Spacewalk 2.2 for Oracle® Linux 6

Release Notes
About this document

This document contains information about the Spacewalk 2.2 release available from Oracle. It describes the differences from the upstream version, includes notes on configuring Spacewalk, and provides a statement of what is supported.

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Preface

The *Spacewalk 2.2 for Oracle Linux Release Notes* provides details of the Spacewalk 2.2 release available from Oracle.

**Audience**

This document is written for system administrators who want to use Spacewalk to manage Oracle Linux systems. It is assumed that readers have a general understanding of the Linux operating system.

**Conventions**

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><strong>italic</strong></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Chapter 1 Release Notes

1.1 About Spacewalk 2.2 for Oracle Linux 6

There are no significant changes in the Oracle version of Spacewalk from the upstream project. Minor changes include the addition of Oracle Linux 6 GPG keys and some branding changes.

Installation

For information about installing or upgrading Spacewalk 2.2 servers and proxies, see the Spacewalk 2.2 for Oracle Linux Installation Guide.

For information about installing the Spacewalk Client software, see Section 1.3, “Installing the Spacewalk Client and Registering Servers”.

Summary of New Features and Changes Since Release 2.0

In addition to numerous fixes and small enhancements, the Spacewalk 2.2 release includes the following new features and changes:

• New design for the web interface.
• Support for defining a chain of actions to be executed on clients (action chaining).
• Remote power management.
• Support for FIPS-enabled Spacewalk clients and servers.
• Spacewalk Proxy content pre-caching.
• Identity management (IPA) integration.
• Support for using SSL for connections to an external PostgreSQL database.
• SCAP improvements.
• New API calls and a new read-only user API for retrieving data, for example for auditing.

The up-to-date API documentation can be found at: http://www.spacewalkproject.org/documentation/api/

• The Monitoring component of Spacewalk is deprecated and might not be available in future Spacewalk releases. If you have already deployed this component, it is still supported but you should investigate alternative monitoring solutions.

Detailed information about the changes can be found in the Release Notes for the Spacewalk project at: https://fedorahosted.org/spacewalk/wiki/ReleaseNotes

1.2 Configuring Spacewalk

This section summarizes the configuration needed to enable Spacewalk to synchronize software with Oracle Unbreakable Linux Network (ULN) or the Oracle public yum server.

For more detailed information, see the Spacewalk 2.2 for Oracle Linux Client Life Cycle Management Guide.

Other documentation for the Spacewalk project can be found at:
1.2.1 Configuring Software Channels Using ULN

Spacewalk contains a ULN plug-in for the `spacewalk-repo-sync` tool. The plug-in enables you to synchronize ULN channels directly into Spacewalk channels without requiring the Spacewalk server to be registered with ULN.

To configure the ULN plug-in, edit the `/etc/rhn/spacewalk-repo-sync/uln.conf` file and add login credentials for ULN. By default, this file is read-only by `root`.

```
[main]
username = <ULN SSO username>
password = <ULN SSO password>
```

After you edit the configuration file, ensure that the file permissions are read-only (0400) by `root`. This is an important security step to protect the ULN credentials.

Once the ULN plug-in is configured, you create the Spacewalk software channels and repositories in the normal way using the Spacewalk web interface. When you specify the URL for a ULN repository, use a URL in the following format:

```
uln://<ULN channel label>
```

**Note**
The URL must contain three forward slash (`/`) characters. For example:

```
uln://ol6_x86_64_latest
```

You can get a list of available ULN channel labels by logging in to ULN (https://linux.oracle.com) and selecting the Channels tab.

1.2.2 Configuring Software Channels Using Public Yum

Oracle Linux channels can be configured using the `spacewalk-common-channels` tool provided in the `spacewalk-utils` package. This tool can automatically configure the required software channels, public yum repositories, GPG keys, and activation keys for Oracle Linux.

The following channels can be created using the `spacewalk-common-channels` command:

- **For Oracle Linux 7 (x86_64):**
  - oraclelinux7 (base channel)
  - oraclelinux7-optional
  - oraclelinux7-addons
  - oraclelinux7-uek-r3
  - oraclelinux7-mysql55
  - oraclelinux7-mysql56
  - oraclelinux7-spacewalk22-client

- **For Oracle Linux 6 (i386 and x86_64):**
  - oraclelinux6 (base channel)
Synchronizing Software Channels

- oraclelinux6-addons
- oraclelinux6-uek
- oraclelinux6-uek-r3
- oraclelinux6-mysql
- oraclelinux6-playground
- oraclelinux6-spacewalk20-client
- oraclelinux6-spacewalk20-server
- oraclelinux6-spacewalk22-client
- oraclelinux6-spacewalk22-server

- **For Oracle Linux 5 (i386 and x86_64):**
  - oraclelinux5 (base channel)
  - oraclelinux5-addons
  - oraclelinux5-oracle-addons
  - oraclelinux5-unsupported
  - oraclelinux5-uek
  - oraclelinux5-spacewalk20-client
  - oraclelinux5-spacewalk22-client

For example, to create all the 32-bit and 64-bit software channels for Oracle Linux 6, install the `spacewalk-utils` package and then run the `spacewalk-common-channels` tool, as follows:

```
# yum install spacewalk-utils
# spacewalk-common-channels -v -u swadmin -p password -a i386,x86_64 -k unlimited 'oraclelinux6*' 
```

Use the `spacewalk-common-channels -h` command to see full usage information.

### 1.2.3 Synchronizing Software Channels

Once you have configured the software channels, you can synchronize the software either by performing an immediate manual synchronization or by scheduling a recurring synchronization job.

As a minimum, Oracle recommends that you update the Oracle Linux latest channels daily.

The initial synchronization of the Oracle Linux channels can take several days to complete. Oracle recommends that you perform an initial manual synchronization to populate the channels, and then configure a recurring job to keep them updated.

**Synchronizing Software Channels Using the Spacewalk Web Interface**

1. Go to **Channels**, then **Manage Software Channels**, and select the required channel.

2. Select **Repositories**, and then **Sync**.
Creating Activation Keys for Spacewalk Clients

3. Synchronize the software.
   To perform an immediate manual synchronization, click the **Sync Now** button.
   To schedule a recurring synchronization job, select the preferred schedule, and click the **Schedule** button.

Synchronizing Software Channels Using the Command Line

Use the `spacewalk-repo-sync` tool to synchronize software channels. You must be `root` to use this tool. You can run the tool manually or in a `cron` job. See the man page for `spacewalk-repo-sync` for full details of the options. If you run the tool in a `cron` job, remember to include the `-q` or `--quiet` option.

In order to synchronize a channel, the key information is the channel label and the URL of the repository. Use the `spacewalk-repo-sync -l` command to display this information.

To synchronize a channel with a ULN repository, use the following format:

```
# spacewalk-repo-sync -t uln -c <Spacewalk channel label> -u uln:///<ULN channel label>
```

For example:

```
# spacewalk-repo-sync -t uln -c oraclelinux6_x86_64_latest -u uln:///ol6_x86_64_latest
```

To synchronize a channel with an Oracle Public Yum repository, use the following format:

```
# spacewalk-repo-sync -c <Spacewalk channel label> -u http://<repo URL>
```

For example:

```
# spacewalk-repo-sync -c oraclelinux6_x86_64_latest \\
```

1.2.4 Creating Activation Keys for Spacewalk Clients

After you have configured and synchronized the software channels, you must create an activation key so that servers can register to those channels.

Create an activation key for each base channel and architecture you configured. If you configure all the base channels, you need five activation keys, two for Oracle Linux 5 (i386 and x86_64), two for Oracle Linux 6 (i386 and x86_64), and one for Oracle Linux 7 (x86_64).

You synchronize software as follows:

1. In the Spacewalk web interface, go to **Systems**, and then **Activation Keys**.

2. Click **Create New Key**.

   Oracle recommends that you enter a meaningful label for the activation key in the **Key** field and that you do not use automatic key generation.

   Create a key with a label that is easy to understand, for example based on the version number and architecture (`oraclelinux6-x86_64`), or based on the server type (`webserver` or `appserver`). Spacewalk automatically adds a number to the activation key label.

   For example, if you select `oraclelinux-x86_64` as the label, the key that is actually created might be called `1-oraclelinux-x86_64`. This enables you to create multiple activation keys for the same base channel, each with different configuration options. The name you use is presented during Spacewalk client registration and creating your own key labels helps you to select the right key.
1.3 Installing the Spacewalk Client and Registering Servers

Oracle supports only Oracle Linux servers as Spacewalk clients. You can use Spacewalk to manage
Fedora-based clients and other systems by using upstream client binaries and repositories but Oracle does
not provide support for these clients.

Oracle provides Spacewalk client packages for Oracle Linux 5 and 6 for both i386 and x86_64
architectures. For Oracle Linux 7, only packages for the x86_64 architecture are provided.

If the Spacewalk Client channel provided by Oracle is mirrored on the Spacewalk server, the Spacewalk
client is installed automatically on servers that are provisioned from Spacewalk. The Spacewalk Client
channel can be configured using the spacewalk-common-channels command, as described in
Section 1.2.2, “Configuring Software Channels Using Public Yum”.

For an Oracle Linux server that is not yet connected to Spacewalk, you install the Spacewalk client and
register the server, as follows:

1. Enable access to the Spacewalk Client repository.

   Download the latest the Oracle public yum repository configuration file from http://public-yum.oracle.com/ and save it to the yum repositories directory (by default /etc/yum.repos.d). Edit
   the configuration file and enable the repository:

   • Oracle Linux 7: enable the ol7_spacewalk22_client repository.
     Alternatively, you can create a /etc/yum.repos.d/spacewalk22-client.repo file with the
     following content:

     ![Configuration file content]

   • Oracle Linux 6: enable the ol6_spacewalk22_client repository.
     Alternatively, you can create a /etc/yum.repos.d/spacewalk22-client.repo file with the
     following content:

     ![Configuration file content]

   • Oracle Linux 5: enable the ol5_spacewalk22_client repository.
     Alternatively, you can create a /etc/yum.repos.d/spacewalk22-client.repo file with the
     following content:

     ![Configuration file content]

2. (Oracle Linux 5 only) Remove the pirut, up2date, and up2date-gnome packages.
Use the `rpm -e --nodeps` command to remove these packages.

In your Oracle Linux 5 Kickstart profiles in Spacewalk, exclude these packages from installation by inserting a dash character (-) in front of the package name in the Kickstart profile on the Software, Package Group screen, for example:

```
@Base
-ൽirut
-зуp2date
-зуp2date-gnome
```

3. Install the Spacewalk client.

Use the following command to install the Spacewalk client on all platforms:

```
# yum install rhn-client-tools rhn-check rhn-setup rhnsd m2crypto yum-rhn-plugin
```

This command replaces the existing packages and deletes a registered server from ULN.

4. Register the server with Spacewalk using the `rhnreg_ks` command.

Before you can register a server, you must have already created a client activation key, as described in Section 1.2.4, “Creating Activation Keys for Spacewalk Clients”. If enabled, a universal default key can be used. However, using a specific activation key is better.

```
# rhnreg_ks --serverUrl=http://spacewalk_server/XMLRPC --activationkey=activation_key
```

5. Disable access to the Spacewalk Client repository.

Disable Spacewalk Client repository in the Oracle public yum repository configuration file, or delete your Spacewalk Client `.repo` file.

**Note**

Starting with Oracle Linux 7 Update 1 and Oracle Linux 6 Update 7, you do not need to install the Spacewalk client before registering a system with a Spacewalk server. Download the CA certificate file from http://spacewalk_server/pub/RHN-ORG-TRUSTED-SSL-CERT on the Spacewalk server to `/usr/share/rhn/RHN-ORG-TRUSTED-SSL-CERT` and use the `--sslCACert` option to specify the certificate in addition to the activation key and Spacewalk server URL to the `rhnreg_ks` command:

```
# rhnreg_ks --serverUrl=http://spacewalk_server/XMLRPC \
    --sslCACert=/usr/share/rhn/RHN-ORG-TRUSTED-SSL-CERT \
    --activationkey=activation_key
```

If you do this, Oracle recommends installing the full Spacewalk Client after registration to support all of the features provided by Spacewalk, which include provisioning and auditing.

### 1.4 Known Issues

#### 1.4.1 Spacewalk Logging

Spacewalk generates large numbers of log messages, particularly under `/var/log/httpd`. To avoid running out of disk space, you might need to adjust the `logrotate` settings to implement more active rotation, compression, and archival of log files.
1.4.2 Spacewalk Fails to Install Due to the slf4j Package

In some circumstances, the Spacewalk installation can fail if the slf4j (Simple Logging Facade for Java) package is installed. The workaround is to remove the slf4j package. Be aware that Eclipse depends on this package, so you either have to uninstall Eclipse or remove the package with the `rpm -e --nodeps slf4j` command.

1.4.3 Tomcat Fails to Start After Spacewalk Configuration

If the Tomcat service (tomcat6) fails to start after the initial configuration of Spacewalk, check that the geronimo-jta-1.1-api package is installed. If you installed Oracle Linux using a software set other than Minimal or Basic Server, the jta package might be installed on the system and the presence of this package prevents the geronimo-jta-1.1-api package from being installed. The geronimo-jta-1.1-api package is required to ensure that all the Spacewalk services start correctly. If the geronimo-jta-1.1-api package is missing from your system, remove the jta package, install the geronimo-jta-1.1-api package, and then shutdown and reboot the system.

1.4.4 Spacewalk Client Fails to Install on Oracle Linux 5

The Spacewalk client conflicts with the up2date client installed by default for connectivity to the Unbreakable Linux Network. Before you install the Spacewalk client for Oracle Linux 5, remove the up2date and up2date-gnome packages manually using the `rpm -e --nodeps` command.

1.4.5 Oracle Linux 5 Does Not Register with Spacewalk after Kickstart Installation

If Oracle Linux 5 does not register with Spacewalk after Kickstart installation, add `-up2date` and `-up2date-gnome` to the Kickstart profile on the Software, Package Group screen.

1.4.6 PXE Booting Fails Due to Incorrect Host Name Configuration

If the Spacewalk server was installed without a fully-qualified domain name (FQDN), or a name that cannot be resolved in DNS, Spacewalk creates invalid PXE boot configuration files.

You can validate that Cobbler is configured correctly by checking that the IP address used in the `ks=` parameter in the `/var/lib/tftpboot/pxelinux.cfg/default` file is correct.

To reconfigure a Spacewalk server after installation:

1. Edit the `/etc/cobbler/settings` file and change all instances of incorrect host names, such as `localhost.localdomain`.
2. Restart Spacewalk by running `spacewalk-service restart`.
3. Resynchronise Cobbler by running `cobbler sync`.

1.4.7 Out of Memory Issues With Large Repositories or Data Sets

When building repository metadata, Spacewalk can fail with Out of Memory issues. This is caused by the default Java memory settings for the Taskomatic daemon. The solution is to increase the JVM memory settings in the configuration file for the Taskomatic daemon `/usr/share/rhn/config-defaults/rhn_taskomatic_daemon.conf`.

For more information, see the Oracle Linux 6 Administrator's Guide.
1.4.8 Client Registration Issues

During installation, Spacewalk generates a CA certificate. This certificate is used in the client registration process. If a Spacewalk server does not have a valid fully-qualified domain name (FQDN), Spacewalk does not generate a valid CA certificate. Spacewalk does not consider .local and .localdomain to be valid domain names.

1.4.9 Clients Might Have to Re-register After an Upgrade

After a Spacewalk server is upgraded, Spacewalk clients might have to re-register with the Spacewalk server. The web interface shows the clients as registered, but when you run the rhncfg-client command on the client, errors such as Authentication failed: Invalid digital server certificate are displayed.

If this happens, use either the rhn_register or the rhnreg_ks --force command to re-register the client.

1.4.10 Issues With Kickstart After an Upgrade

After a Spacewalk server is upgraded, using existing kickstart profiles and distributions might result in errors. The web interface might show error messages such as:

This kickstart profile uses a different type of encryption by default than the root password is currently using. You must reset the root password to encrypt it with the new method.

The solution is:

1. Reset the root password.
2. Restart the Spacewalk service.

```
# /usr/sbin/spacewalk-service restart
```
3. Remount your distribution trees and ISO images.