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Spacewalk for Oracle® Linux

Release Notes for Release 2.2

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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 installing and configuring Spacewalk, and provides a statement of what is supported.

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Preface

[Spacewalk for Oracle® Linux: Release Notes for Release 2.2](#) 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.

Related Documents

The documentation for this product is available at:

[Spacewalk for Oracle® Linux Documentation](#)

Conventions

The following text conventions are used in this document:

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

Chapter 1 Release Notes

1.1 About Spacewalk 2.2 for Oracle Linux

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 [Spacewalk for Oracle® Linux: Installation Guide for Release 2.2](#).

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 Linux yum server.

For more detailed information, see [Spacewalk for Oracle® Linux: Client Life Cycle Management Guide for Release 2.2](#).

Other documentation for the Spacewalk project can be found at:

<https://fedorahosted.org/spacewalk/wiki/UserDocs>

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:///o16_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 by Using the Oracle Linux Yum Server

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, Oracle Linux yum server 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)

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**.
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 Linux yum server 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 \  
-u https://yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/
```

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 by Using the Oracle Linux Yum Server”](#).

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 Linux yum server repository configuration file from <https://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:

```
[ol7_spacewalk22_client]
name=Spacewalk Client 2.2 for Oracle Linux 7 ($basearch)
baseurl=https://yum.oracle.com/repo/OracleLinux/OL7/spacewalk22/client/$basearch/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
gpgcheck=1
enabled=1
```

- **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:

```
[ol6_spacewalk22_client]
name=Spacewalk Client 2.2 for Oracle Linux 6 ($basearch)
baseurl=https://yum.oracle.com/repo/OracleLinux/OL6/spacewalk22/client/$basearch/
```

Installing the Spacewalk Client and Registering Servers

```
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
gpgcheck=1
enabled=1
```

- **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:

```
[ol5_spacewalk22_client]
name=Spacewalk Client 2.2 for Oracle Linux 5 ($basearch)
baseurl=https://yum.oracle.com/repo/OracleLinux/OL5/spacewalk22/client/$basearch/
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-oracle
gpgcheck=1
enabled=1
```

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
-pirut
-up2date
-up2date-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 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.

For more information, see [Oracle® Linux 6: Administrator's Guide](#).

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`.

Similar memory issues can also occur in the web interface if you have big data sets, such as a large number of servers or packages. The solution is to increase the Tomcat memory limits in the `/etc/sysconfig/tomcat6` file. Edit the `JAVA_OPTS` environment variable, and increase the `-Xms` (the start or initial amount of memory) and `-Xmx` (the maximum amount of memory) parameters.

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.

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Issues With Kickstart After an Upgrade,

2. Restart the Spacewalk service.

```
# /usr/sbin/spacewalk-service restart
```

3. Remount your distribution trees and ISO images.

