


Uyuni 2021.12 Server Software User Guide

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Quick Start: Uyuni Overview

Updated: 2021-12-07

This guide shows you how to use install and configure a single Uyuni Server.

This guide is specific to Uyuni and does not apply to setting up a SUSE Manager Server.

For more information about Uyuni, see <https://www.uyuni-project.org/uyuni-docs>. For more information about SUSE Manager, see <https://documentation.suse.com/suma>.

Install Uyuni Server with openSUSE Leap

Uyuni Server can be installed on openSUSE Leap.

- For information about the stable version of Uyuni, see <https://www.uyuni-project.org/pages/stableversion.html>.
- For information about the development version of Uyuni, see <https://www.uyuni-project.org/pages/dev-version.html>.
- For information about the latest version and updates of openSUSE Leap, see <https://doc.opensuse.org/release-notes/>.

Software and Hardware Requirements

This table shows the software and hardware requirements for installing a Uyuni Server on openSUSE Leap.

Table 1. Software and Hardware Requirements

Software and Hardware	Recommended
Operating System:	openSUSE Leap 15.2: Clean installation, up-to-date
CPU:	Minimum 4 dedicated 64-bit x86-64CPU cores
RAM:	Test Server Minimum 8 GB
	Base Installation Minimum 16 GB
	Production Server Minimum 32 GB
Disk Space:	Disk space depends on your channel requirements, at least 100 GB
	50 GB per SUSE or openSUSE product and 360 GB per Red Hat product
Swap space:	3 GB

Install Uyuni Server on openSUSE Leap

You can use a physical or virtual machine running openSUSE Leap to install the Uyuni Server. Configure a resolvable fully-qualified domain name on the server before you login, to ensure that the server is accessible across the network.

The Uyuni Server software is available from download.opensuse.org, and you can use zypper to retrieve the software and install it.

Procedure: Installing openSUSE Leap with Uyuni

1. Install openSUSE Leap as the base system, and ensure all available service packs and package updates have been applied.
2. Configure a resolvable fully qualified domain name (FQDN) with YaST by navigating to System › Network Settings › Hostname/DNS.
3. At the command prompt, as root, add the repository for installing the Uyuni Server software:
repo=repositories/systems management:/
repo=\${repo}Uyuni:/Stable/images/repo/Uyuni-Server-POOL-x86_64-Media1/
zypper ar https://download.opensuse.org/\${repo} uyuni-server-stable
4. Refresh metadata from the repositories: zypper ref

5. . Install the pattern for the Uyuni Server: zypper in patterns-uyuni_server

6. Reboot the server.

When the installation is complete, you can continue with the Uyuni setup. For more information, see

Installation › Uyuni-server-setup.

Set up Uyuni Server with YaST

The initial setup procedure is handled by YaST.

Procedure: Uyuni Setup

1. Log in to the Uyuni Server and start YaST.

2. In YaST, navigate to Network Services › Uyuni Setup to begin the setup

3. From the introduction screen select Uyuni Setup › Set up Uyuni from scratch and click [Next] to continue.

4. Enter an email address to receive status notifications and click [Next] to continue. Uyuni can sometimes send a large volume of notification emails. You can disable email notifications in the Web UI after setup, if you need to.

5. Enter your certificate information and a password. Passwords must be at least seven characters in length, and must not contain spaces, single or double quotation marks (' or "), exclamation marks (!), or dollar signs (\$). Always store your passwords in a secure location.



If you need to also set up a Uyuni Proxy Server, ensure you have taken note of the certificate password.

6. Click [Next] to continue.

7. From the Uyuni Setup › Database Settings screen, enter a database user and password and click [Next] to continue. Passwords must be at least seven characters in length, and must not contain spaces, single or double quotation marks (' or "), exclamation marks (!), or dollar signs (\$). Always store your passwords in a secure location.

8. Click [Next] to continue.

9. Click [Yes] to run setup when prompted.

10. When setup is complete, click [Next] to continue. You will see the address of the Uyuni Web UI.

11. Click [Finish] to complete the Uyuni setup.

Create the Main Administration Account

Before you can log in to the server to manage your clients, you need to have created an administrator account. The main administration account has the highest authority within yuni. Ensure you keep access information for this account secure. We recommend that you create lower-level administration accounts for organizations and groups. Do not have the main administration access details.

Procedure: Setting Up the Main Administration Account

1. In your web browser, enter the address for the Uyuni Web UI. This address was provided after you completed the setup.

2. Sign in to the Web UI, navigate to the Create Organization › Organization Name field, and enter your organization name.

3. In the Create Organization, › Desired Login, and Create Organization › Desired Password fields, enter your username and password.

4. Fill in the account information fields, including an email for system notifications.

5. Click [Create Organization] to finish creating your administration account.

When you have completed the Uyuni Web UI set up, you are taken to the Home › Overview page.=

Optional: Synchronizing Products from SUSE Customer Center

SUSE Customer Center (SCC) maintains a collection of repositories that contain packages, software, and updates for all supported enterprise client systems. These repositories are organized into channels each of which provides software specific to a distribution, release, and architecture. After synchronizing with SCC, clients can receive updates, be organized into groups, and be assigned to specific product software channels.

This section covers synchronizing with SCC from the Web UI and adding your first client channel.



For Uyuni, synchronizing products from SUSE Customer Center is optional. Before you can synchronize software repositories with SCC, you will need to enter the organization credentials in Uyuni. The organization credentials give you access to the SUSE product downloads. You will find your organization credentials at <https://scc.suse.com/organizations>.

Enter your organization credentials in the Uyuni Web UI: Optional Procedure: Entering Organization Credentials

1. In the Uyuni Web UI, navigate to Admin › Setup Wizard.
2. On the Setup Wizard page, navigate to the [Organization Credentials] tab.
3. Click [Add a new credential].
4. Enter a username and password, and click [Save].

A check mark icon is shown when the credentials are confirmed. When you have successfully entered the new credentials, you can synchronize with SUSE Customer Center.

Optional Procedure: Synchronizing with SUSE Customer Center

1. In the Uyuni Web UI, navigate to Admin › Setup Wizard.
2. From the Setup Wizard page select the [SUSE Products] tab. Wait a moment for the products list to populate. If you previously registered with SUSE Customer Center a list of products will populate the table. This table lists architecture, channels, and status information.
3. If your SUSE Linux Enterprise client is based on x86_64 architecture scroll down the page and selects the check box for this channel now.
4. Add channels to Uyuni by selecting the check box to the left of each channel. Click the arrow symbol to the left of the description to unfold a product and list available modules.
5. Click [Add Products] to start product synchronization.

When a channel is added, Uyuni will schedule the channel for synchronization. Depending on the number and size of these channels, this can take a long time. You can monitor synchronization progress in the Web UI. For more information about using the setup wizard, see Reference › Admin. When the channel synchronization process is complete, you can register and configure clients. For more instructions, see Client-configuration › Registration-overview.

Install Uyuni Proxy with openSUSE Leap

Uyuni Proxy can be installed as a server extension on openSUSE Leap. The proxy is installed in the same way as a client, but is designated as a proxy server during installation. This is achieved by adding the Uyuni Proxy pattern and executing the proxy setup script.

- For more information about the stable version of Uyuni, see <https://www.uyuni-project.org/pages/stable-version.html>.
- For more information about the development version of Uyuni, see <https://www.uyuni-project.org/pages/devel-version.html>.

Mirror Uyuni Proxy software

The Uyuni Proxy software is available from <https://download.opensuse.org>. You can synchronize the proxy

software to your Uyuni Server. This process is also known as mirroring. Procedure: Mirroring Uyuni Proxy software

1. On the Uyuni Server, create openSUSE Leap and the Uyuni Proxy channels with the spacewalk common-channels command. spacewalk-common-channels is part of the

space walkutils package:

```
spacewalk-common-channels \  
opensuse_leap15_2 \  
opensuse_leap15_2-non-oss \  
opensuse_leap15_2-non-oss-updates \  
opensuse_leap15_2-updates \  
opensuse_leap15_2-Uyuni-client \  
Uyuni-proxy-stable-leap-152
```

Register the openSUSE Leap system

Begin by installing openSUSE Leap on a physical or virtual machine. To ensure that the proxy is accessible across the network, you must have a resolvable fully-qualified domain name (FQDN) on the openSUSE Leap system before you begin the installation. You can configure an FQDN with YaST by navigating to System › Network Settings › ostname/DNS. When you have installed openSUSE Leap on the proxy and configured the FQDN, you can prepare the Uyuni Server, and register the openSUSE Leap system client.

Procedure: Registering the openSUSE Leap system

1. On the Uyuni Server, create an activation key with openSUSE Leap as a base channel and the proxy and the other channels as child channels. For more information about activation keys, see Client- configuration › Activation-keys.
2. Modify a bootstrap script for the proxy. Ensure you add the GPG key for Uyuni to the ORG_GPG_KEY= parameter. For example: ORG_GPG_KEY=uyuni-gpg-pubkey-0d20833e.key For more information, see [xref:client-configuration:clients-OpenSUSE.adoc\[\]](#).
3. Bootstrap the client using the script. For more information, see Client-configuration › Registration-bootstrap.
4. Navigate to Salt › Keys and accept the key. When the key is accepted, the new proxy will show in Systems › Overview in the Recently Registered Systems section.
5. Navigate to System Details › Software › Software Channels, and check that the proxy channel is selected.

Install Uyuni Proxy on openSUSE Leap

On the client, use the zypper command line tool or on the Uyuni Server, the Web UI to install the proxy software on openSUSE Leap.

Procedure: Installing Uyuni Proxy on openSUSE Leap

1. Install the pattern for the Uyuni Proxy. You can do this either on the client or on the server.
 - For the client, use a zipper in patterns-uyuni_proxy
 - Alternatively, on the Uyuni Server, use the Web UI. Navigate to the details tab of the client, click Software › Packages › Install, and schedule patterns-uyuni_proxy for installation. 1. **Reboot the client.**

Prepare the Proxy

Before you begin, ensure that the proxy pattern is installed correctly. To verify a successful installation, on the Uyuni Server, select the pattern_uyuni_proxy package for installation.

The salt-broker service is automatically started after installation is complete. This service forwards the Salt interactions to the Uyuni Server.



It is possible to arrange Salt proxies in a chain. In this case, the upstream proxy is named parent.

Make sure the TCP ports 4505 and 4506 are open on the proxy. The proxy must be able to reach the Uyuni Server or a parent proxy on these ports.

The proxy shares some SSL information with the Uyuni Server. You need to copy the certificate and its key from the Uyuni Server or the parent proxy to the proxy you are setting up.

Procedure: Copying the Server Certificate and Key

1. On the proxy, you are setting up, at the command prompt, as root, create a directory for the certificate and key:

```
mkdir -m 700 /root/ssl-build cd /root/ssl-build
```

2. Copy the certificate and the key from the source to the new directory. In this example, the source location is called PARENT. Replace this with the correct path:

```
scp root@<PARENT>:/root/ssl-build/RHN-ORG-PRIVATE-SSL-KEY.
```

```
scp root@<PARENT>:/root/ssl-build/RHN-ORG-TRUSTED-SSL-CERT.
```

```
SCP root@<PARENT>:/root/ssl-build/rhn-ca-OpenSSL.cnf .
```



To keep the security chain intact, the Uyuni Proxy functionality requires the SSL certificate to be signed by the same CA as the Uyuni Server certificate. Using certificates signed by different CAs for proxies and servers is not supported. For more information on how Uyuni handles certificates, see [Administration > slcerts](#).

Set Up the Proxy

When you have prepared the proxy, use the supplied interactive `configure-proxy.sh` script to complete the proxy setup.

Procedure: Setting up the Proxy

1. On the proxy you are setting up, at the command prompt, as root, execute the setup script: `configure-proxy.sh`
2. Follow the prompts to set up the proxy. Leave a field blank and type Enter to use the default values shown between square brackets.

More information about the settings set by the script:

Uyuni Parent

the Uyuni parent can be either another proxy or a server.

HTTP Proxy

An HTTP proxy enables your Uyuni Proxy to access the Web. This is needed if direct access to the Web is prohibited by a firewall.

Traceback Email

An email address where to report problems.

Do You Want to Import Existing Certificates?

Answer N. This ensures using the new certificates that were copied previously from the Uyuni server. Organization

The next questions are about the characteristics to use for the SSL certificate of the proxy. The organization might be the same organization that was used on the server unless of course, your proxy is not in the same organization as your main server. Organization Unit

The default value here is the proxy's hostname.

City

Further information is attached to the proxy's certificate.

State

Further information is attached to the proxy's certificate.

Country Code

In the country code field, enter the country code set during the Uyuni installation. For example, if your proxy is in the US and your Uyuni is in DE, enter DE for the proxy.



The country code must be two upper case letters. For a complete list of country codes, see <https://www.iso.org/obp/ui/#search>.

Cname Aliases (Separated by Space)

Use this if your proxy can be accessed through various DNS CNAME aliases. Otherwise, it can be left empty.

CA Password

Enter the password that was used for the certificate of your Uyuni Server.

Do You Want to Use an Existing SSH Key for Proxying SSH-Push Salt Minion?

Use this option if you want to reuse an SSH key that was used for SSH-Push Salt clients on the server.

Create and Populate Configuration Channel rhn_proxy_config_1000010001?

Accept default Y.

SUSE Manager Username

Use the same user name and password as on the Uyuni server.

If parts are missing, such as the CA key and public certificate, the script prints commands that you must execute to integrate the needed files. When the mandatory files are copied, `unconfigure-proxy.sh` again.

If you receive an HTTP error during script execution, run the script again. `configure-proxy.sh` activates services required by Uyuni Proxy, such as squid, apache2, sale broker, and jabbered.

To check the status of the proxy system and its clients, click the proxy system's details page on the Web UI (Systems > System List > Proxy, then the system name). Connection and Proxy subtabs display various status information.

If you want to PXE boot your clients from your Uyuni Proxy, you also need to synchronize the TFTPdata from the Uyuni Server. For more information about this synchronization, see Client-configuration > Autoinst-pxeboot.

Procedure: Synchronizing Profiles and System Information

1. On the proxy, at the command prompt, as root, install the `susemanager-FTP sync-recv` package: `zipper` in `SUSE manager-FTP sync-recv`
2. On the proxy, run the `configure-tftpsync. sh` setup script and enter the requested information: `configure-tftpsync.sh` You need to provide the hostname and IP address of the Uyuni Server and the proxy. You also need to enter the path to the `tftpboot` directory on the proxy.
3. On the server, at the command prompt, as root, install `SUSE manager-FTP sync zipper` in `SUSE manager-tftpsync`
4. On the server, run `configure-FTP sync.sh` setup script and enter the requested information: `configure-tftpsync. sh`
5. Run the script again with the fully-qualified domain name of the proxy you are setting up. This creates the configuration and uploads it to the Uyuni Proxy: `configure-tftpsync.sh FQDN_of_Proxy`
6. On the server, start an initial synchronization: `cobbler sync`
You can also synchronize after a change within Cobbler that needs to be synchronized immediately. Otherwise, Cobbler synchronization will run automatically when needed. For more information about PCE booting, see Client-configuration > Autoinst-pxeboot.

Configure DHCP for PXE through Proxy

Uyuni uses Cobbler for client provisioning. PXE (TFTP) is installed and activated by default. Clients must be able to find the PXE boot on the Uyuni Proxy using DHCP. Use this HCP configuration for the zone which contains the clients to be provisioned:

`next-server: <IP_Address_of_Proxy> filename: "pxelinux.0"`

Reinstalling a Proxy

A proxy does not contain any information about the clients that are connected to it. Therefore, a proxy can be replaced by a new one at any time. The replacement proxy must have the same name and IP address as its predecessor.

For more information about reinstalling a proxy, see Installation > Proxy-setup.Proxy systems are registered as Salt clients using a bootstrap script.

This procedure describes software channel setup and registering the installed proxy with an activation key as the



Before you can select the correct child channels while creating the activation key, ensure you have properly synchronized the openSUSE Leap channel with all the needed child channels and the Uyuni Proxy channel.

More Information

For more information about the Uyuni project, and to download the source, see <https://www.uyuniproject.org/>.

For more Uyuni product documentation, see <https://www.uyuni-project.org/uyuni-docs/uyuni/index.html>.

To raise an issue or propose a change to the documentation, use the links under the Resources menu on the documentation site.

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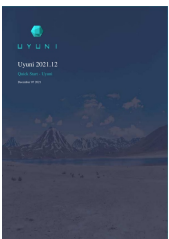
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