



U Y U N I

升级指南

Uyuni 2021.09

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升级服务器

Uyuni 采用滚动发布版本控制模式。请查阅发行说明，获取有关用于升级到下一版本的升级策略的信息：

次要升级

可以将次要升级视为常规升级。有关详细信息，请参见 [[Upgrade > Server-minor-upgrade-uyuni](#)]。

主要升级

可以将主要升级视为特殊升级。在此情况下，将会升级基础操作系统、Salt 或 PostgreSQL 数据库等组件。有关详细信息，请参见 [[Upgrade > Server-major-upgrade-uyuni](#)]。

服务器 - 次要升级

Uyuni 团队每年都会发布几次 Uyuni Server 的次要升级。这些更新旨在修复 Bug 并改进功能，有时也包含一些新功能。



您可能需要执行一些额外的手动步骤，这些信息仅在发行说明中提供。有关升级的额外重要信息，请参见发行说明，网址：<https://www.uyuni-project.org/pages/stable-version.html>。

执行次要升级的过程与安装操作系统软件包更新类似。

过程：更新 Uyuni 服务器上的软件包

默认会为 Uyuni 服务器配置并启用多个更新储存库。新软件包和更新的软件包会自动变为可用状态。

1. 在 Uyuni 服务器上的命令提示符处，以 root 身份停止 spacewalk 服务：

```
spacewalk-service stop
```

2. 列出可用补丁：

```
zypper list-patches
```

3. 应用所有可用补丁：

```
zypper patch
```

此命令仅会应用补丁。要应用所有未进行的更新，可使用 **zypper up**。

4. 重启 spacewalk 服务：

```
spacewalk-service start
```

如果补丁更新建议重引导服务器，请将其重引导。



Zypper 默认每十分钟刷新一次储存库（请参见 `/etc/zypp/zypp.conf` 中的 `repo.refresh.delay`）。如果 `自动刷新` 被禁用，请运行 `zypper ref` 以刷新所有储存库。



从 Uyuni 2020.04 开始，不再需要 `spacewalk-schema-upgrade`。

使用 `spacewalk-service start` 启动 spacewalk 服务时，会自动运行纲要升级。



更新后，受软件包更新影响的服务不会自动重启动。您需要手动重启动这些服务，以免发生潜在故障。运行 `zypper ps` 检查有无使用旧代码并需要重启动的应用程序。

服务器 - 主要升级

当 Uyuni 核心组件升级到新的主要版本时，需在 Uyuni 服务器上执行主要升级。如果需要升级 PostgreSQL、Salt 或 openSUSE Leap 的版本，就需要进行主要升级。openSUSE Leap 为底层基础操作系统 (OS)。



您可能需要执行一些额外的手动步骤，这些信息仅在发行说明中提供。有关升级的额外重要信息，请参见发行说明，网址：<https://www.uyuni-project.org/pages/stable-version.html>。



迁移期间产生的问题无法修复。在开始迁移前，请确保已创建备份。如果您是在虚拟机上运行 Uyuni Server，我们建议在开始前创建快照。

`server-migrator.sh` 脚本会将 Uyuni 服务器迁移到最新的版本，还会将底层操作系统升级到版本 15.3。该脚本包含在 `susemanager` 软件包中。

过程：迁移 Uyuni 服务器

1. 在运行 `server-migrator.sh` 脚本前，需检查是否安装了 `susemanager` 软件包的最新版本：

```
zypper ref
zypper up susemanager
```

2. 运行 `/usr/lib/susemanager/bin/server-migrator.sh` 脚本以升级基础 OS 和 Uyuni 服务器。

3. To migrate the database to the latest database version run the migrate script:

```
/usr/lib/susemanager/bin/pg-migrate-x-to-y.sh
```

For more information about PostgreSQL database migration, see [db-migration-xy.pdf](#).

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. After the migration is complete, manually reboot the {productname} Server:

+

升级代理

在执行任何代理更新前，请安排维护时段。进行更新时，通过代理注册到 Uyuni 的客户端将无法连接到 Uyuni。有关维护时段的详细信息，请参见 [Administration > Maintenance-windows]。



The upgrade procedure to 2021.09 can either be a major or a minor upgrade. For more information, see the Uyuni 2021.09 release notes.

Major Upgrade

See [proxy-uyuni.pdf](#).

Minor Upgrade

See [proxy-minor-uyuni.pdf](#).

Proxy - Major Upgrade

在执行任何代理更新前，请安排维护时段。进行更新时，通过代理注册到 Uyuni 的客户端将无法连接到 Uyuni。有关维护时段的详细信息，请参见 [Administration > Maintenance-windows]。



Major proxy upgrades include a version upgrade of the operating system. For more information, see the Uyuni 2021.09 release notes.

Preparation for the Upgrade

Procedure: Update the package opensuse-build-key at the proxies

1. At the command prompt on the Uyuni Server, as root, use the `spacewalk-repo-sync` command to sync all the openSUSE Leap 15.2 channels:

```
spacewalk-repo-sync -p opensuse_leap15_2-x86_64
```

1. Update the package `openSUSE-build-key` on all Uyuni proxies.

Procedure: Adding openSUSE Leap 15.3 Software Channels at the Command Prompt

1. 在 Uyuni Server 上的命令提示符下，以 root 身份使用 `spacewalk-common-channels` 命令添加相应的频道：

```
spacewalk-common-channels opensuse_leap15_3 \
opensuse_leap15_3-non-oss \
opensuse_leap15_3-non-oss-updates \
opensuse_leap15_3-updates \
opensuse_leap15_3-backports-update \
opensuse_leap15_3-sle-updates \
opensuse_leap15_3-uyuni-client \
uyuni-proxy-stable-leap-153
```

2. 使用 **spacewalk-repo-sync** 完全同步所有频道。

升级代理

要更新代理，首先需停止代理服务，然后替换软件储存库，更新软件，最后重启动代理服务。

过程：更新 Uyuni 代理

1. 在 Uyuni 服务器 Web UI 中，导航到代理系统的细节页面，单击 **重新激活** 子选项卡。
2. 单击 **[生成新密钥]** 以生成重新激活密钥。
3. 在 Uyuni 代理上，停止代理服务：

```
spacewalk-proxy stop
```

4. 在 Uyuni 服务器 Web UI 中，导航到 **系统 > 代理**，然后单击代理名称。
5. 单击 **软件 > 软件频道**，选择 **自定义频道** 列表中所列的 openSUSE Leap 15.3 频道作为基础频道。
6. 在 **子频道** 窗格中，选择 15.3 子频道。
7. 单击 **[下一步]**，然后单击 **[确认] [guimenu]`** 以确认软件频道更改。
8. Click **Details > Remote Command**, add **zypper dup --allow-vendor-change** to the script field, and click **[Schedule]**
9. Wait until the remote command is executed.
10. 使用 **rhnreg_ks** 命令行实用程序通过重新激活密钥重新注册。系统即会重新注册并具有相同的 ID、历史记录和分组。
11. 在 Uyuni 代理上，启动代理服务：

```
spacewalk-proxy start
```

如果需要更新许多代理，可以在 Uyuni 服务器上创建由此命令序列组成的操作链。您可以使用操作链同时对多个代理执行更新。

Proxy - Minor Upgrade

在执行任何代理更新前，请安排维护时段。进行更新时，通过代理注册到 Uyuni 的客户端将无法连接到 Uyuni。有关维护时段的详细信息，请参见 [Administration > Maintenance-windows]。



Minor proxy upgrades do not include a version upgrade of the operating system. For more information, see the Uyuni 2021.09 release notes.

升级代理

要更新代理，首先需停止代理服务，然后更新软件，最后重启动代理服务。

过程：更新 Uyuni 代理

1. 在 Uyuni 代理上，停止代理服务：

```
spacewalk-proxy stop
```

2. 在 Uyuni 服务器 Web UI 中，导航到系统 > 代理，然后单击代理名称。
3. Select all the packages to be updated on the proxy, and then apply the selection.
4. 在 Uyuni 代理上，启动代理服务：

```
spacewalk-proxy start
```

如果需要更新许多代理，可以在 Uyuni 服务器上创建由此命令序列组成的操作链。您可以使用操作链同时对多个代理执行更新。

升级客户端

客户端采用底层操作系统的版本控制系统。对于运行 SUSE 操作系统的客户端，可在 Uyuni Web UI 中进行升级。

有关升级客户端的详细信息，请参见 [[Client-configuration > Client-upgrades](#)]。

升级数据库

To successfully perform a major Uyuni update, you might need to upgrade the underlying database.

要升级到最新的 PostgreSQL，请参见 [[Upgrade > Db-migration-xy](#)]。

This table shows the PostgreSQL version required for each version of Uyuni and openSUSE:

表格 1. PostgreSQL 版本

Uyuni version	Operating System version	PostgreSQL version
Uyuni >= 2020.07	openSUSE 15.2	PostgreSQL 12
Uyuni >= 2021.06	openSUSE 15.3	PostgreSQL 13

Database Migration to Latest Version

This section covers upgrading the PostgreSQL database to the latest version. If you are already using PostgreSQL 13, you do not need to perform this migration.

If you want to upgrade to the latest Uyuni version, you must be using PostgreSQL version 12 or 13, depending on the underlying operating system:

- If you are running SLES 15 SP3, use PostgreSQL 13.
- If you are running Leap 15.2, use PostgreSQL 12.

准备升级

在开始升级前，准备现有 Uyuni 服务器并创建数据库备份。

PostgreSQL 将数据储存在 `/var/lib/pgsql/data/` 中。

过程：准备升级

1. 检查活动 PostgreSQL 版本：

```
psql --version
```

2. 检查活动 smdba 版本：

```
rpm -q smdba
```

PostgreSQL 13 需要 `smdba` 1.7.6 或更高版本。

3. 备份数据库。有关备份的详细信息，请参见 [[Administration > Backup-restore](#)]。

升级 PostgreSQL



在每次进行迁移前都需创建数据库备份。

升级 PostgreSQL 的方式有两种：常规升级或快速升级：

常规升级会创建完整的数据库副本，因此需要两倍于现有数据库大小的可用空间。 常规升级可能需要大量时间，具体取决于数据库大小和储存系统的速度。

快速升级只需要几分钟时间，并且几乎不会使用额外的磁盘空间。 但是，如果快速升级失败，则必须通过备份来恢复数据库。 快速升级可降低磁盘空间用尽的风险，但会增加数据丢失的风险（如果没有备份或备份无法重放）。 常规升级会复制数据库文件，而不是在文件之间创建硬链接。

PostgreSQL 将数据储存在 `/var/lib/pgsql/data/` 中。

过程：执行常规升级

1. 备份数据库。有关备份的详细信息，请参见 [[Administration > Backup-restore](#)]。
2. 开始升级。运行脚本：

```
/usr/lib/susemanager/bin/pg-migrate-x-to-y.sh
```

3. 升级成功完成后，您便可以放心删除旧数据库目录，并回收用掉的磁盘空间。旧目录会重命名为 `/var/lib/pgsql/data-pg12` 或 `/var/lib/pgsql/data-pg10`，具体取决于您是从哪个版本升级的。

`pg-migrate-x-to-y.sh` 脚本会执行以下操作：

- 停止 spacewalk 服务
- 关闭正在运行的数据库
- 检查是否安装了最新的 PostgreSQL，并根据需要安装
- 从 PostgreSQL 的上一个版本切换到最新版本（作为新的默认数据库）
- 发起数据库迁移
- 创建已针对 Uyuni 优化的 PostgreSQL 配置文件
- 启动数据库和 spacewalk 服务



如果升级失败，迁移脚本会尝试将数据库恢复其原始状态。

过程：执行快速 PostgreSQL 升级

1. 备份数据库。 如果没有已经过校验的数据库备份，切勿启动快速升级。 有关备份的详细信息，请参见 [[Administration > Backup-restore](#)]。
2. 开始升级。运行脚本。

```
/usr/lib/susemanager/bin/pg-migrate-x-to-y.sh fast
```

3. 升级成功完成后，您便可以放心删除旧数据库目录，并收回用掉的磁盘空间。旧目录会重命名为 `/var/lib/pgsql/data-pg12` 或 `/var/lib/pgsql/data-pg10`，具体取决于您是从哪个版本升级的。

查错

本节介绍 Uyuni 升级时可能遇到的一些常见问题以及解决方案。

要了解升级问题的细节，请检查迁移日志文件。 日志文件位于要升级的系统的 `/var/log/rhn/migration.log` 中。

磁盘空间不足

在开始迁移前，需检查可用磁盘空间。我们建议将 `/var/spacewalk` 和 `/var/lib/pgsql` 存放于不同的 XFS 文件系统中。

设置单独的文件系统时，编辑 `/etc/fstab` 并去除 `/var/lib/pgsql` 子卷。重引导服务器以应用更改。

重新尝试设置目标系统

如果需要重新尝试设置目标系统，请执行以下步骤：

1. 删除 `/root/.MANAGER_SETUP_COMPLETE`。
2. 停止 PostgreSQL 并去除 `/var/lib/pgsql/data`。
3. 将目标系统主机名设置为与源系统主机名匹配的名称。
4. 检查 `/etc/hosts` 文件，并根据需要更正。
5. 检查目标系统中的 `/etc/setup_env.sh`，并确保已设置数据库名称：

```
MANAGER_DB_NAME='susemanager'
```

6. 重引导目标系统。

7. 再次运行 `mgr-setup`。

纲要升级失败

如果纲要升级失败，数据库版本检查和所有其他 spacewalk 服务都不会启动。请运行 `spacewalk-service start`，获取有关如何继续的详细信息和提示。

您也可以直接运行版本检查：

```
systemctl status uyuni-check-database.service
```

或

```
journalctl -u uyuni-check-database.service
```

如果不想运行更常规的 **spacewalk-service** 命令，这些命令会列显调试信息。

Web UI 加载失败

有时，Web UI 在迁移后不会加载。 如果新系统的主机名和 IP 地址与旧系统的相同，这种情况通常是由浏览器缓存所致。 两个系统的主机名和 IP 地址相同可能会使一些浏览器产生混淆。

清理缓存并重新加载页面可以解决这个问题。 在大多数浏览器中，可通过按 **Ctrl+F5** 快速解决此问题。

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