

Colibri NetManager

Virtual appliance

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Chapter 1 Installation and commissioning of Virtual Colibri NetManager

1.1 Requirements

- A Virtual Colibri NetManager server license
- The installation files obtained with the purchase of a Virtual Colibri NetManager Server license
- A Virtual Colibri NetManager device license for every device that is going to be managed
- A virtualization platform that is ready for operation and in line with system requirements
- A registered user on the Colibri NetManager portal that is able to activate the license

1.1.1 System requirements for the virtualization platform

The server requires two virtual machines. The following hypervisors are considered: VMWare ESXi (5.1 or higher) or Citrix XenServer (6.0 or higher)

- Virtual machine #1 (VM1): "Storage"

- Virtual machine #2 (VM2): "Service"

Minimum requirements for up to 100 devices

Virtual Machine ID	Storage size	# CPU	CPU clock	RAM
VM1	50 GBytes	1	> 1 GHz	2 GBytes
VM2	20 GBytes	1	> 1 GHz	2 GBytes

Requirements for 5000 devices

Virtual Machine ID	Storage size	# CPU	CPU clock	RAM
VM1	1 TBytes	4	> 2 GHz	16 GBytes
VM2	64 GBytes	2	> 2 GHz	8 GBytes

The virtual machines must be able to "see" each other within the network. This generally means that the network adapter in the hypervisor has been set to **bridged**.

1.1.2 Network requirements

Those who, from a technical and firewall perspective, would like to keep the virtual machines as far from each other (and from the rest of the network) as possible should follow these steps. All other users can simply ignore this section.

- When between "Service" and "Storage", the following requirements are applicable:
 - "Service" requires mysql access to "Storage" (TCP Port 3306).
 - "Service" is the NFSv4 client of "Storage" (TCP Port 111 and 2049).
 - "Service" requires ssh access to "Storage" (TCP Port 22) during an update to a newer service version.
- From the outside, the following is necessary:
 - Devices managed by the server require HTTPS or HTTP access to the configured port for "Service" (Default: 8443, 8080).
 - Users of the web interface also require HTTP(S) access to the Service computer.

The "Storage" must not be accessible from the outside.

1.2 Installation and configuration of virtual machines

Both virtual machines are, for the most part, default installations of a Debian GNU Linux server. The relevant configuration menu is displayed on the console. Logging in is not necessary. As usual, six virtual consoles are configured and it is possible to switch between them using keys **Alt-F1** to **Alt-F6**. Virtual consoles 2 to 6 show the normal login. As no valid root-password has been created, logging in is not possible at first. (An explanation on how to issue that kind of password is offered later on).

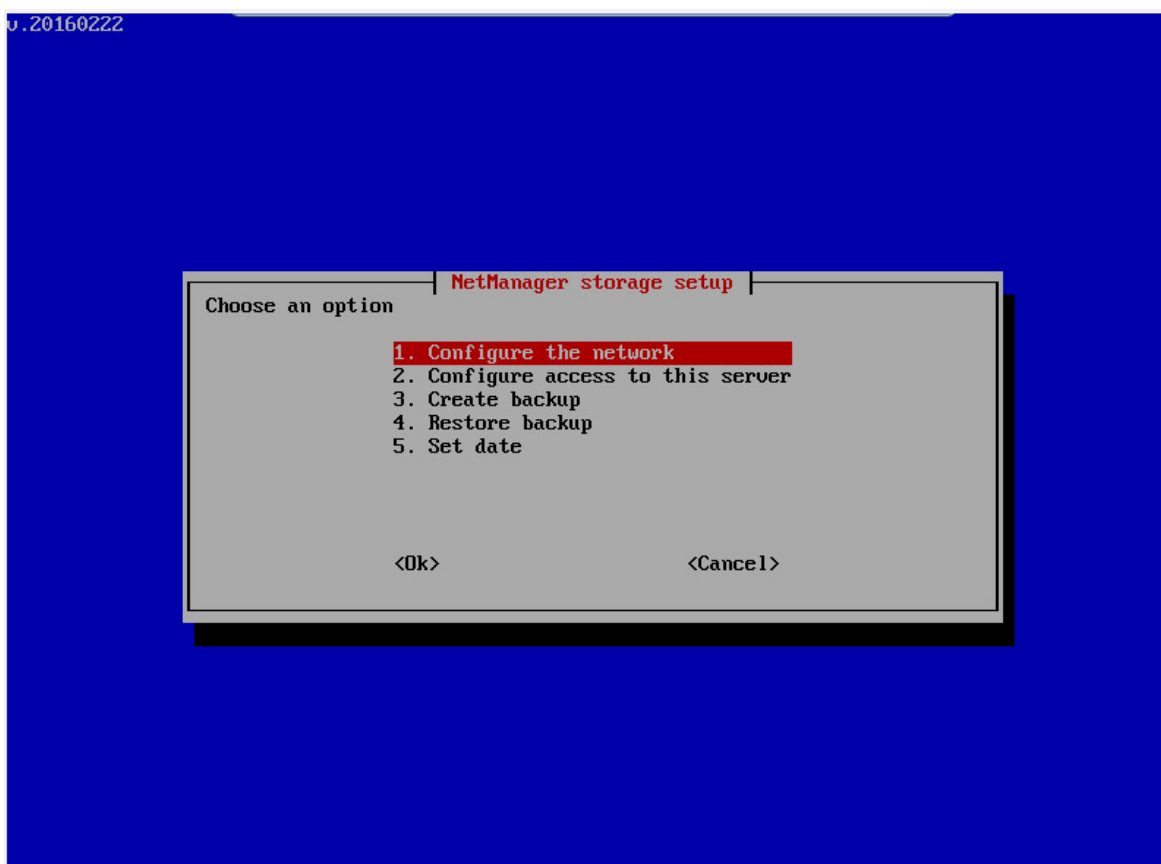
As an example, we will configure both virtual machines in a common network segment 192.168.0.0/24. "Storage" receives IP address 192.168.0.185, "Service" receives IP address 192.168.0.186, Standard Gateway and Name Server both get IP address 192.168.0.254.

1.2.1 Storage server configuration

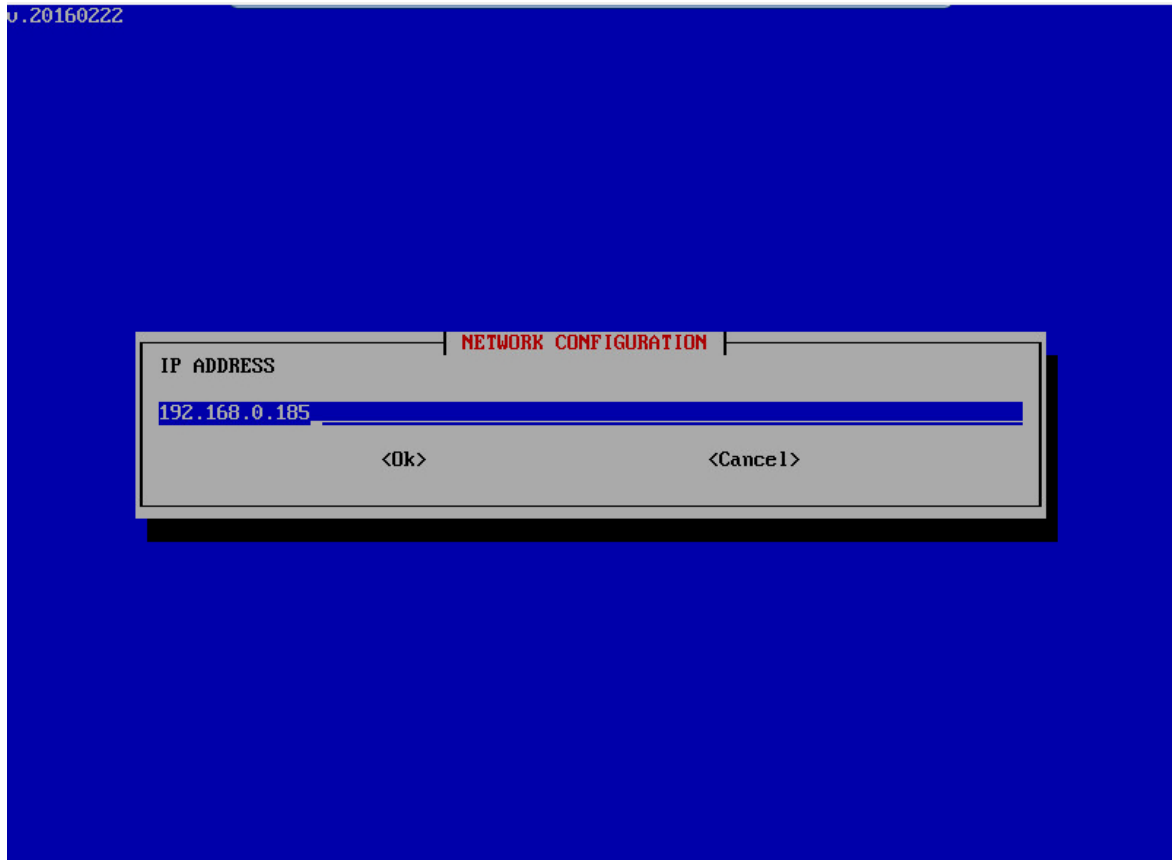
Once the storage server has started, the configuration menu appears automatically. Logging in is not necessary.

Network configuration

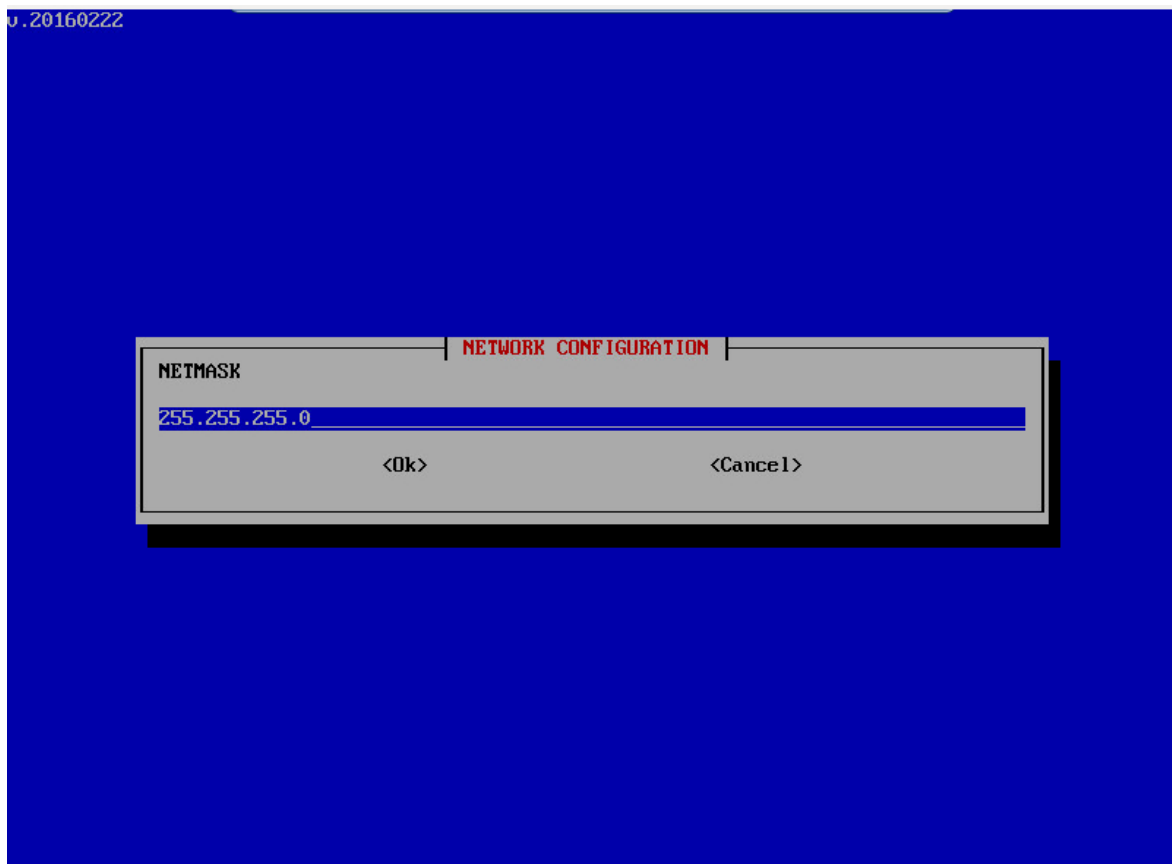
(1) To configure the **network**, select option 1 in the main menu: **Configure the network**.



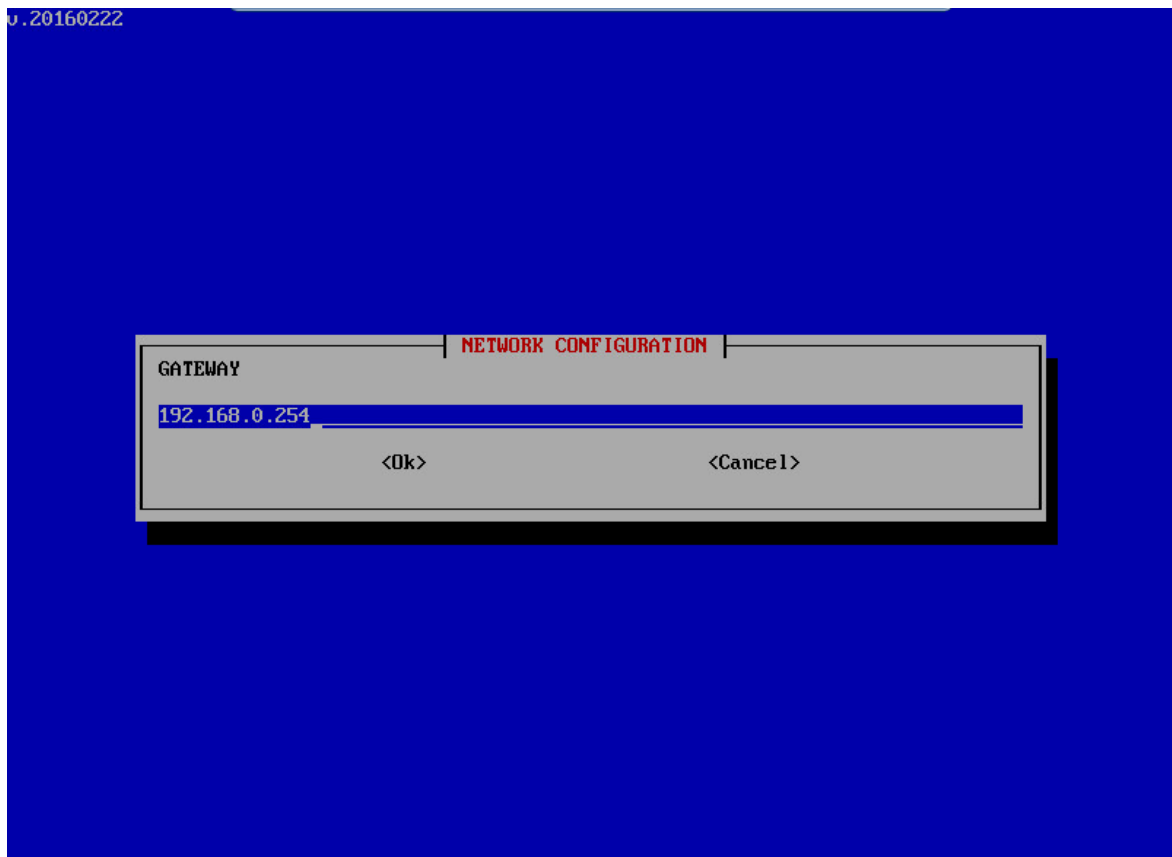
(2) Then enter the **IP address** of the storage server. In the case of our example, it is *192.168.0.185*.



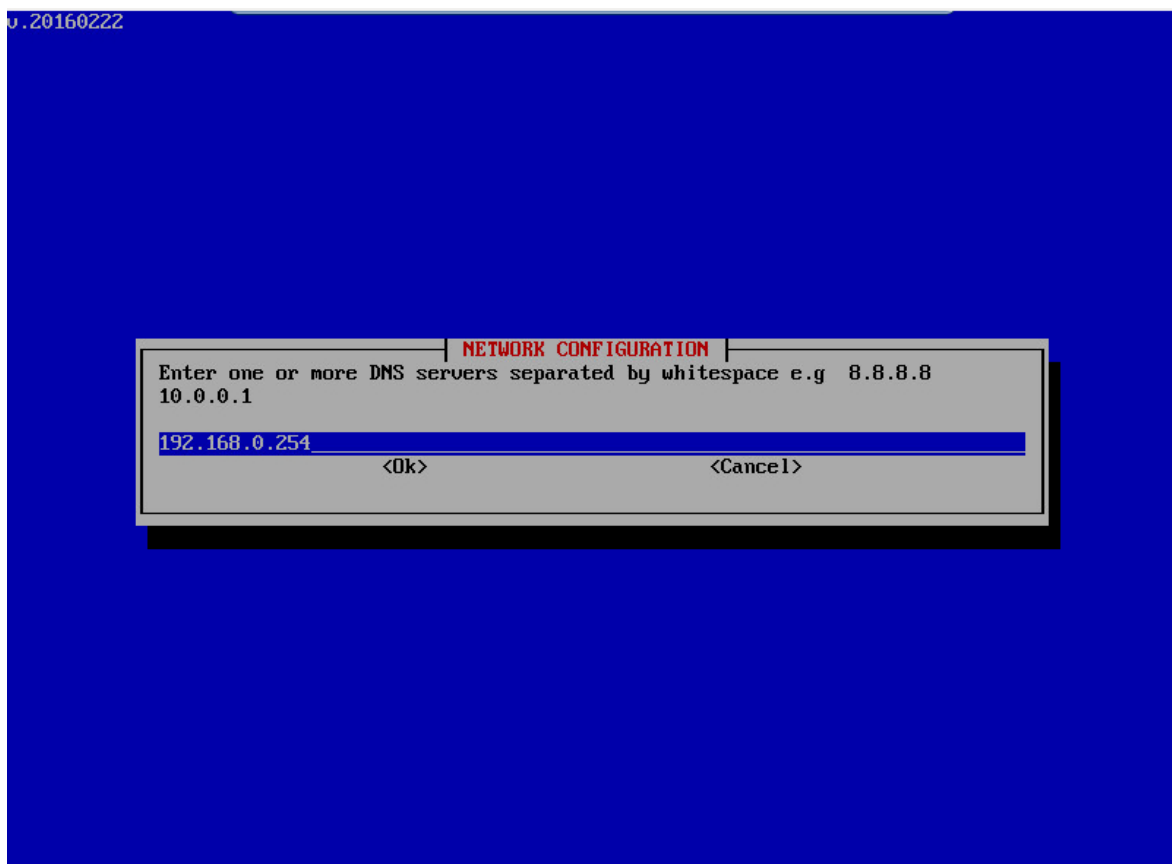
- (3) The **netmask** is entered here. In our example, it is `255.255.255.0`.



- (4) Then enter the **Gateway IP address**. In the case of our example, it is `192.168.0.254`.



- (5) The **DNS server address** must be entered next. In our example, it is `192.168.0.254`.



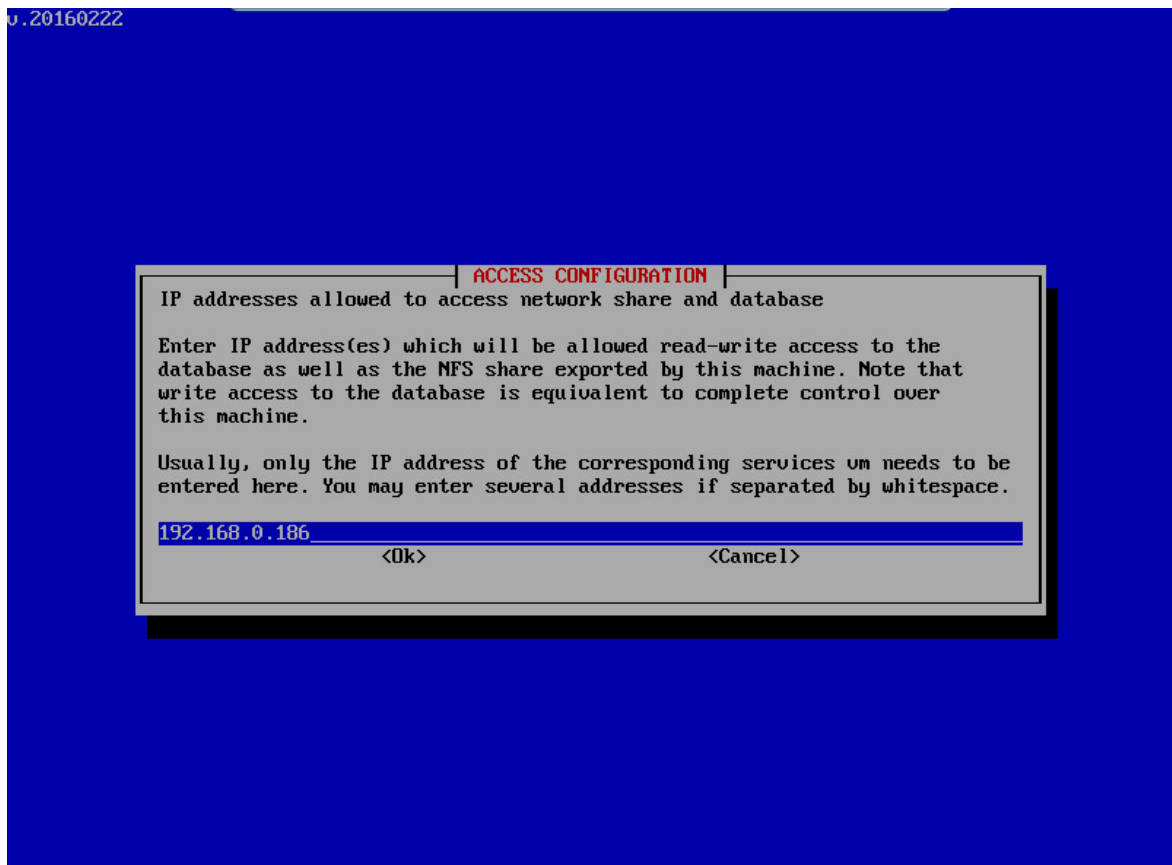
At this point, the **network configuration** is complete.

Access to the storage server

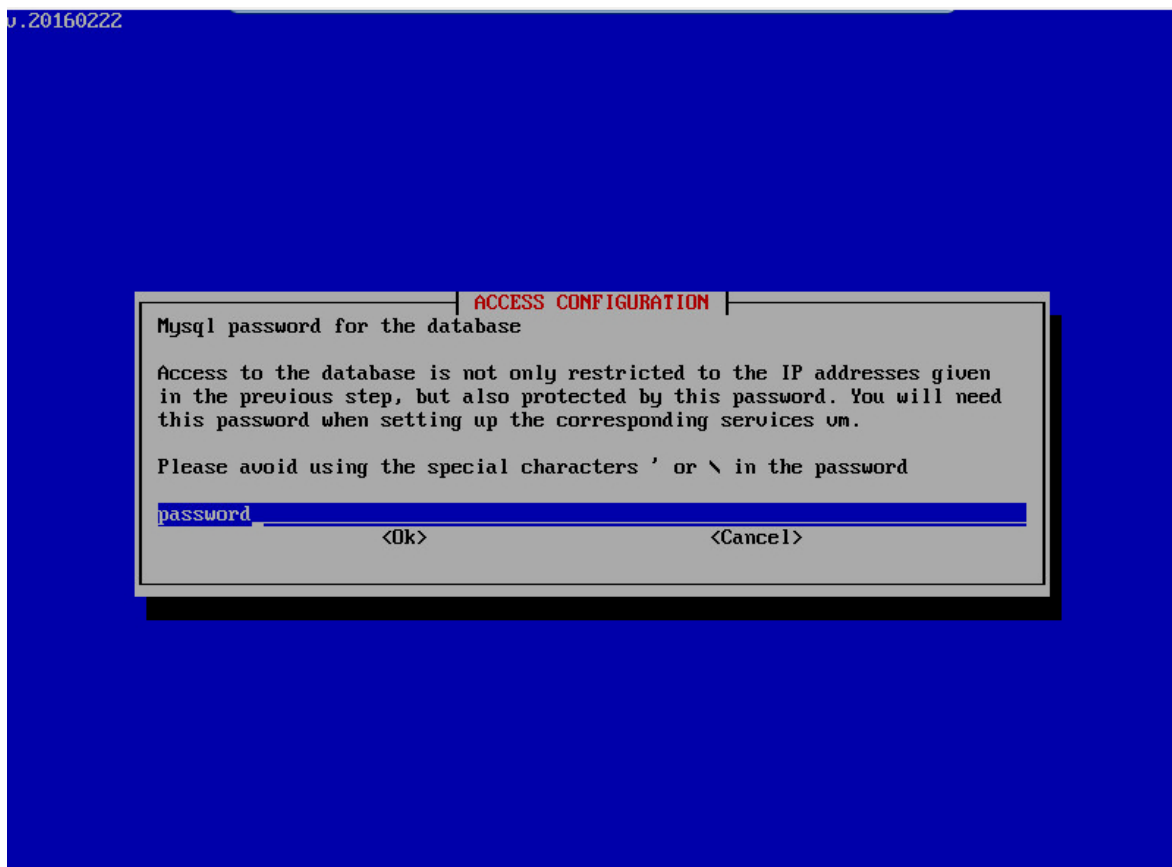
Access to the storage server must be configured next. To do so, select option 2 in the main menu: **Configure access to the storage server**.

- (1) The **IP address** of the server that can access the storage server is entered first. In our example, this is

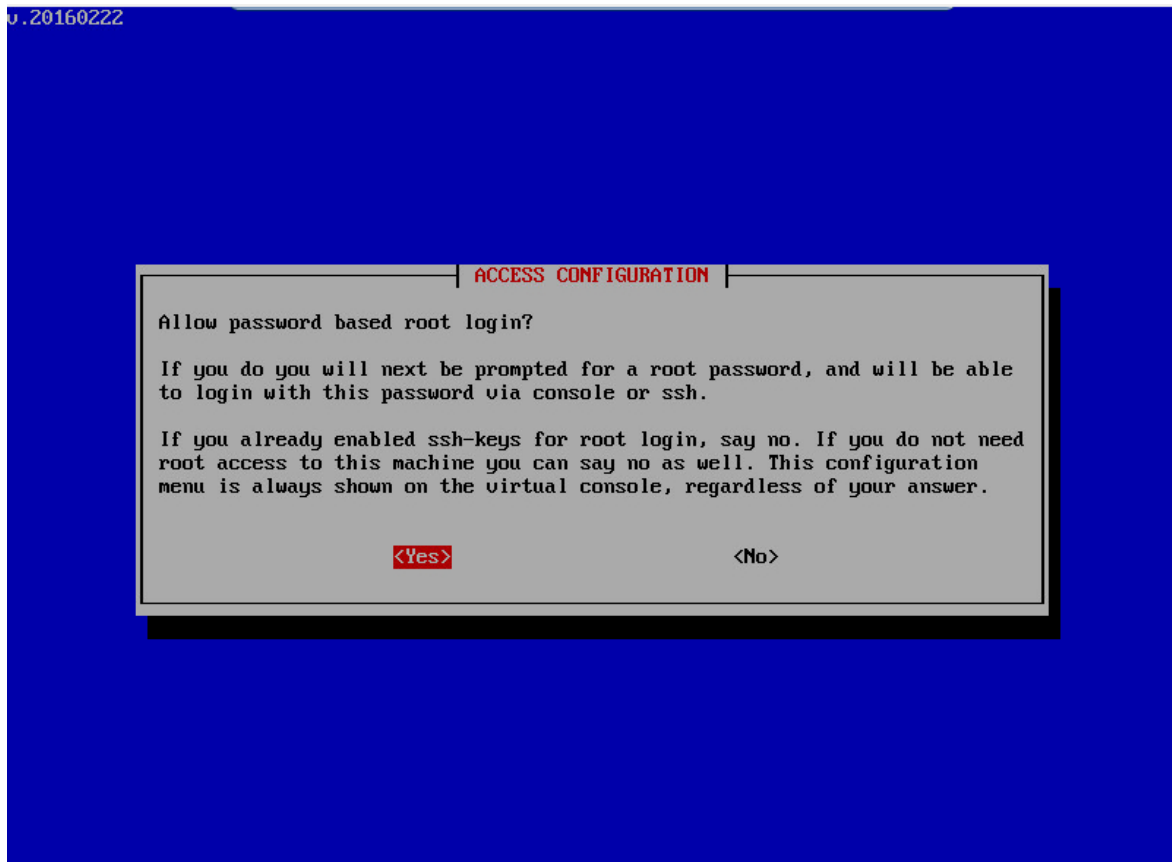
192.168.0.186.



- (2) A **database password**, allowing the storage server to be reached, must be issued next.



- (3) To be able to log in directly using Shell or SSH as `root`, a **root password** must be created.

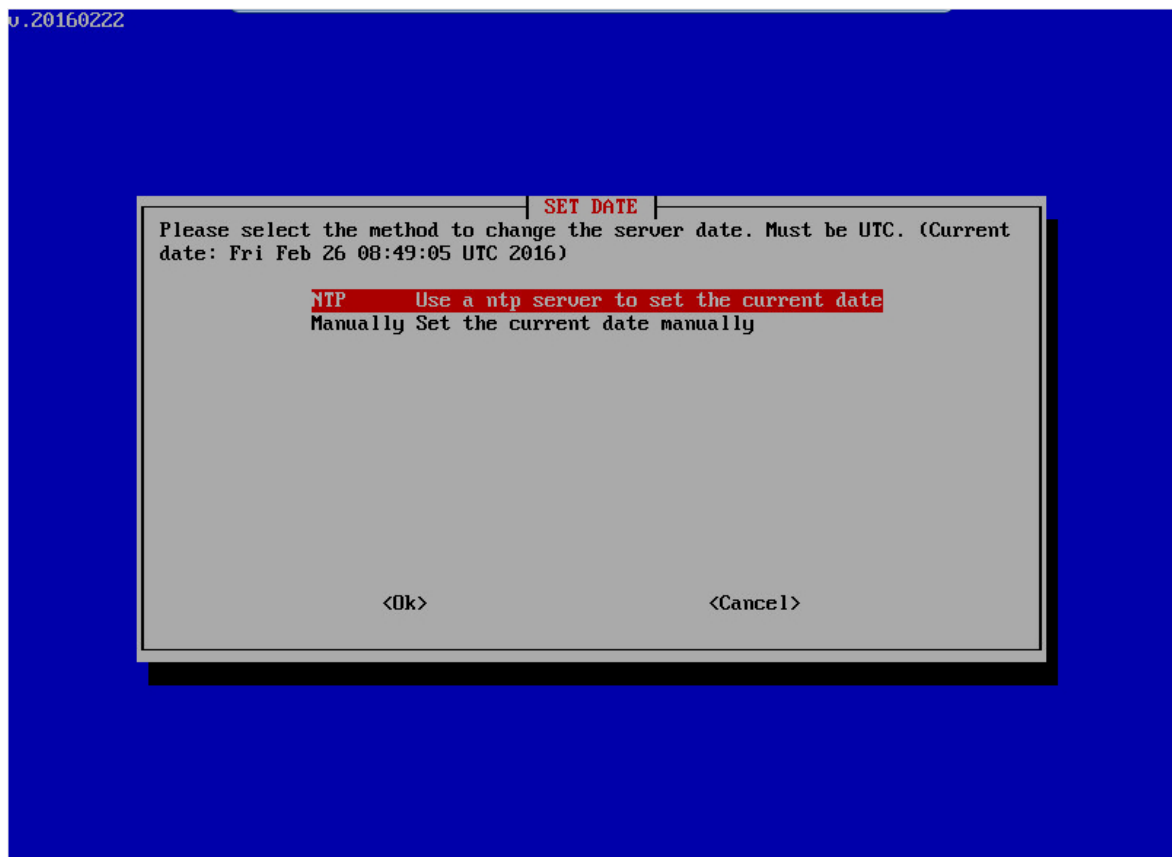


When this message appears, access to the storage server has been fully configured.

Set the storage server date

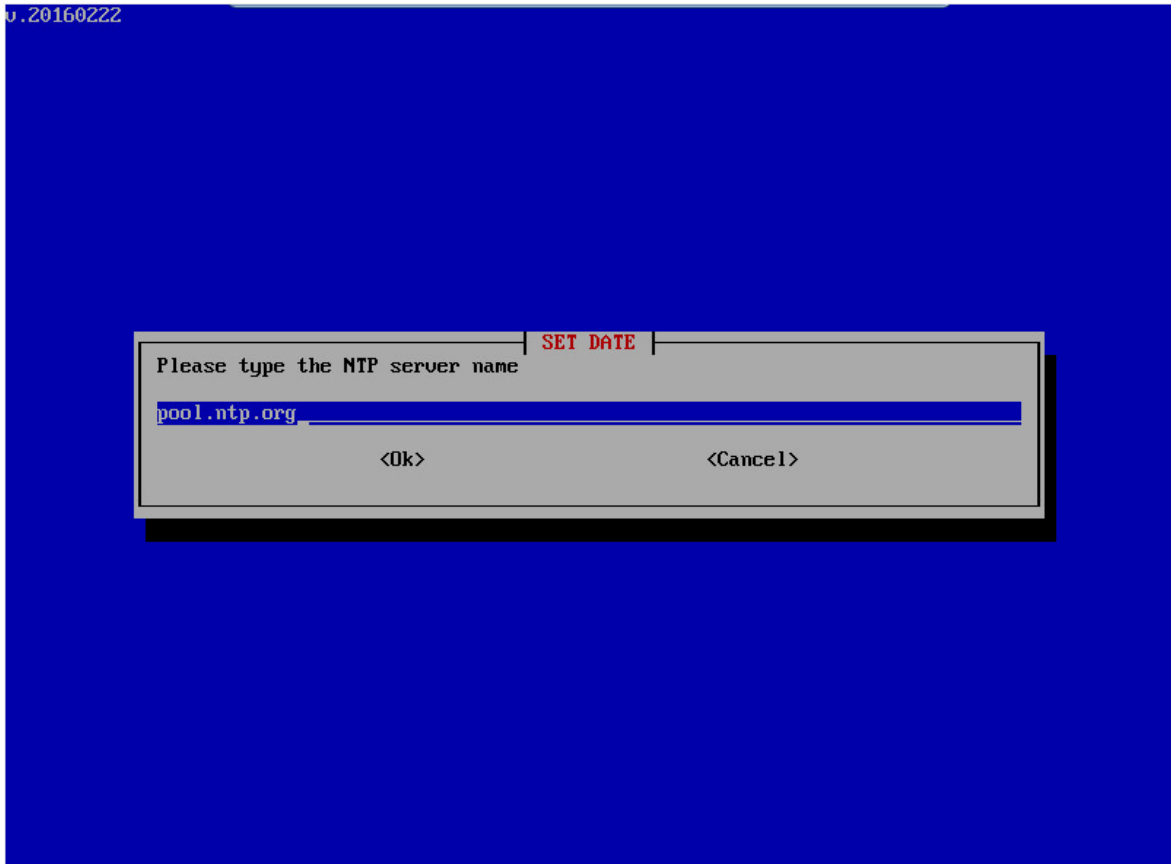
The last thing that needs to be configured is the storage server date. To do so, select the **Set date** option in the main menu.

- (1) You can choose one of two methods to configure the server date: NTP or Manually.

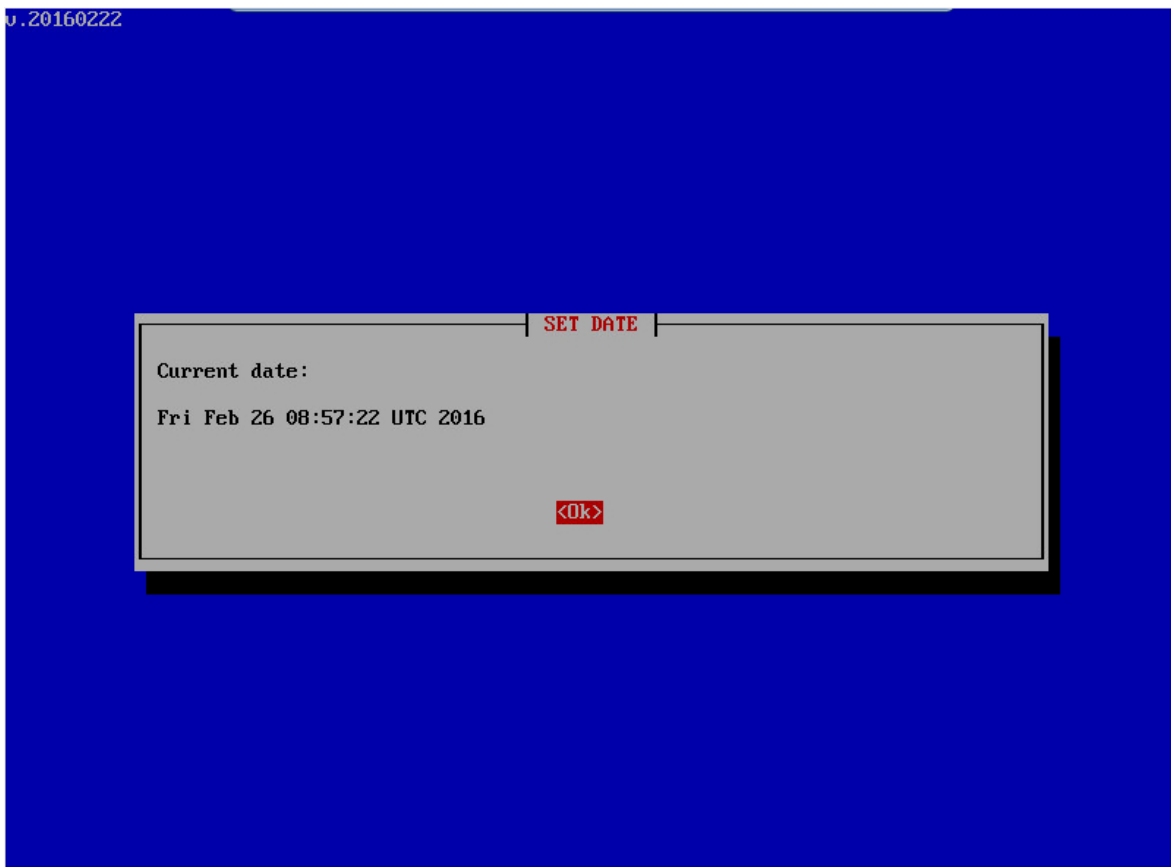


- (2) If you choose the NTP method, enter the NTP server you want to use. By default, this parameter is

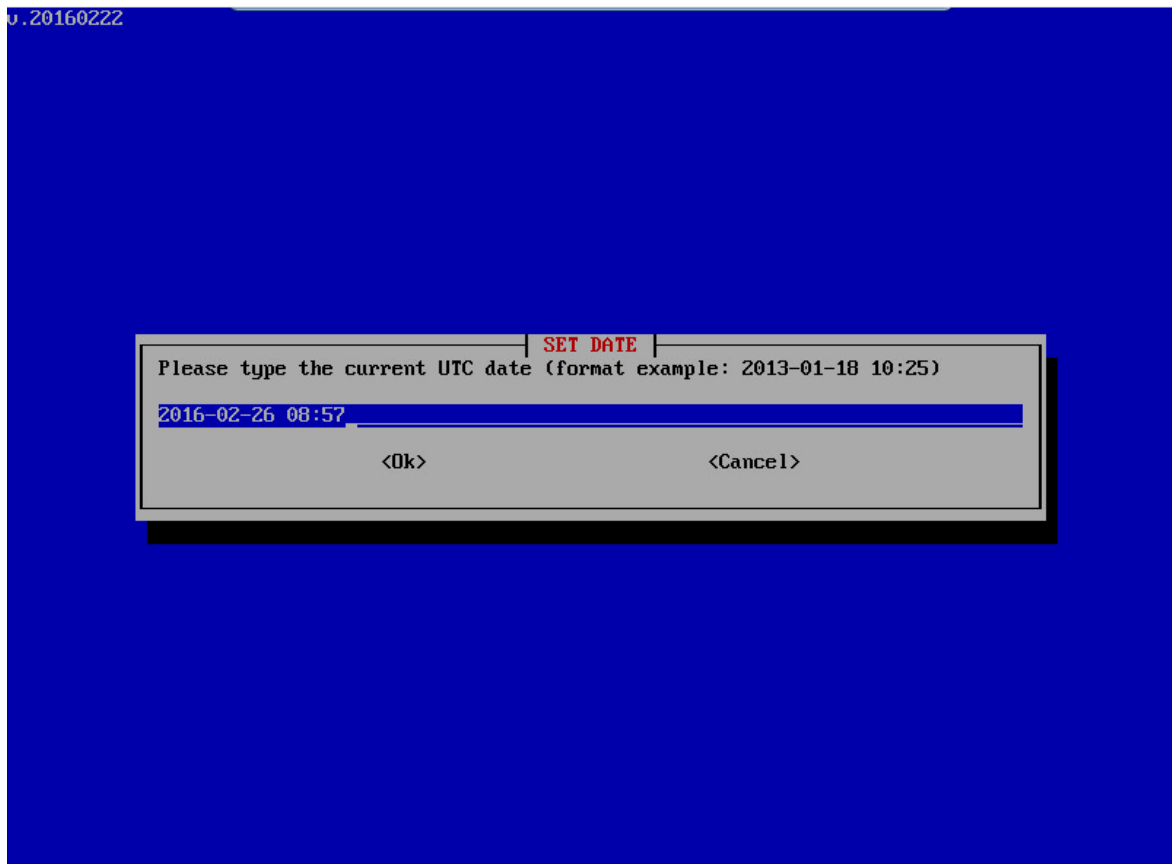
pool.ntp.org



- (3) After some seconds, if connecting with the NTP server was possible, a screen pops up and a message appears showing the current server date.



- (4) If you choose to do it manually, you must enter the date yourself. After this, if the date format is correct, the current date is shown in a manner similar to the way it appeared when using the NTP method.

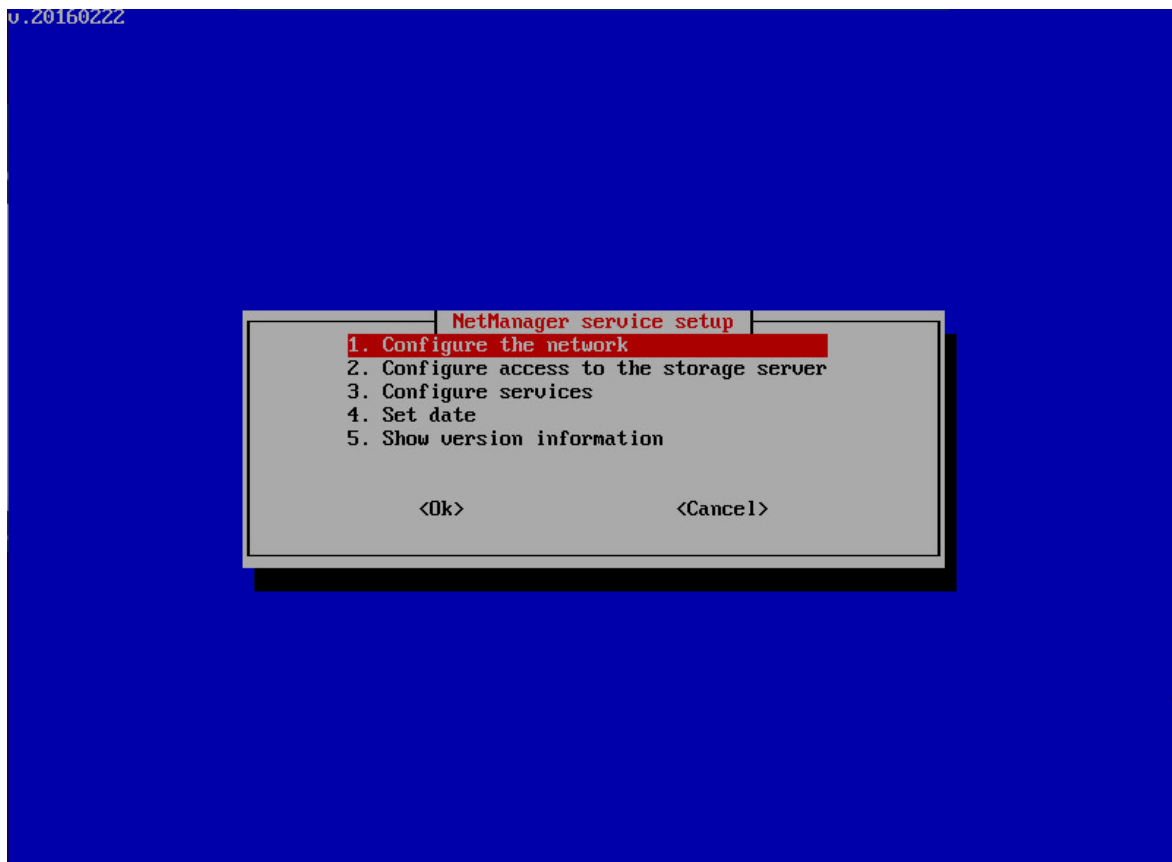


1.2.2 Service configuration

Once the server starts, the configuration menu appears automatically. Logging in is not necessary.

Network configuration

- (1) The **network** is configured again in the first step. Select option 1 in the main menu, **Configure the network**.



- (2) Enter the **IP address** through which the server shall be accessible. In this case, it is `192.168.0.186`.



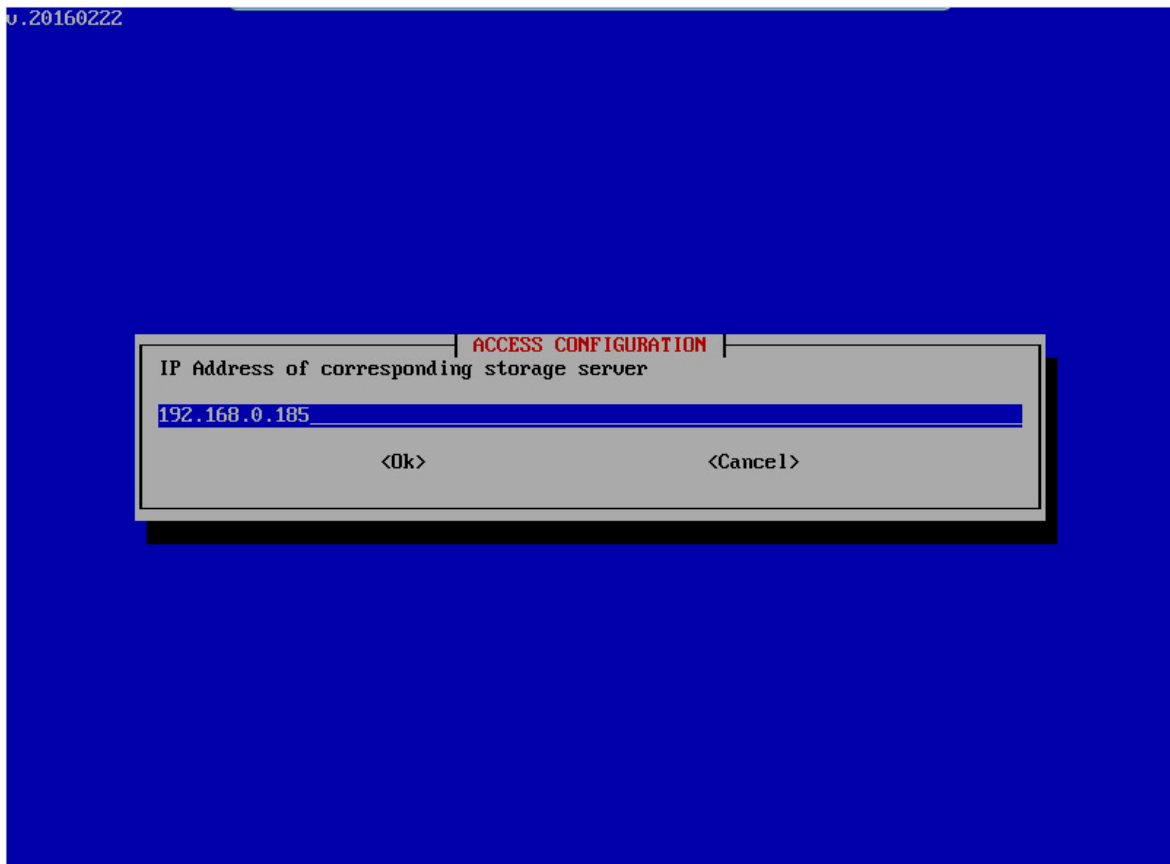
- (3) All additional values (IP address, netmask, Gateway IP address, and the DNS server address) can be transferred from the **storage server configuration**.

At this point, the **network configuration** is complete.

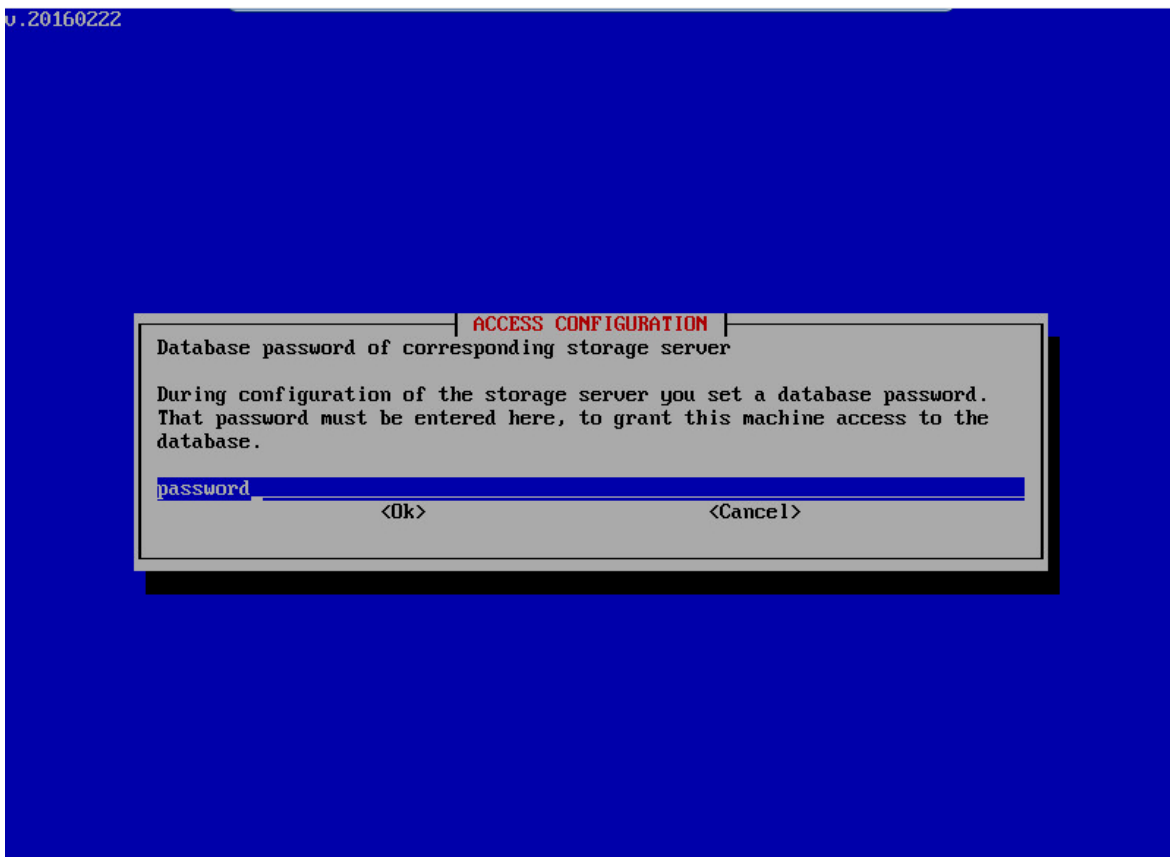
Access to the storage server

Access to the storage server must be configured next. To do so, select option 2 in the main menu: **Configure access to the storage server**.

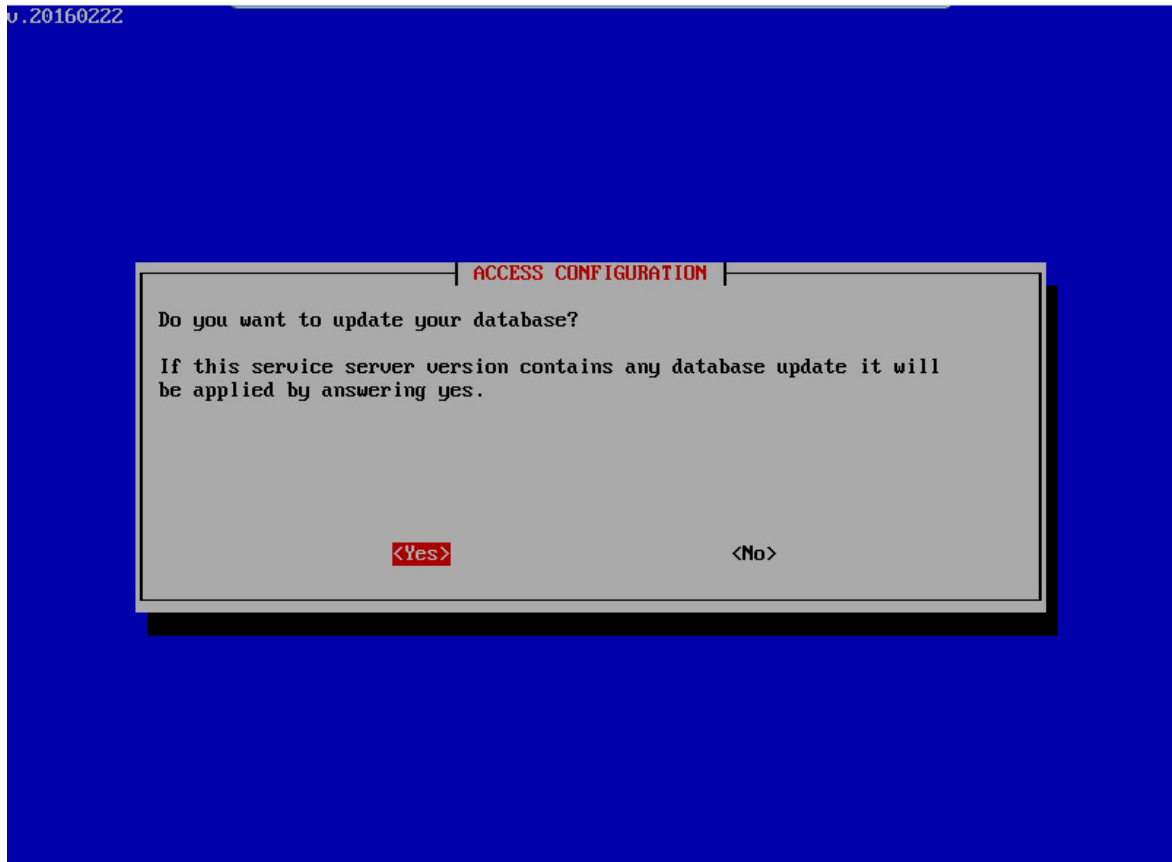
- (1) The first thing that needs to be done is to enter the IP address of the storage server. In this case, it is *192.168.0.185*.



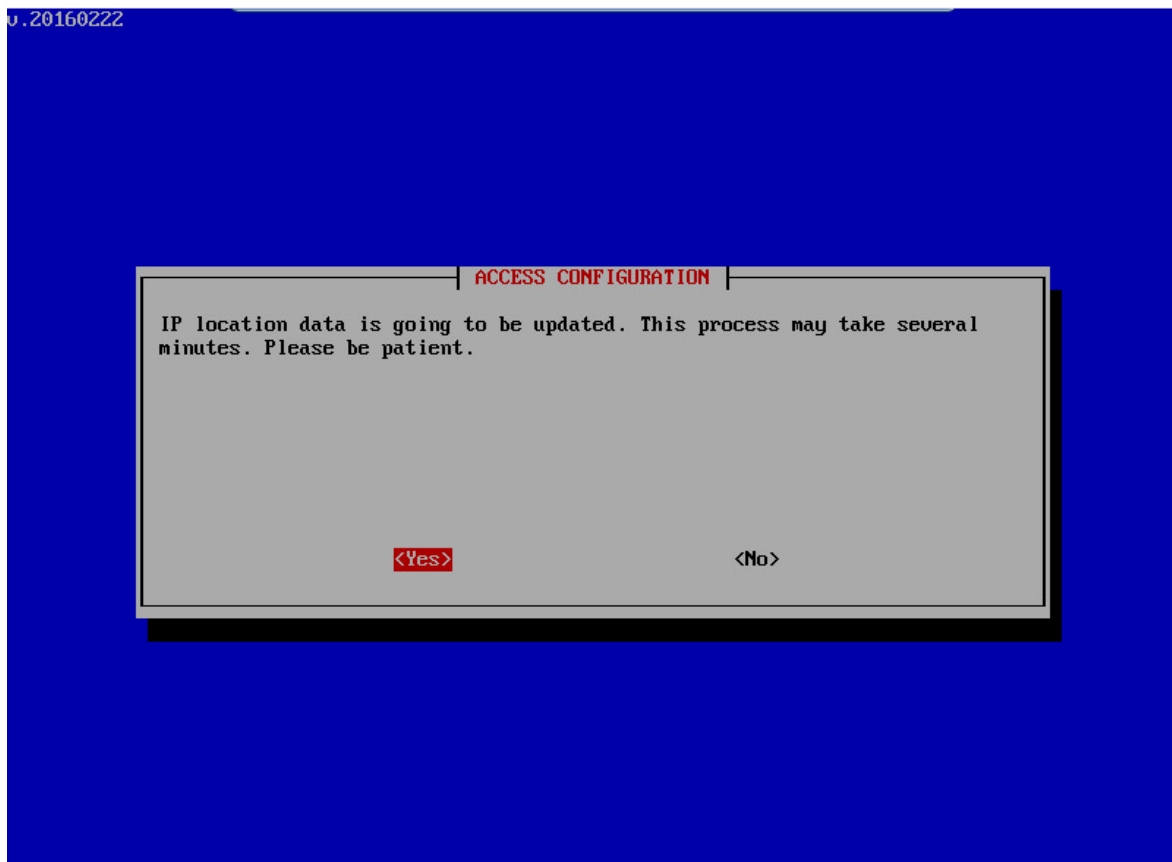
- (2) The database password that was previously set in the storage server configuration is entered to communicate with the storage server. In our example, we have chosen *password* as the database password.



- (3) Once here, you must update the database. Click on "Yes" in order to do so. The Service server connects with the Storage server and checks the database version to update it for Service (if necessary). If this process is a first installation, and not a Service server update, no updates are usually applied.



- (4) Finally, you must update the geographic IP location information data in the database (when necessary). This operation may take several minutes.



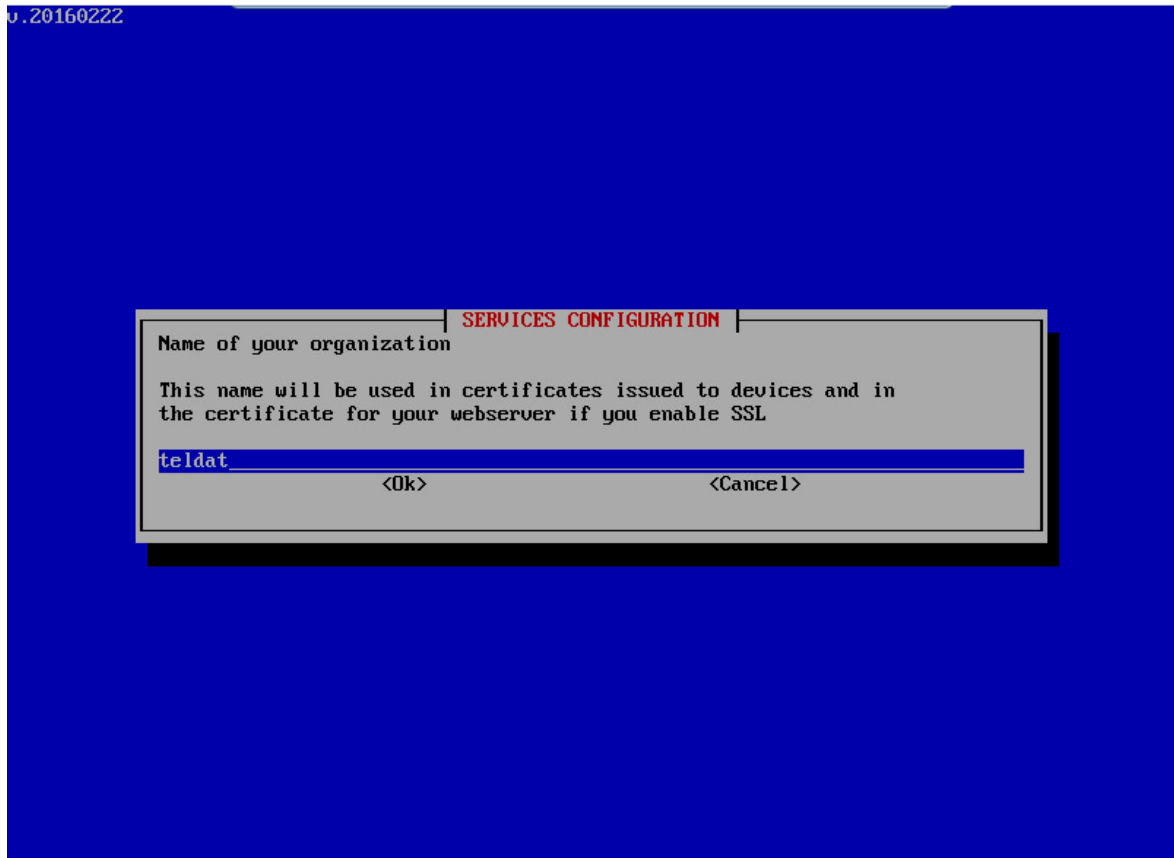
This message means that access to the storage server has been fully configured.

Colibri NetManager web server

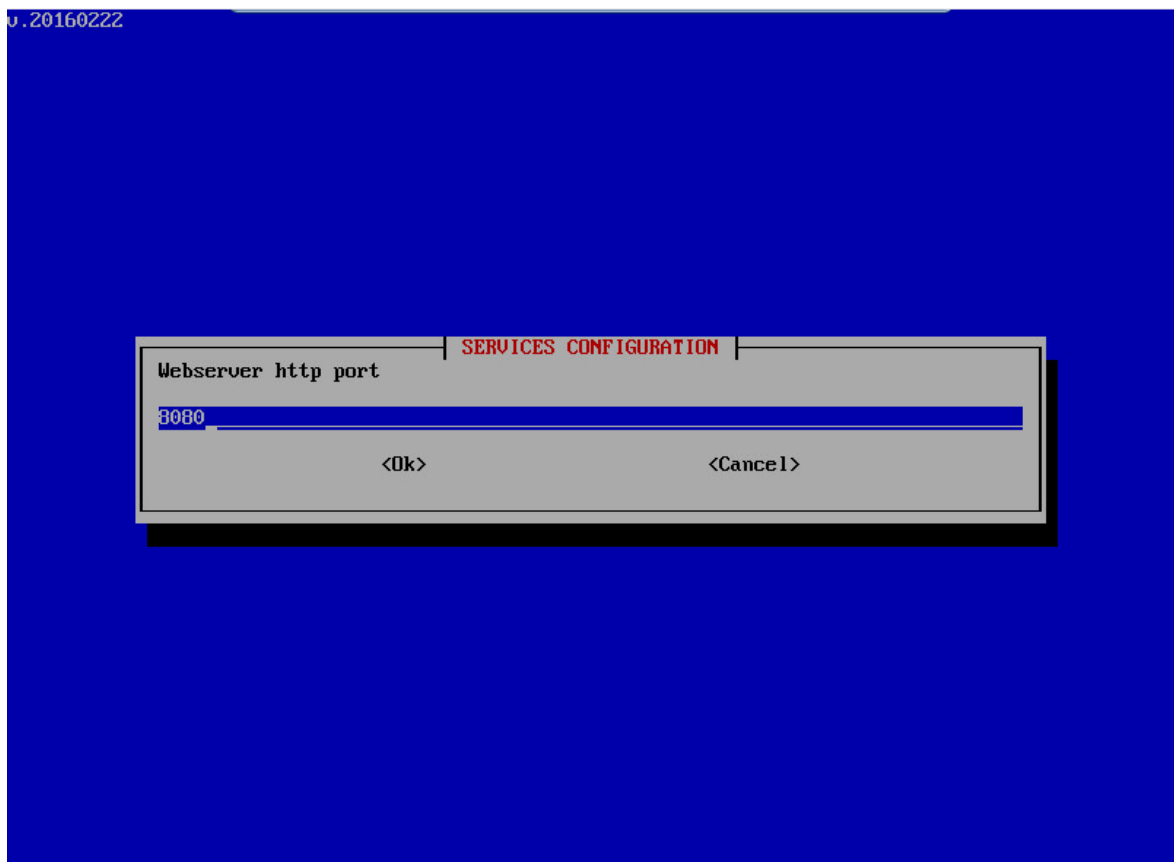
The Colibri NetManager web server is configured next. Select option 3, **Configure services**, in the main menu

- (1) Communication between the terminals to be managed and the server is encrypted and protected via certific-

ates. These certificates are created by the server itself. The only information you need to disclose is the name of your organization.



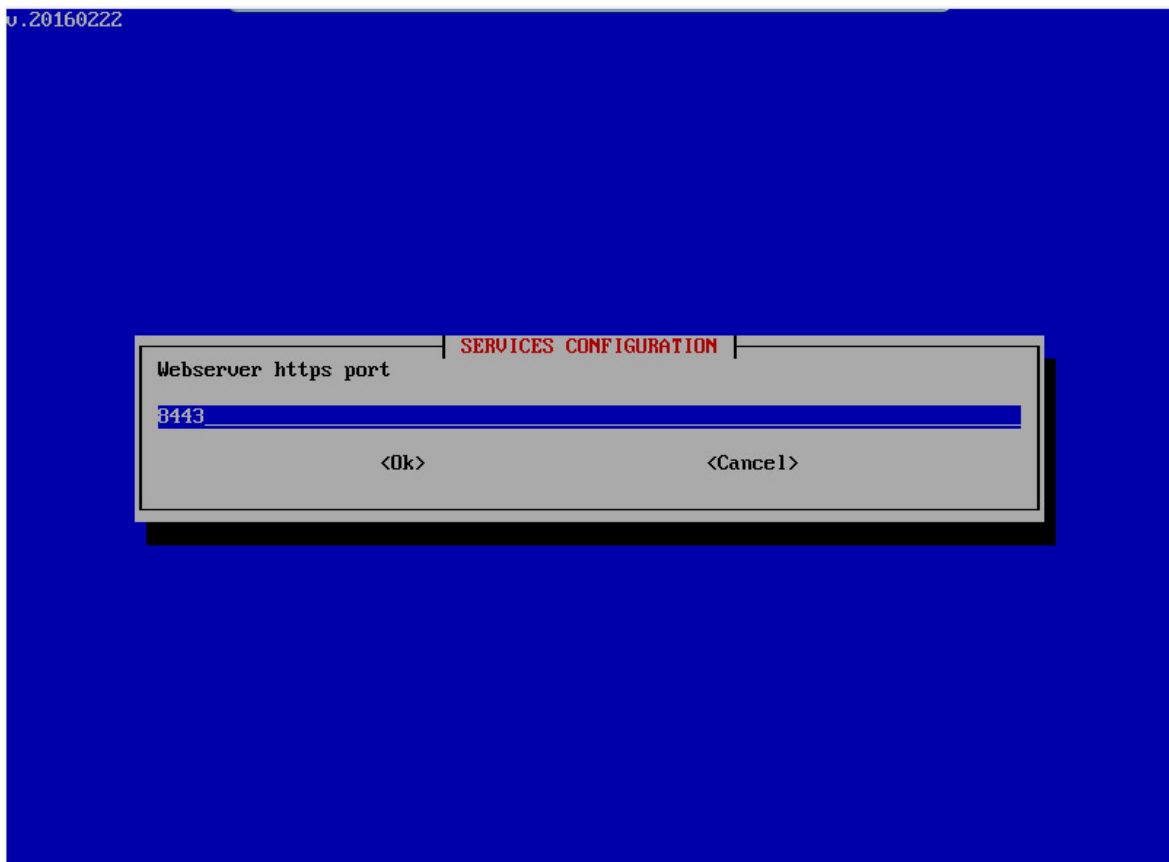
- (2) Now, set the port the web server uses for HTTP calls. In this example, the port is *8080*.



- (3) The configuration process then asks whether the web server should be reached via SSL. In this example, we settled for *Yes*.



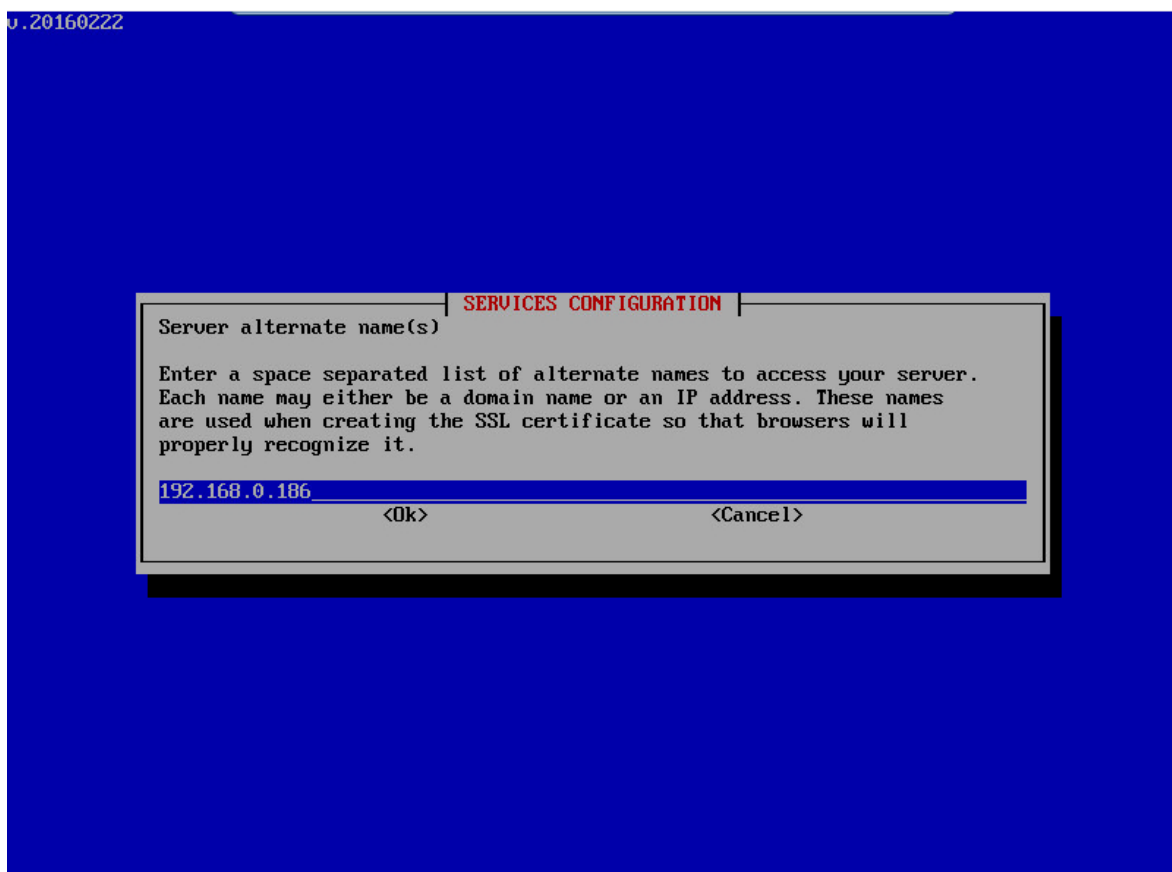
- (4) The web server port defined is the one used for HTTPS communication. In our example, the port is *8443*.



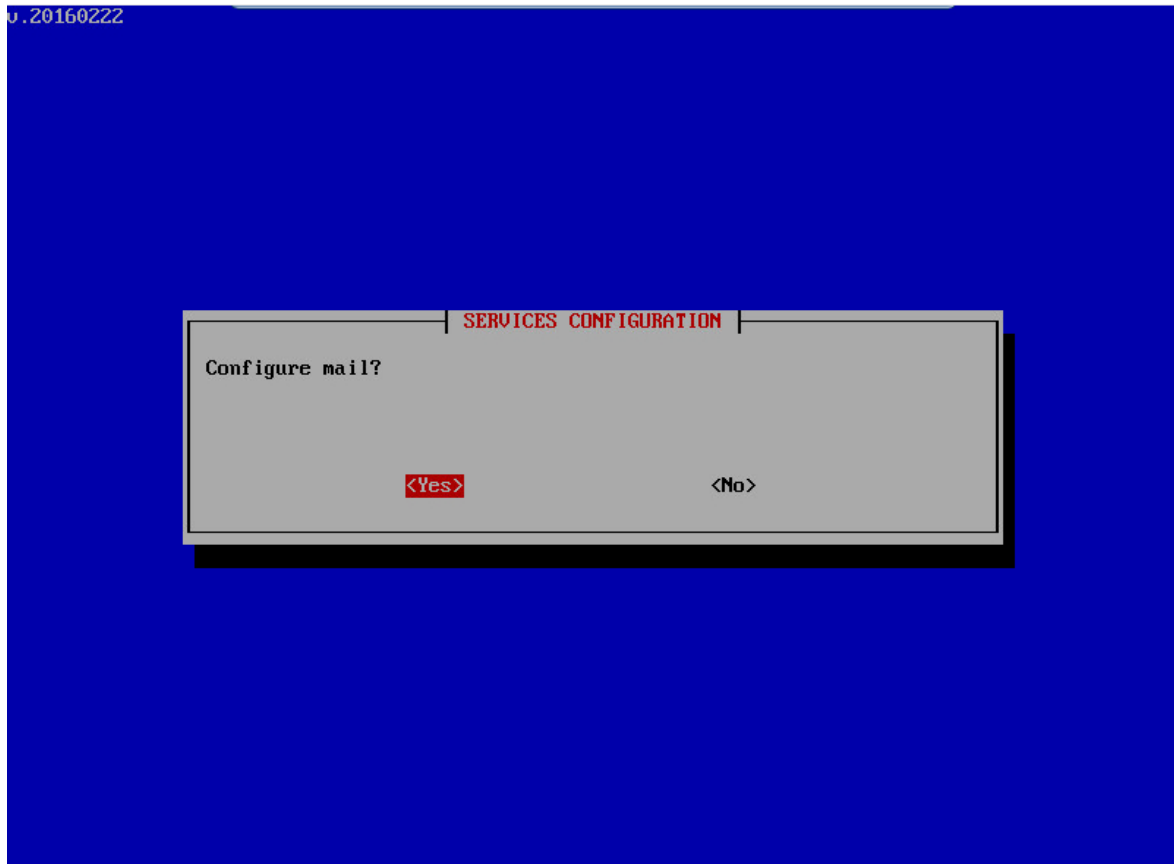
- (5) If the server can be reached, later on, via a URL with HTTPS, then the full domain name of the server must be entered here (e.g. *colibrinetmanager.teldat.com*). If the server can only be reached through one IP address, then the field can remain empty.



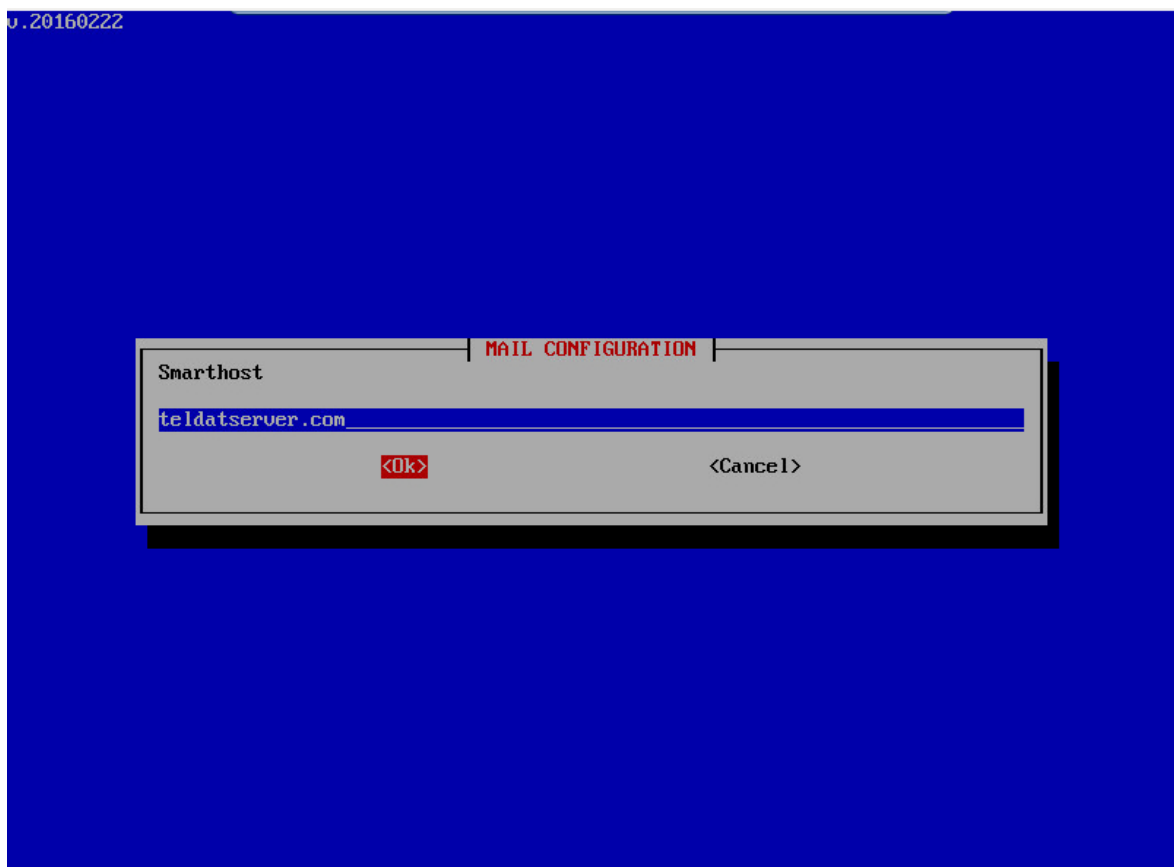
- (6) This aspect is also important for HTTPS accessibility. Alternative domain names can be added here, in case the server has to be reached through other domain names via a HTTPS connection. If the server can only, or may also, be reached from an IP address via HTTPS, then the IP address must be entered here.



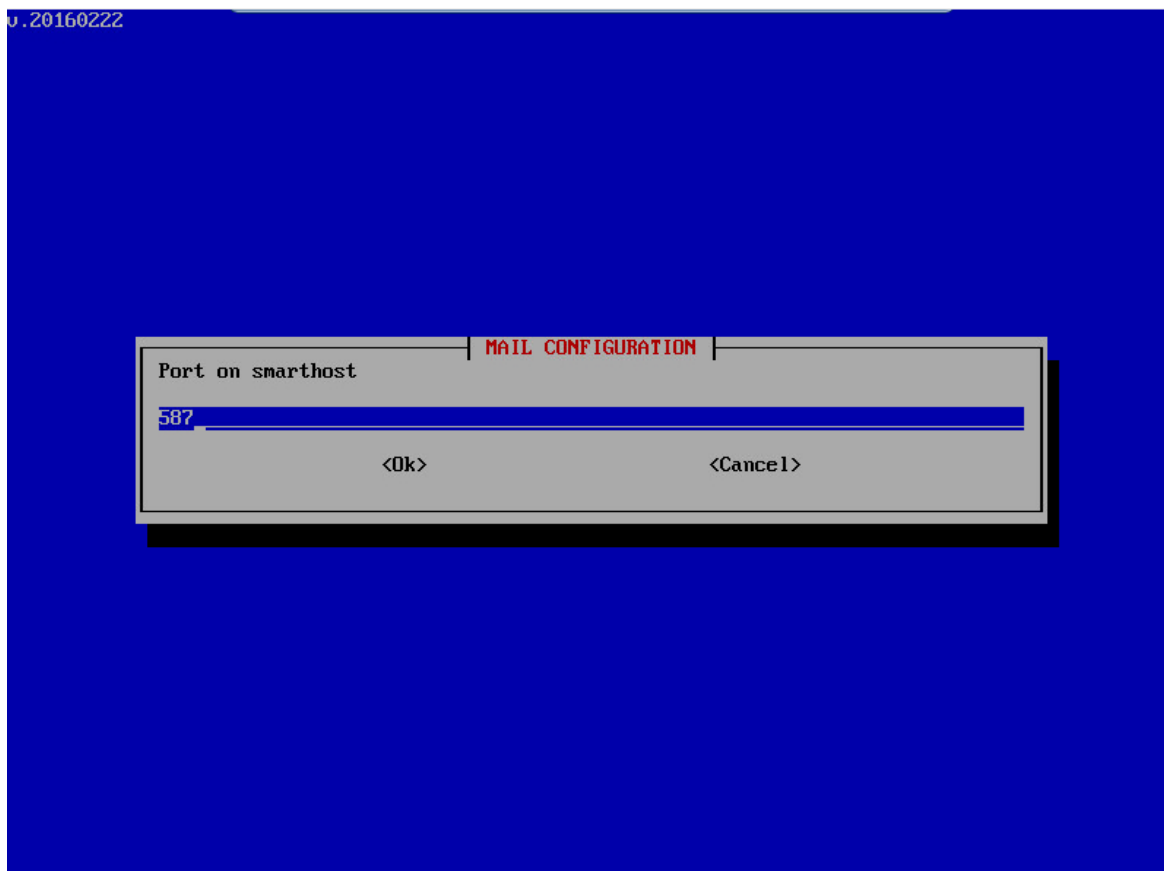
- (7) A mail client is available, allowing the server to send emails (such as alerts). This will be configured next.



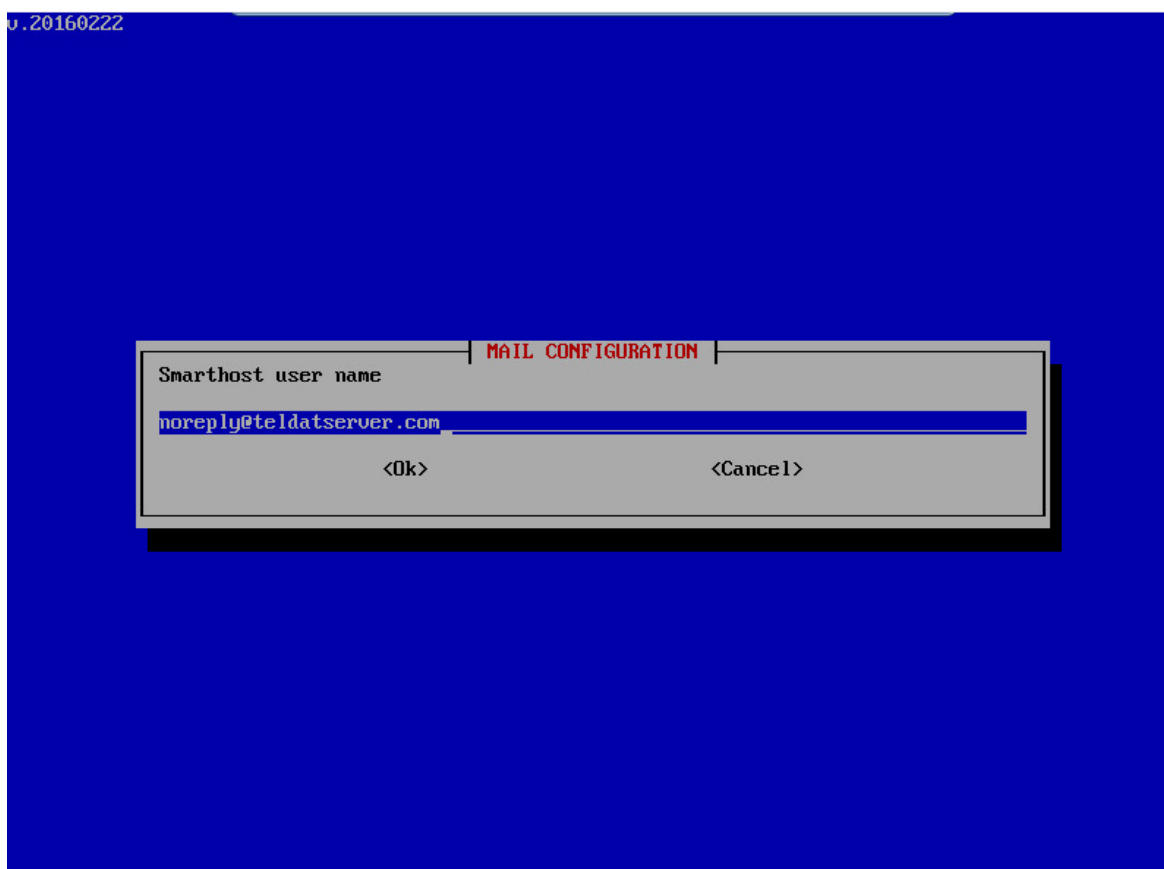
- (8) The name of the mail server that should be used is entered here. In our example, this is *teldatserver.com*. Enter your own mail server. Operation with public mail servers is not provided for. Also, an encrypted connection to the mail server is not possible as we assume that the mail server is located in a private network.



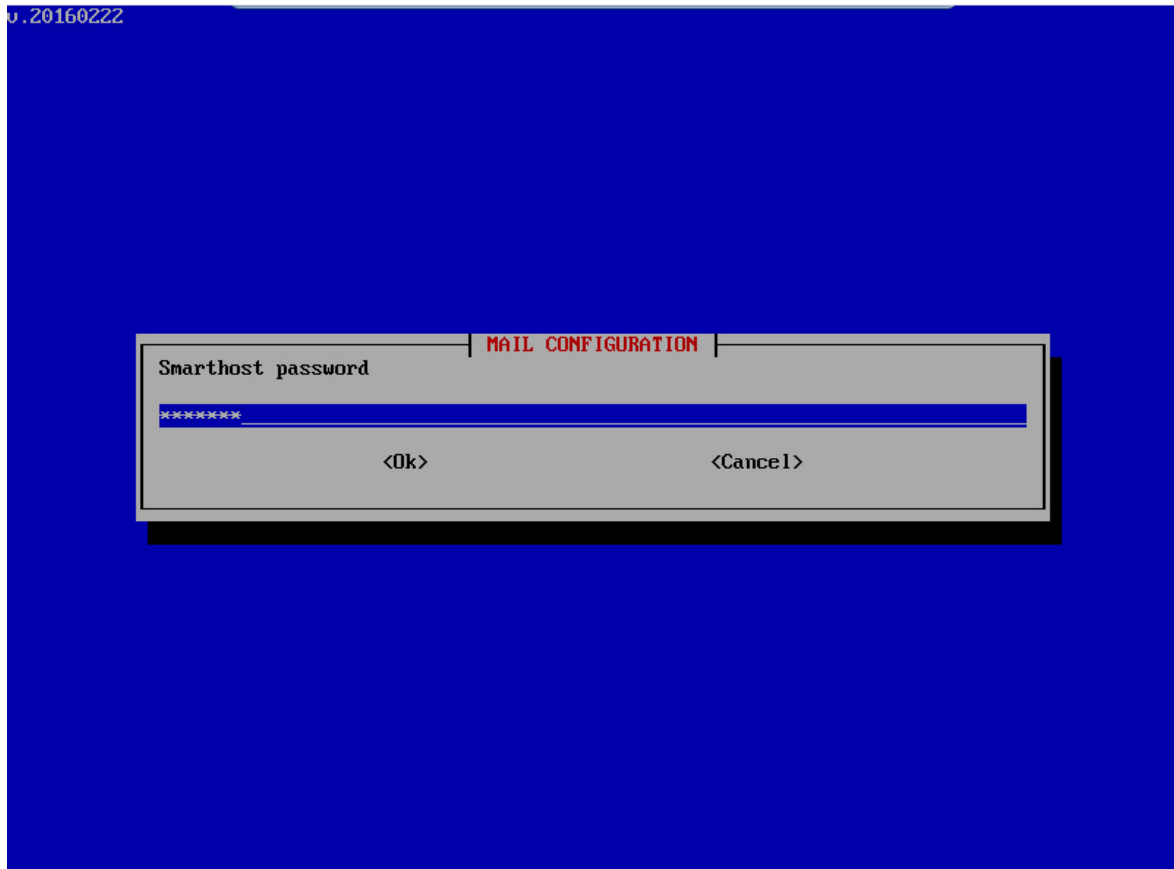
- (9) The server's SMTP port is entered next.



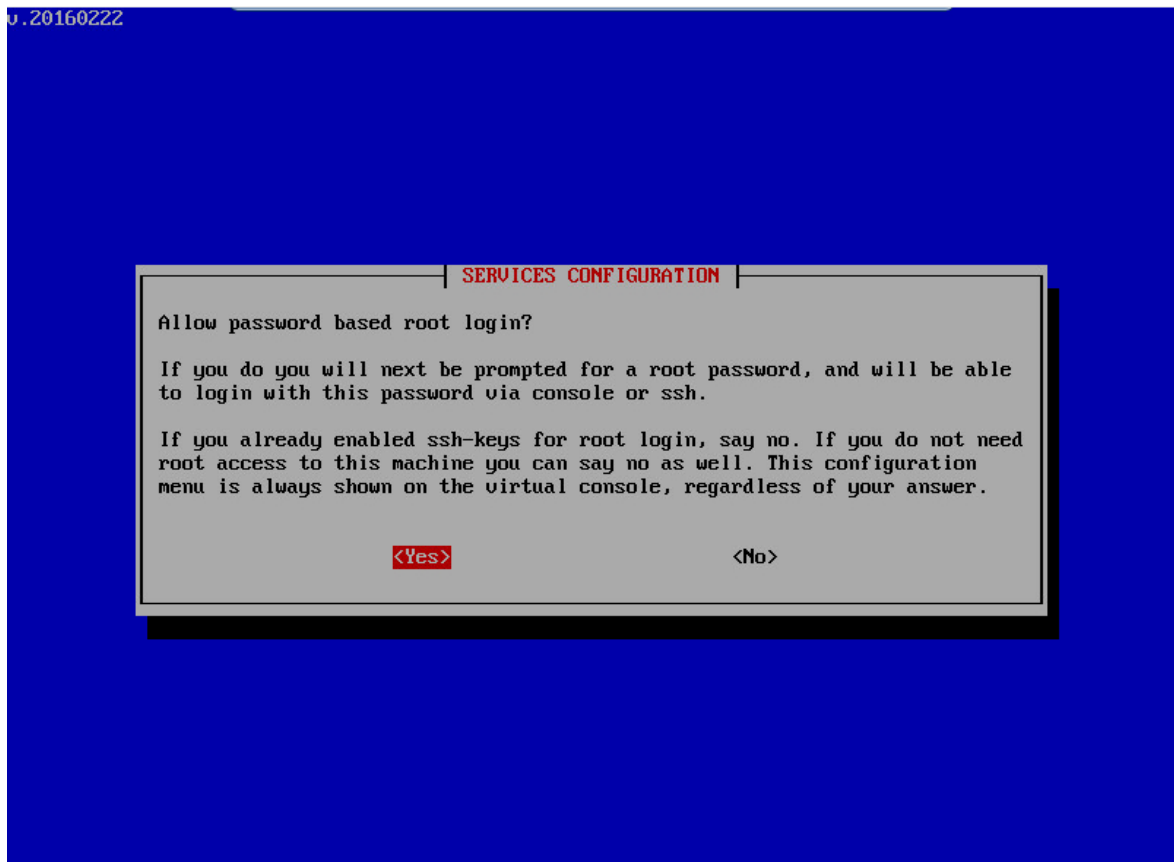
(10) The mail account username is entered here. In this example, it is *noreply@teldatserver.com*.



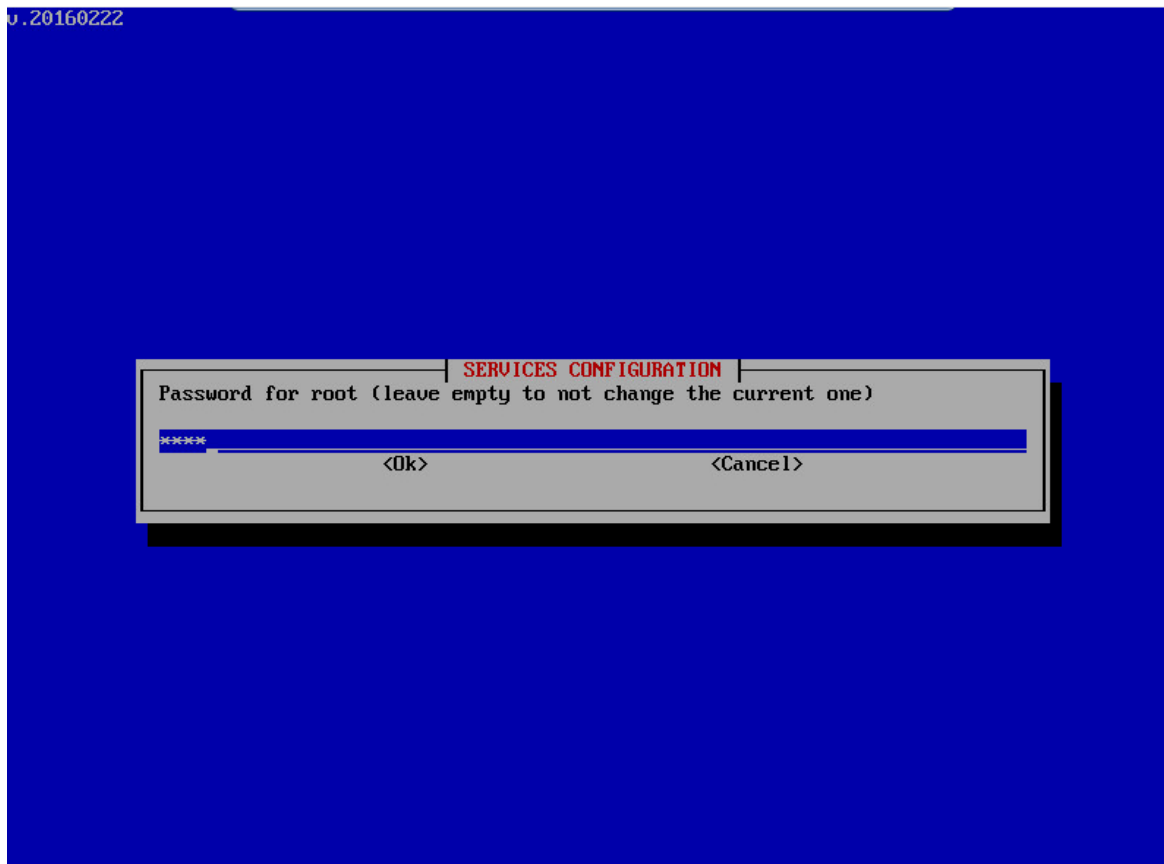
(11) Afterwards, the mail account password must be entered once again.



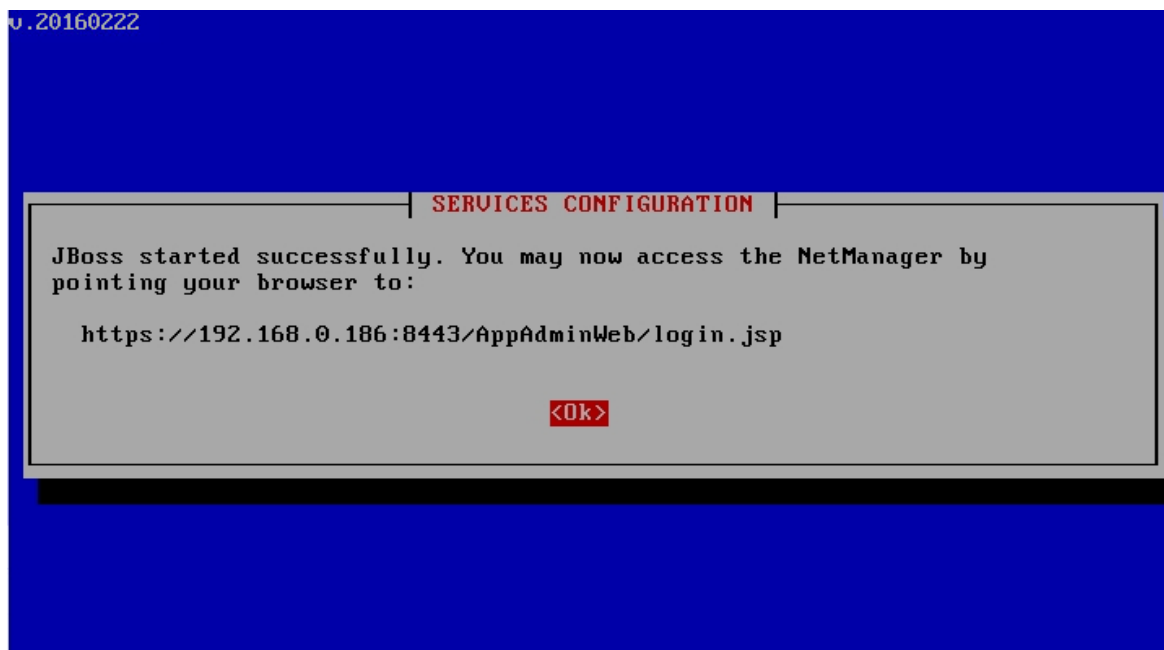
(12) To log in directly as `root` via Shell or SSH, a root password must be set.



(13) Setting a new root password.



- (14) Start the web server (this can take one or two minutes). Afterwards, the following message appears:



This means that the **Colibri NetManager web server** is fully configured.

Set server date

The final step is to configure the date of the server. In the main menu, select **Set date**.

- (1) To configure the date on the Service server, follow the steps set forth in the Storage server section.

1.2.3 Testing installation

When all steps have been successfully carried out, the server can be reached via a web browser.

You can now test whether both servers can be simultaneously reached via Ping by logging into the console (**ALT+F2**) and replacing the Linux command `ping 192.168.0.185` or `ping 192.168.0.186`.

Leave the virtual machines and call up the server in your local environment by means of an Internet browser. Note that it is necessary to prefix the command `http://` or `https://` with several browsers.

Call format:

<http://192.168.0.186:8080> or <https://192.168.0.186:8443>

A certificate warning that requires confirmation when calling up a HTTPS page is displayed.

The server homepage is displayed. Default data for login is as follows:

User: `admin`

Password: `1234`



Note

It is absolutely necessary to change the default password.

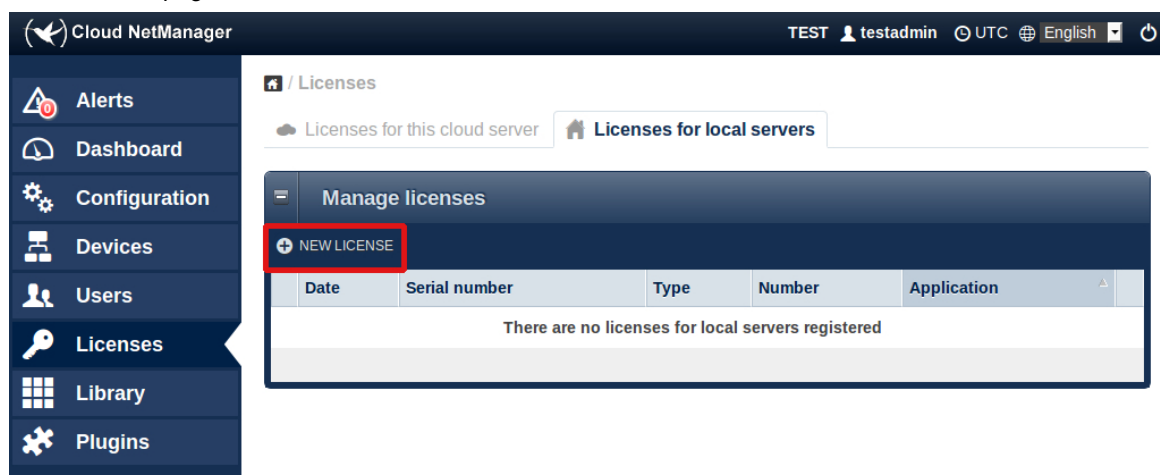
1.3 Licensing

To use the Virtual Colibri NetManager, you must obtain a **Virtual Colibri NetManager license**. You may get one from your distributor. In addition, and depending on the number of devices to be managed, obtaining a device license may also be necessary. The device license has to match a certain client account and cannot be transferred to others.

1.3.1 Installation of the server license

Together with the software for virtual machine installation, you will receive a license document containing a serial number and a PIN code.

- (1) A license file must be generated first. To do this, you need a Cloud NetManager registered account.
- (2) Log into <https://teldat.networkcloudmanager.com>.
- (3) Go to the status page under **Licenses** -> **Licenses for local servers** -> **New license**.



- (4) Enter the serial number and the license key (PIN).
- (5) Click on **Register license**.

Cloud NetManager TEST testadmin UTC English

Licenses / Register license

Licenses for this cloud server Licenses for local servers

New license

Please contact to your sales representative in order to obtain a valid license. If you already have a serial number and a license validation code, just enter the data in the following form. A license can be used only once on a single customer environment. NOTE: System will automatically detect if your new license is a cloud or a local license.

Serial number: LICAA0D16090000002
Serial number of the license. This is an unique code and it can be used once.

License code: 414b0707781d4810ba85
Enter the license code with the validation number

Register license Cancel

- (6) If the license data is correct, the window will expand and ask for the local server's UUID. To obtain the UUID, log into a second browser window on your local server and call up the license menu.

TELDAT COLIBRI PLATFORM GLOBAL MANAGER admin UTC English

Register license

Please register your license for this server. It won't be possible to add additional licenses until the server has a valid license.

Register license

Follow these steps to register your license on this server:

- Request a license to your provider. You will receive the serial number and the code of your new license.
- Enter in the cloud platform to download your license file. To perform this operation you need to enter your UUID code (see the form below).
- Upload your license file and upload the license.

Server UUID: 372a2598-72ea-4891-94cf-c7e00939f36a
Please use this UUID value to request a new license

License file: Examinar...
Download the license file from the cloud platform

Upload license Cancel

- (7) Now copy the **Server UUID** into the open window of your Colibri NetManager account (teldat.networkcloudmanager.com).

Cloud NetManager TEST testadmin UTC English

Licenses / Register license

Licenses for this cloud server Licenses for local servers

New license

Please contact to your sales representative in order to obtain a valid license. If you already have a serial number and a license validation code, just enter the data in the following form. A license can be used only once on a single customer environment. NOTE: System will automatically detect if your new license is a cloud or a local license.

Serial number: LICAA0D16090000002
Serial number of the license. This is an unique code and it can be used once.

License code: 414b0707781d4810ba85
Enter the license code with the validation number

You have correctly entered the license information for 1 server. This license is only valid for a local server. Please enter your server UUID number in order to generate the license file.

Server UUID: a-4891-94cf-c7e00939f36a
The server UUID number is an unique identifier for your local server. It is possible to retrieve your server UUID in the licenses section in your local server. Please contact support if you do not know what is your server UUID. (01234567-89ab-cdef-0123-4567890abcde)

Register license Cancel

- (8) The server now generates an XML license file that should be saved. You can now log out of the Teldat Colibri Manager.

The screenshot shows the 'Cloud NetManager' interface. The top navigation bar includes 'TEST', 'testadmin', 'UTC', and 'English'. The sidebar on the left contains menu items: Alerts, Dashboard, Configuration, Devices, Users, Licenses, Library, and Plugins. The main content area is titled '/ Licenses' and has two tabs: 'Licenses for this cloud server' and 'Licenses for local servers'. Below the tabs is a 'Manage licenses' section with a '+ NEW LICENSE' button. A table displays the following license information:

Date	Serial number	Type	Number	Application
2016-02-26 11:08:38	LICAA0D16090000002 UUID: 372a2598-72ea-4891-94cf-c7e00939f36a	Server	1	

Page 1 of 1 Results by page: 10

- (9) It is now possible to upload the XML license file from the license menu of your local server and complete licensing from there.

The screenshot shows the 'TELDAT COLIBRI PLATFORM' interface. The top navigation bar includes 'GLOBAL MANAGER', 'admin', 'UTC', and 'English'. The sidebar on the left contains menu items: Global users, Resellers, License, Global settings, and Search. The main content area is titled '/ Register license' and has a 'Register license' section. The form displays the following license information:

License type:	Server
Server UUID:	372a2598-72ea-4891-94cf-c7e00939f36a
Signature check:	Valid license signature
Signature:	6bcf052b7e8065247defb311738a7d02bcd7b07b9a08d02e604b5980cd04246b47b0e120536d76ef2ed0a28fae20bf2fe8a41a5ecd2ah2f038f

1.3.2 Installing device licenses

To manage devices, device licenses must be installed via a user account. Please take into account that the virtual machine requires device licenses.

Set up a new client account

- (1) To do so, first log in as an **admin** again.
- (2) Go onto the status page and access the **Manage resellers** menu.

TELDAT COLIBRÍ PLATFORM GLOBAL MANAGER admin UTC English

Global users
Resellers
License
Global settings
Search

Welcome to Colibri NetManager

GLOBAL USER PANEL

- Manage administrators**
Create and edit global users.
- Manage resellers**
Create, delete and edit reseller info.
Log in as reseller.
- Manage licenses**
Register license bundles.
Check the status of the licenses.
Download licenses information.
- Global settings**
General information of the server.
Manage security certificates.
- Search**
Search devices among all system customers.

- (3) Click on **Reseller** -> **Global**.

TELDAT COLIBRÍ PLATFORM GLOBAL MANAGER admin UTC English

/ Resellers

Resellers

NEW RESELLER

Search:

Name	Domain
Global	

Page 1 of 1 Results by page: 10

- (4) When on the **Reseller information** page, click on **Log in as reseller**.

TELDAT COLIBRÍ PLATFORM GLOBAL MANAGER admin UTC English

/ Resellers / Reseller

Reseller information

Name:	Global
Domain:	
Email:	N/A
Phone:	N/A
Contact Person:	N/A
Address:	Global reseller
Portal Name:	
Trap OID prefix:	.1.3.6.1.4.1.2007.1.5
Copyright:	

x Allow user auto registration for this reseller

Modify reseller Delete reseller Log as reseller

- (5) Go back to the status page and call up the **Manage customers** menu.

TELDAT COLIBRÍ PLATFORM GLOBAL admin UTC English

Reseller users
Customers
Preferences
Batch jobs

Welcome to Colibrí NetManager

RESELLER PANEL

Manage reseller users
Create, edit and delete reseller users.

Manage customers
Create, edit and delete customers.
Manage customer profiles.

Preferences
Choose colors, logo and icon for all customers of the reseller. Enter Terms & Conditions and Contact information.

Batch jobs
Register new customers and licenses using a CSV file

- (6) Go to **Customers** -> **New customer** menu.

TELDAT COLIBRÍ PLATFORM GLOBAL admin UTC English

Reseller users
Customers
Preferences
Batch jobs

/ Customers

Customers Customer profiles

Customers

NEW CUSTOMER

Search:

Name	Num. devices	Profile
Testclient	0	Full access

Page 1 of 1 Results by page: 10

The new **client account** is now set up.

Installing a device license to the client account.

- (1) The first step is to log into the newly created client account.
- (2) Go to **Licenses** -> **Manage licenses**.
- (3) Copy the **customer UUID** onto the clipboard.

TELDAT COLIBRÍ PLATFORM TESTCLIENT testclient UTC English

Licenses / Register license

Manage licenses

New license

Follow these steps to register your license on this server:

- Request a license to your provider. You will receive the serial number and the code of your new license.
- Enter in the cloud platform to download your license file. To perform this operation you need to enter your UUID code (see the form below).
- Upload your license file and upload the license.

Customer UUID:
Please use this UUID value to request a new license

License file:
Download the license file from the cloud platform

- (4) Log into your Cloud NetManager account (<https://teldat.networkcloudmanager.com>).
- (5) Go to **Licenses** -> **Licenses for local servers** -> **New license**.
- (6) Enter the license's **serial number** and **license code**.
- (7) Under **Customer UUID**, enter the **UUID** from the clipboard.
- (8) Press **Register license** to create the license file.
- (9) Save your data.

- (10) Go back to the client account on your local server.
- (11) Load the license file via the menu **Licenses** -> **Manage licenses** -> **Load license**.

Installing a device license on the reseller account.

Licenses can be installed not only on customer but also on reseller accounts. A reseller can allocate installed licenses to its customers. Resellers will be able to recover unused licenses allocated to customers (i.e., reclaim licenses when no customer devices are using them), as well as those assigned to customers that have been deleted. The following considerations should be taken into account:

- The reseller can give any of its available licenses to a customer (see the license allocation procedure below). A license cannot be divided and cannot be shared by several customers. Each customer receives a full license from the reseller.
- Reseller licenses can be reassigned to another customer only if the current license owner has been removed from the server, or if the customer has not yet used the license. In the second case, the reseller must recover the license (see the license recovering procedure below) from the customer and assign it again to another customer.

- Licenses registered by customers cannot be recovered or reassigned by the reseller in any case. If a customer is removed from the server, any licenses the customer registered are lost. However, the reseller can recover any of its allocated licenses and reassign them.
- (1) The first step is to log into the reseller account.
 - (2) Licenses are installed on the reseller account just like on customer accounts (see above), but using the **reseller UUID** instead of the **customer UUID**. You may find the reseller UUID under **Licenses -> Available-> New li-
cense**

Assign reseller licenses to a customer

- (1) The first step is to log into the reseller account.
- (2) Go to **Licenses -> Available**. This screen shows you a table with the reseller licenses available. Available licenses can be assigned to a client and be used by his/her devices.
- (3) Select one or more licenses using the checkboxes. A new button, **Assign to customer** appears.
- (4) Click on **Assign to customer**. A new row appears in the table, inviting you to select the target customer.
- (5) Select the customer that will receive the licenses from the list.

The screenshot displays the 'Manage licenses' interface in the TELDAT COLIBRI PLATFORM. The top navigation bar shows 'GLOBAL', 'resellerglobal', 'UTC', and 'English'. The sidebar on the left contains icons and labels for 'Reseller users', 'Customers', 'Licenses', 'Preferences', and 'Batch jobs'. The main area is titled '/ Licenses' and has tabs for 'Available' and 'Assigned'. Below these are buttons for 'NEW LICENSE' and 'ASSIGN TO CUSTOMER'. The 'ASSIGN TO CUSTOMER' button is highlighted with a red box. A table lists available licenses with columns for 'Type', 'Available', and 'Status'. Each row shows 'Managed devices' with a progress bar indicating '10 of 10' and a 'Valid license' status with a search icon. A checkbox is present in the 'Status' column for each row. Below the table, there is a pagination control showing 'Page 1 of 2' and a 'Results by page: 10' dropdown.

- (6) Click on **Assign** to allocate. Afterwards, the assigned licenses disappear from the screen that shows all licenses available and appear on the assigned licenses screen.

Recover reseller licenses from a customer

- (1) The first step is to log into the reseller account.
- (2) Go to **Licenses -> Assigned**. This screen shows you a table with the licenses assigned to customers.
- (3) Select one or more licenses using the checkboxes. A new button, **Recover licenses** appears. You can only recover licenses that have not been used. Checkboxes are disabled for licenses in use, meaning they cannot be selected.
- (4) Click on the **Recover licenses** button. Licenses are recovered from customers and may be reassigned, appearing under the reseller available licenses screen.

The screenshot shows the 'Manage licenses' page in the Teldat Colibri Platform. The interface includes a sidebar with navigation options: Reseller users, Customers, Licenses (selected), Preferences, and Batch jobs. The main content area shows a 'Licenses' section with tabs for 'Available' and 'Assigned'. Below this is a 'Manage licenses' section with a 'RECOVER LICENSES' button highlighted in red. A table lists managed devices with the following data:

Type	Available	Customer	Status
Managed devices	9 of 10	Customer 1	Valid license
Managed devices	9 of 10	Customer 2	Valid license
Managed devices	10 of 10	Customer 5	Valid license
Managed devices	10 of 10	Customer 6	Valid license
Managed devices	10 of 10	Customer 6	Valid license

Page 1 of 1
Results by page: 10

1.4 Managing devices

Devices can be used and managed in the same manner as with the Cloud NetManager (<https://teldat.networkcloudmanager.com>). Step-by-step instructions on how to use the Cloud NetManager can be found in the separate guide for each application. These can be downloaded from the www.teldat.com website.

1.4.1 Adjusting the management URL in the device

You must enter your server's address if you want your device to operate with your own virtual Colibri NetManager.

You have two options:

- Via the local GUI on the device.
- Using option 43 of your local DHCP server

1.5 Notes regarding free software

Part of the Virtual Colibri NetManager is made up of free software that is available under various open source licenses (Apache 2.0, GPL 2.0 or 3.0, LGPL, BSD, etc.). You can find more information on the software used, as well as the relevant copyright notes and licenses, under the "copyrights" directory in the data storage media. The full text (including all licenses) can be found under the "copyrights/common-licenses" directory. The sources to GPL-licensed programs are in the "repo" directory, which is structured like a Debian repository, and in the src directory.

In addition, the End User License Agreement (EULA) you received together with the Virtual Colibri NetManager also applies to this product.