



# How to Directly Connect SUSE Manager to Red Hat Content Delivery Network

Methods to Receive Your Red Hat Updates and Patches

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SUSE Manager 2.1 and 3

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The described solution allows you to directly connect SUSE Manager to the Red Hat Content Delivery Network (CDN) to retrieve your software updates and patches.

This is useful if you plan on continuing your agreement with Red Hat, and/or you do not want to use Expanded Support from SUSE. It is also useful when you have multiple distributions that you want to update and patch from SUSE Manager. Finally, it is helpful if you use an updated code stream of the Satellite 5 series, and continue your use of an enhanced road map to the Spacewalk project.

You must have a current subscription with Red Hat. This in no way requires that you have a subscription to Satellite Server from Red Hat.

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# 1 Import Red Hat Entitlement and CA Certificate

During the next few paragraphs, you will learn how to import the Red Hat CA and entitlement certificate.



## Note: Expiration Dates for Entitlement Certificates

Entitlement certificates have embedded expiration dates tied to the length of the support subscription. You must repeat this process with updated entitlement certificates as needed to avoid disruption in channel mirroring.

## 1.1 Entitlement Certificate

Red Hat Subscription Manager is a local service which tracks installed products and subscriptions on a local system to help manage subscription assignments. To obtain your certificates, you must register your system using this subscription manager tool supplied by Red Hat.

1. Register with the subscription manager tool from your Red Hat client. It will prompt you for your user name and password for authentication on the Red Hat Portal:

**subscription-manager register**

2. Navigate to the location of your entitlement certificate and key, and copy these files to where your Web browser connected to SUSE Manager can open them:

**cd /etc/pki/entitlement/**

You will see two files with the data file format extension **.pem** (Program Editor macro). One is the certificate, and the other is the key and it has the word “key” in the file name.

## 1.2 Red Hat CA Certificate

The next step is to get the Red Hat CA Certificate file. It is located on this same Red Hat system in the file /etc/rhsm/ca/redhat-uep.pem. Place this file in the same location where, in the previous section, you put the entitlement certificate.

## 1.3 Obtain Repository URL list

Use the subscription manager tool to obtain the URL's of the repositories you want to mirror:  
[subscription-manager repos](#)

## 1.4 Import

Now you are ready to import the Red Hat CA Certificate and Entitlement Certificate into SUSE Manager for software repository mirroring. You must create three entries here: one each for the entitlement certificate, the entitlement key, and the Red Hat CA certificate.

Start your SUSE Manager. Go to the **Systems** tab at the top. Click **Autoinstallation** on the left pane. Then click **GPG and SSL Keys** also on the left pane, as you can see it from the screenshot below.

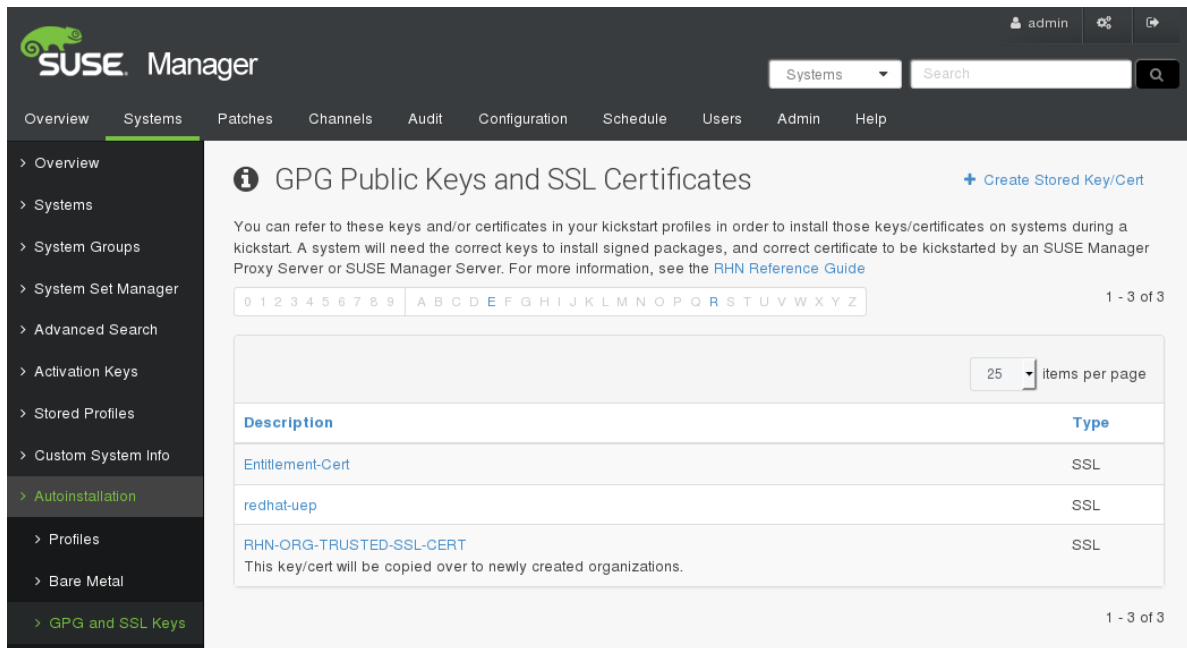
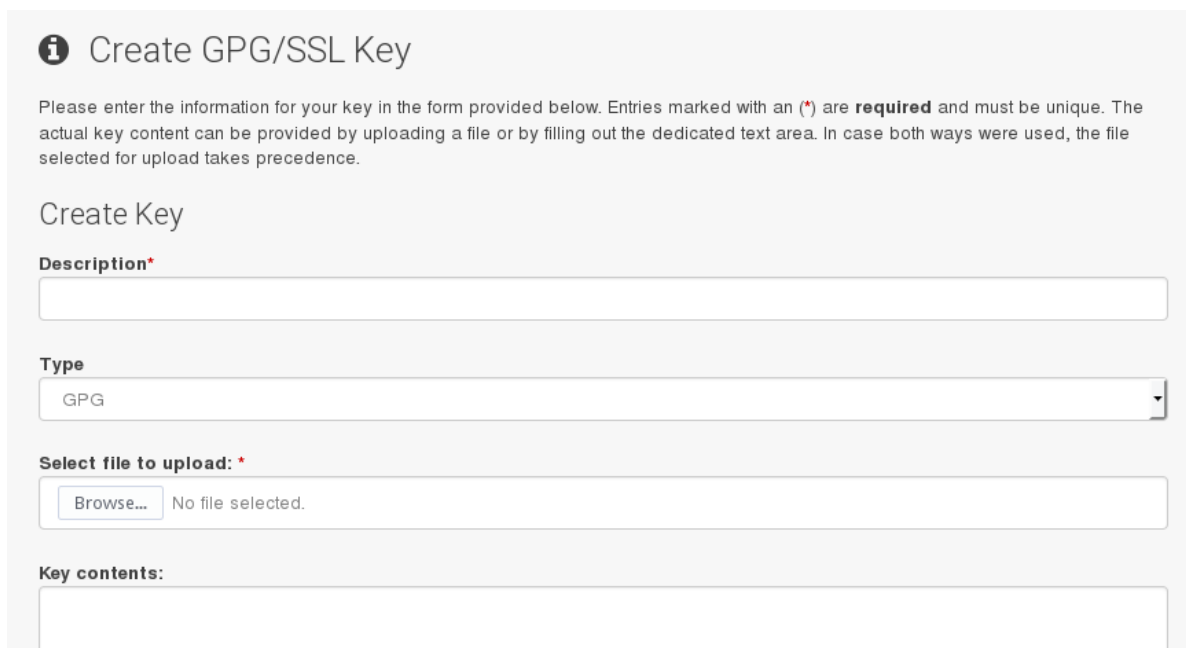


FIGURE 1: SUSE MANAGER GPG PUBLIC KEYS AND SSL CERTIFICATES

Click **Create Stored Key/Cert** on the right. Another screen opens where you can fill in the required information.



**i** Create GPG/SSL Key

Please enter the information for your key in the form provided below. Entries marked with an (\*) are **required** and must be unique. The actual key content can be provided by uploading a file or by filling out the dedicated text area. In case both ways were used, the file selected for upload takes precedence.

Create Key

**Description\***

**Type**

GPG

**Select file to upload: \***

Browse... No file selected.

**Key contents:**

FIGURE 2: SUSE MANAGER CREATE GPG/SSL KEYS

Enter the following values, and ensure you enter the date:

**Description:** Entitlement-Cert-*date*

**Type:** Ensure you select *SSL*

**Select file to upload:** Browse to where you saved the Entitlement Certificate .pem file and select it.

Click the **Create Key** button at the bottom.

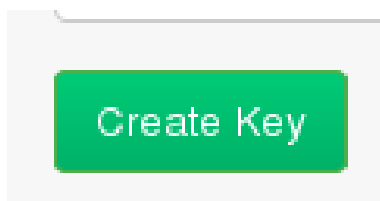


FIGURE 3: SUSE MANAGER CREATE KEY BUTTON

Repeat the above steps for the Entitlement Key and change the values to match the following:

**Description:** Entitlement-key-*date*

**Type:** SSL

**Select file to upload:** Browse to the location where you saved the Entitlement key .pem file and select it.

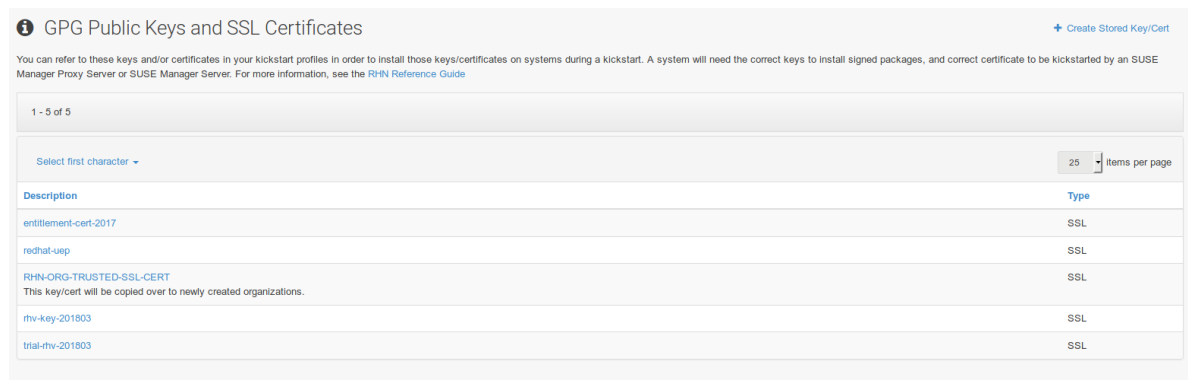
Repeat the above steps for the Red Hat CA Certificate (*redhat-uep*) and change the values to match the following:

**Description:** redhat-uep

**Type:** SSL

**Select file to upload:** Browse to the location where you saved the Red Hat CA Certificate and select it.

You now have imported the Entitlement certificate, the Entitlement key and the Red Hat CA into SUSE Manager for use. Your outcome should look like the screen below:



**FIGURE 4: SUSE MANAGER IMPORTED RED HAT CERTIFICATES**

## 2 Create Software Repositories

To mirror the software from the Red Hat CDN, you need to create custom channels and repositories in SUSE Manager that are linked to the CDN with their respective URL. This will only work if you have entitlements to these products in your Red Hat Portal. To create these software repositories you need to perform the following actions.

On your SUSE Manager screen, go to the **Software**(or in older SUSE Manager versions, to the **Channels**) tab at top. Click **Manage Software Channels** on the left pane. Then click **Manage Repositories** also on the left pane.

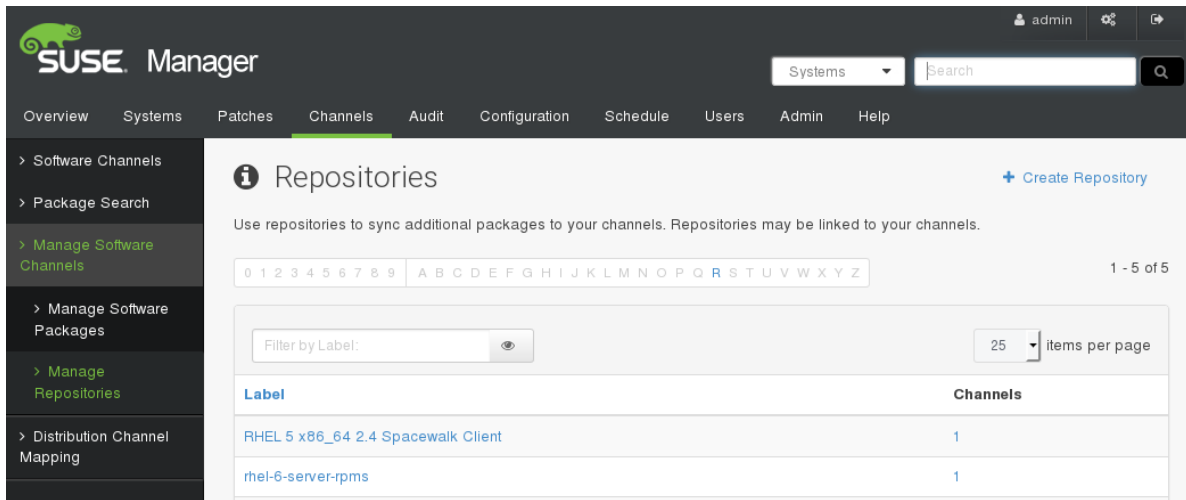


FIGURE 5: SUSE MANAGER REPOSITORIES

Click **Create Repository**. The following screen opens, where you can enter the required information to create the repository.

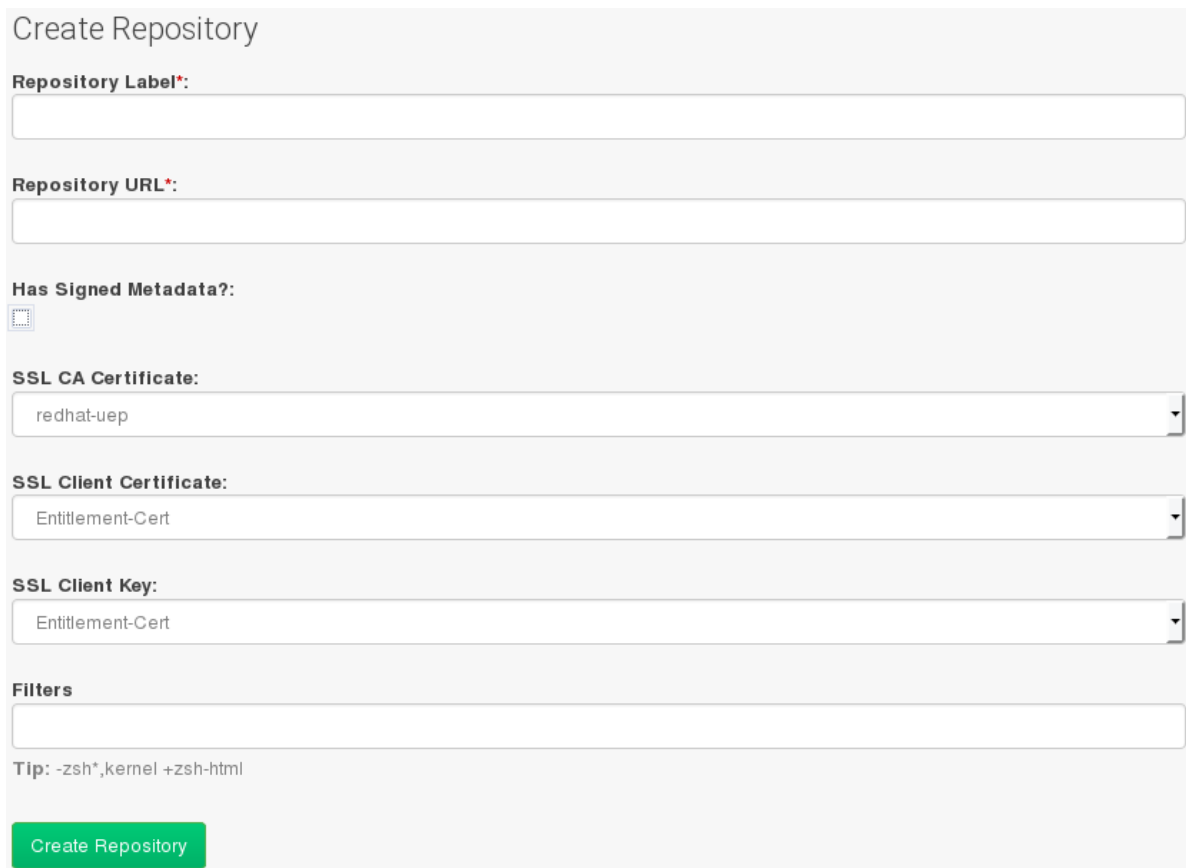


FIGURE 6: SUSE MANAGER CREATE REPOSITORY

Fill in the fields with values, following the example below:

**Repository Label:** rhel-7-server-rpms

**Repository URL:** https://cdn.redhat.com/content/dist/rhel/server/7/7Server/x86\_64/os/

**Has Signed Metadata?:** Uncheck (Uncheck for all Red Hat Enterprise Repositories)

**SSL CA Certificate:** redhat-uep

**SSL Client Certificate:** Entitlement-Cert-*date*

**SSL Client Key:** Entitlement-Key-*date*

These steps need to be repeated for the Products / Repository URLs you define for your environment.

## Repository Values

Use the output of repository URL's obtained earlier from the subscription manager tool to create other repositories to which you are entitled. Mirror only the content which you need to manage your systems.

## 3 Create Software Channel Delivery

Next step is to create corresponding channels to which you assign these repositories.

Click **Channels**, after that click **Manage Software Channels** .

### 3.1 Parent Channels Example

Click **Create Channel** and fill in the fields with at least the following values:

**Channel Name:** RHEL 7 x86\_64

**Channel Label:** rhel7-x86\_64-server

**Parent Channel:** None

**Architecture:** x86\_64

**Repository Checksum Type:** sha1

**Channel Summary:** RHEL 7 x86\_64

**Organization Sharing:** Public

After you have filled in the values, click again **Create Channel**.



On the screen below, click the tab **Repositories**, and mark the check box next to the appropriate repository.

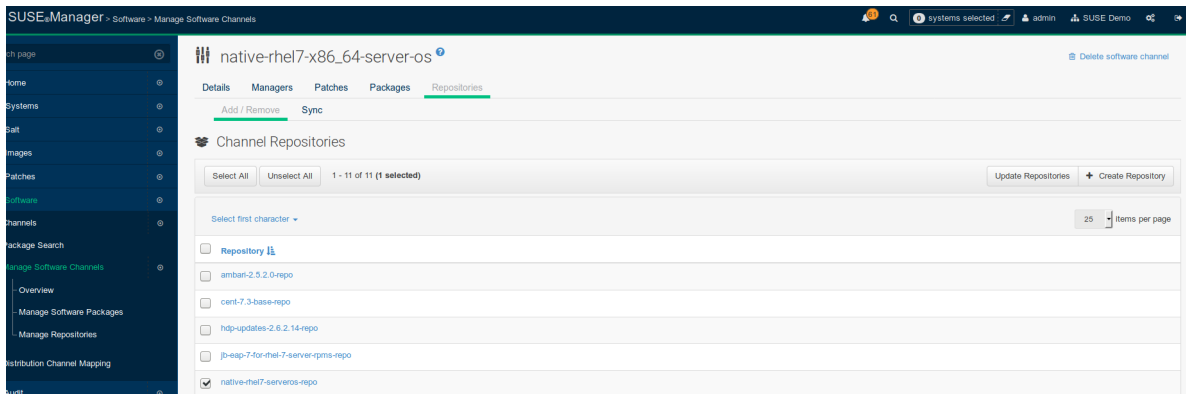


FIGURE 7: CREATE PARENT CHANNELS

On the next screen, click the tab **Sync** and set your preferred recurring schedule for synchronization for this repository. You can also select **Sync Now** to launch the synchronization immediately.

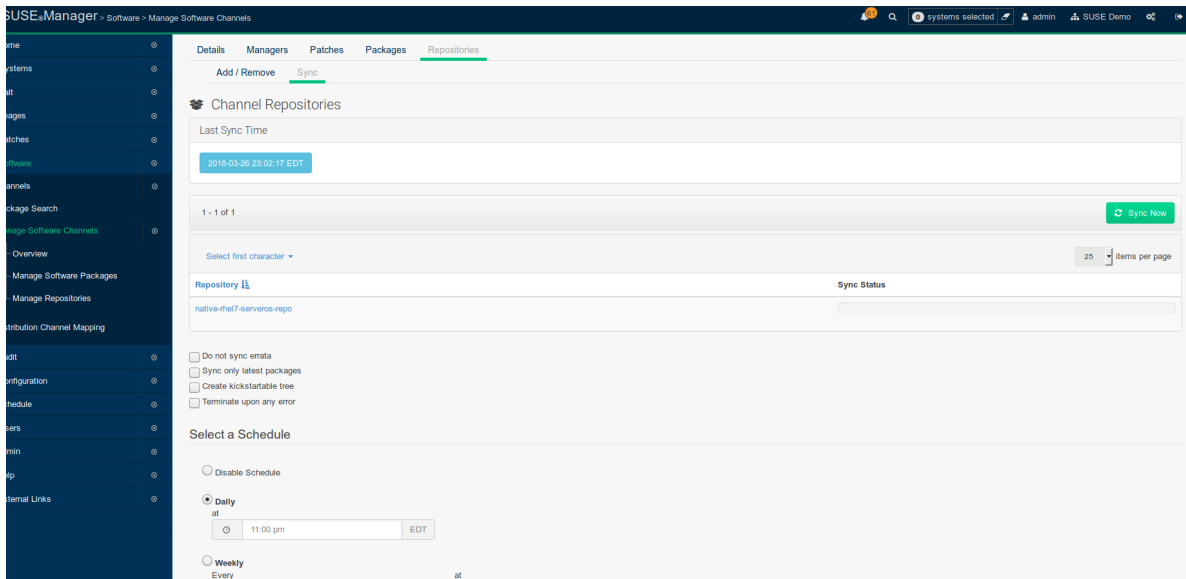


FIGURE 8: SYNCHRONIZE PARENT CHANNELS



### Note: Mirroring Duration

Red Hat Server OS channels can grow to be very large. Thus it can take several hours to complete mirroring.

## 3.2 Child Channels example

Click **Create Channel** and fill in the fields with at least the following values:

**Channel Name:** RHEL 7 x86\_64

**Channel Label:** rhel7-x86\_64-extras

**Parent Channel:** rhel7-x86\_64-server (from drop-down box)

**Architecture:** x86\_64

**Repository Checksum Type:** sha1

**Channel Summary:** RHEL 7 x86\_64 Extras

**Organization Sharing:** Public

After you have filled in the values, click again **Create Channel**.

On the screen below, click the tab **Repositories**, and mark the check box next to the appropriate repository.

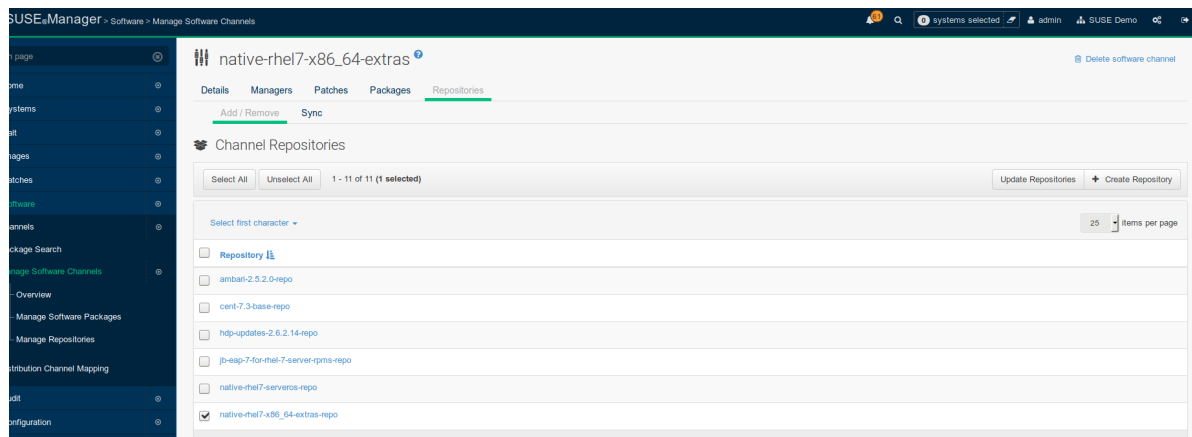
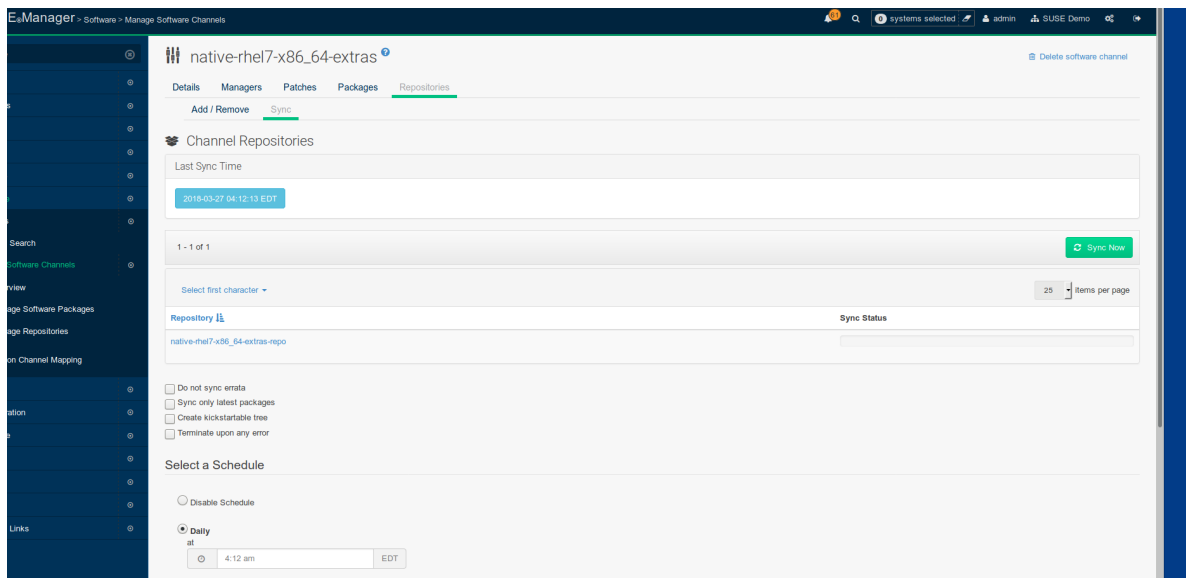


FIGURE 9: CREATE PARENT CHANNELS

On the next screen, click the tab **Sync** and set your preferred recurring schedule for the synchronization of this repository. Ensure you scroll down and click **Schedule**. You can also select **Sync Now** to launch the synchronization immediately.



**FIGURE 10: CREATE PARENT CHANNELS**

Now you can proceed to create the activation key in the SUSE Manager Web UI, and assign appropriate channels to it.

## 4 Registration

To register your systems, follow the steps described in the sections below.

### 4.1 Bootstrap Repository Creation

SUSE Manager subscriptions entitle everyone to the tools channels for Red Hat Expanded Support (RES) distributions. Any Red Hat Enterprise Linux or CentOS 6 or 7 system should use these to create the proper bootstrap repository for either traditional or salt-minion connectivity.

1. Add the corresponding SUSE Manager RES tools channel and allow it to synchronize from SUSE Customer Center. You will need the 0-package parent channel and the tools. Here is an example command to add it for RES6 on AMD64/Intel 64:

```
mgr-sync add channels rhel-x86_64-server-6 res6-suse-manager-tools-x86_64
```

2. Follow the instructions to synchronize your base media as a child repository for your distribution based on Red Hat Enterprise Linux, as explained in the SUSE Manager Wiki: [https://wiki.microfocus.com/index.php/SUSE\\_Manager/Sync\\_RHEL\\_media](https://wiki.microfocus.com/index.php/SUSE_Manager/Sync_RHEL_media)

3. Create a bootstrap repository for your Red Hat Enterprise Linux clients with

```
mgr-create-bootstrap-repo --with-custom-channels
```

This will use the base media channel to capture needed dependencies. Ensure that it completes without error.

## 4.2 Minion Registration

On the client machine(s), perform the following steps to register the minion using a bootstrap script (recommended):

1. If needed, regenerate the bootstrap script with the `Salt` option enabled:

```
mgr-bootstrap --salt --script=bootstrap-salt.sh
```

2. Download and run the appropriately edited bootstrap script after adding the correct activation key and other parameters. This will install the necessary Salt packages, set the proper activation key, and start the salt-minion service:

```
curl -Sks http://<server>/pub/bootstrap/bootstrap-salt.sh | /bin/bash
```

3. In the SUSE Manager Web UI, go to **Salt**, click **Onboarding** and accept the minion's key.

After a few minutes, the new minion will appear in your list of systems with the channels assigned in the activation key you specified in the bootstrap process.

## 5 References

For more information, see:

1. Using and Configuring Red Hat Subscription Manager: [https://access.redhat.com/documentation/en-us/red\\_hat\\_subscription\\_management/1/html-single/rhsm/index](https://access.redhat.com/documentation/en-us/red_hat_subscription_management/1/html-single/rhsm/index)
2. Get Started with Red Hat Subscription Management: <https://access.redhat.com/articles/433903>
3. Update `spacewalk-create-channels`: <https://github.com/kgibson/spacewalk/blob/master/spacewalk-create-channels>

4. Wiki article “SUSE Manager/Sync RHEL media”: [https://wiki.microfocus.com/index.php?title=SUSE\\_Manager/Sync\\_RHEL\\_media](https://wiki.microfocus.com/index.php?title=SUSE_Manager/Sync_RHEL_media) ↗
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