Fujitsu Enterprise Postgres

Patching Guide for Linux

FUJITSU

Preface

Purpose of this document

This document is the guide to apply patches for Fujitsu Enterprise Postgres using JFrog.

Intended readers

This document is intended for those who obtain patches from JFrog.

Readers of this document are assumed to have general knowledge of:

- Fujitsu Enterprise Postgres
- Linux

Target products

This document applies to Fujitsu Enterprise Postgres Advanced Edition 18 and later versions.

[Linux]

Function for installation
Fujitsu Enterprise Postgres Advanced Edition
Fujitsu Enterprise Postgres Client
Fujitsu Enterprise Postgres WebAdmin
Fujitsu Enterprise Postgres Pgpool-II
Fujitsu Enterprise Postgres pgBackRest
Fujitsu Enterprise Postgres ldap2pg
Fujitsu Enterprise Postgres Server Assistant

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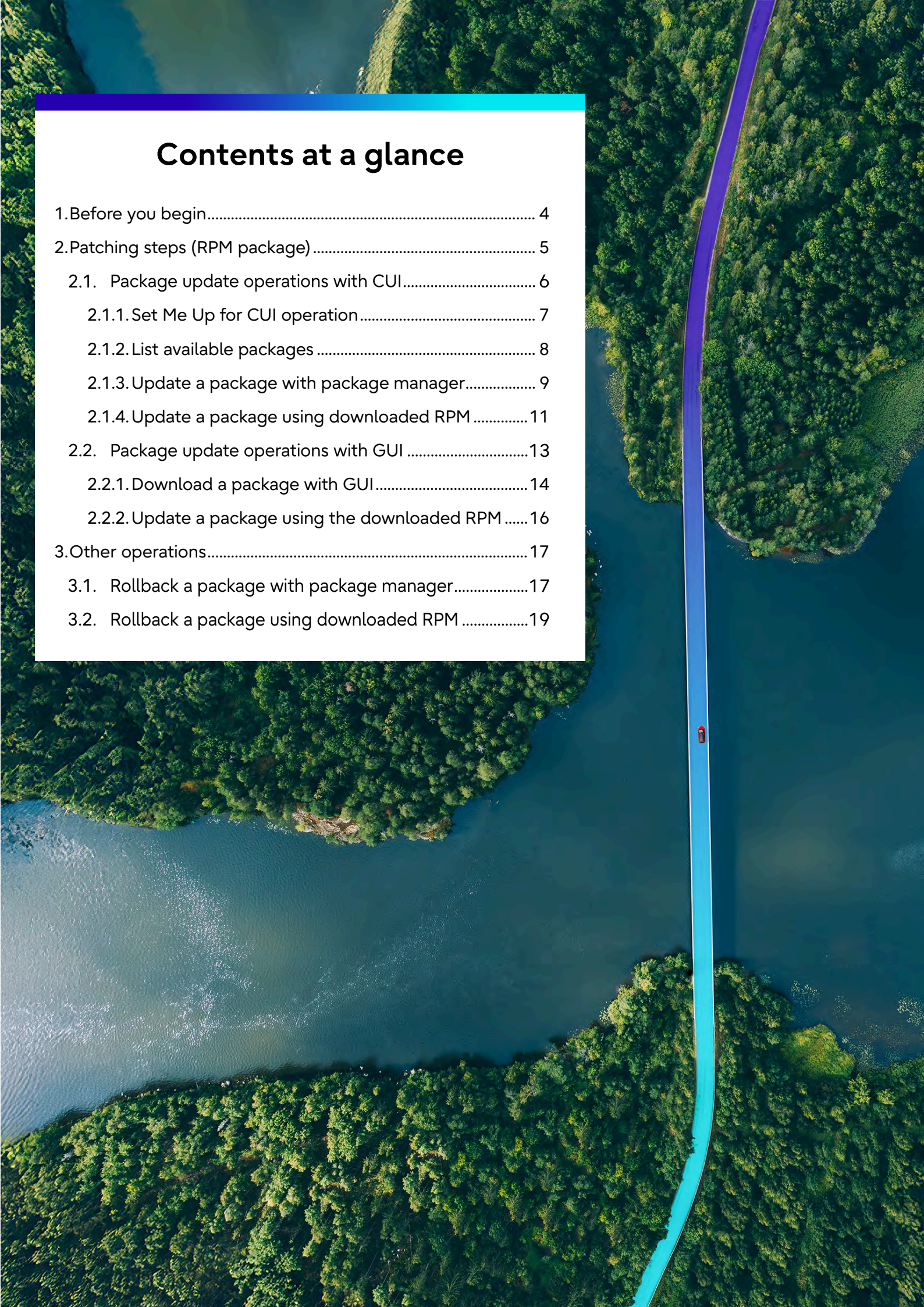


Contents at a glance

1. Before you begin

- The critical patch updates and important information regarding Fujitsu Enterprise Postgres are available on the following page:

  https://www.postgresql.fastware.com/fujitsu-support-engineering

  When applying patches, it is essential to check the following information below provided on this page:

  - "Patch release information": For a list of the updated package names.
  - "Patch information (readme)": For detailed insights into the update packages.

- For patch application, it is required that all packages listed in the [Notes] section of the "Patch information (readme)" on the above page be updated concurrently.
- Prior to updating the package, verify the product version installed on your target environment. This is essential for confirming applicable packages.

2. Patching steps (RPM package)

There are two methods for applying the patches using RPM package:

- CUI operation: Refer to "2.1. Package update operations with CUI"
- GUI operation: Refer to "2.2. Package update operations with GUI"

This guide uses Fujitsu Enterprise Postgres Advanced Edition 18 as an example.

In the following instructions, `<RPM-pkg-name>` refers to RPM package name.

- RPM package names generally follow this pattern: `<pkg-name-pattern>-<version>.x86_64.rpm`
- Here, `<pkg-name-pattern>` is the part that includes the product version (for example, "x" in "Fujitsu Enterprise Postgres x SPz").

Let's look at an example. For the package named FJSVfsep-server-core-18-1800-2.el8.x86_64.rpm:

- `<pkg-name-pattern>` is `FJSVfsep-server-core-18`
- `<version>` is `1800-2.el8`
- `<RPM-pkg-name>` is `FJSVfsep-server-core-18-1800-2.el8.x86_64.rpm`

2.1. Package update operations with CUI

This section describes package operations with CUI, including:

- Set Me Up for CUI operation
- List available packages
- Update a package

There are two methods available for updating a package:

- Using package manager: Refer to "2.1.3. Update a package with package manager"
- Using the downloaded RPM: Refer to "2.1.4. Update a package using downloaded RPM"

For the following specific cases, you must use the method described "2.1.4. Update a package using downloaded RPM":

- If you have installed Fujitsu Enterprise Postgres in a location other than the default
- For local / offline update of packages

Note

RHEL

- It is assumed that a repo for yum is configured on the target machine to access packages on JFrog (refer to "2.1.1. Set Me Up for CUI operation" for details).
- You need root privilege to perform all yum operations, except for `yum list`.
- You can optionally include `--disablerepo="*" --enablerepo=<FEP repo name>` in yum command-line if you want to exclude other repo configuration files.

  Example:

  ```
  sudo yum --disablerepo="*" --enablerepo="Artifactory" --showduplicates list FJSV*
  ```

SLES

- It is assumed that a repo for zypper is configured on the target machine to access packages on JFrog (refer to "2.1.1. Set Me Up for CUI operation" for details).
- You need root privilege to perform all zypper operations.

2.1.1. Set Me Up for CUI operation

This section describes how to use **Set Me Up** for CUI operation. This feature helps you with the steps to set up the repo configuration for the following CUI package manager on a target machine.

- yum in RHEL
- zypper in SLES

Set Me Up for CUI operation is described below:

1. Click **Artifactory**, then click **Artifacts** to show Artifacts Repository Browser page.
2. Locate and select an RPM package in **Tree Browser**.
3. Click **Set Me Up** to open **Set Me Up** pop-up window.
4. Configure the Identity Token, edit the repo file, and then enable the repository, following the instructions in the "Set me up" section.

2.1.2. List available packages

This section describes how to list available packages.

RHEL procedure

To list the latest version of a package, use `yum list available`.

```
# yum list available
Available Packages
FJSVfsep-server-core-18.x86_64   1800-3-el8                          Artifactory
```

To list all versions of a package, use `yum --showduplicates list available`.

```
# yum --showduplicates list available
Available Packages
FJSVfsep- server-core-18.x86_64  1800-2.el8                          Artifactory
FJSVfsep- server-core-18.x86_64  1800-3.el8                          Artifactory
FJSVfsep- server-core-18.x86_64  1800-4.el8                          Artifactory
```

SLES procedure

To list all version of a package, use `zypper se -s --repo <repo-name>`.

```
# zypper se -s --repo Artifactory

Loading repository data...
Reading installed packages...
S | Name                       | Type    | Version | Arch   | Repository
--+----------------------------+---------+---------+--------+------------
  | FJSVfsep- server-core-18   | package | 1800-3  | x86_64 | Artifactory
  | FJSVfsep- server-core-18   | package | 1800-2  | x86_64 | Artifactory
  | FJSVfsep- server-core-18   | package | 1800-1  | x86_64 | Artifactory
```

2.1.3. Update a package with package manager

This section describes how to update a package to a specific version with package manager.

RHEL procedure

To get the version of the installed package, use `yum list installed | grep <pkg-name-pattern>`.

```
# yum list installed | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18.x86_64   1800-2.el8                              @System
```

To update a package, use `yum update <pkg-name-pattern>-<version>`.

```
# yum update FJSVfsep-server-core-18-1800-3.el8
This system is not registered with an entitlement server. You can use subscription-manager to
register.

Dependencies resolved.

================================================================================
 Package        Arch   Version    Repository   Size
================================================================================
Upgrading:
 FJSVfsep-server-core-18   x86_64  1800-3.el8  Artifactory  5.2 k

Transaction Summary
================================================================================
Upgrade  1 Package

Total download size: 5.2 k
Is this ok [y/d/N]: y
Downloading packages:
No Presto metadata available for Artifactory
FJSVfsep-server-core-18-1800-3.el8.x86_64.rpm…  | 5.2 kB  00:00:00
Running transaction checkTransaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing  :                                                 1/1
  Upgrading  : FJSVfsep-server-core-18-1800-3.el8.x86_64…  1/2
  Cleanup    : FJSVfsep-SV-server-core-18-1800-2.el8.x86_64…  2/2
  Verifying  : FJSVfsep-server-core-18-1800-3.el8.x86_64…  1/2
  Verifying  : FJSVfsep-server-core-18-1800-2.el8.x_86_64…  2/2
Installed products updated.

Upgraded:
  FJSVfsep-server-core-18-1800-3.el8.x86_64

Complete!
```

Verify that the package has been updated correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.el8.x86_64
```

SLES procedure

To get the version of the installed package, use `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-2.s15.x86_64
```

To update a package to specific version, use `zypper up <pkg-name-pattern>-<version>`.

```
# zypper up FJSVfsep-server-core-18-1800-3.s15
Loading repository data...
Reading installed packages...
Resolving package dependencies...

The following package is going to be upgraded:
  FJSVfsep-server-core-18

The following package has no support information from its vendor:
  FJSVfsep-server-core-18

1 package to upgrade.
Overall download size: 331.5 KiB. Already cached: 0 B. No additional space
will be used or freed after the operation.
Continue? [y/n/...? shows all options] (y): y
Retrieving package FJSVfsep-server-core-18-1800-3.s15.x86_64
                                (1/1), 331.5 KiB (921.3 KiB unpacked)
Retrieving: FJSVfsep-server-core-18-1800-3.s15.x86_64.rpm .........................[done]

Checking for file conflicts: ......................................[done]
(1/1) Installing: FJSVfsep-server-core-18-1800-3.s15.x86_64 .......................[done]
```

Verify that the package has been updated correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.s15.x86_64
```

2.1.4. Update a package using downloaded RPM

This section describes how to update a package to a specific version using downloaded RPM, including:

- Download a package with CUI
- Update a package using the downloaded RPM

2.1.4.1. Download a package with CUI

This section describes how to download a package with CUI.

RHEL procedure

To download a package, use `yum install --downloadonly --downloaddir=<download-dir> <pkg-name-pattern>`.

```
# yum  install --downloadonly --downloaddir=~/RPM_DIR FJSVfsep-server-core-18
This system is not registered with an entitlement server. You can use subscription-manager to
register.

Dependencies resolved.

================================================================================
Package        Arch   Version    Repository   Size
================================================================================
Upgrading:FJSVfsep-server-core-18  x86_64  1800-3.el8  Artifactory  5.2 kB

Transaction Summary
================================================================================
Upgrade  1 Package

Total download size: 5.2 kB
Background downloading packages, then exiting:
No Presto metadata available for Artifactory
FJSVfsep-server-core-1800-3.el8.x86_64.rpm  |  5.2 kB  00:00:04
exiting because "Download Only" specified
```

SLES procedure

To download a package (specific version), use `zypper download <pkg-name>-<version>`.

```
# zypper download FJSVfsep-server-core-18-1800-3.s15
Loading repository data...
Reading installed packages...
Retrieving package FJSVfsep-server-core-18-1800-3.s15.x86_64…   (1/1), 331.5 KiB (921.3 KiB
unpacked)
(1/1) /var/cache/zypp/packages/Artifactory/FJSVfsep-server-core-18-1800-
3.s15.x86_64.rpm ..........................................................................[d
one]

download: Done.
```

Note

Ensure you comply with the data download limit of Fujitsu during your download activity.

2.1.4.2. Update a package using the downloaded RPM

This section describes how to update a package to a specific version from a downloaded RPM.

RHEL and SLES common procedure

First, copy the RPMs to the target machine before updating a package.

To get the version of the installed package, use `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-2.el8.x86_64
```

To update the package, use `rpm -U <RPM-pkg-name>`. If you have changed the installation directory from the default, specify `[--prefix=installation directory]`.

```
# rpm -U FJSVfsep-server-core-18-1800-3.el8.x86_64.rpm
```

Verify that the package has been updated correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.el8.x86_64
```

2.2. Package update operations with GUI

This section describes package operations using the downloaded RPM, including:

- Download a package with GUI
- Update a package using the downloaded RPM

2.2.1. Download a package with GUI

This section describes how to download an RPM package with GUI operation.

2.2.1.1. Locate an RPM package

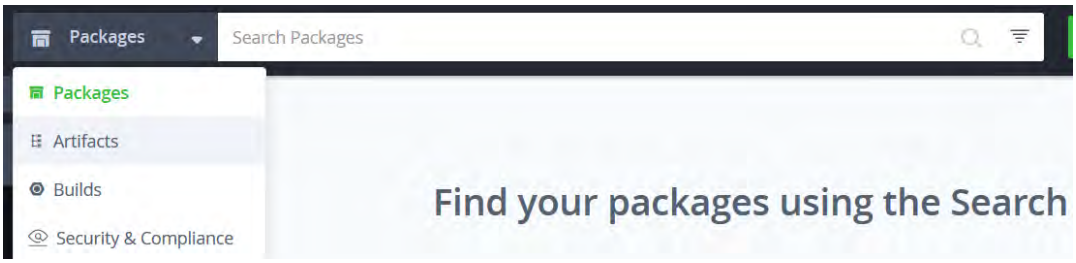
There are two options to locate an RPM package from Artifacts:

- Search Artifacts
- Browse Artifacts

Search Artifacts

This section describes how to search Artifacts.

1. Locate Search Bar at the top of JFrog UI window.



2. Enter the text to match the RPM package.

   Free text search supports * and ? wildcards to help you narrow down your search.

   For example, when searching for a package named `FJSVfsep-server-core-18-1800-1-el8.x86_64.rpm`, typing `FJSVfsep-server-core-18*`or `FJSVfsep-server-core-18*el8.x86_64.rpm` will return a list of matching packages as a result.
3. Select the RPM package from search result list.
4. Click the link to selected to view the package details in the **Artifacts Tree** page.

Browse Artifacts

This section describes how to browse Artifacts.

1. Click **Artifactory**, then click **Artifacts** - this will open the **Artifacts Repository Browser** page.
2. You can browse through repositories via mode below:

   Tree browsing mode shows repositories as a tree
3. Expand the nodes in a tree to locate an RPM package.
4. Click to select and show the package details.

2.2.1.2. View an RPM package

Follow the steps below to view details of an RPM package.

1. Locate and select an RPM package to show the package details page.
2. Click **General** tab to view the summary of the package.
3. Click **Rpm Info** tab to view details of the package, including the information below:
   - Package Info
   - Provides
   - Change Log
4. Click **Properties** tab to view the metadata of the package.

Note

Copy `<PATH_TO_REPODATA_FOLDER>` required in the Set Me Up section by following the steps below:

1. Select the immediate parent folder of the selected package from Tree Browser.
2. Locate **Repository Path:** and click **Copy to clipboard** to copy the patch.

   Example: `EnterprisePostgres_AE_x86_64_patch/18/RHEL8/`
3. Replace `<PATH_TO_REPODATA_FOLDER>` with `18/RHEL8`.

2.2.1.3. Download an RPM package

Follow the steps below to download an RPM package.

1. Locate and select the RPM package.
2. Click **Download** and follow the instructions on the browser to save the package locally.

2.2.2. Update a package using the downloaded RPM

This section describes how to update a package to a specific version from a downloaded RPM.

RHEL and SLES common procedure

First, copy the RPMs to the target machine before updating a package.

To get the version of the installed package, use `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-2.el8.x86_64
```

To update the package, use `rpm -U <RPM-pkg-name>`. If you have changed the installation directory from the default, specify `[--prefix=installation directory]`.

```
# rpm -U FJSVfsep-server-core-18-1800-3.el8.x86_64.rpm
```

Verify that the package has been updated correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.el8.x86_64
```

3. Other operations

This section describes package rollback operations with CUI, including:

- Using package manager: Refer to "3.1. Rollback a package with package manager"
- Using the downloaded RPM: Refer to "3.2. Rollback a package using downloaded RPM"

For the specific cases below, you must use the method described "3.2. Rollback a package using downloaded RPM":

- If you have installed Fujitsu Enterprise Postgres in a location other than the default
- For local / offline rollback of packages

3.1. Rollback a package with package manager

This section describe how to rollback a package with package manager.

RHEL procedure

To check for the installed package, use `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.el8.x86_64
```

To rollback a package, use `yum downgrade <pkg-name-pattern>-<version>`. For `<version>`, specify the version you want to rollback to.

```
# yum downgrade FJSVfsep-server-core-18-1800-2.el8
This system is not registered with an entitlement server. You can use subscription-manager to
register.
Dependencies resolved.
================================================================================
Package        Arch   Version    Repository   Size
================================================================================
Downgrading:
 FJSVfsep-server-core  x86_64  1800-2.el8  Artifactory  33 M

Transaction Summary
================================================================================
Downgrade  1 Package

Total download size: 33 M
Is this ok [y/d/N]: y
Downloading packages:
FJSVfsep-server-core-18-1800-2.el8.x86_64.rpm…  |  33 MB  00:00:03
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing  :                                                 1/1
  Downgrading : FJSVfsep-server-core-18-1800-2.el8.x86_64  1/2
  Cleanup    : FJSVfsep-server-core-18-1800-3.el8.x86_64  2/2
  Verifying  : FJSVfsep-server-core-18-1800-2.el8.x86_64  1/2
  Verifying  : FJSVfsep-server-core-18-1800-3.el8.x86_64  2/2
Installed products updated.

Downgraded:
  FJSVfsep-server-core-18-1800-2.el8.x86_64

Complete!
```

Verify that the package has been downgraded correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-2.el8.x86_64
```

SLES procedure

To check for the installed package, use `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.s15.x86_64
```

To rollback a package, use `zypper in --oldpackage <pkg-name-pattern>-<version>`. For <version>, specify the version you want to rollback to.

```
# zypper in --oldpackage FJSVfsep-server-core-18-1800-2.s15
Loading repository data...
Reading installed packages...
Resolving package dependencies...

The following package is going to be downgraded:
  FJSVfsep-server-core-18

The following package has no support information from it's vendor:
  FJSVfsep-server-core-18

1 package to downgrade.
Overall download size: 331.5 KiB. Already cached: 0 B. No additional space will be used or
freed after the operation.
Continue? [y/n/...? shows all options] (y): y
Retrieving package FJSVfsep-server-core-18-1800-2.s15.x86_64…  (1/1), 331.5 KiB (921.3 KiB
unpacked)
Retrieving: FJSVfsep-server-core-18-2.s15.x86_64.rpm…  [done]

Checking for file conflicts: …  [done]
(1/1) Installing: FJSVfsep-server-core-18-1800-2.s15.x86_64
```

Verify that the package has been downgraded correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-2.s15.x86_64
```

3.2. Rollback a package using downloaded RPM

This section describe how to rollback a package using a downloaded RPM.

RHEL and SLES common procedure

To check for the installed package, use `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-3.el8.x86_64
```

To rollback a package using a downloaded RPM, use `rpm -U --oldpackage <RPM-pkg-name>`. If you have changed the installation directory to something other than the default, specify `[--prefix=installation directory]`.

```
# rpm -U --oldpackage FJSVfsep-server-core-18-1800-2.el8.x86_64.rpm
```

Verify that the package has been downgraded correctly using `rpm -qa | grep <pkg-name-pattern>`.

```
# rpm -qa | grep FJSVfsep-server-core-18
FJSVfsep-server-core-18-1800-2.el8.x86_64
```