

# Uyuni 2023.02

## *Common Workflows*

March 02 2023

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# Common workflows overview

Updated: 2023-03-02

The Uyuni Common Workflows Guide covers most commonly used workflows you need to install, manage, and configure your clients with Uyuni.

Each workflow in this book has a clear goal, and provides detailed steps to achieve that goal.

It is designed to help you better understand both routine and advanced tasks, by explaining what you are achieving in each step, and the various options available to you along the way.

Each routine will be described as Workflow.

# Chapter 1. Configuration Management

You can use configuration files and channels to manage configuration for your clients, rather than configuring each client manually. This workflow shows you how to use the Uyuni WebUI to create a centrally managed configuration file, assign it to a Salt client, and apply the configuration.

## 1.1. Use case

If you are managing a lot of clients, you probably do not want to manually apply configuration settings to each of them in turn. Configuration channels are used to organize configuration files. You can subscribe clients to configuration channels, and deploy configuration files as required.

## 1.2. Outcome

When you have completed this workflow, you will have a configuration channel containing a configuration file, have assigned clients to the channel, and applied the configuration successfully.

## 1.3. Preparation

Before you start, you should already have:

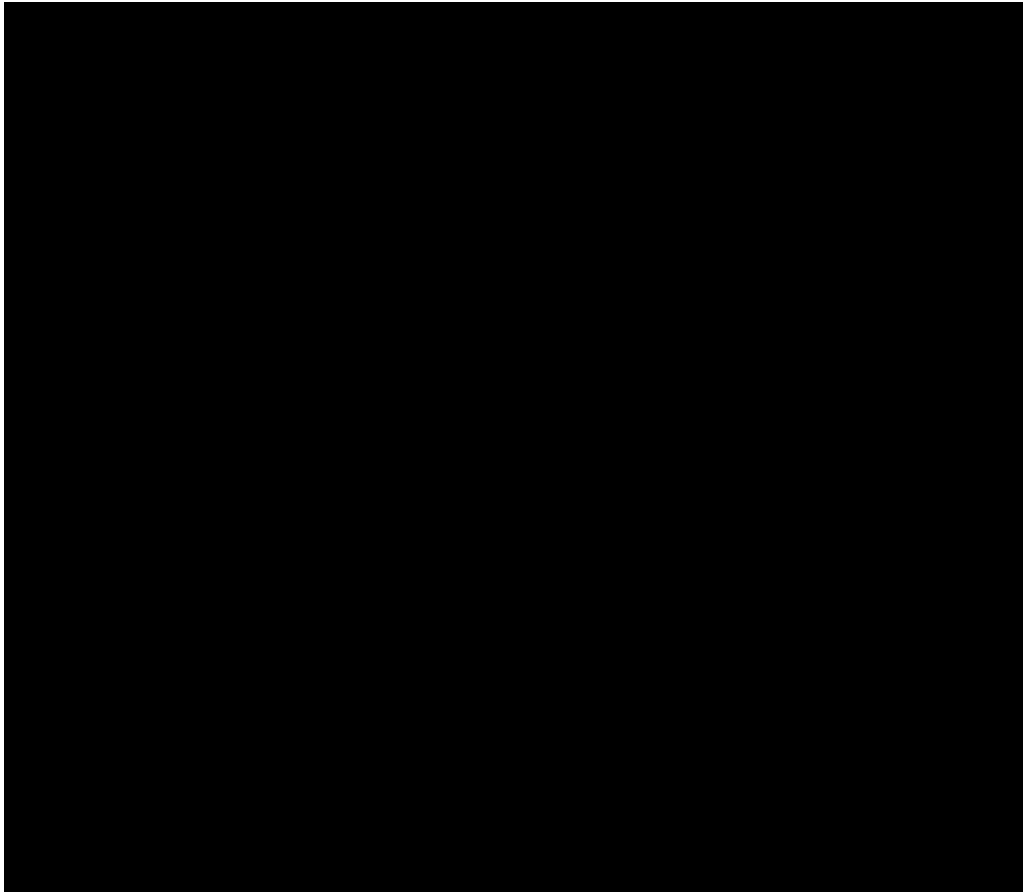
- ¥ Uyuni Server installed, that you can access using the WebUI.
- ¥ At least one Salt client registered to your server.
- ¥ Appropriate subscriptions from <http://scc.suse.com> for the products you are using.

This workflow uses a centrally managed configuration file and a Salt state. You can also use locally managed configuration files, traditional clients, and different methods, to get more flexibility in how you manage configuration in your environment. For more information about the different ways to manage configuration, see [Client-configuration](#) and [Configuration-management](#).

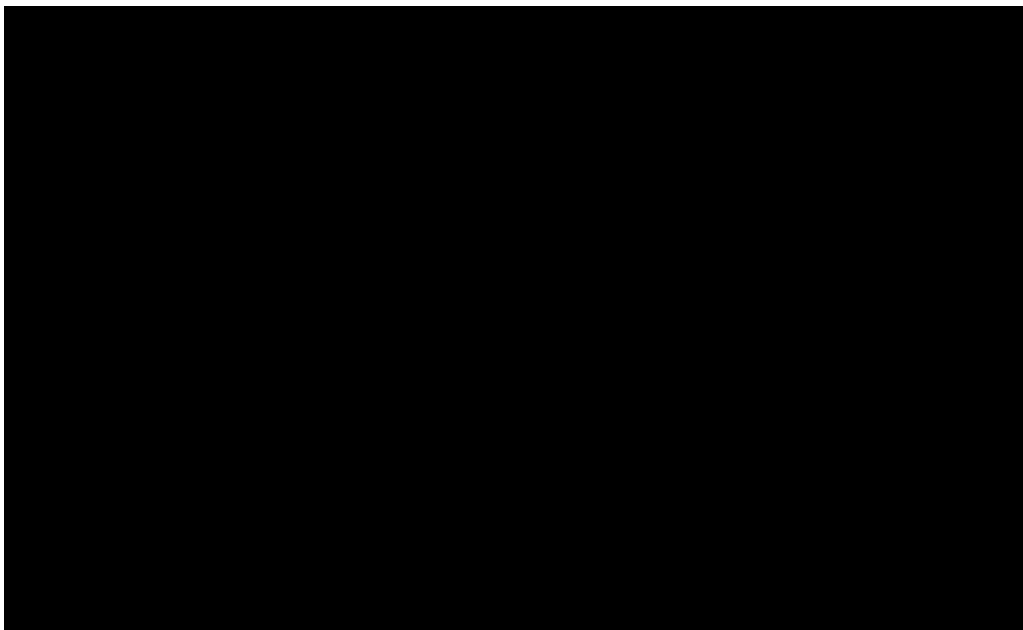
## 1.4. Step-by-step workflow instructions

*Procedure: Create a new configuration channel and file*

1. In the Uyuni WebUI, navigate to Configuration > Channels and click [!Create State Channel!].
2. Type a name, label, and description for your configuration file, and type the contents of your configuration file. An example that you can copy is at the end of this section. .Click [!Create Configuration State Channel!]



3. Procedure: Assign clients to the configuration channel
4. In the Uyuni WebUI, navigate to Systems **Y**Systems List and select the client you want to assign to your configuration channel.
5. Navigate to the **Configuration** tab. In the **Configuration Overview** section, click **[Subscribe to channels!]**.
6. Check the configuration channel you created earlier, and click **[Continue!]**.



7. If you have more than one configuration channel, you can rank them in order of importance, or click **[Update Channel Rankings!]** to finish.

*Procedure: Apply the configuration to your client*

1. In the Uyuni WebUI, navigate to Systems **Systems List** and select the client you want to assign to your configuration channel.
2. Navigate to the **Configuration** tab. In the **Configuration Actions** section, click **Deploy all managed config files!**.

## 1.5. Example

### 1.5.1. SLS for Keeping Clients Updated

```
include:
- channels

int_keep_system_up2date_updatestack:
  pkg.latest:
  - pkgs:
    - salt
    - salt-minion
  {%- if grains.os_family == 'Suse' %}
  - zypper
  - libzypp
  {%- elif grains['os_family'] == 'RedHat' %}
  {%- if grains['osmajorrelease'] >= 8 %}
  - dnf
  {%- else %}
  - yum
  {%- endif %}
  {%- endif %}
  - require:
    - sls: channels
  - order: last

int_keep_system_up2date_pkgs:
  pkg.up2date:
  - require:
    - sls: channels
  - pkg: int_keep_system_up2date_updatestack
  - order: last

int_reboot_if_needed:
  cmd.run:
  - name: shutdown -r +5
  {%- if grains['os_family'] == 'RedHat' and grains['osmajorrelease'] >= 8 %}
  - onlyif: 'dnf -q needs-restarting -r; [ $? -eq 1 ]'
  {%- elif grains['os_family'] == 'RedHat' and grains['osmajorrelease'] <= 7 %}
  - onlyif: 'needs-restarting -r; [ $? -eq 1 ]'
  {%- elif grains['os_family'] == 'Debian' %}
  - onlyif:
```

```
Ê    - test -e /var/run/reboot-required
{% - else %}
Ê    - only if: 'zypper ps -s; [ $? -eq 102 ]'
{% - endif %}
```

## 1.6. Related topics

- ¥ For more information about configuration management, see [Client-configuration](#) [Configuration-management](#).
- ¥ For more information about SLS files, see: [https://docs.saltproject.io/en/latest/topics/tutorials/starting\\_states.html](https://docs.saltproject.io/en/latest/topics/tutorials/starting_states.html).

# Chapter 2. Content Lifecycle Management

If you are managing a lot of clients and you need to apply customized packages to them, you can use content lifecycle management (CLM) to manage your packages. CLM allows you to customize and test packages before updating production clients. It is also useful if you need to apply updates during a limited maintenance window.

## 2.1. Use case

Content lifecycle management allows you to select software channels as sources, adjust them as required for your environment, and thoroughly test them before installing onto your production clients. You can use CLM to manage your software channels from development, through testing, and rolling the changes out to your clients.

## 2.2. Outcome

When you have completed this workflow, you will have a content lifecycle project set up. You will have created a basic CLM project, and promoted it through its lifecycle.

## 2.3. Preparations

Before you start, you should already have:

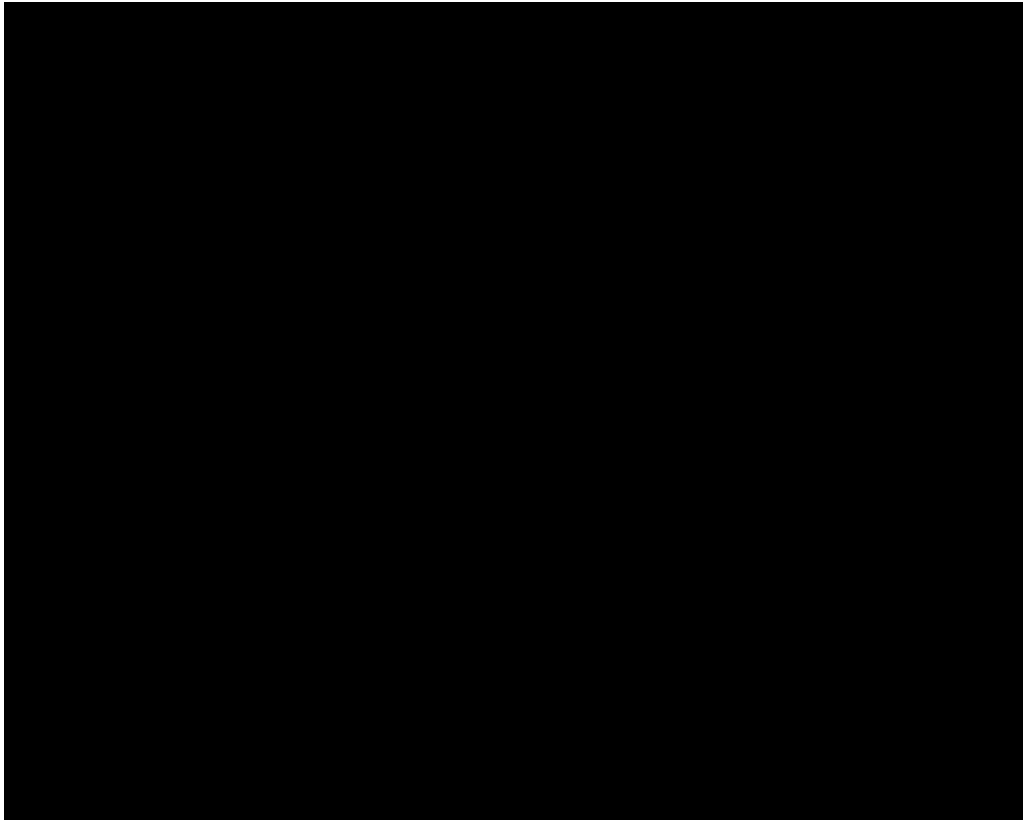
- ¥ Uyuni Server installed, which you can access using the WebUI.
- ¥ Client machine with an operating system installed, which you can access across the network that your Uyuni Server is on, using SSH.
- ¥ Appropriate subscriptions from <http://scc.suse.com> for the products you are using.

## 2.4. Step-by-step workflow instructions

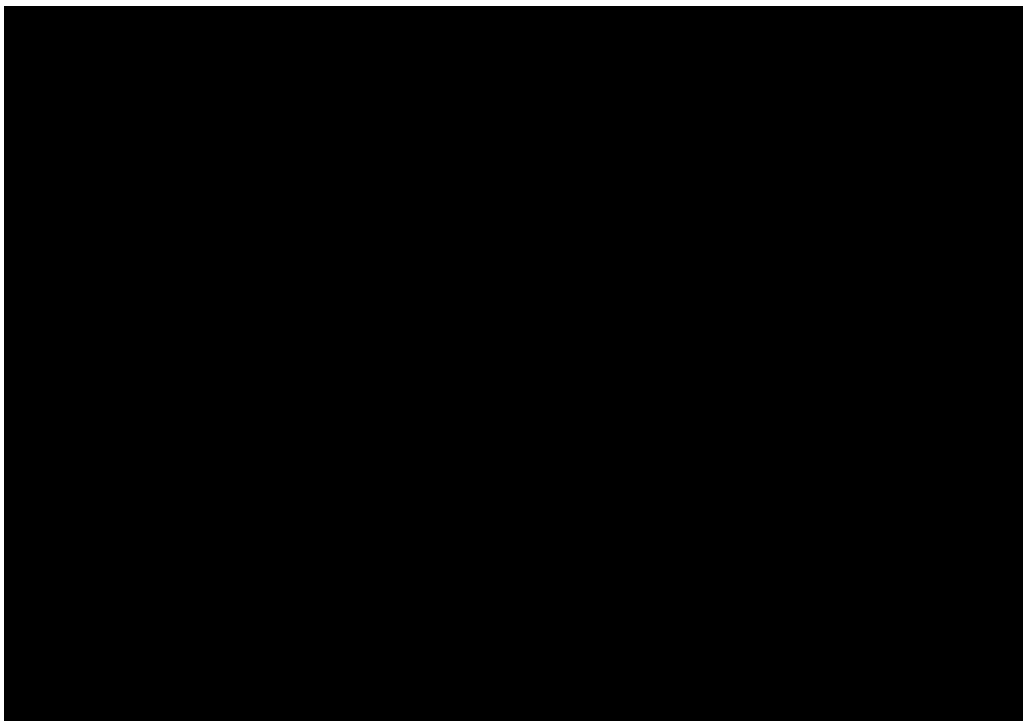
*Procedure: Create a new CLM project*

1. In the Uyuni WebUI, navigate to Content Lifecycle  Projects, and click [!Create Project!]. Type a name, label, and description for your project, and click [!Create!].



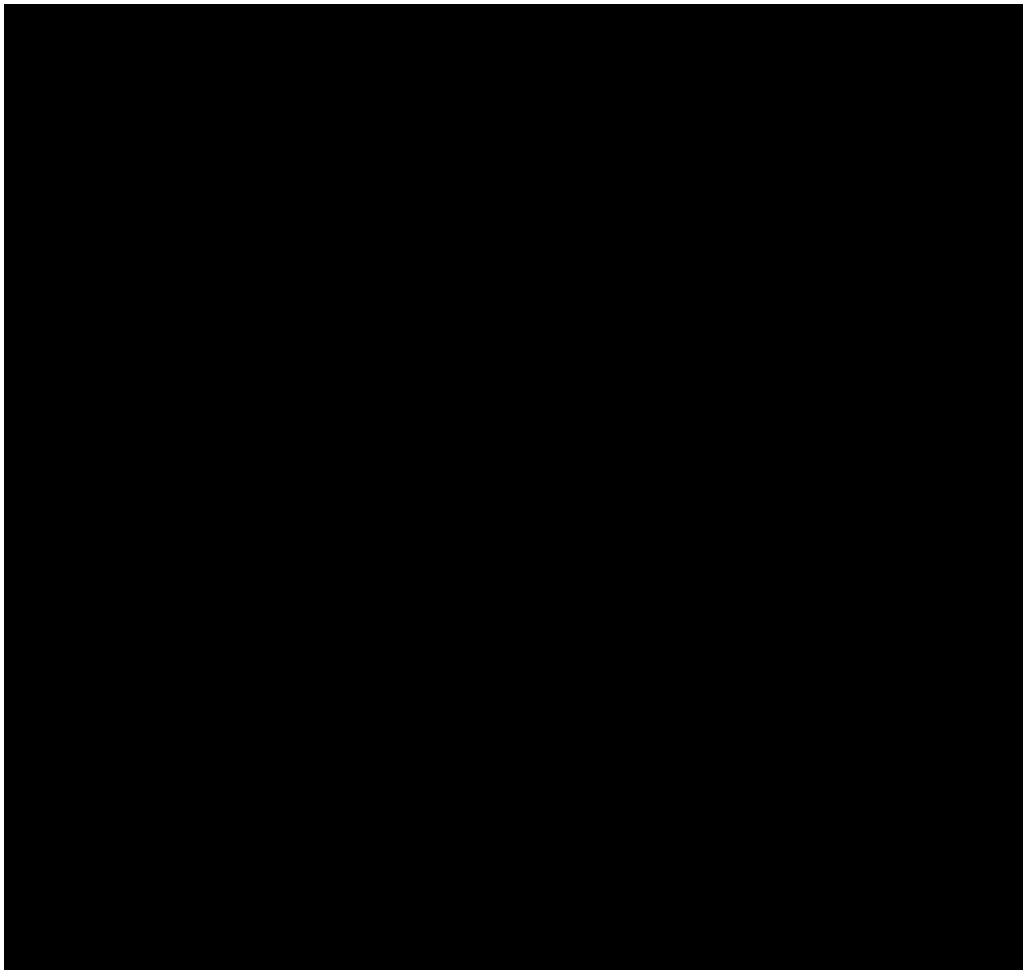


2. In the **Sources** section, click [!Attach/Detach Sources!]. Select the source type, and select a base channel for your project. The available child channels for the selected base channel are displayed, including information on whether the channel is mandatory or recommended. Check the child channels you require, and click [!Save!] to return to the project page.

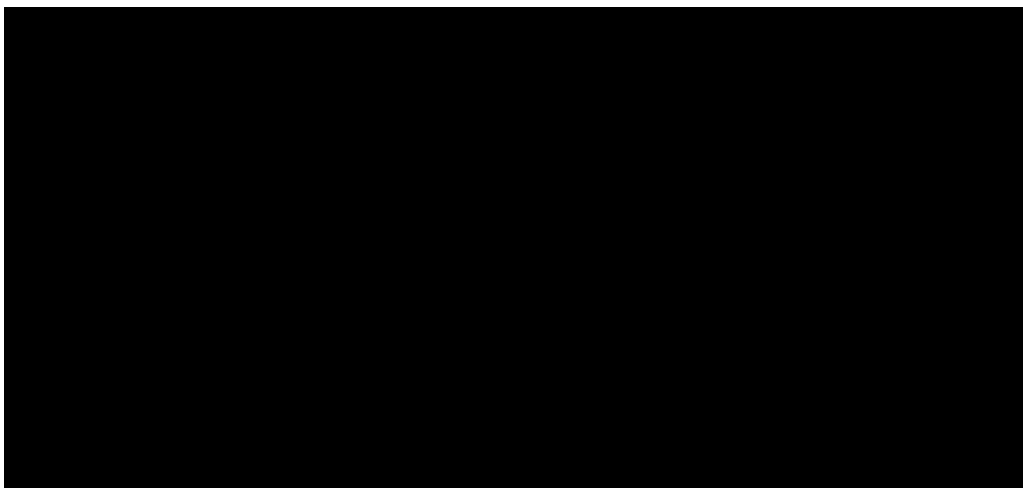


3. Leave the **Filters** section blank for now, we will not be using them in this example. You can add filters later on if you need to.
4. In the **Environment Lifecycle** section, create three environments: **production**, **testing**, and **development**. Click [!Add Environment!] and complete the name and label for each. For the



production environment, leave the Insert before field blank. For the testing environment, in the Insert before field, select production. For the development environment, in the Insert before field, select testing`.



5. Click [!Build!] to build version 1 of your project:



#### *Procedure: Assign clients*

1. Navigate to Systems  System List, select the client to assign, and go to the Software  Software Channels tab.
2. In the Base Channel section, select the CLM project and environment you want to assign the client to. For example, if you want this client to receive updates from your CLM only when

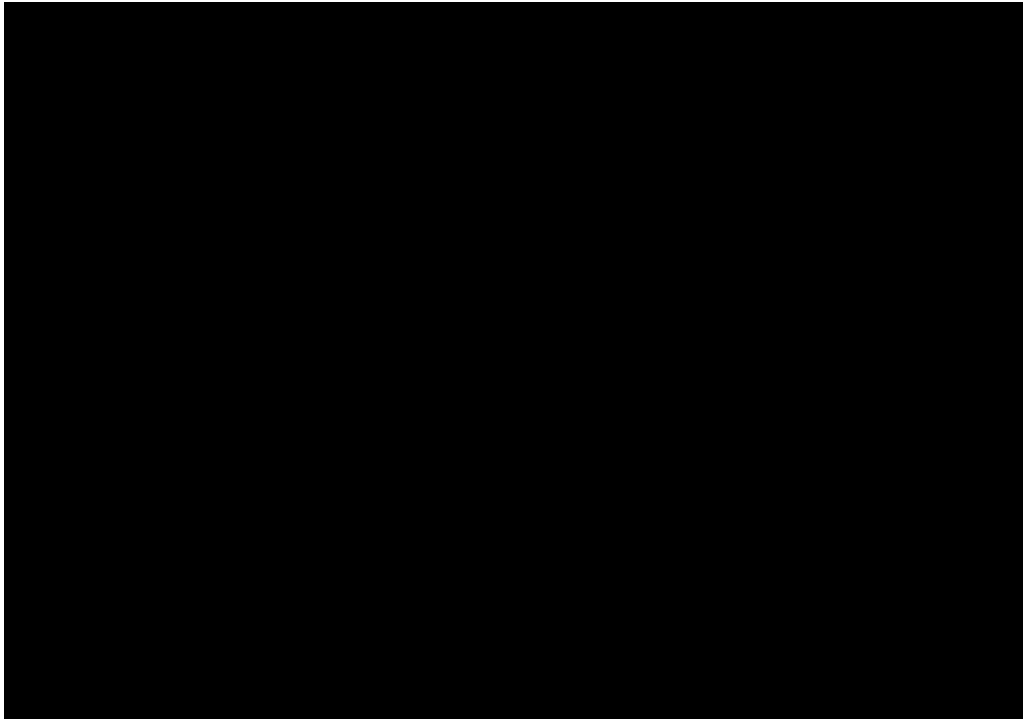
packages are in the **production** environment, assign the base channel `<CLM_Project_Name>-production-<Channel_Name>`. Alternatively, you could use this client as a way to test if your CLM packages are working as expected before you promote them to **development**, so you assign the base channel `<CLM_Project_Name>-testing-<Channel_Name>`.



3. Click [!Next!] to assign the client.

#### *Procedure: Promote Environments*

1. In the Uyuni WebUI, navigate to Content Lifecycle **Projects**, and select the project you want to work with.
2. In the **Environment Lifecycle** section, locate the environment to promote to its successor, and click [!Promote!]. You can monitor build progress in the **Environment Lifecycle** section.



## 2.5. Related topics

¥ For more information about CLM, including information about how to use filters, see [Administration](#) ¥ [Content-lifecycle](#).

¥ For CLM examples, see [Administration](#) ¥ [Content-lifecycle-examples](#).

# Chapter 3. Service Pack Upgrade via WebUI


If you want to migrate the registered SUSE Linux Enterprise client's service pack (SP) to a newer version, it can be done either on the command line or via WebUI.

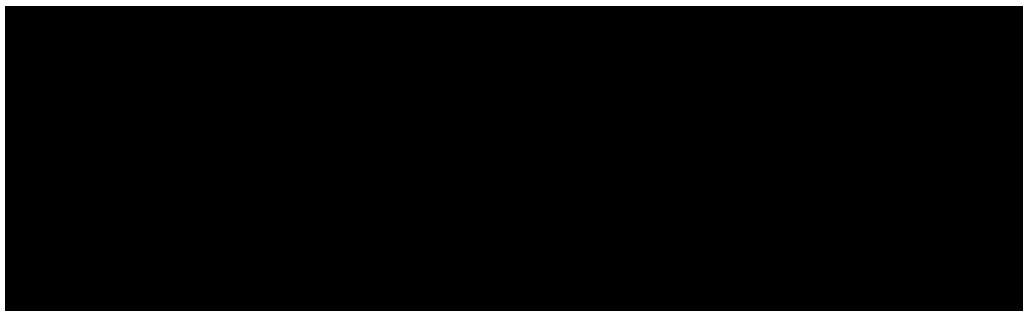
This document describes and illustrates in detail the migration using the WebUI.



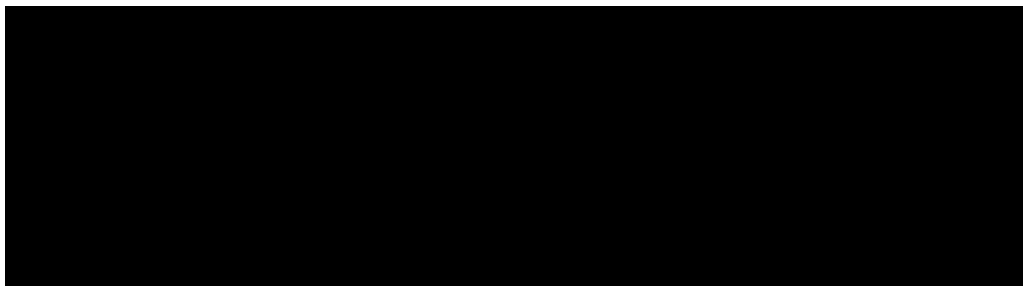
SP versions used are not reflective of the actual latest versions available. They are used for illustration purposes only.



*Procedure: Migrating service pack to a newer version using WebUI*

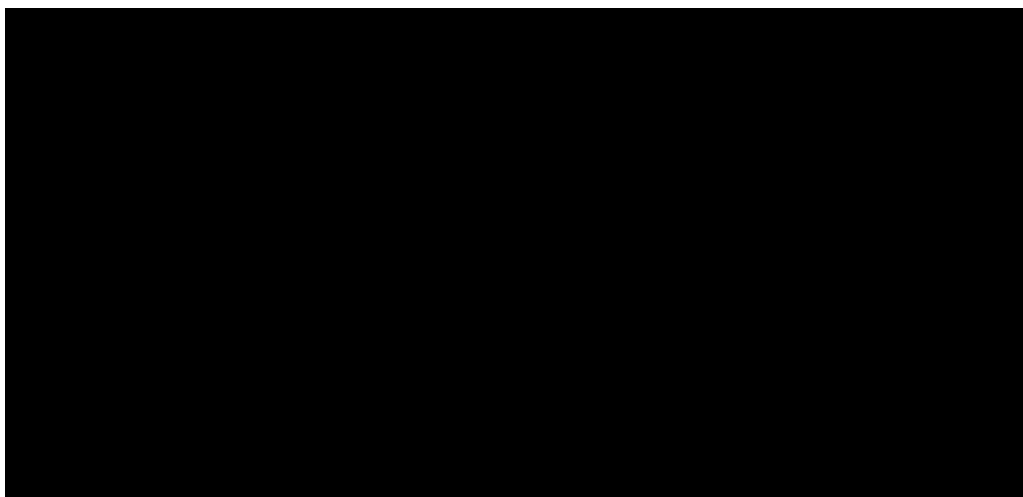
1. Log in to Uyuni WebUI and navigate to Admin  Products and search for "SUSE Linux Enterprise Server 15 SP4 x86\_64 (BETA)"
2. Select the recommended channels.



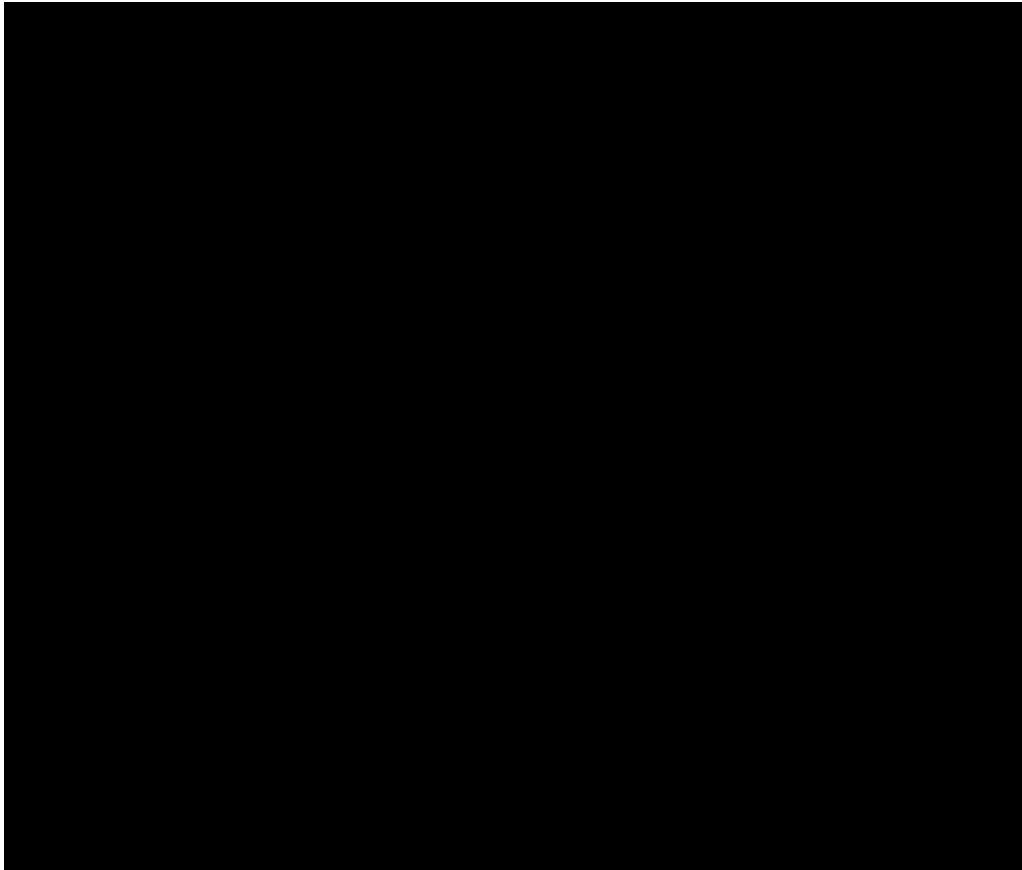
3. Click .



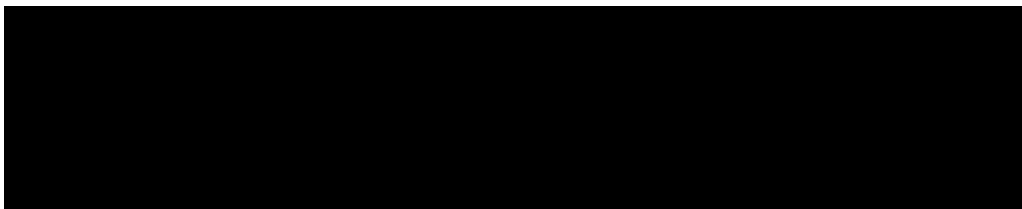
4. Navigate to Systems  registered client  Software  SP Migration. You will see two targets, SP3 and SP4.



5. Select **SUSE Linux Enterprise Server 15 SP4 x86\_64 (BETA)**. This will expand further as shown below.



6. Select **Target Base Channel** as **SLE-Product-SLES15-SP4-Pool** for **x86\_64** and keep **Allow Vendor Change** unchecked.
7. Click **[!Schedule Migration!]** and it will highlight message **It is better to do a dry run first so continuing with dry run first.**
8. Click **[!Dry-run!]** and check the status of the simulation in Events **Y**History. You should see a return code **0** meaning successful.
9. Now you may click **[!Schedule Migration!]** to actually migrate the server. Following message will get highlighted on top of the screen in Uyuni Web**UI**.



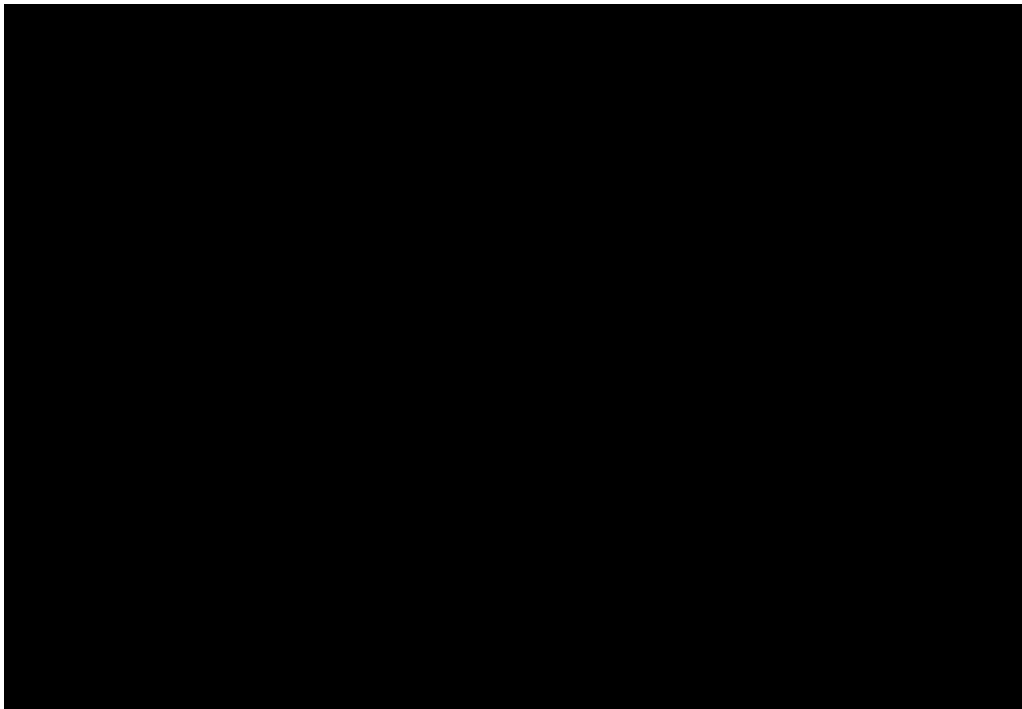
10. When the migration is complete, check the status in Events **Y**History.
11. On the client side also you can verify it by running:

```
cat /etc/os-release
```

12. The output will look similar to:

```
NAME="SLES"
VERSION="15-SP4"
VERSION_ID="15.4"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP4"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp4"
DOCUMENTATION_URL="https://documentation.suse.com/"
```

13. On the Uyuni WebUI side, you can verify the successfully completed migration by going to Systems **Y** registered client **Y** Detail.



# Chapter 4. Onboarding

Uyuni is all about managing client systems. So one of the first things you need to do is onboard some clients. This workflow shows you how to set up your Uyuni Server to manage a new client, set up the software channels you need, and bootstrap the client using an activation key.

## 4.1. Use case

This workflow shows you how to onboard a client to your Uyuni Server.

The client must be running a supported Linux operating system. For a list of supported client systems, see [Installation-and-upgrade](#) [Client-requirements](#).

This is one of the first tasks you need to do when you set up Uyuni for the first time, and you will probably have to do it many more times as you use the product.

## 4.2. Outcome

When you have completed this workflow, your client is onboarded, and it can be seen in the systems list of the Uyuni WebUI. You can then use Uyuni to manage the client.

## 4.3. Preparation

Before you start, you should already have:

- ¥ Uyuni Server installed, that you can access using the WebUI.
- ¥ Client machine with an operating system installed, which you can access across the network that your Uyuni Server is on, using SSH.
- ¥ Appropriate subscriptions from <http://scc.suse.com> for the products you are using.

This workflow uses a SUSE Linux Enterprise Server 15 SP2 operating system. You can use other Linux operating systems, but some of the steps might be different. For more information on onboarding other clients, see [Client-configuration](#) [Registration-methods](#).

## 4.4. Step-by-step workflow instructions

*Procedure: Configure a fully qualified domain name (FQDN) on your client*

1. On the client, at the command prompt, show the current hostname:

```
hostname -f
```

This command will probably return an error, or show something like `local host`.

2. Set a new hostname. Your new hostname should have a subdomain name and thus include at least two periods. In this example, we are using `client1.suma.example`



```
hostnamectl set-hostname client1.suma.example
```

3. Check that your change was successful:

```
hostnamectl
```

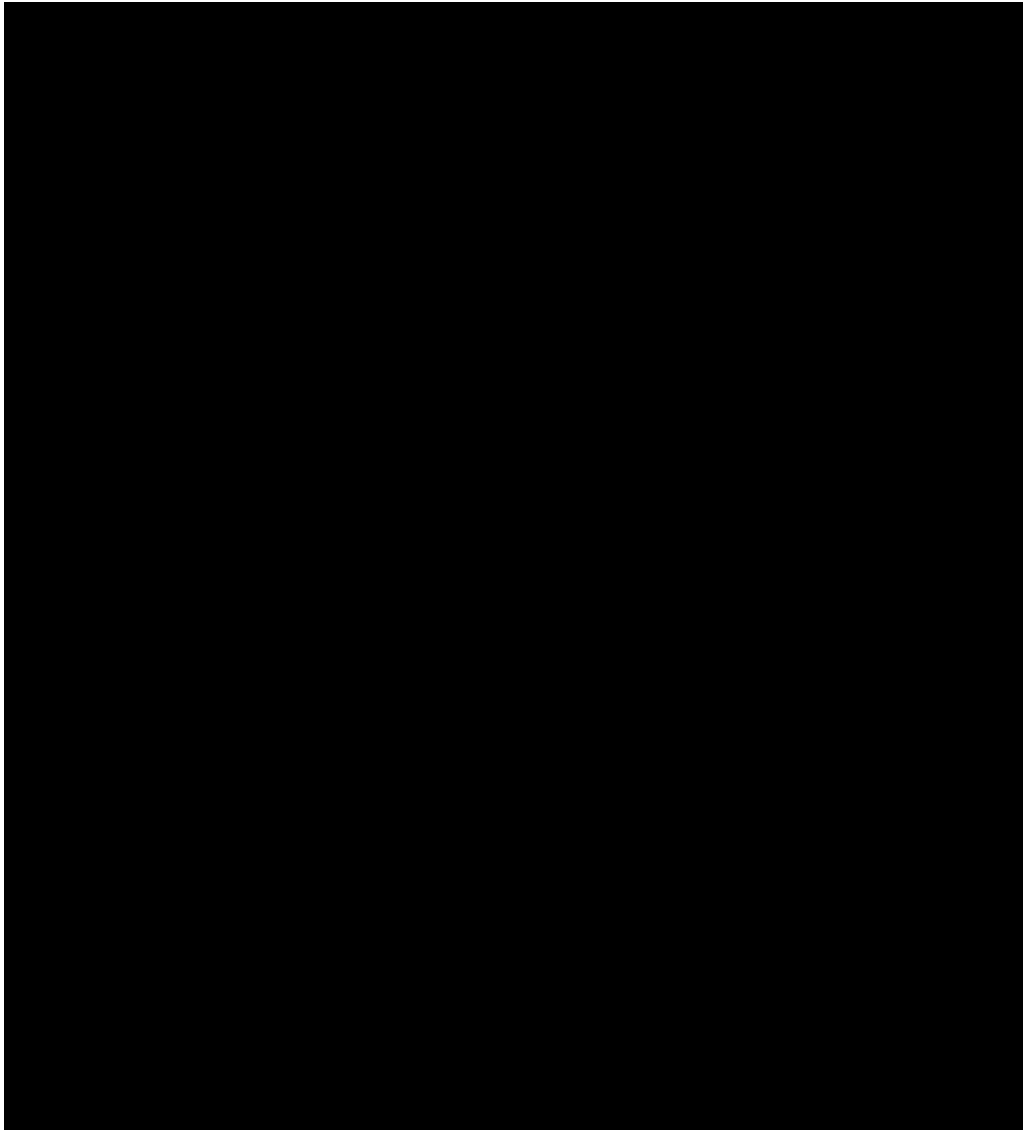
4. Open YaST and navigate to Network Services **Y** Hostnames. Edit the hostname to match the one you just set, and click [!OK!].
5. In YaST, navigate to System **Y** Network Settings and go to the **Hostname/DNS** tab. In the **Static hostname** field, type your new hostname.
6. Check that the change was successful:

```
hostname -f
```

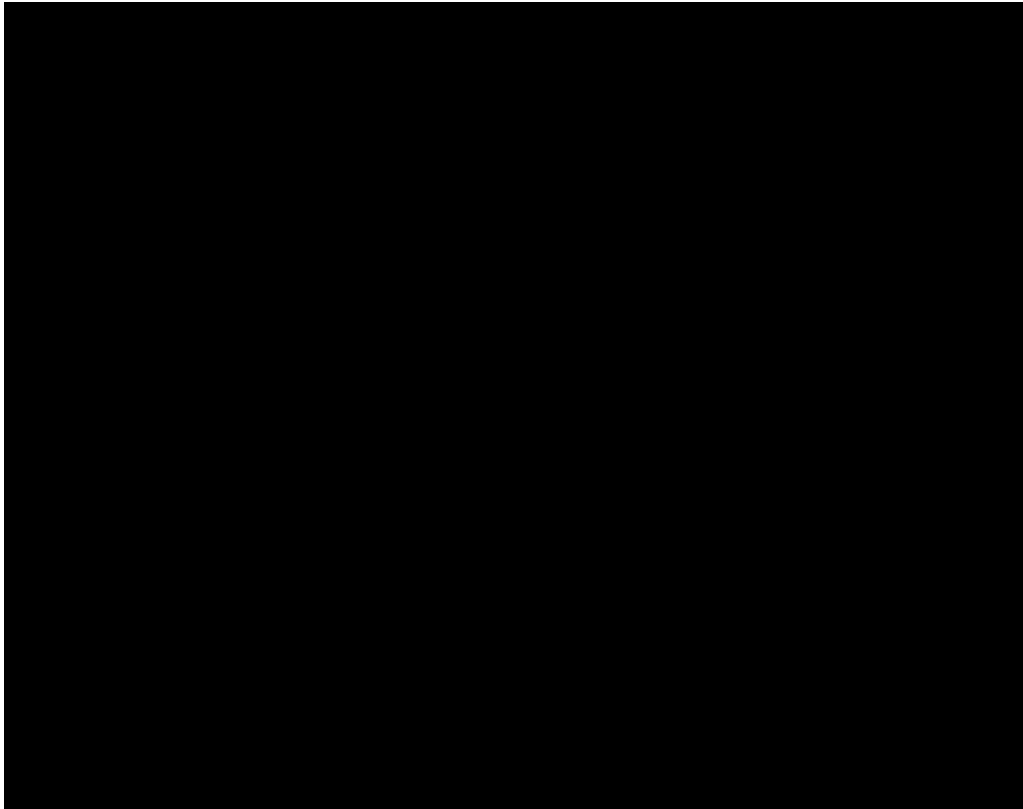
This command should return your new FQDN.

*Procedure: Prepare software channels on the Uyuni Server*

1. In the Uyuni Web **UI**, navigate to Admin **Y** Setup Wizard.
2. In the **Organization Credentials** tab, ensure you have entered your SUSE Customer Center credentials, and are correctly authenticated.
3. In the **Products** tab, ensure that the product catalog is fully updated:



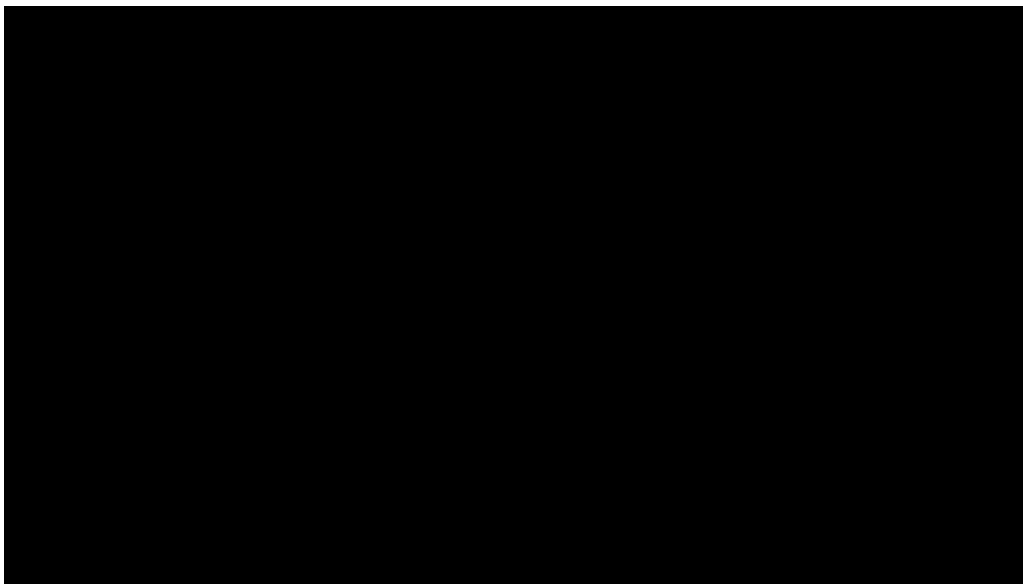
4. Use the product search bar to find the channels you need for your client operating system. Check the channels you want to install, and click [!Add products!]:



5. Wait for the product channels to fully synchronize. Depending on the products you have chosen, this could take a long time.

*Procedure: Create an activation key*

1. In the Uyuni WebUI, navigate to Systems > Activation Keys, and click [!Create Key!].
2. Give your activation key a name, and select the base channel that matches the client you want to onboard. This should be the product you just enabled:

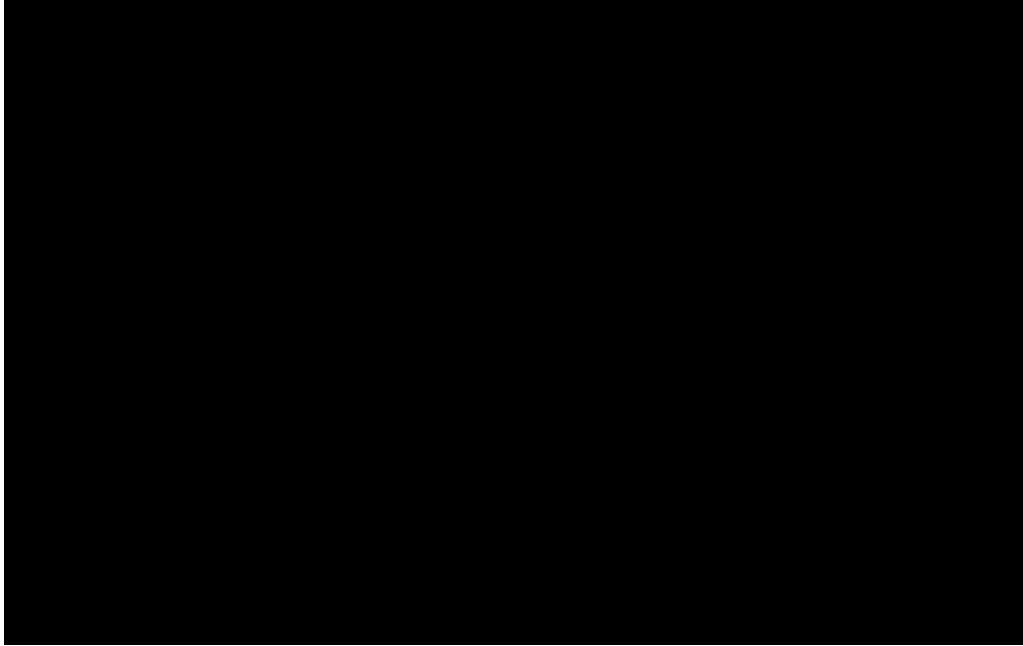


3. Check the child channels to include, and any add-on system types you want clients registered with this key to have. Click [!Create Activation Key!].

*Procedure: Bootstrap the client*

1. In the Uyuni WebUI, navigate to Systems > Bootstrapping.

2. Type the hostname and provide authentication credentials for the client you want to onboard, and select the activation key. Click [!Bootstrap!]:



3. Navigate to Systems [Y](#) System List to manage your new client.

## 4.5. Related topics

- ¥ For more information about supported clients and client features, see Client-configuration [Y](#) Supported-features.
- ¥ For more information about different onboarding methods, and instructions for clients running various operating systems, see Client-configuration [Y](#) Registration-methods.
- ¥ For more information about general client concepts, see Client-configuration [Y](#) Channels.

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