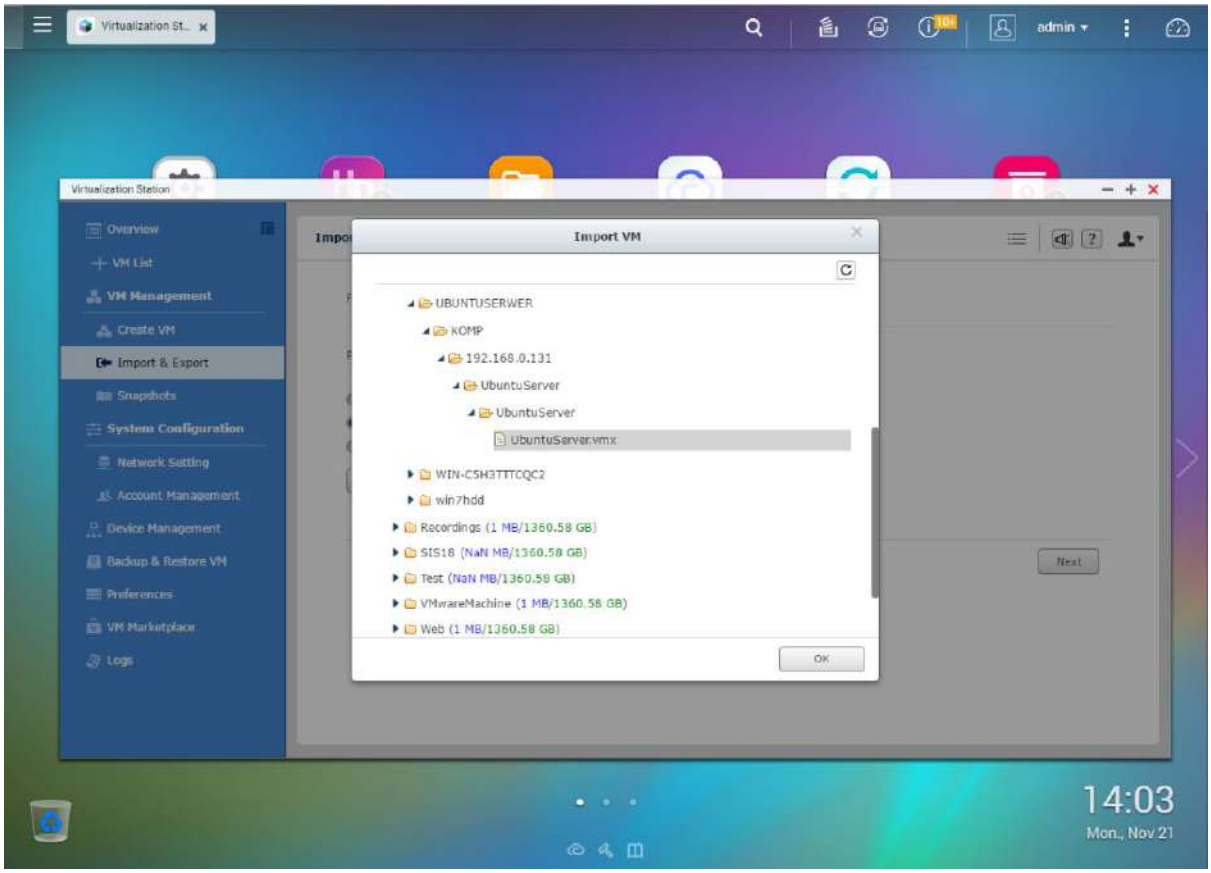
In this way the shared folder will be displayed on tree when importing machine in Virtualization Station (installed on the server QNAP).

Import of machine

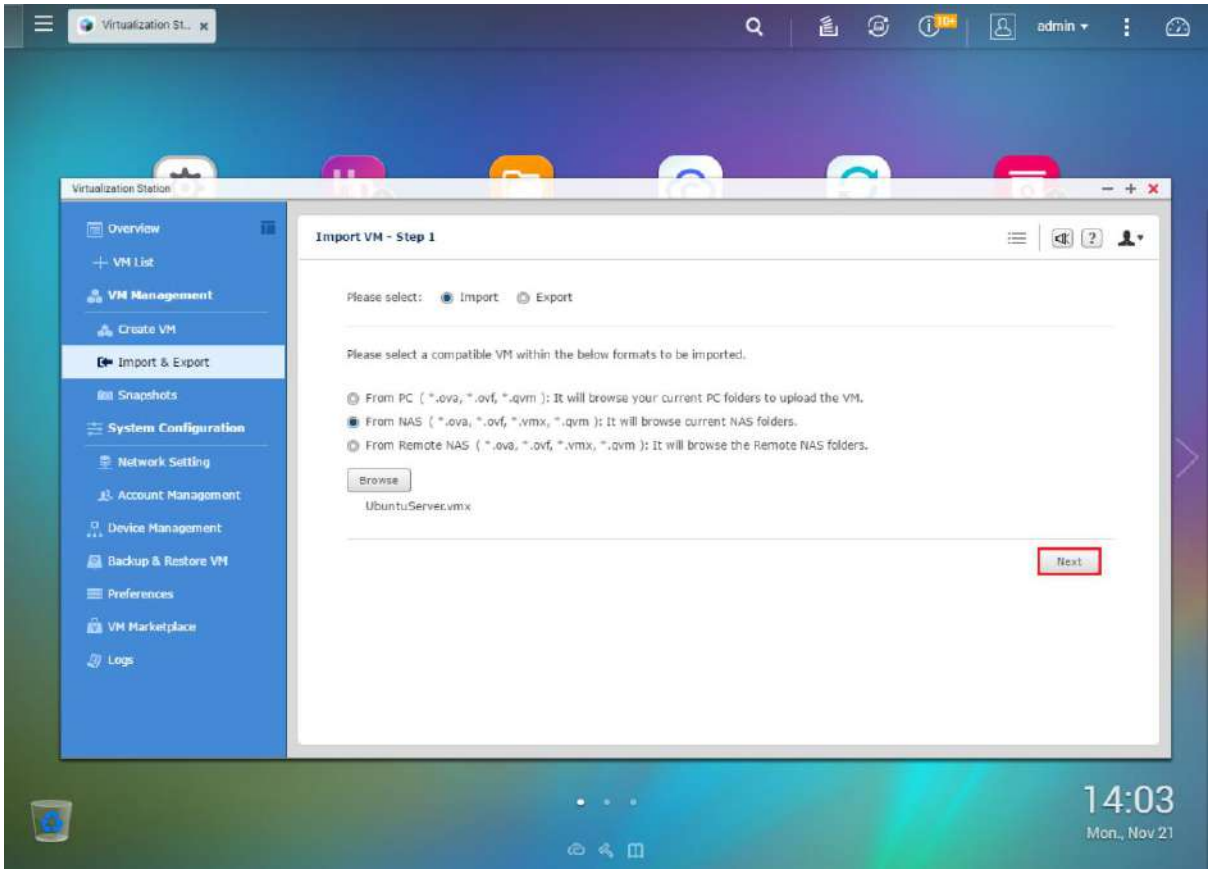
To import a virtual machine, open the Virtualization Station and go to the tab ***Import & Export***. Then choose from available import option ***From NAS*** and click ***Browse***.



Window will be displayed,in which you have to indicate the location of the exported machine and choose file having the extension ***.vmx** and click ***OK***. If necessary, you can check the location of the machine with the application Management Center, by going to edit an export task.



After selection the machine localization you have to go to the next window, including choose the button ***Next***.



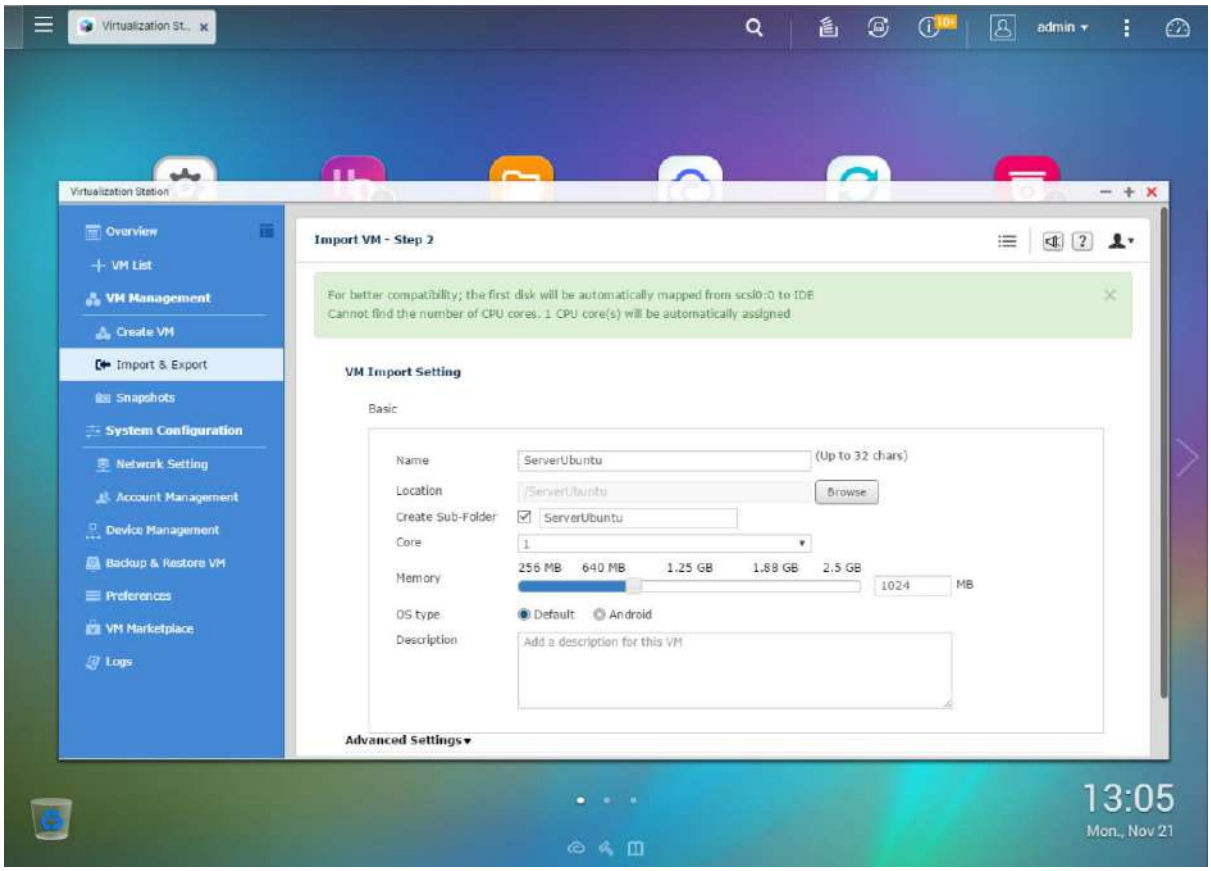
In next step you have to define parameters of the virtual machine. Available form field:

- **Name** - enter name of the virtual machine.
- **Location** - select target location, which will be saved to the machine.
- **Create Sub-Folder** - this is an additional option, enables you to create a subfolder for the location.
- **Core** - select amount of processor cores CPU.
- **Memory** - you have to allocate memory (RAM).
- **OS type** - select the type of system virtual machine.
- **Description** - field with a description of the machine is not required.

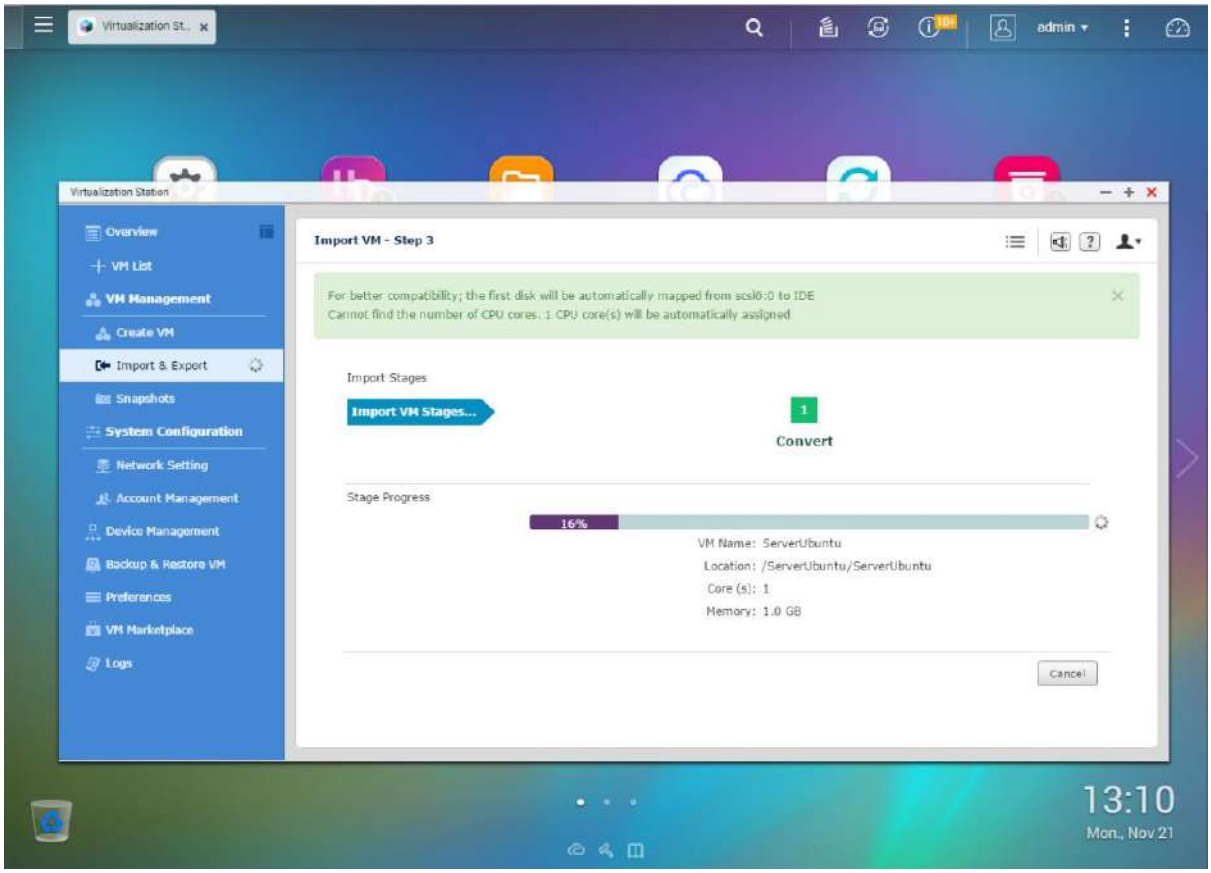
Advanced settings (optional):

- **Network** - here you can configure the network adapter of virtual machine (ie. a dedicated network), generating a MAC address and selecting the model network interface controller.
- **Hard disk** - here you can configure mode cache and the hard disk controller.
- **IDE CD/DVD ROM** - here you can add a virtual CD / DVD ROM.

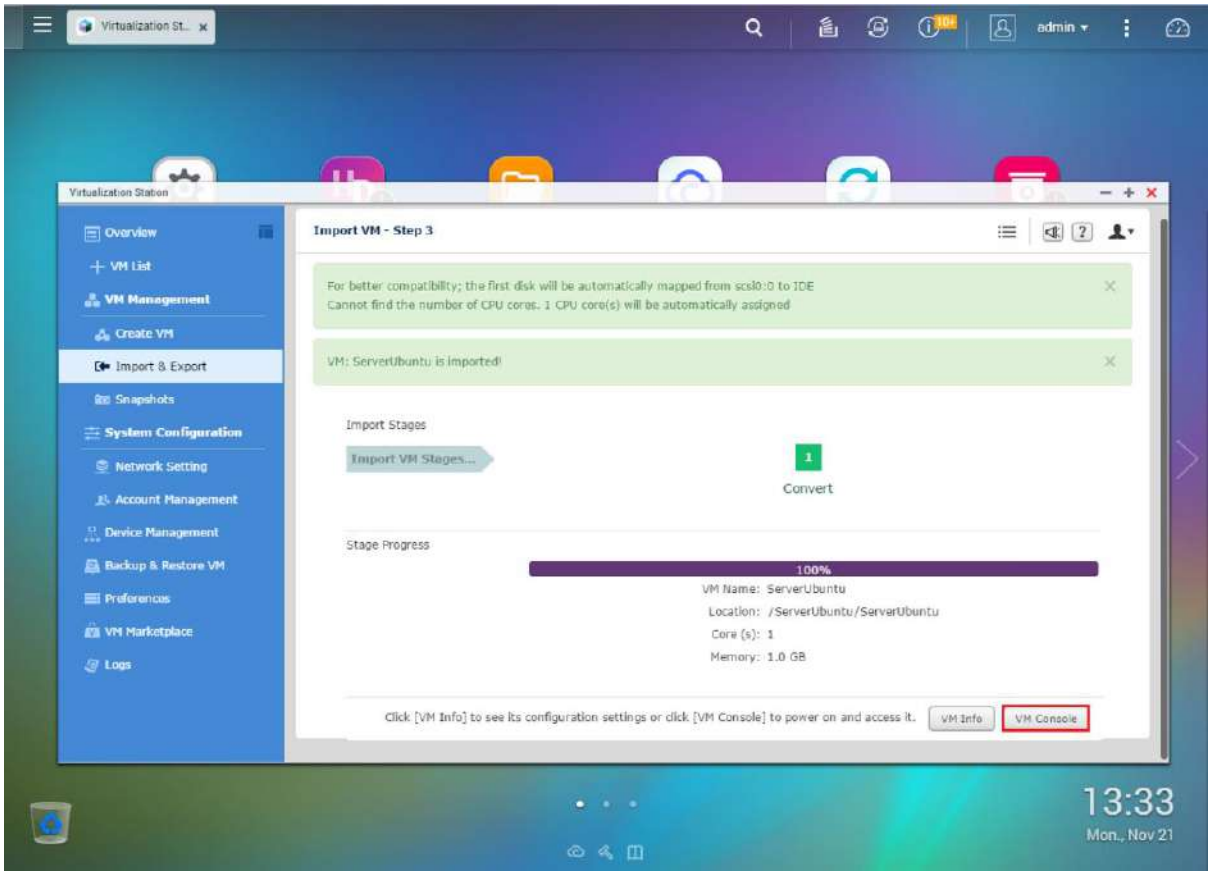
After completing the form, select the button ***Import***.



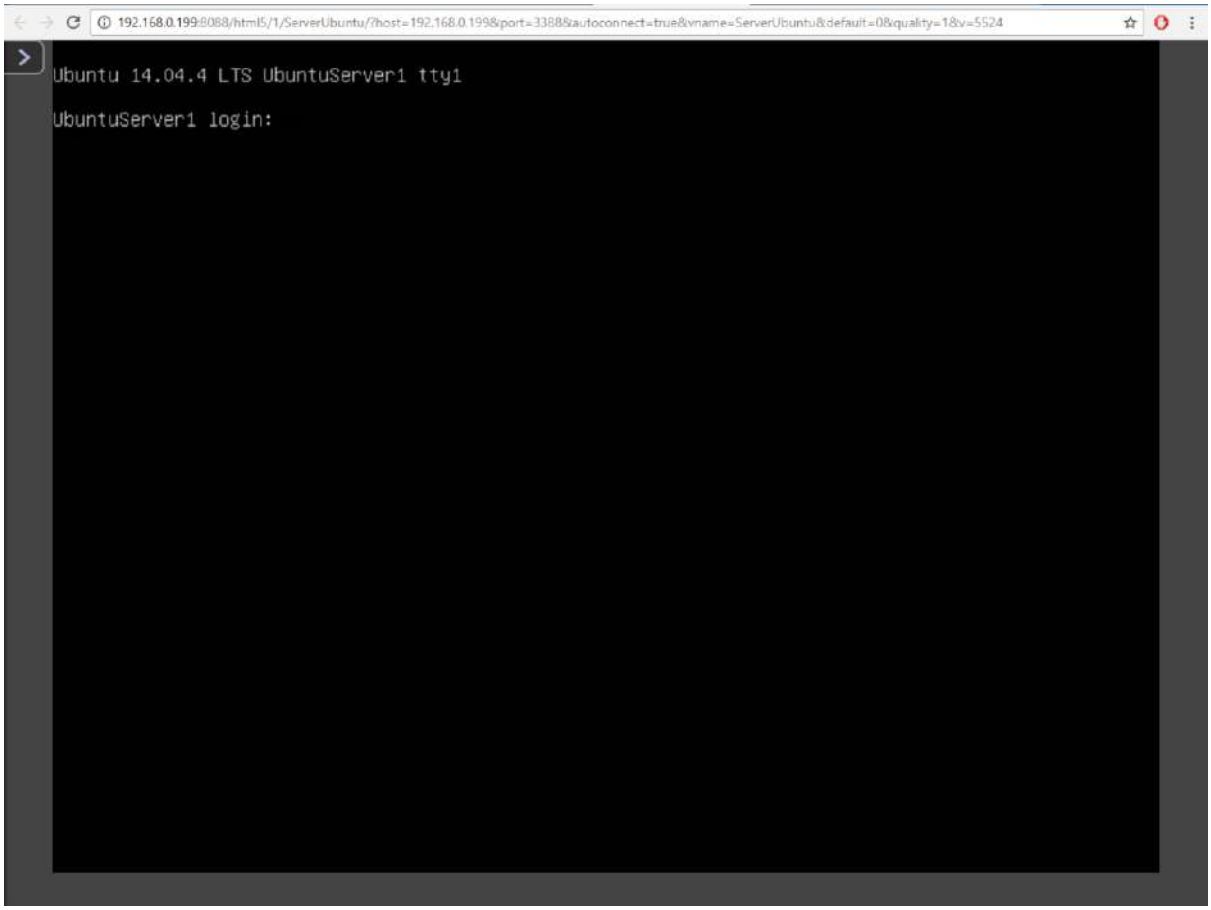
Here were started importing machine to Virtualization Station.



When the progress bar of machine reaches 100%, button VM Console will appear, capable of running the imported machines.



The virtual machine will be launched in a new browser window.



Xopero Image Tool

What it is and what is for?

Xopero Image Tool is an independent tool to convert images:

- RAW -> VHD,
- RAW -> VHDX,
- VHD -> RAW,
- VHDX -> RAW,

and also create a VMDK file:

- RAW -> VMDK,
- VHD -> VMDK,
- VHDX -> VMDK

and reset registry entries.

The VMDK file cannot be converted to another image!

To run the tool, go to the directory in which are four versions of the application - run from CMD or from the terminal (for Linux and OSX). Depending on the system version, you need to choose the right one.

1. Linux x64

Supported systems:

OS	Version	Architectures
Red Hat Enterprise Linux CentOS Oracle Linux	7	x64
Fedora	26, 27	x64
Debian	9, 8.7+	x64

Ubuntu Linux Mint	17.10, 16.04, 14.04 18, 17	x64
openSUSE	42.2+	x64
SUSE Enterprise Linux (SLES)	12	x64

2. OSX x64

Supported systems:

OS	Version	Architectures
Mac OS X	10.12+	x64

3. Windows x64

Supported systems:

OS	Version	Architectures

Windows Client	7 SP1+, 8.1	x64
Windows 10 Client	Version 1607+	x64
Windows Server	2008 R2 SP1+	x64

4. Windows x86

Supported systems:

OS	Version	Architectures
Windows Client	7 SP1+, 8.1	x86
Windows 10 Client	Version 1607+	x86
Windows Server	2008 R2 SP1+	x86

Converting the disk image will allow you to run it as a virtual machine, for example Hyper-V, VMware or VirtualBox.

Converting the disk image to VHD or VHDX

```
D:\ImageTool\net461>XoperoImageToolCLI.exe convert
Usage:
    --in-path <PATH>         Path to input image.
  [ --in-format <FORMAT>     Format of input image: RAW | VHD | VHDX. ]
  [ --out-path <PATH>        Path to output image. ]
  [ --out-format <FORMAT>    Format of output image: RAW | VHD | VHDX. ]
  [ --in-place               Makes conversion on the same path and renames it if needed. ]
  [ --help                   Prints help ]
  [ --show-params            Shows used params with values ]
ERROR: No required parameters: inPath
```

Required parameters:

--in-path=<PATH> - path to the image file to be converted.

Additional parameters:

--in-format=<FORMAT> - input image format - RAW, VHD, VHDX,

--out-path=<PATH> - path to output image,

--out-format=<FORMAT> - output image format - RAW, VHD, VHDX,

--in-place - converts to the same file and rename it if necessary. Using this parameter will speed up conversion performance (does not apply to VHDX),

--help - shows help,

--show-params - shows used parameters with their values.

Example command:

```
D:\ImageTool\net461>XoperoImageToolCLI.exe convert --in-path="D:\ImageTool\Drive(BDE578A2).raw" --out-format=VHD
[                    ] 0% [47,38 MB/s] | 30720 MB
```

Remember that before converting, the VHD and VHDX files should be of the Flat type - means that the disk has a fixed, not dynamically increasing, size.

Usage case:

1. Restore the physical machine as a virtual machine in Hyper-V:

- at first you need to make a HDD Image backup,
- restore it from the client application or Management Center,
- use the Xopero Image Tool and convert the image,
- add a machine to the Hyper-V whose disk will be the converted image.

2. Transfer the machine from another Hyper-V virtualizer:

- install the Xopero client application inside the machine,
- make a HDD Image backup,
- restore it from the client application or Management Center,
- use the Xopero Image Tool and convert the image,
- add a machine to the Hyper-V whose disk will be the converted image.

3. Mount the image in the file system:

- make a HDD Image backup,
- restore it from the client application or Management Center,
- use the Xopero Image Tool and convert the image,
- go to Computer Management,
- right-click on Disk Management and select the option Attach VHD.

To start the machine with UEFI, image have to be converted to VHDX.

Creating VMDK file

While converting a Windows 7 .raw file, it is necessary to set the IDE disk controller for this machine in VirtualBox, by default, the SATA controller is selected. Otherwise Blue Screen will be displayed.

Creating a VMDK file from the selected disk image will allow you to run it in VirtualBox or as a VMware machine and also allows you to add a disk to an existing machine.

```
D:\ImageTool\net461>XoperoImageToolCLI.exe create-vmdk
Usage:
    --image-path <PATH>         Path to image.
  [ --vmdk-path <PATH>          Path to VMDK description. If no path then the same file name is used with .vmdk ]
  [ --adapter-type <ADAPTER>    Type of disk adapter. If no adapter then 'ide' is used ]
  [ --help                      Prints help ]
  [ --show-params               Shows used params with values ]
ERROR: No required parameters: imagePath
```

Required parameters:

--image-path=<PATH> - path to the image file from which to create the vmdk file.

Additional parameters:

--vmdk-path=<PATH> - path to the VMDK file, if not specified, the file will be saved in the same place as the image,

--adapter-type=<ADAPTER> - the type of disk adapter. By default it is IDE,

--help - shows help,

--show-params - shows used parameters with their values.

Example command:

```
D:\ImageTool\net461>XoperoImageToolCLI.exe create-vmdk --image-path="D:\ImageTool\Drive (BDE578A2).raw"
```

Usage case:

1. Restore the physical machine as a virtual machine in VirtualBox or VMware:

- at first you need to make a HDD Image backup,
- restore it from the client application or Management Center,
- use the Xopero Image Tool and create VMDK file,
- add a machine in VirtualBox or VMware, which will be used to create the VMDK file.

2. Transfer the machine from another virtualizer to VirtualBox or VMware:

- install the Xopero client application inside the machine,
- make a HDD Image backup,
- restore it from the client application or Management Center,
- use the Xopero Image Tool and create VMDK file,
- add a machine in VirtualBox or VMware, which will be used to create the VMDK file.

Editing registry file

The registry files should be reset in case a problem with starting the system after he has been restored.

```
D:\ImageTool\net461>XoperoImageToolCLI.exe edit-registry
Usage:
    --metadata-path <PATH>    Path to metadata file.
  [ --image-path <PATH>       Path to image file. Default is *.raw ]
  [ --registry-path <PATH>    Path to registry file. Default is: \Windows\System32\config\SYSTEM ]
  [ --help                    Prints help ]
  [ --show-params             Shows used params with values ]
ERROR: No required parameters: metadataPath
```

Required parameters:

--metadata-path=<PATH> - path to metadata files (.met) created during HDD Image backup.

Additional parameters:

--image-path=<PATH> - path to image file,

-registry-path=<PATH> - the path to the registry to be edited,

--help - shows help,

--show-params - shows used parameters with their values.

Example command:

```
D:\ImageTool\net461>XoperoImageToolCLI.exe edit-registry --metadata-path="D:\ImageTool\Drive (BDE578A2).met"
ERROR: No registry keys in metadata content
```

ERROR: No registry keys in metadata content - means there are no entries to edit.

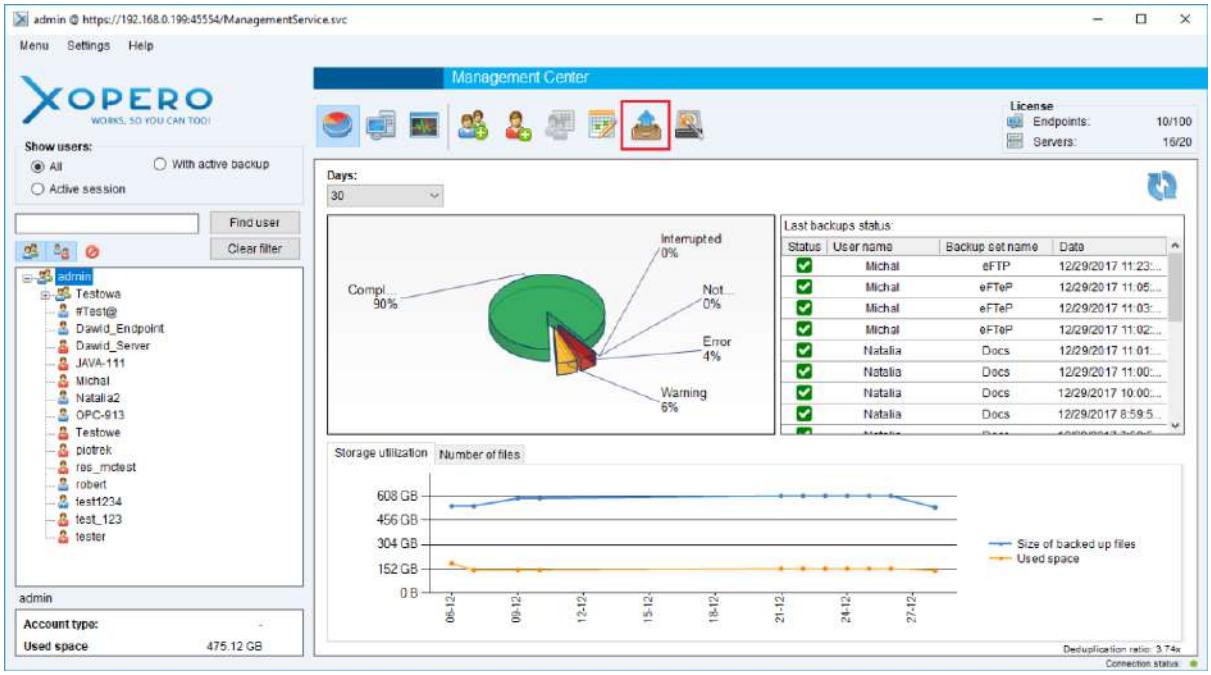
Export

What is it?

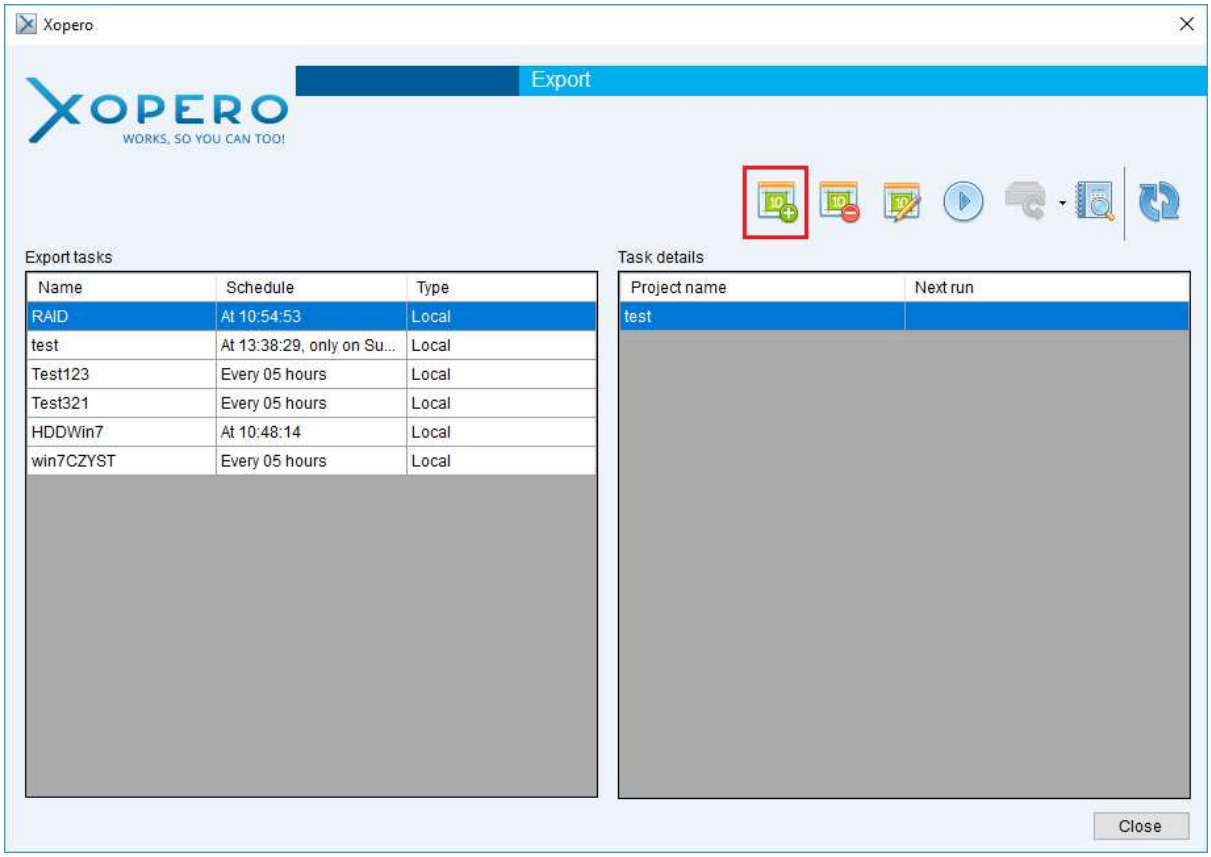
Export is a function which allows you to extract files from storage to any location within the server. The files are exported in an unencrypted and uncompressed form.

Creating an export task

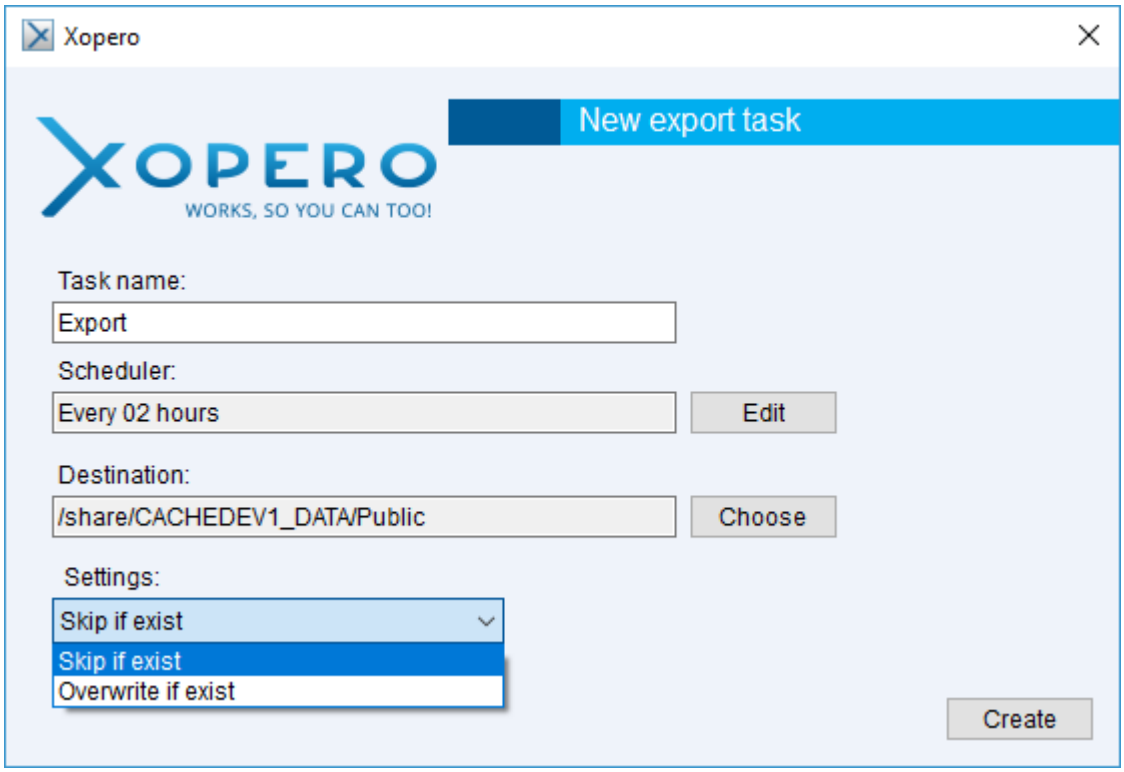
Export task can be defined from Xopero Management Center. It writes the newest version of selected backups to chosen location, on the backup server, in not encrypted form. It may overwrite or overlook data in export location, depends on settings. Export tasks are executed automatically, according to defined schedule. It does not delete any data from backup. In order to create export task select *Export* from the ribbon in Management Center. The task should be created before backup will done.



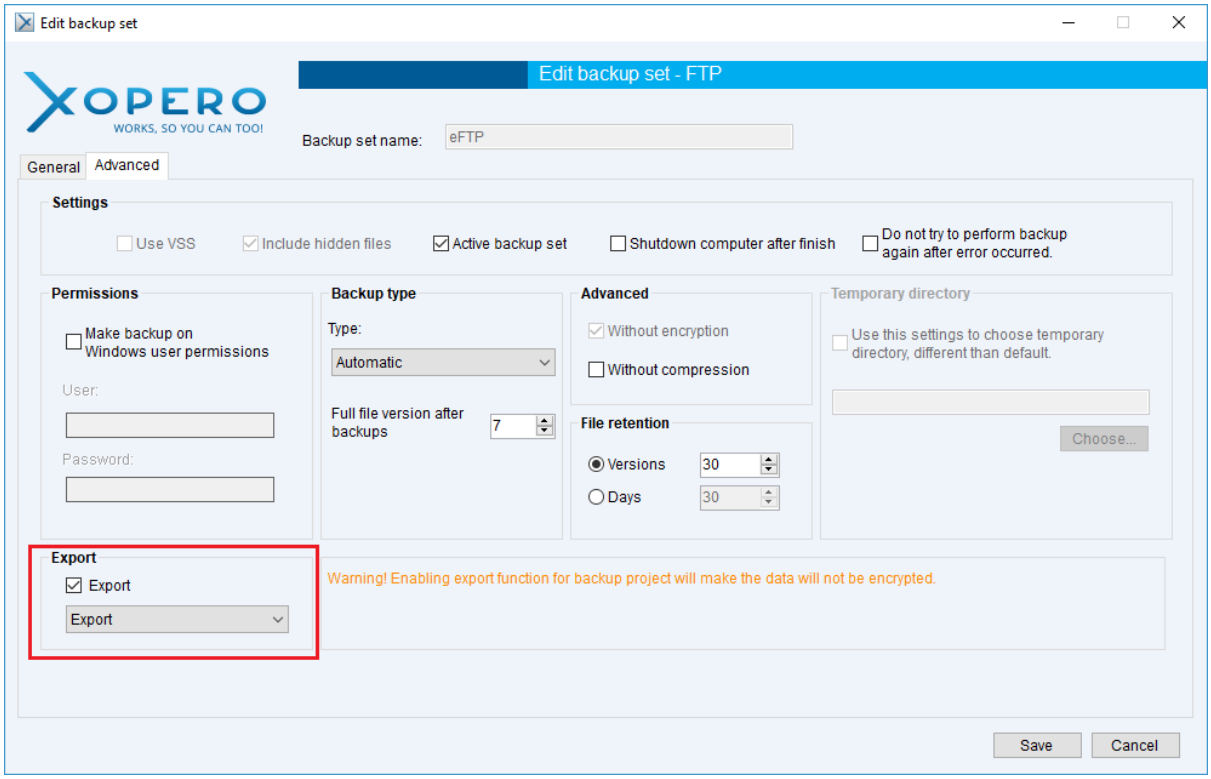
Then a window will be displayed with a list of defined tasks Export. In order add new export task click the button Add task.



In the next step you have to complete form which allows to add new export task. After entered name of the task, you have to define a schedule for him. In this order on the form you have to choose the button Edit. Then new window will appear which allowing you to add schedule. After you save and re going to the define the export task, select the storage location for the exported data. After a successful completing to the entire form, you can save a new export task selecting button Create. **Exports may take several a few hours!**



To add backup project to export task go to the Advanced tab, select Export, and choose a task from the list.



Usage

In the case of the Xopero QNAP Appliance, the Export function can be used to export the HDD image file to any place on QNAP, which will help the machine to start up faster in Smart Recovery.

Export allows you to restore data in accordance with the schedule, store the data on the device on standby.

Xopero integration with AD

General information

Active Directory is a directory service for systems of the Windows family, which is an implementation of the standard protocols and directory names - LDAP. Server with installed and active Active Directory is promoted to a domain controller for a specified domain. The Xopero QNAP Appliance enables integration with Active Directory. The configuration of integration with AD is not required for proper work of the Xopero system.

What is the integration of Xopero with AD?

Active Directory integration is based on mapping the structure of all users who are active in the domain. With the Active Directory User Mapping option, the administrator has the ability to easily set up Xopero accounts from a single location. Integration requires Xopero Active Directory Agent to be installed. The mapped account in Xopero reflects the user's domain account, so the user does not need to authenticate with additional data.

By default, client application always connects to the same server that the administrator connects using the Management Center. If the server address has changed, the administrator will log in to this server, and the end users will also do so at the next logon to the system.

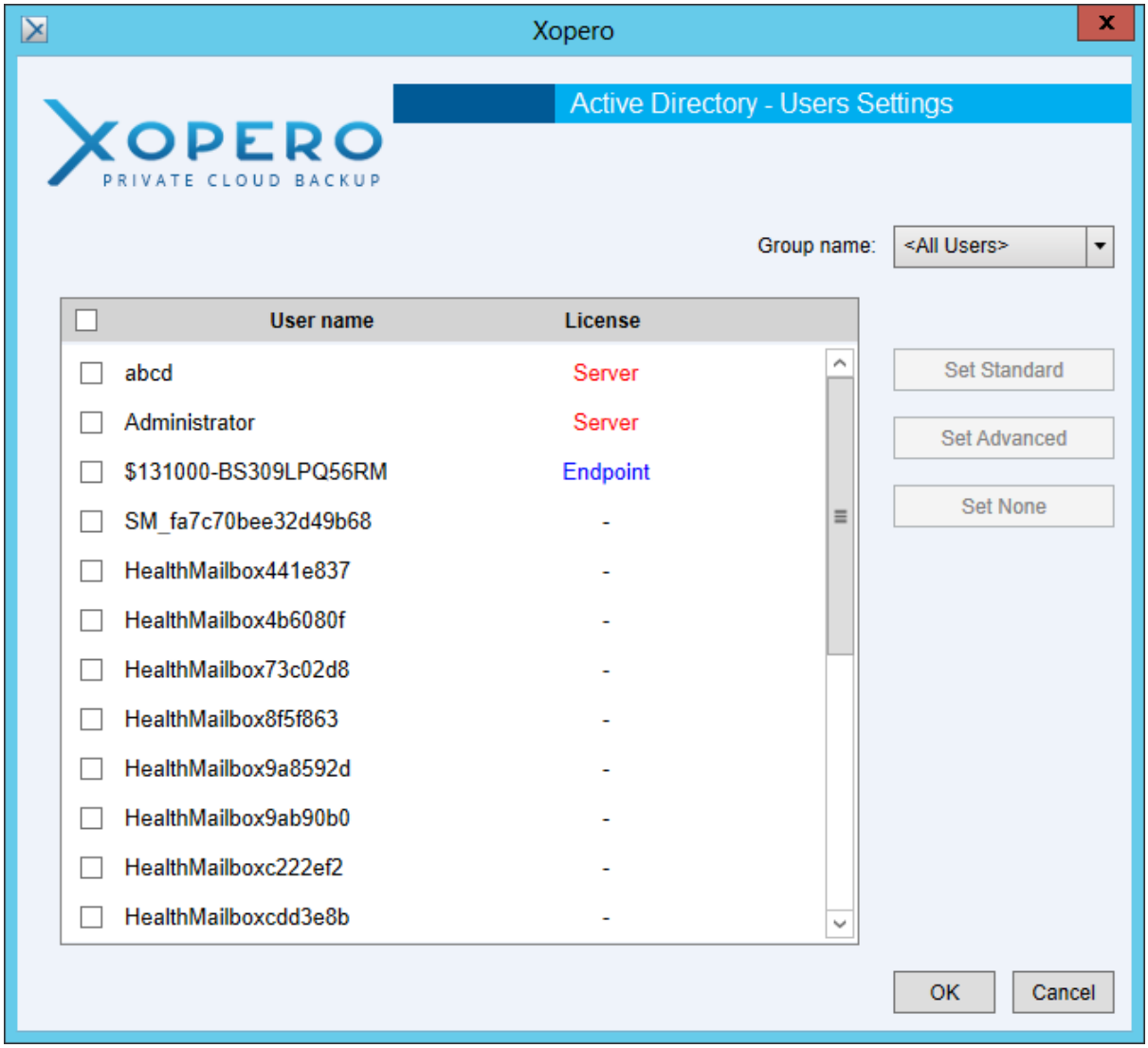
Mapping Active Directory users

To assign permissions to Active Directory users run Xopero Management Center on the domain controller. Then click on Active Directory users mapping button marked on a screenshot below.

This icon can be greyed out, if you don't have enough rights. It's the best to login to host as domain administrator.

Active Directory - Users settings window will appear, it contains a list of available domain controller users. At this moment you need to define, to which group the user(whose account will be performed backup) will be assigned.

Available groups are *Endpoint* and additionally, depends on bought license version - *Server*. Endpoint group enables members of it local data and mailbox from MS Outlook. While Server expands those possibilities for advanced copies.



Remember to install the Management Center on a different host than the Xopero server. Otherwise, the endpoints will not be able to log in.

Smart Recovery

What is it and what is it for?

Smart Recovery is used to import a virtual machine image from HDD Image and connect to it, without installing additional software on your computer.

To start a virtual machine you must meet the following conditions:

- Virtualization Station application must be installed on QNAP.
- You need to have at least 4 GB of memory on QNAP, and 2GB of memory must be available, at machines start.

Once these conditions are met, it is possible to start virtual machine using Virtual recovery function.

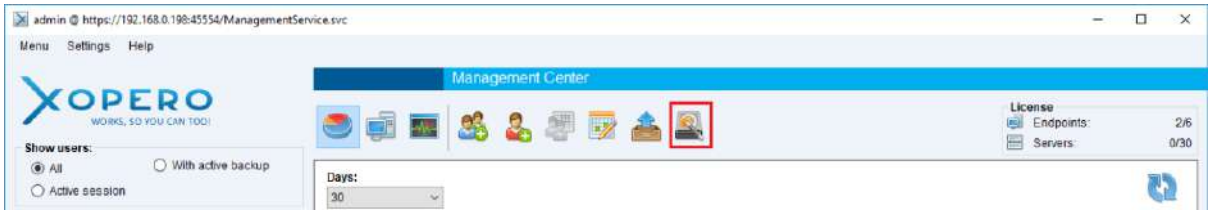
Adding machine

PIEASE NOTE THAT:

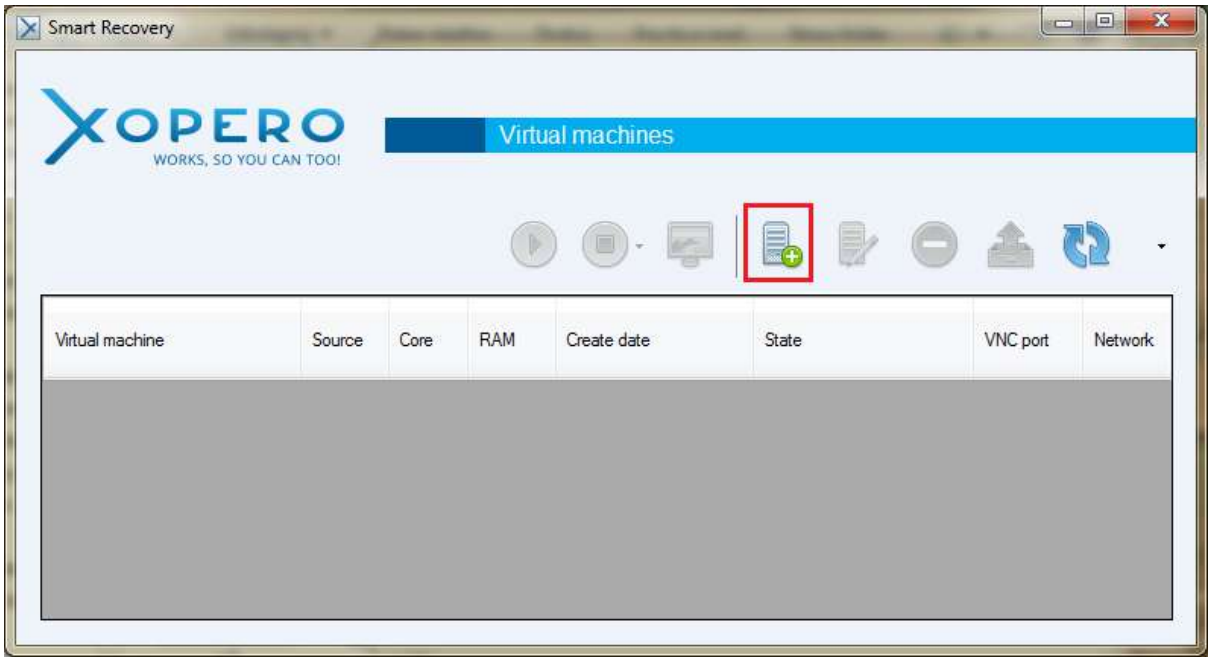
1. You can create the machine only from BMR (Bare Metal) backup, the partition backup does not allow to create the machine,

2. There is no possibility to create machine, if backup was encrypted by custom key.

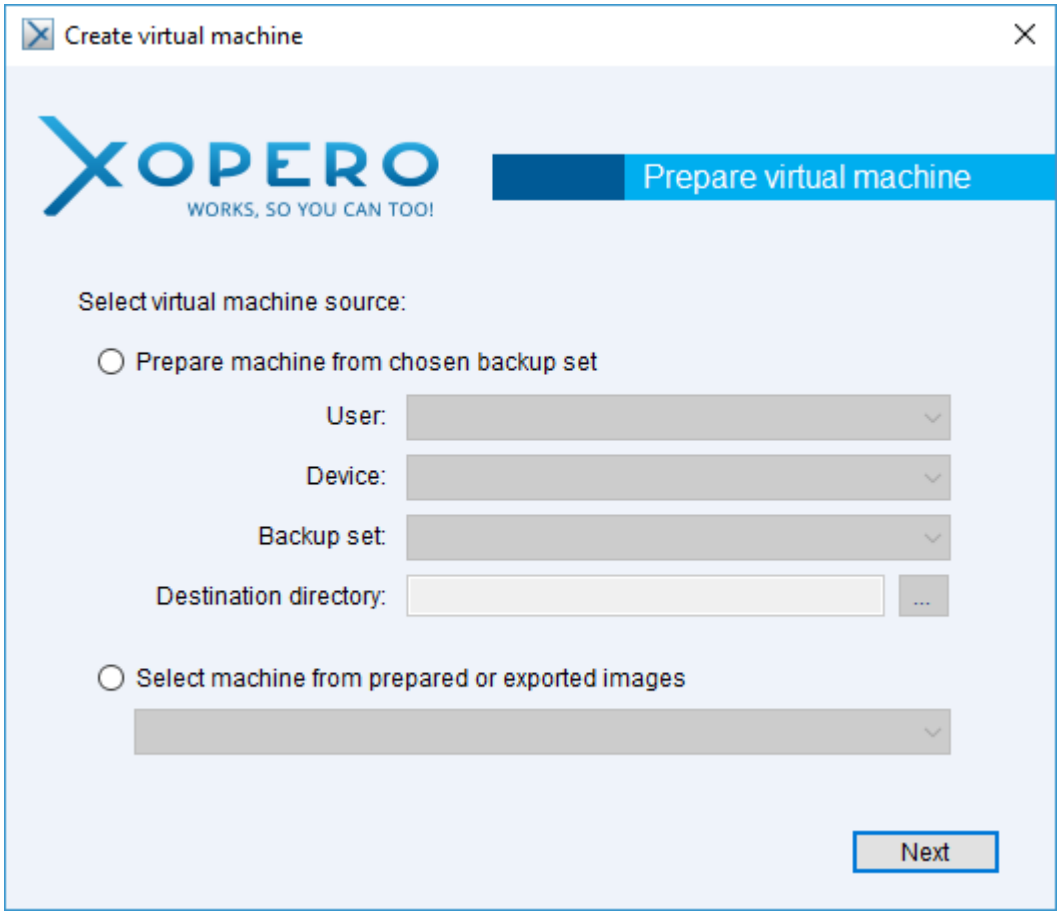
To open the window of the Smart Recovery, click on Virtual recovery option, which is located on the ribbon with main functions.

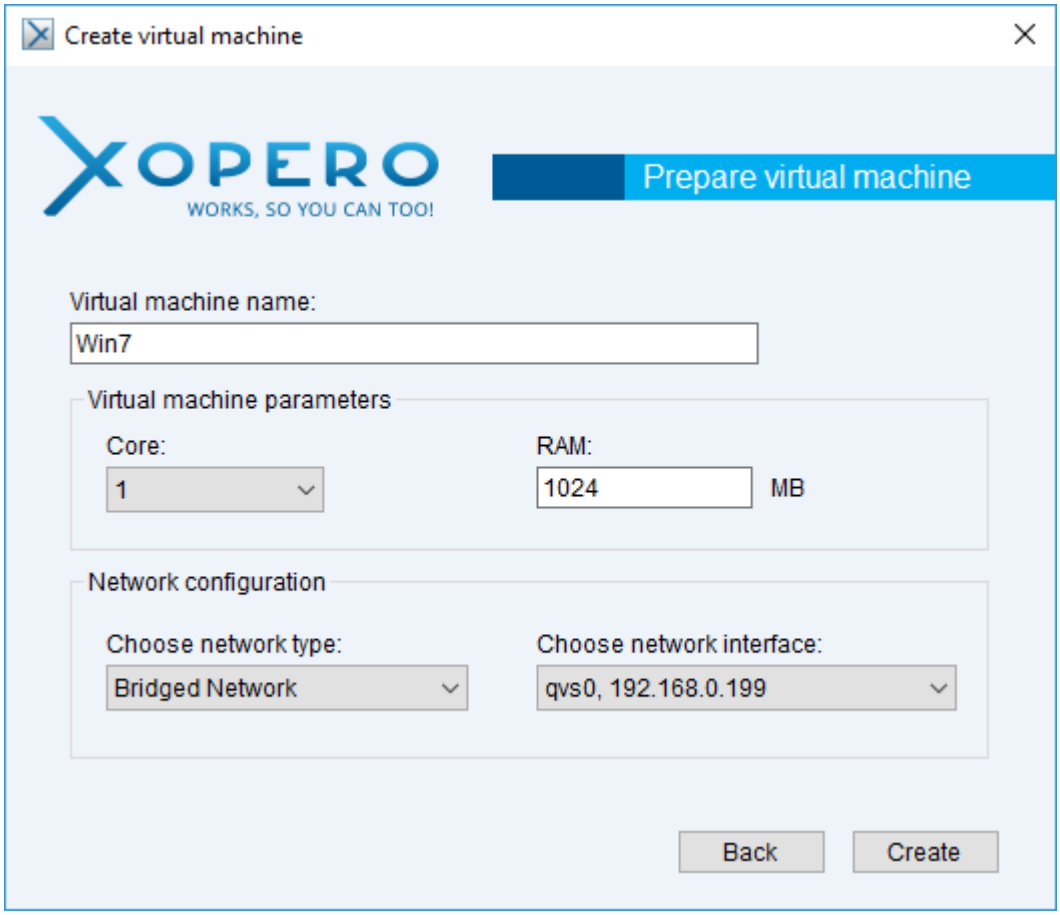


After that Smart Recovery window will appear. To add the machine, click Import Virtual Machine button.



Then, at the Wizard window, you have two options to import machines - *Prepare chosen machine from the backup set* and *Select machine from prepared or exported images*. The first option allows you to select user and backup image, which user made. After the creation of the machine, the Preparing status appears, which means that the machine is imported from the storage. The second option allows you to select the finished image.


Create virtual machine
XOPERO
WORKS, SO YOU CAN TOO!
Prepare virtual machine
Select virtual machine source:
Prepare machine from chosen backup set
User:
Device:
Backup set:
Destination directory:
...
Select machine from prepared or exported images
Next



In the next step, enter the name of the virtual machine, set the number of QNAP cores and RAM, which will be used by machine. Then choose network type.

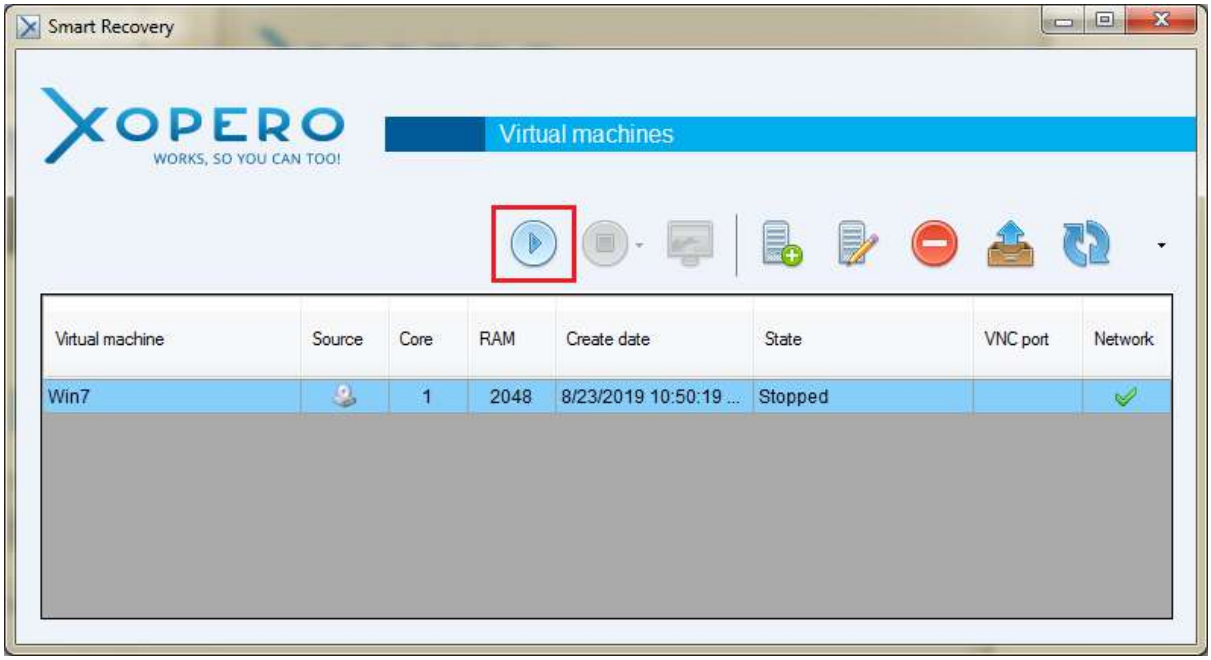
Please remember to set the appropriate amount of RAM and CPU cores depending on QNAP, which will operate the machine.

Starting machine

To turn machine on click Start button at the main tab.

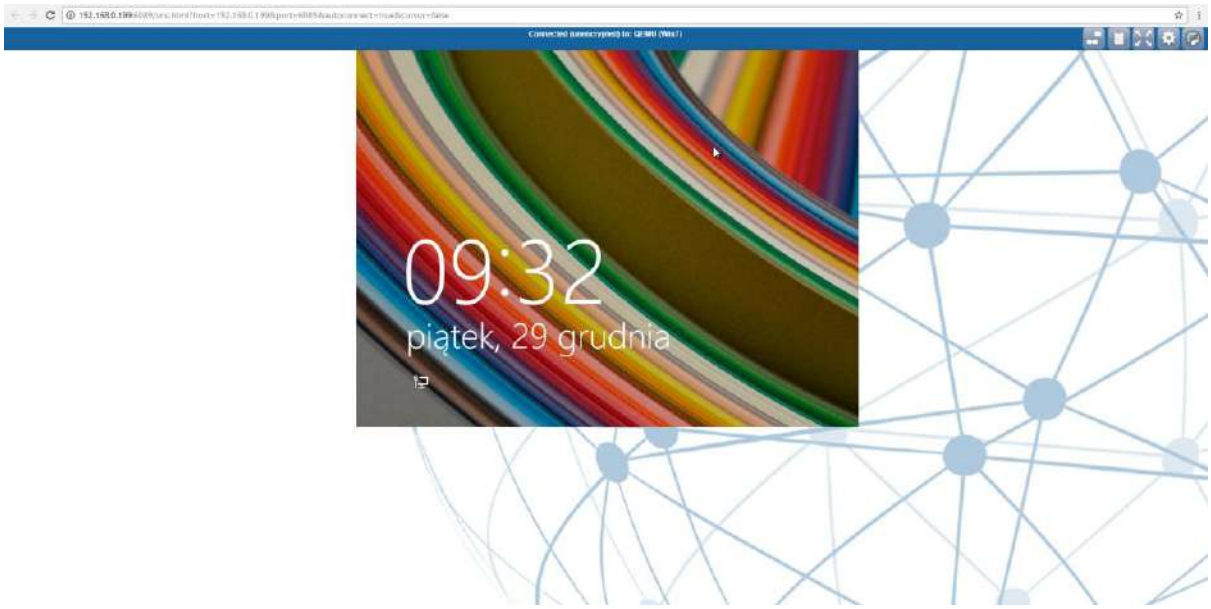
Connection with machine starts by clicking Connect, then you're going to be redirected to the browser and the machine will start by using tool to connect to VNC.

The machine can also connect using its own tools like Real VNC, using the specified port on the machine.



The browser used to connection with machine, has to support HTML 5

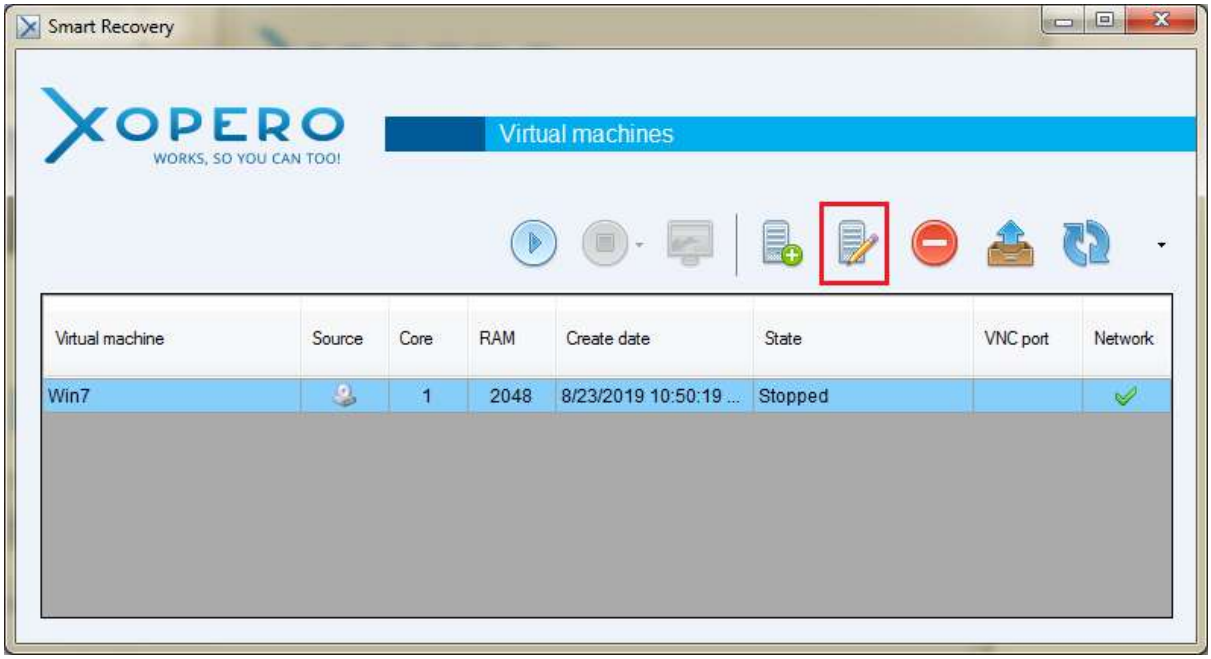
Running virtual machine can be stopped at any time, bearing in mind that the detention is associated with cut off power supply, which can cause system errors.



Modifying

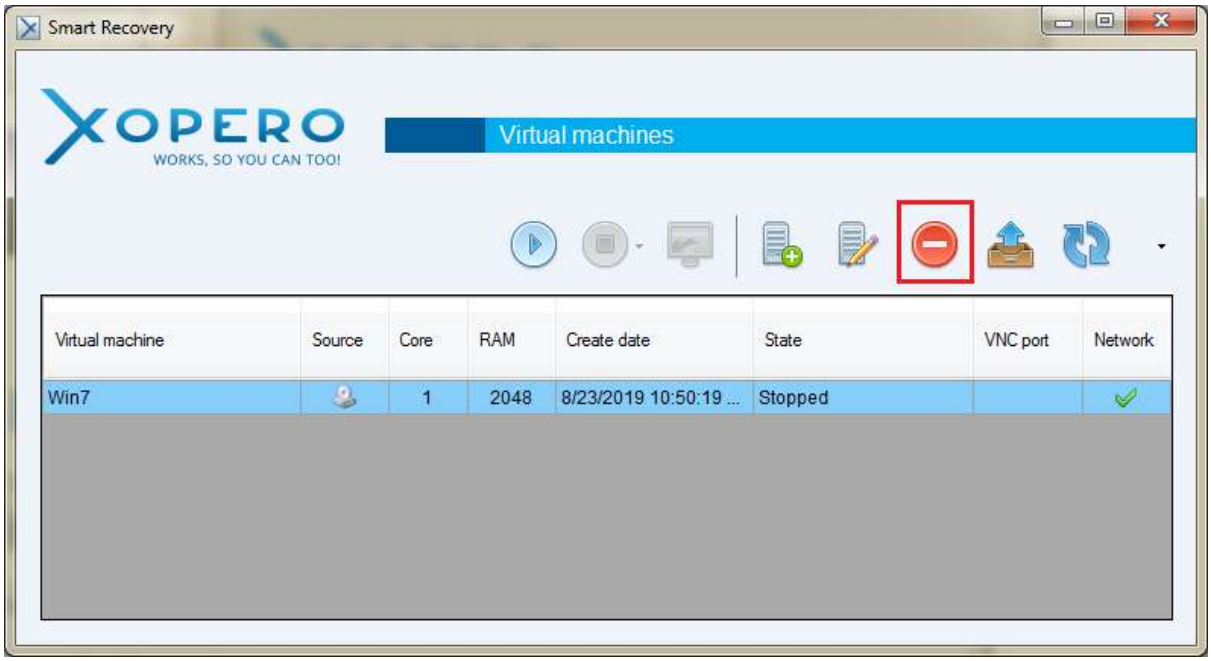
If you want to edit settings of your machine select *Edit virtual machine* option.

Then you will see a Machine edition window, where it is possible to change the amount of cores used by the machine , amount of RAM, the ability to connect or disconnect the machines from the network.



Deleting machine

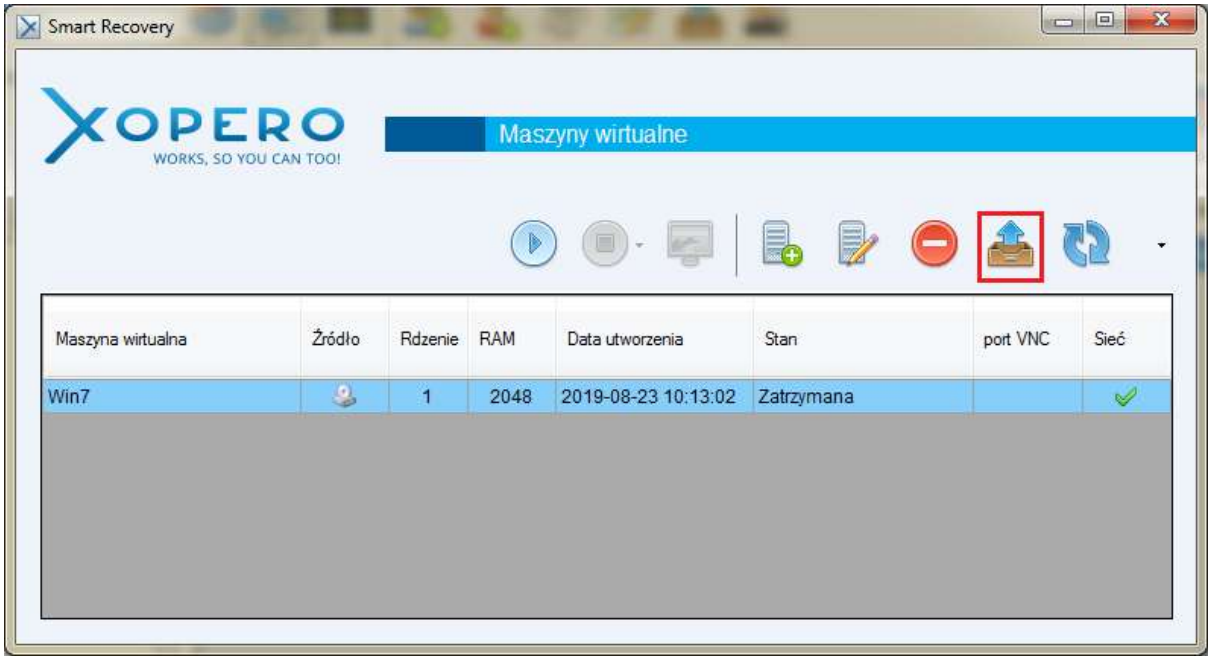
To delete machine choose *Remove* option, it will delete machine from the list, but it won't remove backup files from QNAP.



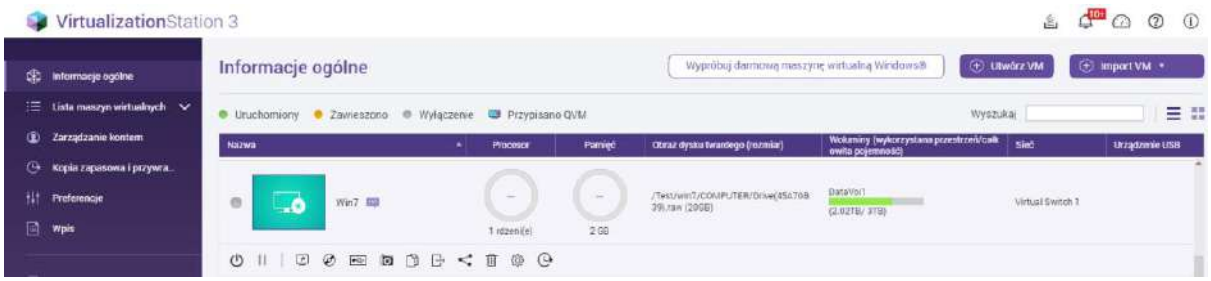
Export to QNAP Virtualization Station

If we have ready virtual machine, it is easy way to move it directly to Virtualization Station on QNAP. After using export option, there will be no way to connect with machine from *Management Center*. Any actions will be available only using QVS.

In order to export your virtual machine to QNAP choose option Export to **QNAP Virtualization Station.**



Thanks to this option every user, which has access to QNAP will be available to use this virtual machine. In addition it gives more possibilities to configure and manage it.



Troubleshooting

Timeout during datastore creation on QNAP

Cannot create a Storage on QNAP

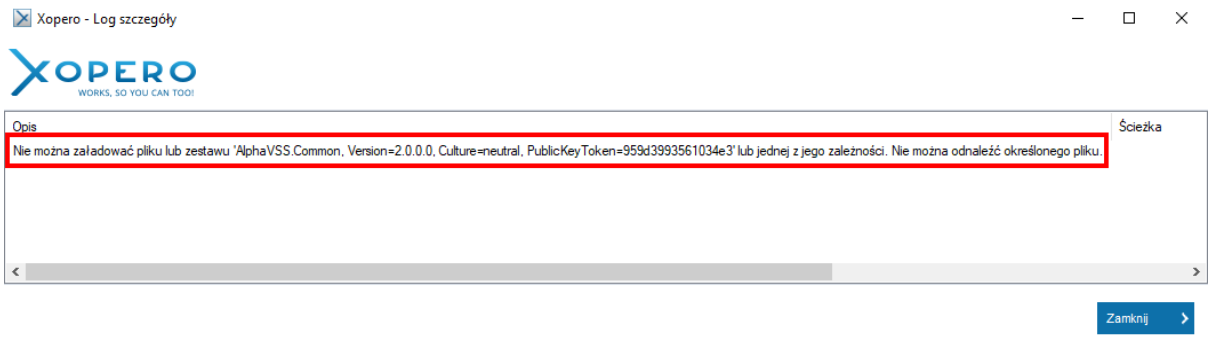
In case of issue with creating a Storage on QNAP 'Module:Server; Function:FunctionCreateDataBlock; Error:UnableToAssignDataStore; ErrorCode:60F0170E2000' or timeouts while launching Storage Manager option you need to disable forcing secure connection(HTTPS) on your QNAP device.

Open the QNAP General settings.

Disable Forcing HTTPS on System Management tab.

Cannot load file or assembly AlphaVSS.x64.dll

Alpha VSS problem



In case of error 'Cannot load file or assembly 'AlphaVSS.x64.dll'' (...) 'or one of its dependencies. The specified file could not be found.' Xopero agent needs to be reinstalled.

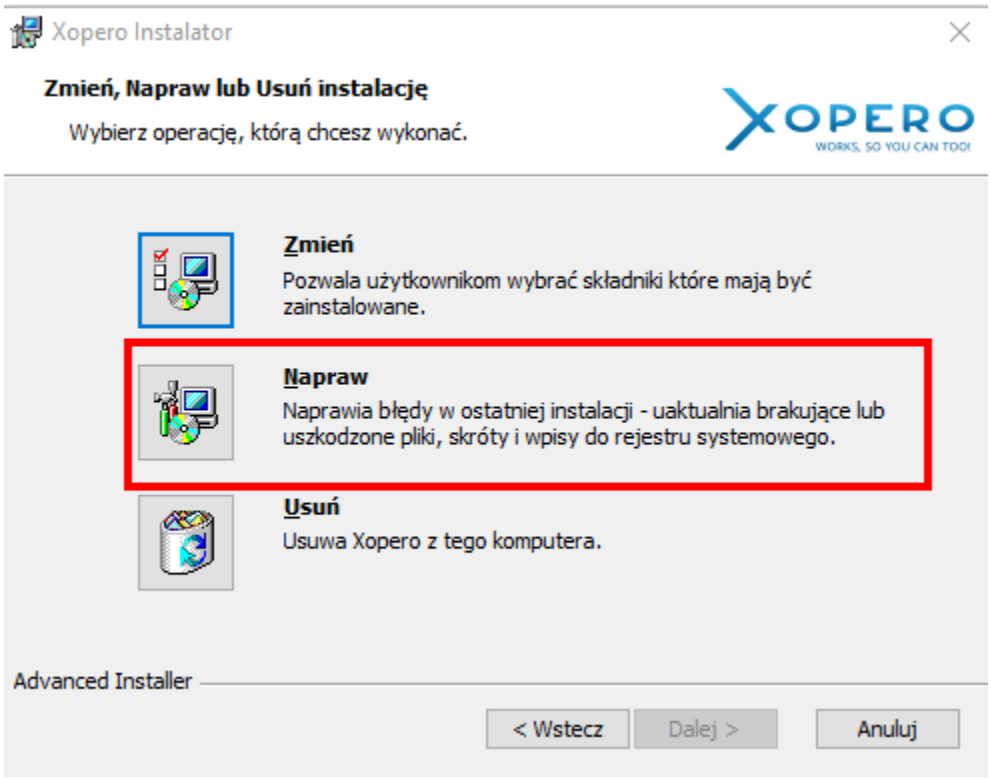
The problem is caused by missing file(s):

- AlphaVSS.x64.dll
- AlphaVSS.x86.dll
- AlphaVSS.Common.dll

Go to Control Panel> Programs> Uninstall a program

In the list, find Xopero and select the 'Uninstall/Change' option.

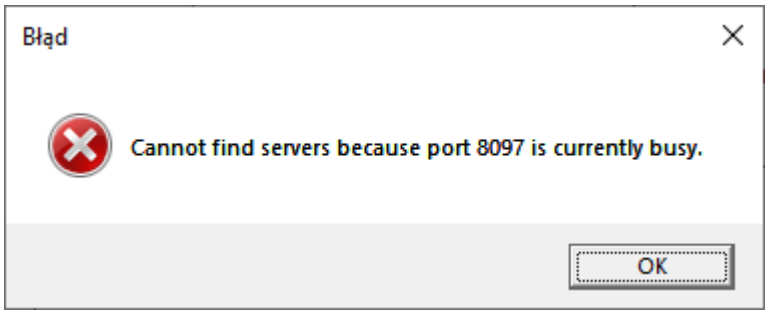
In the first window, click 'Next', then the 'Repair' option.



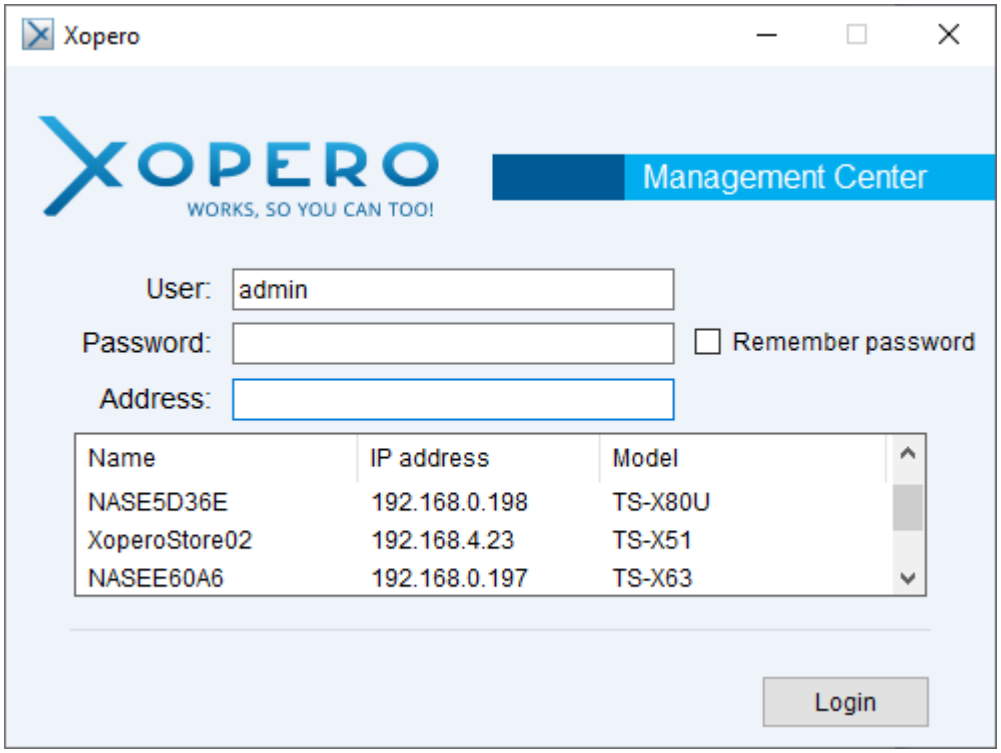
Cannot find servers because port 8097 is currently busy

Problem with finding server instances

The following error may occur when starting the Management Center application



Issue is caused by busy port 8097, which is used by our application to find Xopero Server instances and display them as available servers on the list:



Same port is used by qFinder application to find QNAP devices in LAN network - which is the source of the issue.

To solve that problem you can just close qFinder application and restart Management Center.

You can also ignore the message and provide the IP of Xopero Server instance manually in Address field.

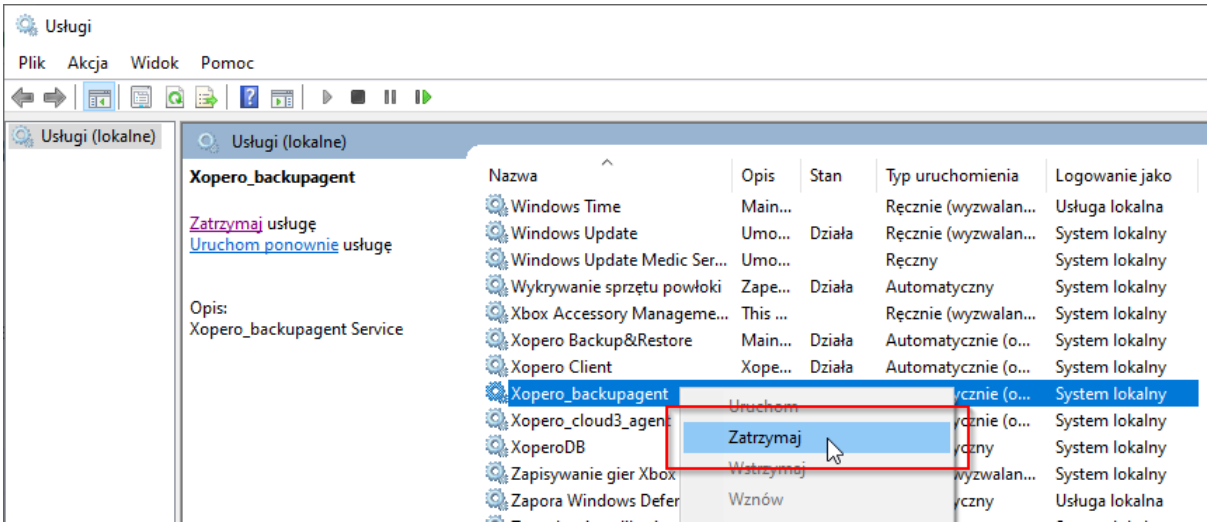
Unexpected error. No connection could be made because the target machine actively refused it.

Changing the port used by the client application

If during the attempts to run the Xopero Agent interface, the following message appears: ***Unexpected error. No connection could be made because the target machine actively refused it.***, probably the port on which the application connects to the Xopero_backupagnet service has been blocked or is occupied.

The solution to this issue is to change the default port to another one. To do this, follow the steps below.

1. Go to the list of services and stop the Xopero_backupagent service.



2. Go to the directory where the application has been installed (default: C:\Program Files (x86)\Xopero), and then open the configuration file: *Opero.Client.ClientApplication.exe.config* (recommend to use the free tool Notepad ++).

3. Find the section: *appSettings* and change the value for *RemotingPort* to the port number that want to assign to the application, e.g. <add key="RemotingPort" value = "9001"/>. If the parameter: *RemotingPort* is missing, add it.

Opero.Client.ClientApplication.exe.config

```
<?xml version="1.0"?>
<configuration>
  <configSections>
    <section name="nlog" type="NLog.Config.ConfigSectionHandler, NLog"/>
    <sectionGroup name="userSettings" type="System.Configuration.UserSettingsGroup, System, Version=2.0.
      <section name="Opero.Client.ClientApplication.Properties.Settings" type="System.Configuration.Clie
    </sectionGroup>
  </configSections>
  <appSettings>
    <add key="CacheExp_AccountInfo" value="60"/>
    <add key="UsedSpaceWarning" value="90"/>
    <add key="ErrorsInRowDisconect" value="3"/>
    <add key="RemotingPort" value="9001"/>
    <add key="ClientSettingsProvider.ServiceUri" value=""/>
    <add key="LogFilePath" value="serviceLogs.db"/>
    <add key="SettingsFilePath" value="settings.xml"/>
    <add key="CallbackPeriod" value="300"/>
    <add key="SleepBeforeReconnect" value="60000"/>
    <add key="SleepBetweenLoops" value="1000"/>
    <add key="RetryExecuteBackupAfterError" value="10"/>
    <add key="ShutdownTimeoutInMins" value="5"/>
    <add key="ShutdownRetries" value="3"/>
    <add key="WaitForServiceDelay" value="180000"/>
  </appSettings>
  <runtime>
    <loadFromRemoteSources enabled="true"/>
  </runtime>
```

4. Also define the same value in the file: Opero.Client.ClientService.exe.config.

Opero.Client.ClientService.exe.config

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <configSections>
    <section name="nlog" type="NLog.Config.ConfigSectionHandler, NLog"/>
    <sectionGroup name="userSettings" type="System.Configuration.UserSettingsGro
      <section name="Opero.Client.ClientService.Properties.Settings" type="Syste
    </sectionGroup>
  </configSections>
  <appSettings>
    <add key="LogFilePath" value="serviceLogs.db"/>
    <add key="SettingsFilePath" value="settings.xml"/>
    <add key="CallbackPeriod" value="300"/>
    <add key="SleepBeforeReconnect" value="60000"/>
    <add key="SleepBetweenLoops" value="1000"/>
    <add key="RetryExecuteBackupAfterError" value="10"/>
    <add key="ShutdownTimeoutInMins" value="5"/>
    <add key="ShutdownRetries" value="3"/>
    <add key="RemotingPort" value="9001"/>
    <add key="ClientSettingsProvider.ServiceUri" value=""/>
  </appSettings>
  <runtime>
    <loadFromRemoteSources enabled="true"/>
  </runtime>
```

5. After saving changes to the configuration files, start the Xopero_backupagent service and try run the Agent interface again.

Repeated update of the Management Center application

Resolve a problem with updates install

When the Management Center update installation fails, attempts to reinstall will be made every time it starts. To solve this problem, uninstall and reinstall the application. For to do this, you can use the Management Center installation file. Select the option to remove the application at first step, and then the installation option at second step.

Sending file error

Sending file error on Xopero QNAP Appliance - ErrorCode:60F1000E9998

QNAP devices have limitations on the number of files in the directory. If the number of 5326084 files is met, saving to such directory becomes impossible. If an error occurred during sending and you will see a message in the logs:

Module:Server; Function:FunctionUploadData; Error:UnhandledException; ErrorCode:60F1000E9998

that means the file limit has been met.

To ensure continue backing up without losing the old one backups, you need to edit the magazine and change its priority to Low, and then create a new High-priority magazine.

Displaying capacity

16 EB value in Management Center QNAP

Sometimes happened that the account capacity displayed in the Management Center will be incorrectly recalculated and EB value will be display. Then you should recalculate the storage capacity. To do this, follow the steps below:

1. Login to QNAP by SSH.
2. Perform the following commands in command-line (puTTy) and then press enter:

- /etc/init.d/XoperoServer.sh backup_info_job_1_hour
- /etc/init.d/XoperoServer.sh refresh_retention_days

I can't connect with MS SQL server, why?

The most common problem with the connection to the database - the correct server name

The problem with the connection to the Microsoft SQL server, when creating a backup project, is usually result from an incorrectly entered server name.

The Xopero system detects only host name, on which at least one MS SQL server instance is located, but we must remember that there may be many instances on one host.

That's why instance name must be included in backupset, the full server name should be:

HOST_NAME\INSTANCE_NAME , for example:

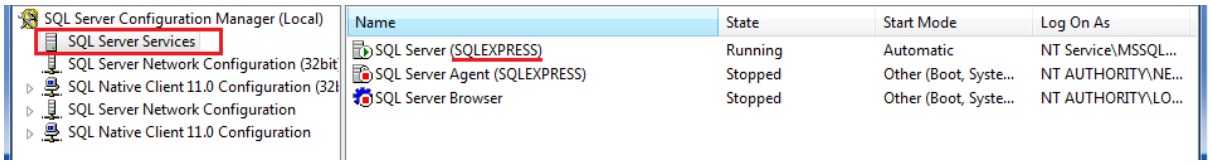
Michał-PC\SQLEXPRESS

Instance name

If we don't know the name of an instance, we can find it by few ways:

1. Sql Server Configuration Manager

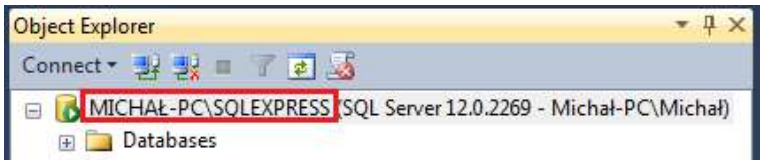
After running the above-mentioned tool, go to the SQL Server Services window and look at the name in brackets next to the SQL Server entry:



2. Microsoft SQL Server Management Studio

One of the basic tools that also allows us to verify the instance name already on the server connection window:

In case you log in automatically, the name can be verified in the Object Explorer.



How to backup and restore the Xopero Backup&Restore database?

Introduction

Xopero system store its data in PostgreSQL database and in *storage folders*.

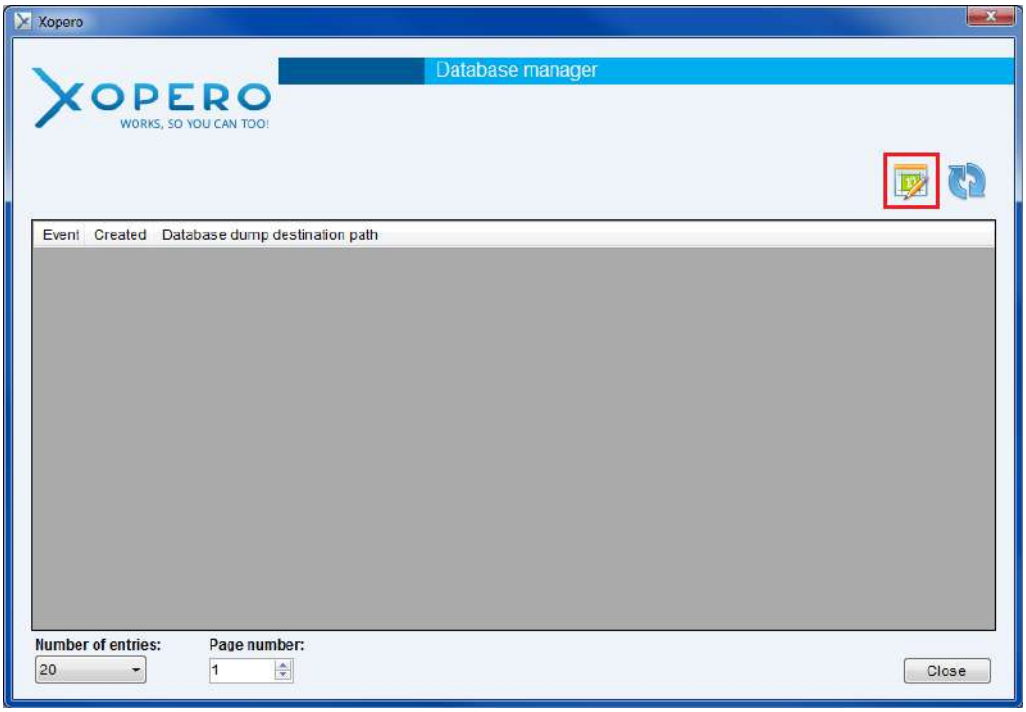
PostgreSQL database is being copied daily and it's backup saved in *storage folder*.

System always stores last 7 copies of the database.

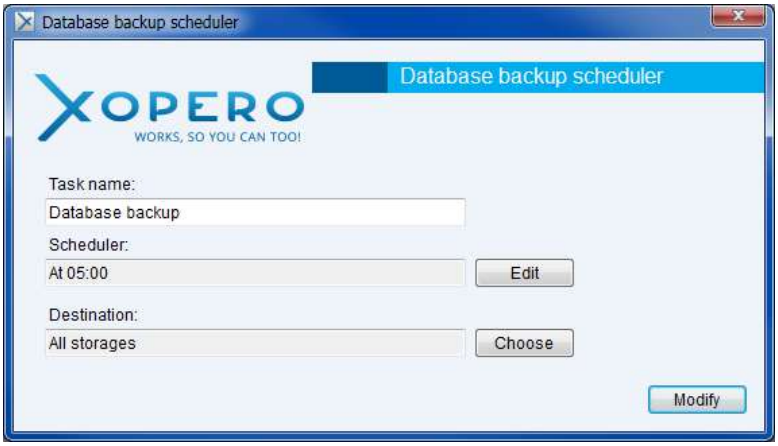
Database dump

Database dump is performed automatically once a day. If user wants to have the newest dump, he should use Database manager.

To perform forced database backup, launch Management Center, go to Settings and launch Database manager.



Then open Database backup sheduler and choose your own configuration.



Database restore

In case of database damage, it can be restored from previous database backup. It is required to have valid database copy. To restore the database:

1. Make sure, that the application is stopped:

```
stop Xopero Backup&Restore service
```

2. Run cmd with administrator rights:

```
  cd C:\Program Files\Xopero Software\Xopero
Backup&Restore\pgsql\bin
```

3. Connect with database:

```
  psql -U postgres -p 5433 -d opero21
```

4. Verify that the database opero21 is empty:

```
 SELECT count(id) FROM public.versions;
```

```
  SELECT count(id) FROM public.files;
```

empty base should return a 0 value

5. Return to catalog:

```
  \q
```

6. Drop database:

```
  dropdb -U postgres -p 5433 opero21
```

7. Create empty database:

```
createdb -U postgres -p 5433 opero21
```

8. Import database backup:

```
psql -U postgres -p 5433 -f name_dumpbase opero21
```

How to backup and restore the Xopero QNAP database?

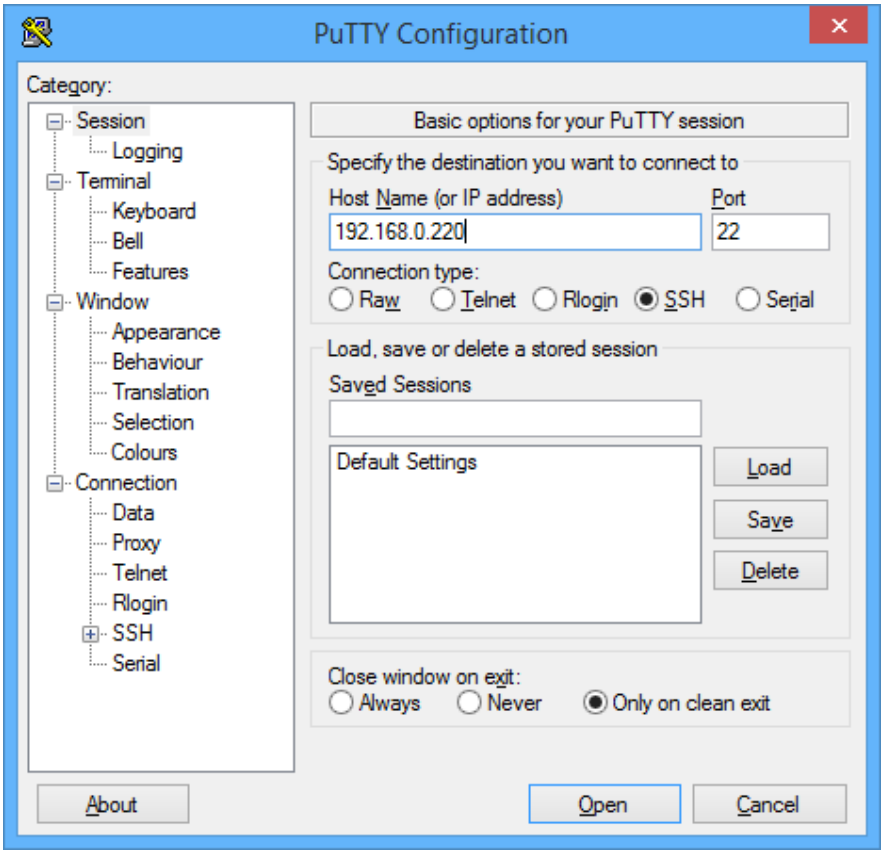
Introduction

Xopero system store its data in PostgreSQL database and in *storage folders*. PostgreSQL database is being copied daily and it's backup saved in *storage folder*. System always stores last 7 copies of the database.

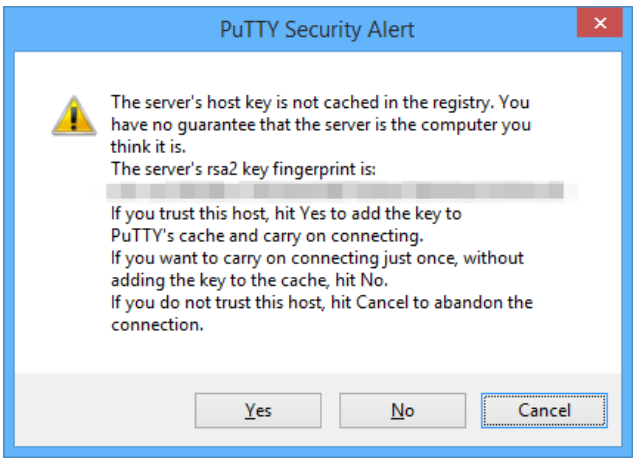
Backup files are saved with the **backup_opero21_X.sql** name, where X is a number from 0 to 6.

Logging to QNAP by SSH

1. Log into your QNAP by SSH. It is possible by e.g. PuTTy, it is a free program which you can download here.



2. In *Host Name (or IP address)* field enter QNAP IP address, choose *connection type SSH*. After these steps click *Open*or, if necessary, change other settings.



3. When the above window appears, select *Yes*.

4. Enter the login and password to your QNAP.

Database dump

To perform Xopero database backup, stop XoperoServer at first step, then launch database and make dump of it.
Database dump is performed once a day. If user wants to have the newest dump,
it's possible to force this operation it by using following command:
/etc/init.d/XoperoServer.sh backupexpert_pgdump
After this operation you can copy storage with files and dumps.

Database restore

In case of database damage, it can be restored from previous database backup. It is required to have valid database copy. To restore the database:

1. Make sure, that the database is stopped:

```
  /etc/init.d/XoperoServer.sh stop
```

2. Change the name of XoperoServer.sh:

```
 Go to: /etc/init.d/ directory
```

```
 enter command: mv XoperoServer.sh XoperoServer.sh1
```

3. Before the next step, you need to check status of the service - (this command should return no processes):

```
  ps aux | grep opero-mono
```

```
  If the mono service is running, use the command: kill [port where the service is running] eg. kill 14692.
```

4. Run the PostgreSQL database instance without Xopero applications:

```
  /etc/init.d/XoperoServer.sh1  postgres_start
```

5. Verify, that the database is started - (Only one result should be returned):

```
   #ps aux | grep 'postgres' | grep 'Xopero'
```

6. Log in to the PostgreSQL:

```
/etc/init.d/XoperoServer.sh1 psql
```

7. Check if the database is empty:

```
SELECT count(id) FROM public.files opero21;
```

```
 Exit: [Ctrl] + [z]
```

Check, if you can find opero21 on the list. If so, you have to verify, if it's a empty database (created automatically during qpkg package installation) or it's a proper database (in this case the database is propably not damaged). The easiest way to verify it is by using above commands. Empty database should return 0.

If the output is different than 0, the database is not empty and it is necessary to check its content before proceeding. If the output is 0, you can delete empty database by using command:

```
Go to: /share/CACHEDEV1_DATA/.qpkg/Xopero/postgres95
```

```
and enter the command: ./exec.sh dropdb -U postgres -p 5433 opero21
```

8. Creating an empty database:

```
$createdb -U postgres -p 5433 opero21
```

9. Import of the database dump:

```
./exec.sh psql -U postgres -p 5433 -f {dump localization} opero21
```

```
e.g. ./exec.sh psql -U postgres -p 5433 -f
/share/CACHEDEV1_DATA/dump.sql opero21
```

10. Change the name of XoperoServer.sh1:

```
Go to: /etc/init.d/ directory
```

```
 enter command: mv XoperoServer.sh1 XoperoServer.sh
```

11. Start the application:

```
 /etc/init.d/XoperoServer.sh start
```

Management Center not running - error including .NET Framework 4.7

Solving the problem with not running Management Center (issues with Microsoft .NET Framework 4.7)

"User 'SYSTEM; has previously initiated an install for product 'Microsoft .NET Framework 4.7'. That user will need to run that install again before they can use that product. Your current install will now continue".

If you receive this message when you try to start the Management Center, download the Microsoft .NET Framework Repair Tool, so that it can detect and fix the malfunction. We also recommend that you update your operating system.

Not once failed to perform a full backup of data, because the CLI application lost its connection with the server. What to do?

Increasing memory for Java

The problem may be inherent in the available memory for Java. Increase the amount of memory in the JVM, it is possible by the command line, using the given options:

- -Xms<size> set initial Java heap size
- -Xmx<size> set maximum Java heap size
- -Xss<size> set java thread stack size

Maximum memory size for 32-bit JVM is 4GB, so to increase the memory you need to use the 64-bit version of the JVM, e.g. java -Xmx6144M -d64. Flag -d64 is needed to running JVM in 64-bit mode.

While performing backup of one of the machines, a warning appears: "Virtual DB machine does not have a snapshot created." - what's going on?

Snapshots - for what?

The message about the lack of a snapshot in our application is marked as a warning and refers to sub-optimal backup (longer and bigger). For this reason, we recommend creating a snapshot for one machine Hyper-V in virtualizer settings, which means that the only a snapshot file will be processed - the speed up sending and reduce the processing time for each machine for which will be a minimum of 1 snapshot. In this case, the main virtual machine disk file is not modified.

What cause the error "Authentication with old password no longer supported, use 4.1 style passwords" when creating a MySQL backup project?

Errors in defining MySQL backup

The problem is the lack of support for the MySQL passwords of the old type. The sites https://dev.mysql.com/doc/internals/en/old-password-authentication.html is shown information that support for old password type was excluded because it is a less secure form login. A proposal of the solution to the problem is to create a new MySQL user account for the purpose of backup or move to a new type of authentication while keeping the old account.

How to delete data from the Xopero Cloud server?

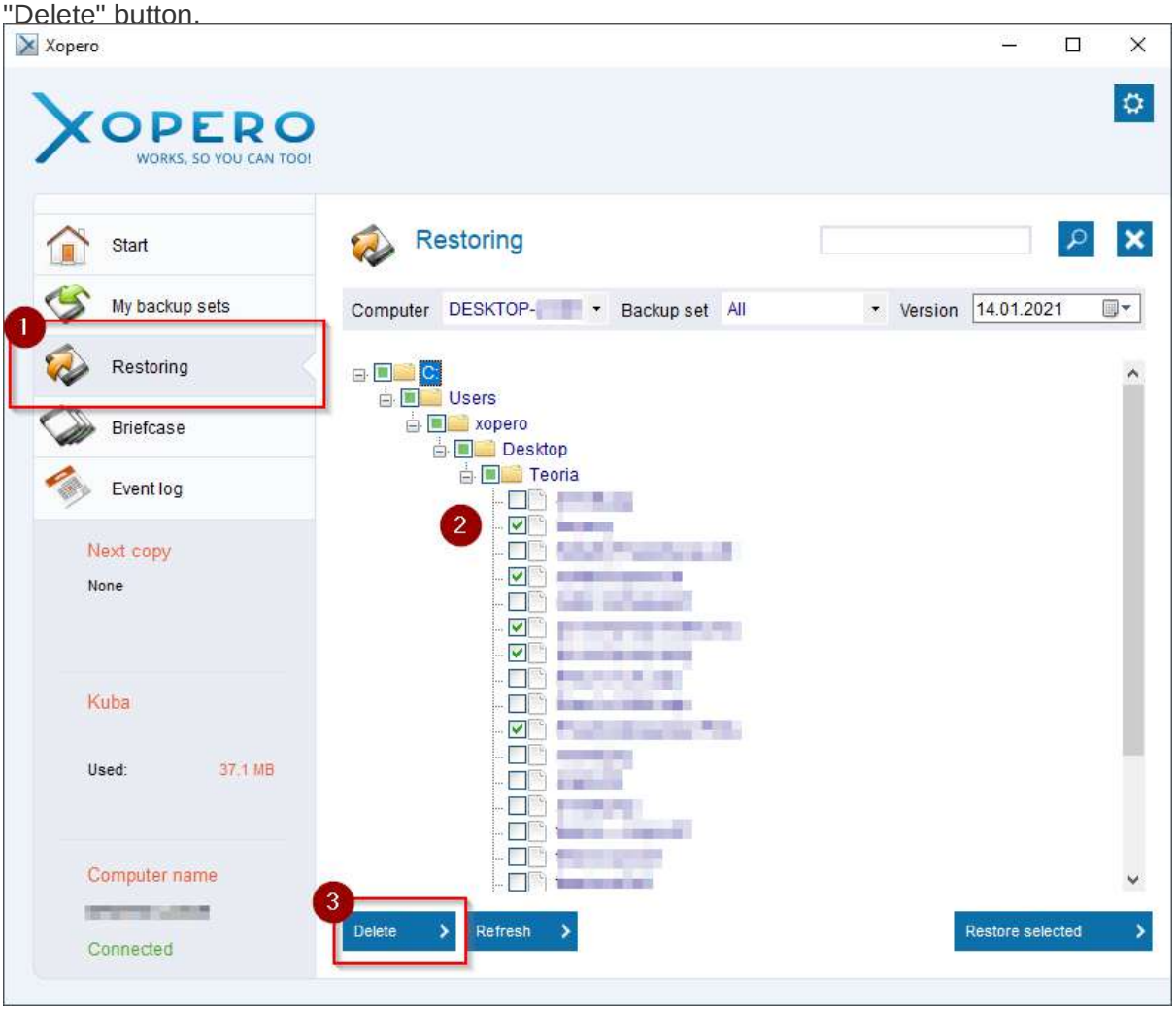
Deleting data

Backup or briefcase files that have been sent to Xopero Cloud servers can be deleted at any time.

Backup files

Backup files, processed within backup tasks, can only be deleted through desktop applications:

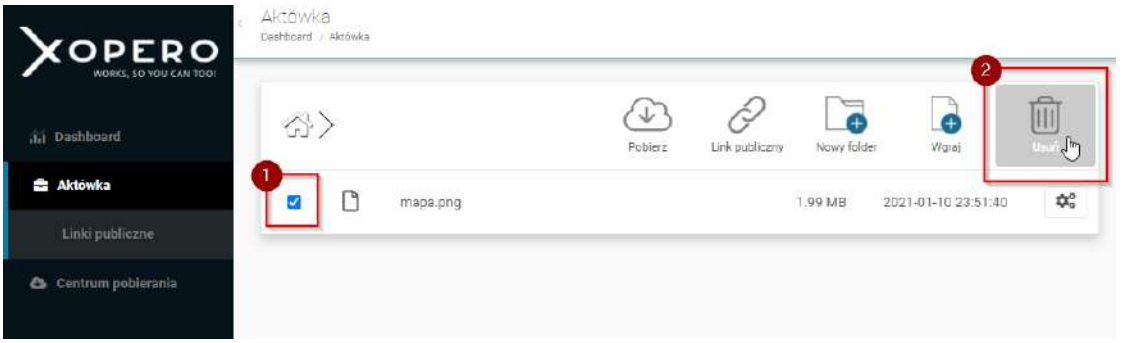
- **Xopero Cloud Agent**
  After logging to application, go to "Restore" tab, where all files sent as backups are viewed. After marking all the files that are meant to be deleted, click on "Delete" button.



Briefcase files

Regardless of used method, deleting file from any location will result in disposal of file in briefcase cloud resources. File sent do briefcase can be deleted from different locations:

- Through the directory that is synchronized with briefcase space in local computer - we execute identical operations on files as in any other Windows directory
- Through the web panel:
    - Log in to web panel (login.xopero.com)
    - Choose "Briefcase" tab
    - Mark the files that are meant to be deleted and choose "Delete" button



More information about file deletion can be found here.

If I forget to renew the license, then my files will be lost - the lifetime of the account.

Account lifetime

User files in Xopero Cloud platform are kept to the end of customer license, unless there is a one of the following situations:

- resignation - the data store 1 month,
- license expiration - the data store 1 month,
- delete user account - the data store 1 month,
- delete data - the data store 1 month,
- reset the encryption key - the data are deleted immediately.

The application has selected the message "Different device chosen. You can only restore your data". I can't make a backup. What to do?

Solving the problem of moving applications in read-only status

If you mistakenly selected host during the installation of the application and you can add new host or choose the right host which has previously been defined as follows:

1. Stop the service and turn off the application,
2. Go to %ProgramData% directory and remove Xopero Cloud directory with content,
3. Start the service,
4. After start the application and log on, a window with the possibility of adding a new device or selecting one of the previously defined appears. Select the appropriate, or add new.

In case were chosen the wrong host, but there is no possibility to add new host and the right has not been before defined :

1. Determine which hosts of user to be removed, and next restore data from it, if you do not want to lose them,
2. Stop the service and turn off the application,
3. Go to %ProgramData% directory and remove Xopero Cloud directory with content,
4. Log on to the user panel and remove the host from the account edit,
5. Start the service,

6. After start the application and log on, a window with the possibility of adding a new device appears. If the message is results from hardware changes, please contact the service provider.

If the instructions above doesn't help, we recommend sending ticket to Xopero's technical support.

Causes

This "Read-only" message appears when:

- during the application installation user indicate a different host than the one on which the application has been installed,
- in computer where the application was installed has been changed the motherboard or processor, because on their basis is generated hardware key applications.

How to start?

First steps with Xopero - QNAP

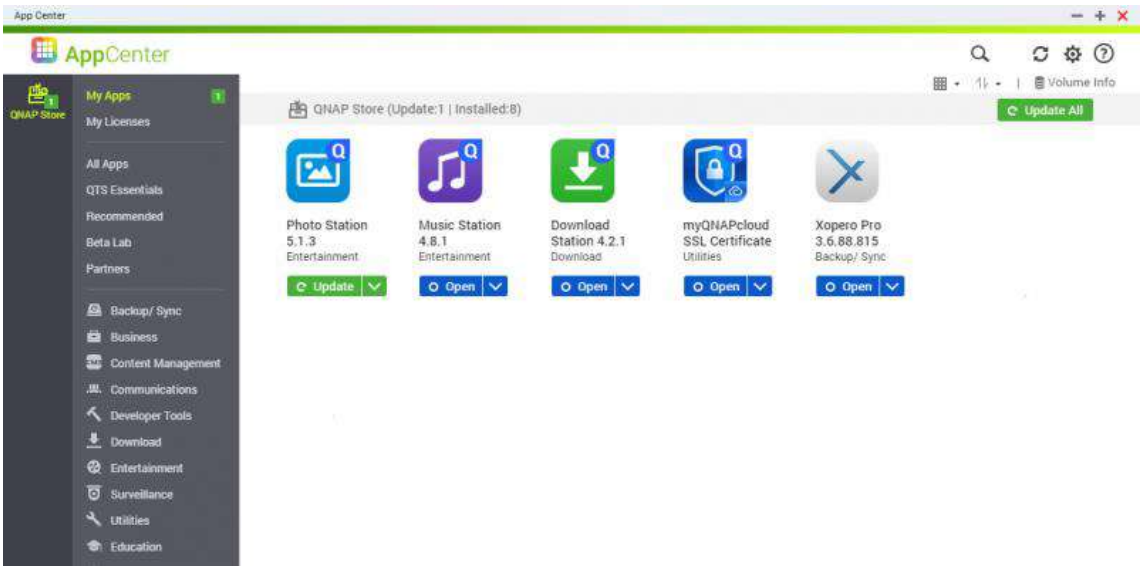
The following document will show you how to configure Xopero after its installation. If you have not installed Xopero yet, see our Installation manual or watch it on YouTube.

Get Management Center

The Management Center is an application which allows you to configure and manage Xopero Appliance centrally and remotely.

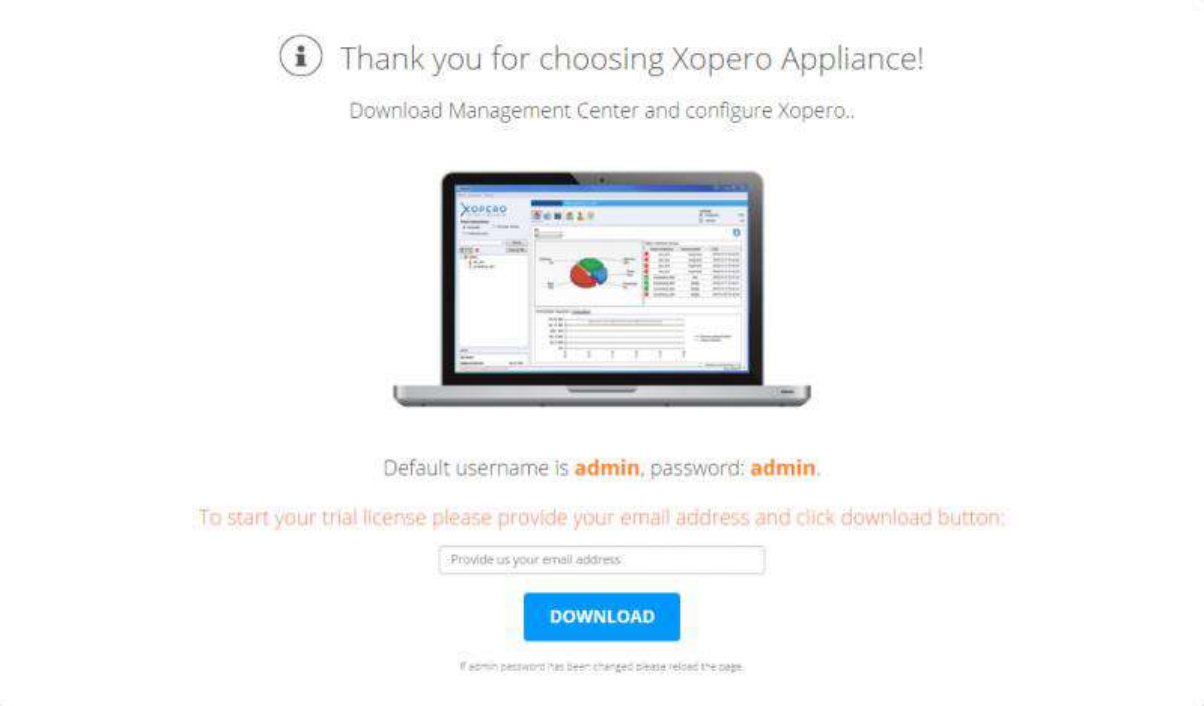
It is required to install the Management Center application after the installation of Xopero. Open your QNAP web panel and go to the *App Center*. You have to find the *Xopero PRO* or *Xopero Free Forever* and click the *Open button* in its box.

The Xopero icon should also appear in the main QNAP panel. You can open the *Xopero Control Panel* from here as well.



The Xopero Control Panel will be shown, however at this stage of configuration you will be asked to download the Management Center application. Click the *Download* button in order to get it.

When the Xopero is configured the Control Panel enables you to view the data store utilization, check user logs or download client applications and update license details.



When the download is finished, install and run the Management Center application on your computer.

Setup Xopero to work

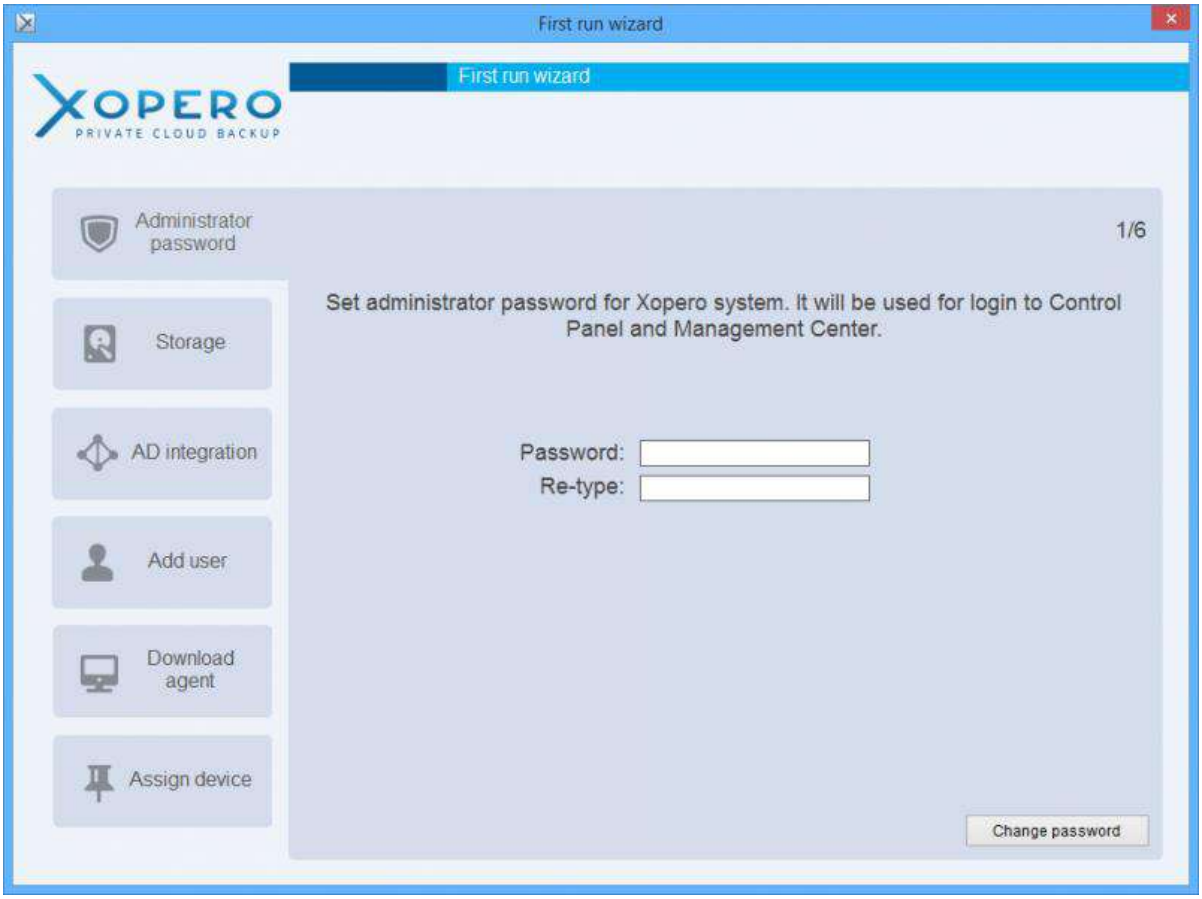
When you run the Management Center, the login screen will be displayed. Your QNAP device will be detected automatically and the default Xopero username and password will be filled in.

In order to log into the Management Center you have to use the Xopero administrator account instead of QNAP user. The **Xopero default username** is **admin** and its password: **admin**.

During the first log on to the Management Center, a wizard guides first configuration, which will help you prepare Xopero platform for further work.

Change the admin password

After logging into your QNAP the First Run Wizard will be launched and in the first step it is required to change the user password for security reasons. Just type in the password and make sure that you re-type it correctly.



Create data storage

If you have a default password to your QNAP (*admin*) the data storage will be created automatically. In case of previous alteration of QNAP admin password the First Run Wizard will ask you to type in this admin password and then to choose the data storage type:

- **Automatic** – this is the recommended type, the data storage size will be fit to the available disk space on QNAP,
- **Manual** - it allows you to set the data storage size, its priority, cluster size and QNAP shared folder.

If the QNAP device has been updated from the QTS less than 4.0 the data store cannot be created automatically. In this case you have to create the data store manually, click on the "..." button in the Shared folder field and create the folder directly on QNAP device.

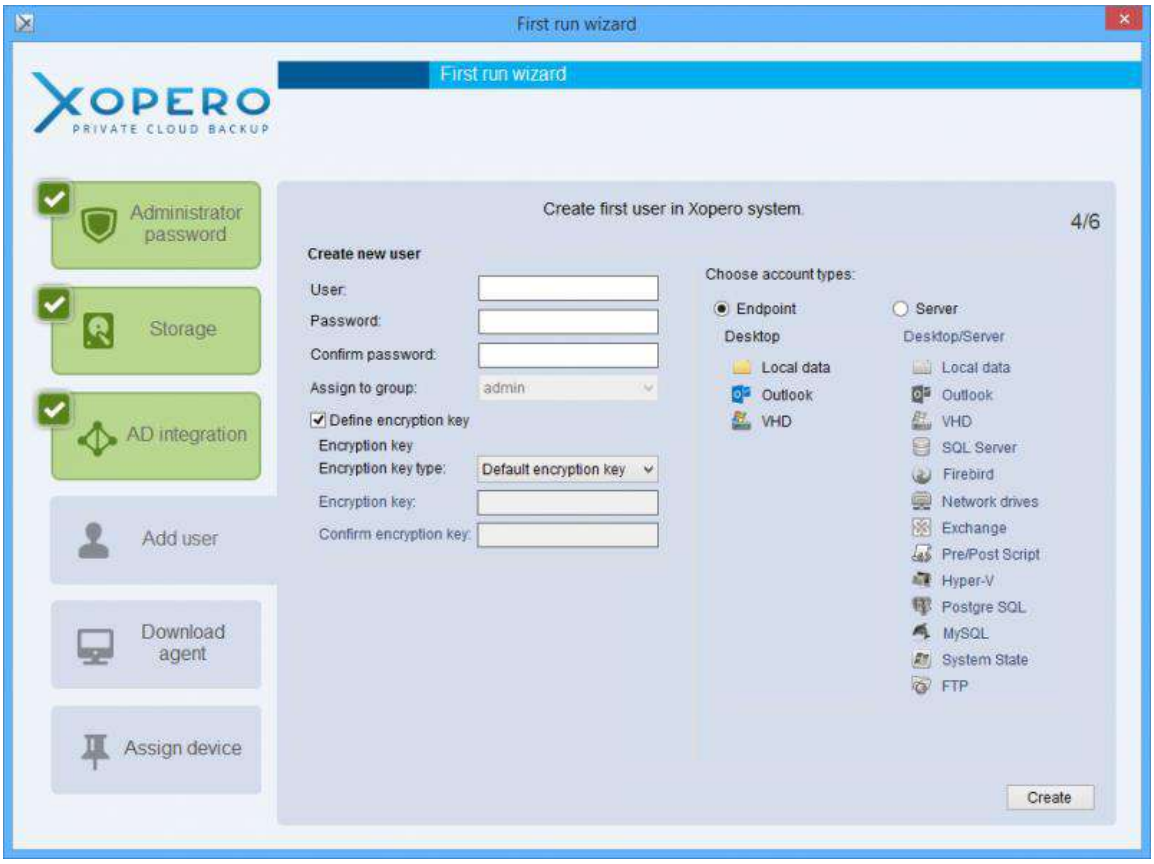
Integration with Active Directory service

Now comes AD integration, which is available for domain controllers with Active Directory. We'll skip this step. More information about it: Mapping Active Directory Users.

Add your first Xopero user

Now, you have to create your first Xopero user who will be able to backup and sync data. Firstly, type his/her name and password. Next, it is recommended to define the user encryption key which will be used to encrypt the data. There are two type of the encryption key:

- **Default key** – it is generated automatically and stored in Xopero database on QNAP, user does not know this key. It is a safe and comfortable method because there is no risk of losing the key.
- **User key** – the user types in his/her own encryption key and it is not stored in Xopero database. The data is better secured because there is also required to enter the encryption key besides the user name and password to restore data. In case of the key loss it is impossible to restore backed up data.



Subsequently, you have to choose the account type between:

- **Endpoint** – the user can backup only local data, Microsoft Outlook and perform VHD backup.
- **Server** – the user can backup the same data as in Endpoint type and moreover it is possible to backup the databases, Microsoft Exchange, virtual environments, FTP servers and network drives.

The Endpoint user cannot use Xopero applications installed on the Windows Server operating system.

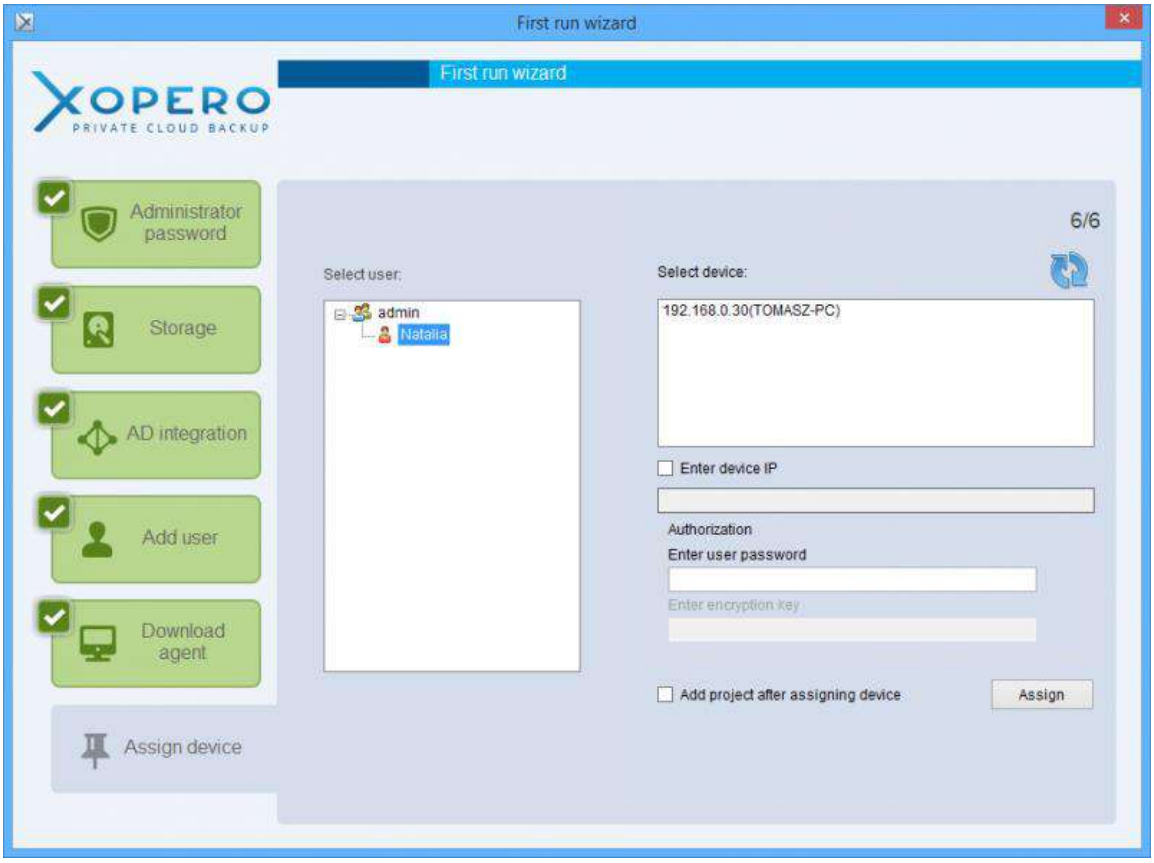
Download and install client application

In the next step, you have to download the client application and install it on any computer in your local network. It can be the same computer where the Management Center is installed.

Assign device to user account

Once the client application is installed, you can assign the device to user account. In Xopero system the device is the user’s computer with the client application installed on it.

For the Xopero system, device is the user's computer with the installed client application



Just right-click on the user and select the *Assign device* option then select the device from the list or enter its IP address manually. Finally you have to enter the user password and its encryption key if it is required.

Click *Assign* to finish the wizard and start protecting your data with Xopero.

First steps with Xopero - B&R

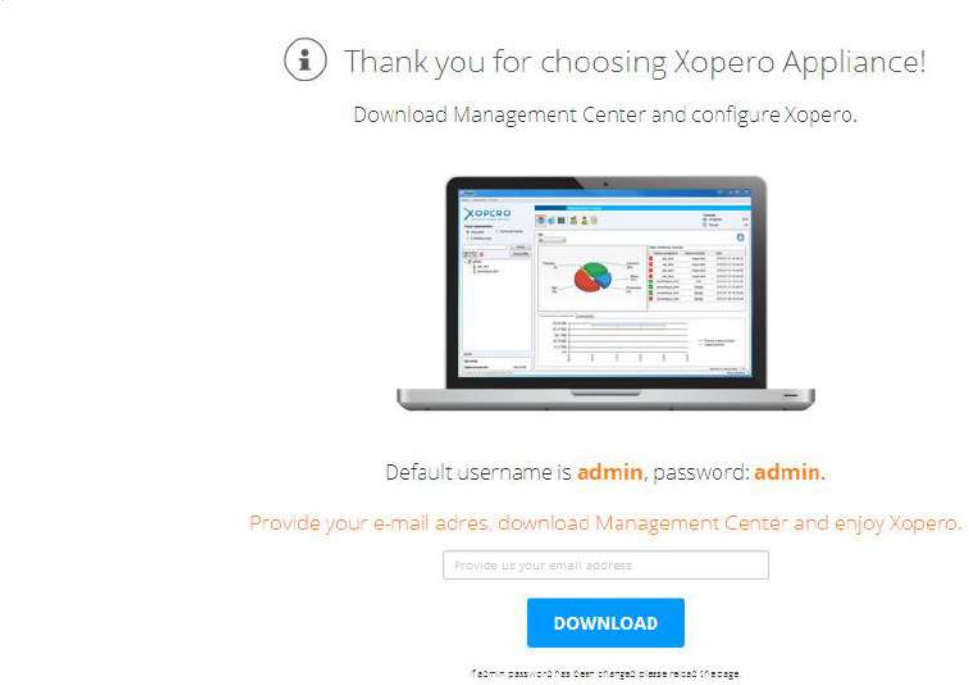
The following document will show you how to configure Xopero after its installation.

Get Management Center

The Management Center is an application which allows you to configure and manage Xopero Backup&Restore centrally and remotely.

It is required to install the Management Center application after the installation of Xopero.

Just click twice on Xopero B&R panel icon to open Xopero Control Panel. At this stage of configuration you will be asked to download the Management Center application. Type your mail and click the *Download* button in order to get it.



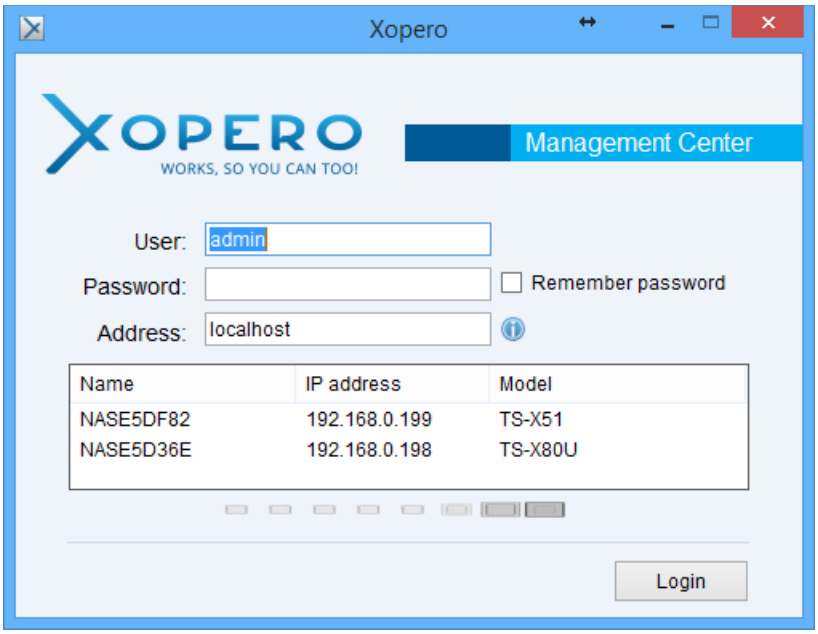
When the download is finished, install and run the Management Center application on your computer.

Setup Xopero to work

When you run the Management Center, the login screen will be displayed. The default Xopero username and password will be filled in, you need to type *localhost* or *your IP address* in *Address* field.

If you want to work in AD, you have to use IP address during log into Managment Center.

During the first log on to the Management Center, a wizard guides first configuration, which will help you prepare Xopero platform for further work.



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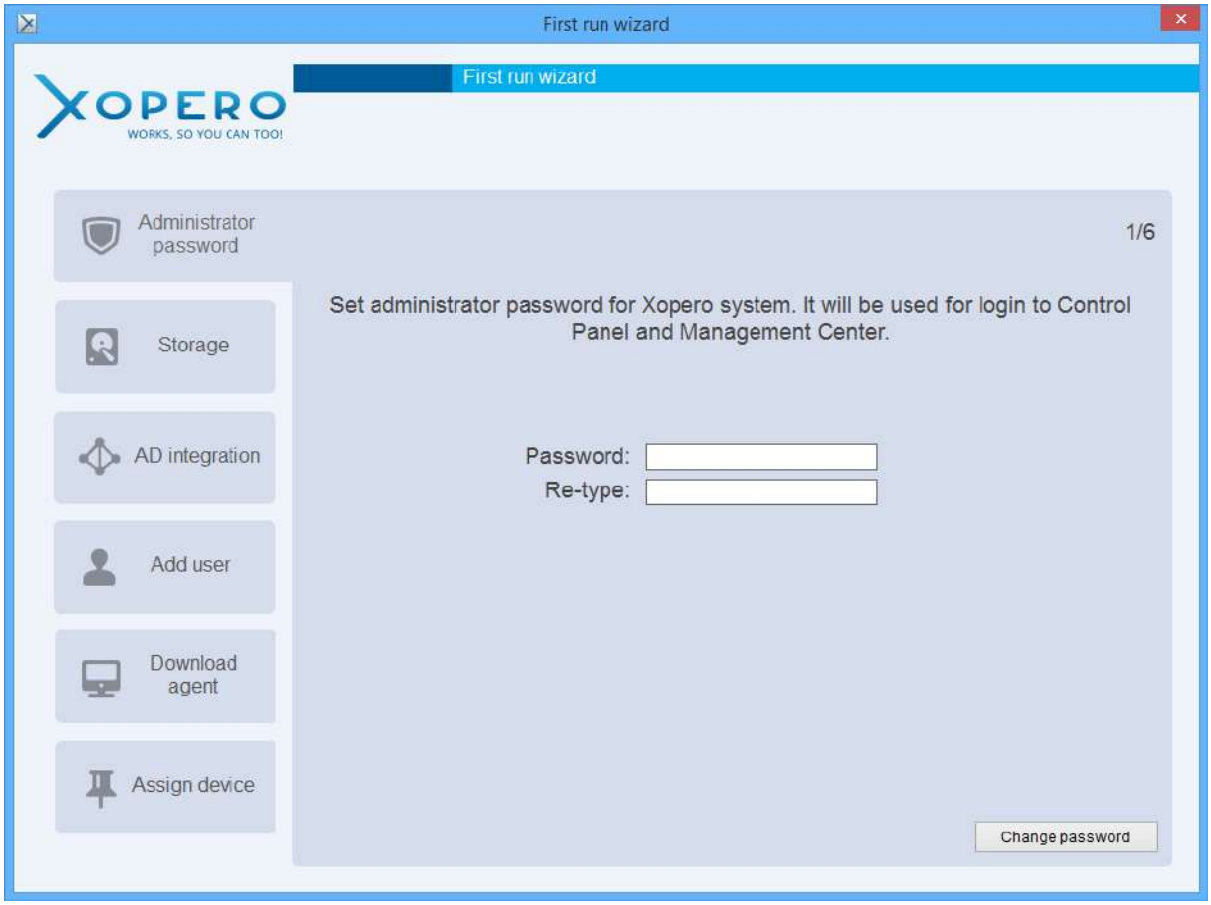
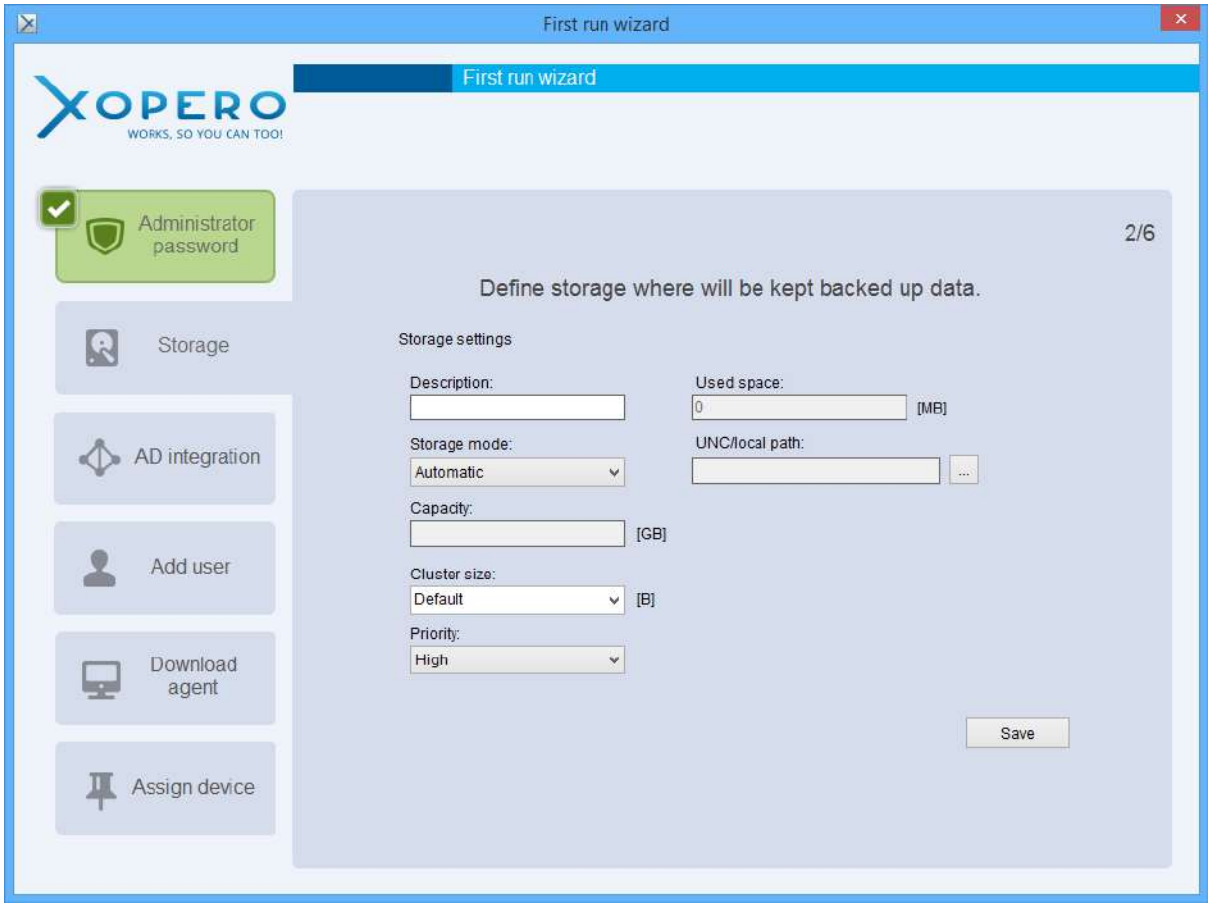


Create data storage

In this step, you will define data storage. It had to be the local path (on the same host in which Xopero B&R is installed).



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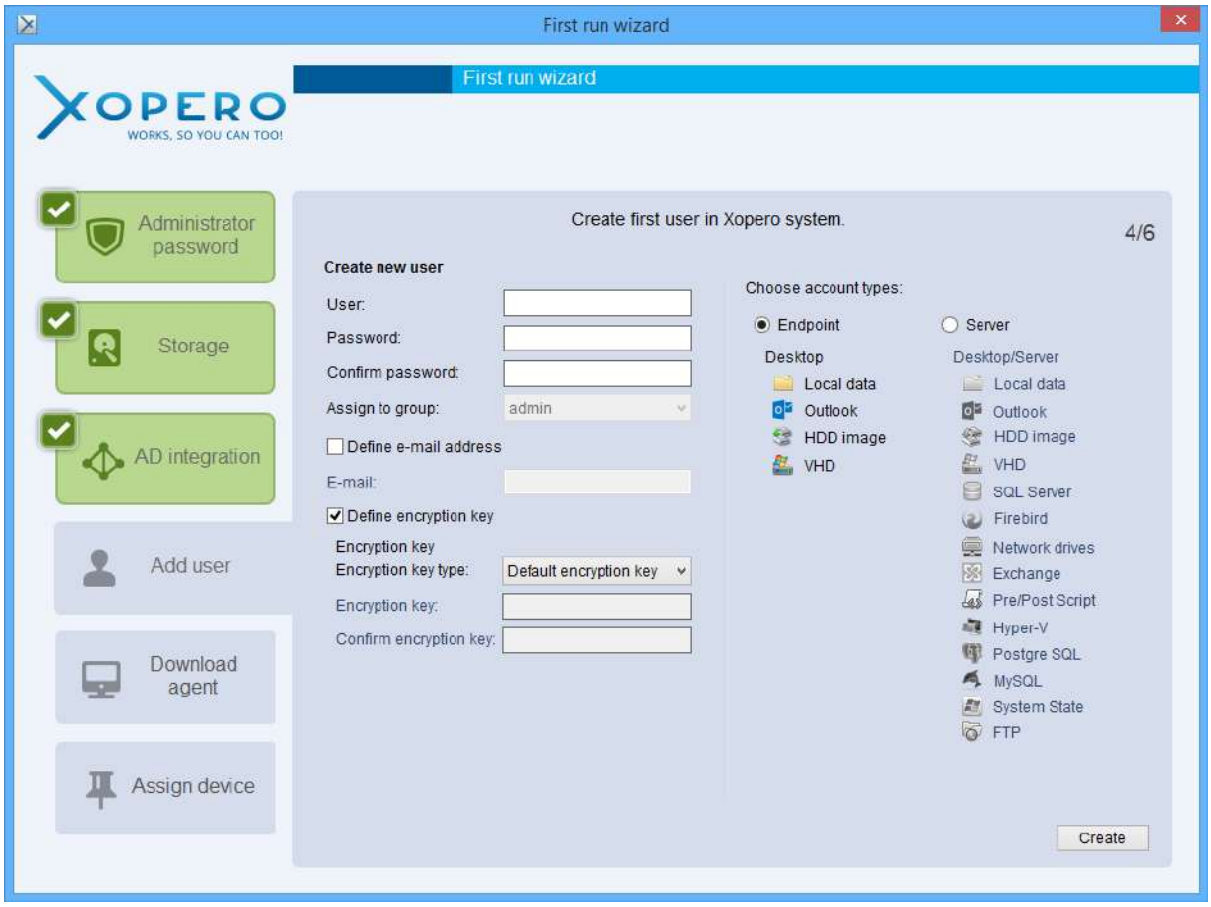

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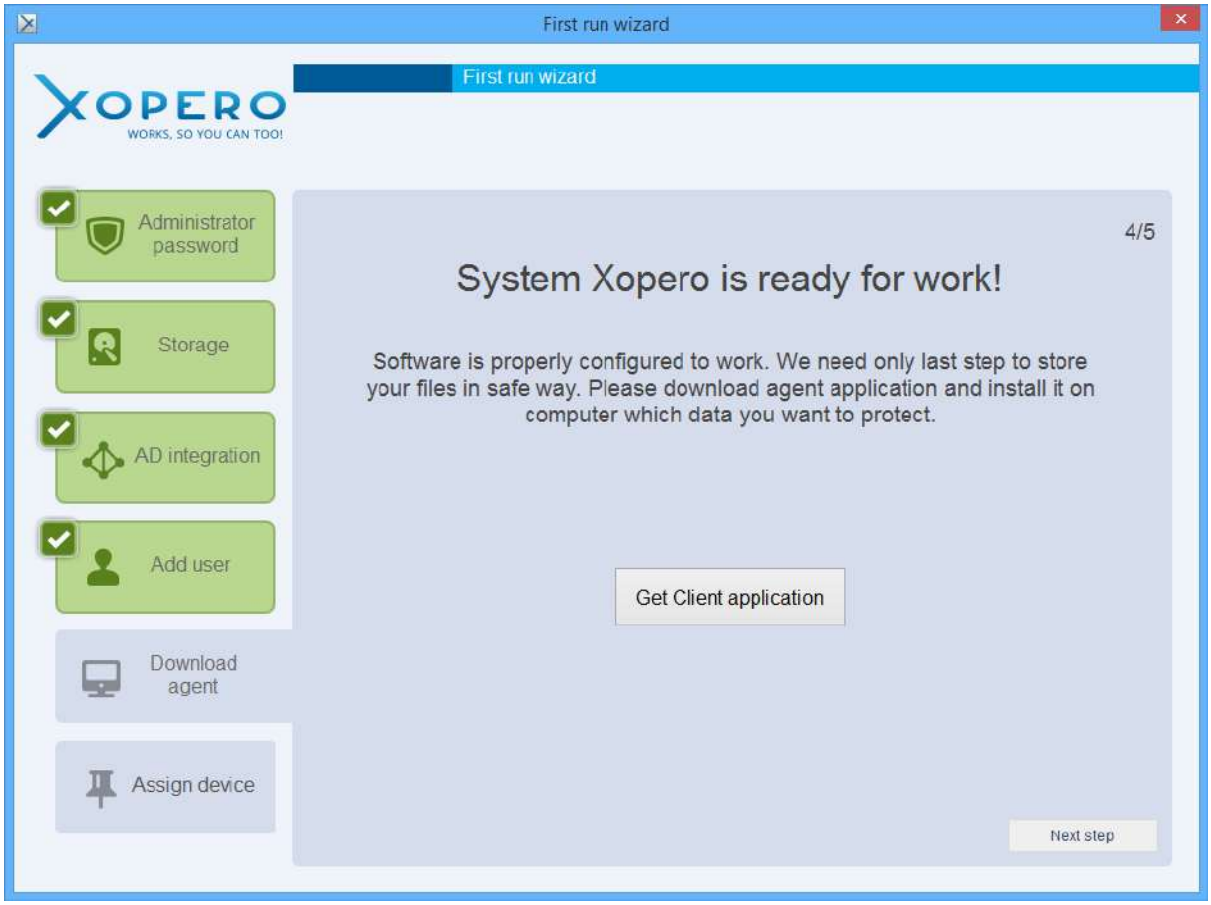

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For the Xopero system, device is the user's computer with the installed client application.

Just right-click on the user and select the *Assign device* option then select the device from the list or enter its IP address manually. Finally you have to enter the user password and its encryption key if it is required.

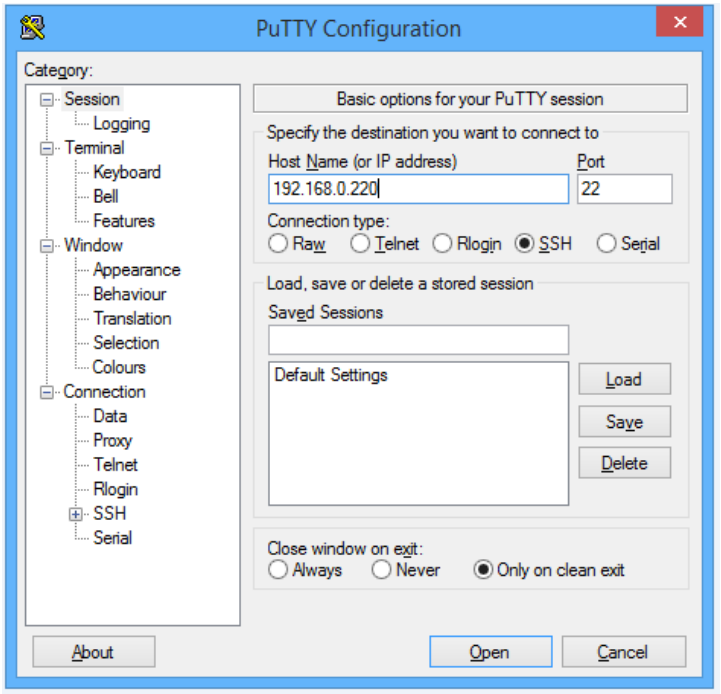
Click *Assign* to finish the wizard and start protecting your data with Xopero.

Forgotten administrator password Xopero - what next?

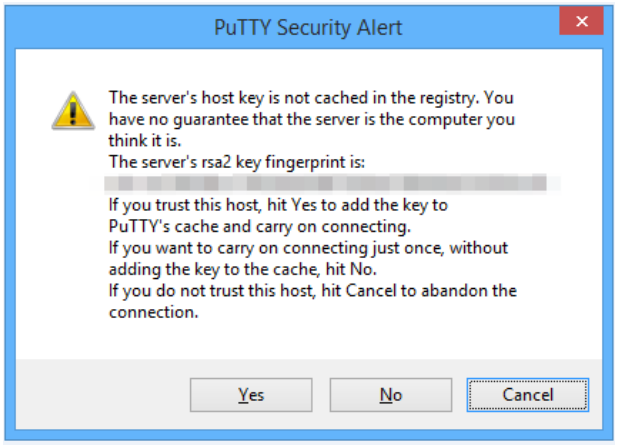
Admin password reset - QNAP

In case of forgotten password of the Xopero Administrator System you can use following instruction.

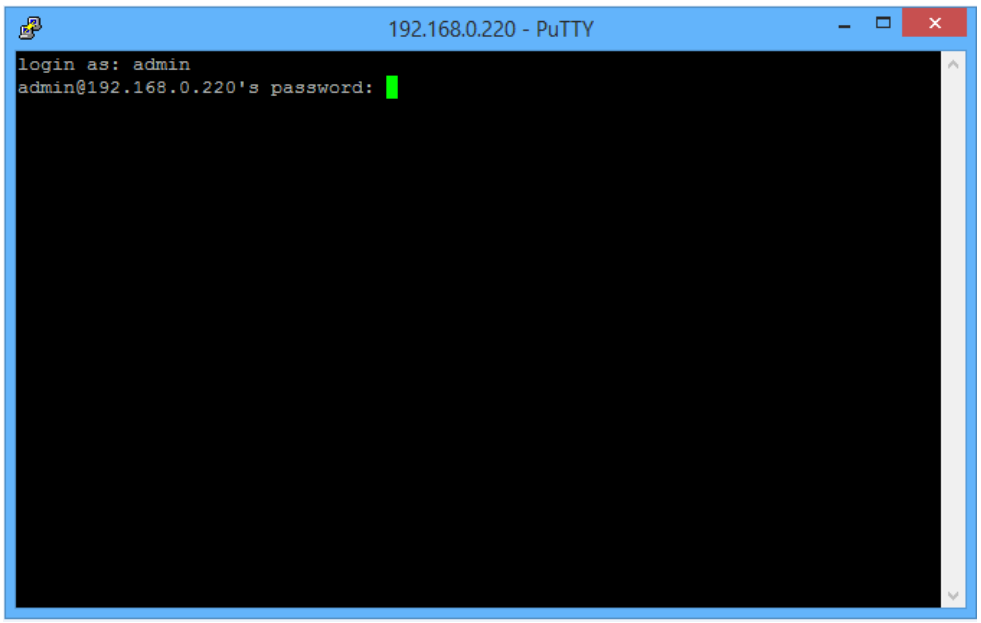
1. At first step you need to log in to your QNAP device using SSH connection. It is possible by e.g:. free program PuTTy - http://www.putty.org/



2. In the *Host Name (or IP address)* field, type your QNAP device address, check *SSH* connection type. After that click *Open* or if the need arises change other settings.



3. After showing up the above window you need to press *Yes* button.



4. You need to enter login and password to your QNAP device.

5. After log in you need to reset the password. To do this type in following command:

```
[~] # /etc/init.d/XoperoServer.sh reset_password
```

After this operation password is set to default - **admin**

Unlocking the administrator account

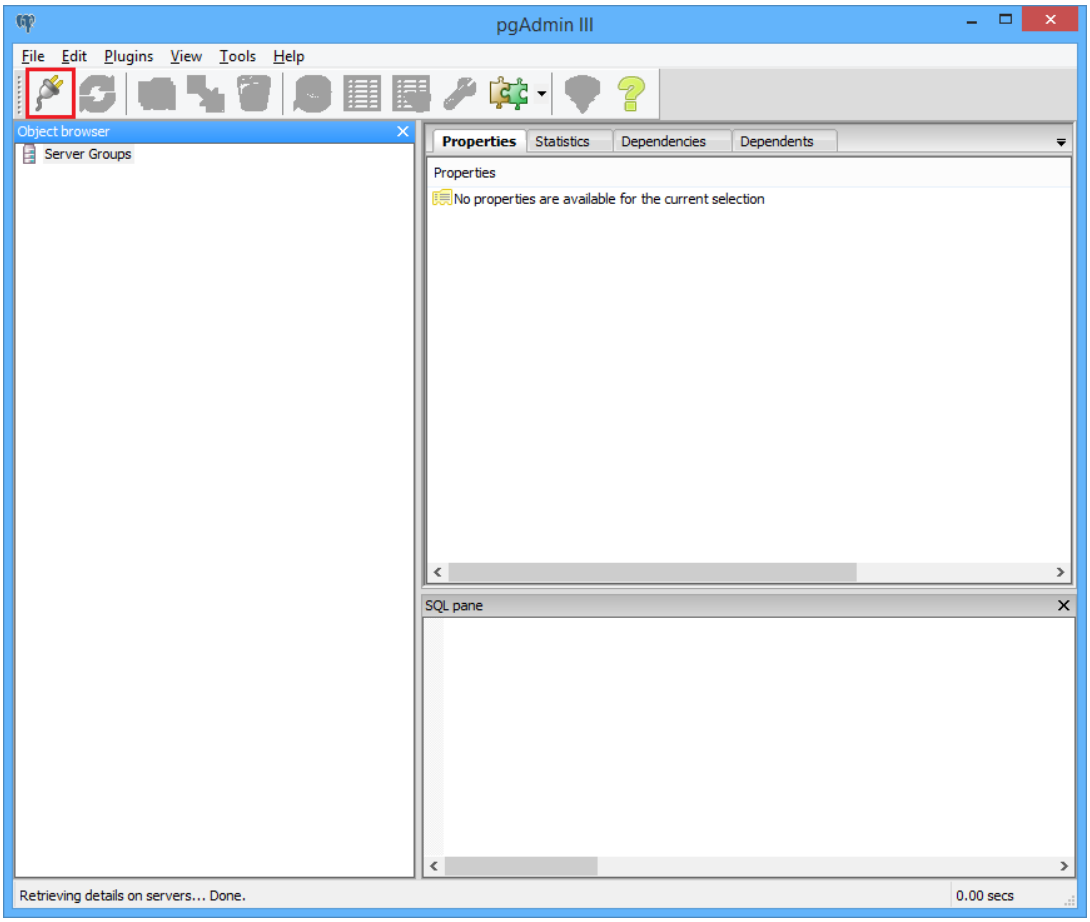
In case that instructions above doesn't seem to bring any better, it's possible that administrator account has been blocked. To unlock the admin account, you need to:

1. Log in to QNAP device using SSH connection (in the same way as in previous instruction - points 1-4)
2. After logging in, we need to connect with Xopero database. In this case, you need to type in a command below:
   /etc/init.d/XoperoServer.sh psql
3. After that, execute another command that will result with unlocking administrator account:
   update public.administrativepanelusers set "blocked"=false,resethash=null where name='admin';
4. Exit database by :
   \q

Admin password reset - B&R

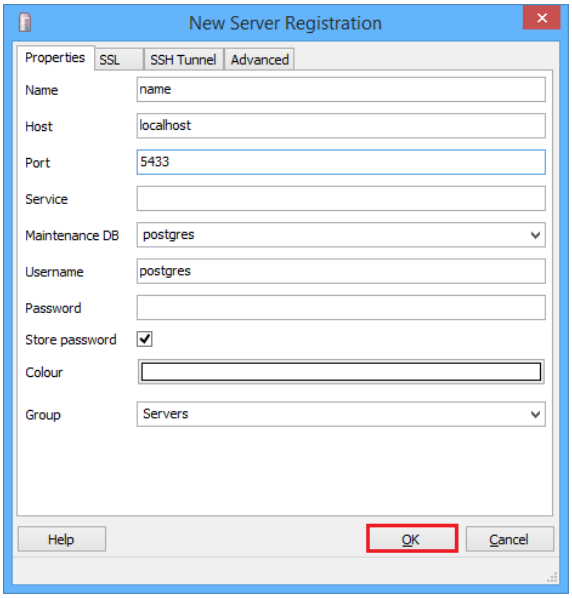
In case of forgotten password of the Xopero Administrator System you can use following instruction.

At first step go to C:\Program Files\Xopero Software\Xopero Backup&Restore\pgsql\bin directory and run pgAdmin3.exe

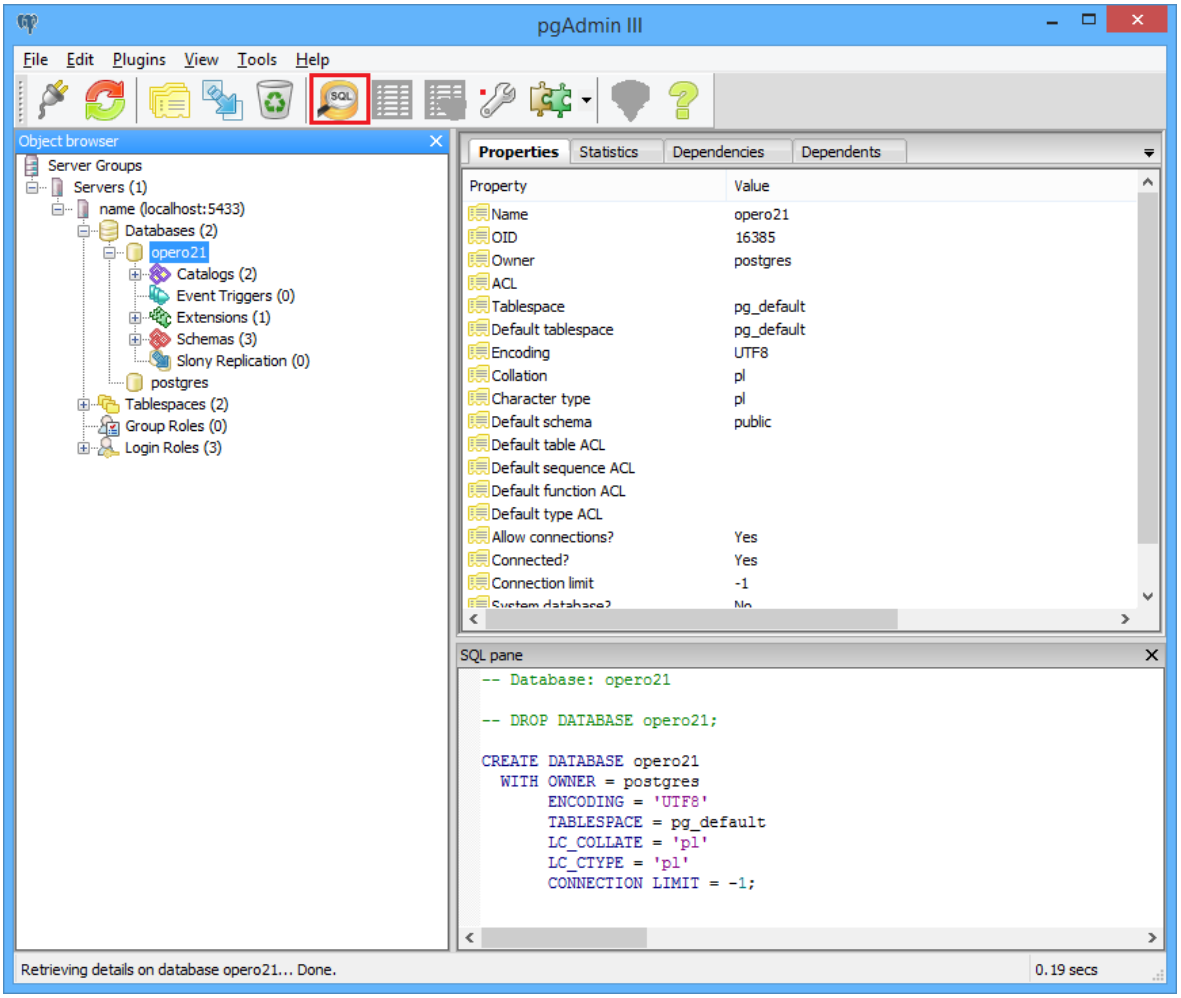


Click on *Add a new connection to server* button and enter the following data:

- *Name* - arbitrary name
- *Host* - localhost
- *Port* - 5433



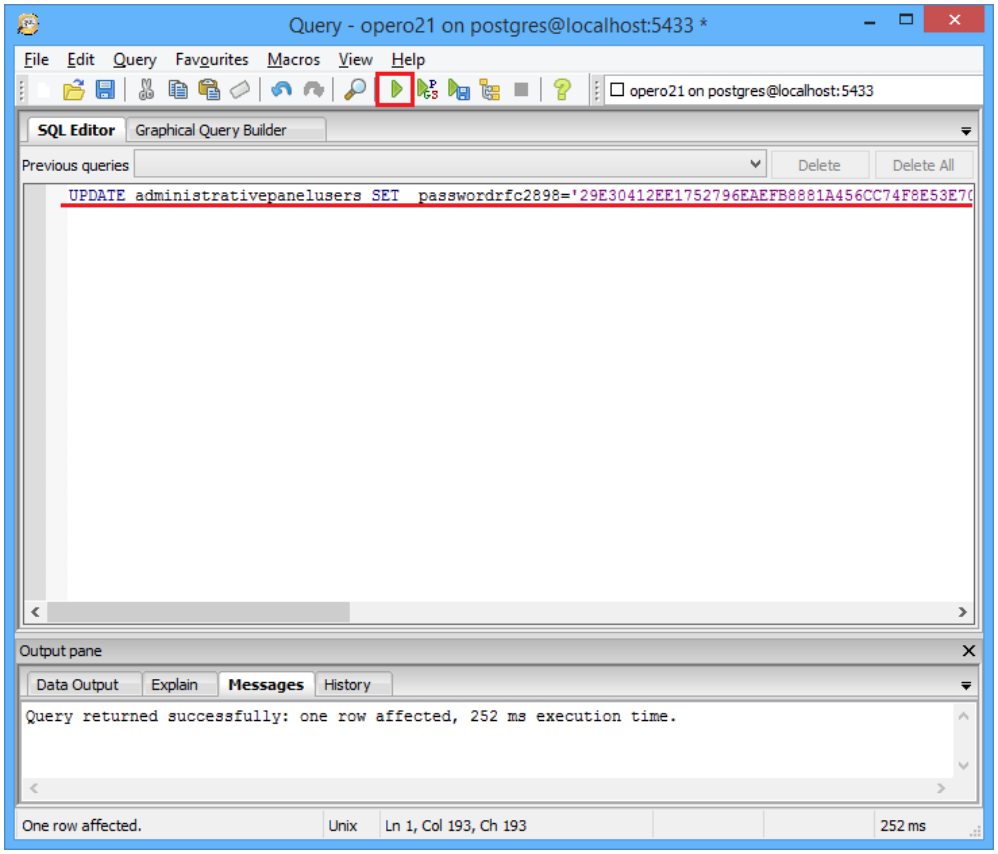
Double-click the relevant server and select the database opero21. If you will be prompted by the system for a password, please skip it by selecting the OK button.



Then choose *Execute arbitrary SQL queries* and type in this query:

UPDATE administrativepanelusers SET passwordrfc2898='29E30412EE1752796EAEFB8881A456CC74F8E53E707A09D2C1293D81253F663B', passwordsalt='7392cb21-321f-4aaf-a10a-0e30d94e7e72' WHERE name='admin'

Click on Execute query. Returned message should look like this "Query returned successfully: one row affected".



After saving changes, the password will be changed to **admin**

How to disable the Fast Startup function?

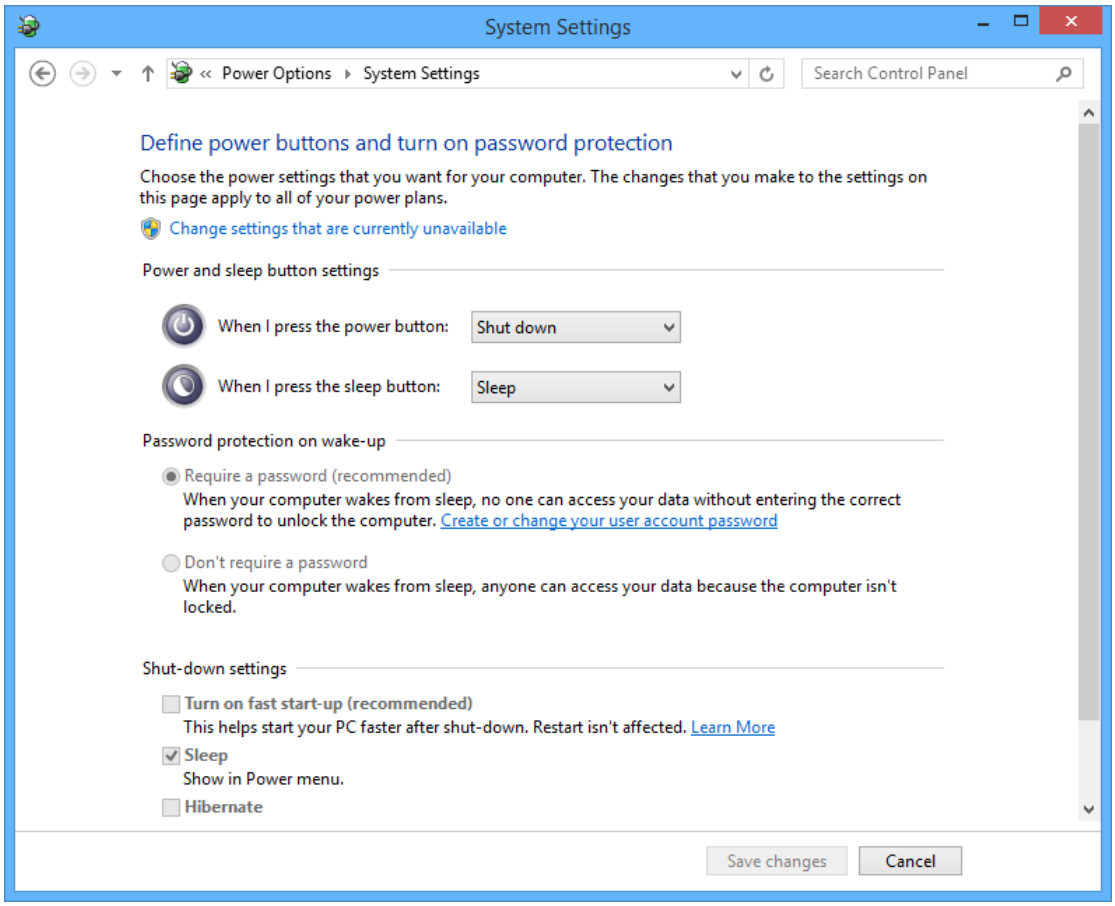
Disabling the Fast Startup function

Fast Startup function works like hibernation. During shutdown of system, logged-in user session gets closed and system is going to be hibernated. As a result user obtains faster computer start.

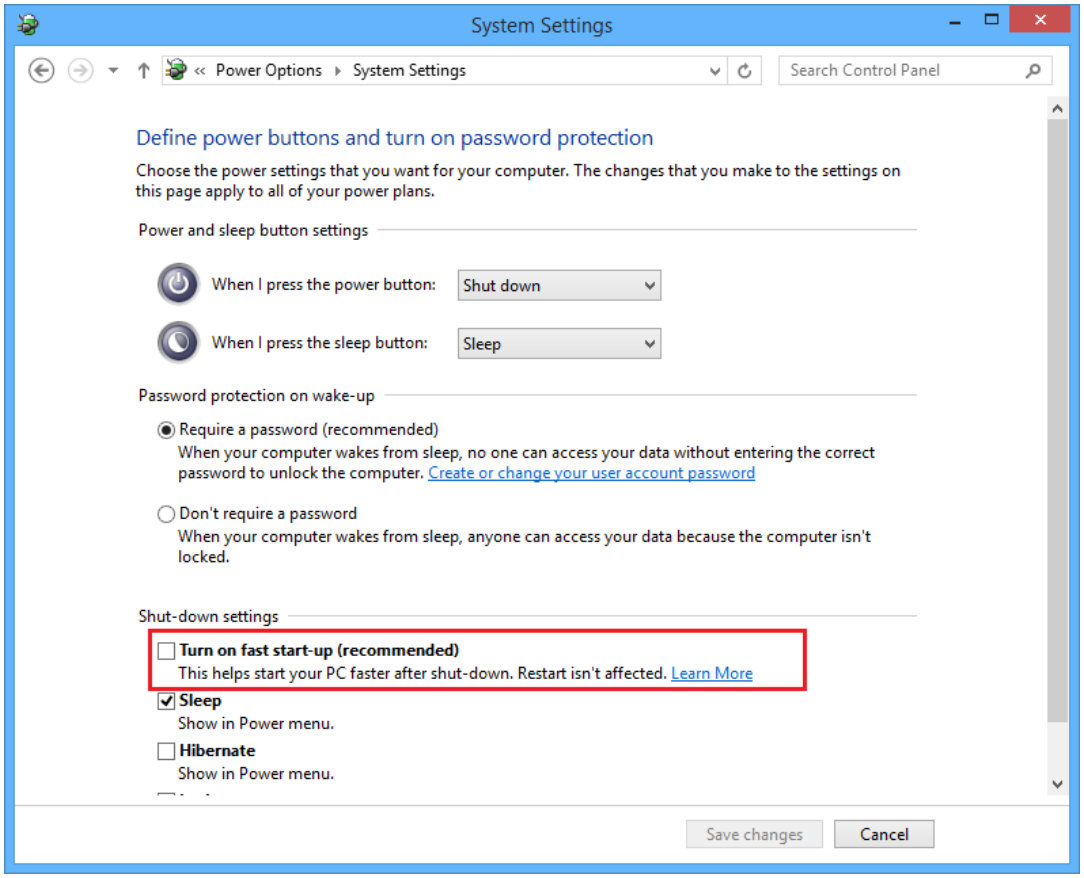
Disabling Fast Startup function

Via Control Panel

To disable Fast Startup function you need to run *Control Panel* then choose category *Power Option* (or *System and security -> Power Option*) and next select *Choose what the power buttons do.*

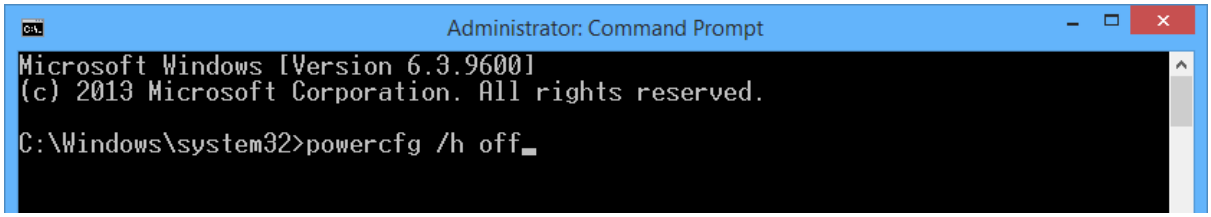


In the next step, choose option Change settings that are currently unavailable and uncheck ***Turn on fast startup****.*



Via Command-line interface

Fast Startup function can be disabled also by cmd using command **powercfg /h off** (cmd has to run by *Run as Administrator* option).



If it would be necessary to start the function again, just enter the following command:

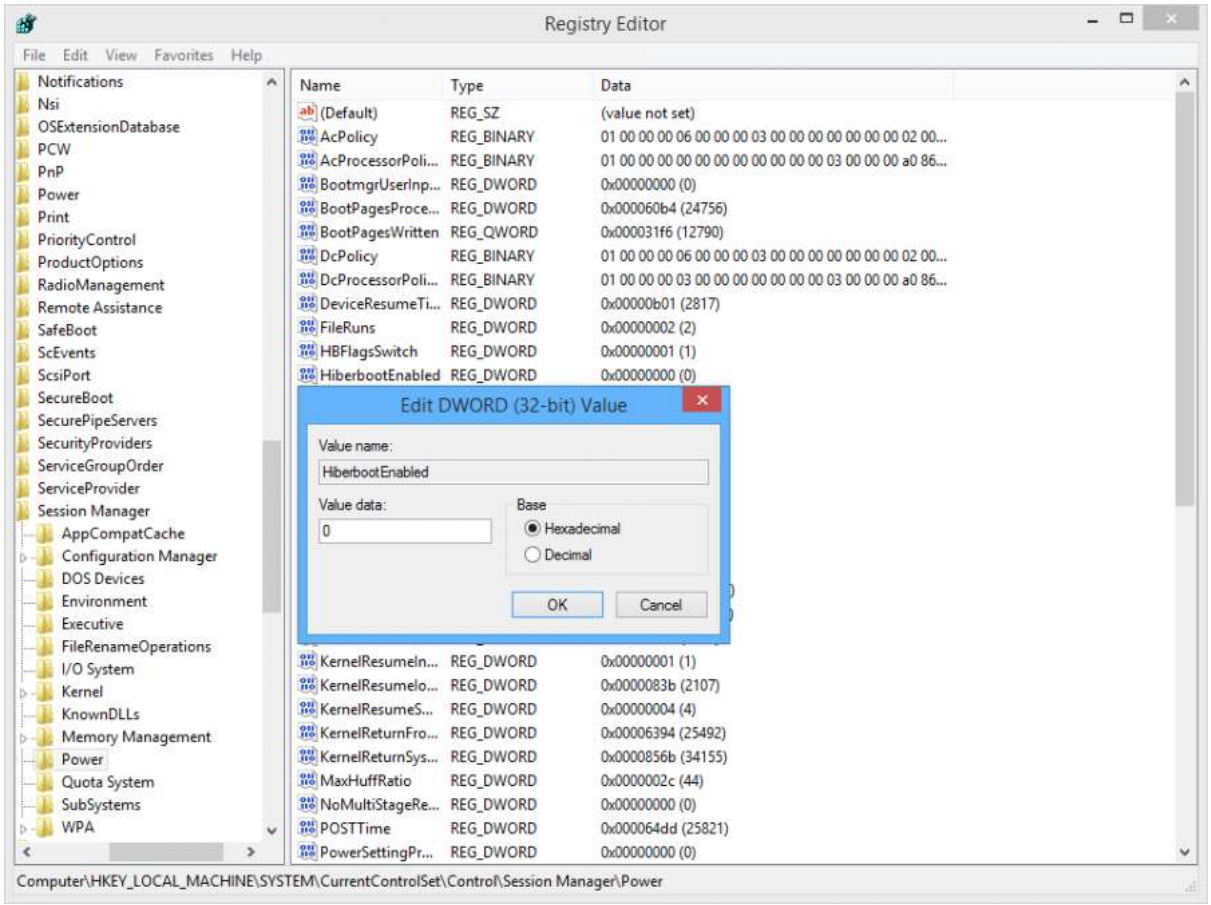
```
powercfg /h on
```

Via system registry

The next way to disable Fast Startup function is to change entry in the registry:

`HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Power`
`HiberbootEnabled DWORD.`

Value **0** means that the Fast Startup option is disabled and value **1** that the option is enabled.



After disabling the Fast Startup function you have to **reboot your computer.**

"Backup does not contain files" - what to do?

Problems with VSS

The problem occurs when VSS (Volume Shadow Copy Service) cannot be started due to an unexpected error.

Solution

The following have been described 5 ways to solve the problem with VSS.

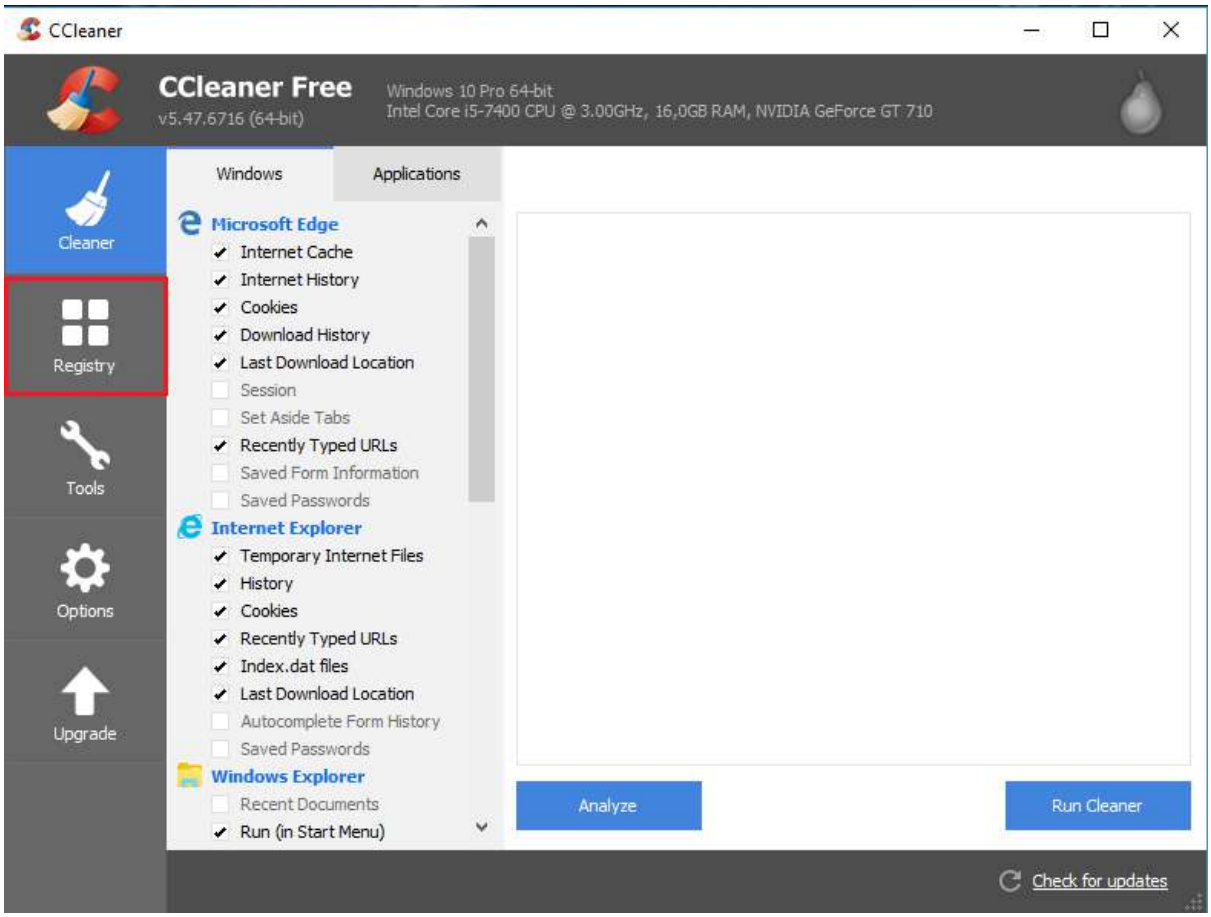
First way - you have multiple backup solution installed.

Many applications to perform backups have their own snapshot manager, which can cause conflicts with another backup solution installed on the computer.

If you have several applications to perform backup installed on your computer, uninstall them, except of Xopero.

It is a good practice to have one software to do backups at one time.

After uninstalling programs you should start cleaning the registry -e.g. by CCleaner.



Second way - Shadow storage is not configured or capacity is too low.

VSS requires space on each volume to create and store snapshots. Ways to configure depend on the operating system, it is advisable to check the Microsoft Knowledge Base which steps you must take in case of your system.

Steps and commands to change the volume of the shadow storage are the same for each.

To check and change the size use the following commands:

1. Check the current size:
   vssadmin list shadowstorage
2. Change size:
   vssadmin Resize ShadowStorage /For=X: /On=X: /Maxsize=YY%

In place of YY specify the size in percentage and in place of X: type the drive letter for which you want to resize shadow storage.

It is recommended to set the amount at 30% to avoid errors related to Shadow Copy.

Third way - Create a backup of mapped drives.

The Windows VSS service can only create snapshots of drives connected locally to the machine that you are taking the snapshot of.

This error can occur when you try to create a snapshot of network drive which is seen as a local by operating system (eg. Mapped network drive).

To solve the problem, disconnect the drive and re-run the backup.

Fourth way - Previous VSS snapshot is still running.

Snapshot manager of Windows is able to perform only one snapshot at a time. If the process of creating a snapshot is running during backup, so backup fails. Stopping and restarting the VSSa can solve this problem.

In order to do this run command line as administrator and type the following command:

- net stop vss
- net start vss

Correct server restart does not solve the problem because of the manager snapshot cleanup.

Fifth way - Using an extended partition as a backup destination.

Performing VSS snapshot may fail because there are extended partition.

In order to ascertain whether the extended partition is used:

1. Use these commands on the command line: fsutil fsinfo ntfsinfo,
2. Look for the bytes per sector output,
3. if the size of the sector is greater than 512 (usually this will be 4096), the partition is extended.

The problem occurs at the hardware level and disk format does not fix it. To solve the problem, try to start the USB device, with value of bytes per sector is 512.

The problem occurs mostly on Windows earlier than Windows Server 2012/Windows 8.

Six way - Rebuilding VSS's DLL using the Regsvr32 tool

Execute the following commands from the command line or in the command script, and then restart the computer.

```
cd /d %windir%\system32

net stop vss

net stop swprv

regsvr32 /s ole32.dll

regsvr32 /s oleaut32.dll

regsvr32 /s vss_ps.dll

vssvc /register
```

regsvr32 /s /i swprv.dll

regsvr32 /s /i eventcls.dll

regsvr32 /s es.dll

regsvr32 /s stdprov.dll

regsvr32 /s vssui.dll

regsvr32 /s msxml.dll

regsvr32 /s msxml3.dll

regsvr32 /s msxml4.dll

vssvc /register

net start swprv

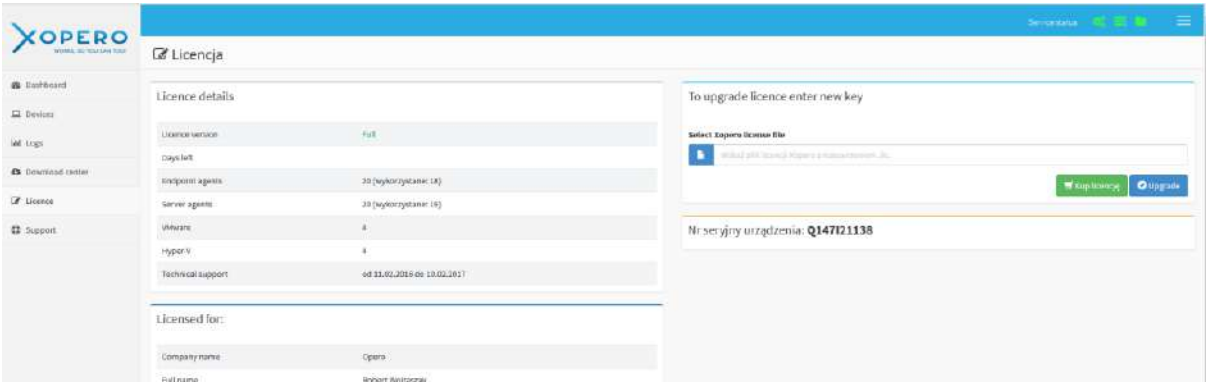
net start vss

How to activate a licence?

QNAP

1. Click Xopero icon which is display in AppCenter. You will be redirected to Xopero Control Panel.

2. Once you login to Xopero Control Panel, go directly to LICENCE section on the left, then select file with license and click Upgrade.



Backup&Restore

1. Go to Xopero Backup&Restore panel, using an icon that is automaticly created during the application installation. You will be redirected to Xopero Control Panel

If the shortcut is no more on your desktop, in your webbrowser enter an IP address of device with working Xopero server module in selected way (example):

- https://192.168.0.199:45558 (for HTTPS protocol)
- https://192.168.0.199:45554 (for HTTP protocol)

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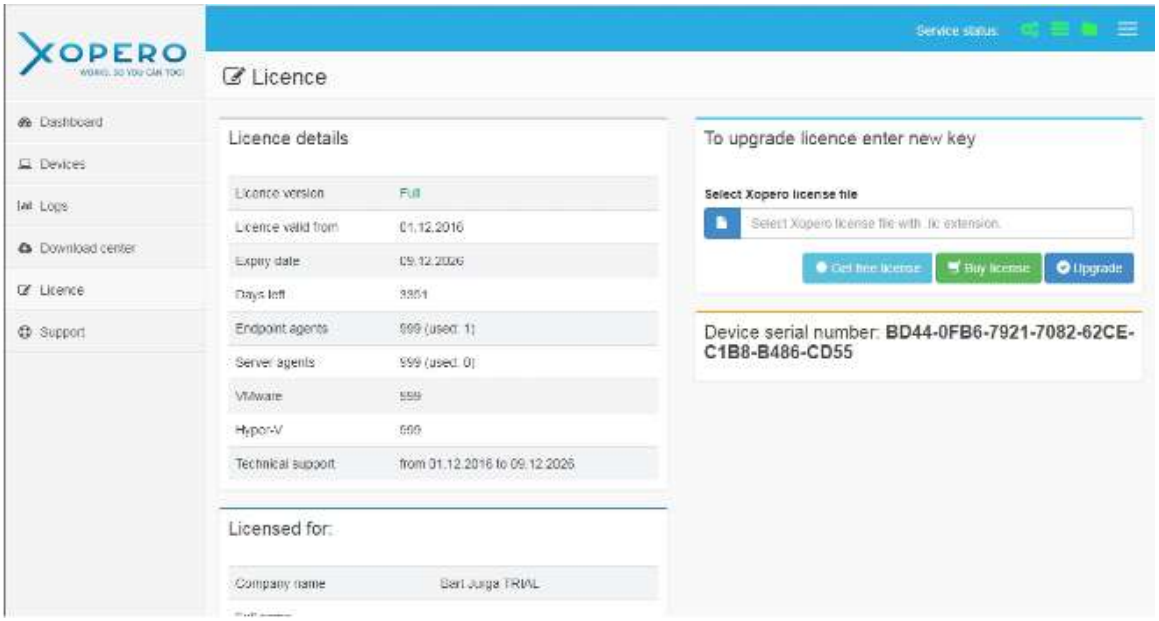


Free license activation - Xopero Backup&Restore

To enable free licence you need to open Xopero Control Panel and log in using admin credentials - the same as in Management Center.

There’s multiple ways to get to the Xopero Control Panel:

1. Management Center

After logging into Management Center and then choosing Dashboard, go to the Help section and use ‘License Management’. It will automatically turn on the Control Panel in your web browser.

2. Desktop Icon

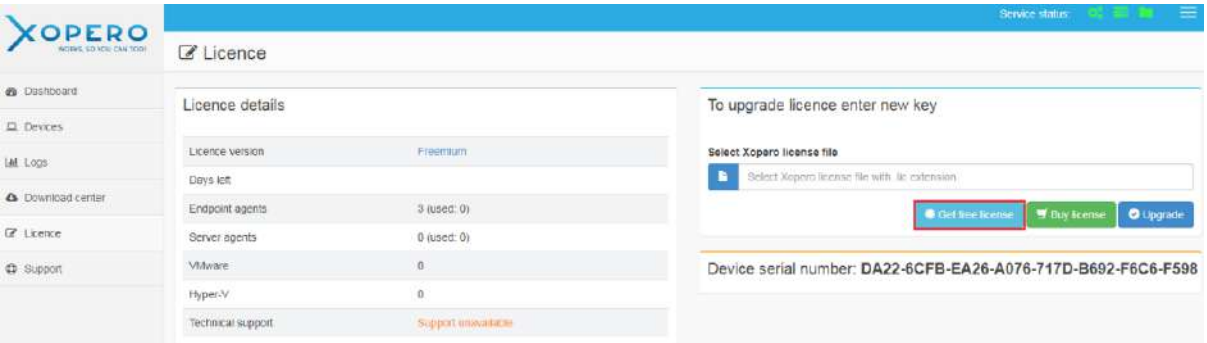
If you’re currently on the host with installed Xopero server, you can also use icon on the desktop. It is ‘.url’ shortcut to the Xopero Control Panel.

3. Address

You can connect to the panel by yourself trought the browser putting the server address into it. For example: http://192.168.0.239:45558 - remember about the port !

Now you can log into the system as admin,

and then go to the license tab and click on ‘Get free license’ button.

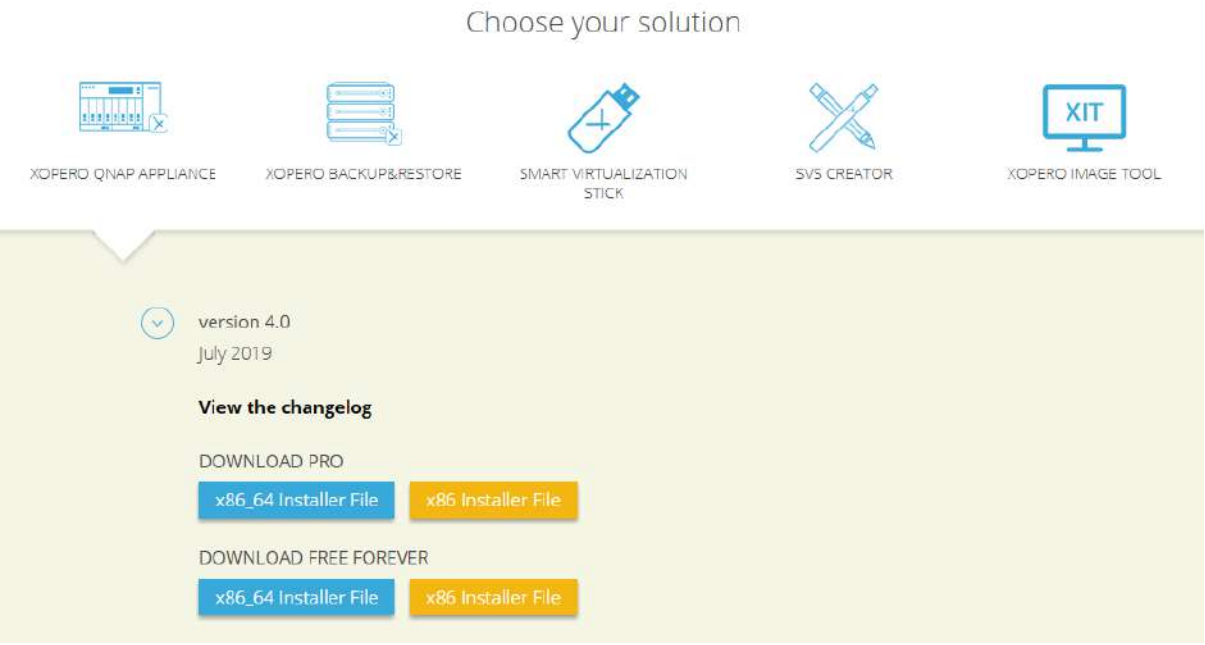


Remember, the free license allows you to use 3 Endpoint devices, if you have Server devices or more Endpoint devices assigned to the users, you will get an appropriate message and you’ll also have to delete them.

How to get S/N?

QNAP

1. You can download Xopero backup installation package directly from our website: https://xopero.com/latest-updates/



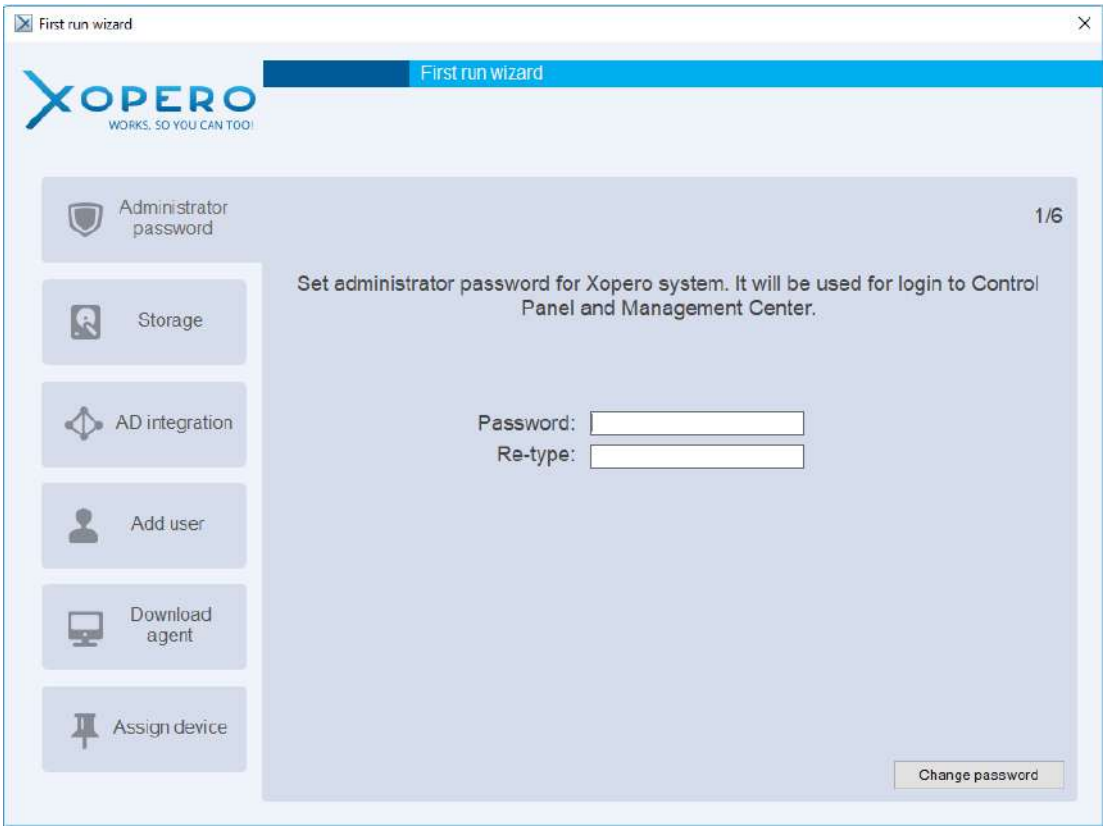
For NAS with QTS 4.2 download x86 Installer File.

For NAS with QTS 4.3 or newer download x86_64 Installer File.

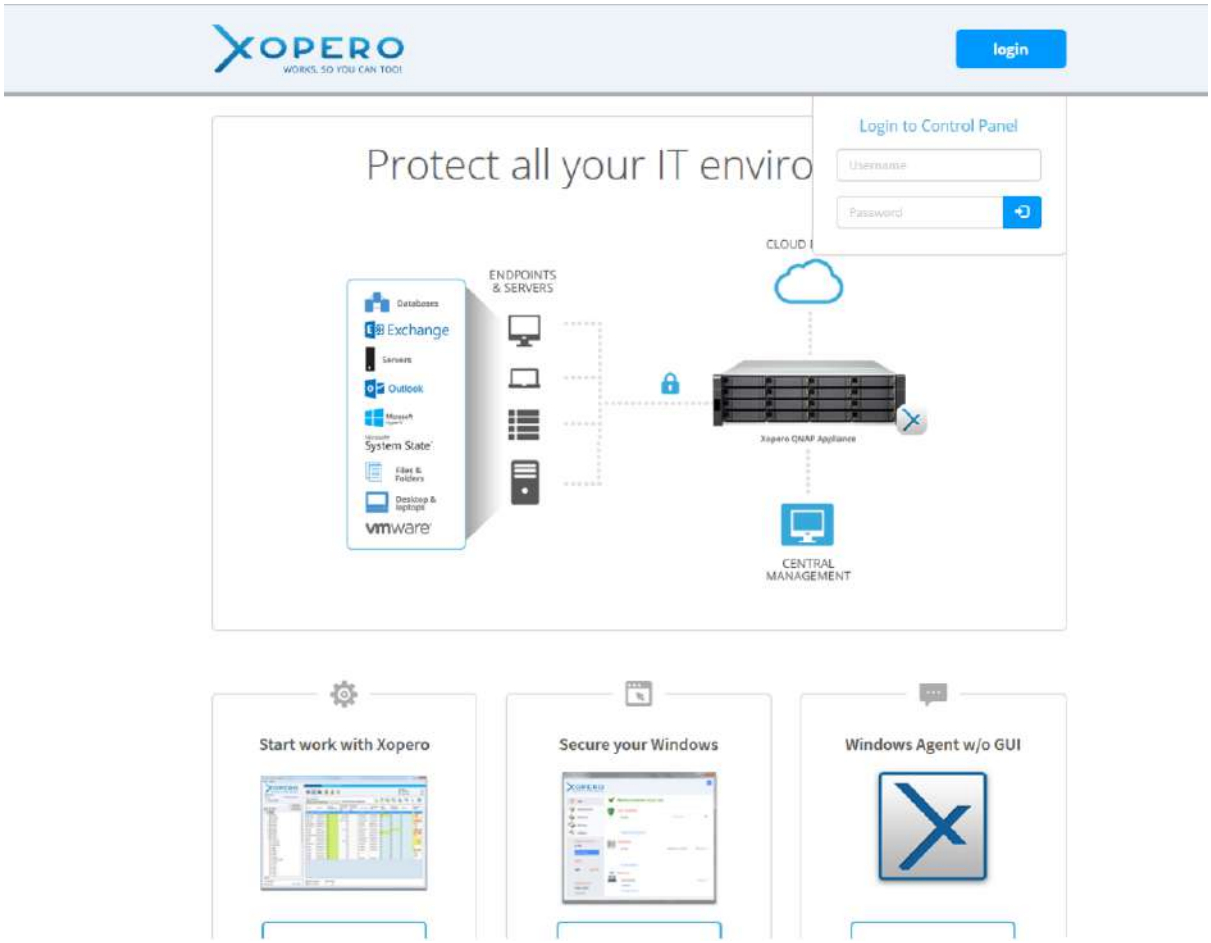
2. Once the downloading is finished, install .qpkg package on your QNAP device. Follow the instructions:

https://support.xopero.com/hc/articles/115001925844-QNAP-Appliance-

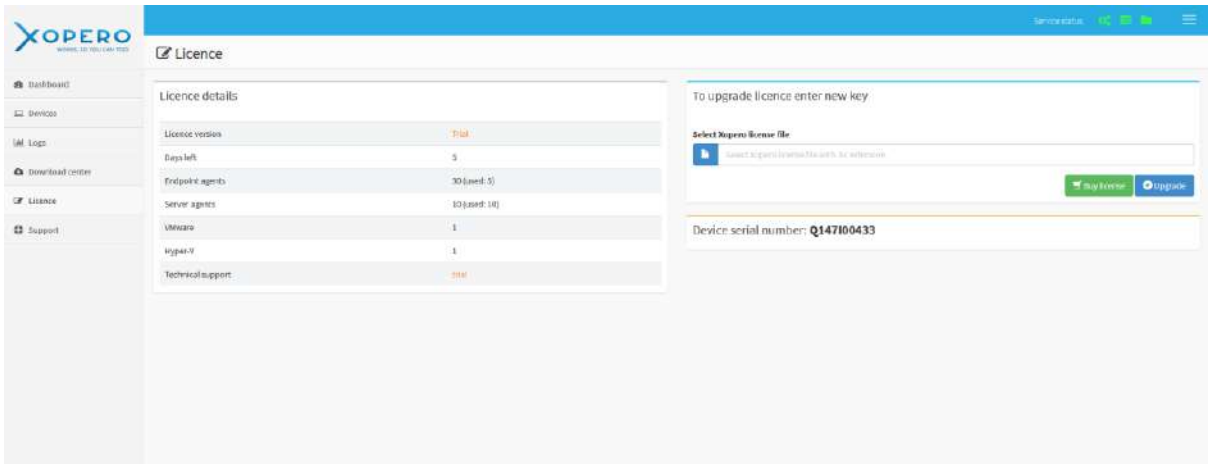
3. Once the installation is finished, click the Xopero icon that appears in AppCenter. You will be redirected to Xopero Control Panel, where you will be obligated to download Xopero Management Center. Once it's done please log in into Xopero Management Center (user: admin, password: admin: IP: QNAP IP) and after that you will be asked to change the password.



4. Once password is changed, re-fresh Xopero Control Panel website and log in.

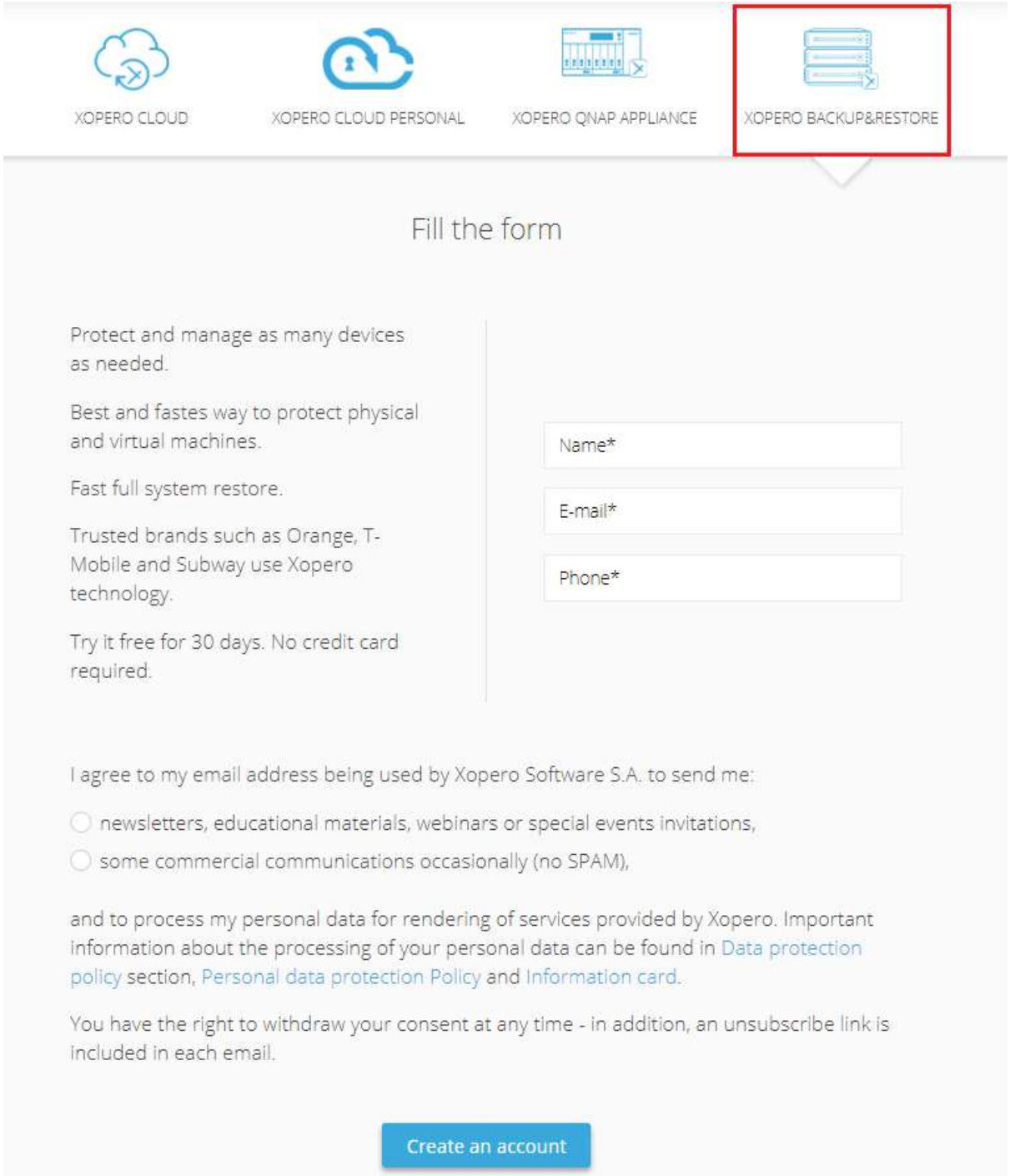


5. Go directly to LICENCE section on the left - required **Device Serial Number** will be displayed.

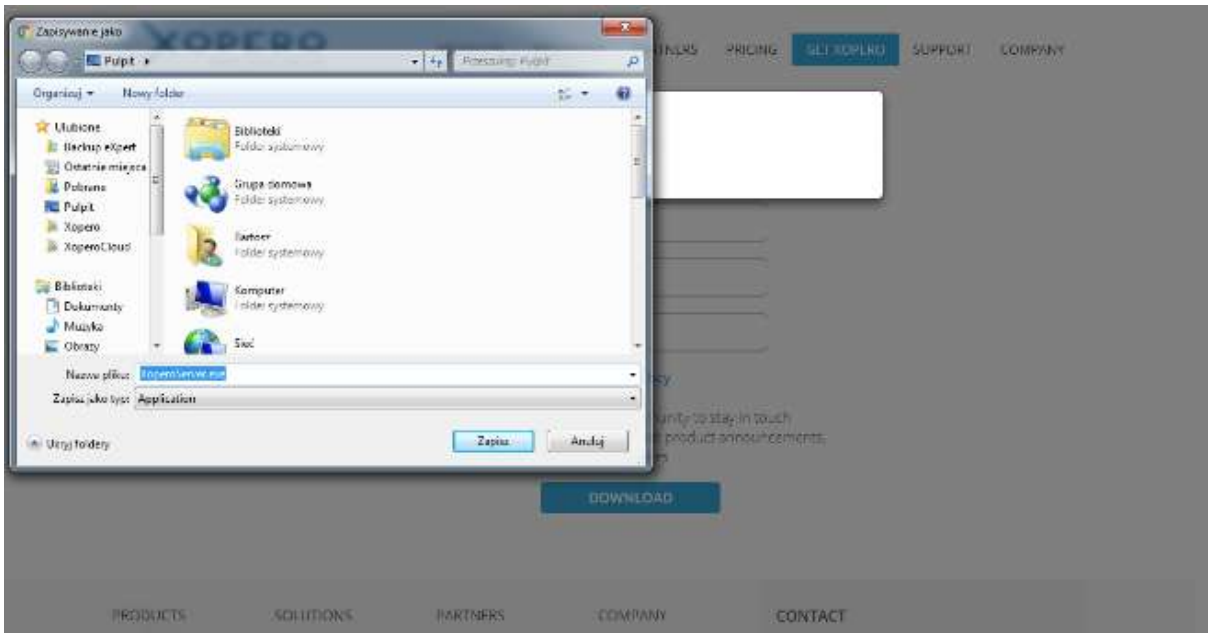


Backup&Restore

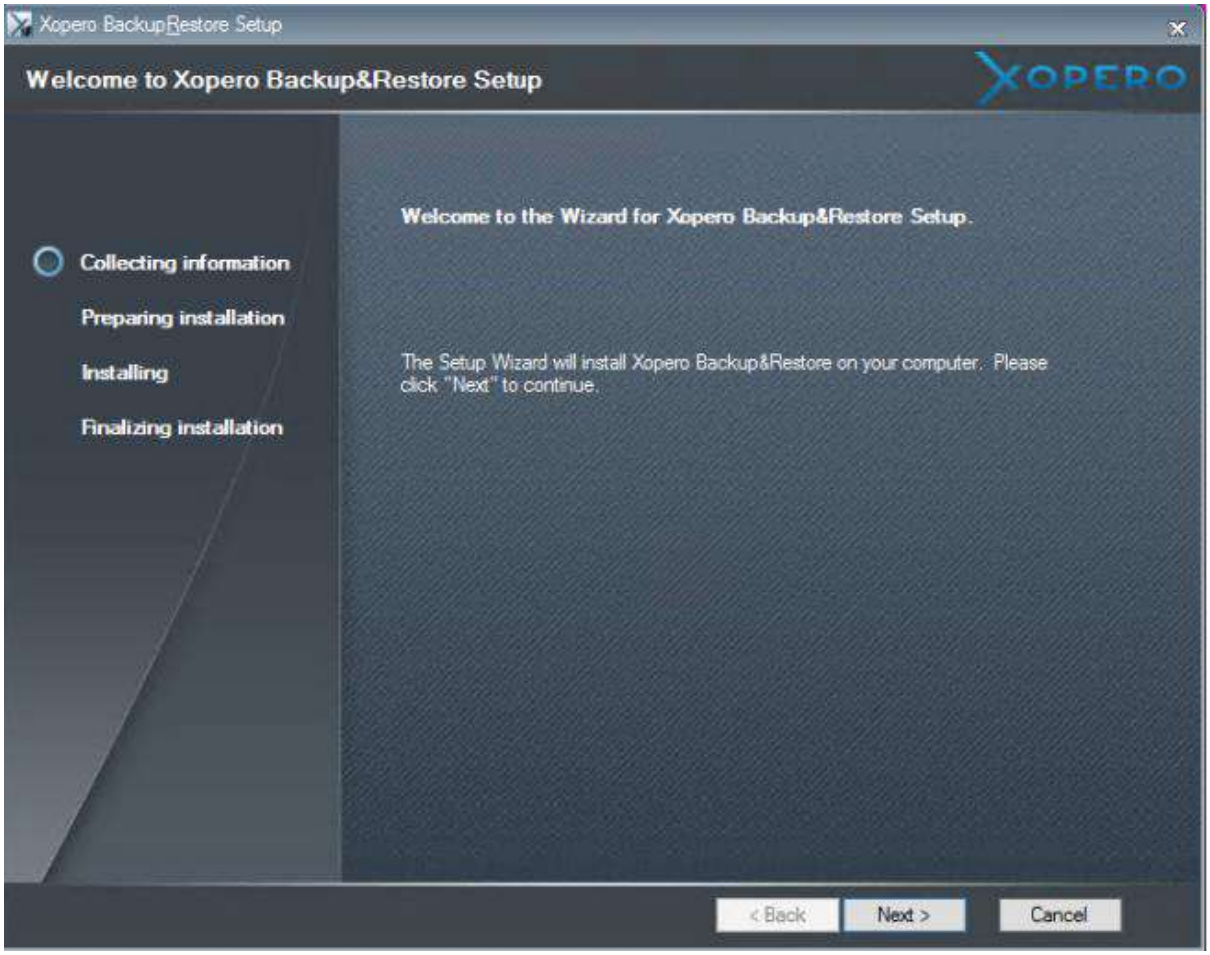
1. Go to https://xopero.com/get-xopero/#xopero-backup-restore to download a trial version of **Xopero Backup&Restore:**



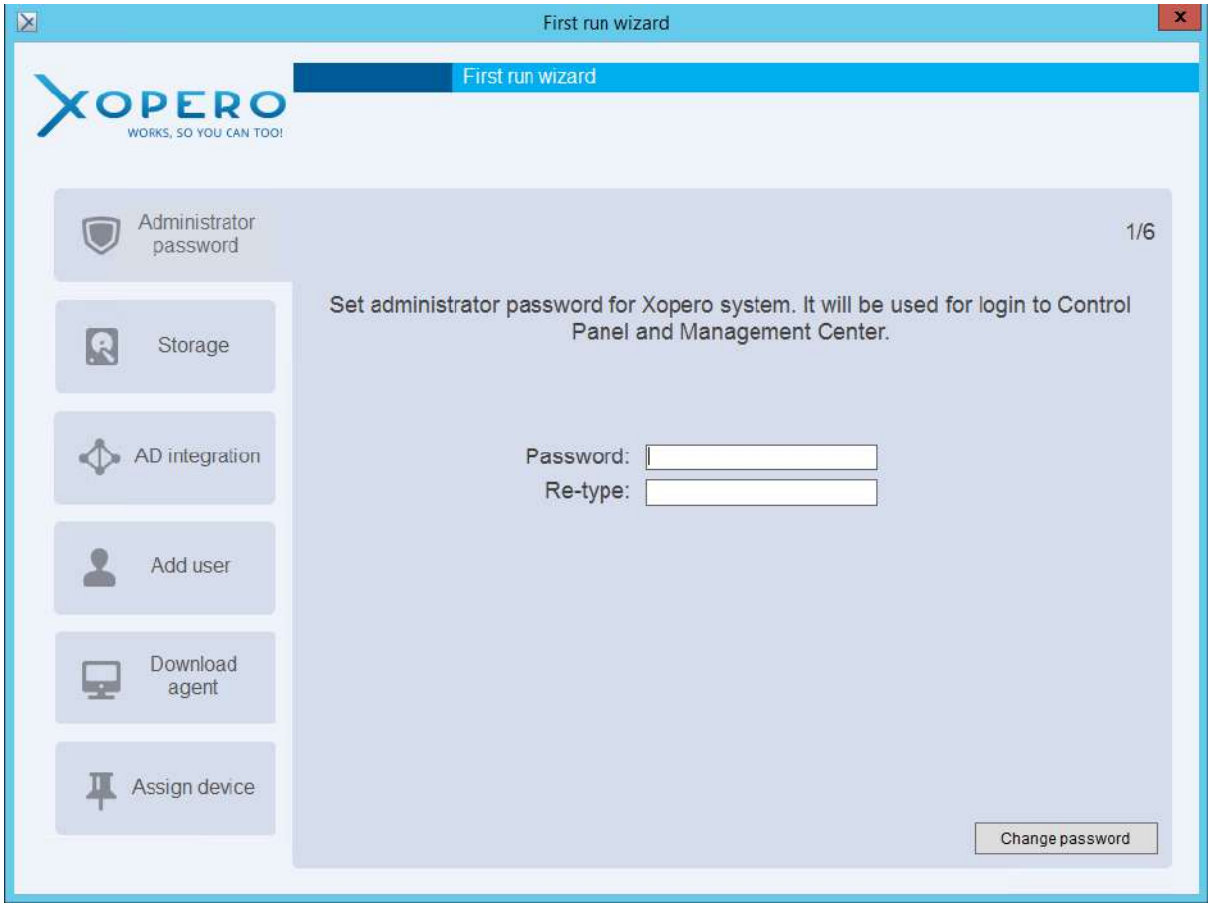
2. Once you fill the form and click Create an account button, download wizard appears - accept it and save installation file on your device.



3. Once the downloading is finished, open installation file to go through installation wizard and follow the instructions:

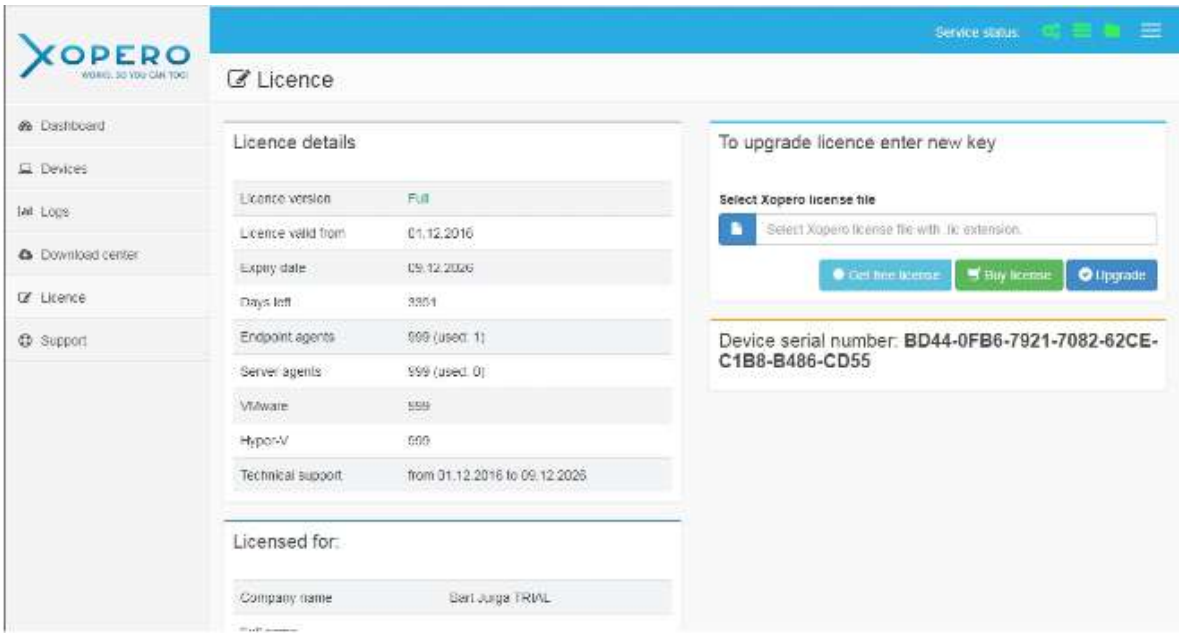


4. Once the installation is finished, and the computer restarted, double click the Xopero B&R Panel icon that appears on your desktop. You will be redirected to Xopero Control Panel, where you will be obligated to download Xopero Management Center. Once it's done please log in into Xopero Management Center (user: admin, password: admin: IP: localhost) and after that you will be asked to change the password.



5. Once password is changed, refresh Xopero Control Panel website and log in.

6. Go directly to LICENCE section on the left - required **Device Serial Number** will be displayed.



What I have to do, if during the XQA installation displays the error "Xopero: cant run postgres"?

XQA installation - Xopero: cant run postgres

The "cant run postgres" error occurs most often when the database update installation process fails, after the firmware update from QTS 4.2 to QTS 4.3. Follow the steps below to start the database.

The package of Xopero QNAP Appliance for QTS 4.3 must be x86_64.

1. Connect with QNAP server by SSH. This is possible e.g. by free software PuTTy. In field Host Name (or IP address) enter the QNAP address, choose connection type, SSH. Then press the Open button or, if necessary, change other settings,

2. After logging into QNAP server, go to /share/CACHEDEV1_DATA/.qpkg/Xopero by command **cd /share/CACHEDEV1_DATA/.qpkg/Xopero**,

3. Execute the command: **cp postgresql.conf.org9.5 postgresql.conf.org**,

4. Execute the Xopero server restart command: **/etc/init.d/XoperoServer.sh restart**,

5. After the restart, check the system Xopero working. If you are still having trouble logging into Xopero, follow these steps,

6. Start the server database with a command: **/etc/init.d/XoperoServer.sh psql start**,

7. Press: **[CTRL] + [Z]**,

8. Enter the command: **/etc/init.d/XoperoServer.sh psql opero21**,

9. Enter: **CREATE ROLE webrequestsuser LOGIN SUPERUSER INHERIT CREATEDB CREATEROLE REPLICATION;** and click **[ENTER]**,

10. Enter: **ALTER ROLE webrequestsuser SET statement_timeout = '180000';** and press **[ENTER]** again,

11. Press: **[CTRL] + [Z]**,

12. Restart the Xopero server: **/etc/init.d/XoperoServer.sh restart**,

13. Check the Xopero working.

How to solve the problem with updating Xopero after update from QTS 4.2 to 4.3?

Container station installation

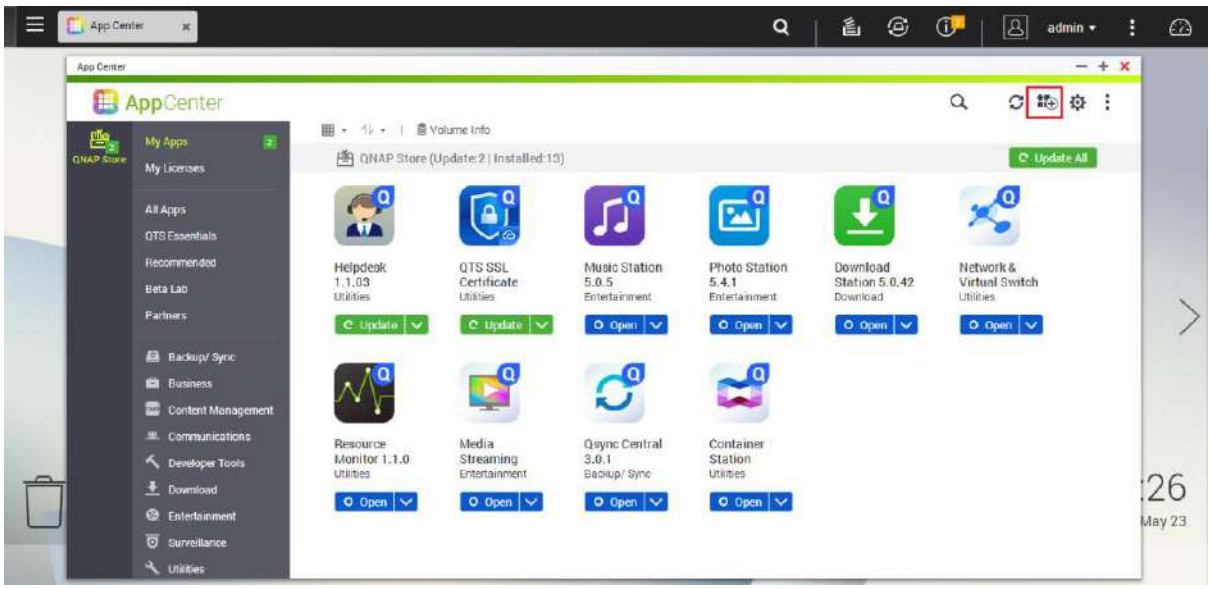
After logged in to the QNAP panel, go to the *App Center*. Then on the left side select the *All Apps* tab, find the *Container Station* and install.

After completing the steps above, you only need to install Xopero **x86_64** version.

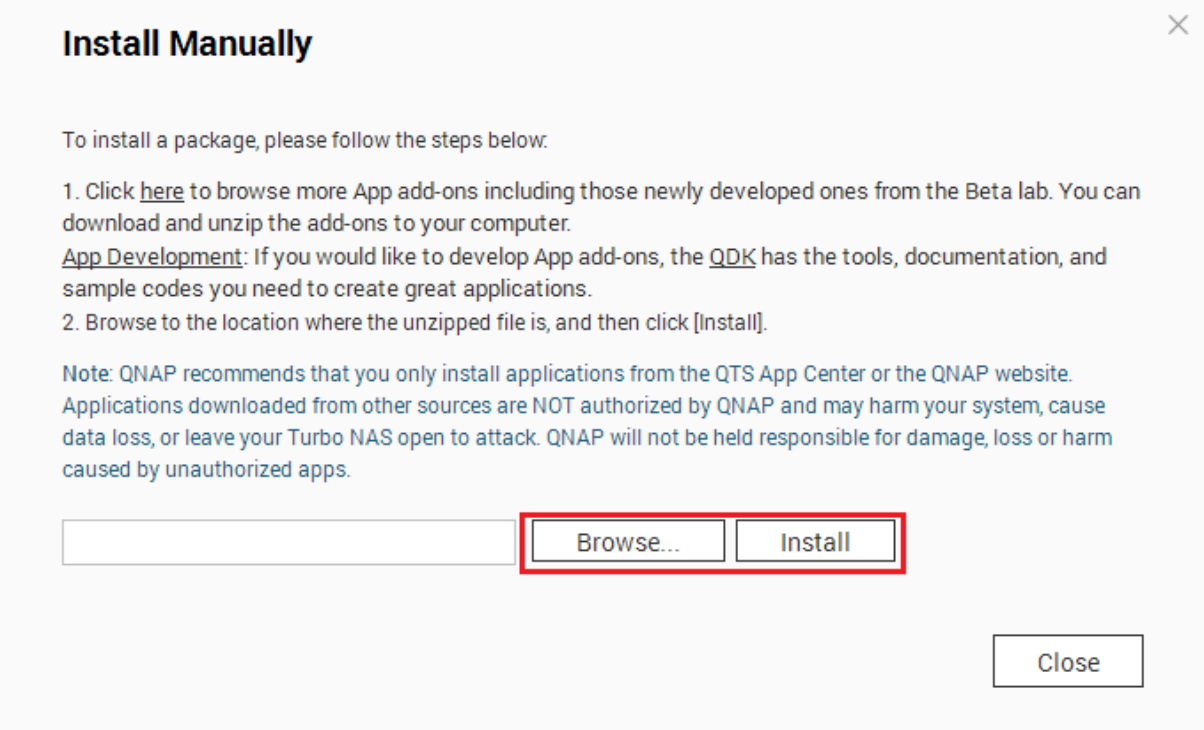
If you have a QTS 4.3 and previous Xopero installation on your QNAP, remove it before proceeding with the following steps - you will keep your data.

After Container installation follow these steps:

To install the package, go to My Apps and select *Install Manually* option.



Then in a window, you have to select the location of the package and click *Install*.



After performing the above steps, the installation will start. During the installation, in QNAP logs will display the information and warnings about the installation process. The screenshot below shows the correct database migration process.

ⓘ	2017/05/23	10:33:58	System	127.0.0.1	localhost	XoperoBackup 3.9.301266 has been installed in /share/CACHEDEV1_DATA /.qpkg/XoperoBackup.
ⓘ	2017/05/23	10:33:50	System	127.0.0.1	localhost	Xopero enabled.
⚠	2017/05/23	10:33:34	System	127.0.0.1	localhost	Database migration to 64 bit finished succesfully.
⚠	2017/05/23	10:33:33	System	127.0.0.1	localhost	Found migration output, copying to new path.
⚠	2017/05/23	10:32:30	System	127.0.0.1	localhost	starting migration: docker run -i -v /share/CACHEDEV1_DATA /xoperobackup_postgresDB_9.5:/PGDATA xopero/pgdata_updater
⚠	2017/05/23	10:32:28	System	127.0.0.1	localhost	Downloading docker database upgrading tool... it could take some time / 650MB to download. For info check: https://support.xopero.com/hc/articles /115000409630.
ⓘ	2017/05/23	10:32:22	System	127.0.0.1	localhost	Xopero: can't run postgres. Starting x86 to x64 migration procedure
ⓘ	2017/05/23	10:29:14	admin	192.168.0.30	localhost	[App Center] XoperoBackup removed.

Frequently Asked Questions

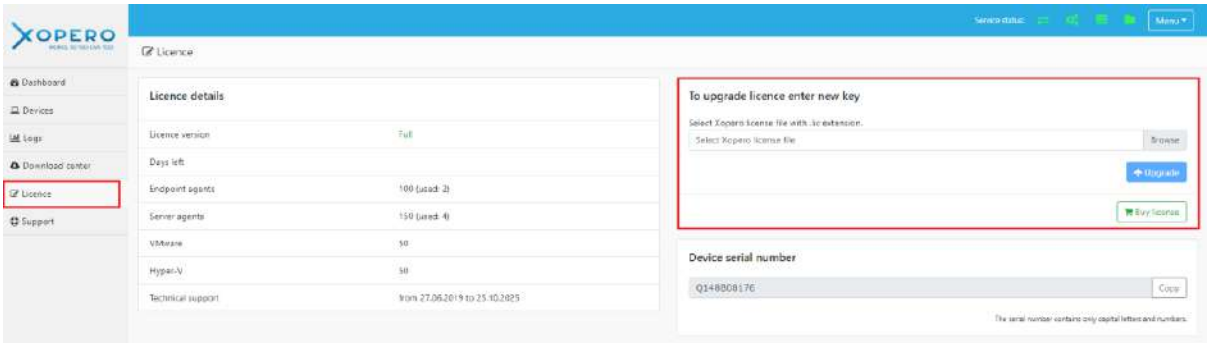
Local

How to upload a file with the license? I must uninstall trial version before upload license?

QNAP

To upload a file with a licence you have to login to Xopero Control Panel on your QNAP

and go to **Licence** tab, then click *Select Xopero license file with *.lic extension* field. Next, in displayed window you have to choose file with license and click *Upgrade* button. There is no need to delete trial version, just upload a license.



Backup&Restore

Same as on QNAP solution, to upload a file with licence, you have to login to Xopero Control Panel (the panel icon in menu start or desktop), and go to **Licence** tab, then click *Select Xopero license file with *.lic extension* field. Next, in displayed window you have to choose file with license and click *Upgrade* button. There is no need to delete trial version, just upload a license.

Why I can't upload a file with the license?

In this case, most common cause of the problem is that the purchased license includes smaller range of devices than there're currently assigned into the system (e.g. 10 endpoints and 1 server devices, and the client has assigned 3 server appliances on trial license). To resolve this problem you have to delete assigned excess devices by using Xopero Management Center.

The other possible case can be that during purchase the customer has provided incorrect serial number.

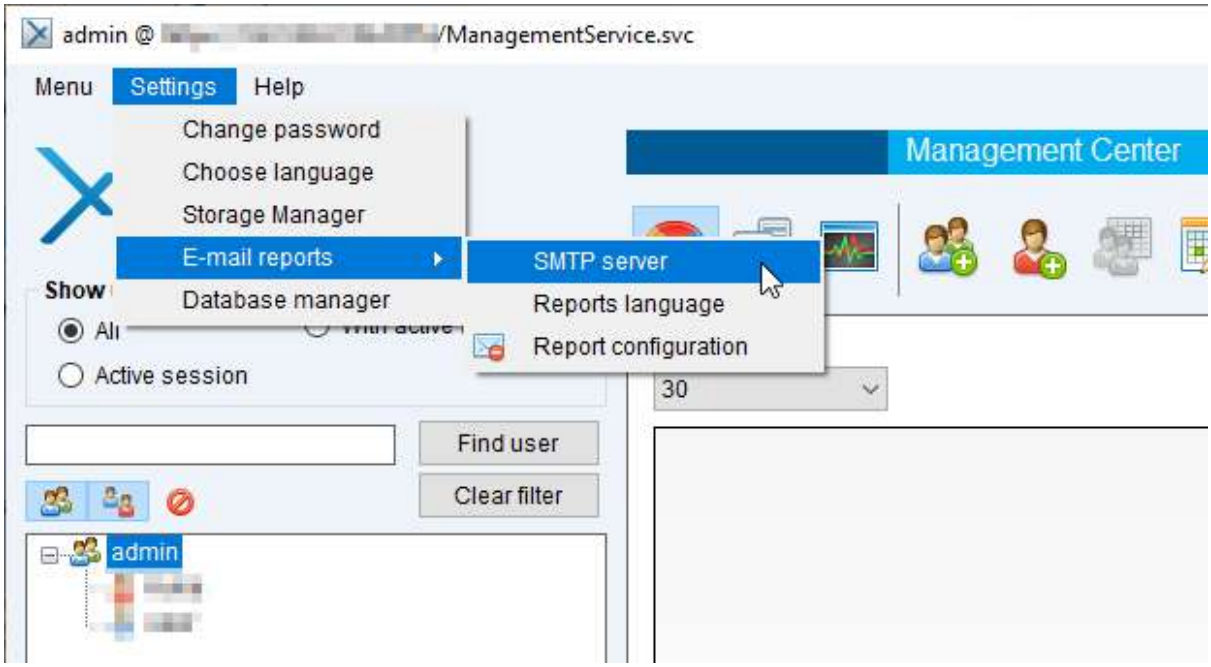
If the problem with upgrading the license could not be resolved, please contact our technical support.

How to assign a host to the user if there is a problem with performing this operation from the Management Center?

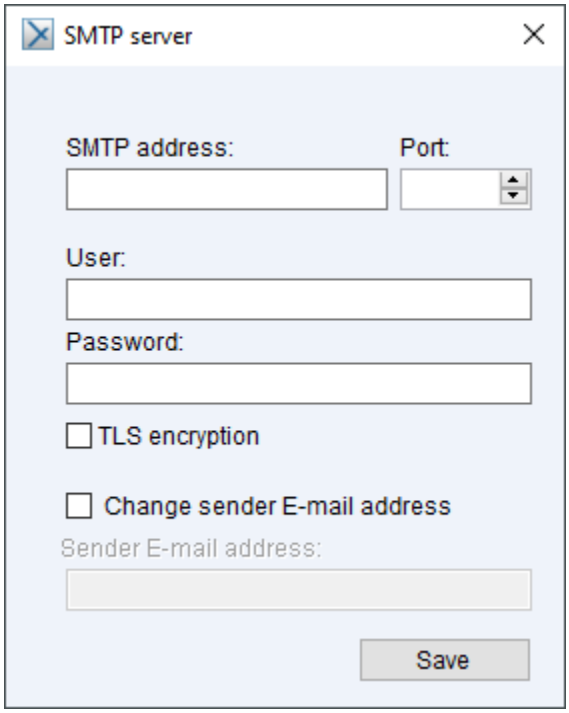
You must log in on the device using client application to QNAP/server. This method will automatically assign your device to the user.

How to configure SMTP server to receive a reported e-mail?

Configuration options for SMTP are available in Management Center in Settings > E-mail Reports > SMTP server.



To configure the SMTP server you must provide the SMTP server address to which will send e-mail reports and the port used by the server (e.g. Gmail - address: smtp.gmail.com, port: 25, 465, 587). Then enter login and password to mail account and select TLS encryption.



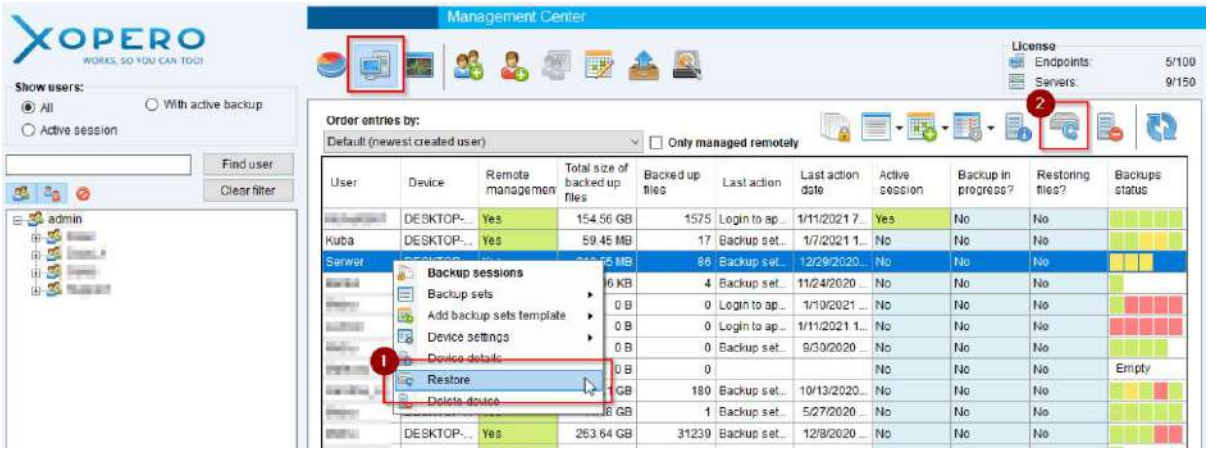
Example configuration of SMTP for Google Gmail mailbox:

- SMTP address: smtp.gmail.com
- Port: 465 (for SSL connection purposes) lub 587 (for TLS connection purposes, with active "TLS encryption" checkbox)
- User: complete e-mail address (e.g. example@gmail.com)
- Password: password of your e-mail

Is it possible to recover files by the Management Center? How to do this?

File restoring option option can be found in "Devices" section (available from welcome panel or section line, between "Dashboard" or "Logs"). File recovery option can be called in two ways:

1. From the unrolled options, right after pressing right mouse button on a device included in device list
2. By clicking "Restore" button, after the device is highlighted with left mouse button.



In both cases the restore window will appear. Once there, you can choose your files that are going to be restored and then press "Download" button. Next step is about deciding

how the restore process will proceed: choosing destination device, saving location and behaviour on already existing files.

Where on NAS are physically stored projects of backup, and database backups? Can somehow the backup archive through a replication on another NAS?

Backup is stored wherever was defined storage directory. By default, this folder is *xopero_repo*. Location of the storage directory can be found in "Settings" tab > "Storage manager". "Shared folder" column carries the information about storage directory location.

Depending on used solution, database can be found in different locations:

- Xopero QNAP Appliance:
  Default database location in QNAP is "/share/CACHEDEV1_DATA/xopero_postgresDB_9.5"
- Xopero Backup & Restore:
  Database can be found in location that we have defined in first installation of the program, in "data" folder. Default set is "C:\Program Files\Xopero Software\Xopero Backup&Restore\data".

Furthermore, database copy is also stored in data storage.

Replication to another QNAP server is possible with an application available in QTS named Hybrid Backup Sync (HBS 3). More informations and instructions can be found in a link below:

https://www.qnap.com/en/how-to/tutorial/hybrid-backup-sync

Real-time replication is also possible after adding another path in the storage edition. A description of how to do this can be found in this manual.

Is archived data after the removal of the user are removed from the NAS?

With the removal of the user, his data are deleted.

What time daily reports are sent?

On Xopero QNAP Appliance solution, the daily notifications are sent once a day at 3.40 A.M. You can check this by connecting to the QNAP by SSH and entering the command *crontab -l* and find */etc/init.d/XoperoServer.sh opero_report_sender* (first are displayed minutes, hours later).

If it comes to Xopero Backup&Restore solution, you can find the task Xopero reportsender in Scheduler available on your operating system, the task resposible for daily notifications is called "Xopero reportsender" and by default it is being executed by trigger on 6:00 A.M., but you can easily edit/add the trigger.

What can block start of Xopero Backup&Restore service?

Devart dotConnect for PostgreSQL Professional application can block start the service. After uninstallation this application you must restart the computer and then Xopero Backup&Restore service should start properly.

How are files deleted?

After delete files by the user in the application, they are marked in the database as marked for deletion. After 24 hours from the removal of the files by the user, the Cleanup Manager is run and deletes files from the storage. You can check the cleanup operation for Xopero Backup&Restore in Task Scheduler, there should find Xopero Cleanuptask and see the result of the last run - (0x0) means that operation performed by the cleanup was successful and if there is (0x1) means that cleanup operation resulted an error.

How to install Xopero Agent application on Windows Server Core?

The easiest way is download application with .msi extension and then install it from the CMD using the msiexec command - eg msiexec / i Xopero.msi.

What to do if you manually delete files from the store?

YOU SHOULD NOT REMOVE ANY DATA FROM STORAGE DIRECTORY!

However, if this happens, you should change the retention setting in projects to 1, that the next implementation of the project sent full dump files. Otherwise, if the deleted directory was a full dump and in the storage remained only increases, this backup will not be recoverable.

Differences between XQA and XBR

Xopero QNAP Appliance

Xopero server is installed on QNAP NAS, it doesn't mean that QNAP is backed up. It means, that this QNAP is place where Xopero server works and the storage for data backups is.

Client applications are used to backup endpoints, which can be downloaded from Xopero server(Xopero, Xopero AD, Xopero noGUI). Data backups performed by these applications are sent to the storage on server. Client applications should be installed on

hosts, which will perform backup. Application used to central management is Management Center, it’s downloaded at first run of the server. This application is also available at Download center at Xopero server, same as other applications.

Xopero Backup&Restore

Xopero server is installed on host with Windows system, that also doesn’t mean that this host is backed up. It means, that this host is place where Xopero server works and the storage for data backups is.

Client applications are used to perform backups on endpoints, these can be downloaded from Xopero server(Xopero, Xopero AD, Xopero noGUI). Data backups performed by these applications are sent to the storage on server. Client applications should be installed on hosts, which will perform backup. Application used to central management is Management Center, it’s downloaded at first run of the server. This application is also available at Download center at Xopero server, same as other applications.

It is not recommended to install client application on the host with Xopero Backup & Restore.

Differences between Xopero QNAP Appliance and Xopero Backup&Restore:

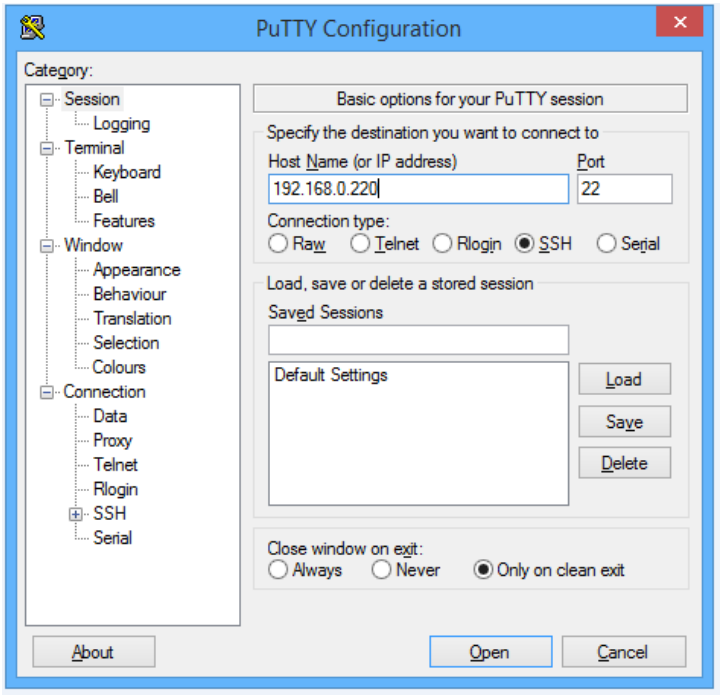
The main difference between Xopero QNAP Appliance and Xopero Backup&Restore is the place where the Xopero server application is installed. In the case of XQA, the application is installed on the QNAP server, in the case of XBR, the application is installed on a Windows computer - Windows 7 and higher.

How to reset admin password - Xopero QNAP Appliance?

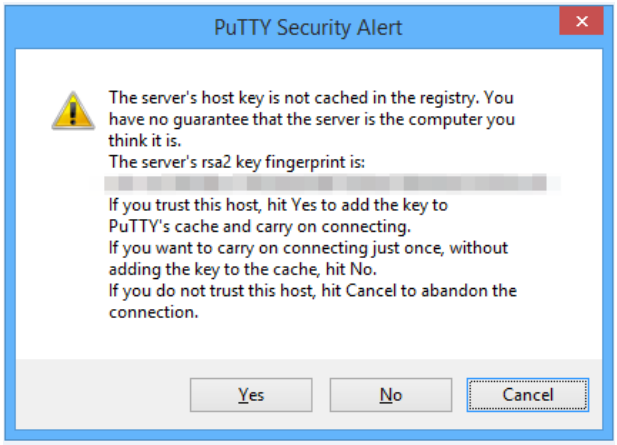
In case of the forgotten password of the Xopero Administrator System(admin), you can use the following instruction.

Manual reset of the administrator password

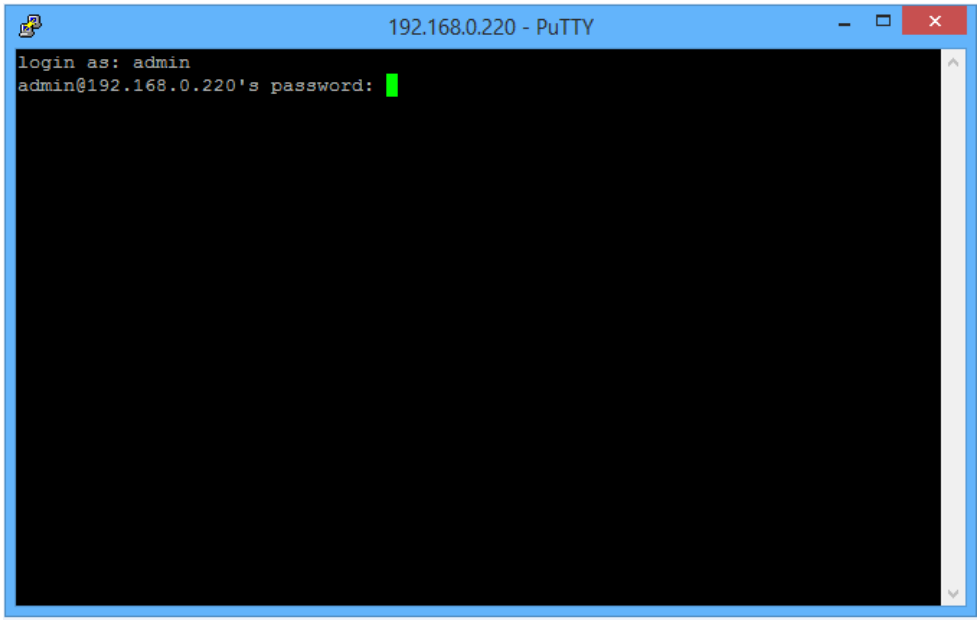
1. In the first step you need to log in to your QNAP device using an SSH connection. It is possible by e.g: the free program PuTTy - http://www.putty.org/



2. In the *Host Name (or IP address)* field, type your QNAP device address, and check the *SSH* connection type. After that click *Open* or if the need arises change other settings.



3. After showing up in the above window you need to press the *Yes* button.



4. You need to enter your login and password to your QNAP device.

5. After logging in you need to reset the password. To do this type in the following command:

```
[~] # /etc/init.d/XoperoServer.sh reset_password
```

/etc/init.d/XoperoServer.sh reset_password

After this operation password is set to default - **admin**

Unlocking the administrator account

In case the instructions above don't seem to bring any better, the administrator account may have been blocked. To unlock the admin account, you need to:

1. Log in to the QNAP device using SSH connection (in the same way as in previous instruction - points 1-4)
2. After logging in, we need to connect with the Xopero database. In this case, you need to type in the command below:
   /etc/init.d/XoperoServer.sh psql
3. After that, execute another command that will result in unlocking the administrator account:
   update public.administrativepanelusers set "blocked"=false,resethash=null where name='admin';
4. Exit the database by :
   \q

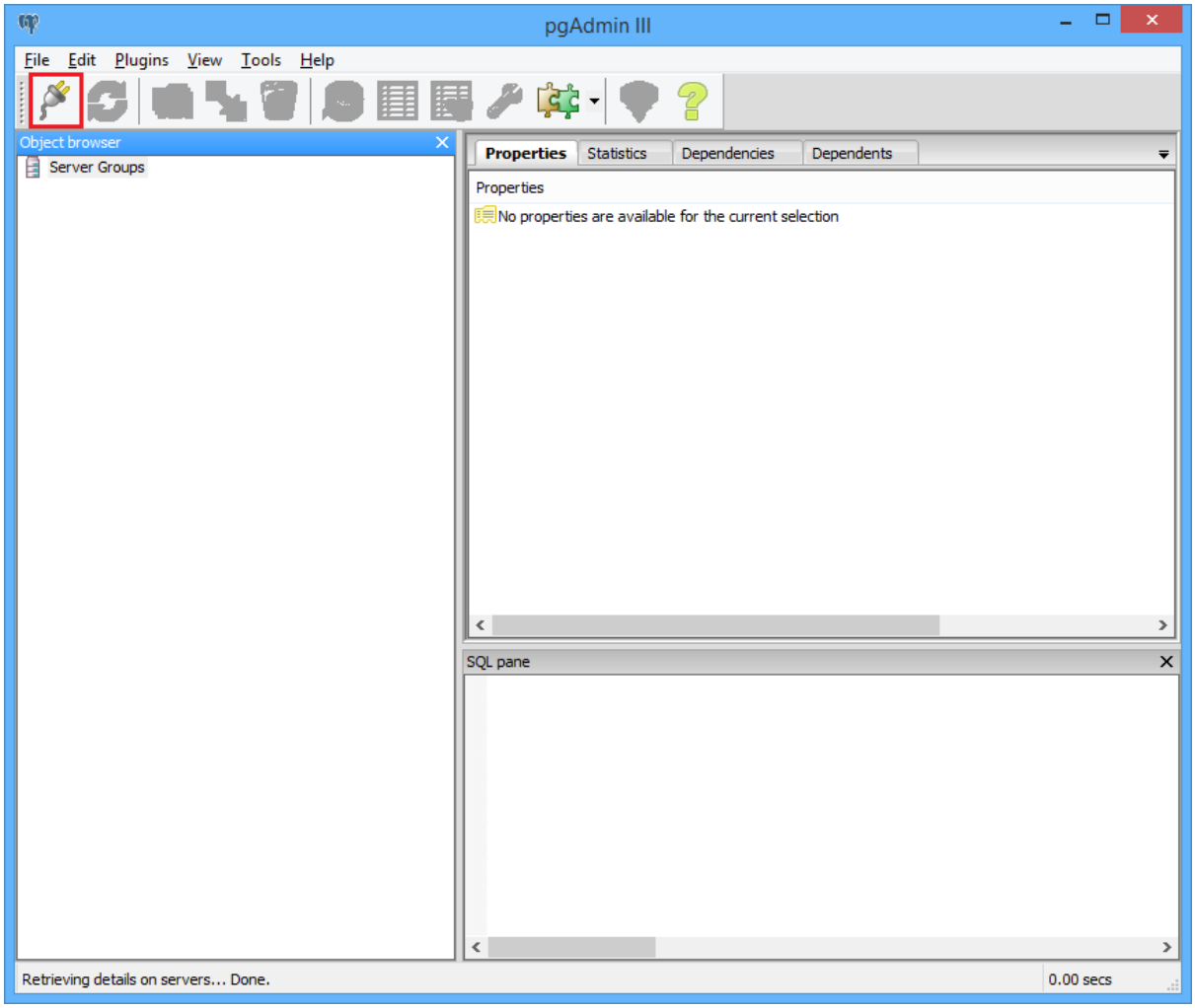
How to reset admin password - Xopero Backup&Restore?

Introduction

In case of forgotten password of the Xopero Administrator System you can use following instruction.

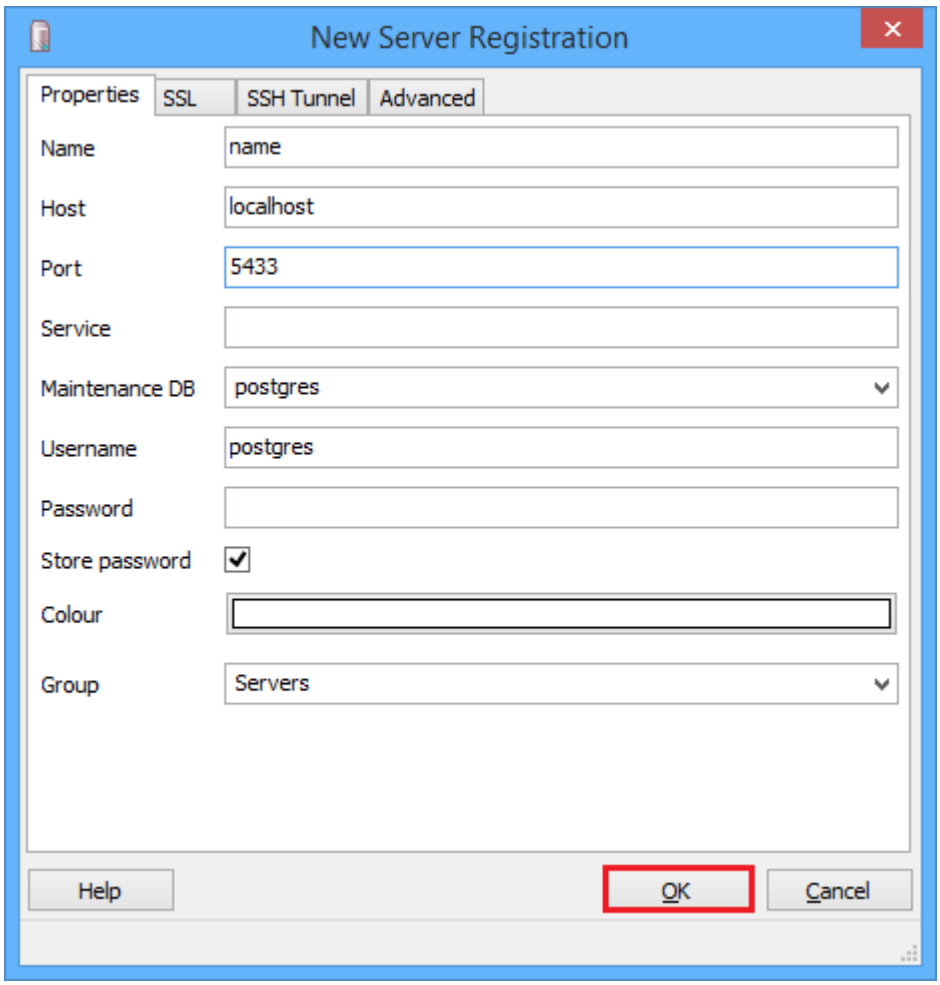
Manual reset of the administrator password

At first step go to C:\Program Files\Xopero Software\Xopero Backup&Restore\pgsql\bin directory and run pgAdmin3.exe

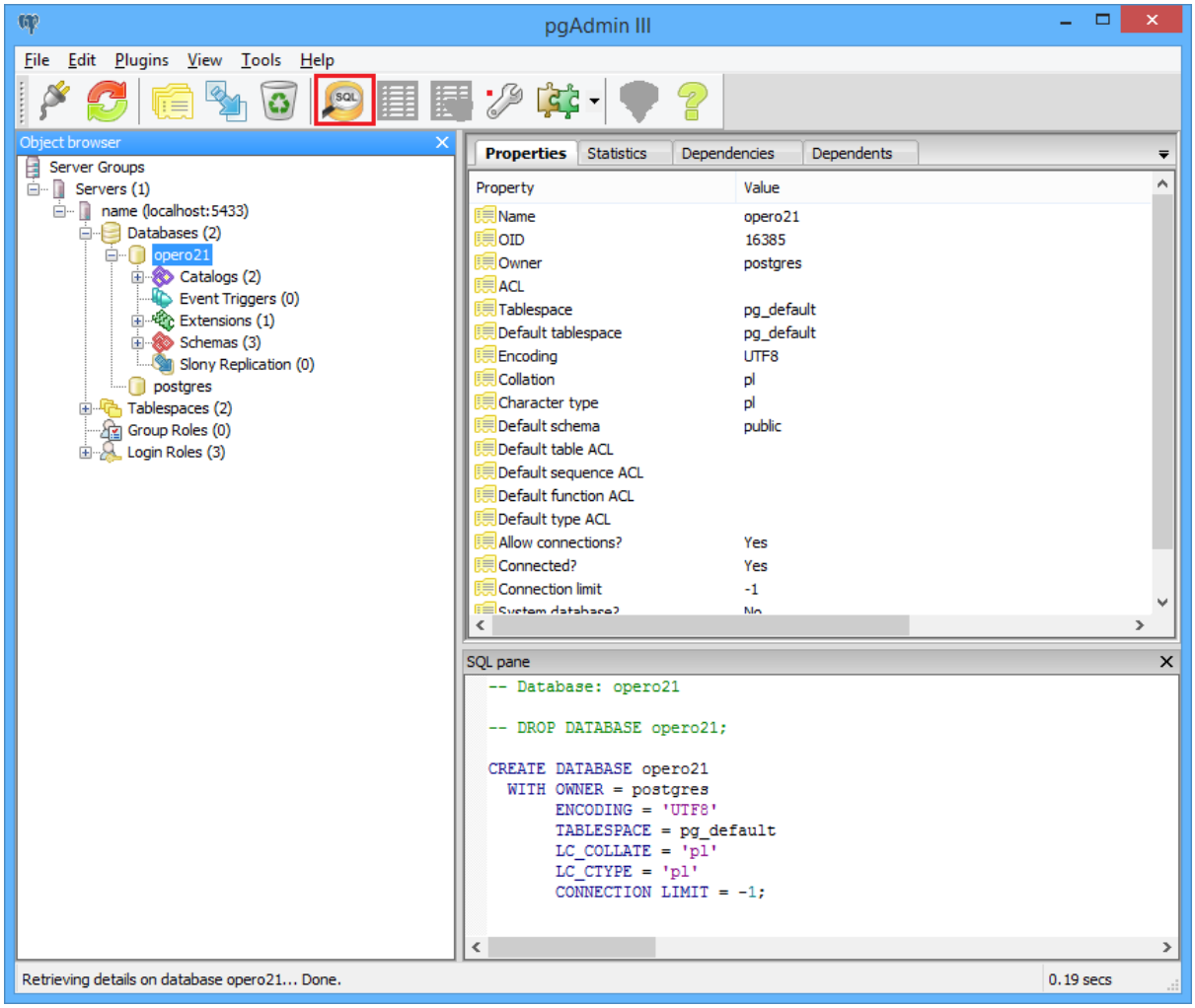


Click on *Add a new connection to server* button and enter the following data:

- *Name* - arbitrary name
- *Host* - localhost
- *Port* - 5433



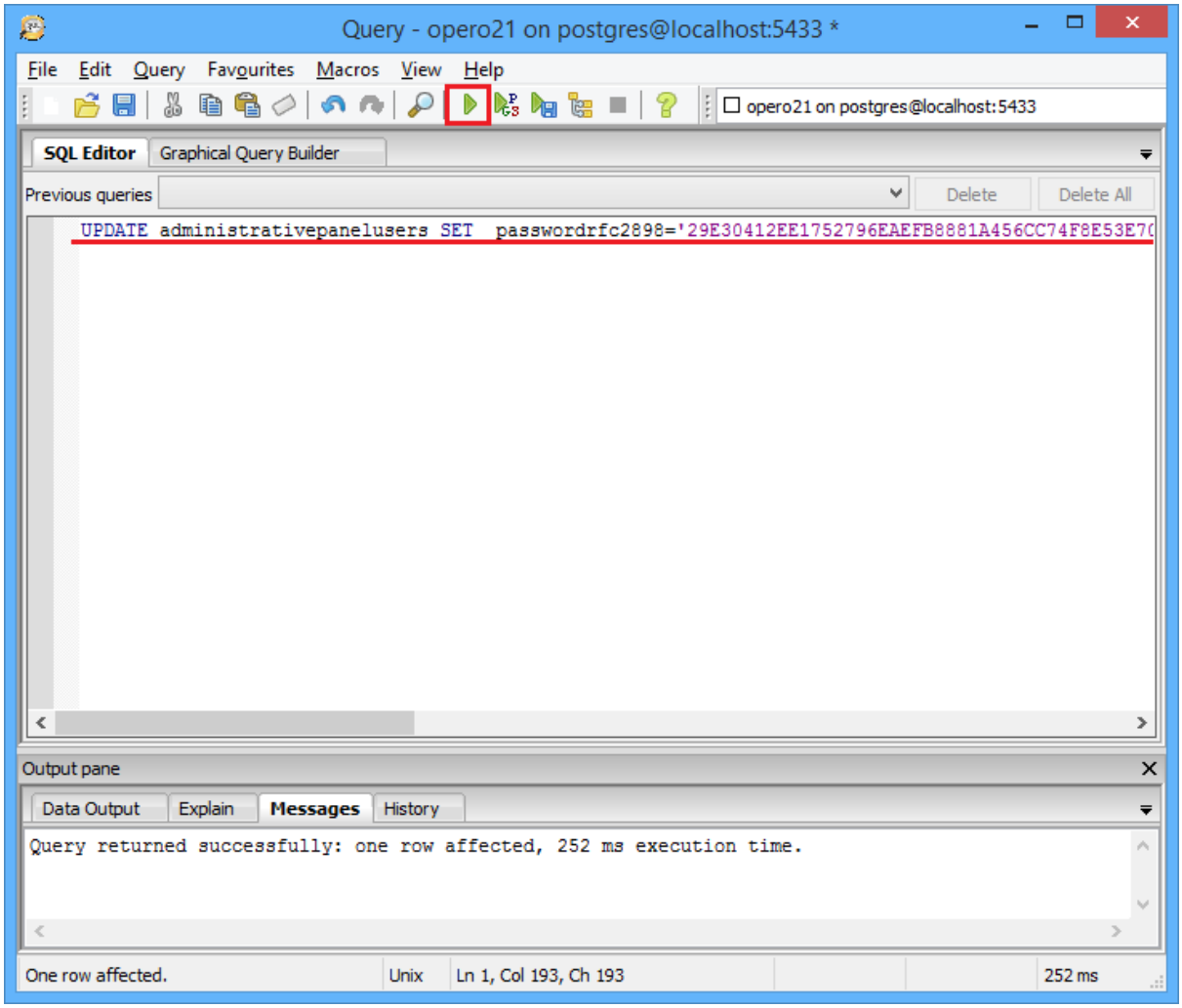
Double-click the relevant server and select the database opero21. If you will be prompted by the system for a password, please skip it by selecting the OK button.



Then choose *Execute arbitrary SQL queries* and type in this query:

UPDATE administrativepanelusers SET passwordrfc2898='29E30412EE1752796EAEFB8881A456CC74F8E53E707A09D2C1293D81253F663B', passwordsalt='7392cb21-321f-4aaf-a10a-0e30d94e7e72' WHERE name='admin'

Click on Execute query. Returned message should look like this "Query returned successfully: one row affected".



After saving changes, the password will be changed to **admin**

Which ports Xopero use?

To perform backup from different networks, you should put the ports used by the application to the outside.

Xopero uses two ports, for HTTP and HTTPS:

- 45558 - for HTTP,
- 45554 - for HTTPS.

Sending client application logs

You can send client application logs several ways: using client application, by Management Center or manually (by request or email).

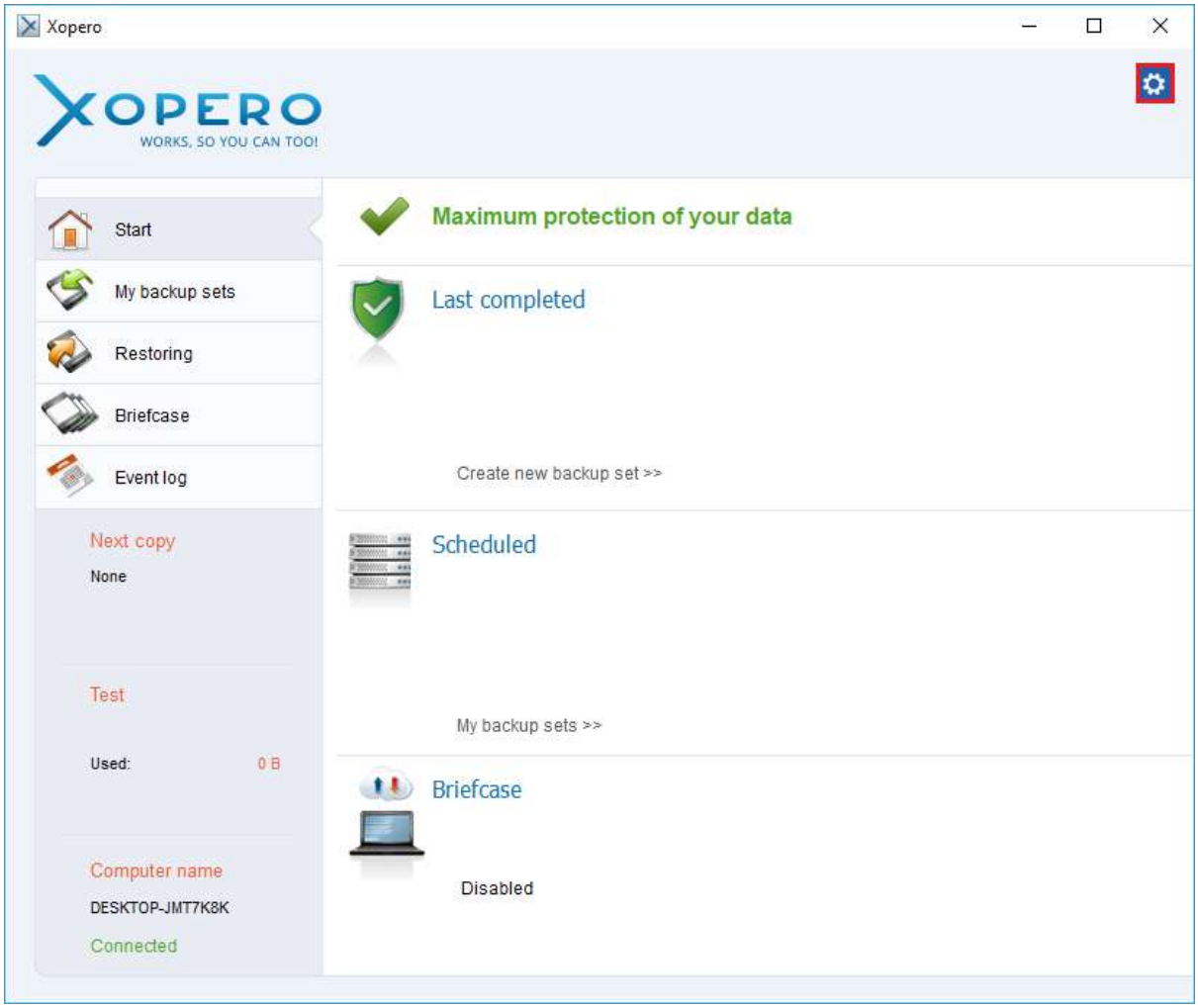
REMEMBER THAT LOGS SHOULD BE SENT ON A SUPPORT EMPLOYEE REQUEST. OTHERWISE THE LOGS MAY NOT BE VERIFIED.

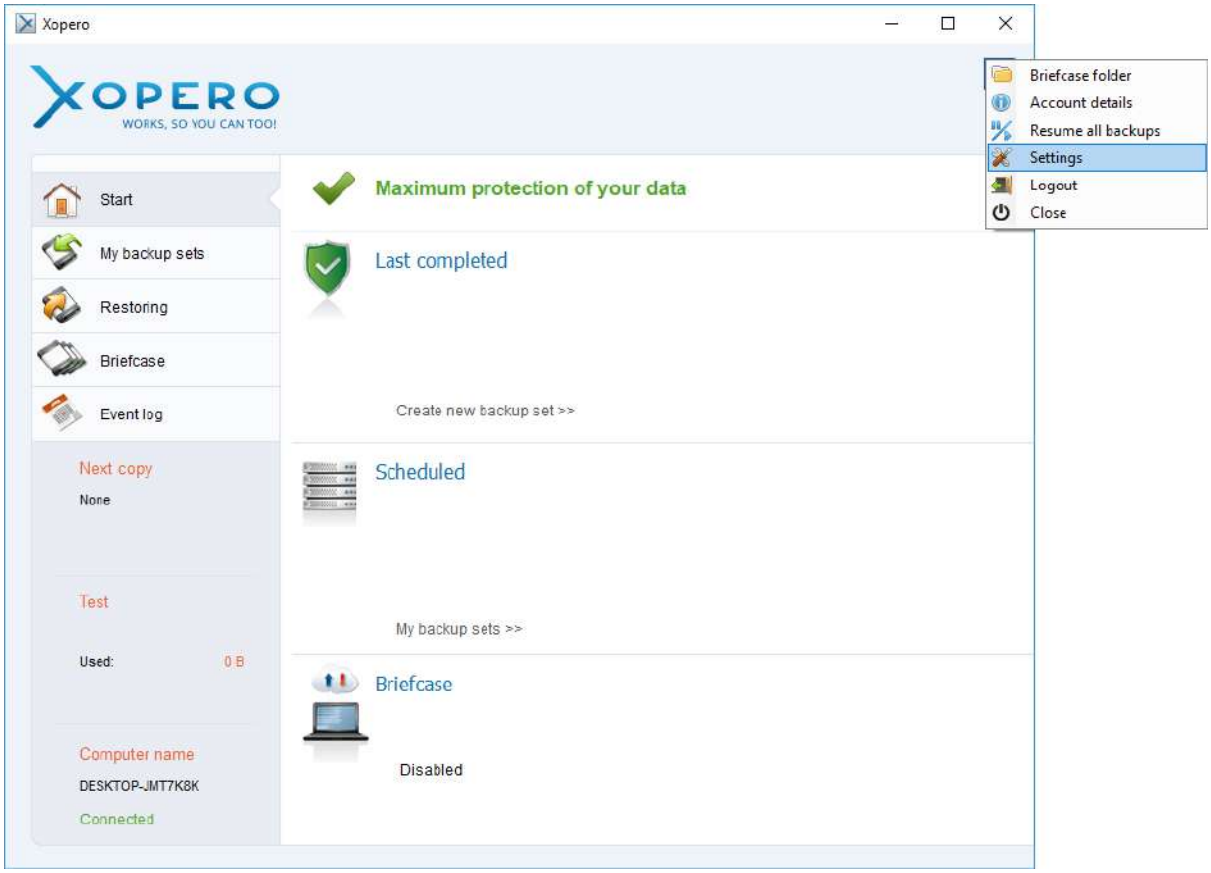
It will not be possible to send logs if:

1. the licence for technical support has ended,
2. the service does not work on the device.

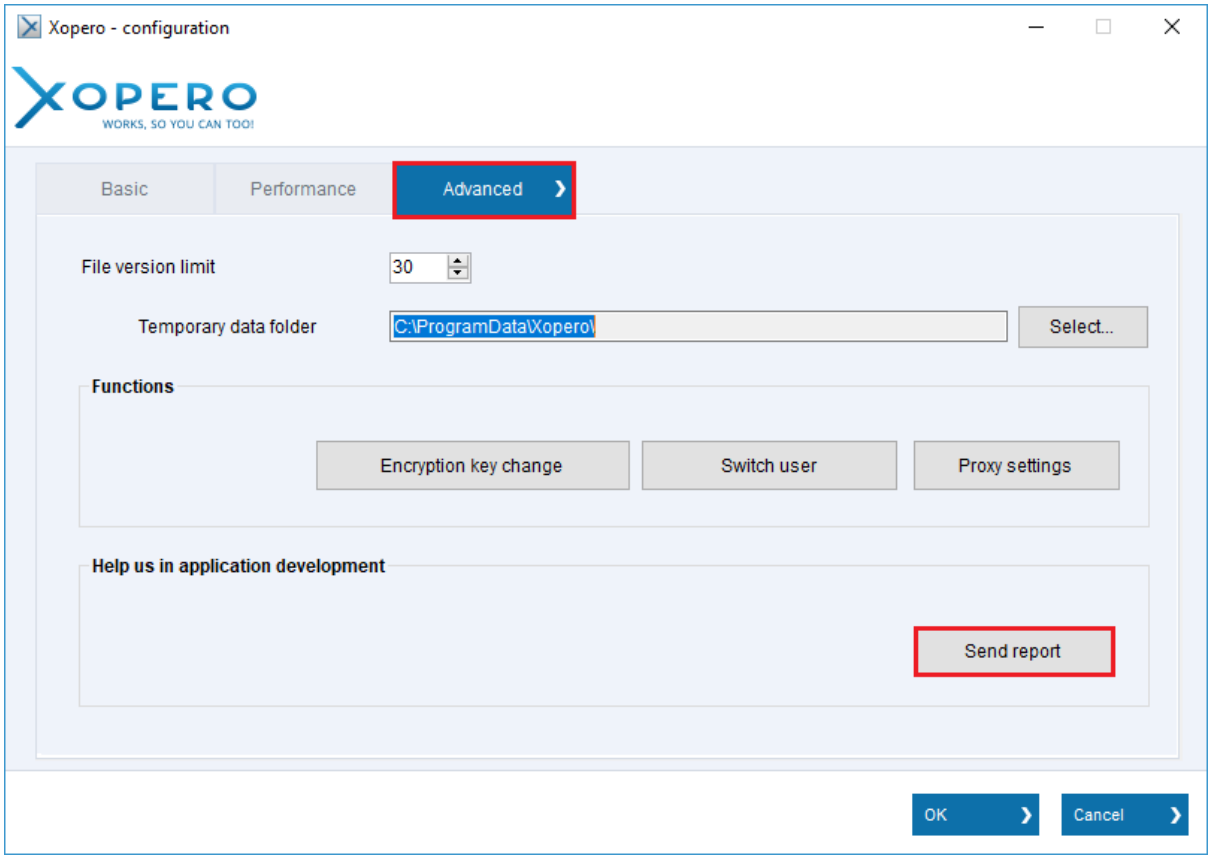
Using client application

To send logs by client application go to **Settings**.

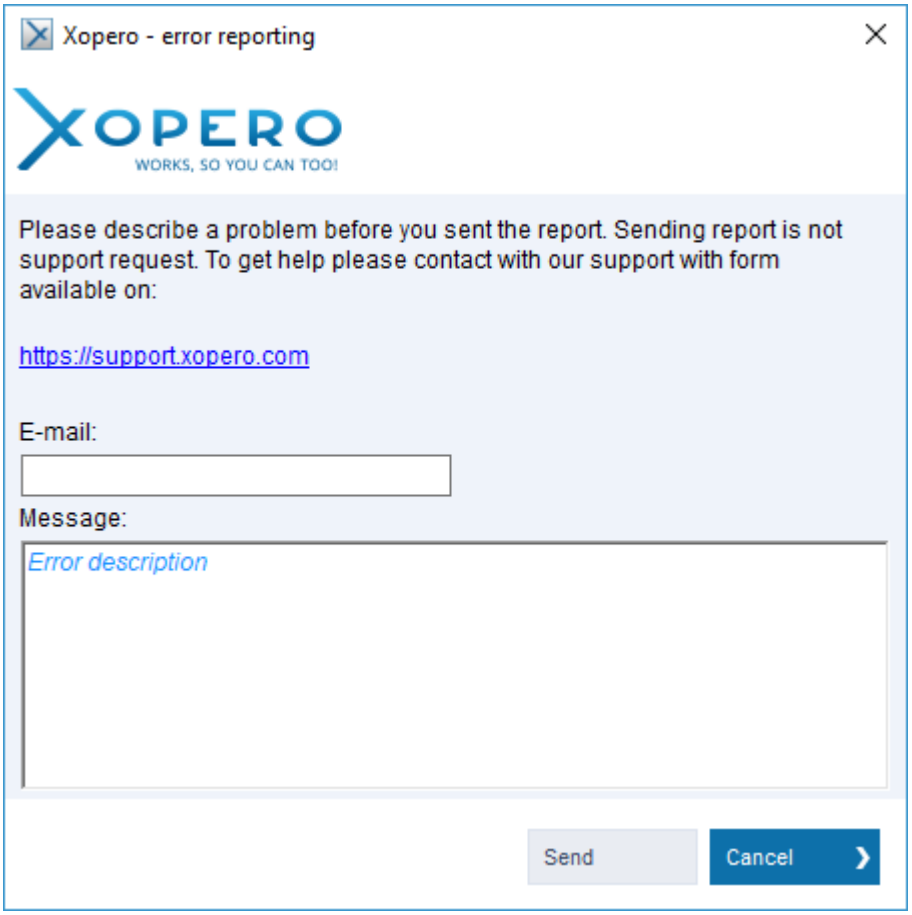

Xopero
XOPERO
WORKS, SO YOU CAN TOO!
Start
My backup sets
Restoring
Briefcase
Event log
Next copy
None
Test
Used:
0 B
Computer name
DESKTOP-JMT7K8K
Connected
Maximum protection of your data
Last completed
Create new backup set >>
Scheduled
My backup sets >>
Briefcase
Disabled



Then go to **Advanced** tab and choose **Send report** option.

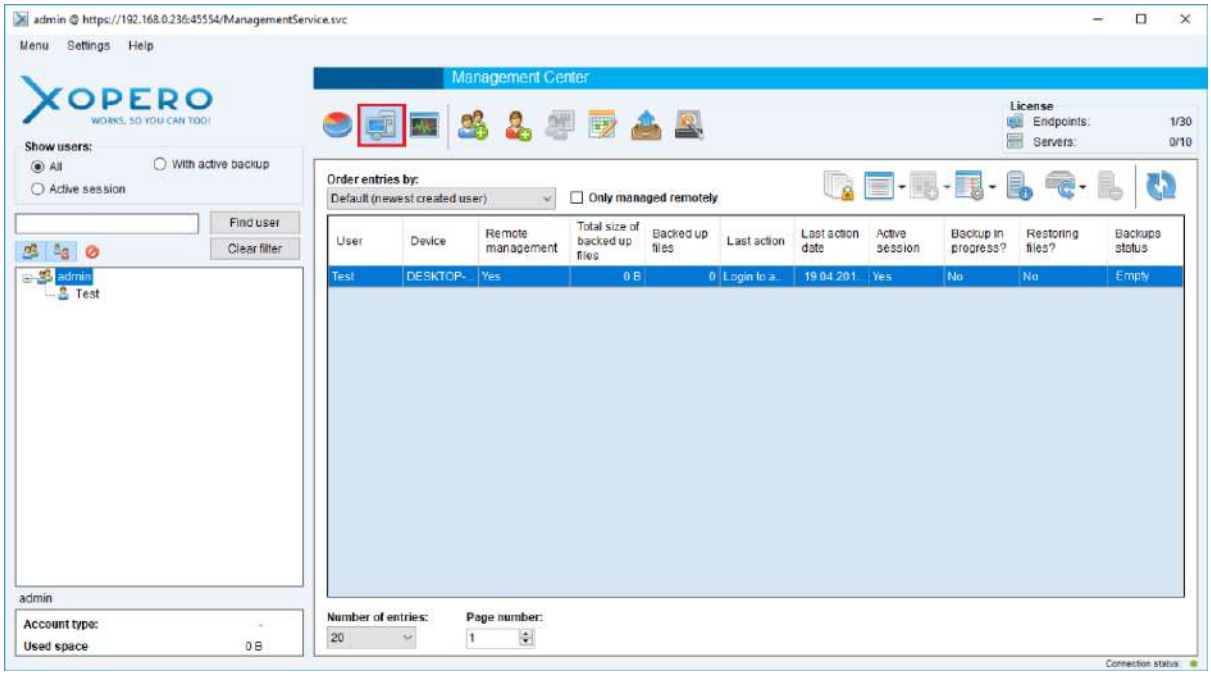


After select the above option, a window will be displayed in which you should enter the e-mail address and describe the problem or enter the request number.

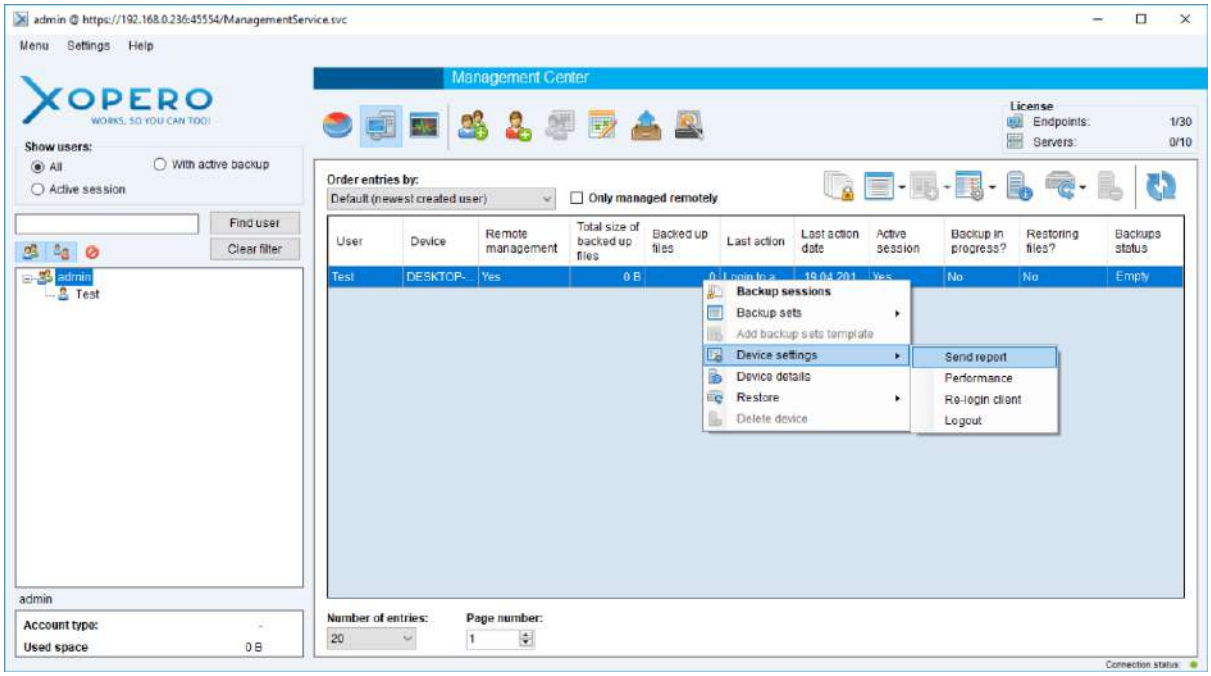


By Management Center

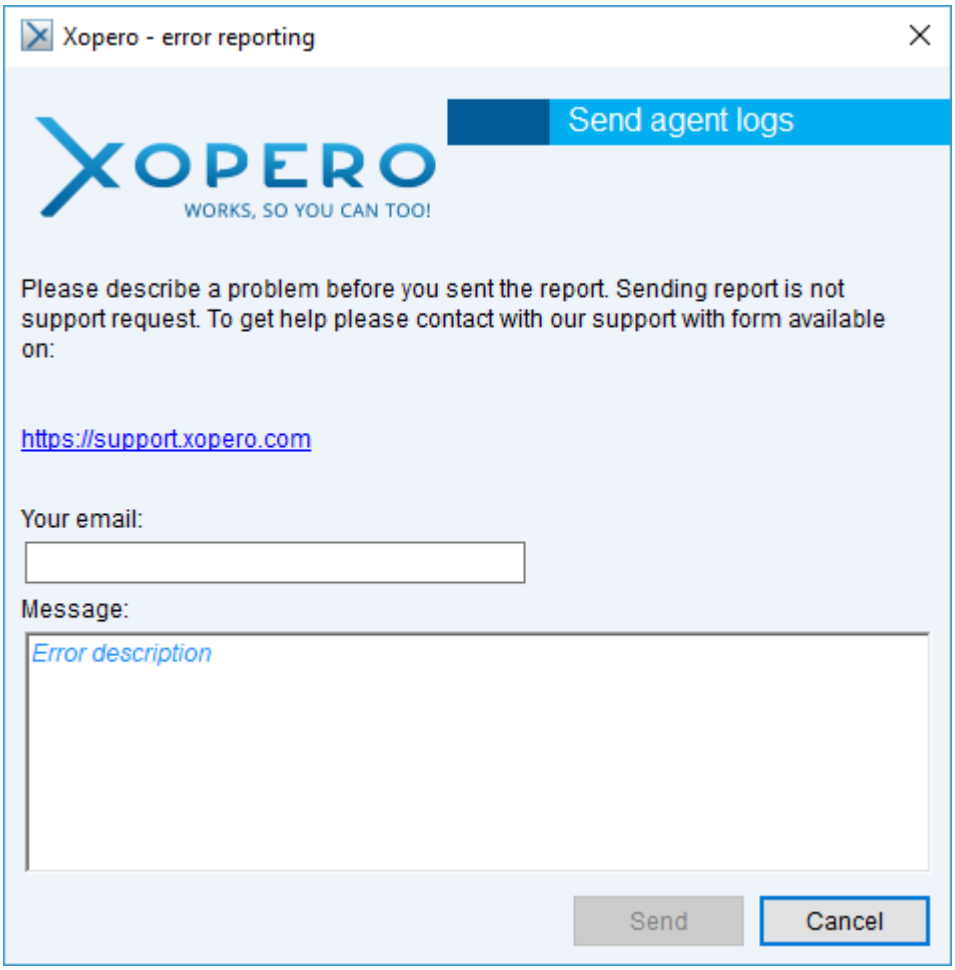
To send logs by Management Center go to **Devices** tab.



From the list of devices, select the one from which you want send the logs and right click on it. Then choose options **Device settings** and **Send report**.



After select the above option, a window will be displayed in which you should enter the e-mail address and describe the problem or enter the request number.



Manually

If for some reason you can not send logs from the application (e.g. it does not start, you can not log in), it is possible to send them directly in the request or email.

For a client application, the default location of the log files is C:\ProgramData\Backuplogs and for CLI {user's home directory}\opero\temp\log (or {user's home directory}/opero/temp/log).

Sending server logs

You can send client application logs several ways: using Management Center, by SSH or manually (by request or email).

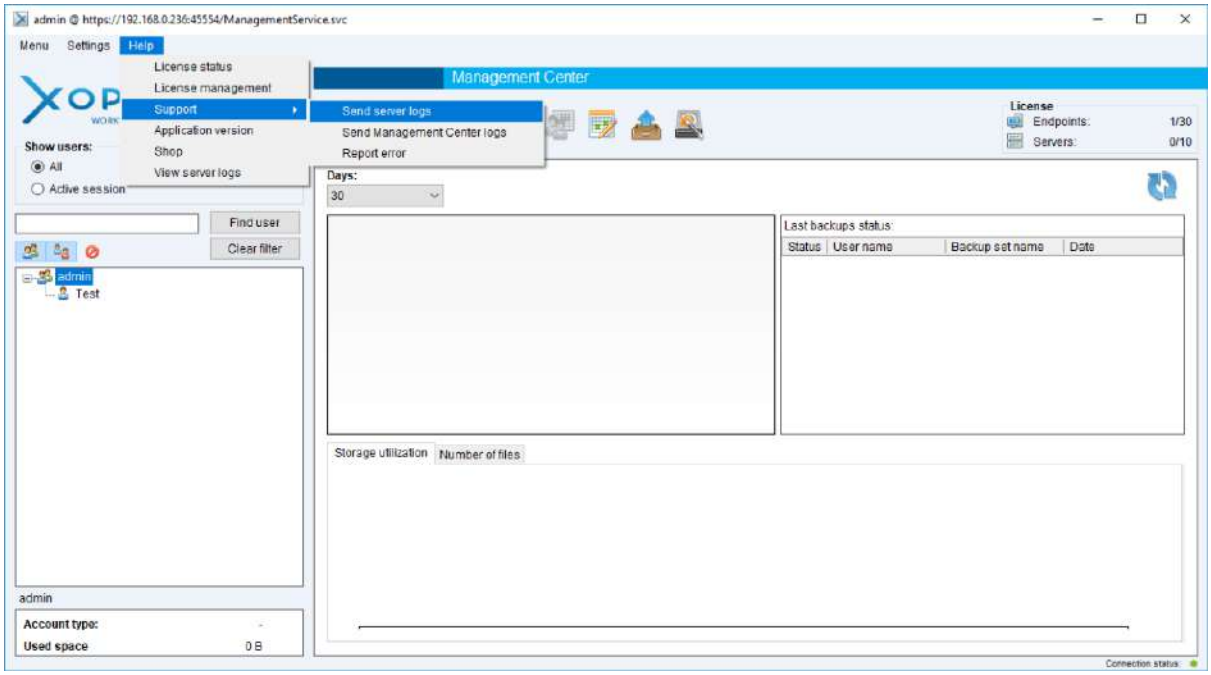
REMEMBER THAT LOGS SHOULD BE SENT ON A SUPPORT EMPLOYEE REQUEST. OTHERWISE THE LOGS MAY NOT BE VERIFIED.

It will not be possible to send logs if:

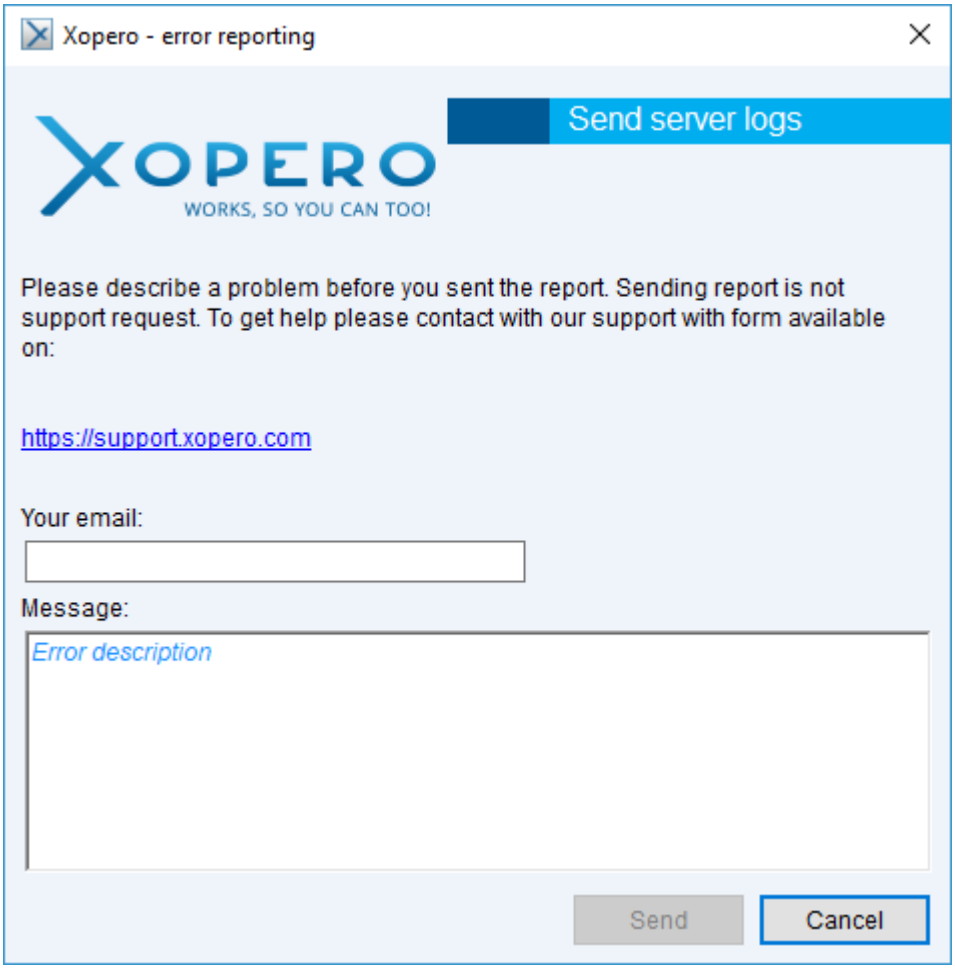
1. the licence for technical support has ended,
2. when Xopero services on the backup server do not work or you cannot connect to them.

By Management Center

To send logs by Management Center you should log in as admin, from the ribbon choose Help, then Support and Send server logs.



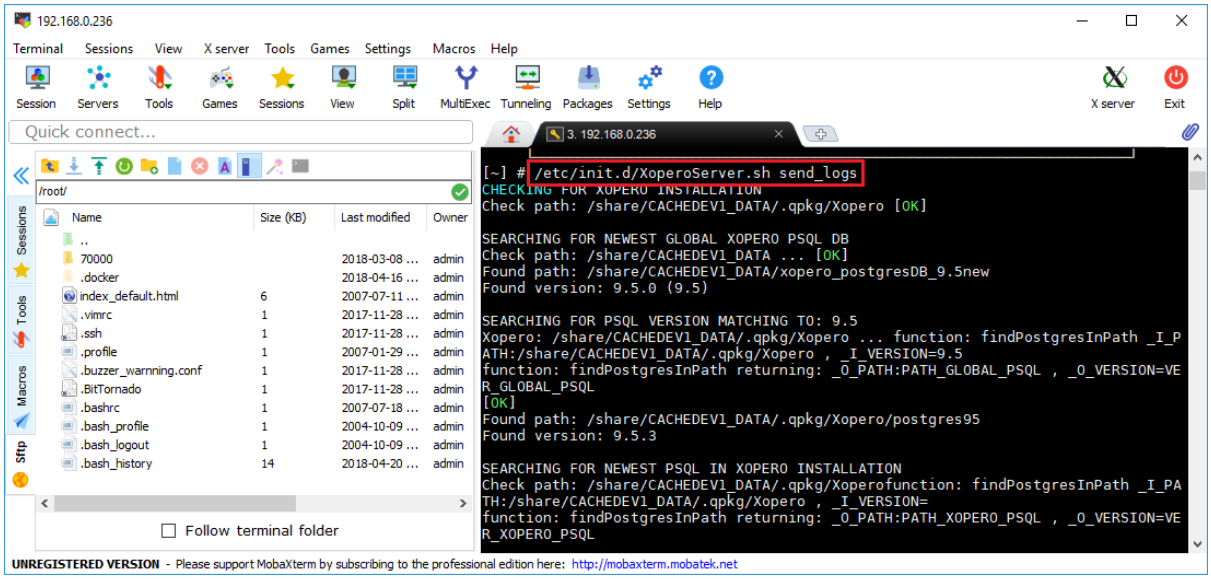
After select the above option, a window will be displayed in which you should enter the e-mail address and describe the problem or enter the request number.



QNAP

By SSH

To send logs by SSH you have to connect with QNAP e.g. by MobaXterm, the execute the command /etc/init.d/XoperoServer.sh send_logs



You can also download the logs to your host using the scp -r command or using the mobaXterm graphics part - by default, the logs can be found in /share/CACHEDEV1_DATA/.qpkg/Xopero

Xopero Backup&Restore

Manually

If for some reason you can not send logs from the application (e.g. it does not start, you can not log in), it is possible to send them directly in the request or email

To send the logs manually you have to, on the Xopero Backup&Restore server, go to the log directory - by default it is C:\Program Files\Xopero Software\Xopero Backup & Restore\AllInOne\Logs and pack all files, then attach them to the request or email.

What should I do if error "Cannot connect to remote service on device" appears while assigning device? (XBR)

This error may occur while you've provided localhost or 127.0.0.1 IP address as server address while logging in to the Management Center.

You should make sure that the address field is not specified as: "localhost" or "127.0.0.1" - this is the most common reason for problem with assinging devices remotely if the Management Center and Xopero Backup&Restore are installed on the same host.

In the address field, enter the IP address of the host on which the Xopero server is installed.

If there's still a problem with assigning the device, while entering the correct IP address, log into the client application using account, which you want to assign this host to. First log in will cause an automatic assignment of current device to user.

Transfer Xopero between QNAPs

To transfer the server to a new QNAP, please use the following steps:

1. Install Xopero on a new device:

The installation process is relatively simple. Go to the AppCenter on your QNAP and install Xopero Pro. Once the application has been installed, it can be temporarily stopped.

2. Move the Xopero database:

To move the database, log in to QNAP1 via SSH and then execute the command: `/etc/init.d/XoperoServer.sh backupexpert_pgdump` which will dump the database to the pgDump directory inside the repository directory. Then move the entire repository directory, which is defined on the QNAP1, to the QNAP2, after which you only need to import the database: import the database.

3. Move the Xopero data repository:

The storage path for QNAP2 must be the same as for QNAP1 (for example: /share/CACHEDEV1_DATA/Xopero_repo).

4. Upload a new Xopero license:

Due to the fact that the license is assigned to the serial number of the device, you will need to upload a new license. To do this, contact support, and send the old and new serial number of the devices.

How to completely remove Xopero from QNAP?

Removing the Xopero QNAP Appliance from the AppCenter does not remove all components. During the deletion process, the directory indicated as the data store and database directory remain intact.

To delete the Xopero datastore and database, connect to QNAP using SSH, connection manual are available HERE.

After the SSH connection has been successfully established, perform following commands that will remove the resources mentioned above:

- Delete datastorage:

rm -r <storage path>

(The default path to the storage that was created automatically is /share/CACHEDEV1_DATA/ Xopero_Repo/)

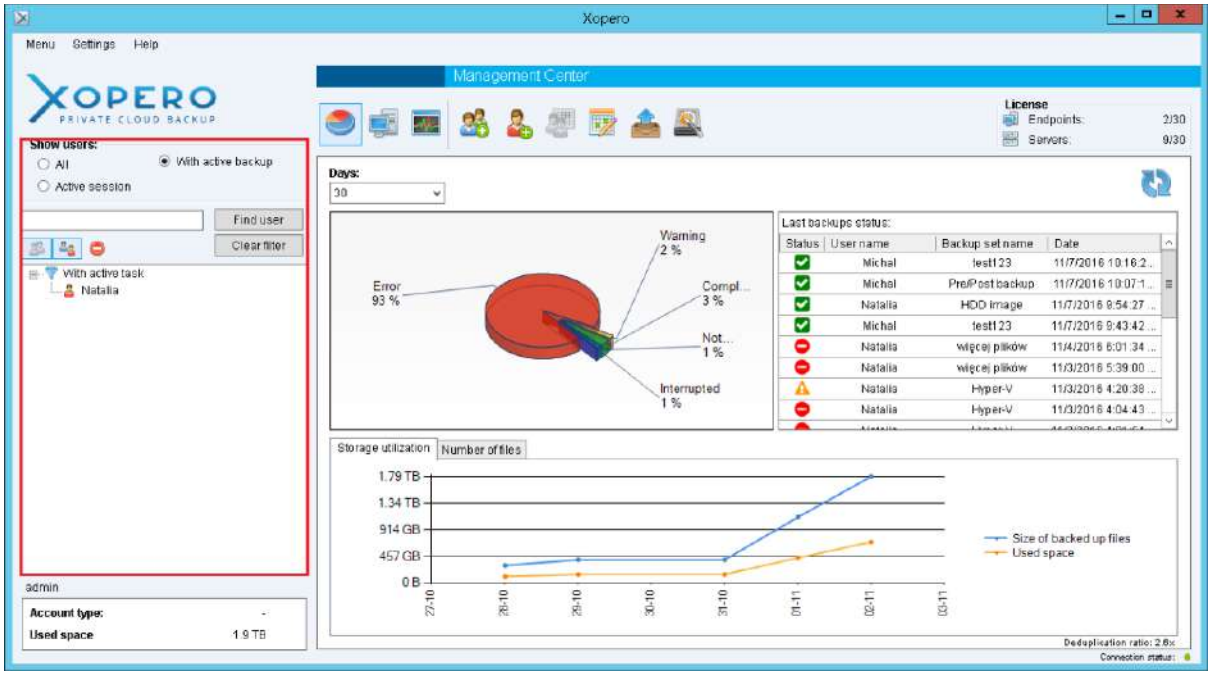
- Deleting the system database:

rm -r <database path>

(By default, the Xopero system database for the Pro version is available under the path /share/CACHEDEV1_DATA/xopero_postgresDB_9.5/, for the Free version it is /share/CACHDEV1_DATA/share/CACHEDEV1_DATA/xoperobackup_postgresDB_9.5/)

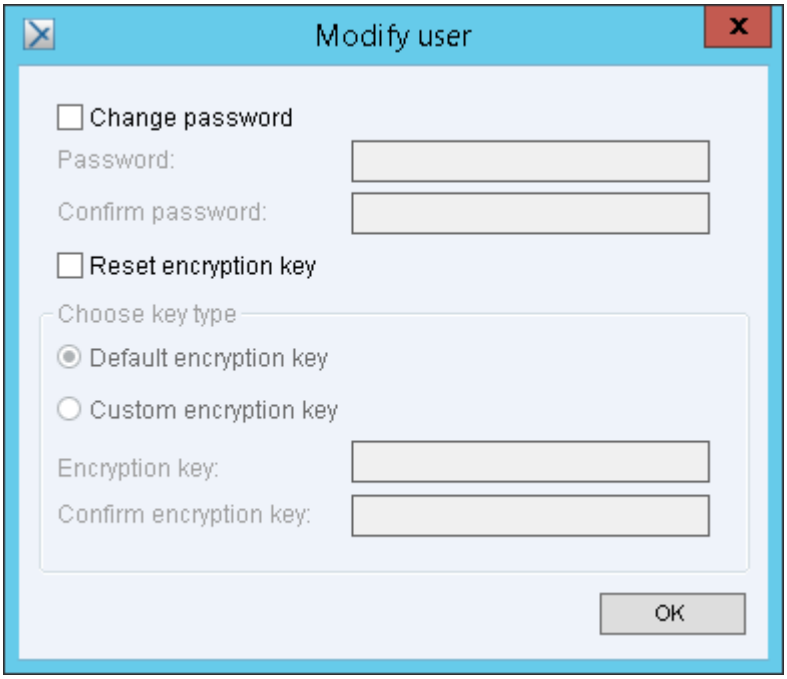
How to change user's password?

To change password go to Management Center.



On the left side right-click on the name of the user. Choose option *Modify*.

Select *Change password* and type the new password. Then confirm clicking *OK* button.



General

What is the AES 256?

AES 256 is the algorithm used to encrypt data which was approved by the National Institute of Standards and Technology as the standard in 1997. Currently, this algorithm is regarded as one of the safest, impossible to break. By using AES 256 we are sure that your data are always safe.

Are my data safe?

The main priority of the whole platform is its safety and reliability, so that our users have a confidence that third parties do not have access to sent data. All of files, also from briefcase, are encrypted using AES 256 on user computer before they are sending to the servers. The data transmission is also encrypted. This prevents unauthorized access to files sent by user, because used data encryption algorithm is impossible to break.

How to schedule backups?

When planning backup, most crucial are three key steps:

1. **Choosing data to back up**
   Making decision, which data need to be secured: which files are necessary, valuable and key? Loss of which files will involve serious consequences?
2. **Backup schedule settlement**
   Analising of backup frequency and time: in which hours processing backup task will be most comfortable? How much different can be the time of completed file versions and copies?
3. **Defining the type and retention of versions**
   Choosing the method and ammount of stored verions of backup files: how many versions should be available to recover? How important is availability to insight the previous versions? How far in time the specific file versions must be available?

Backup tasks in Xopero Solutions are based on those steps and many other, additional, advanced options to adapt backup to various needs.

How to perform not scheduled copy?

Whole of created project backup you can run manually. To do this go to *My backup sets* tab in application and then select one of them and click the *Start now* button.

Are copies created automatically?

Yes, once set of project will be performed in the background without user intervention.

What is the backup project?

The backup project is a summary of the data type and advanced options, as well as the frequency of the backup data. User can create any amount of projects and for each of them indicate other data, and establish a separate schedule.

How can I delete a project from application?

In order to delete project from application sign in to app and go to Restore tab and then mark box next to name of project and click *Delete backup set* button which is located in the lower part of the tab.

What are the hosts?

Host within the meaning of platform Xopero is any computer on which you installed the application and has been assigned to a user account and the maximum number of hosts are limited by license.

In the Xopero Cloud solution hosts are not mobile devices, so you can use any number of them.

Can I login from few devices to one account?

Yes, for each user is assigned to 3 hosts, so you can use e.g. a desktop computer, laptop and smartphone.

What is the encryption key?

All files sent by Xopero Cloud application are encrypted on the client side by the AES 256 algorithm. User can choose one of two keys, which will encrypt his data. Default key - the key is automatically generated and stored on serversplatform. User key - the user themselves declares its encryption key, which is not stored on the servers.

What is the difference between the default key and the user key?

After selecting the default key will be generated automatically and stored in a database on Xopero Cloud servers. The user does not know, so he does not need to worry about its safety. By using the default key user can, via a web panel, download and generate public links to resources sent as a backup. User key provides higher security of your data than the default key is known only user, is not stored on the Xopero Cloud servers, therefore the user duty is to properly secure. In case of loss user key the data sent to servers Xopero Cloud are impossible to recover. By using user key there is no possibility download and generate public links to resources sent as a backup. Regardless of the choice of the encryption key the data are encrypted and decrypted on the user side.

Does the application run as a Windows service?

The application installed on a computer running Windows includes service which is responsible for performing backups,restoring data, syncing briefcase and an application that provides a user interface. Just that you properly configure projects and you do not need more run application. Our service running automatically during system startup, and since then application care for the safety of your valuable data.

What is versioning?

File versioning allows the user to restore a previous version of the file, not necessarily the last, so user can restore the earlier changes. By default Xopero application stores up to 30 versions of each file.

Can I change the amount of stored version of a file?

Yes, you can do this at any time, by application installed on your computer. Go to application settings and in Advanced tabyou can freely increase or decrease the amount of stored versions. If you change the amount of versions to a smaller, thenafter the next backup version of up quantity of will be removed.

How to delete file versions?

File versions sent as a backup, you can delete only by desktop application. In this order go to *Restoring* tab, find file, which version you want to delete and click the right mouse button on this file. From menu that is displayed select *Show file version*.

Are files in the briefcase subject to versioning?

Yes, the files in the briefcase are also versioned. Any version you can download via the user panel. In the files tab, if you choose a space briefcase, you can click the icon options for a given file and select the version you want to download.

Will be performed backup of file, which I am currently working on?

Yes, it is possible by using VSS mechanism, which is enabled by default for all of projects created by user.

What can I do in case of loss of private encryption key?

In case of loss of private encryption key there is no possibility to restore data, because the key is not stored in the Xopero platform.

If you want still use application, change the encryption key via Xopero Agent. Remember that changing encryption key areassociated with the irretrievable loss of all data.

Can I do a backup of my mailbox?

You can backup your mailbox when you synchronize it with Microsoft Outlook on your local computer. In this order select the appropriate type of project and you point PST files (and OST), which will be subjected to archive.

For Xopero Cloud users in Endpoint&Server version we enable the backup of mailboxes that are located on the Microsoft Exchange server.

For Xopero Local (XQA and XBR) users with server license it is possible to backup mailboxes that are located on the MS Exchange server.

I do not know where my mails are stored on my computer. How can I make a backup?

Xopero automatically detects the MS Outlook location, you only have to choose email backup option, Xopero will do the rest.

Can a network location or mapped resource be the temporary directory?

No, the temporary directory can be only directories which physically located on user computer.

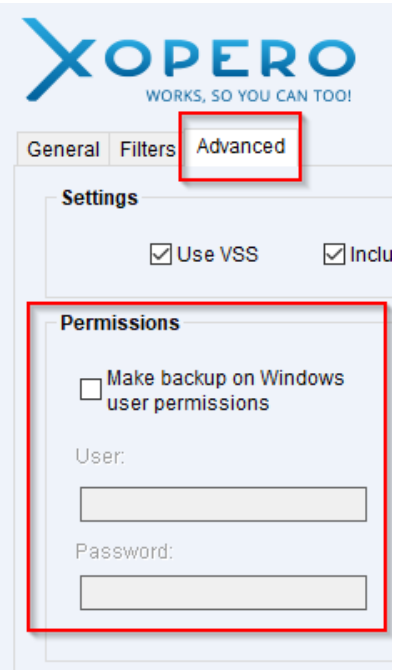
Can I make backup of external drives (USB)?

Yes, Xopero allows you to making backup of files which are located on any external drives which are connect to your computer. Just choose the local data, and then select the files. In case of errors, go to *Advanced* option and select option *Start backup as Windows user*, and then he user name and password that you have declared in Windows.

What is and how to perform a backup as Windows user?

Every backup can be performed as Windows user, which means that for the duration of the backup takes placeimpersonation service and it works in the context of the specified user. By this solution user can performed resource backup which requires additional permissions, because standard service works on the rights of local service.

In order to perform backup as Windows user, in wizard project go to *Advanced* tab, select *Start backup as Windows user* and enter the authorization data.



Where I have to install client application to perform a virtual machines backup?

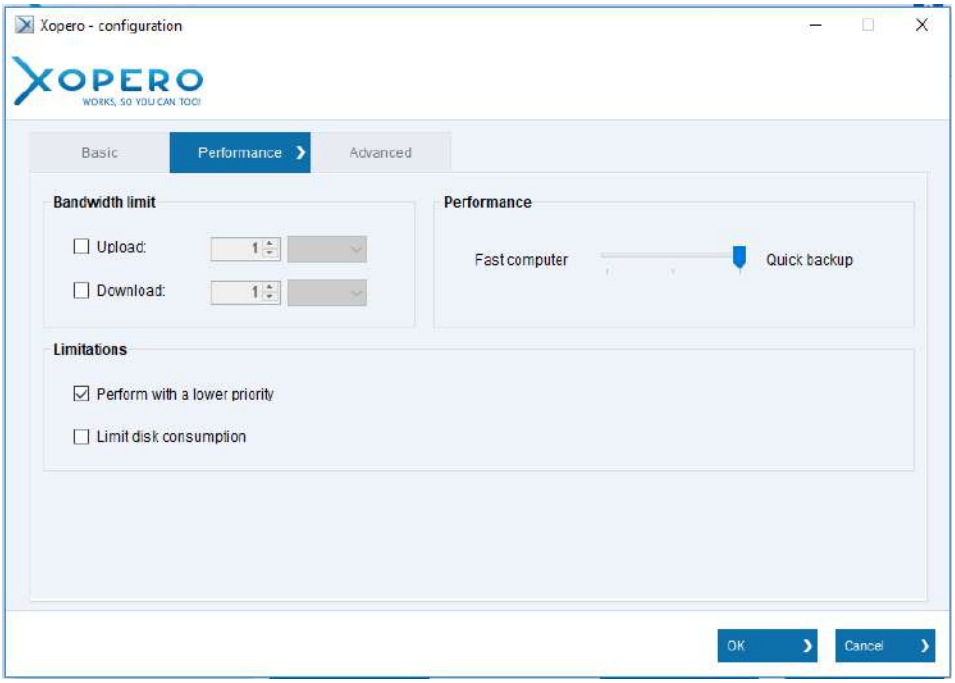
To perform a Hyper-V backup you must install the client application on the computer where is the host virtual machines. In case VMware backup the agent can be installed on any hosts located on the same network as the server running VMware.

How to speed up the backup?

In the Xopero application, there are two ways to improve backup speed. The first method applies to performance settings, which define to what extent will the resources of our host be used during backup. The second option is advanced project settings.

Performance settings

Go to application settings and then to **Performance** tab, after that you'll see following window:



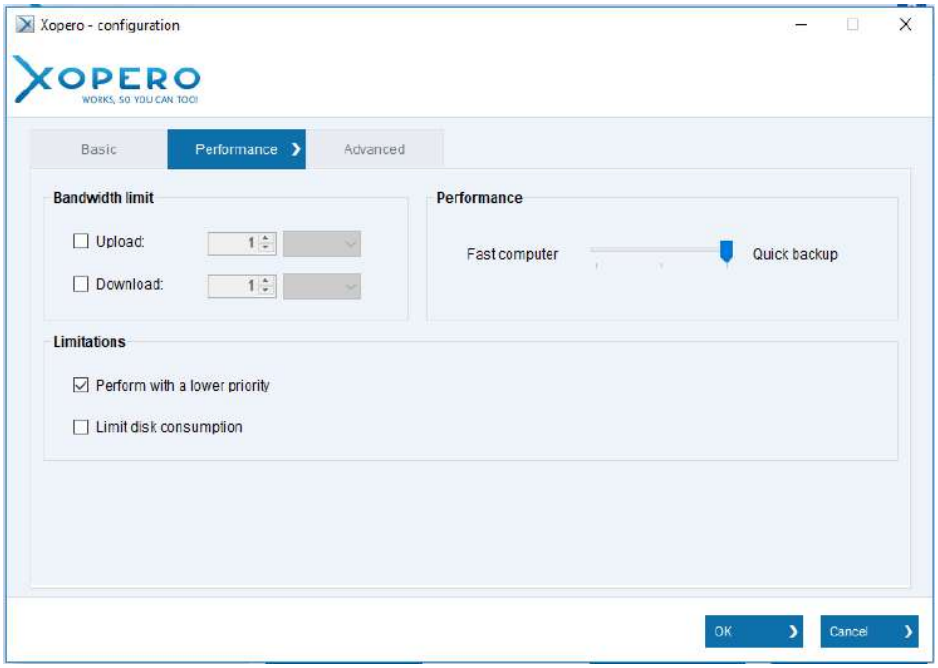
The fields to focus on are **Performance** and **Limitations**. In the first case - **Performance** - the user has a resource utilization indicator available. The goal is to increase the speed of backup, that's why it is a good idea to move the marker to the **Fast backup** position, it will make the Xopero application utilize fully available host resources during backup. The option **Fast computer** works in the opposite way, reduces the use of funds and allows you to perform additional tasks in the system.

Limitations work in a very similar way. The execution priority is used to set the effective speed of programs running under Windows, so to increase the speed, deselect the **Perform at lower priority box**.

Variant **Limit disk consumption**, as the name suggests, allows you to determine the use of hard disk during backup, the option should be checked to improve the copy performance.

Project advanced settings

For each backup project, we can additionally manage advanced options, specifically **No encryption** and **No compression**.



If you want to speed up the backup, both options should be selected. As a result of this operation, the data in the Xopero storage will not be compressed, so they will occupy more space, they will also not be encrypted.

How works Full copy every x, Version limit, Days limit options?

The first backup is always full, then are sent differences/increases. The ***Full copy every x*** option - if the user selects this option and set e.g. that full backup is to be performed every 7, the seventh performance of the backup will be sent the full version of the changed file, the files that have not changed will not be sent, ***Version limit*** - it allows to reduce or increase the amount of data stored on the server by changing a number of file versions that will be stored. If the file is changed daily and backup is performed every day, then each copy is added to the next version of the file, ***Days limit*** - it means that after its expiration are deleted all versions except the last full version. You have to remember that files are versioned, not data packages.

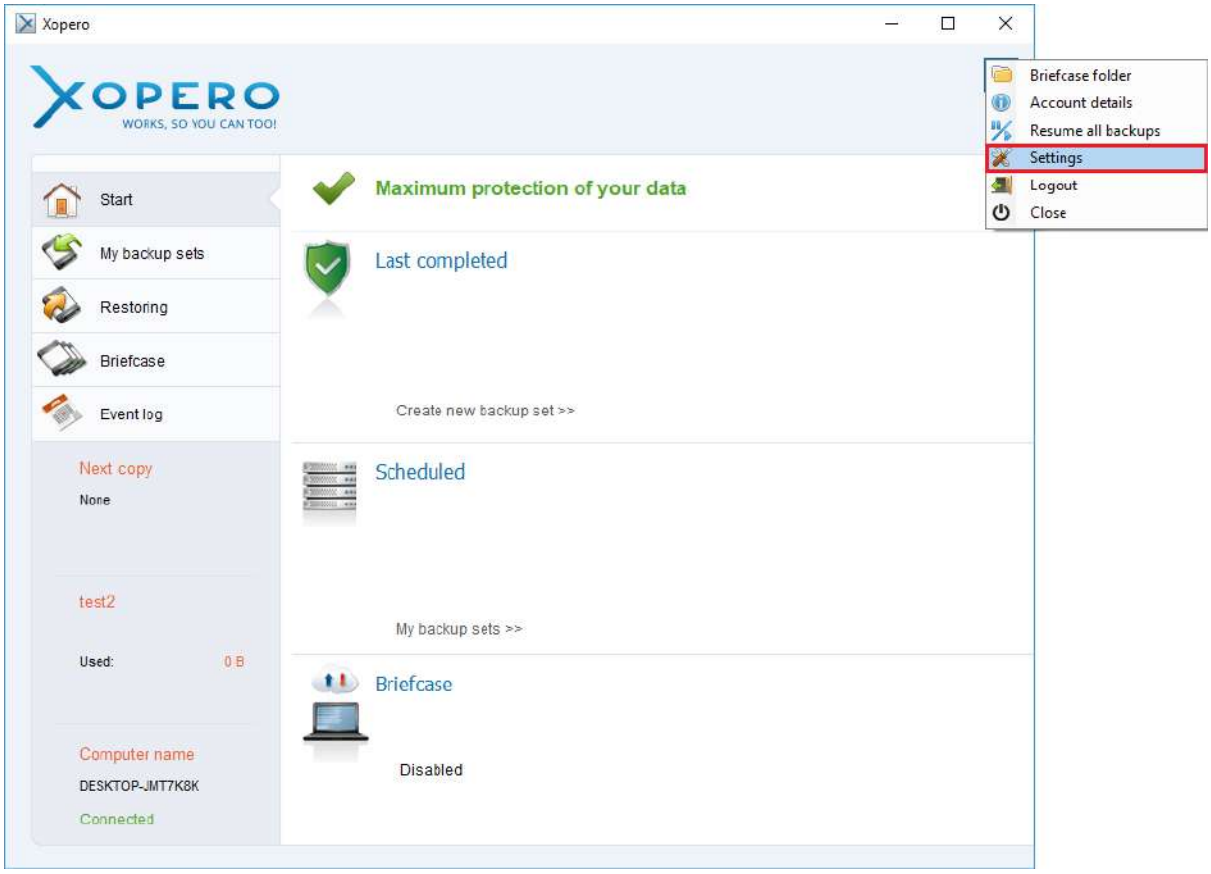
What is VSS?

VSS is a Windows technology which allows to take manual or automatic backup copies or snapshots of files or volumes, even when they are in use.

How to deactivate graphical interface?

The service is responsible for performing backups and the restore, so you can disable the interface.

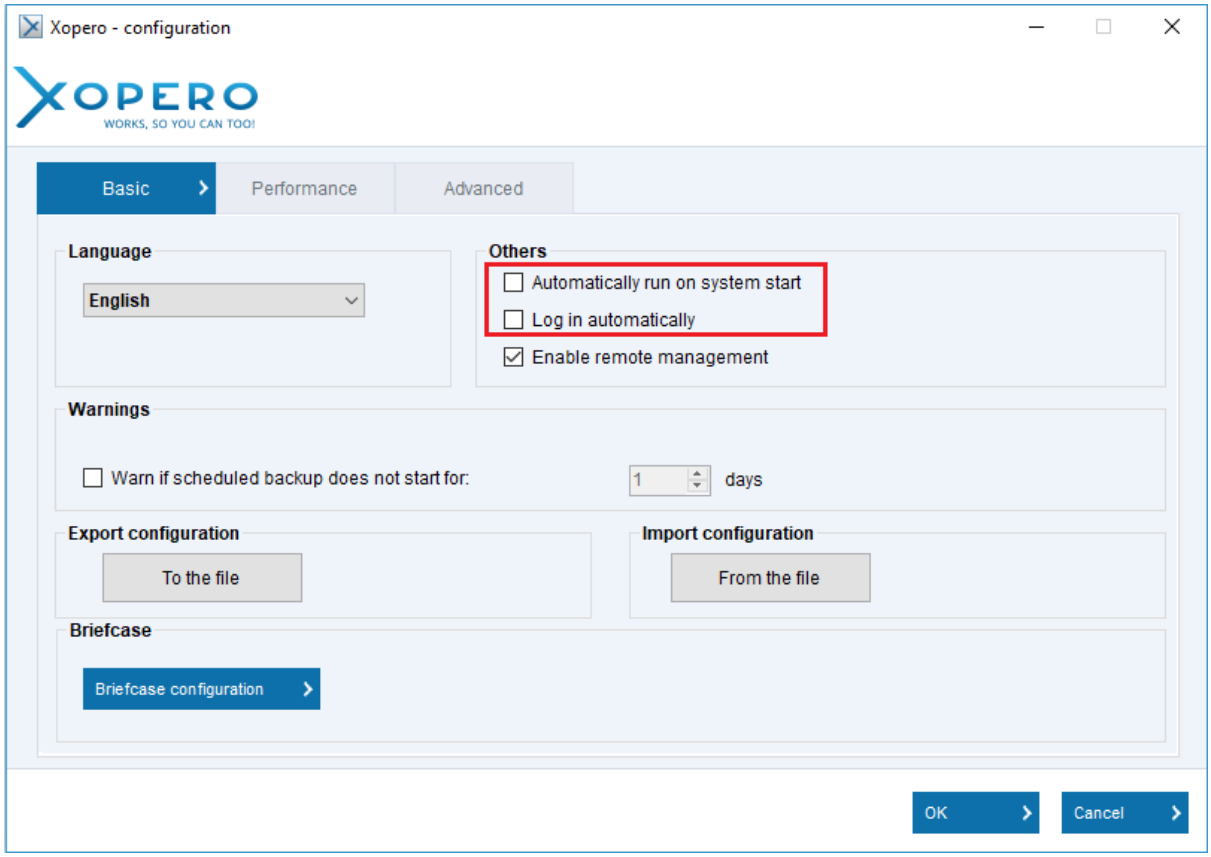
To disable the graphical interface in the client application, go to the application settings.



Then disable the options:

- Automatically run on system start,

- Log in automatically.



This will cause that during the system starts Xopero service will be started, while the interface will remain inactive. If you try to run the interface, the application will display a login screen where you will need to enter authorization data.

What is the cost of the license?

In matters of license prices and other sales issues, please contact our sales department one of our resellers.. Our specialists will provide you with all required information.

Available contact methods:

- Contact form on our official website,

- Email contact: sales@xopero.com,

- Contact by phone +48 95 740 20 40 internal number 2.

More details here: How to buy Xopero

What algorithms does Xopero use to compress data?

Data compression takes place directly on the device with the client application installed, which is responsible for backing up data. Xopero uses two algorithms for compression - for files/folders it is the Deflate64 algorithm, for HDD image copies the LZ4 algorithm.

Compression ratio:

Algorithm	Compression ratio	Comments
Deflate64	40-60%	Not all file types can be compressed with equal performance - for example, text files usually compress well, achieving a high compression ratio, while other formats, such as multimedia files, do not compress properly and achieve very low compression rates, no matter how strong (and slow) compression is used.
LZ4	60%	The stream compression provided by LZ4 allows you to maintain a stable compression ratoi - 60% of disk usage (empty blocks are skipped in the backup process)

How to protect virtual environments other than Hyper-V and VMware?

Virtual environments that are not natively supported by our application - such as Nutanix, Proxmox or XenServer - can be protected by the so-called "inside" method.

This method requires to install desktop application directly inside the virtual machine so that it will be treated as a physical host. After installing the application just select the resources to backup (for example, Disk Image - if you want to secure the entire machine - or individual components, such as databases or specific files).

Cloud

What is the backup in cloud?

Backup - creating backups of neuralgic data in order to restore after lost or damaged. Cloud or Cloud computing, in this model, storage application and information takes place on servers located outside local network, not on the user computer.

Will my data never leak out?

There is no possibility that third parties have access to user data or leaked to the outside. There is no access without user login and password. Whole files are encrypted already in the user device (AES 256) and in such form sent, also transmission is encrypted (SSL). In the encrypted form are replicated and stored on two servers in Data Center whichmeets the highest safety requirements.

Do the third parties have access to my data?

There is no possibility that third parties have access to user data which has been sent to Xopero Cloud servers. In user computer, before sending, files are split into smaller parts and subjected to encryption algorithm AES 256. In servers, files are stored in encrypted form and each part stored in a random location, thereby restore them by third parties is not possible.

How can I get to my data?

Backup files

Access to data, secured using backup projects, is possible through installed in system Xopero agent or Xopero Cloud Management Center application. Second solution allows to restore data from all available devices of any dependent user.

Briefcase files

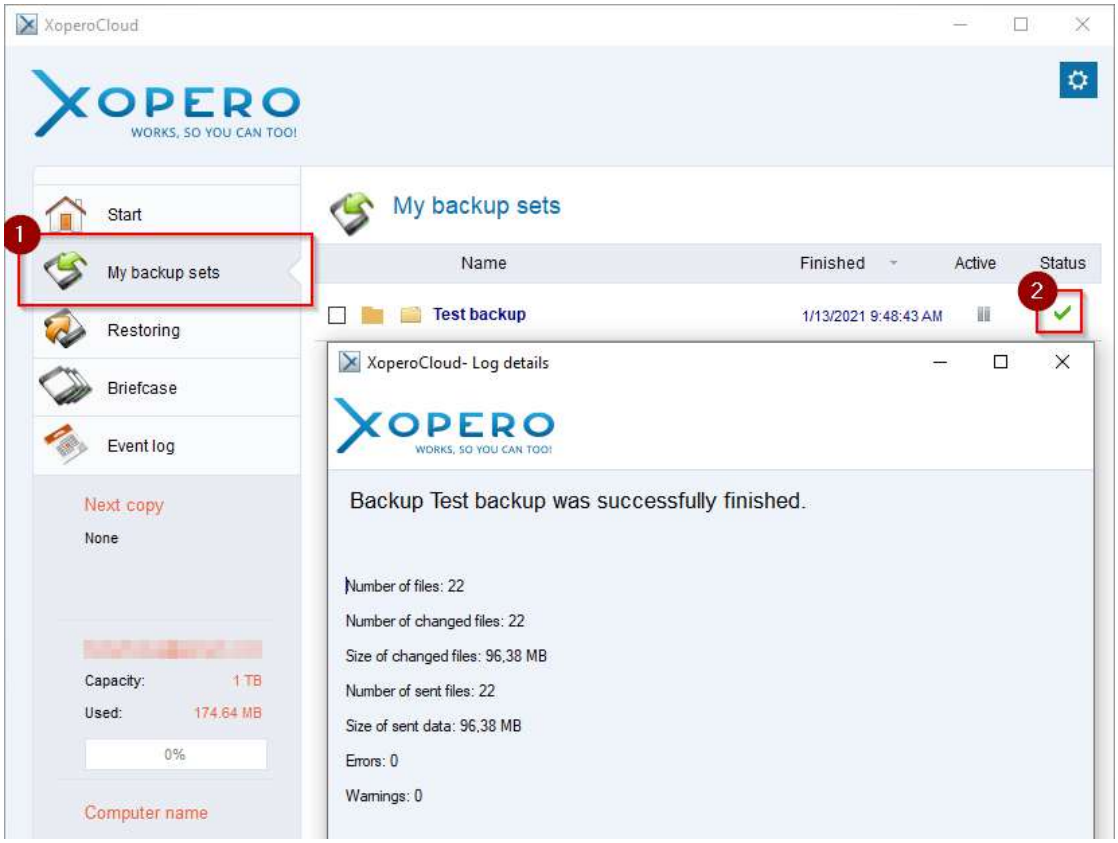
Access to data in Xopero Cloud briefcase is possible with any device connected with Internet. File control can be carried in following methods:

- by logging in to Xopero Cloud web panel on any web browser (login.xopero.com)
- through briefcase directory, configured on endpoint using Xopero Cloud agent

How do I know if the backup was done successfully?

Verification of backup correctness can be performed in following ways:

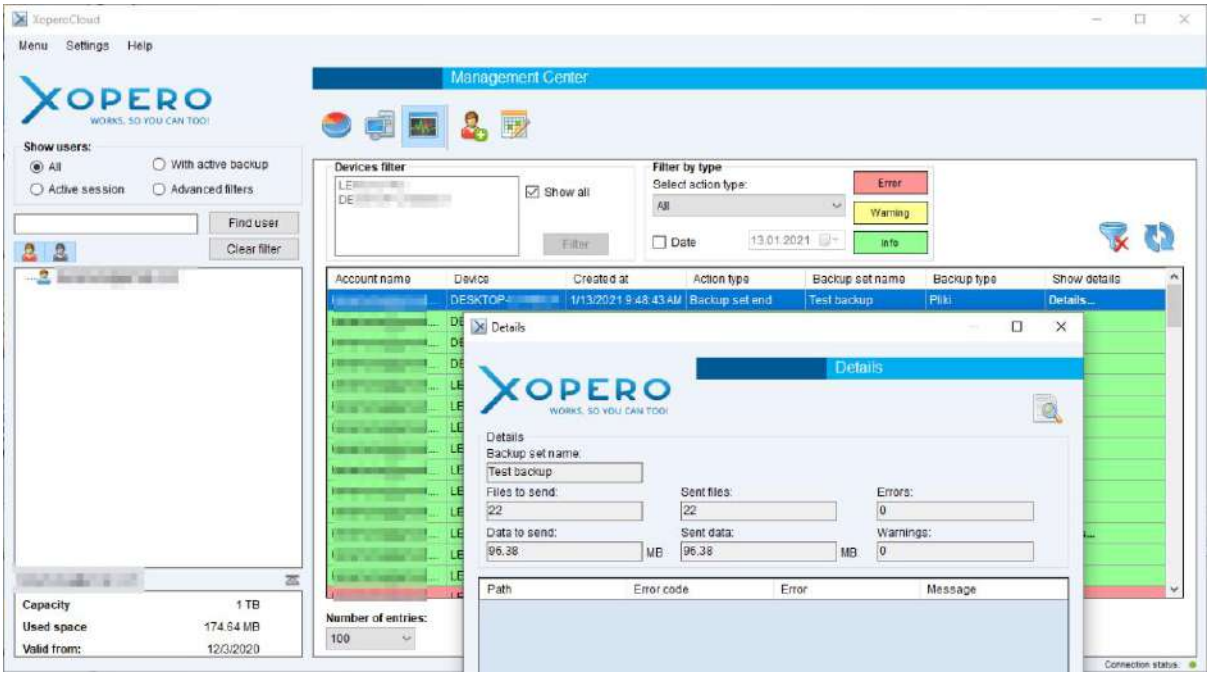
- **Using Xopero Cloud agent**
    - "My projects" tab - after clicking an icon in "Status" column of chosen project, additional information about backup will appear with adequate notes and details:



    - "Event Log" tab - besides information about aplication functioning, event log also infroms us if the backup projects were finished successfully.
- **Using Management Center for Xopero Cloud**

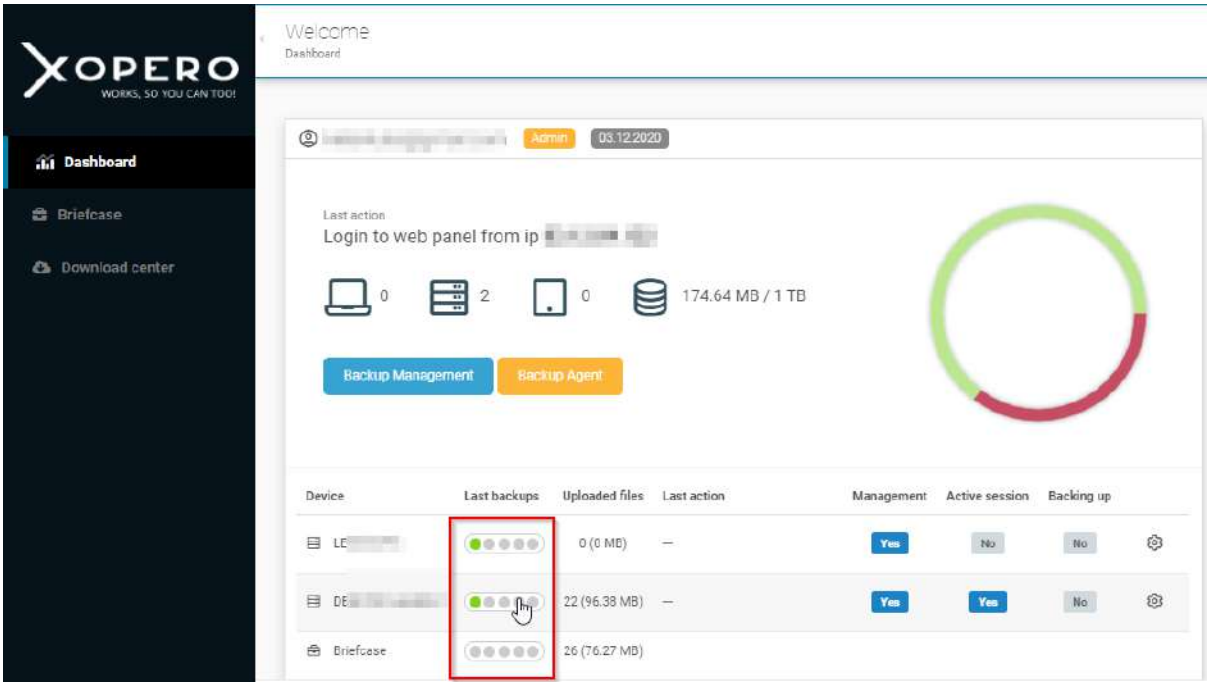
  "Logs" section, among other, has information about correctness of completed backup sets. Double left mouse clicking on event from the list or choosing

"Details" option from the last column "Show details" will cause viewing of additional info about chosen event.



- **Using web panel** - login.xopero.com

  Clicking on a graphic from the "Last backups" collumn of chosen device will cause viewing details about completed backups.



What data can be backed up using Xopero Cloud?

Xopero Cloud allows you to backup all of your data! From the local files that are on your computer, the files MS Outlook or MS Exchange and ending with databases (like MS SQL, PostgreSQL, MySQL, Firebird) as well as files stored on network devices. Additionally user can perform backup with pre and post scripts written by themself in Power Shell.

What is the Briefcase?

Briefcase in Xopero Cloud is a remote space to keep and synchronize files in cloud. Added there data are automaticly uploaded to Xopero Cloud servers from which, using another device with Internet connection, we can read, modify and save those data in current and actual form. Each device connecting with briefcase gets access to identical briefcase state. This feature can be used, among other things, for remote cooperation with particular files or as a remote data storage. Another meaningful function of briefcase is generating public links with access to chosen file, working similary to file hosting.

Access to Xopero Cloud is possible with:

- Xopero Cloud client application and configured briefcase directory with this app
- Xopero Cloud web panel (login.xopero.com)

Can I view the files in the Briefcase?

User can browse it's briefcase content anytime and anywhere. It can be done by using:

- computer with Internet connection, with installed client application (Xopero Cloud agent) or with management application (Xopero Cloud Management Center)
- any device with access to Internet and installed web browser, by using web panel login.xopero.com

What files are selected when choosing an automatic backup?

For automatic backup are included all local files from user directory, which does not exceed the size of 4GB and are not in the directory briefcase.

Where is the briefcase directory created by default ?

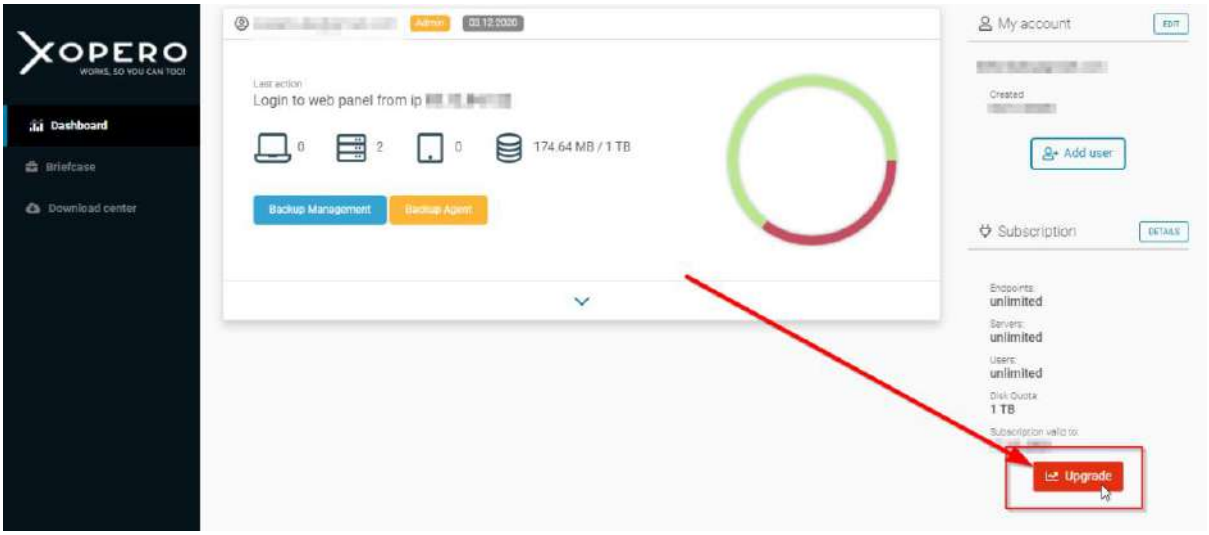
If you choose automatic configuration the briefcase directory will be installed in local Windows user directory. The name of directory is Xopero Cloud. In order to display contents of briefcase directory enough that you run the application, and in *Briefcase* tab you click *Go to Briefcase*.

What happens if I reach maximum capacity?

In a moment when user fills out the maximum capacity available in cloud an e-mail notification will be sent and backups will stop processing. Sychronization will also be stopped. Before that situation will happen though, user will be warned about oncoming lack of free space with email.

User can modify it's account anytime, therby increase the available space on it's account. It can be done in few ways:

- by extending available space, after contacting Xopero sales department (sales@xopero.com) or by choosing "Upgrade" option in Xopero Cloud webpanel:



- by acquiring free space through deleting excessing and no longer desired data.

  It's worth to mention here, that deleting backup sets won't cause deletion of of data included in those backup tasks. Function that allows deleting already backed up files is available in restoring options.

How to add another user?

Another users you can adding if you using Xopero Cloud Endpoint&Server. Limit the number of users specifies the product that you chose. During the addition new users each of them is assigned a part of the space from the available pool, in which user can perform backup and data synchronization. Each newly added user can also use thehosts in the amount specified in the parameters of the subscribed product

How to create public link?

User, to selected resources from briefcase and backup encrypted by user key, can generate links which can be send to another person. In order to generate public link to selected resources must previously mark them, and then click on the icon *link* which is located above the file list. Window, with public link indicated resources, and its expiration date, will be displayed.

What does it mean, that Xopero Cloud uses SSL connection?

SSL is abbreviation of Secure Sockets Layer. This encryption protocol protect communication on the Internet using encryption and authentication. The protocol is often used to perform secure electronic transactions by the Internet, e.g. banking transactions online.

What ports does the Xopero Cloud application use on my computer?

Xopero Cloud use the standard ports. All of communication between Xopero Cloud service and our servers done through the 443 (SSL) and 80 ports. It is thus not necessary to change the firewall settings or Internet security software in order to be able to use the software.

Xopero Quick Start - inactive account

Once your account has been created you will have to go through a few steps. The following manual will guide you through the process of preparing an account and creating the first backup:

1. After registration in Xopero Cloud you will receive activation email. Click the activation link in the email you will receive or copy and paste into web browser.

Dear n.bak0203,

congratulations! Your Xopero Cloud account has been created.

Before you can start doing and managing all your backups you need to activate your account first. Just click on the link: https://cloud.xopero.com/activate/2e7995dd-47f3-41c6-8ceb-ef0fb47e7e63

Login: **n.bak0203**
Windows client application: https://cloud.xopero.com/setup/windows

Xopero Cloud is an advanced solution for online backup, which enables unlimited protection of computers, databases, physical and virtual machines. All data is encrypted by AES 256 algorithm – the very same which is globally used to secure financial operations. So you have a guarantee that they are well protected.

+48 95 740 20 40
support.xopero.com

Regards
Xopero Cloud

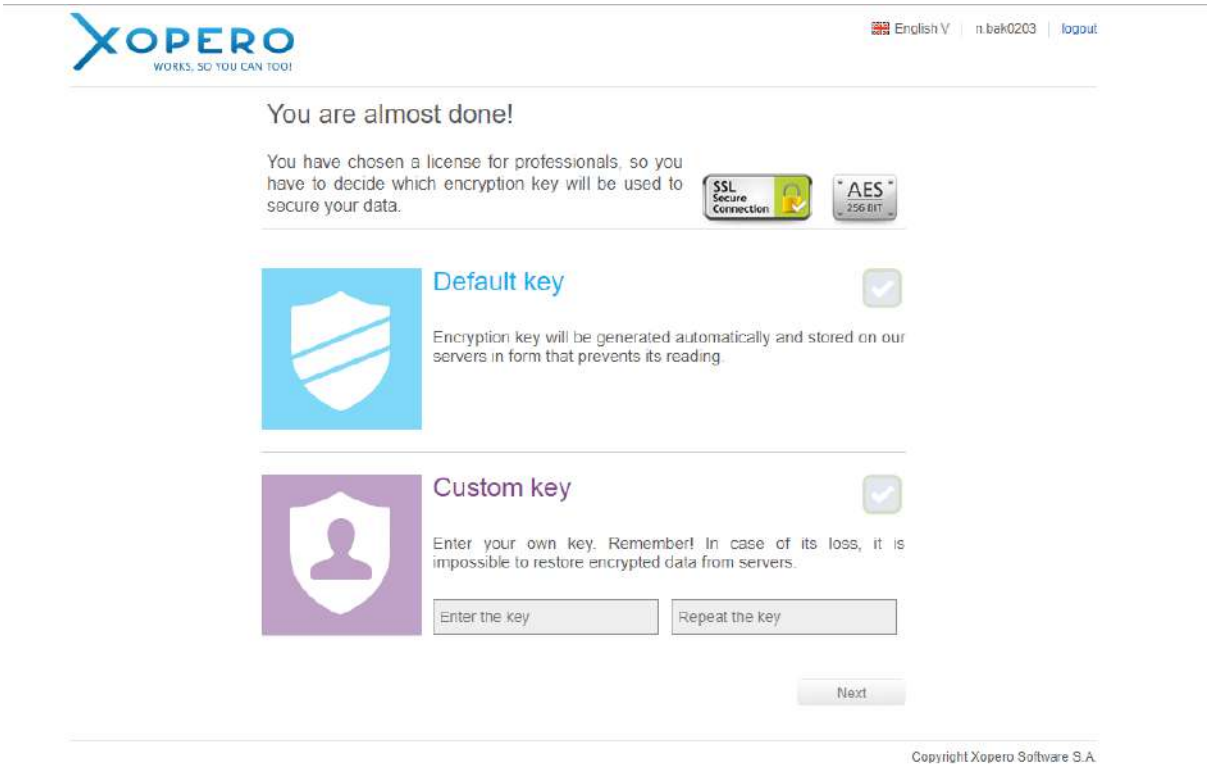
2. You will be redirected to the Xopero Cloud website, where you have to set up a password for the account.

3. After password set up, you will be able to log in.

4. During first login you have to choose the encryption key:

- Default - will be generated automatically and stored in a database on Xopero Cloud servers.
- Custom - provides higher security of your data than the default key, is known only by the user, is not stored on the Xopero Cloud servers, therefore the user duty is to properly secure. In case of loss user key the data sent to servers Xopero Cloud are impossible to recover.

All files sent by Xopero Cloud application are encrypted on the client side by the AES 256 algorithm. User can choose one of two keys, which will be used to encrypt the data.



5. After selecting the encryption key, a dialog window, which lets you download the application will be displayed. Applications for download are also available in the Download applications tab.

You should download Agent application - marked as Windows in Download applications tab.

XOPERO
WORKS, SO YOU CAN TOO!

Welcome!

You made right decision!

What you should know about our solution:

Security

You can be sure that your data is completely safe. Each file sent via our application is encrypted before sending to servers by unbreakable AES 256 algorithm and the transmission is secured with SSL certificate.

Mobility

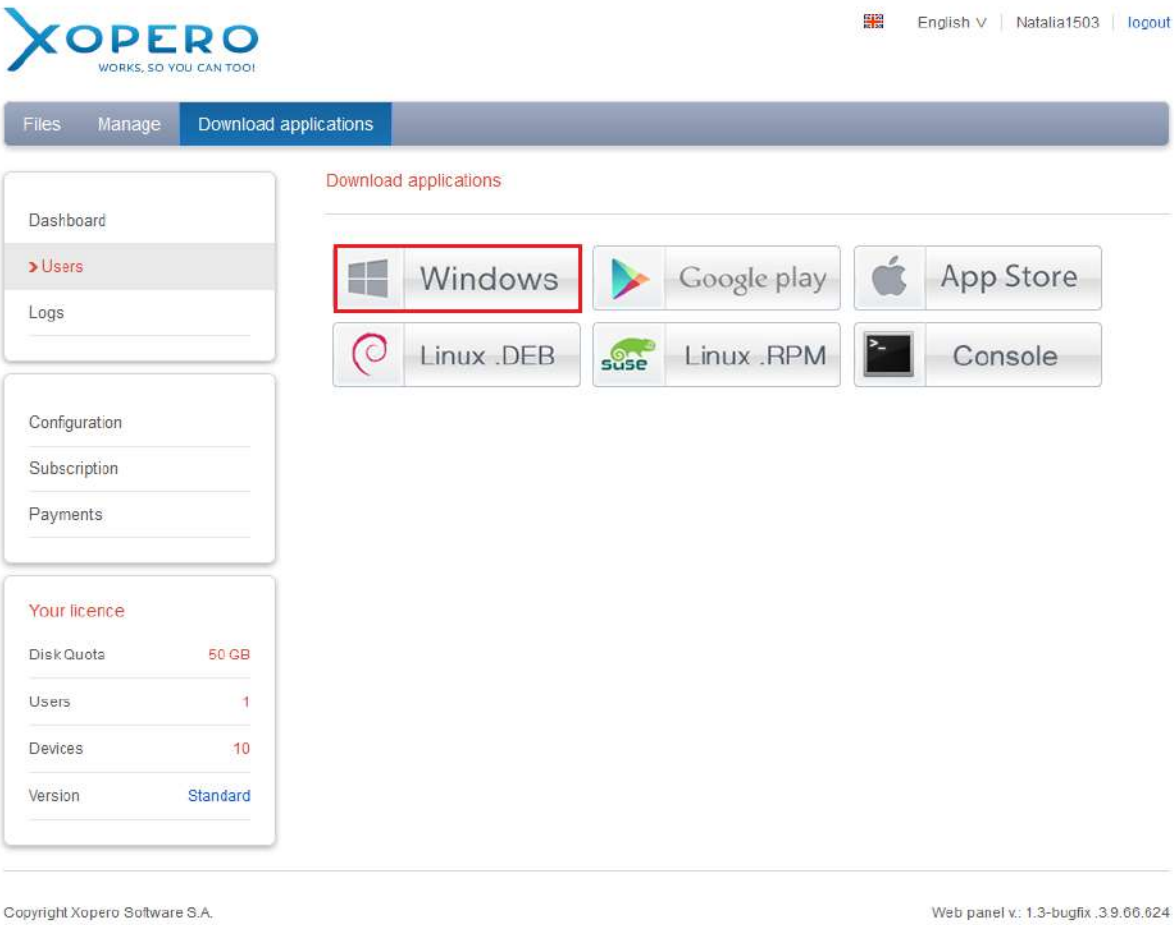
Access to data from anywhere in the world? Yes, it is possible. Mobile applications and WEB panel allow you to access your files and documents wherever you are. Download, send and share data with no limits.

Desktop application

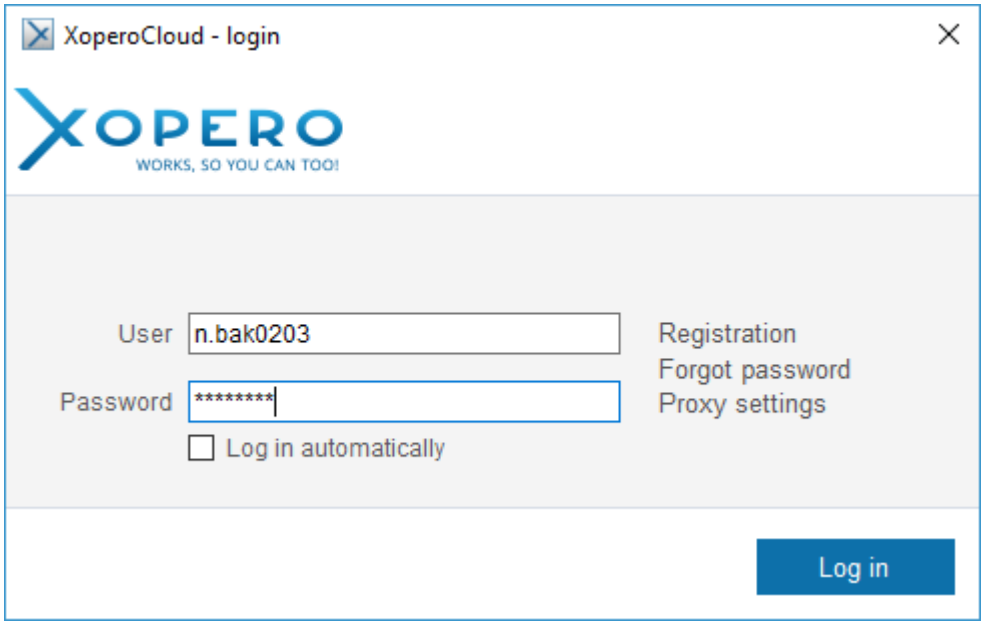
Perform complex backup of valuable files. Install the application on computers with Microsoft Windows OS and start creating safe backup and sync data between few devices.

Download

Do not show again



6. After downloading and installing the application, log in using the previously entered credentials.



7. Go to My backup sets tab and choose New backup set option.

Xopero Quick Start - active account

Once your account has been created you will have to go through a few steps. The following manual will guide you through the process of preparing an account and creating the first backup:

1. After registration in Xopero Cloud you will receive e-mail from your administrator with your login and password. If not, contact them.

2. If you have a password for your account, go to the login page (for EU and US) and enter credentials.

3. During first login you have to choose the encryption key:

- Default - will be generated automatically and stored in a database on Xopero Cloud servers.
- Custom - provides higher security of your data than the default key, is known only by the user, is not stored on the Xopero Cloud servers, therefore the user duty is to properly secure. In case of loss user key the data sent to servers Xopero Cloud are impossible to recover.

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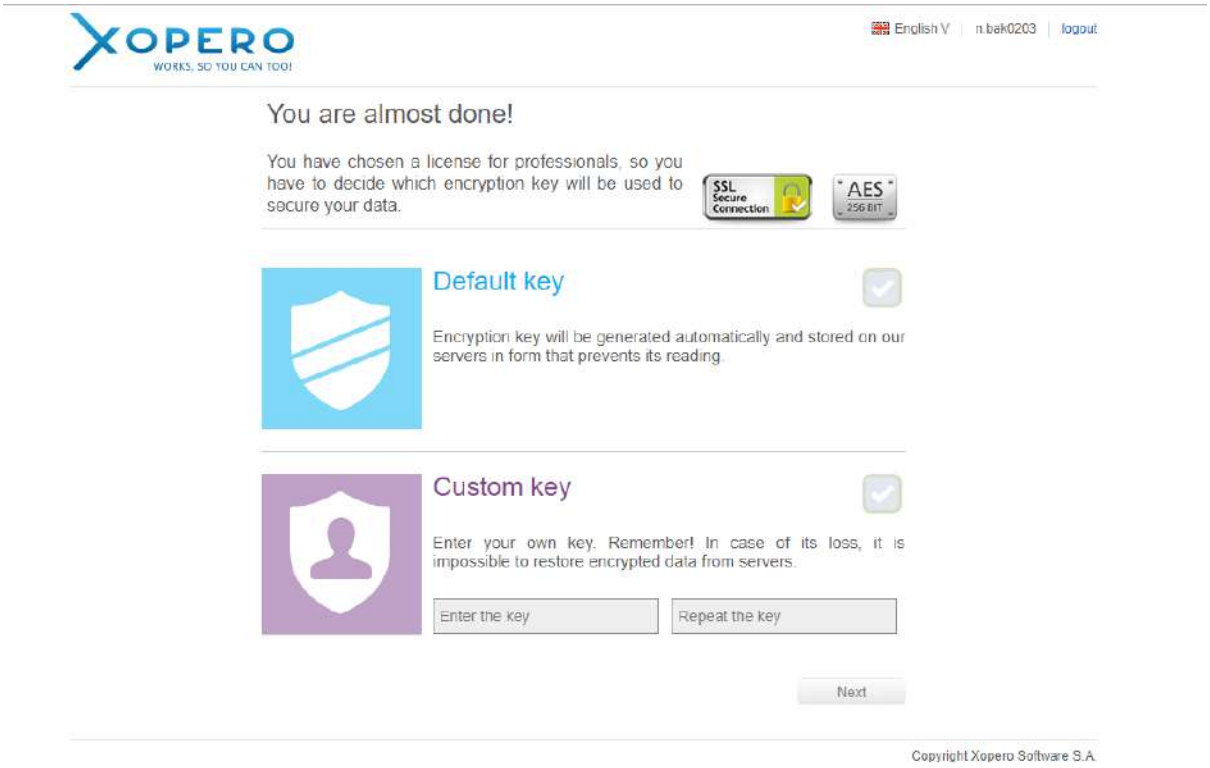

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You should download Agent application - marked as Windows in Download applications tab.

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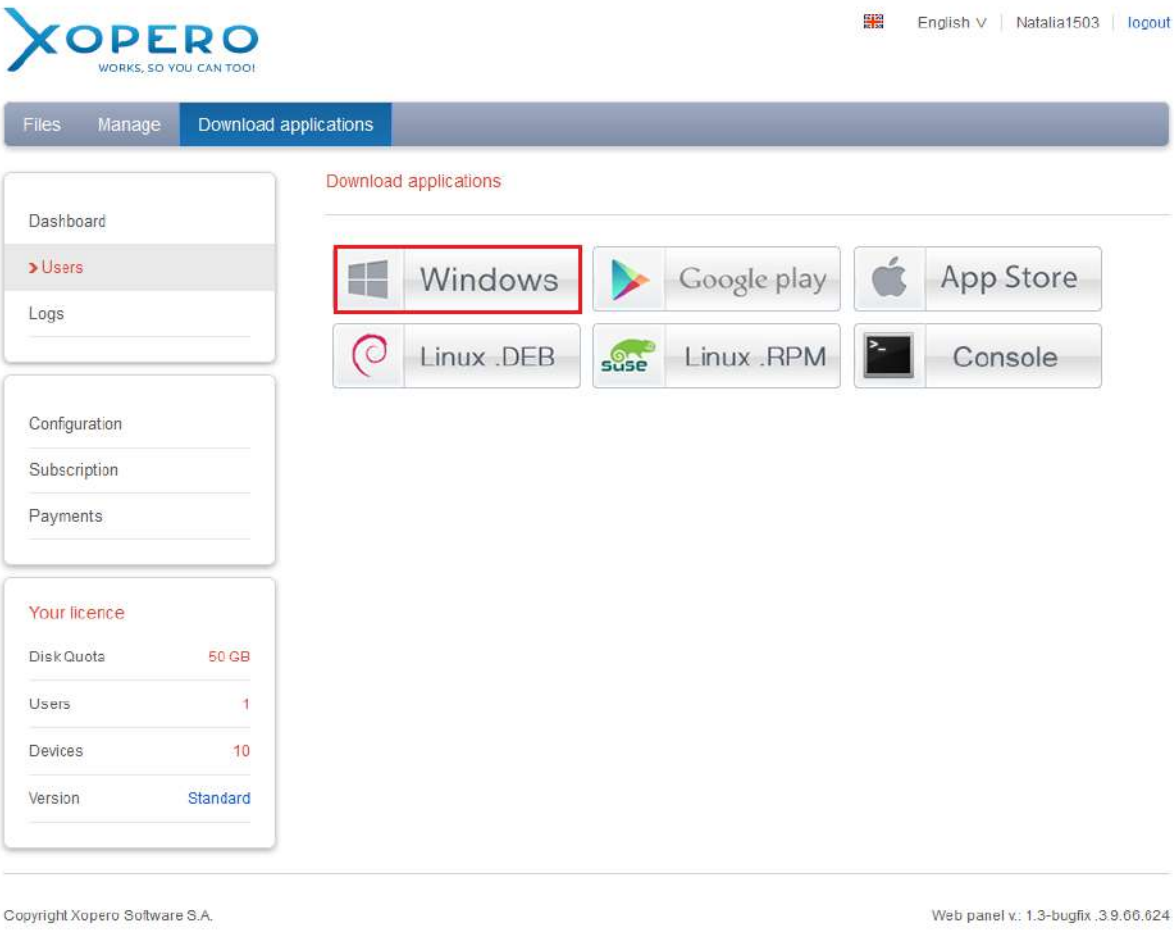

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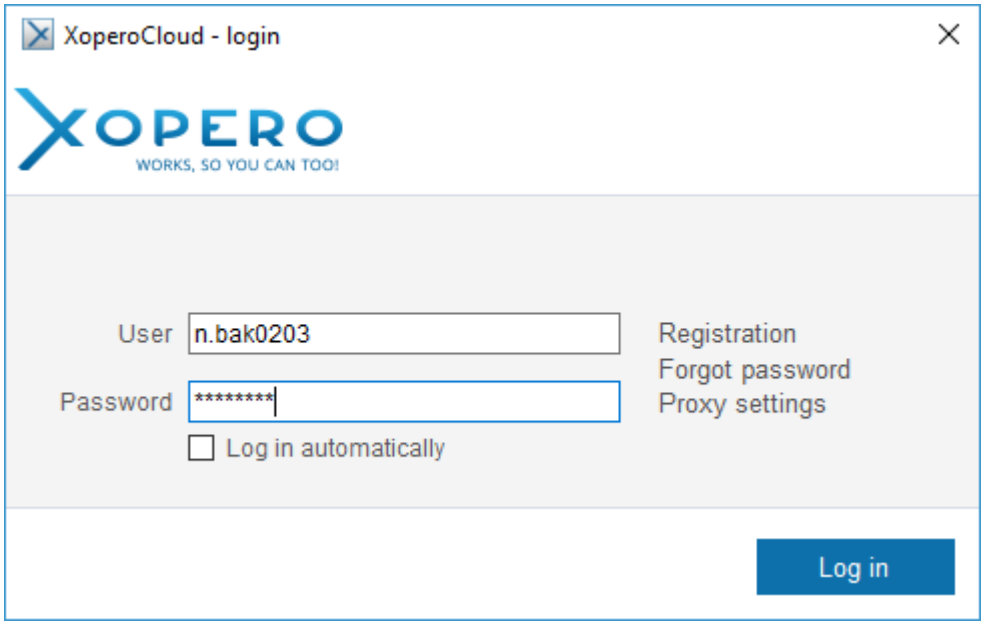
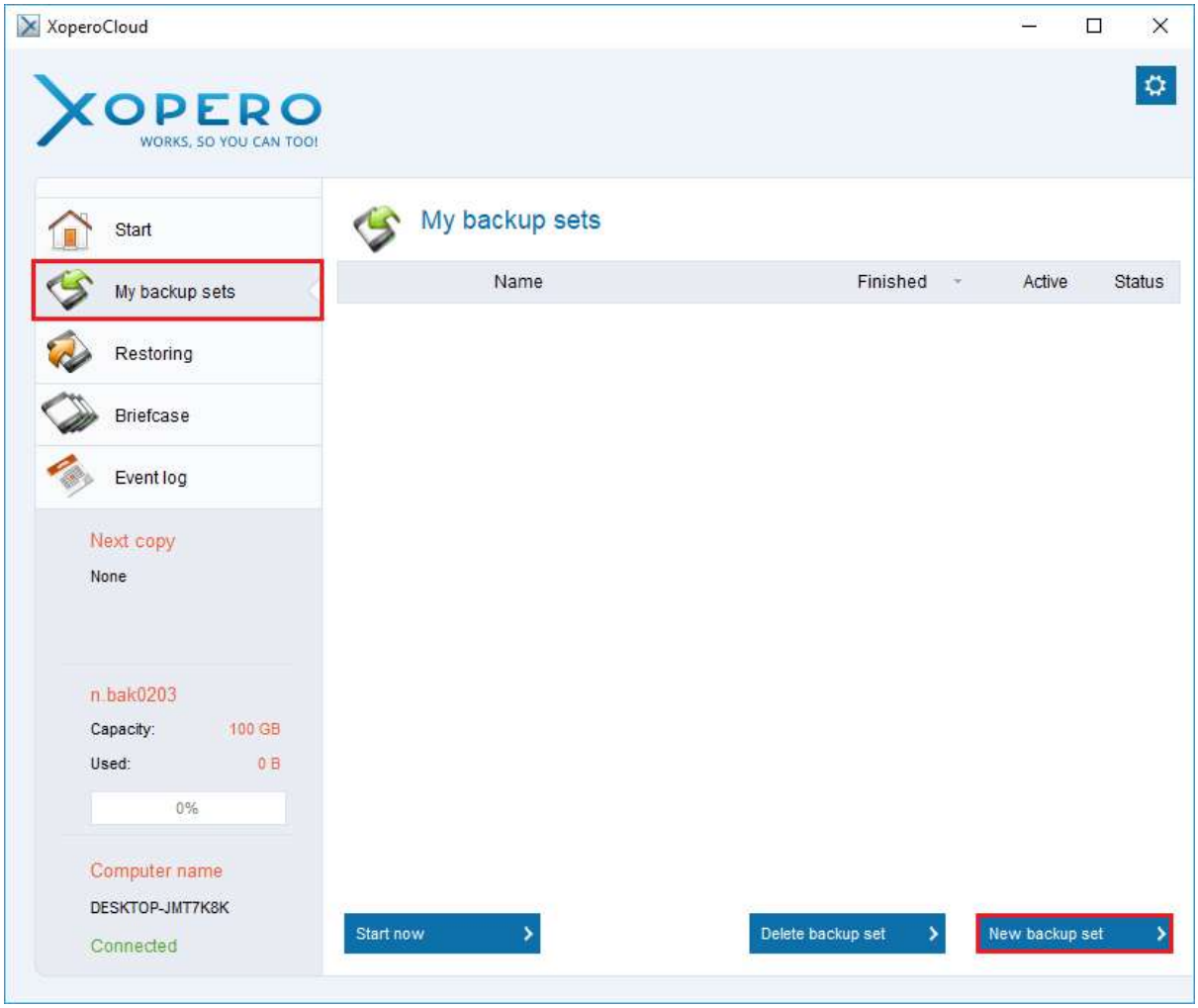
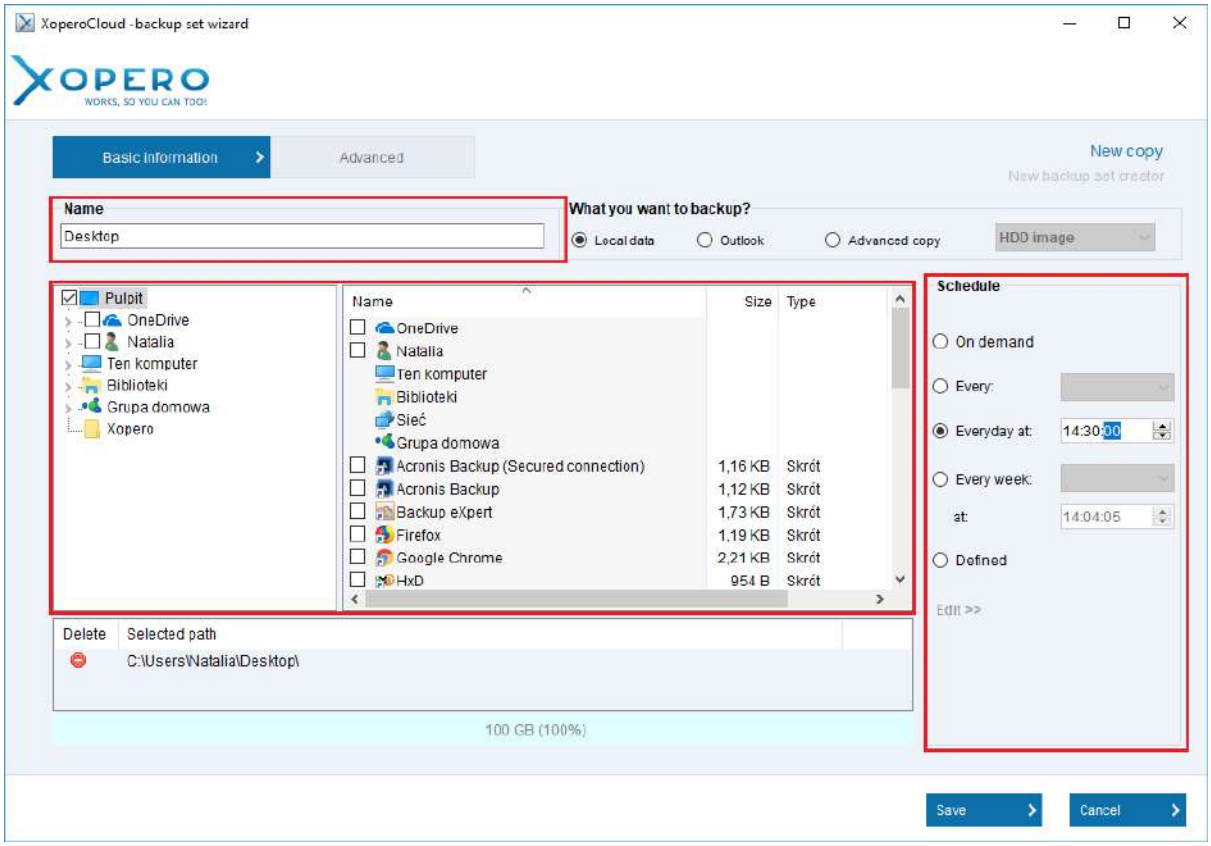


6. Go to My backup sets tab and choose New backup set option.

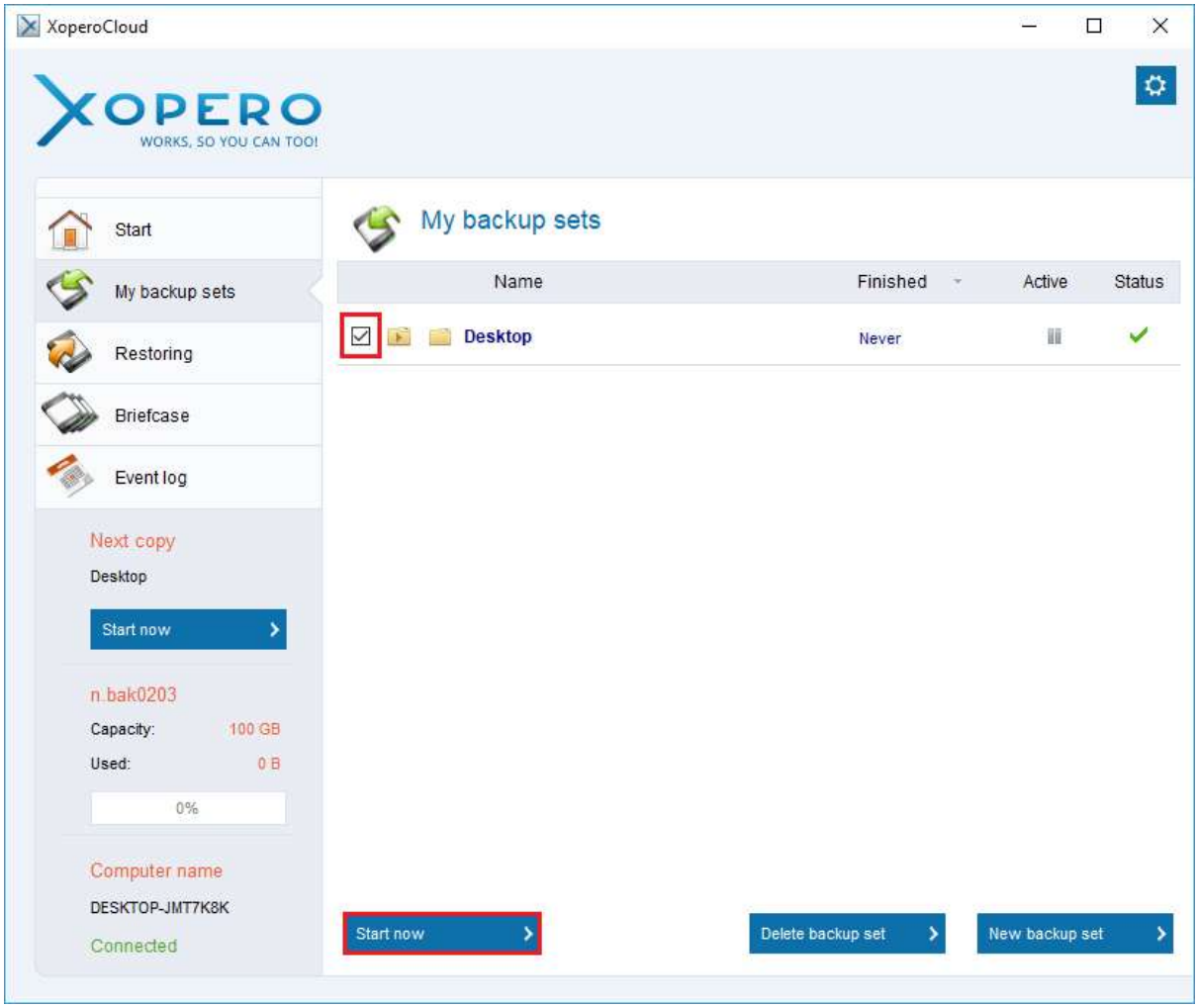


7. Define backup:

- Enter the name of the project,
- Select the type of project (default is local data),
- If you select local data, indicate what you want to backup,
- Set a schedule,
- Save the project.



8. If you have set a schedule, the project will start automatically at the appointed time, if not, you have to start it manually - select the checkbox next to the project, then click on the Start now option.


XoperoCloud
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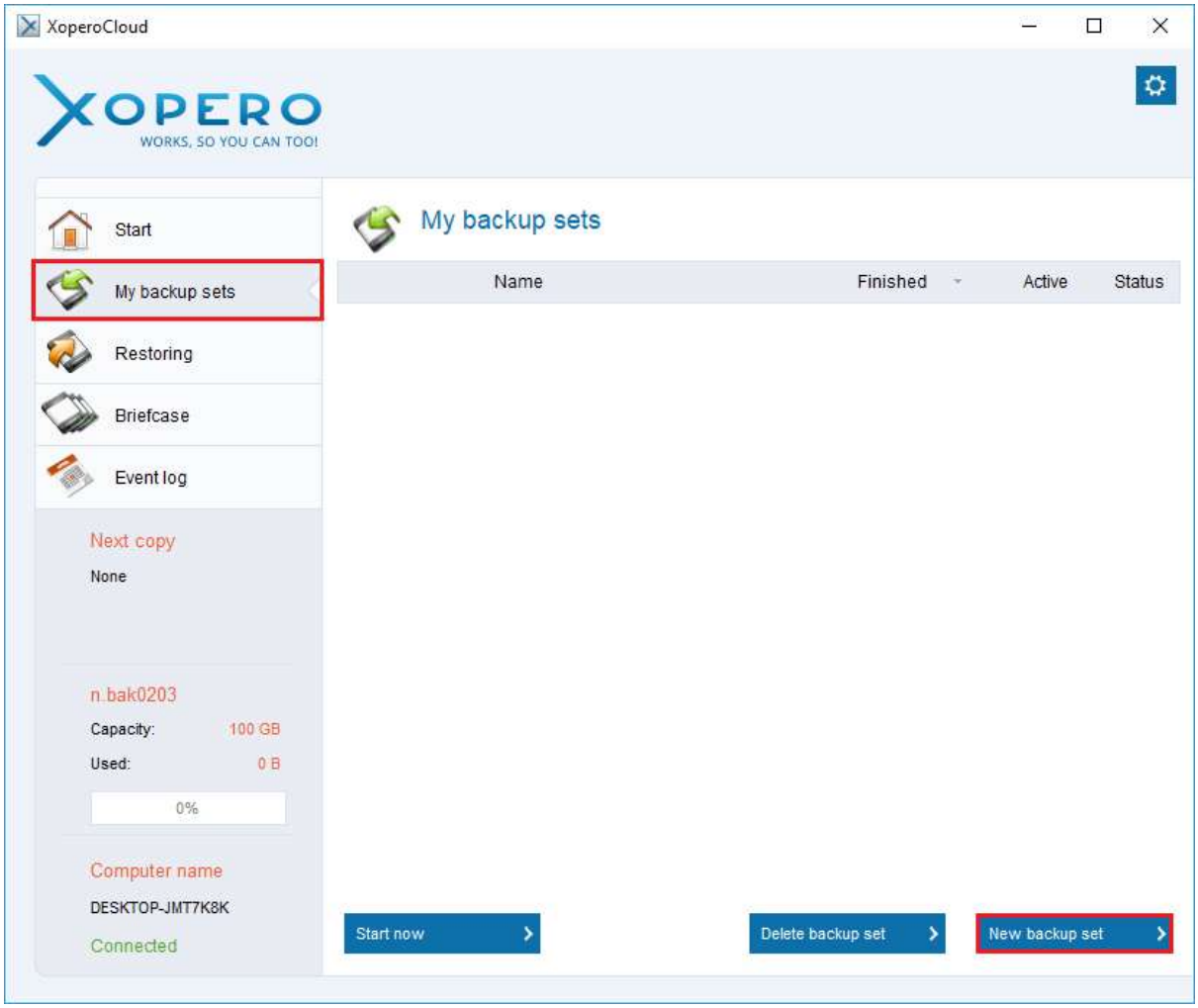
Start
My backup sets
Restoring
Briefcase
Event log
Next copy
Desktop
Start now
n.bak0203
Capacity: 100 GB
Used: 0 B
0%
Computer name
DESKTOP-JMT7K8K
Connected
My backup sets
Name
Finished
Active
Status
Desktop
Never
Start now
Delete backup set
New backup set



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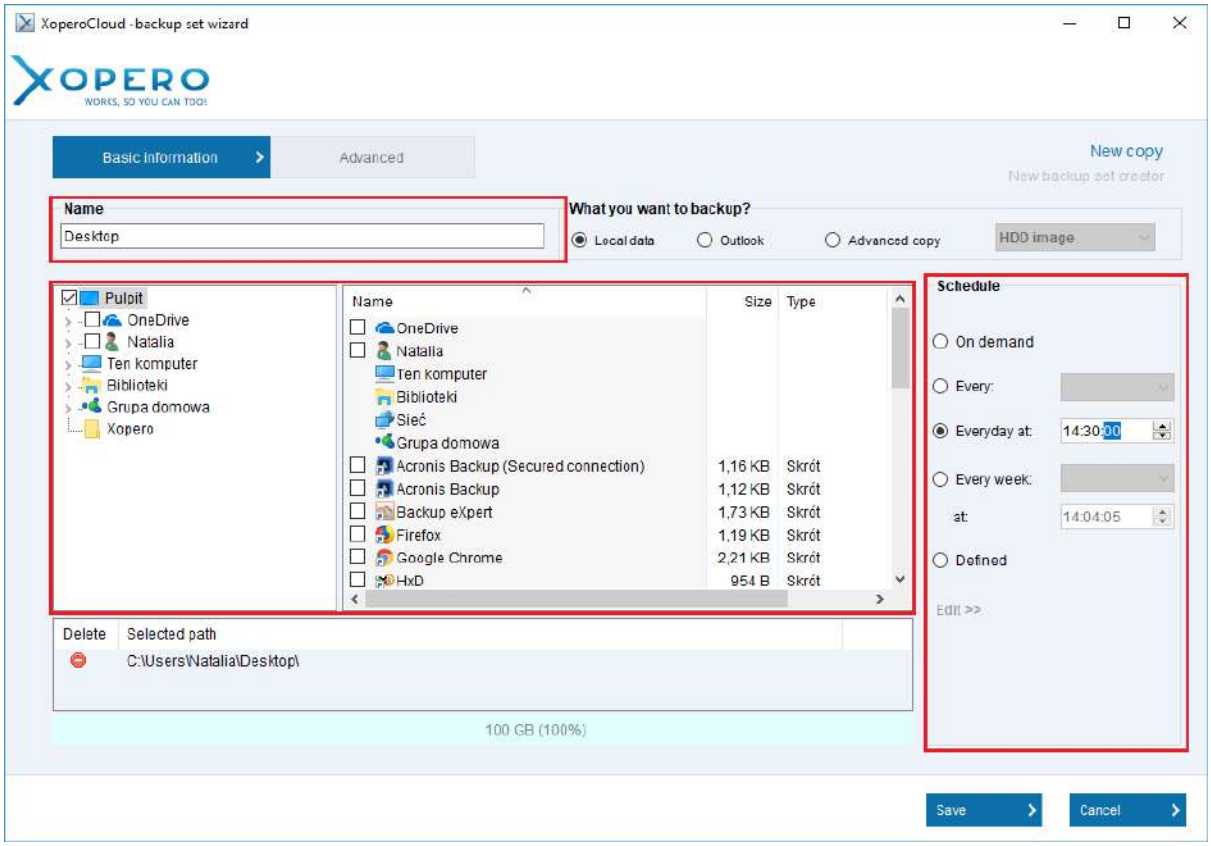

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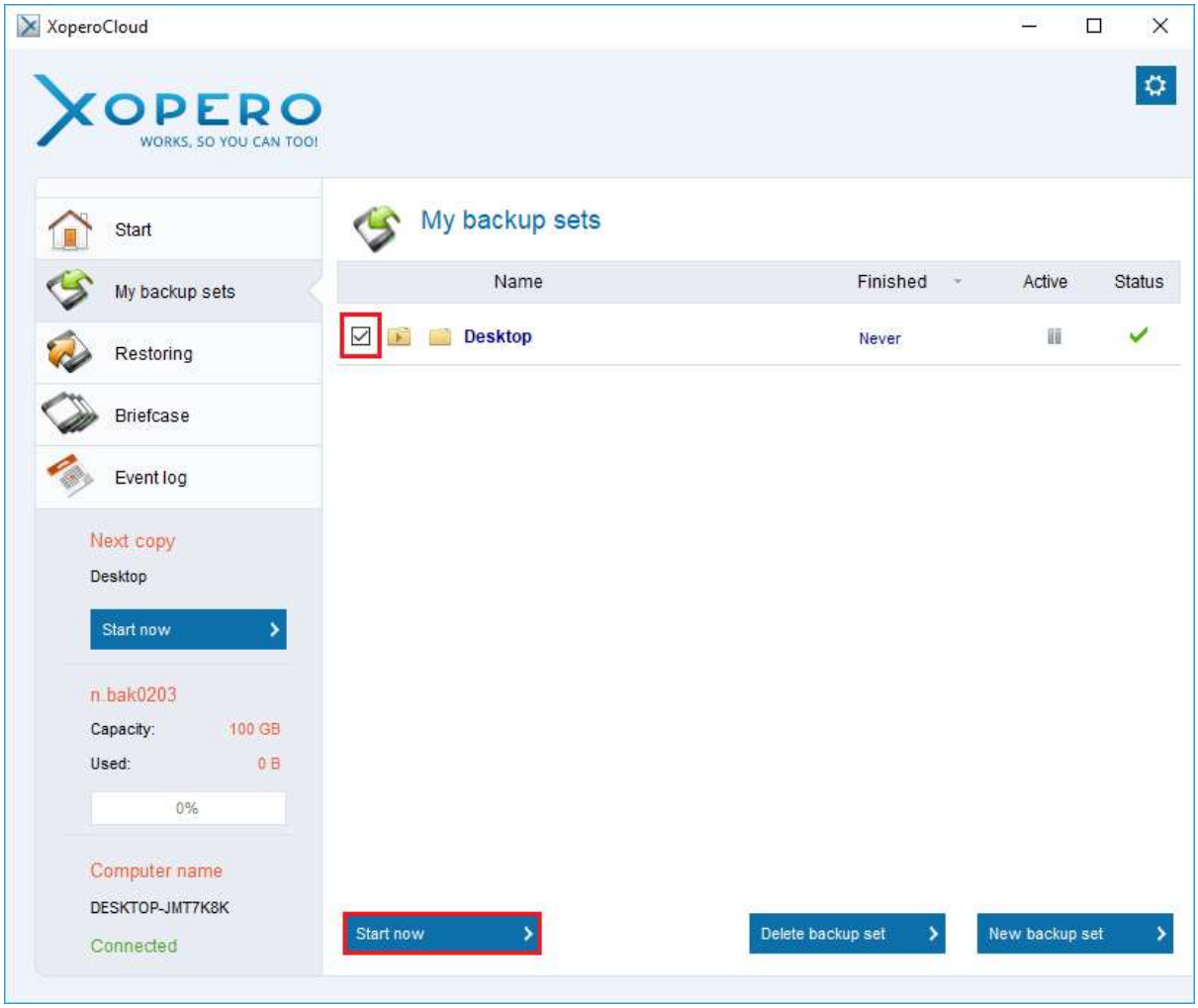


How to renew the subscription?

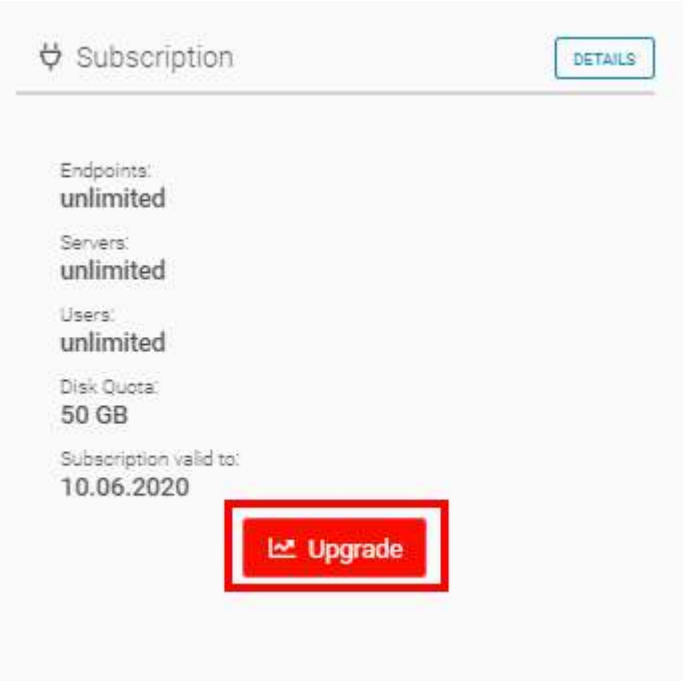
At any time during the subscription period, as well as for some time after its expiration, it is possible to renew the subscription through Webpanel Xopero.

The renewal is made by the Account Manager (Xopero reseller or directly Xopero).

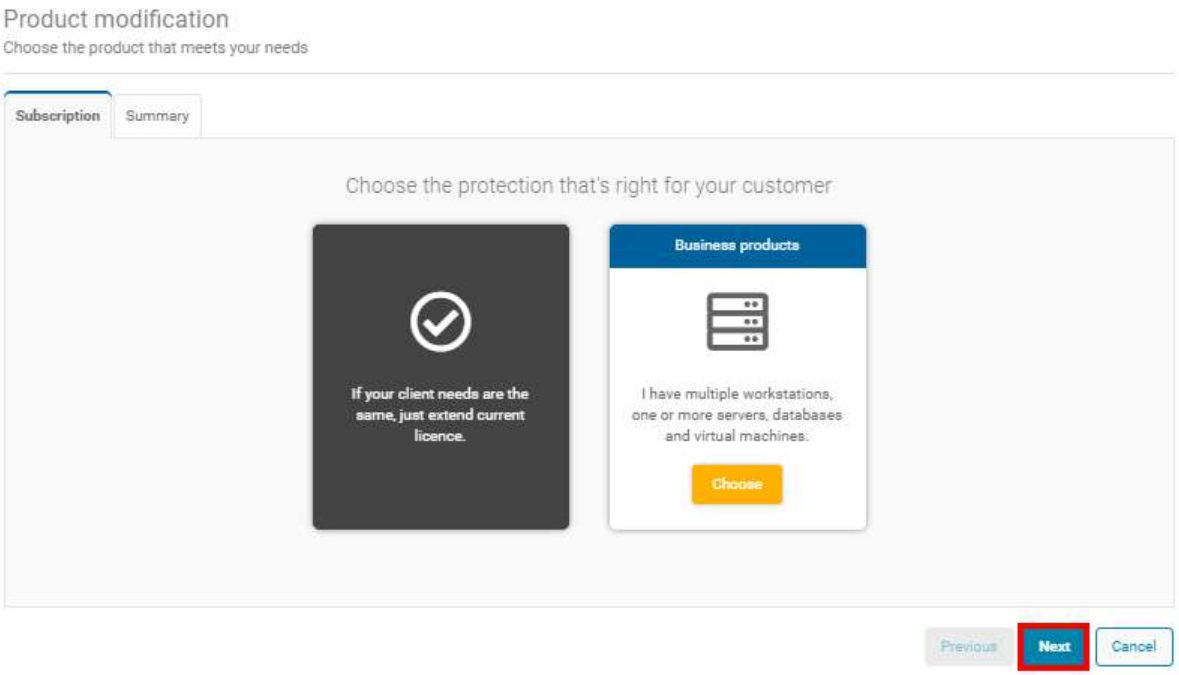
To report to your Account Manager the desire to renew the subscription, log in to the Xopero Cloud panel.

On the right side in the Subscription section, select "Upgrade".

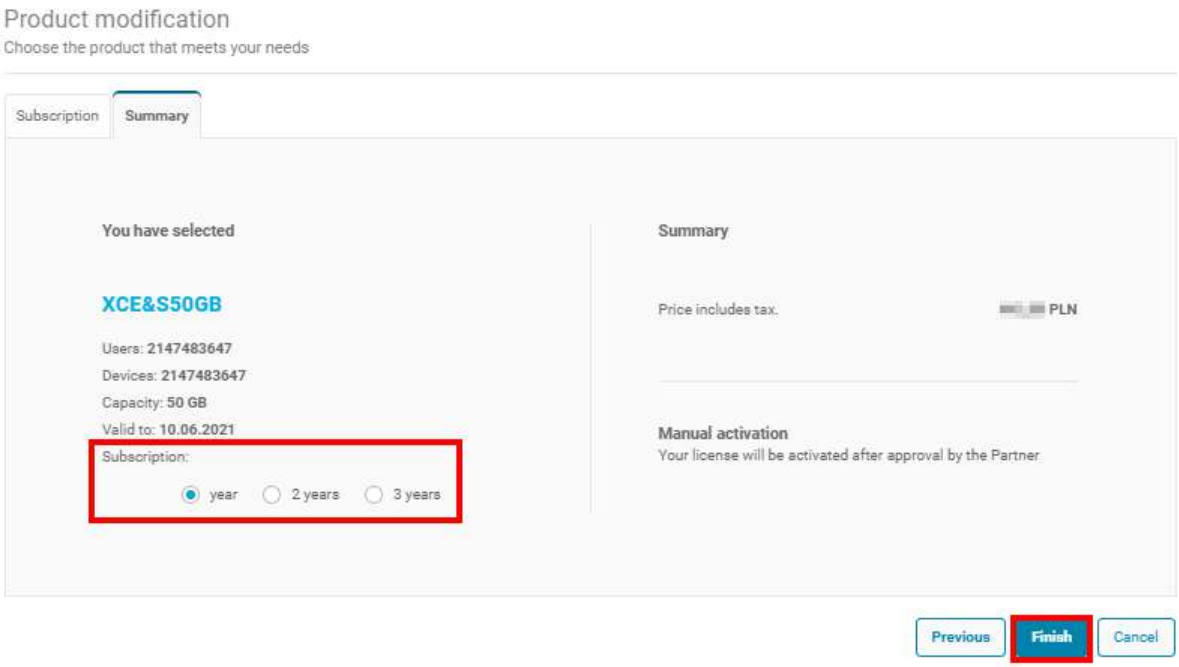
Attention! If this option is not available to you, please contact your Account Manager directly!



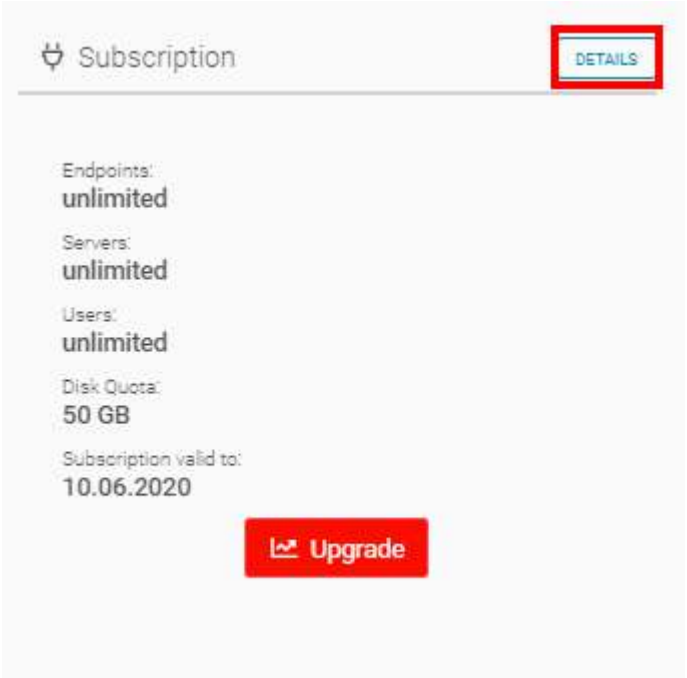
Choose subscription type. If you want to stay with the current subscription, just click "Next".



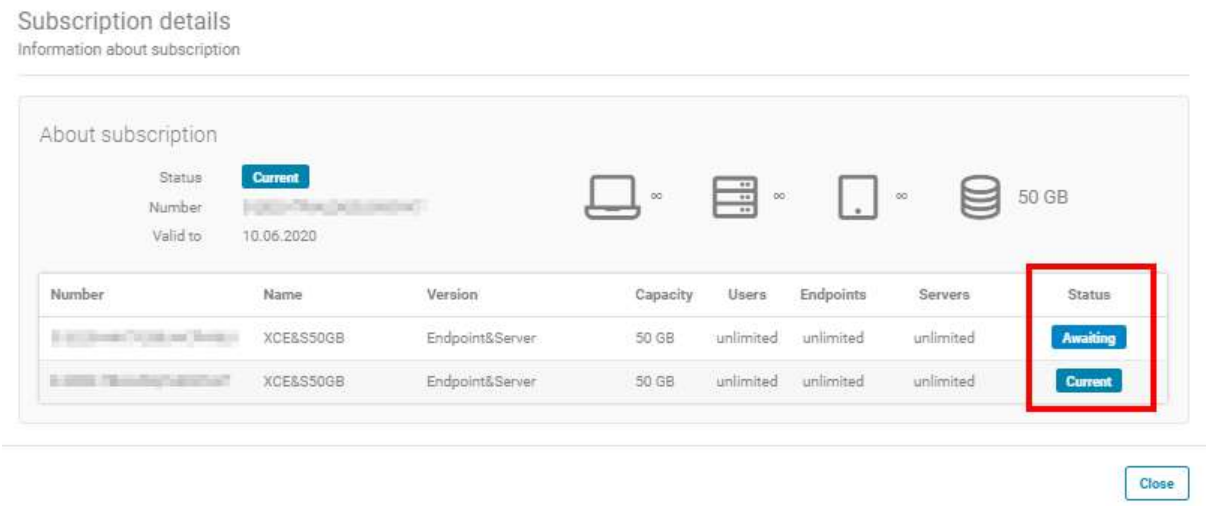
Choose the duration of the subscription. The price will be displayed on the right. Confirm the purchase with the "Finnish" button. The Account Manager will get information to extend the subscription.



You can check the subscription status by clicking "Details".



A list of subscriptions with their current status will be displayed. After the Account Manager accepts, the status will change from "Awaiting" to "Current".



Storages

Deleting files from storage

Cleaning the storage

User data, which has been backed up is physically stored on the hard disk, until they are being removed by a storage cleaning tool. Only the data that has been deleted by the user in the Xopero client application are subject to removal by the mentioned tool.

After deleting data in one of the above-mentioned applications, data in the storage is marked for deletion and finally deleted after 24 hours after being marked.

If the user wants to delete the data from the storage earlier, he can use the Storage cleanup option, which will start the cleanup process.

B&R storages replication

Within two servers

About replication

Replication is a process of duplication information between different servers. This operation allows you to limit the amount of data lost during the failure and restore the system to work.

Creating a iSCSI resource

To replicate the storage, create an iSCSI resource on the server to which you want to replicate data.

In the first step, log in to the selected server (it can be a domain controller to which other servers are connected) as Administrator, go to the Server Manager and choose the option related to adding roles.

QNAP storages replication

Within two QNAPs

About replication

Replication is a process of duplication information between different servers. This operation allows you to limit the amount of data lost during the failure and restore the system to work.

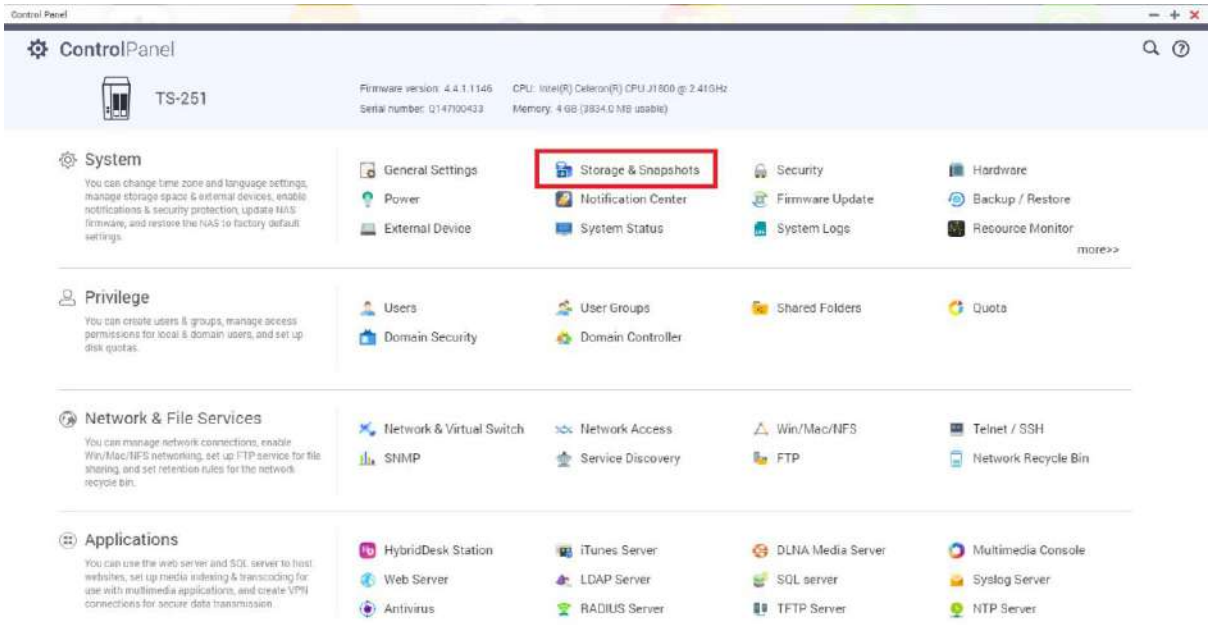
Creating a iSCSI resource

To be able to replicate storage to another QNAP, you have to create a iSCSI target on second QNAP.

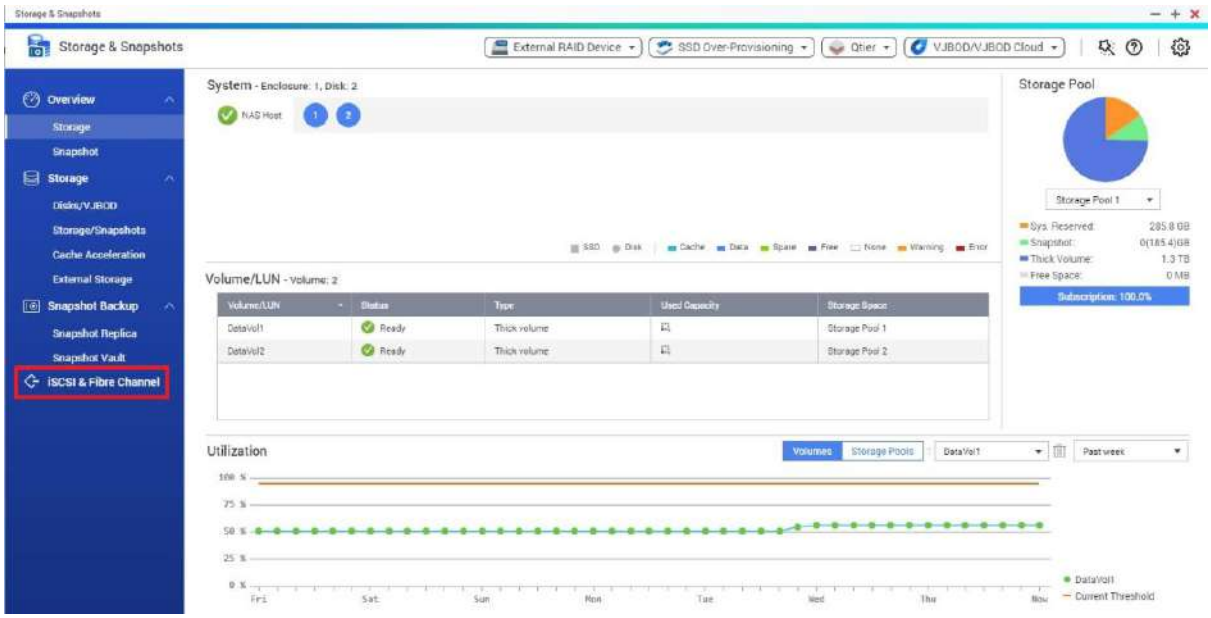
iSCSI target cannot include data!

In the first step go to QNAP's web panel and run the Control Panel.

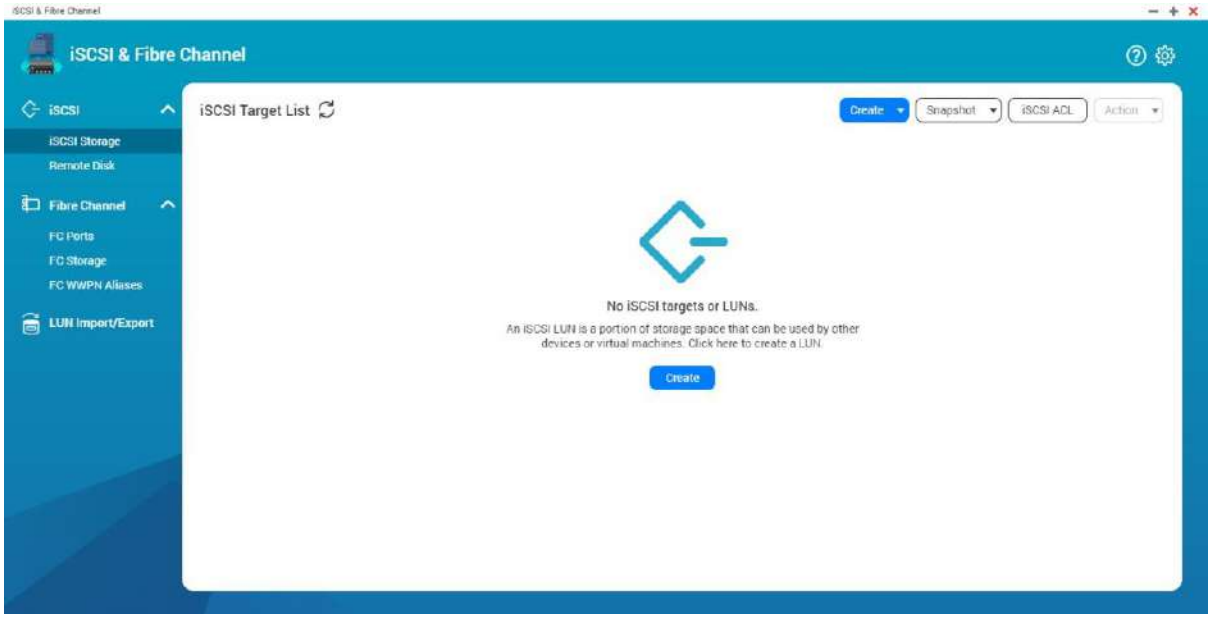
In the next step, go to the storage and snapshot manager window.

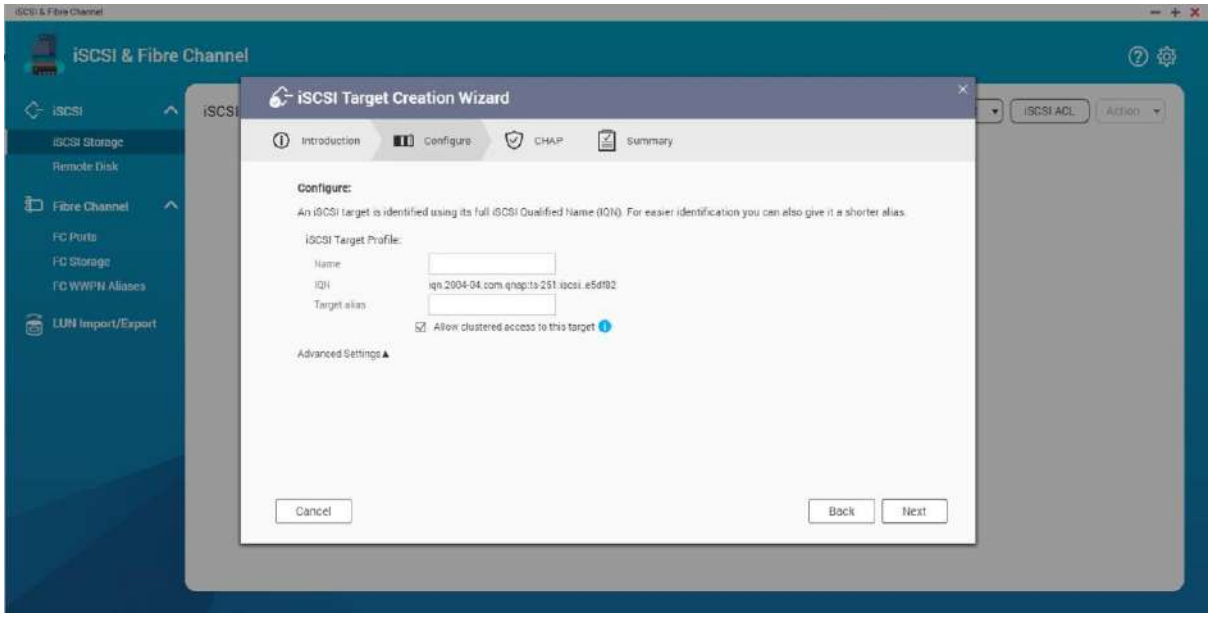


Then select the iSCSI and Fiber Channel tab.

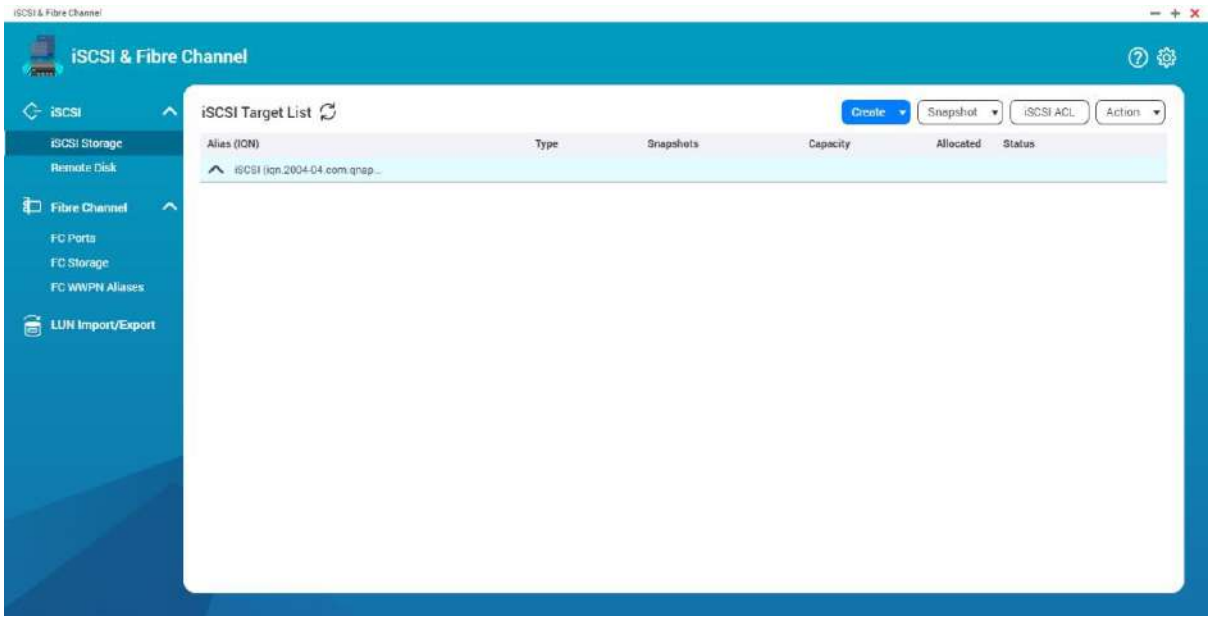


Select Create. A wizard window will be displayed, in which must define the parameters of the iSCSI storage being created. **Remember to create iSCSI Target with a mapped LUN.**

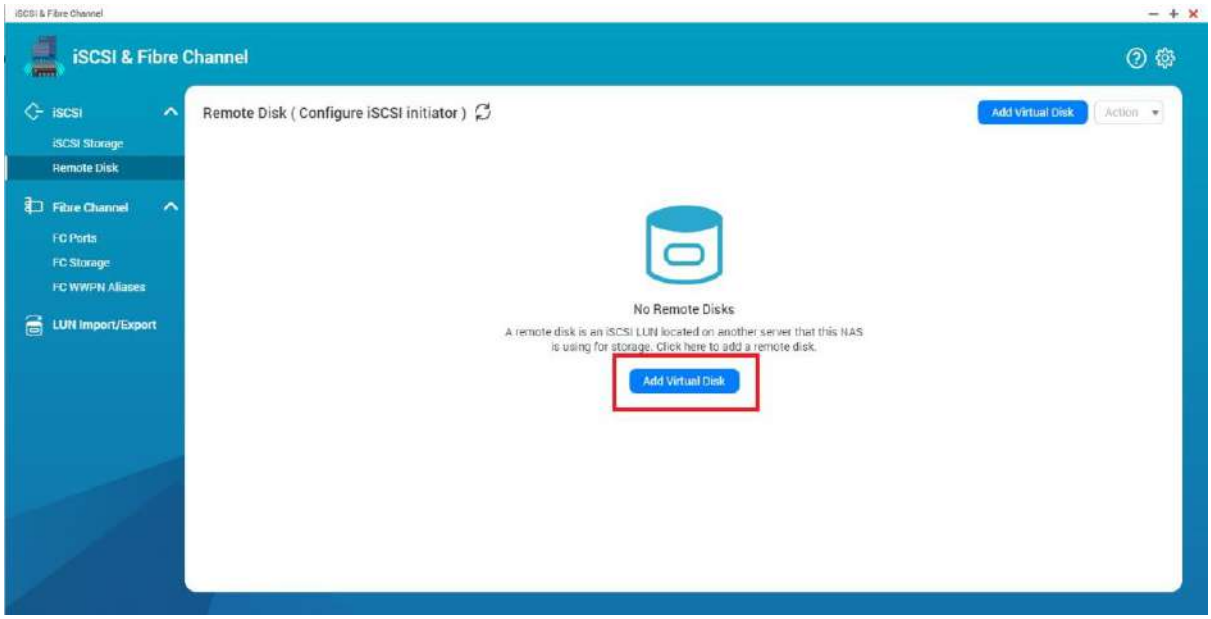




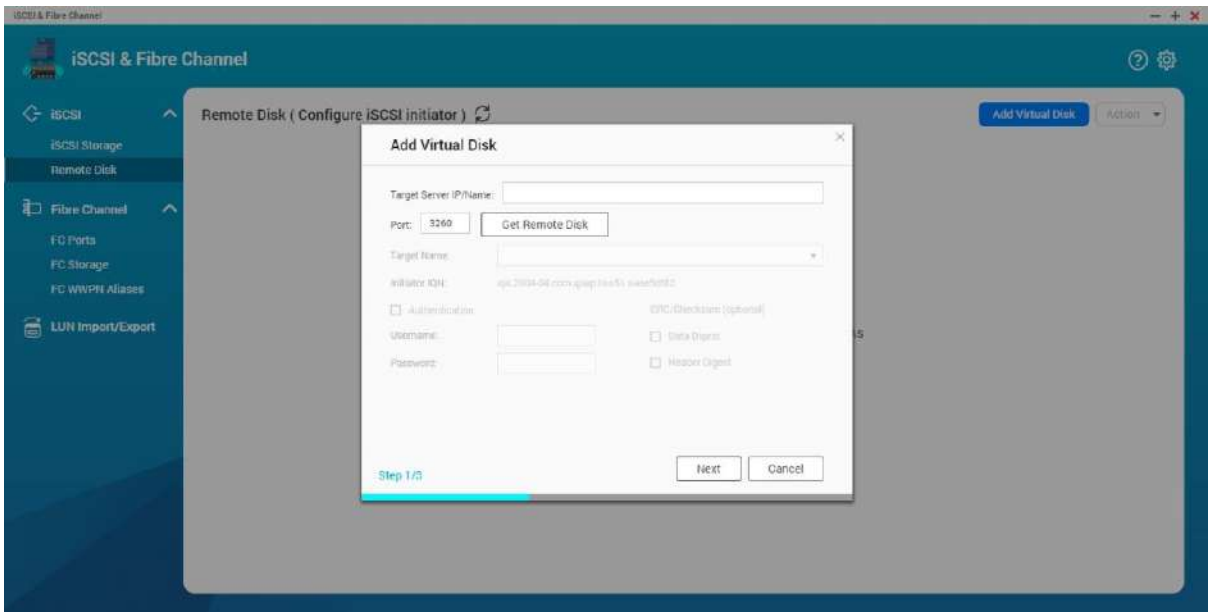
After the new storage is created, it will be displayed in the iSCSI target list.

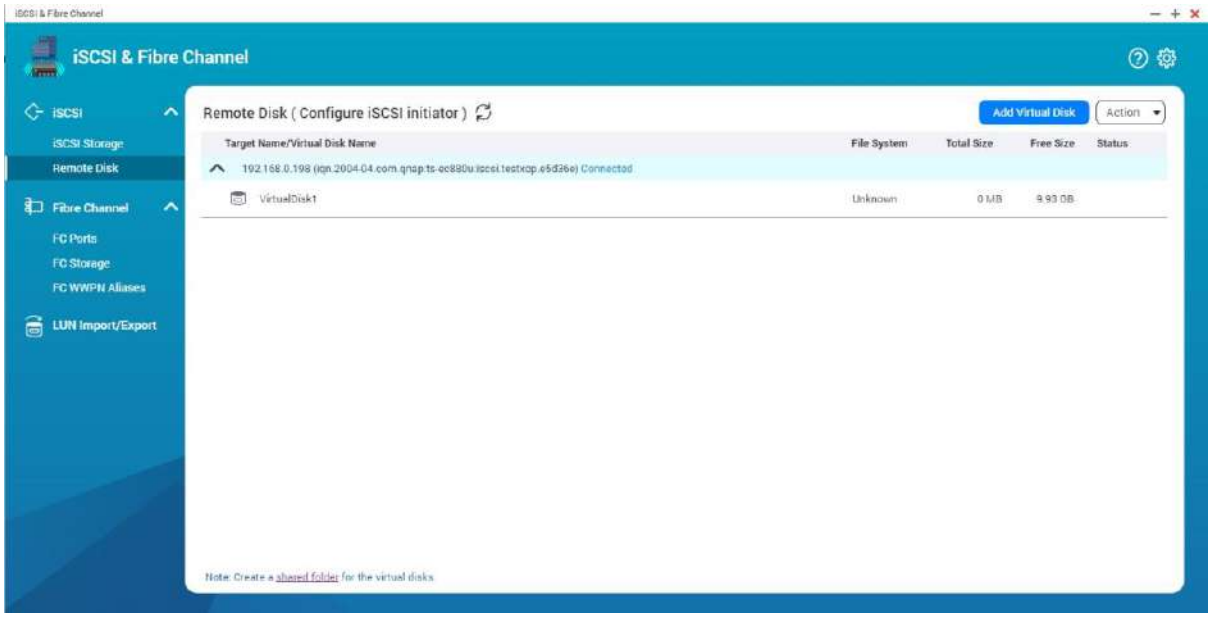


After completing these steps, go to the QNAP web panel which running the Xopero server module and map the newly created iSCSI storage. To do this, go to the iSCSI and Fiber Channel window (*Control Panel -> Storage & Snapshots -> iSCSI and Fiber Channel*) and select the Add Virtual Disk button in the Remote Disk tab.

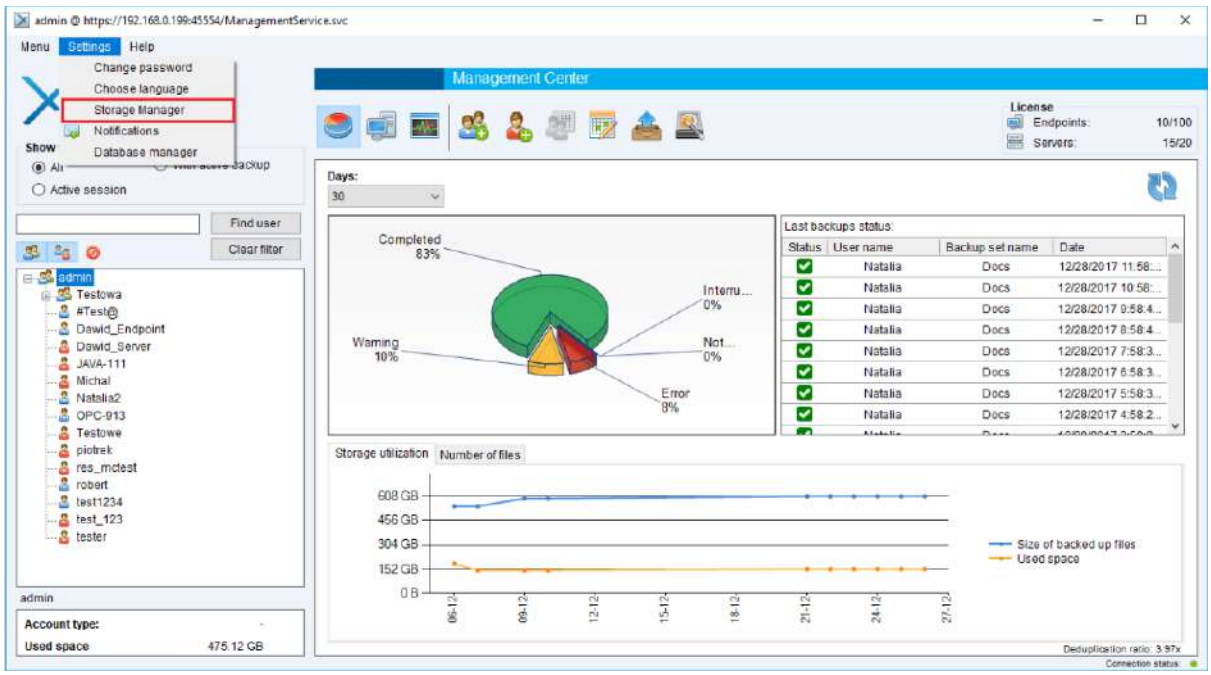


The form for adding a new virtual disk will be displayed. After filling it, the iSCSI resource will be mapped.

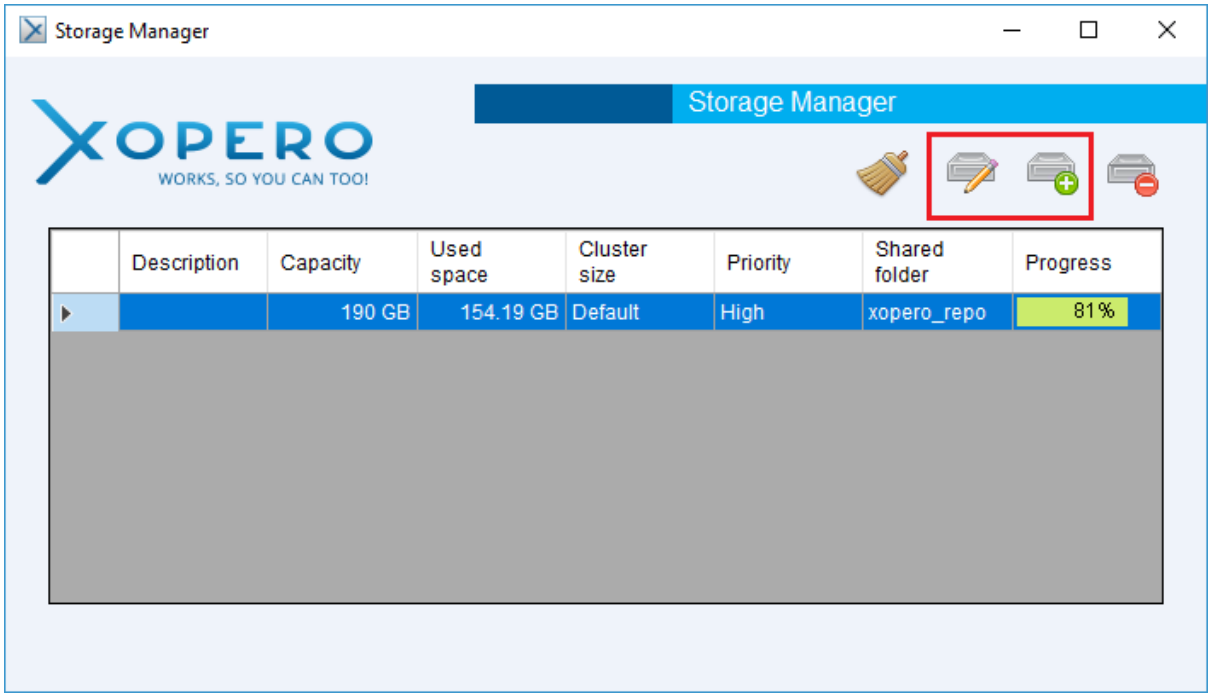




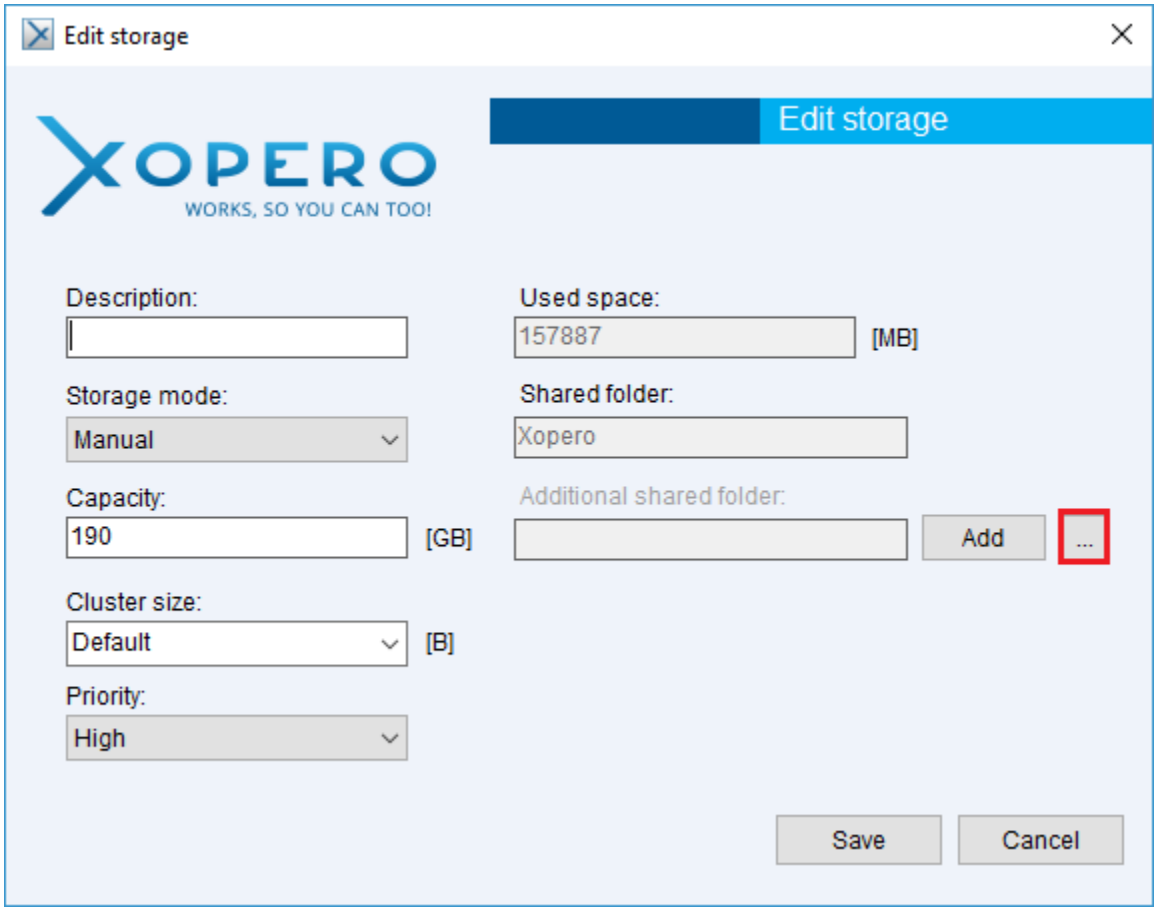
Then, go to Management Center and run Storage Manager.



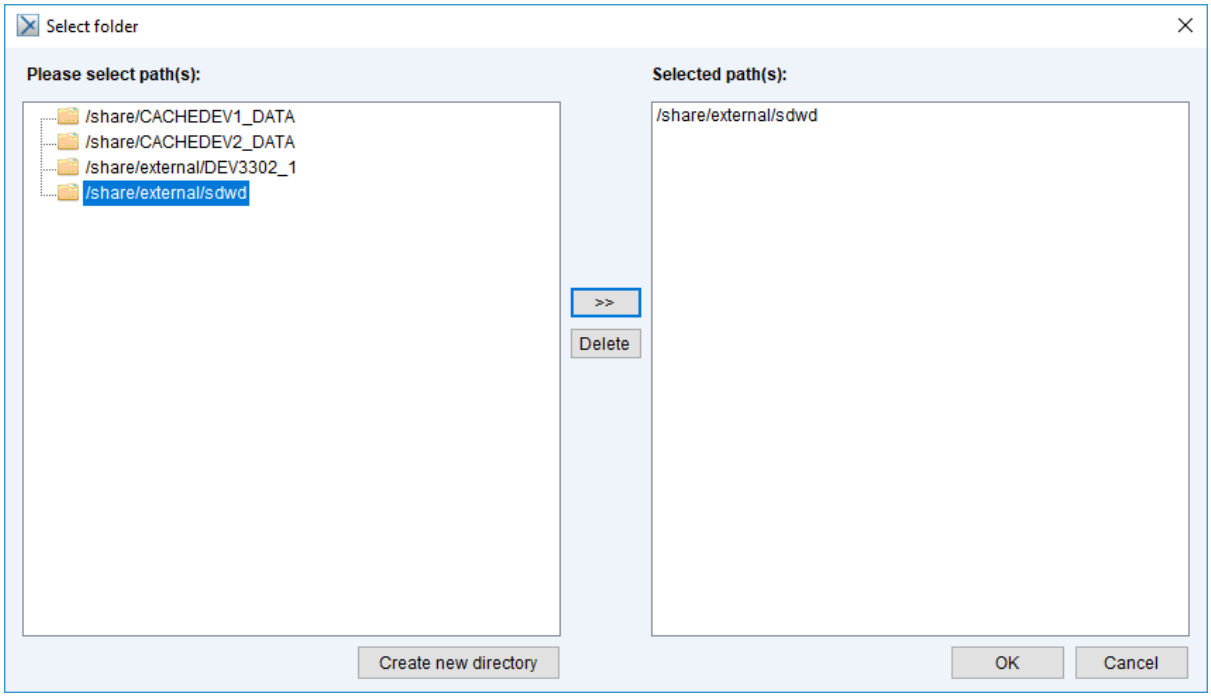
To add a path to replicate, you can edit an existing store or do it by creating a new one.



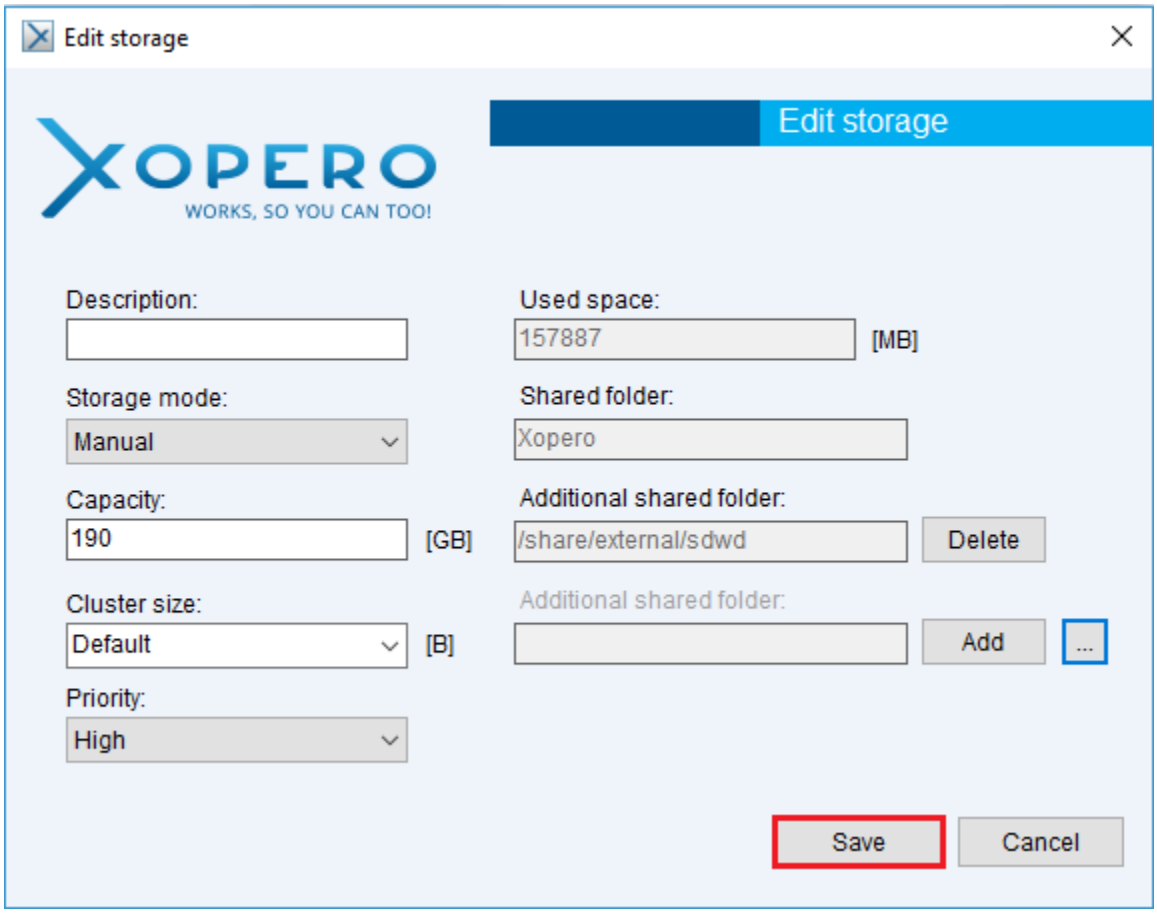
To add path to iSCSI resource click dots.

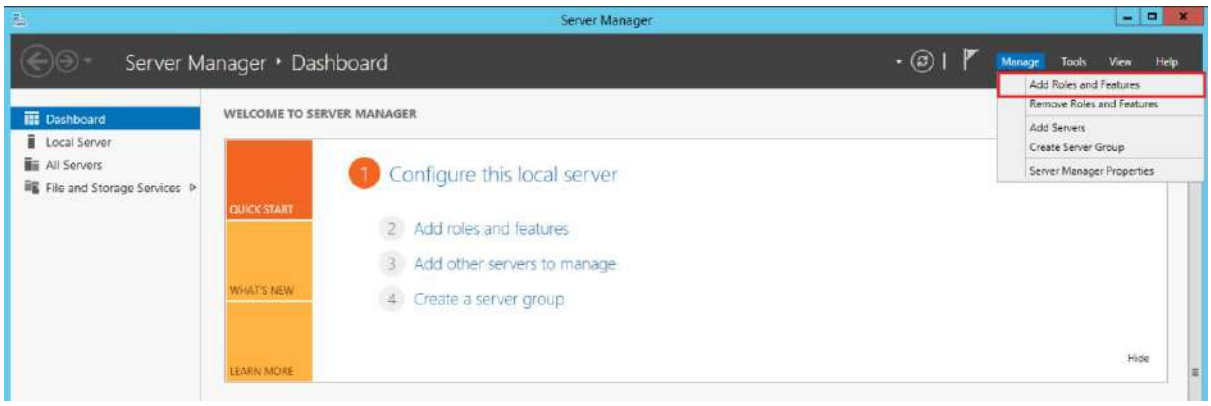


Select shared folder.

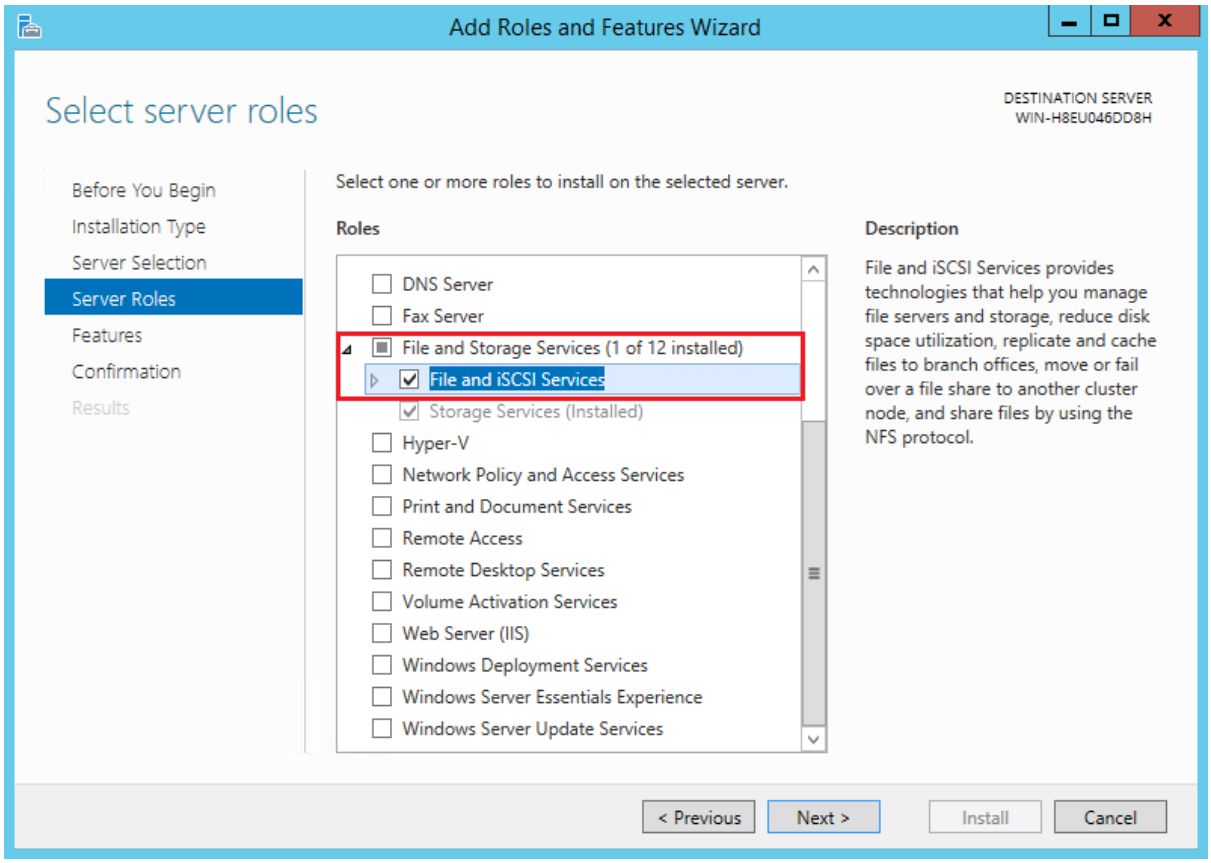


After that *Save* changes.

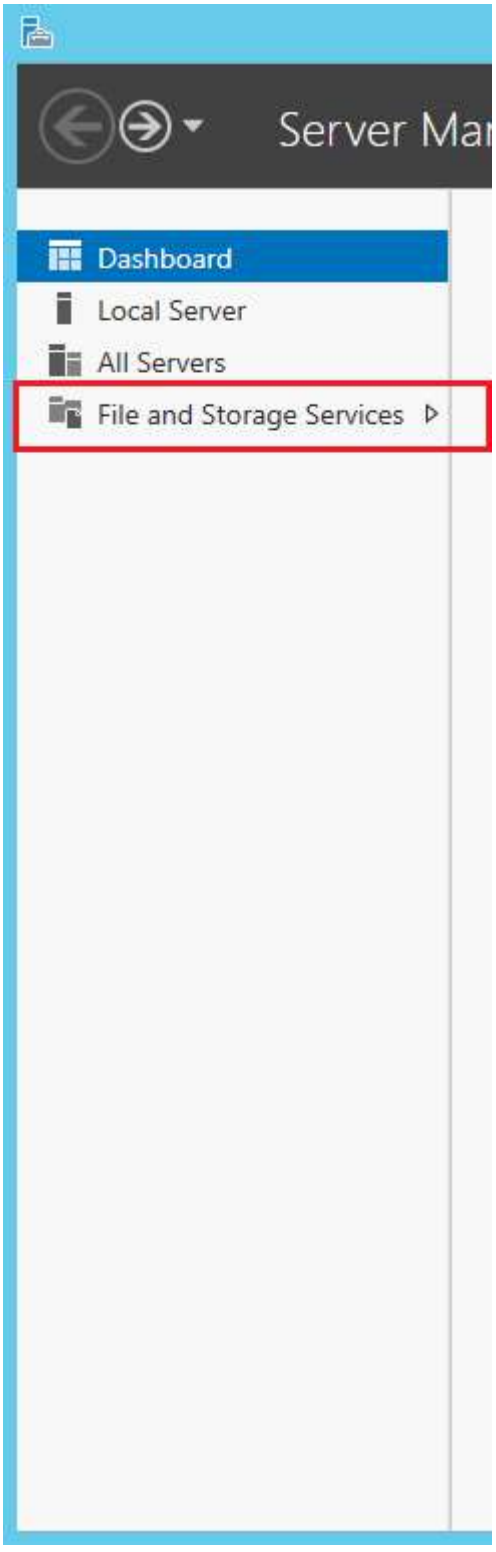

Edit storage
XOPERO
WORKS, SO YOU CAN TOO!
Edit storage
Description:
Used space:
157887
[MB]
Storage mode:
Manual
Shared folder:
Xopero
Capacity:
190
[GB]
Additional shared folder:
/share/external/sdwd
Delete
Cluster size:
Default
[B]
Additional shared folder:
Add
...
Priority:
High
Save
Cancel

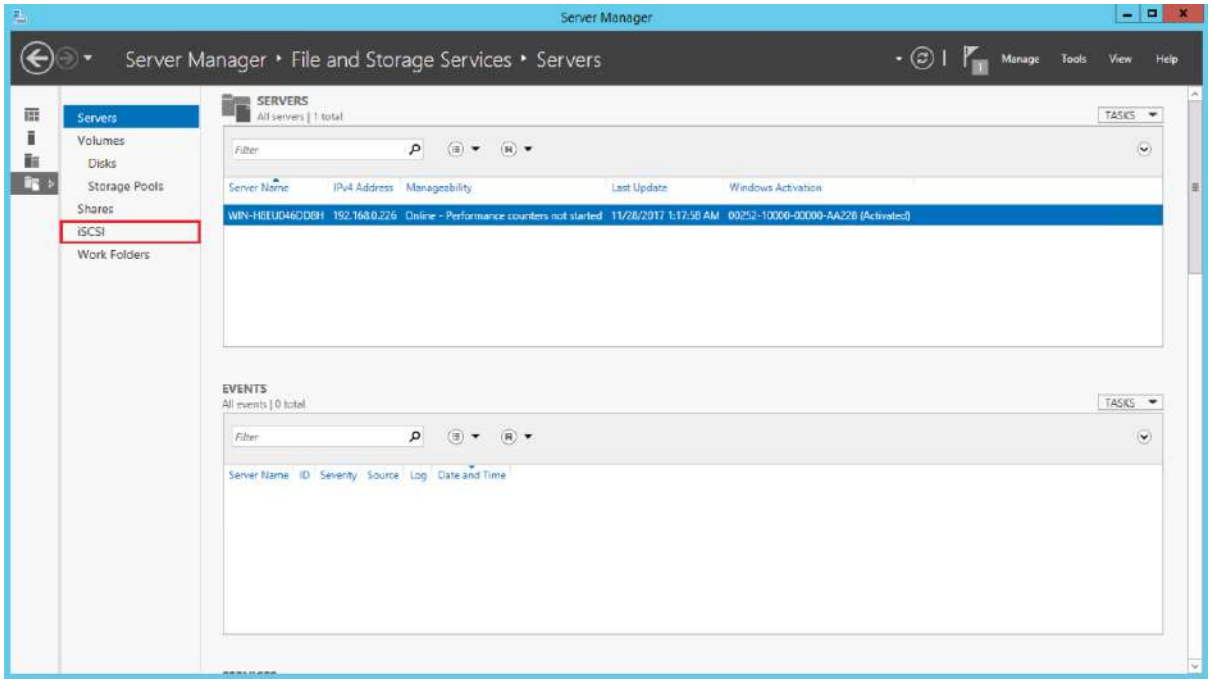

Server Manager
Server Manager • Dashboard
Manage
Tools
View
Help
Add Roles and Features
Remove Roles and Features
Add Servers
Create Server Group
Server Manager Properties
Dashboard
Local Server
All Servers
File and Storage Services
WELCOME TO SERVER MANAGER
QUICK START
WHAT'S NEW
LEARN MORE
1 Configure this local server
2 Add roles and features
3 Add other servers to manage
4 Create a server group
Hide

In the Wizard that will be displayed, select the role **File and Storage Services -> File and iSCSI Services**

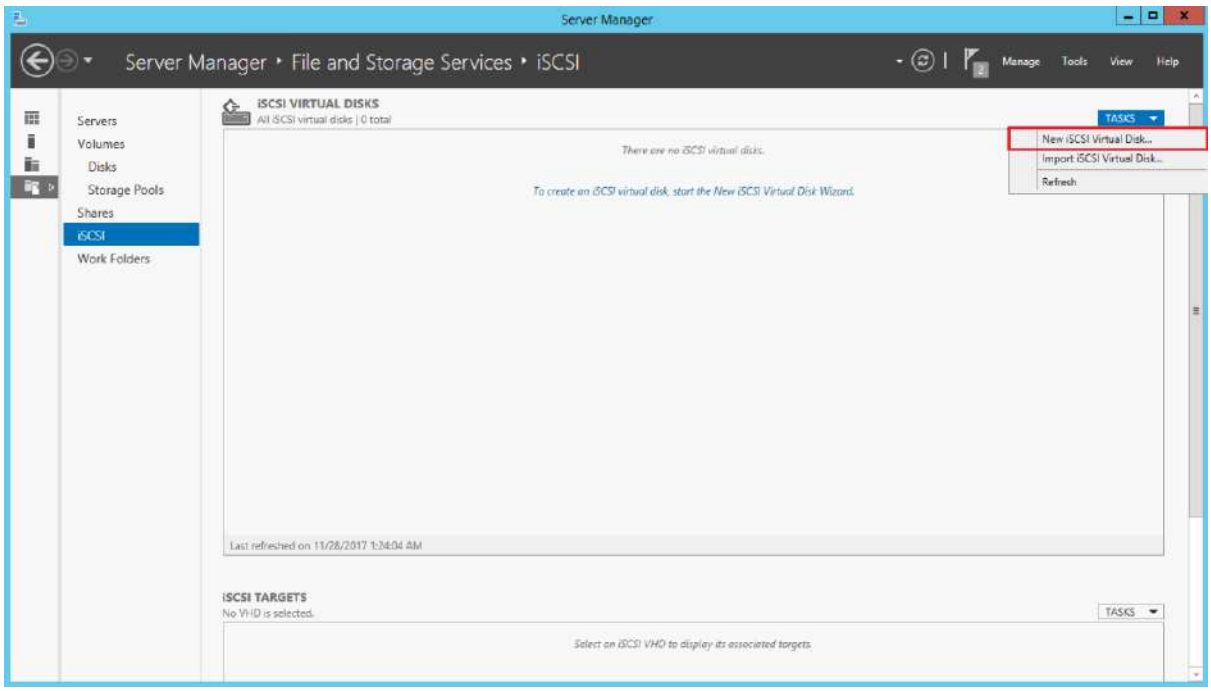


After going through all the wizard steps, open the installed role and then go to the iSCSI option.

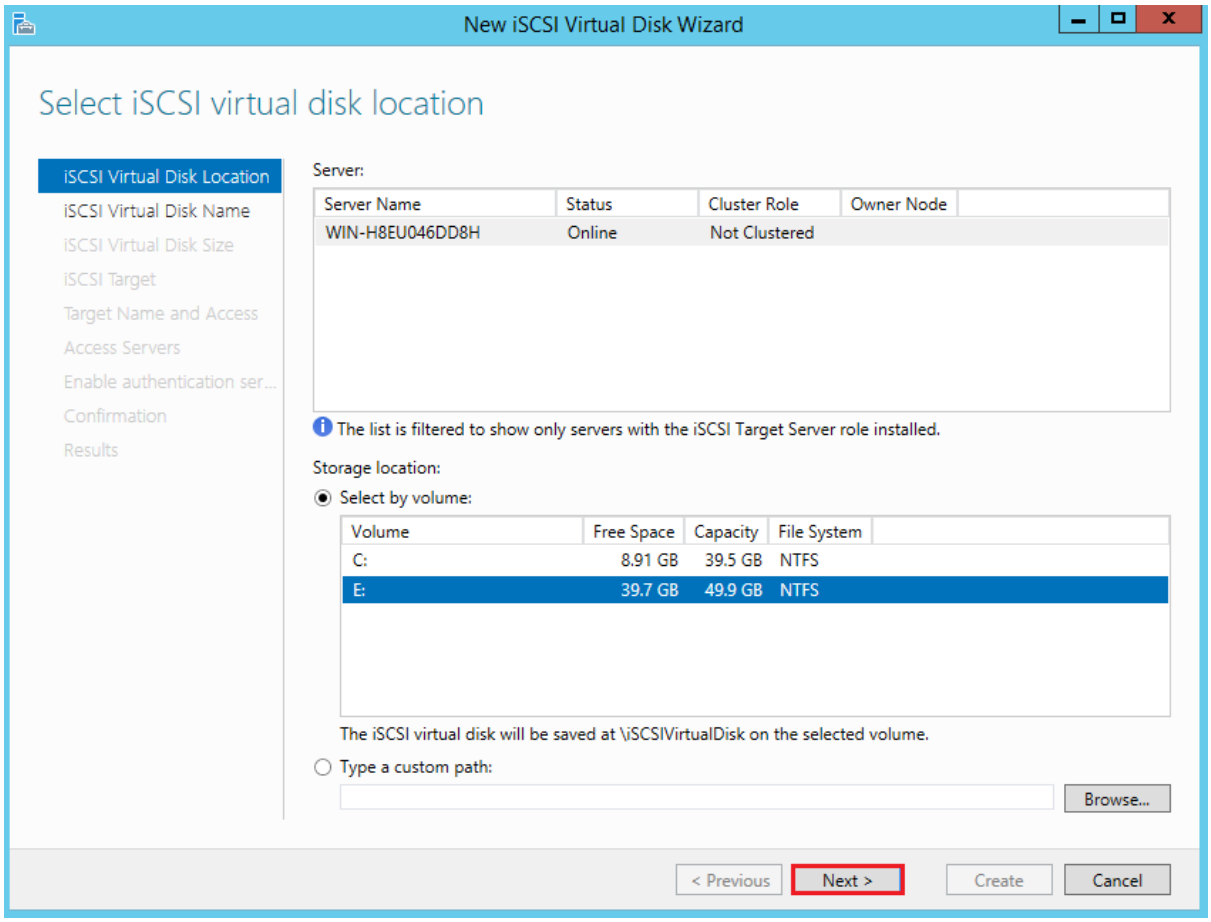

Server Mar
Dashboard
Local Server
All Servers
File and Storage Services



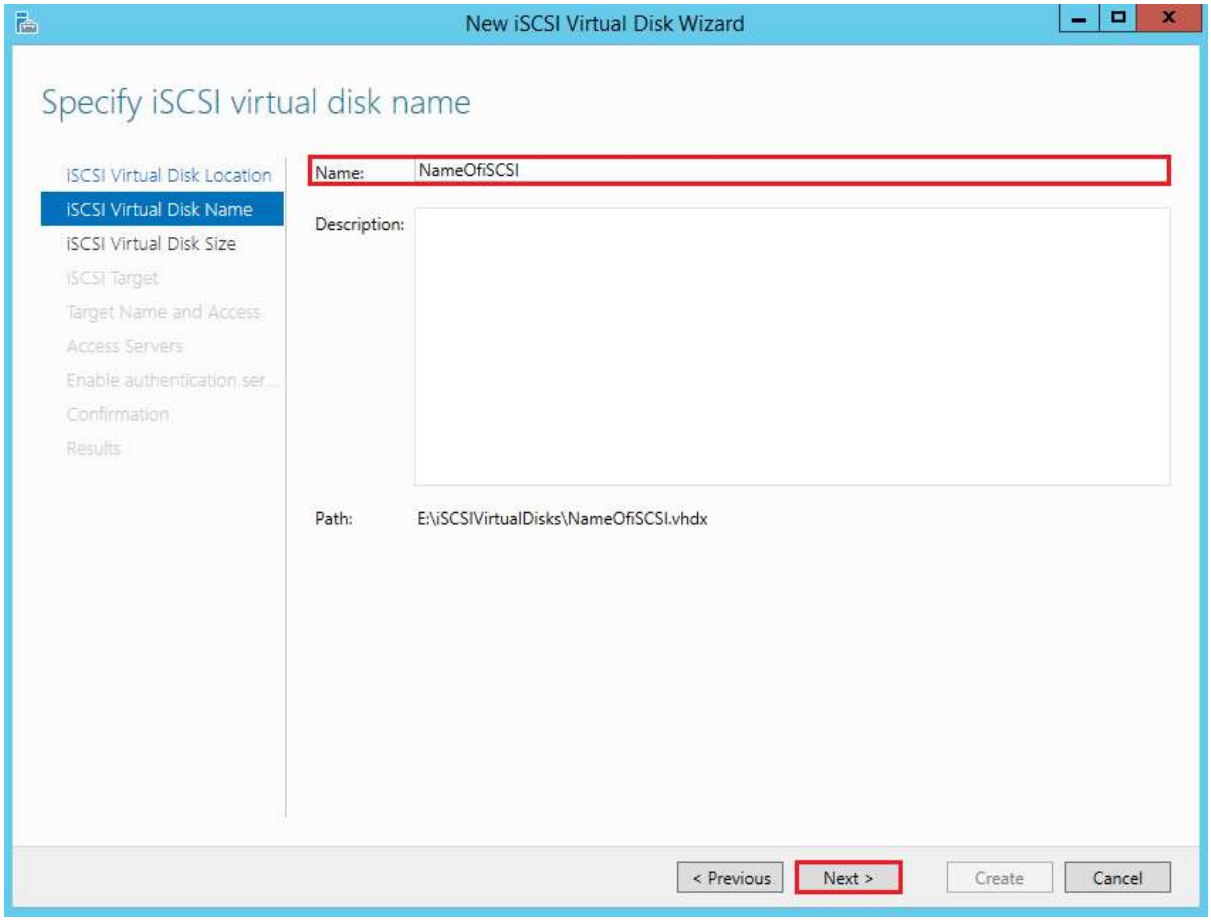
In the next step go to **Tasks -> New iSCSI Virtual Disk**

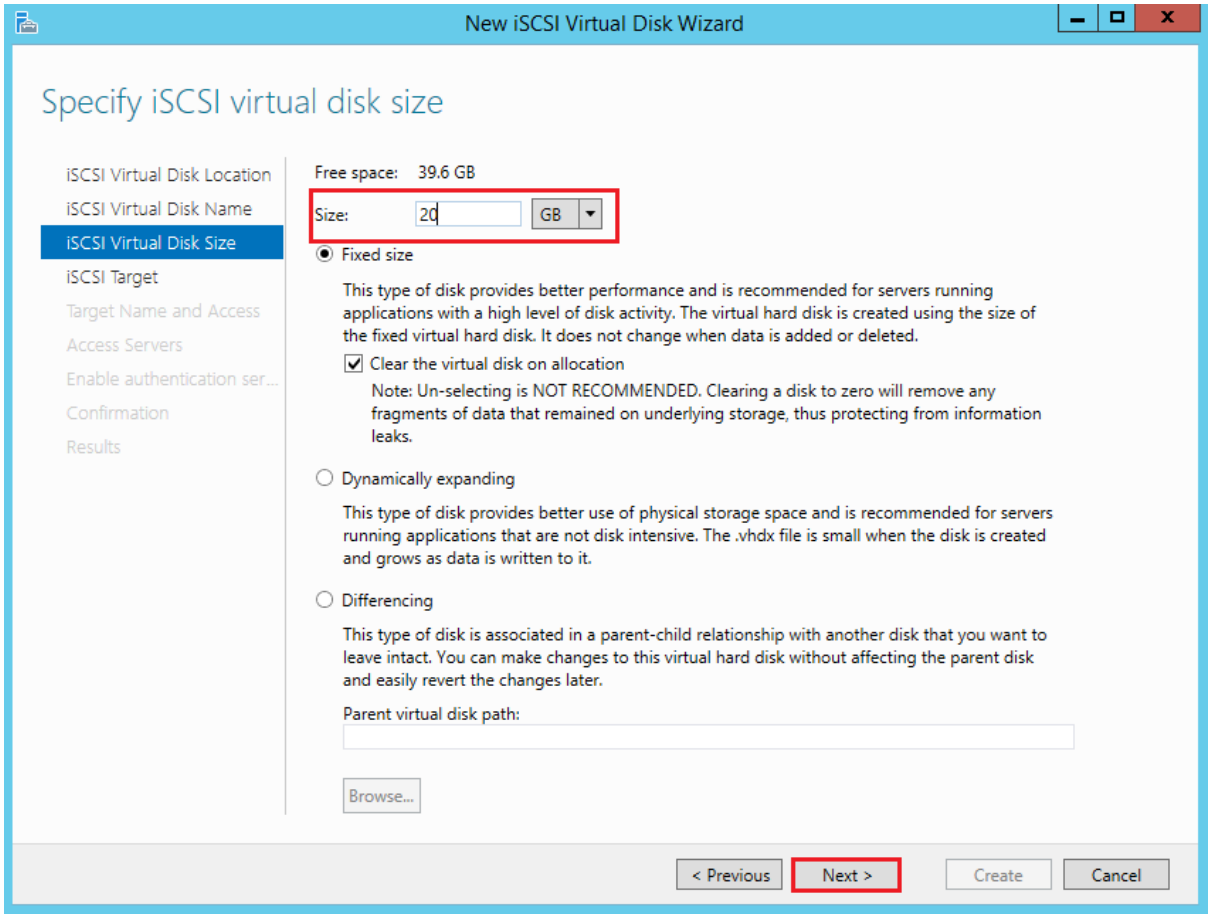


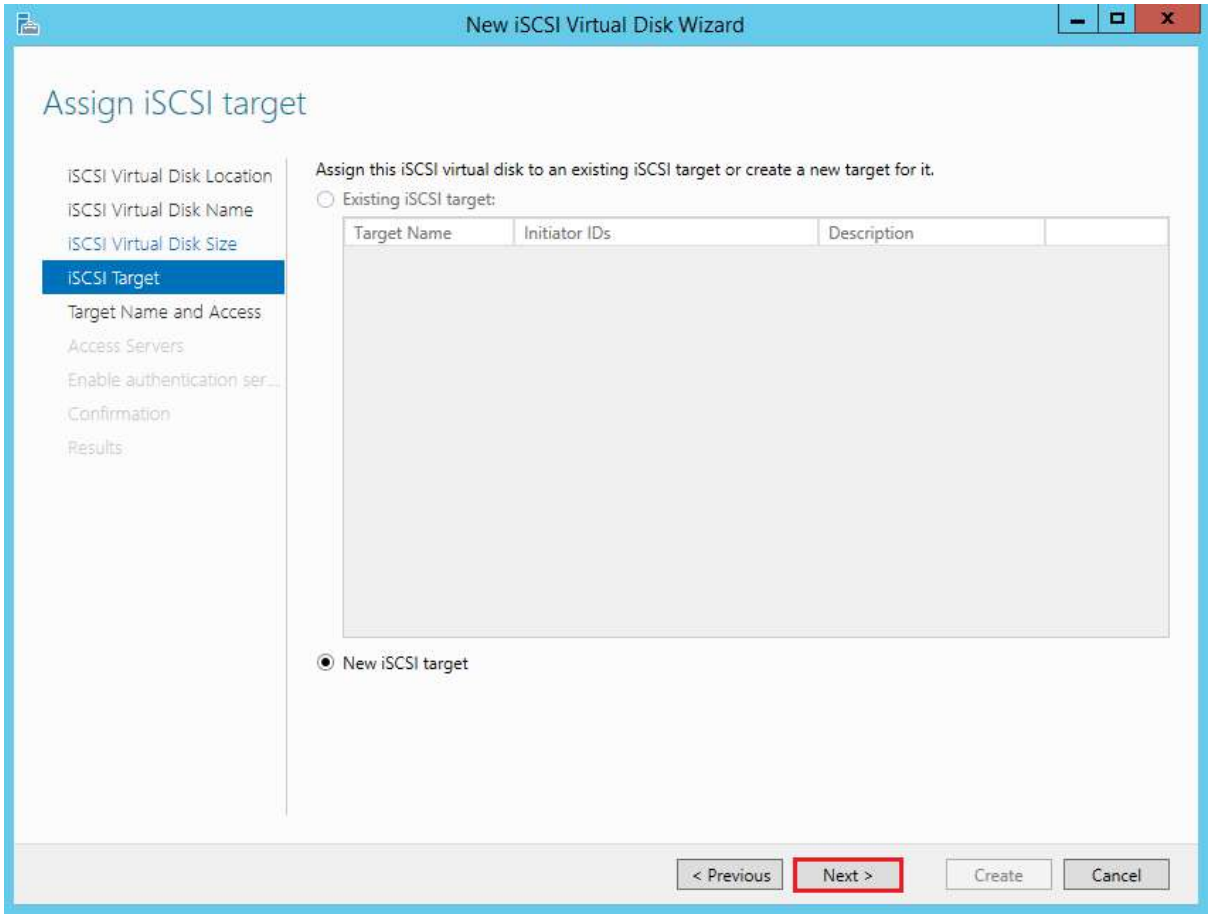
In the first wizard window, select the server and disk or path where the resource should be created.



Next, enter the name, select the amount of memory to be allocated for the resource and select an existing target or create a new one.

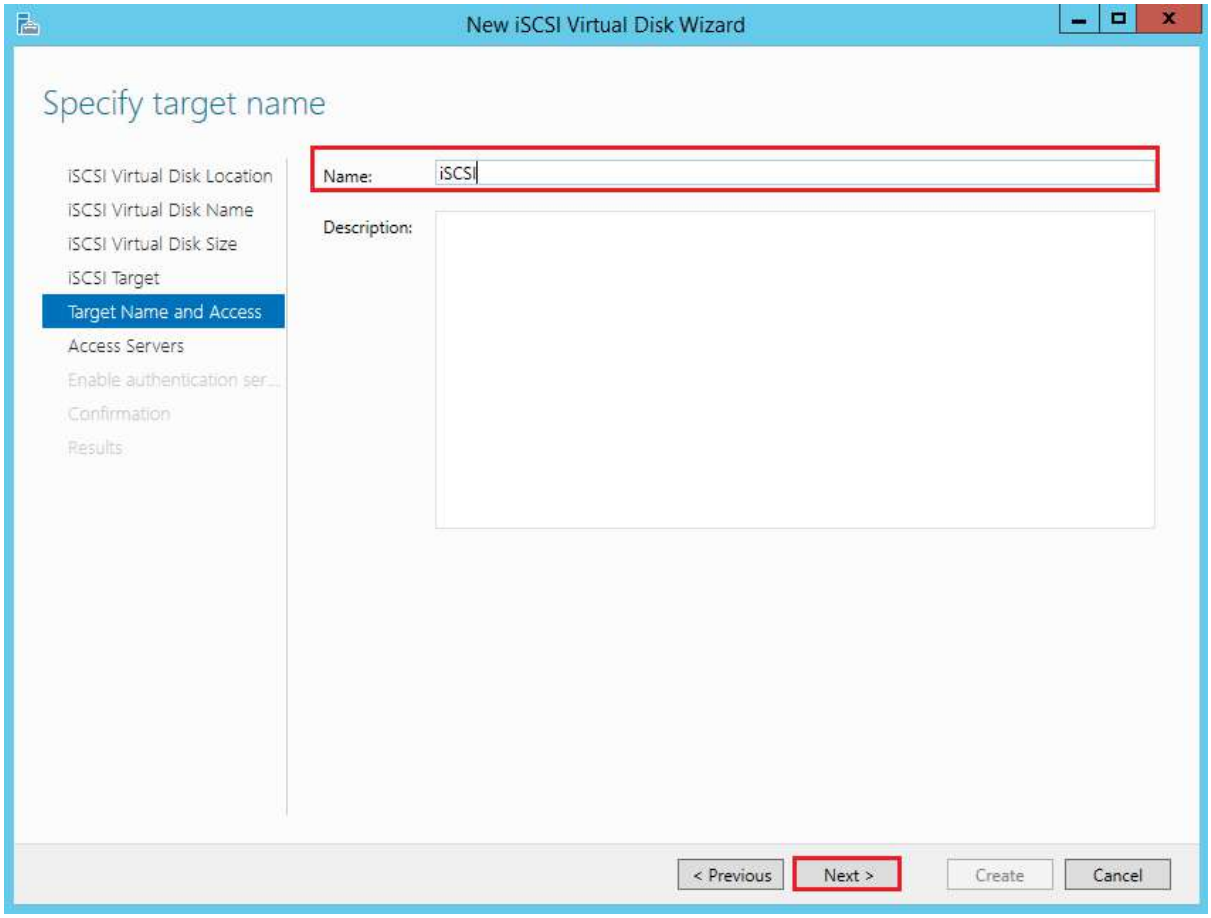

New iSCSI Virtual Disk Wizard
Specify iSCSI virtual disk name
iSCSI Virtual Disk Location
iSCSI Virtual Disk Name
iSCSI Virtual Disk Size
iSCSI Target
Target Name and Access
Access Servers
Enable authentication ser...
Confirmation
Results
Name:
NameOfiSCSI
Description:
Path:
E:\iSCSIVirtualDisks\NameOfiSCSI.vhdx
< Previous
Next >
Create
Cancel

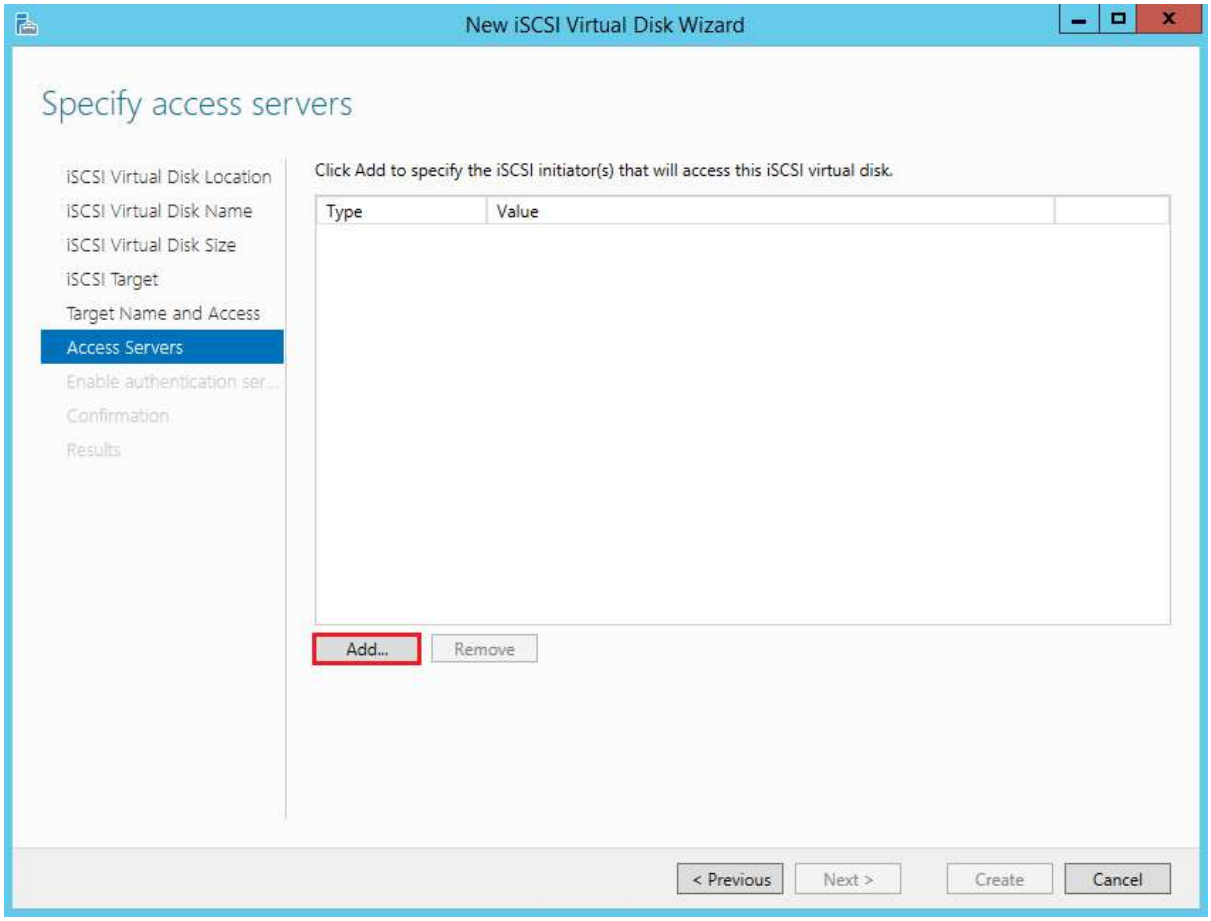

New iSCSI Virtual Disk Wizard
Specify iSCSI virtual disk size
iSCSI Virtual Disk Location
iSCSI Virtual Disk Name
iSCSI Virtual Disk Size
iSCSI Target
Target Name and Access
Access Servers
Enable authentication ser...
Confirmation
Results
Free space: 39.6 GB
Size: 20 GB
Fixed size
This type of disk provides better performance and is recommended for servers running applications with a high level of disk activity. The virtual hard disk is created using the size of the fixed virtual hard disk. It does not change when data is added or deleted.
Clear the virtual disk on allocation
Note: Un-selecting is NOT RECOMMENDED. Clearing a disk to zero will remove any fragments of data that remained on underlying storage, thus protecting from information leaks.
Dynamically expanding
This type of disk provides better use of physical storage space and is recommended for servers running applications that are not disk intensive. The .vhdx file is small when the disk is created and grows as data is written to it.
Differencing
This type of disk is associated in a parent-child relationship with another disk that you want to leave intact. You can make changes to this virtual hard disk without affecting the parent disk and easily revert the changes later.
Parent virtual disk path:
Browse...
< Previous
Next >
Create
Cancel



In the case of creating a new target, wizard will carry out the user through the stages of creating the target.

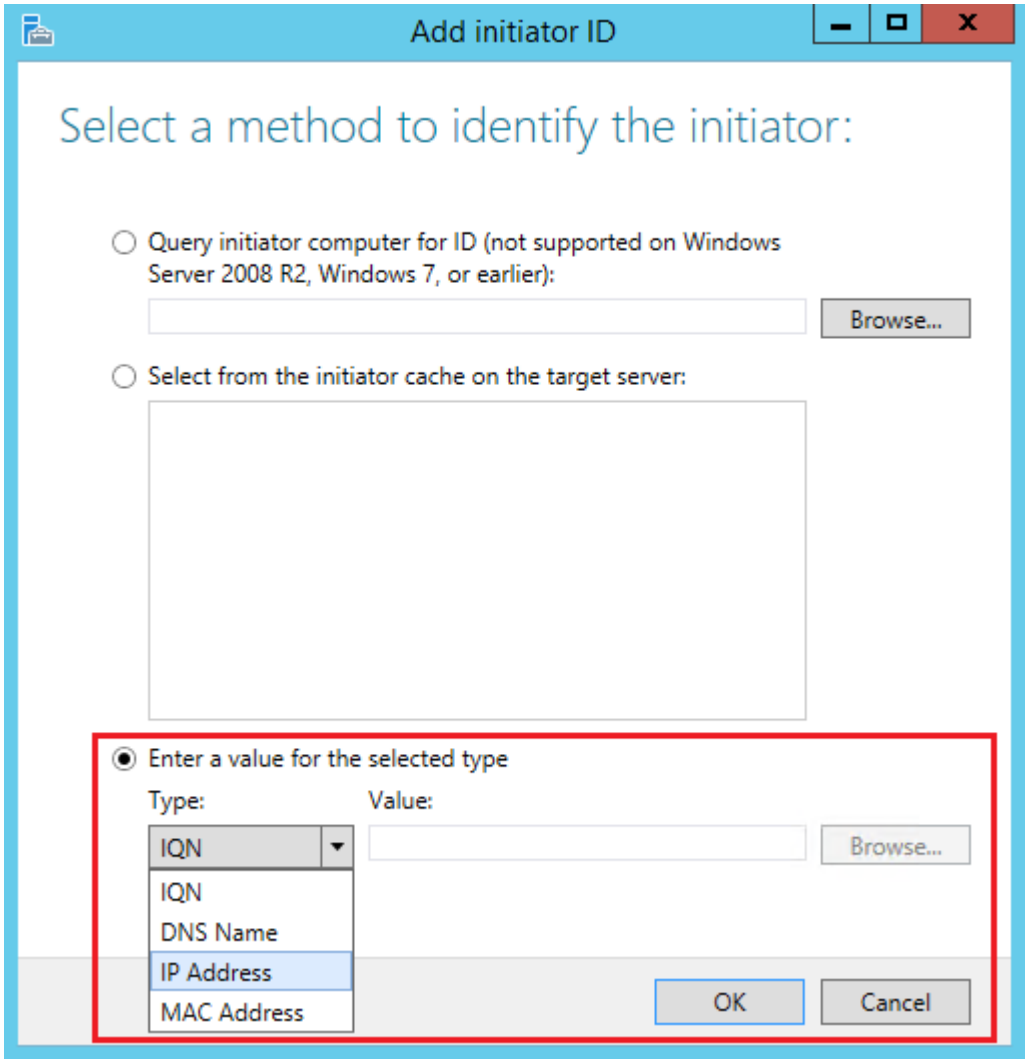
First define its name, then select the computer that should have access to the resource. **Please remember that this have to be the host on which the Xopero Backup&Restore application is installed.**


New iSCSI Virtual Disk Wizard
Specify target name
iSCSI Virtual Disk Location
iSCSI Virtual Disk Name
iSCSI Virtual Disk Size
iSCSI Target
Target Name and Access
Access Servers
Enable authentication ser...
Confirmation
Results
Name:
iSCSI
Description:
< Previous
Next >
Create
Cancel

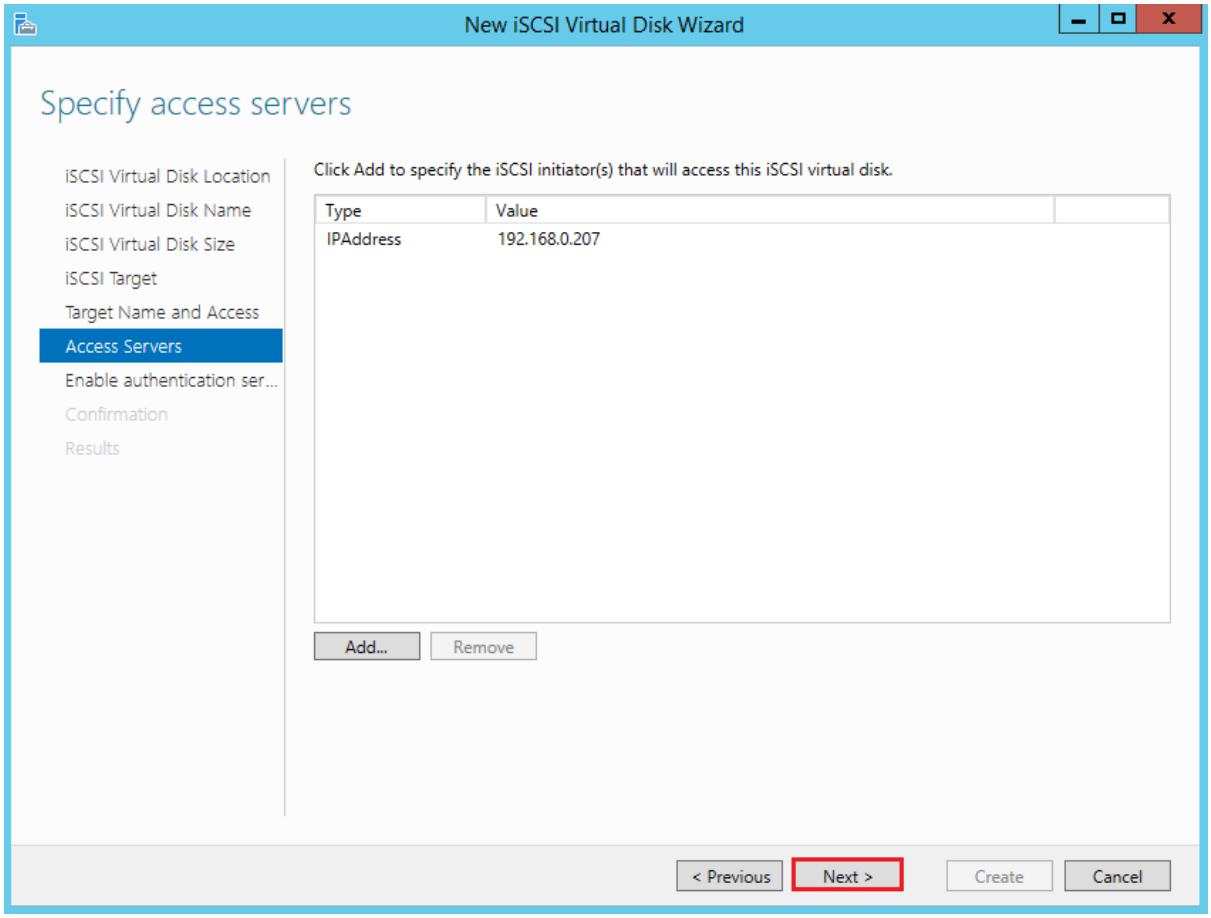


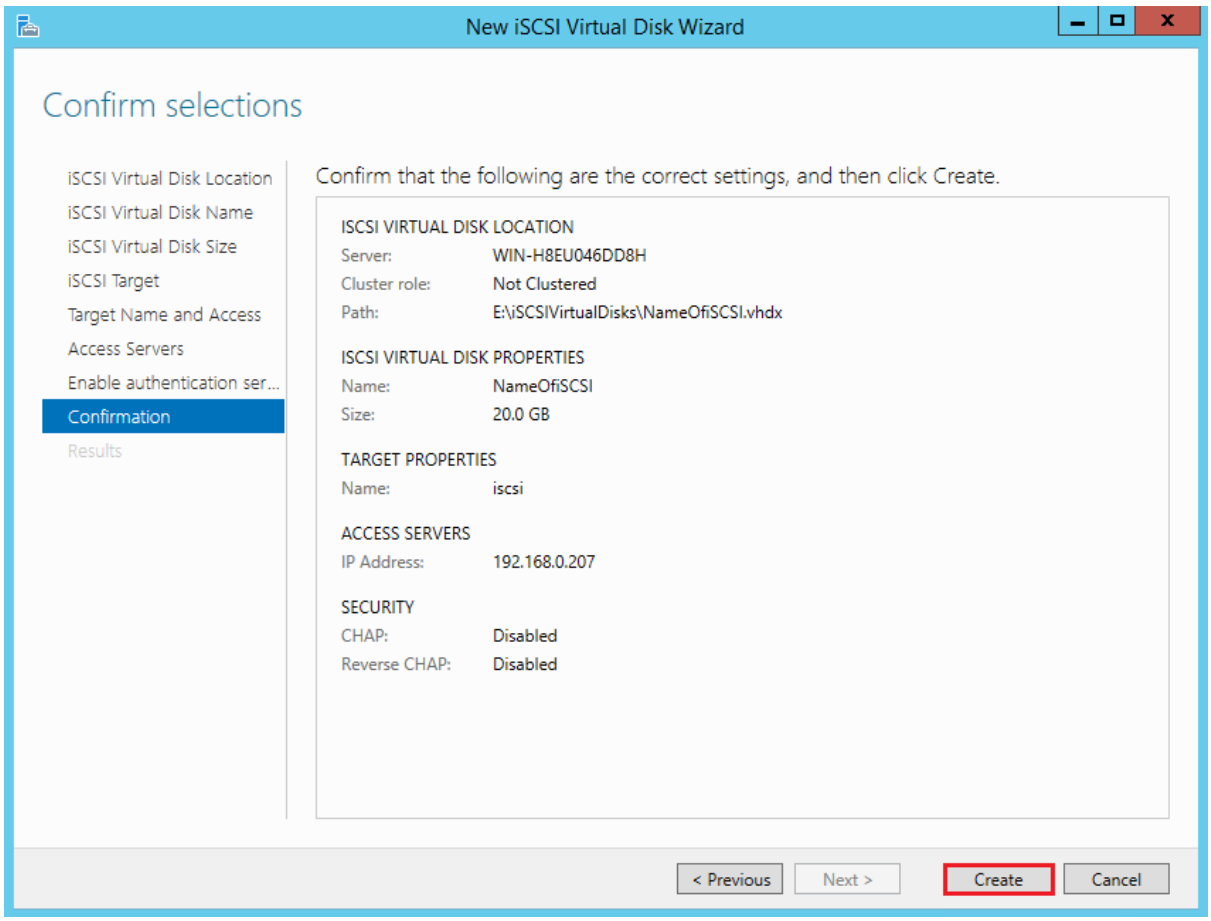
There are several ways to add a new host:

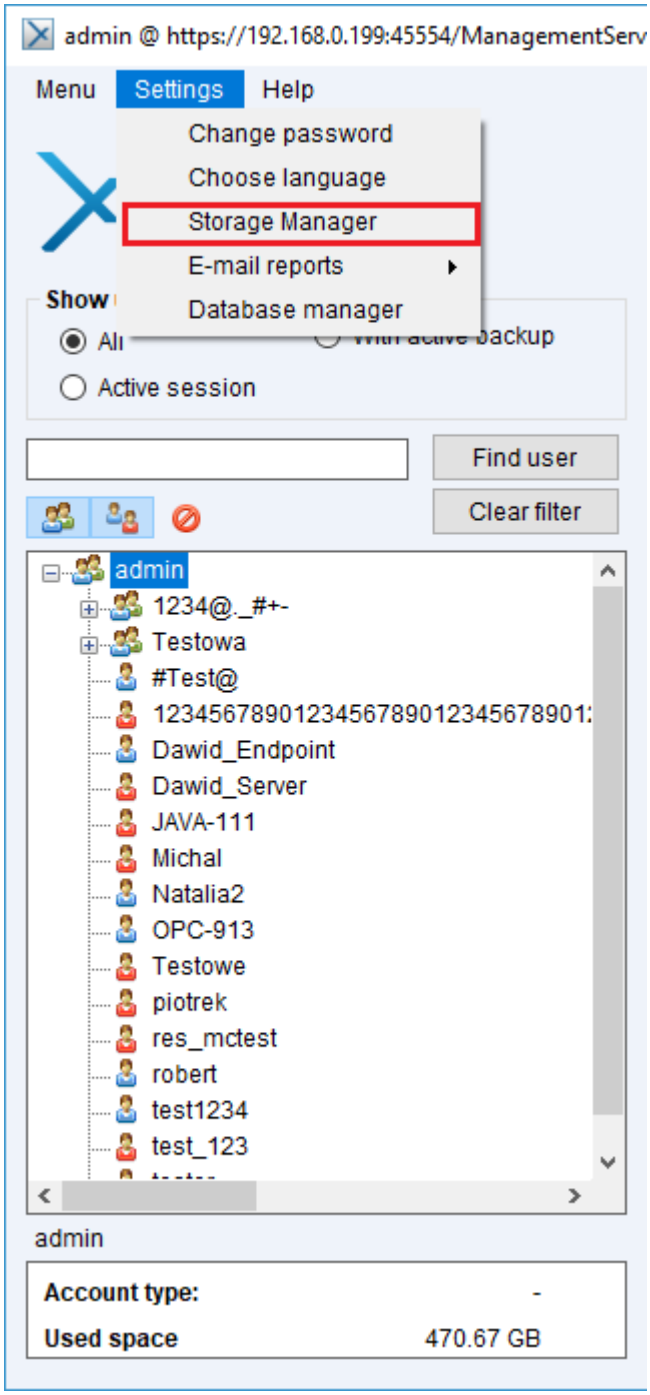
- By **Query initiator computer for ID**, however, this is not an option supported for Windows 2008 R2, Windows 7 and earlier,
- By select from initiator cache,
- By selecting the type and entering the value (select IQN, DNS name, IP address and MAC address).

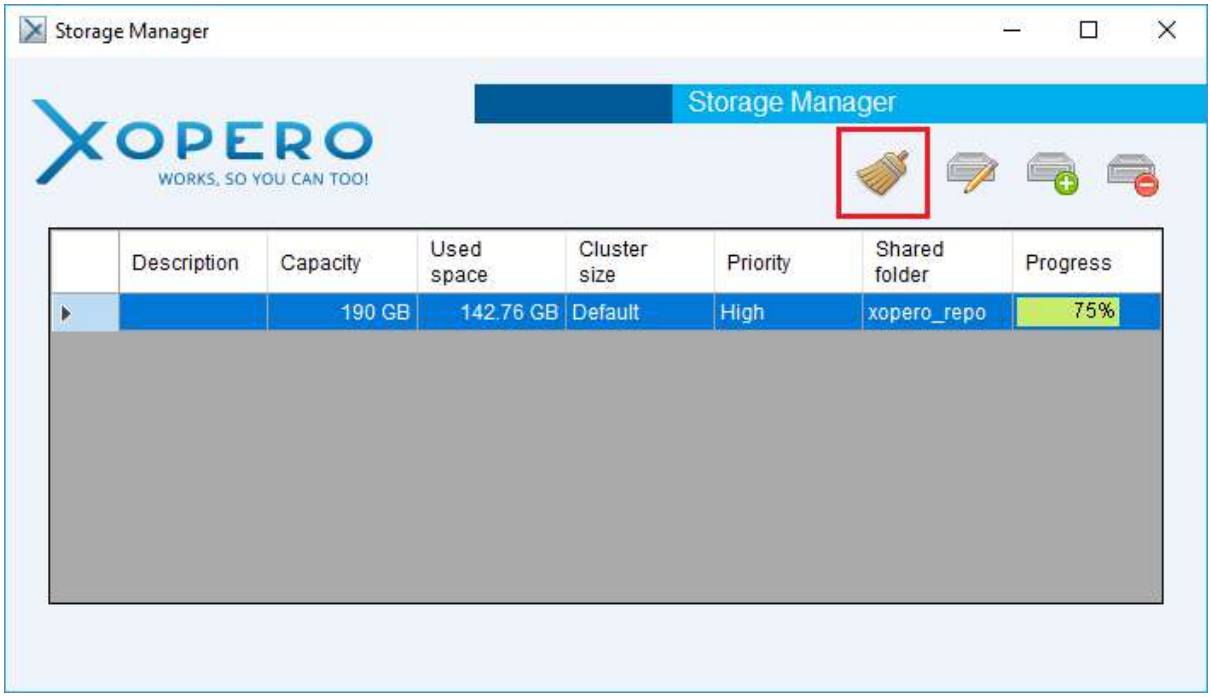


After adding the host, create the resource.

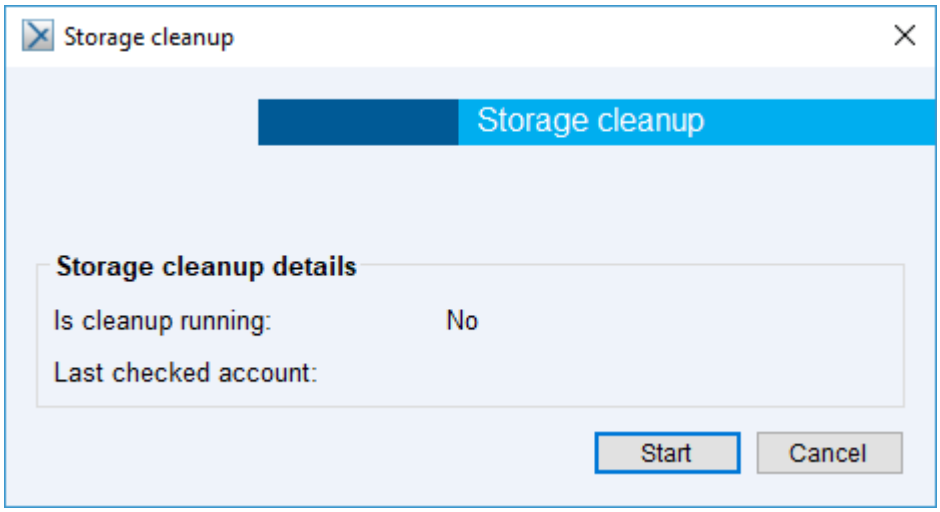

New iSCSI Virtual Disk Wizard
Specify access servers
iSCSI Virtual Disk Location
iSCSI Virtual Disk Name
iSCSI Virtual Disk Size
iSCSI Target
Target Name and Access
Access Servers
Enable authentication ser...
Confirmation
Results
Click Add to specify the iSCSI initiator(s) that will access this iSCSI virtual disk.
Type
Value
IPAddress
192.168.0.207
Add...
Remove
< Previous
Next >
Create
Cancel


New iSCSI Virtual Disk Wizard
Confirm selections
iSCSI Virtual Disk Location
iSCSI Virtual Disk Name
iSCSI Virtual Disk Size
iSCSI Target
Target Name and Access
Access Servers
Enable authentication ser...
Confirmation
Results
Confirm that the following are the correct settings, and then click Create.
ISCSI VIRTUAL DISK LOCATION
Server: WIN-H8EU046DD8H
Cluster role: Not Clustered
Path: E:\iSCSIVirtualDisks\NameOfiSCSI.vhdx
ISCSI VIRTUAL DISK PROPERTIES
Name: NameOfiSCSI
Size: 20.0 GB
TARGET PROPERTIES
Name: iscsi
ACCESS SERVERS
IP Address: 192.168.0.207
SECURITY
CHAP: Disabled
Reverse CHAP: Disabled
< Previous
Next >
Create
Cancel


admin @ https://192.168.0.199:45554/ManagementServ
Menu
Settings
Help
Change password
Choose language
Storage Manager
E-mail reports
Database manager
Show
All
Active session
Find user
Clear filter
admin
1234@._#+-
Testowa
#Test@
Dawid_Endpoint
Dawid_Server
JAVA-111
Michal
Natalia2
OPC-913
Testowe
piotrek
res_mctest
robert
test1234
test_123
admin
Account type:
-
Used space
470.67 GB



The *Storage cleanup* option is highly overloading the drive, so it is best to run it at the time of the lowest usage.



Configuration B&R storages

Introduction

Data storage is a logical unit that defines the storage location backed up data. Storage can consist of one or more paths (location) each path within a storage, it is the path for data replication and does not increase the storage capacity. Xopero system works with any type of storage, it can be a single directory on disk as well as NAS or large disk arrays.

Xopero doesn't support LTO tape libraries.

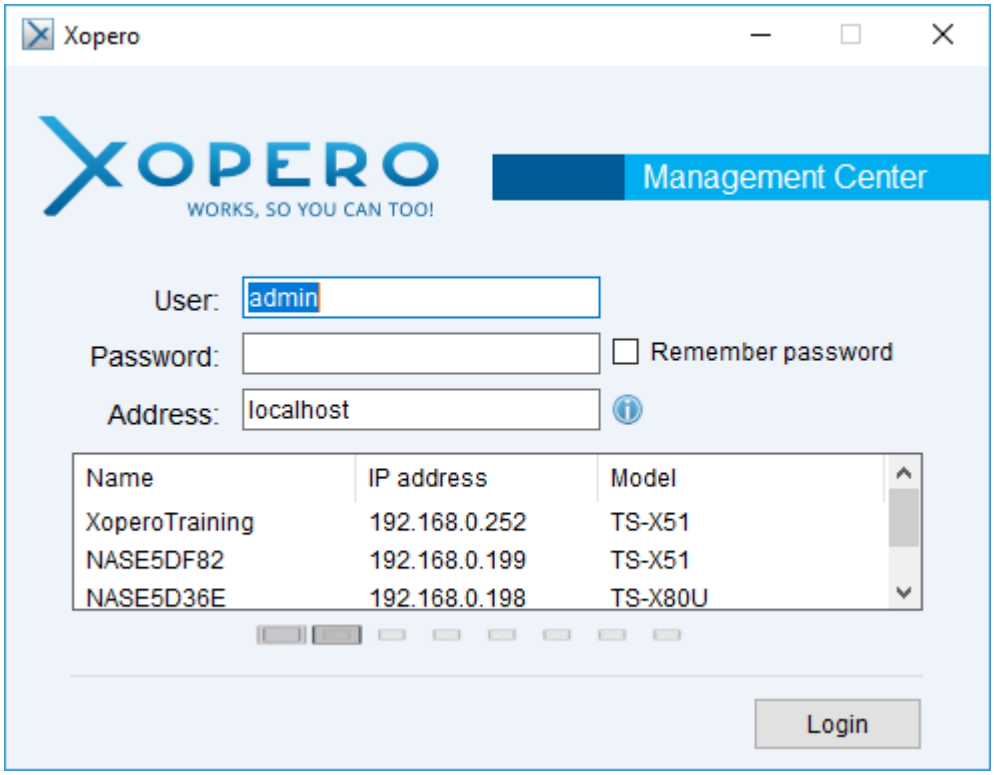
In case of the configuration using multiple instances of the server, the file system must support the competitive record.

It is not recommended to delete/move storage data/disk. In case in such a need, please contact Xopero Support .

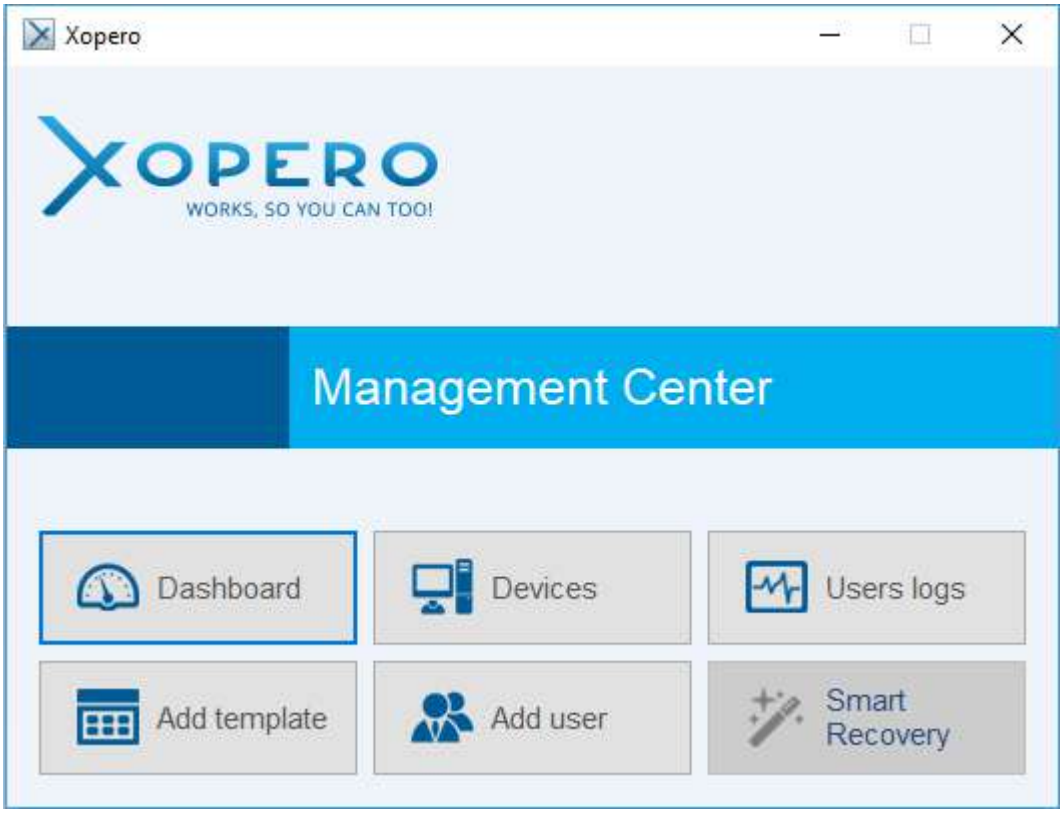
To create and manage data storage use *Management Center*.

Starting configuration

To start data storage configuration run Management Center application.



If you've more than one Xopero server in your network, select the appropriate from list. Then enter main user of the system authentication data and click *Login*. After a successful login, select *Dashboard* from the list of shortcuts.

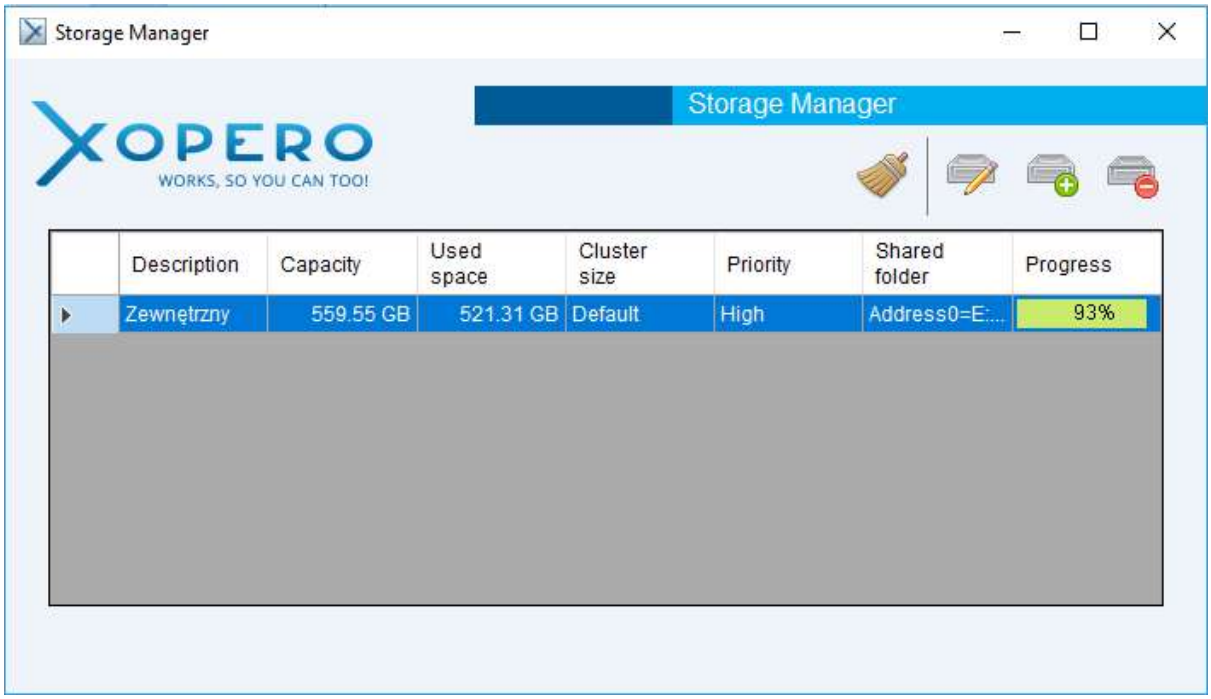


Then from the main application window, from the menu in the upper right corner, select *Settings* and then *Storage Manager*.

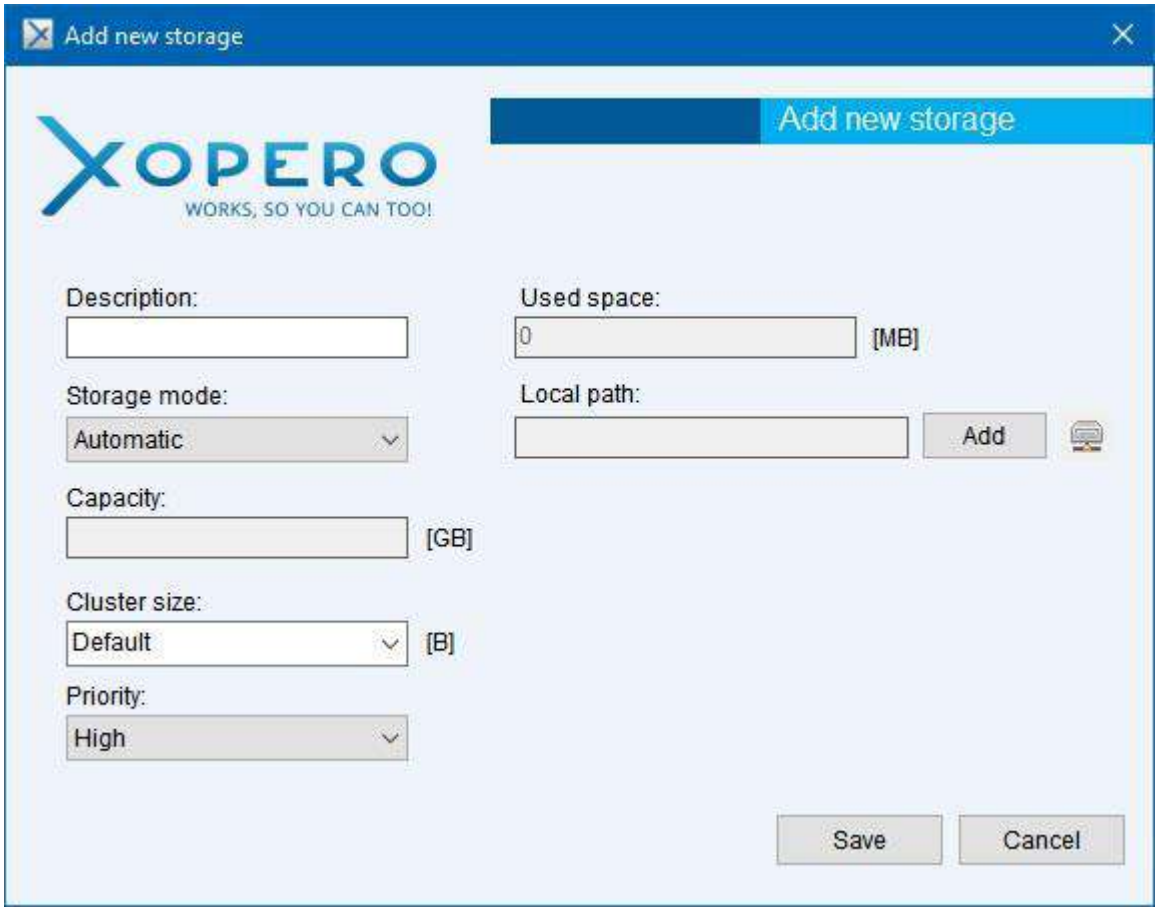
Configuring storages

Previous article shows you how to go to the following view.

The storage configuration window contains a list of currently defined storages available for the system Xopero and a range of additional information. You can also check here, how busy is each of the storages.



To define a new storage, click on the icon to *Add new storage*. This will open the configuration window.

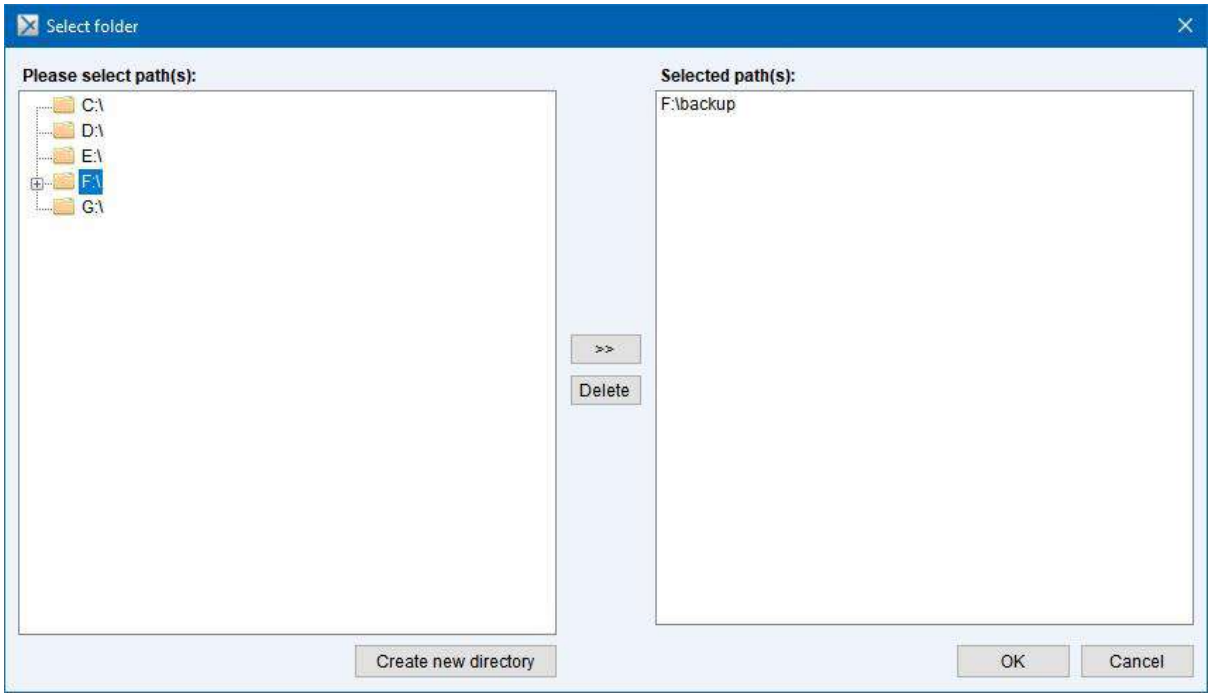


This window contains both information fields and fields to specify the configuration parameters of the new sotrage:

- ***Description*** - Description makes it easier to identify storage.
- ***Capacity*** – Defines the size of the new storage in GB. This value should be equal to or less than the actual size of the space in a dedicated location.
- ***Cluster size*** - Defines the size of the cluster disc (discs), on which magazine is defined. In most cases this will be the default value.
- ***Priority*** – Defines the priority of the storage. In the first place, data will be send to the storage with highest priority.

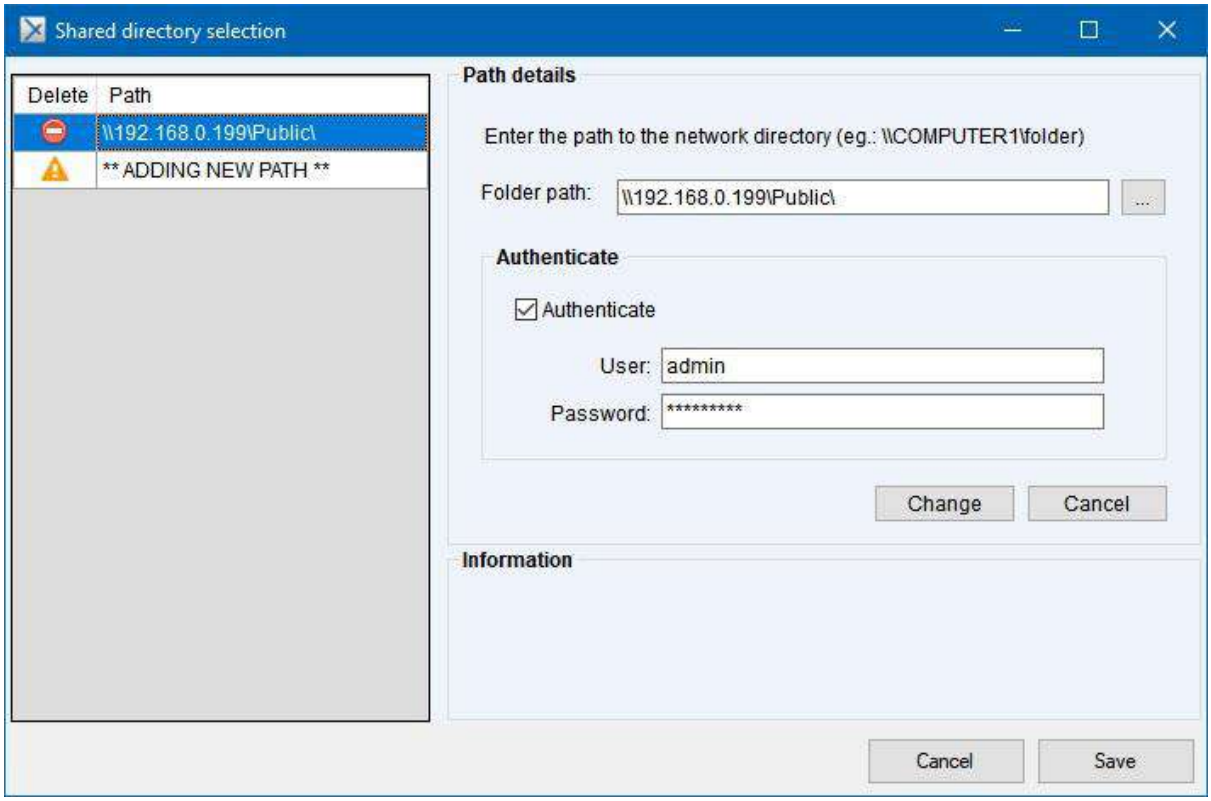
- ***Local path*** – It is local path, which points to location, where you want to store data.
- ***Additional path (redundancy)***- additional directory enables data replication, which is parallel recording in several locations, thus user data security is increased. Setting the replication option is particularly recommended, if you have network drive on your server, two separate hard drives that do not use RAID function. If one drive fails, then it is possible to recover data from a second location.

To define the storage on the local disk, choose the *Add* button. The directory browsing window will be displayed, in which the user can choose the location for the datastorage.



After selecting the folder, click the *OK* button, which will close the window.

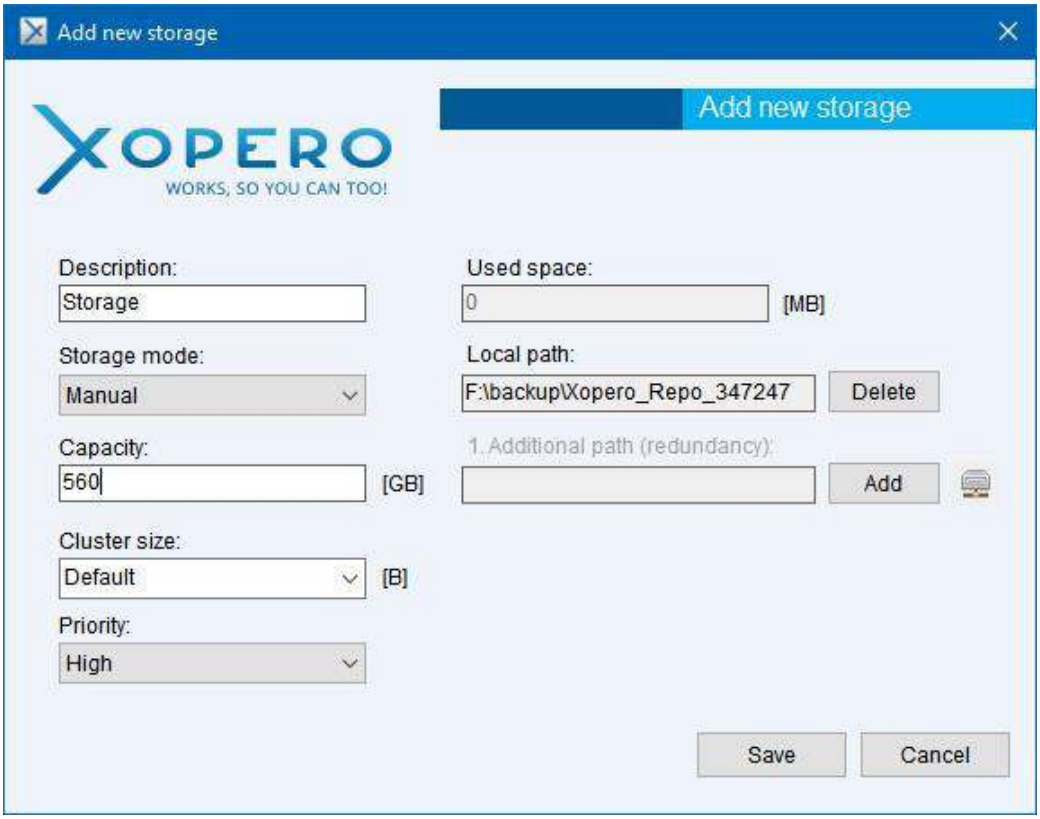
To define the datastorage on the shared resource, choose the button: . A window will be displayed to choose the network location.



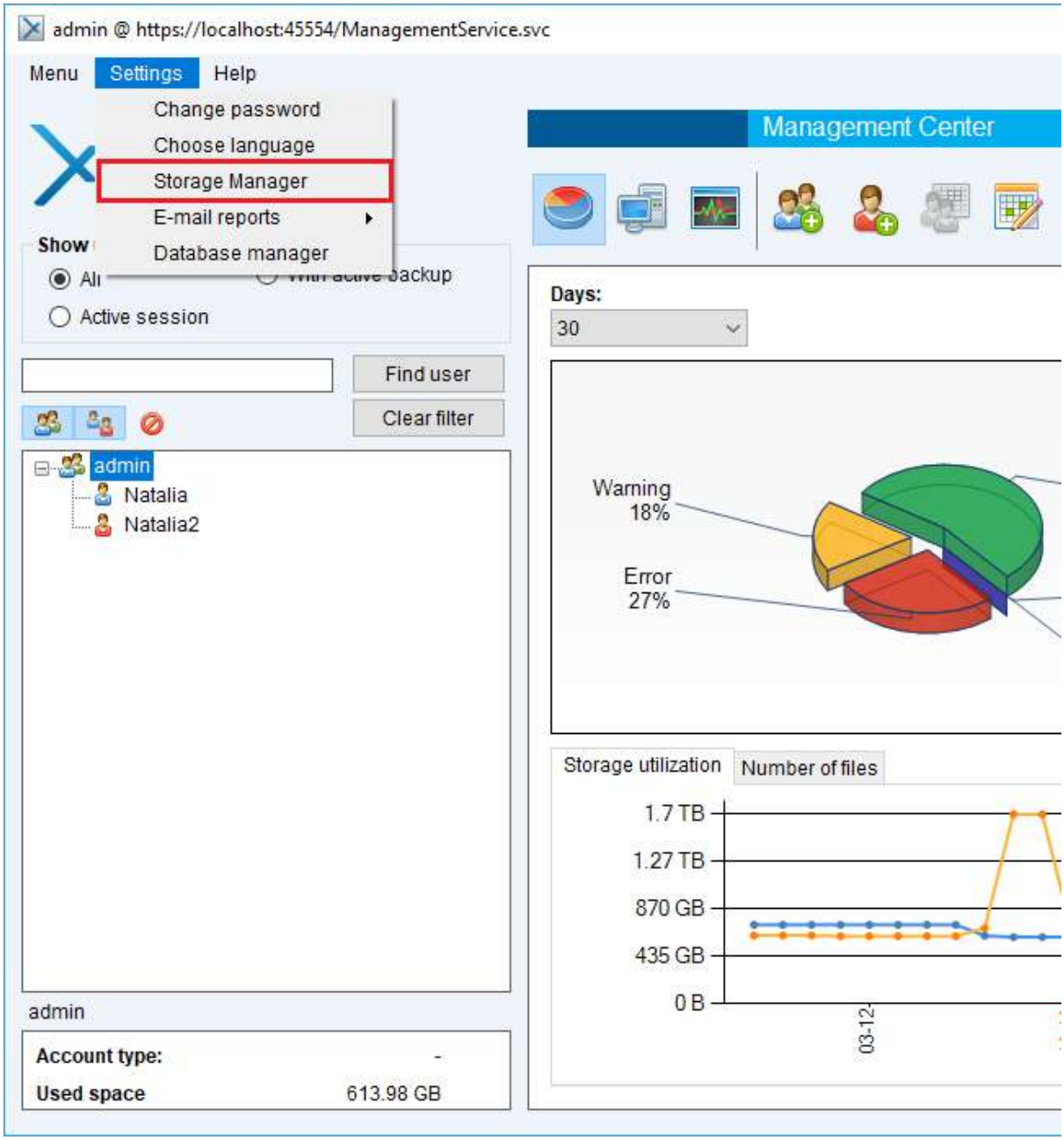
Above window contains fields for entering configuration parameters for the network directory:

- ***Path*** - a network path indicating the place where the data will be stored (after clicking the button: , an additional window will be displayed for searching and browsing network resources).
- ***User*** - the username who has write and read permissions on the indicated network resource.
- ***Password*** - the password of the user with write and read permissions on the indicated network resource.

Defining storage on shared resource an SMB is not recommended for large instances. Insufficient performance of the SMB protocol may negatively affect the operation of the entire solution.

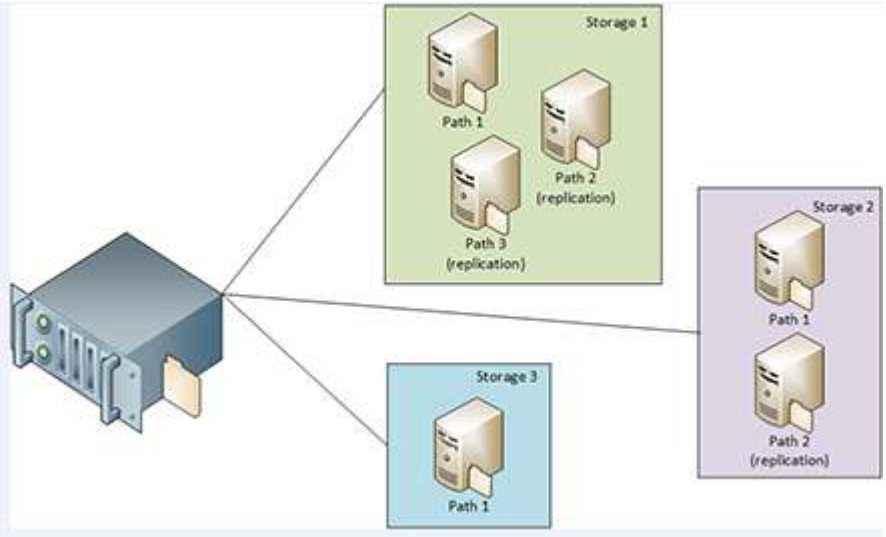


After defining the remaining parameters of the datastorage, choose the *Save* button to add it or the *Cancel* button to abandon the changes.

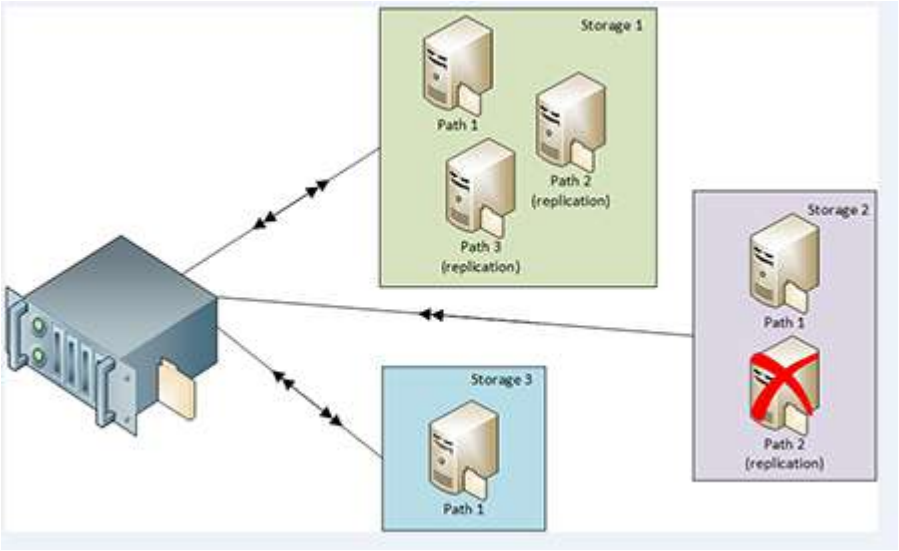


How does the Xopero storages work?

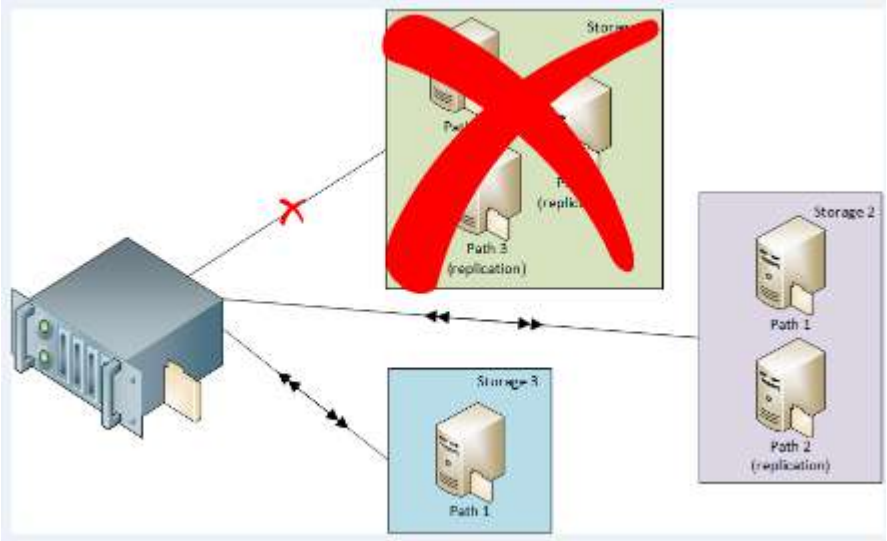
The data store is a logical definition of the place where backed up data are stored. Each unit can consist of one or several tracks, they are also in different locations.



If any of the storage paths becomes unavailable, the system will not allow the recording of data in the storage data, however, still be possible, however, to read this storage.



If the entire storage becomes unavailable due to failure or problems with the connection, the system will ignore it, until the problem will be solved.



Configuration QNAP storages

Introduction

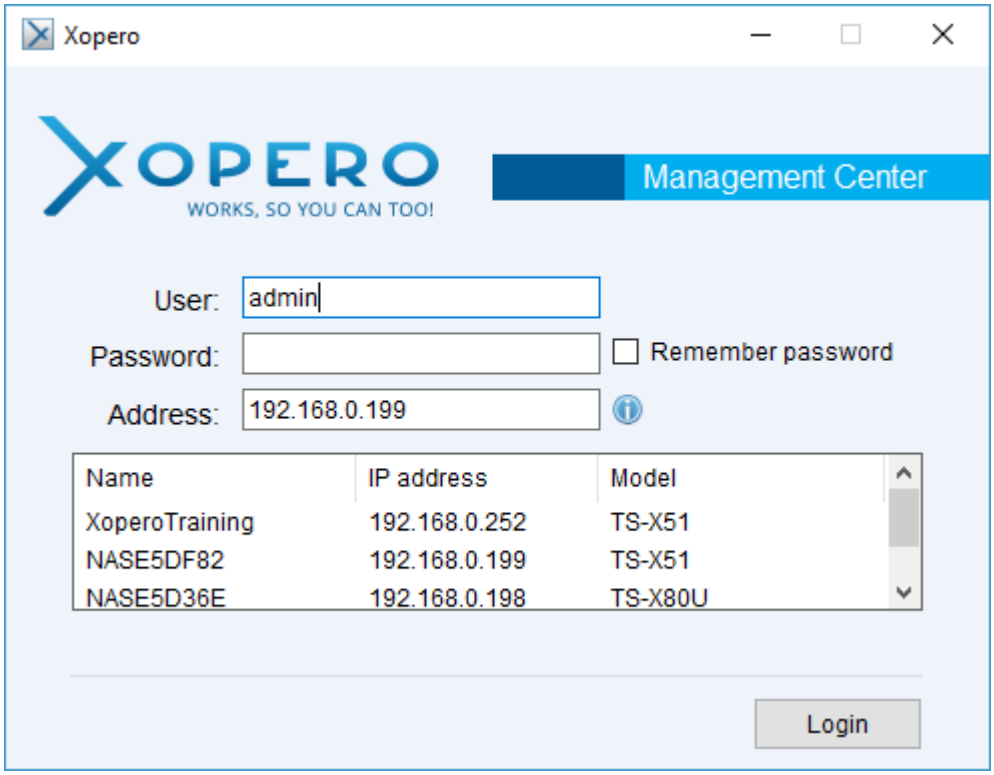
Data storage is a logical unit that defines the storage location backed up data. Storage can consist of one or more paths (location) each path within a storage, it is the path for data replication and does not increase the storage capacity. Xopero system works with any type of storage, it can be a single directory on disk as well as NAS or large disk arrays. It is required that the magazine was available to the system by the UNC path.

In case of the configuration using multiple instances of the server, the file system must support the competitive record.

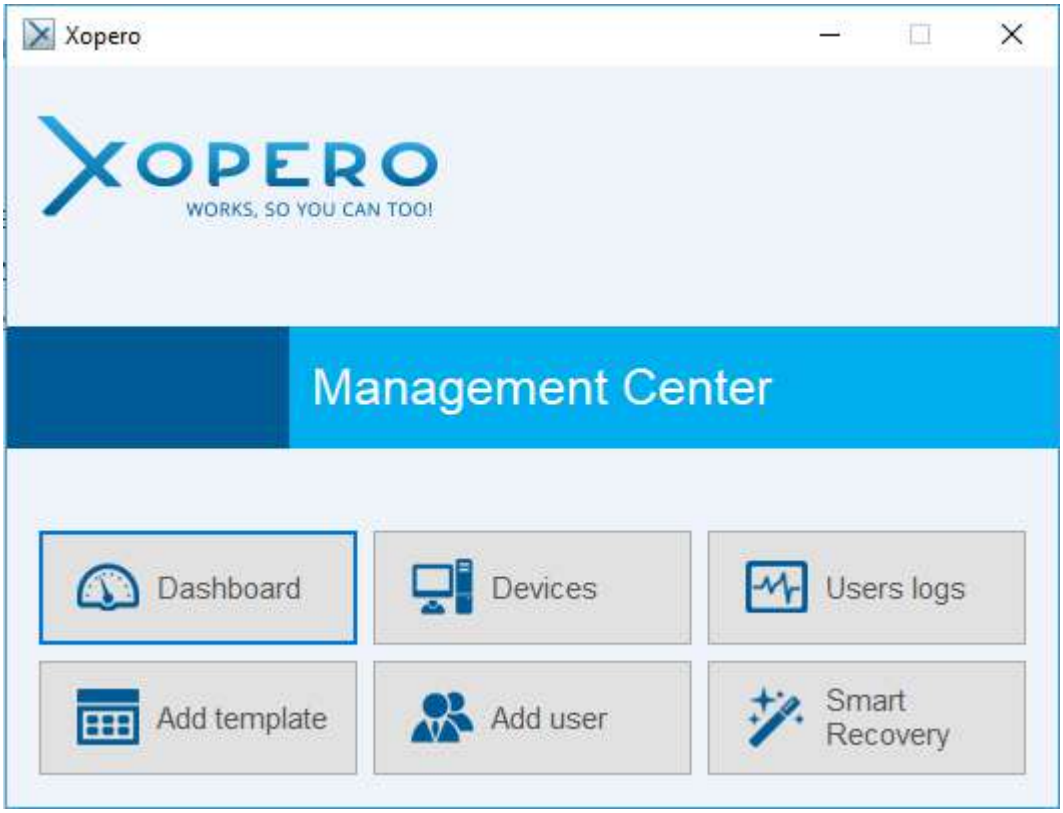
To create and manage data storage is used *Management Center*.

Starting configuration

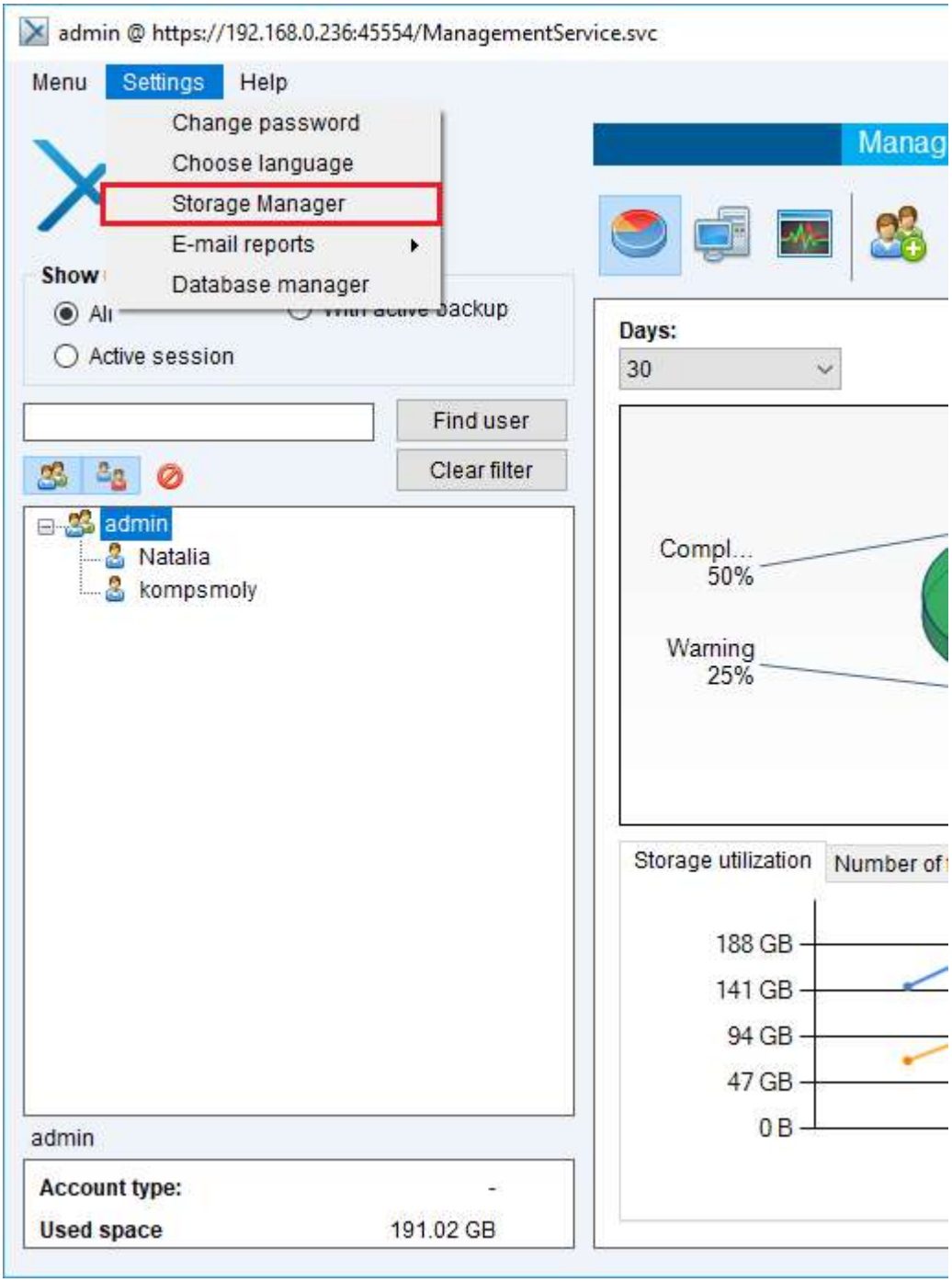
To start configuration the data storage run Management Center application.



If in your network is more than one Xopero server, select the appropriate from list. Then enter authenticate the main user of the system and click *Login*. After a successful login, select *Dashboard* from the list of shortcuts.



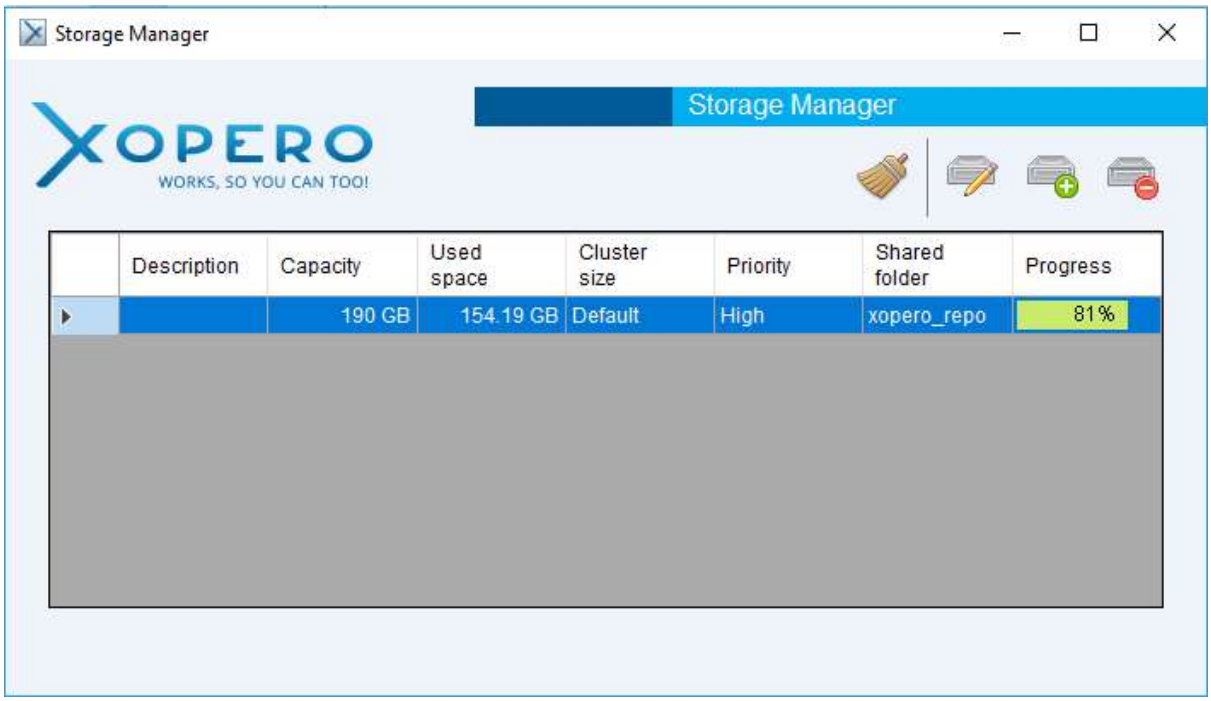
Then from the main application window, from the menu in the upper right corner, select *Settings* and then *Storage Manager*.


admin @ https://192.168.0.236:45554/ManagementService.svc
Menu
Settings
Help
Change password
Choose language
Storage Manager
E-mail reports
Database manager
Manag
Show
All
Active session
Days:
30
Find user
Clear filter
admin
Natalia
kompsmoly
Compl...
50%
Warning
25%
Storage utilization
Number of
188 GB
141 GB
94 GB
47 GB
0 B
admin
Account type:
-
Used space
191.02 GB

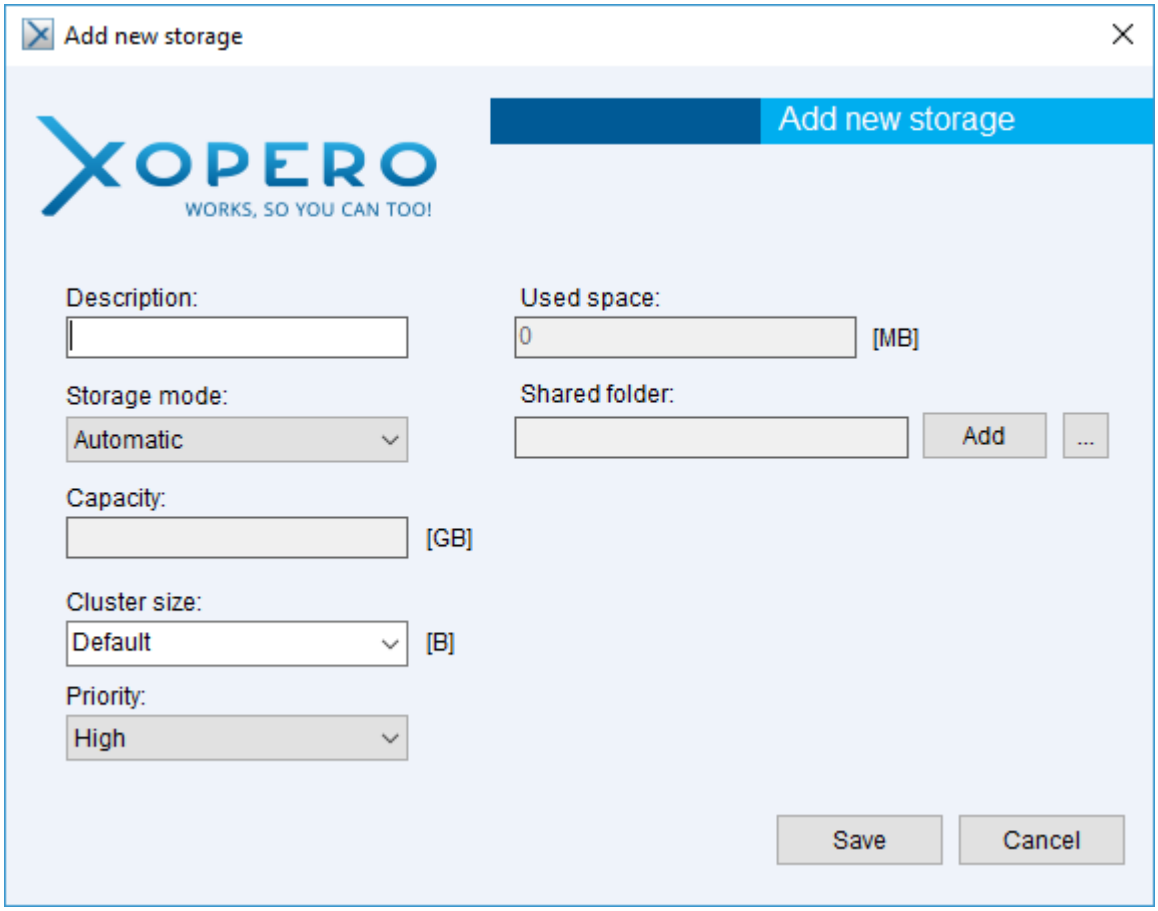
Configuring storages

Previous article shows you how to go to the following view.

The configuration window storage contains a list of currently defined magazines available for the system Xopero and a range of additional information. Here you can also check how busy each of the storage.



To define a new storage, click on the icon to *Add new storage*. This will open the configuration window.

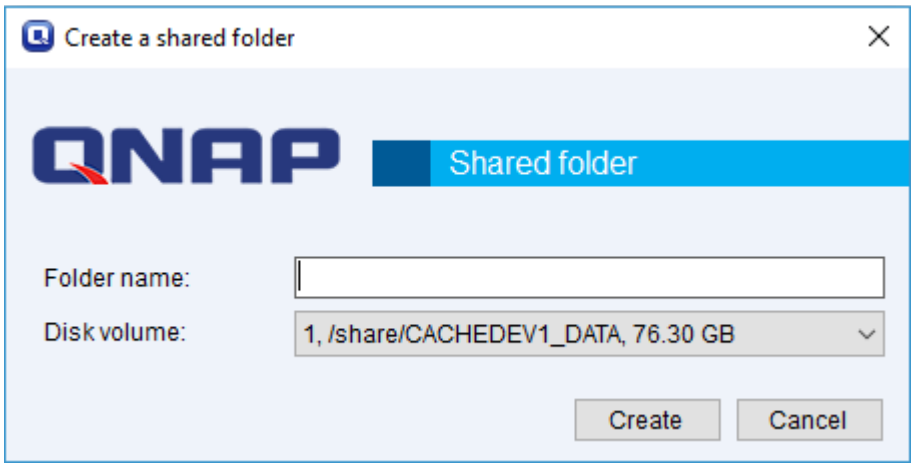


This window contains both information fields and fields to specify the configuration parameters of the new storage:

- **Description** – a text information about the storage, which is displayed in the *Management Center*application and the *Control Panel*,
- **Storage mode** – two modes of data storage have been emphasized: automatic, where the size of the volume is adjusted automatically, depending on the available space, and manual, where the user himself defines the size of the data storage,
- **Capacity** - defines how much data can be placed in storage,
- **Cluster size** - should be set only if you know the physical size of the disk cluster. Otherwise, you should leave the default value,
- **Priority** – the order of the storages where data will be saved, it is determined according to the priority. As first, a storage with the highest priority among the available will be chosen,
- **Used space** – is displayed only when editing a storage. For a newly created storage, the amount of used space is 0 MB,

- **Shared folder** – directory name on QNAP network drive,
- **Additional shared folder (replication)**- additional shared folders enable data replication, which is parallel recording in several locations, thus user data security is increased. Setting the replication option is particularly recommended if you have on your QNAP network drive, two separate hard drives that do not use RAID function. If one drive fails, then it is possible to recover data from a second location.

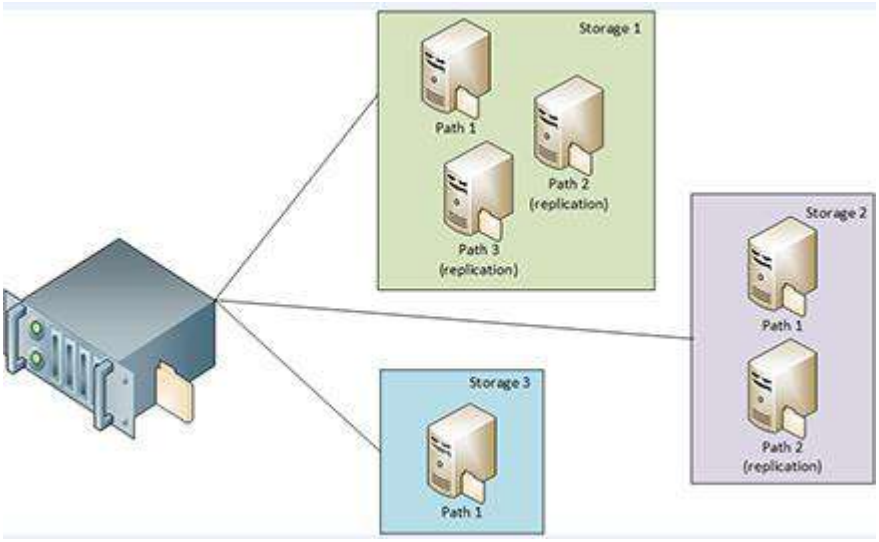
To create a folder on the device data store QNAP, use the *Add* option.



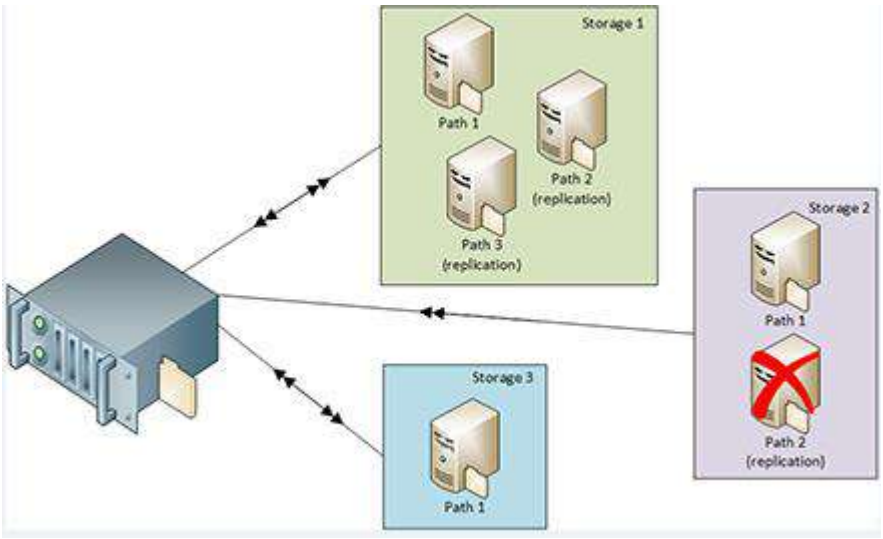
Enter the name of the shared folder and select the disk volume on which it has to be created. After completing the form, select the *Create* option. In total, you can add up to four shared folders, including one primary and three in the context of data replication. After the procedure, select *Save* option. Added magazine appears in the list.

How does the Xopero storages work?

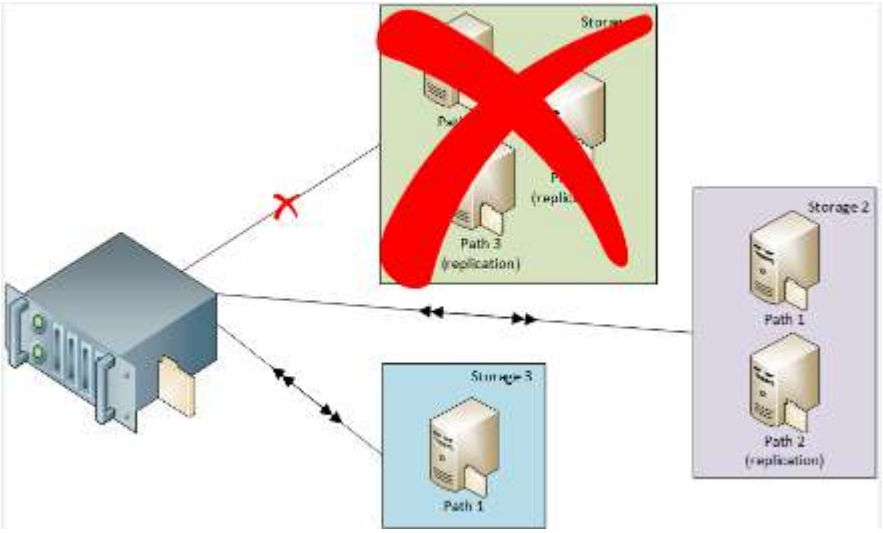
The data store is a logical definition of the place where backed up data are stored. Each unit can consist of one or several tracks, they are also in different locations.



If any of the storage paths becomes unavailable, the system will not allow the recording of data in the storage data, however, still be possible, however, to read this storage.



If the entire storage becomes unavailable due to failure or problems with the connection, the system will ignore it until the problem will be solved.


Path 3
(replication)
Storage 2
Path 1
Path 2
(replication)
Path 1