



Fujitsu Enterprise Postgres for Kubernetes

Bug fix guide



Preface

Purpose of this document

This document is the guide to update a container image to new tag version and apply bug fixes for Fujitsu Enterprise Postgres client.

Target of correction

- Operator Container
- Database Server Container
- Backup Container
- PGPool2 Container
- Exporter Container (V13 or later)
- Fluentd Container (V14 or later)
- Fluentbit Container (V14 or later)
- Cronjob Container (V14 or later)
- Utils Container (V15 or later)
- Fujitsu Enterprise Postgres client
 - FJSVfsep-CL
 - FJSVfsep-JDBC
 - FJSVfsep-ODBC
 - FJSVfsep-ADMIN4
 - FJSVfsep-DOTNET
 - FJSVfsep-Npgsql

Structure of this document

This document is structured as follows:

Updating the container image

This section describes how to update a container image to new tag version.

Applying Bug Fixes for Fujitsu Enterprise Postgres client

This section describes how to apply a product package.

Export restrictions

Export/release of this document may require necessary procedures in accordance with the regulations of your resident country and/or US export control laws.

Issue date and version

Edition 6.0: August 2023

Edition 5.0: November 2022

Edition 4.0: September 2022

Edition 3.0: June 2022

Edition 2.0: May 2022

Edition 1.0: March 2022

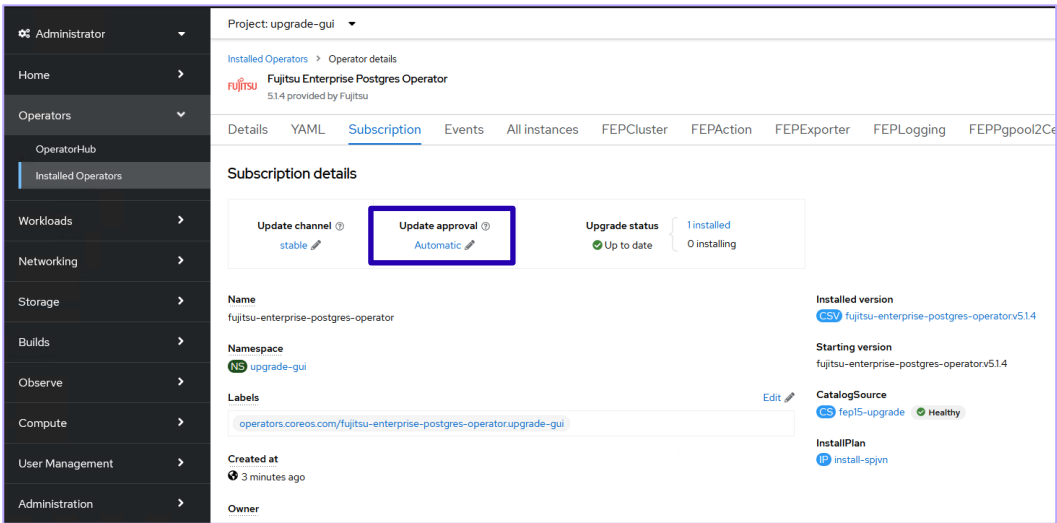
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1. Updating the container image

1.1. Updating the Operator container image

- **Automatic update:** If automatic update is set, it is updated automatically.



- **Manual update:** If you want to update manually, you can do so using the following Red Hat procedure.
 - <https://docs.openshift.com/container-platform/4.10/operators/admin/olm-upgrading-operators.html>
 - <https://docs.openshift.com/container-platform/4.11/operators/admin/olm-upgrading-operators.html>
 - <https://docs.openshift.com/container-platform/4.12/operators/admin/olm-upgrading-operators.html>

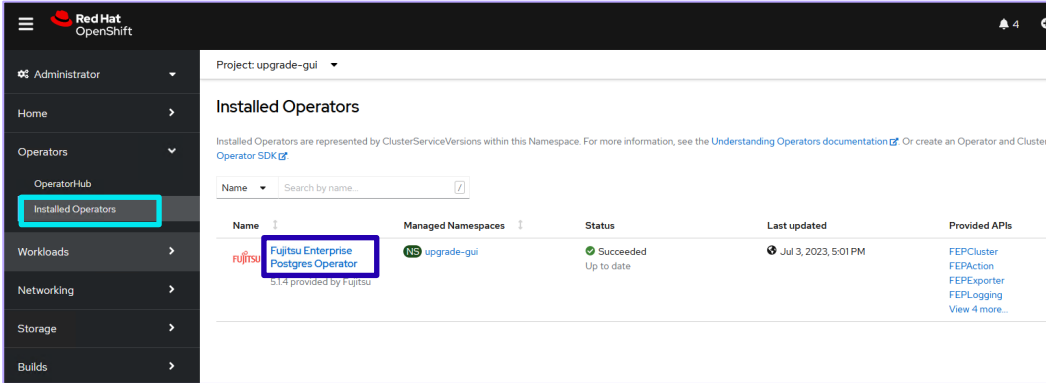
1.2. Updating the server, backup, fluentbit, cronjob, and utils container image

The upgrade process is performed by updating the image in the CR. Follow the steps below to upgrade Fujitsu Enterprise Postgres Server, Backup, Fluentbit, Cronjob, and Utils.

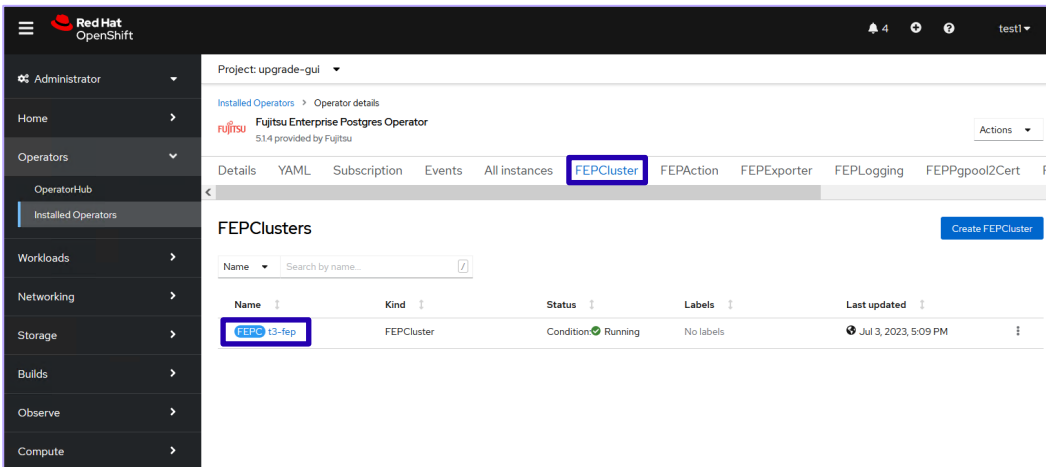
1.2.1. Using OpenShift Console

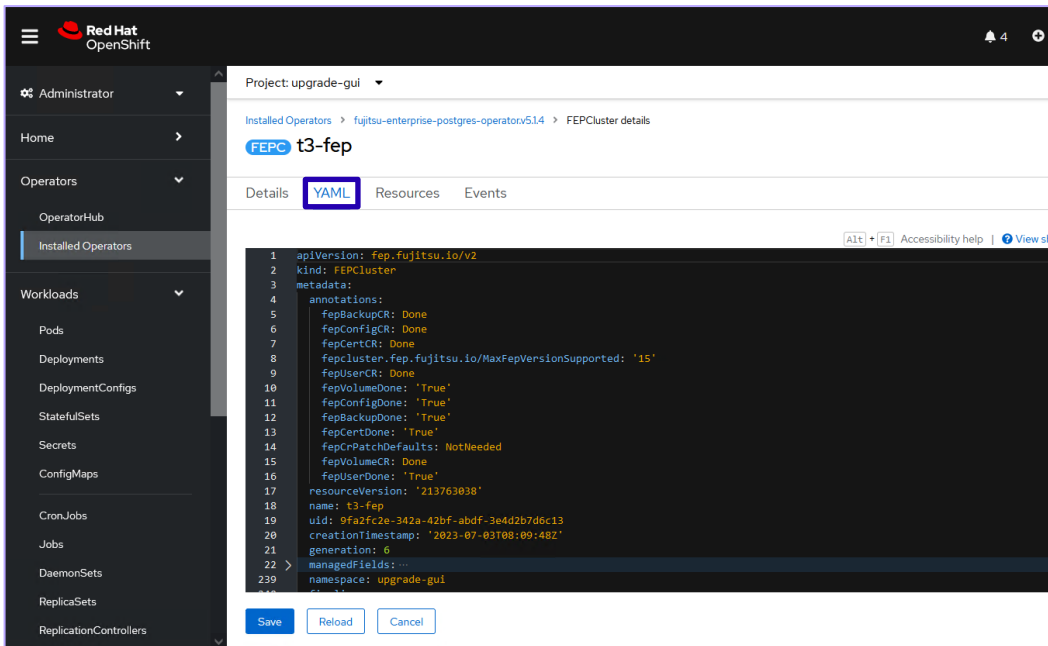
1. From the OpenShift Web Console:

- For V14 or later: Click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.
- For V12 or V13: Click **Operators > Installed Operators > FUJITSU Enterprise Postgres <version> Operator**.



2. Click the **FEPCluster** tab and select the FEPCluster name to be upgraded.



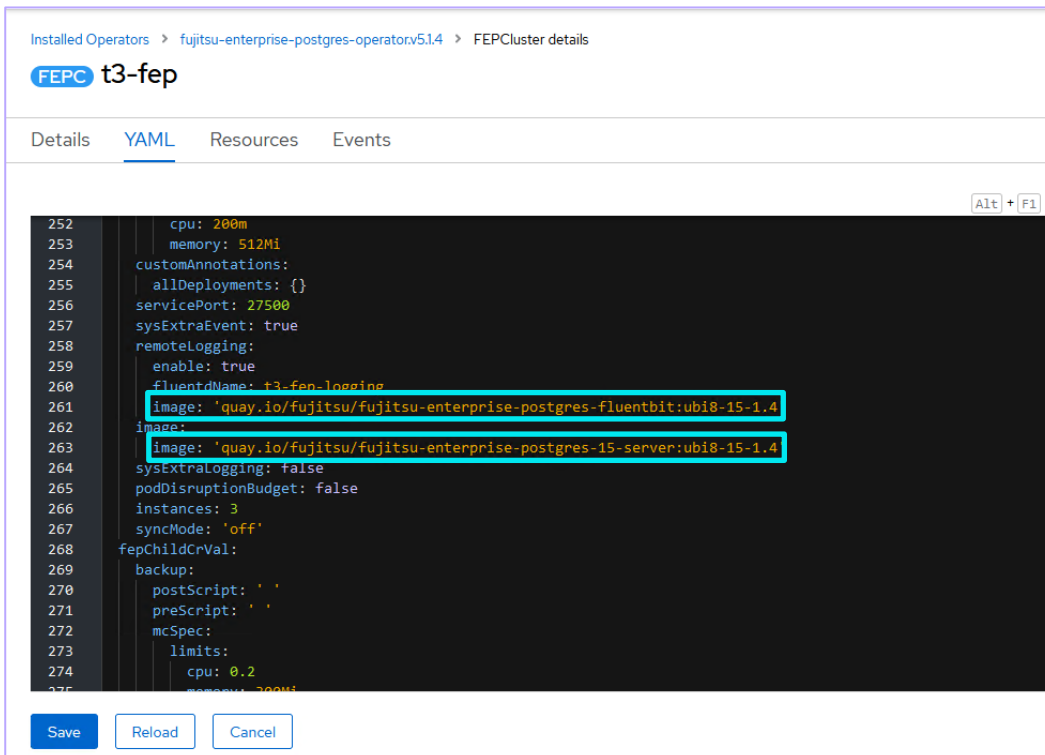
3. Click the **YAML** tab.

4. Change the following parameters to the new version of the image specifications as shown below for the server, backup, fluentbit, cronjob, and utils image sections in the YAML. Refer to "image tag name" in the readme.

```

.spec.fep.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-server:<image tag name>'
.spec.fepChildCrVal.backup.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-backup:
<image tag name>'
.spec.fep.remoteLogging.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentbit:<image tag name>'
.spec.fep.pgBadger.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-cronjob:<image tag name>'
.spec.fep.feputils.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-utils:<image tag name>'

```



Installed Operators > fujitsu-enterprise-postgres-operatorv5.1.4 > FEPCluster details

FEPC t3-fep

Details YAML Resources Events

```

286     fepoi-retention-full-type-time
287     log-path=/database/log/backup
288   schedule1:
289     schedule: 15 0 * * 0
290     type: full
291   schedule2:
292     schedule: 15 0 * * 1-6
293     type: incr
294   image:
295     image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-15-backup:ubi8-15-1.4'
296     pullPolicy: IfNotPresent
297   schedule3:
298     schedule: ' '
299     type: ' '
300   schedule4:
301     schedule: ' '
302     type: ' '
303   schedule5:
304     schedule: ' '
305     type: ' '
306   customPgAudit: |
307     # define pg audit custom params here to override defaults.
308     # if log volume is not defined, log_directory should be
309     # changed to '/database/userdata/data/log'
    
```

Save Reload Cancel

Installed Operators > fujitsu-enterprise-postgres-operatorv5.1.4 > FEPCluster details

FEPC t3-fep

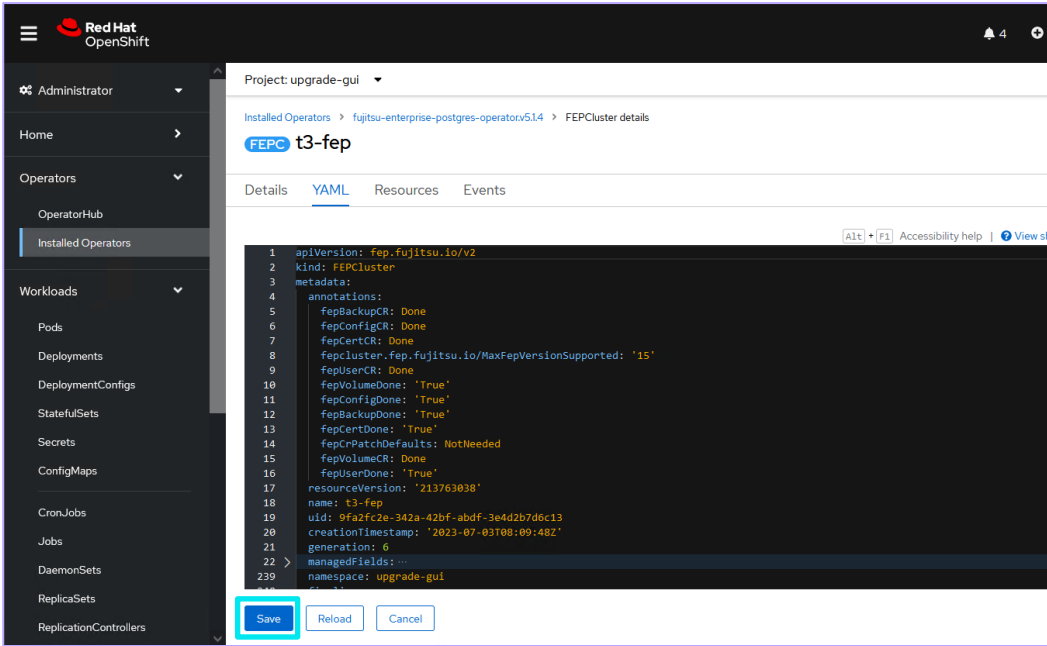
Details YAML Resources Events

```

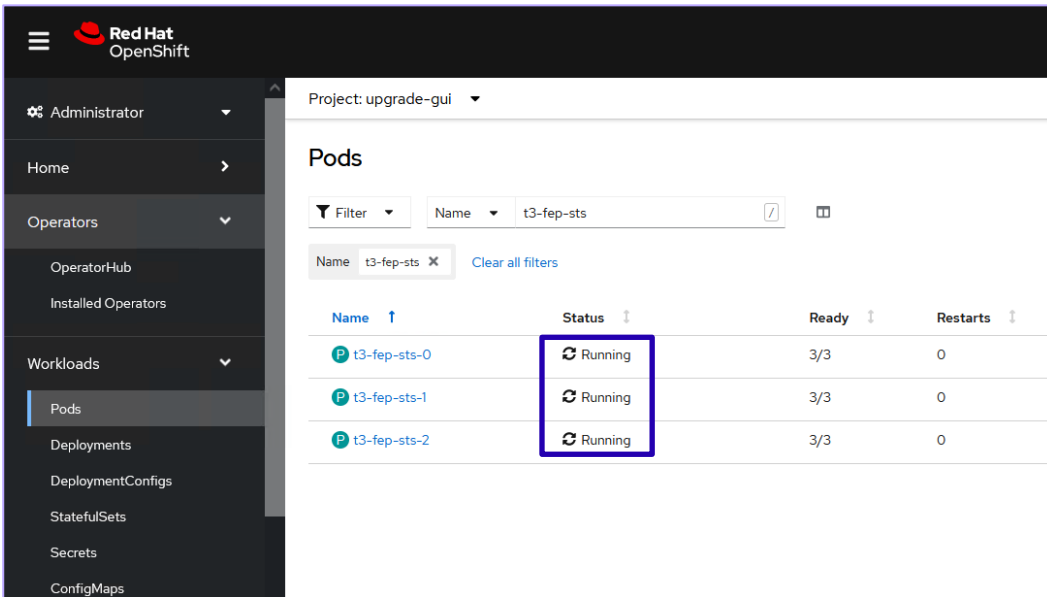
234   - fep.fujitsu.io/finalizer
235   spec:
236     fep:
237       feutils:
238         image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-utils:ubi8-15-1.4'
239       forceSsl: true
240       pgBadger:
241         image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-cronjob:ubi8-15-1.4'
242       schedules:
243         cleanup: 10 * * * *
244         create: 50 * * * *
245       usePodName: true
246       podAntiAffinity: false
247       mcSpec:
248         limits:
249           cpu: 500m
250           memory: 700Mi
251         requests:
252           cpu: 200m
253           memory: 512Mi
254       customAnnotations:
255         allDeployments: {}
256       servicePort: 27500
    
```

Save Reload Cancel

5. Click **Save**.



6. Check the state of the FEPCluster and verify that the status is **Running**.



1.2.2. Using the CLI

1. Edit the FEPCluster resource using the kubectl command.

```
$ kubectl edit fepcluster <CR name> -n <namespace>
```

2. Change the following parameters to the new version of the image specifications as shown below for the server, backup, fluentbit, cronjob and Utils image sections in the YAML.

```
.spec.fep.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-server:<image tag name>'
.spec.fepChildCrVal.backup.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-backup:
<image tag name>'
.spec.fep.remoteLogging.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentbit:<image tag name>'
.spec.fep.pgBadger.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-cronjob:<image tag name>'
.spec.fep.feputils.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-utils:<image tag name>'
```

3. Check the state of the FEPCluster and verify that the status is Running. The output will be like displayed below.

```
$ kubectl get po
NAME                                READY    STATUS    RESTARTS    AGE
```

fep-ansible-operator-7dc5fd9bf7-4smzk	1/1	Running	0	20m
t3-fep-sts-0	3/3	Running	0	17m
t3-fep-sts-1	3/3	Running	0	15m
t3-fep-sts-2	3/3	Running	0	13m

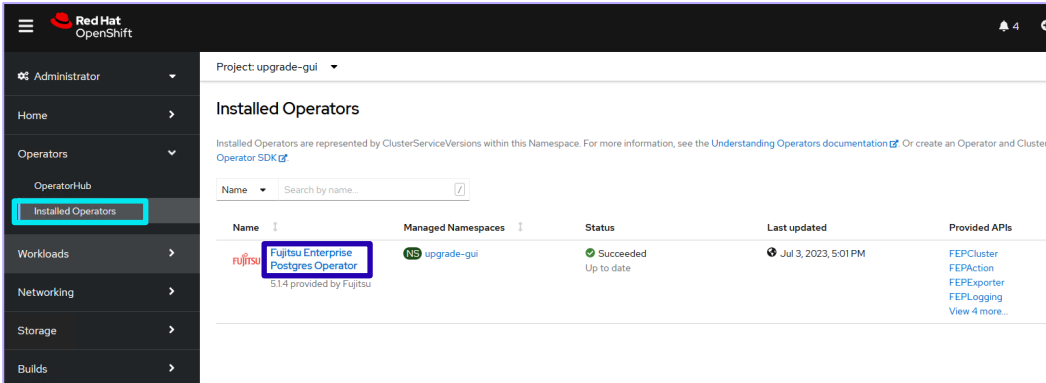
1.3. Updating the PGPool2 container image

The upgrade process is performed by updating the image in the CR of FEPPGPool2. Follow the steps below to upgrade pgpool2.

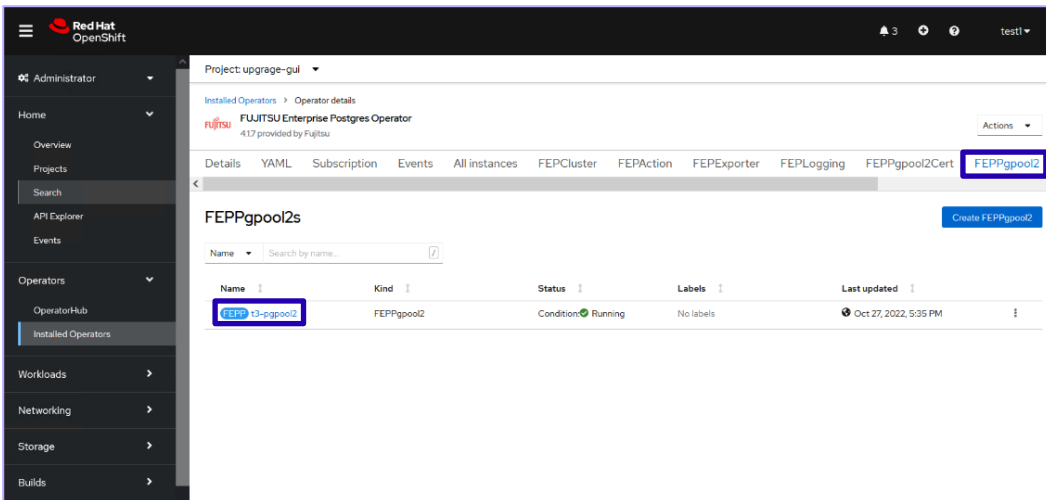
1.3.1. Using OpenShift Console

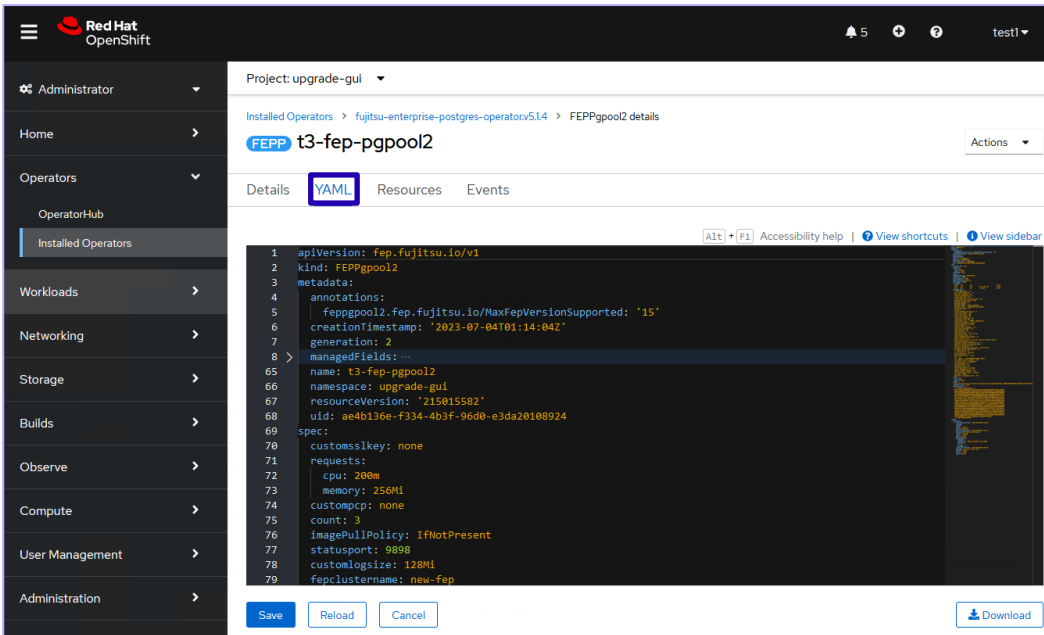
1. From the OpenShift Web Console:

- For V14 or later: Click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.
- For V12 or V13: Click **Operators > Installed Operators > FUJITSU Enterprise Postgres <version> Operator**.



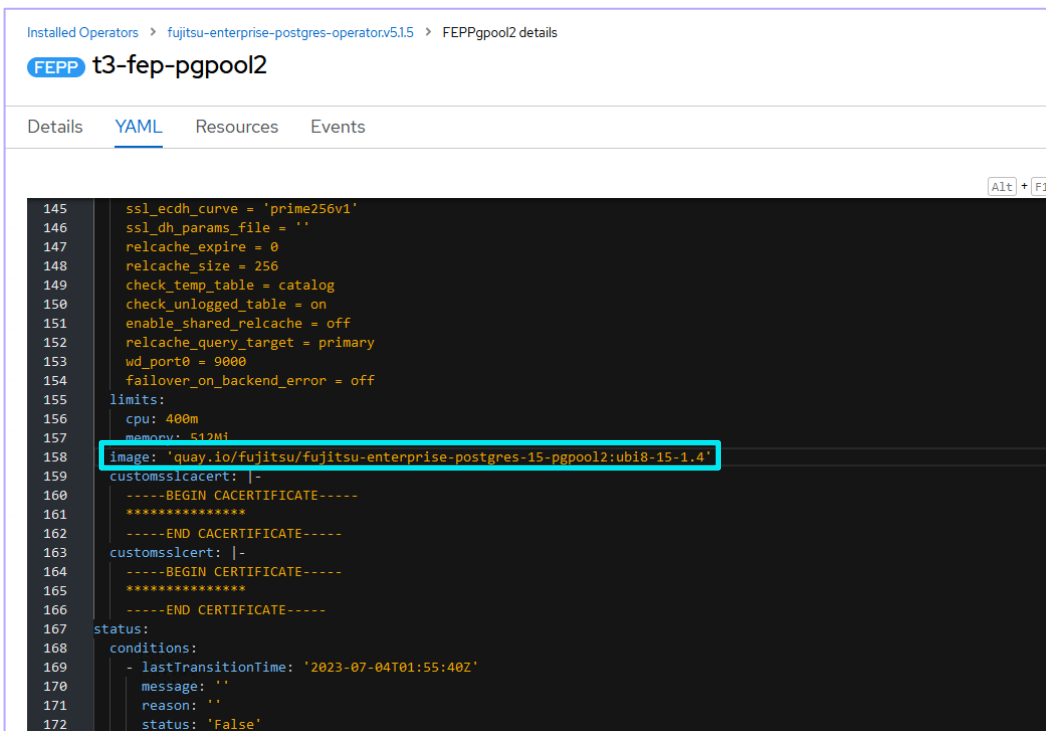
2. Click the **FEPPgpool2** tab and select the FEPPgpool2 name to be upgraded.

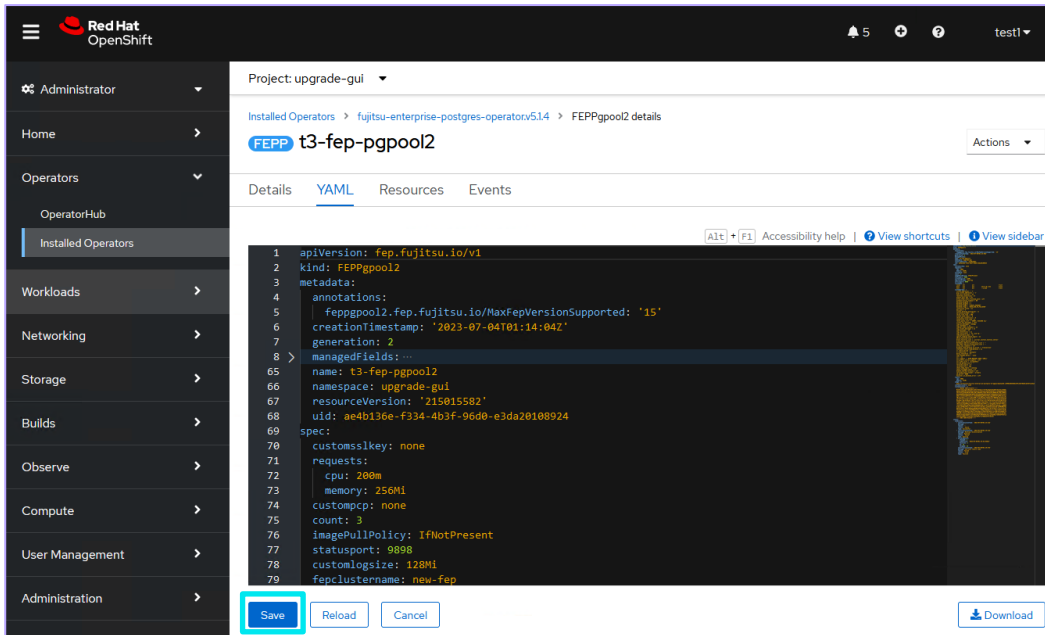
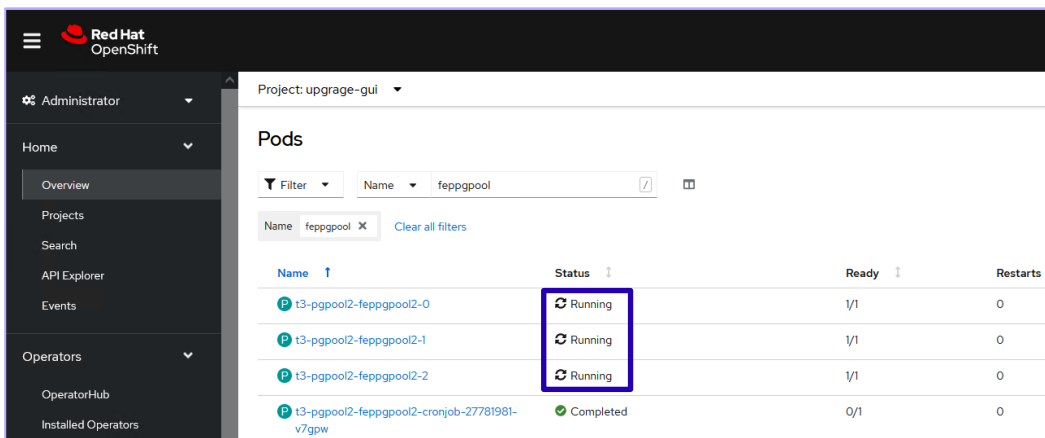


3. Click the **YAML** tab.

4. Change the following parameters to the new version of the image specifications. Refer to "image tag name" in the readme.

```
.spec.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-pgpool2:<image tag name>'
```



5. Click **Save**.6. Check the state of the FEPPgpool2 and verify that the status is **Running**.

1.3.2. Using the CLI

1. Edit the FEPPGPool2 resource using the kubectl command.

```
kubectl edit feppgpool2 <CR name> -n <namespace>
```

2. Change the following parameters to the new version of the image specifications as shown below for the FEPPGPool2 image sections in the YAML.

```
.spec.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-pgpool2:<image tag name>'
```

3. Check the state of the FEPPGPool2 and verify that the status is **Running**.

```
$ kubectl get po
NAME                                READY   STATUS    RESTARTS   AGE
fep-ansible-operator-7dc5fd9bf7-4smzk 1/1     Running   0           1d1h
t3-fep-sts-0                          3/3     Running   0           1d1h
t3-fep-sts-1                          3/3     Running   0           1d1h
t3-fep-sts-2                          3/3     Running   0           1d1h
t3-pgpool2-feppgpool2-0               1/1     Running   0           1d1h
t3-pgpool2-feppgpool2-1               1/1     Running   0           1d1h
t3-pgpool2-feppgpool2-2               1/1     Running   0           1d1h
```

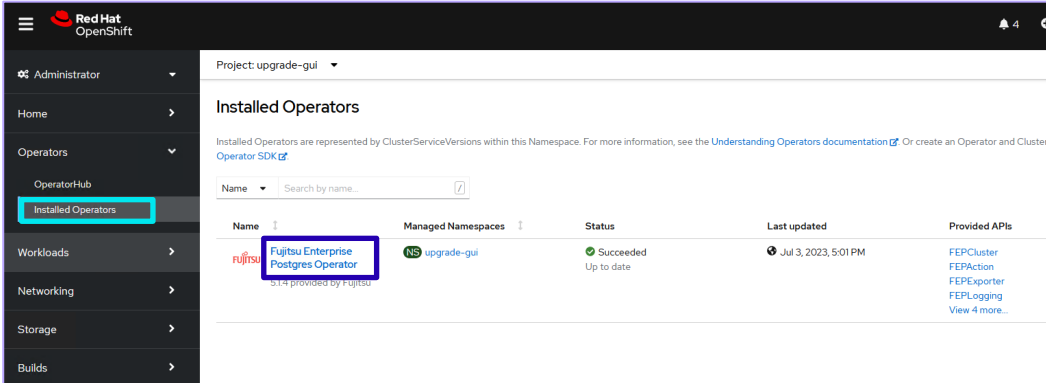
1.4. Updating the FEPEXporter container image

The upgrade process is performed by updating the image in the CR of FEPEXporter. Follow the steps below to upgrade FEPEXporter.

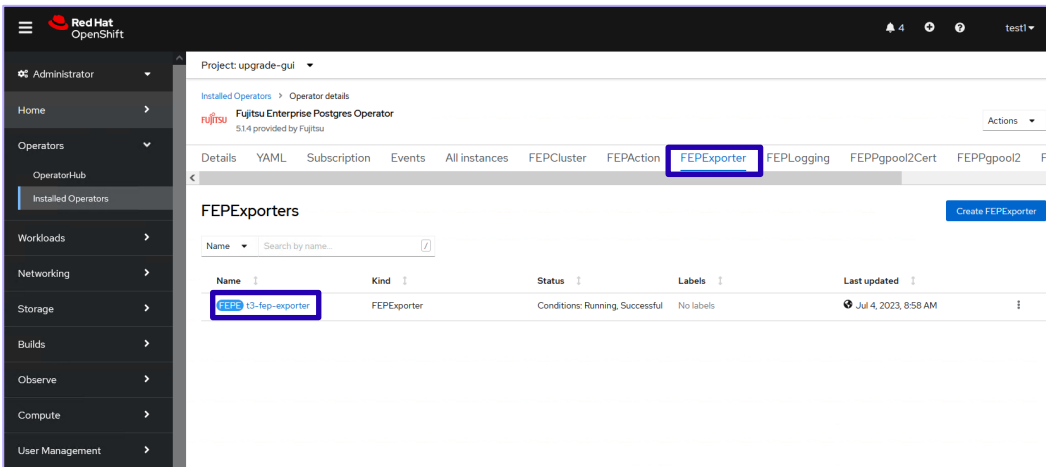
1.4.1. Using OpenShift Console

1. From the OpenShift Web Console:

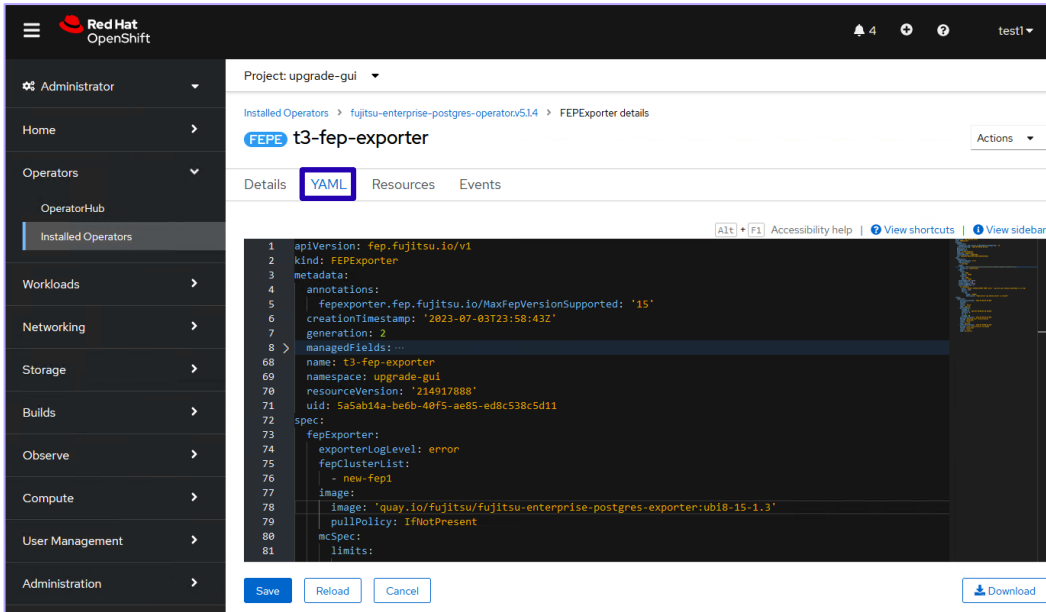
- For V14 or later: Click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.
- For V13: Click **Operators > Installed Operators > FUJITSU Enterprise Postgres <version> Operator**.



2. Click the **FEPEXporter** tab and select the FEPEXporter name to be upgraded.



3. Click the **YAML** tab.



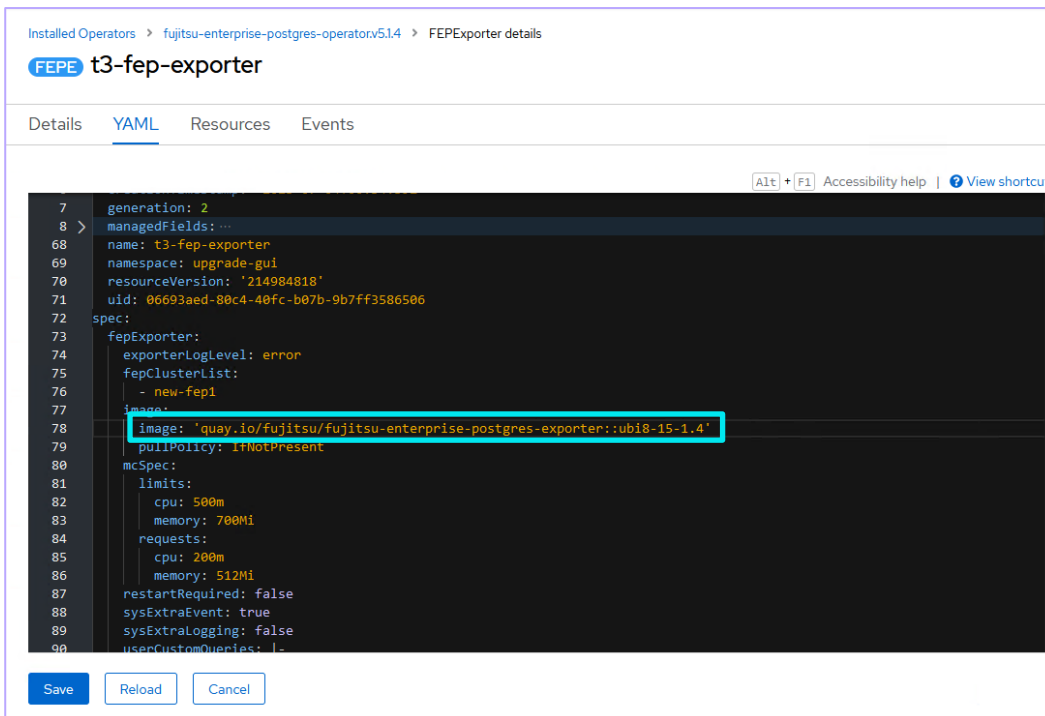
4. Change the following parameters to the new version of the image specifications. Refer to "image tag name" in the readme.

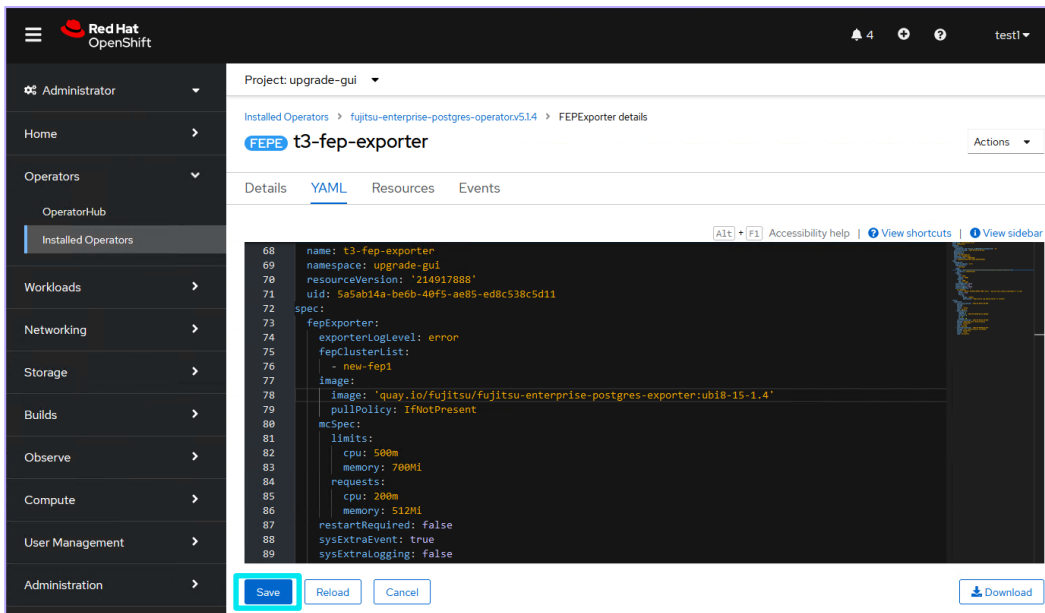
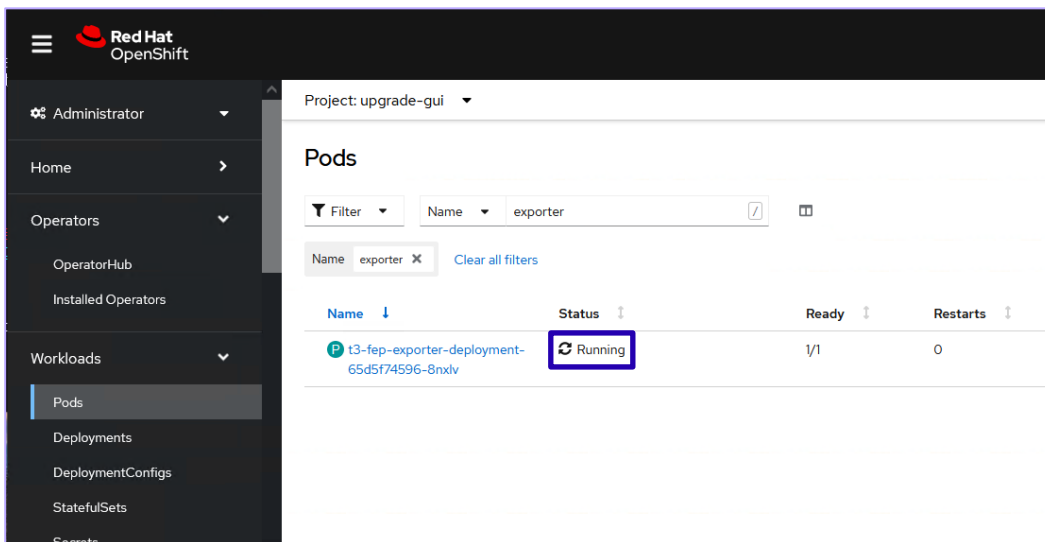
- For V14 or later

```
.spec.fepExporter.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-exporter:<image tag name>'
```

- For V13

```
.spec.fepExporter.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-exporter:<image tag name>'
```



5. Click **Save**.6. Check the state of the FEPEXporter and verify that the status is **Running**.

1.4.2. Using the CLI

1. Edit the FEPEXporter resource using the kubectl command.

```
kubectl edit fepexporter <CR name> -n <namespace>
```

2. Change the following parameters to the new version of the image specifications as shown below for the FEPEXporter image sections in the YAML.

- For V14 or later

```
.spec.fepExporter.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-exporter:<image tag name>'
```

- For V13

```
.spec.fepExporter.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-exporter:<image tag name>'
```

3. Check the state of the FEPEXporter and verify that the status is **Running**.

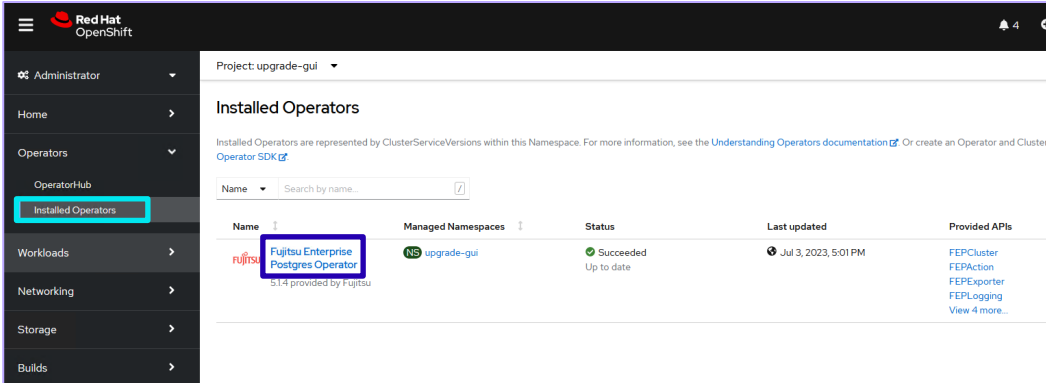
```
$ kubectl get po
NAME                                READY  STATUS   RESTARTS  AGE
fep-ansible-operator-7dc5fd9bf7-4smzk  1/1    Running  0          1d3h
t3-fep-exporter-deployment-57b98f5799-5n6cp  1/1    Running  0          1d1h
t3-fep-sts-0                            3/3    Running  0          1d3h
t3-fep-sts-1                            3/3    Running  0          1d3h
t3-fep-sts-2                            3/3    Running  0          1d3h
```

1.5. Updating the FEPLuentd container image

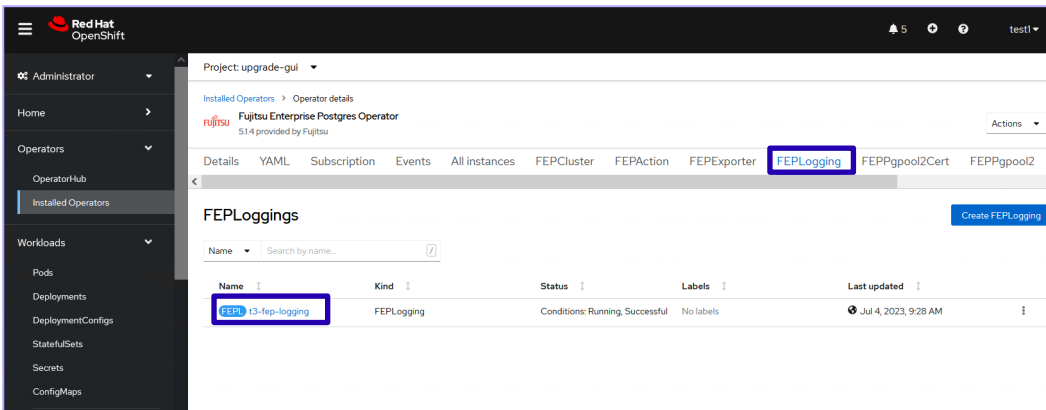
The upgrade process is performed by updating the image in the CR of FEPLogging. Follow the steps below to upgrade FEPLogging.

1.5.1. Using OpenShift Console

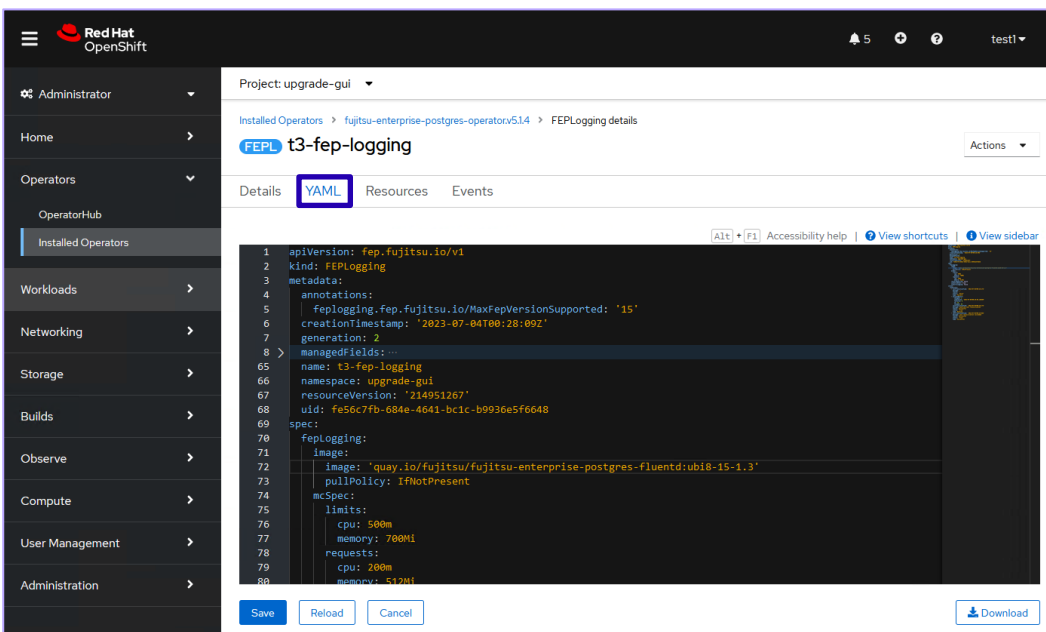
1. From the OpenShift Web Console, click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.



2. Click the **FEPLogging** tab and select the FEPLogging name to be upgraded.

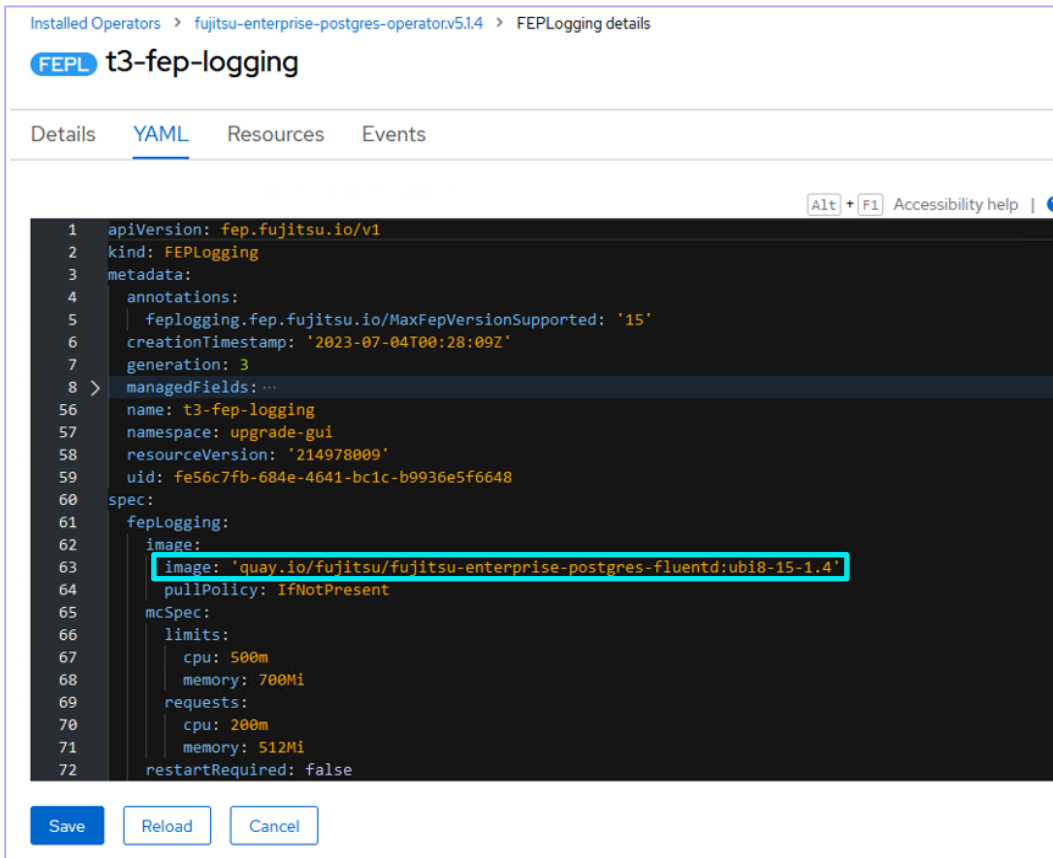


3. Click the **YAML** tab.

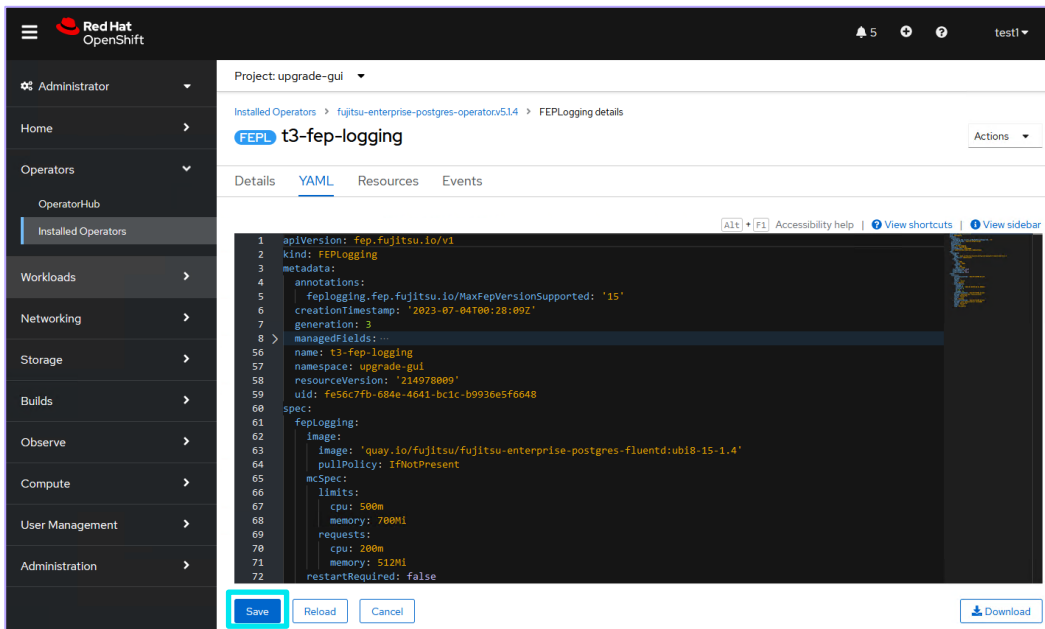


- Change the following parameters to the new version of the image specifications. Refer to "image tag name" in the readme.

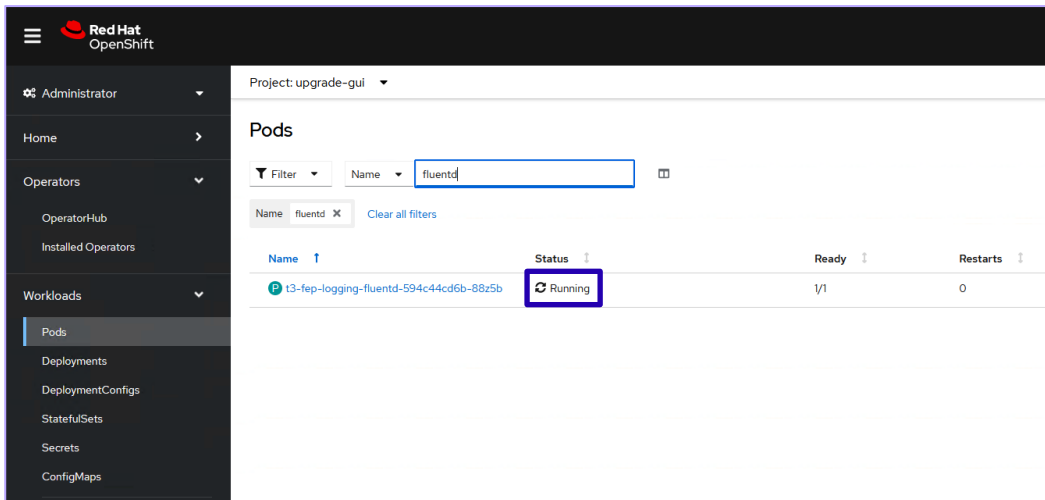
```
.spec.fepLogging.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentd:<image tag name>'
```



- Click **Save**.



- Check the state of the FEPLogging and verify that the status is **Running**.



1.5.2. Using the CLI

- Edit the FEPLogging resource using the `kubectl` command.

```
kubectl edit feplogging <CR name> -n <namespace>
```

- Change the following parameters to the new version of the image specifications as shown below for the FEPLuentd image sections in the YAML.

```
.spec.fepLogging.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentd:<image tag name>'
```

- Check the state of the FEPLogging and verify that the status is **Running**.

```
$ kubectl get po
NAME                                READY   STATUS    RESTARTS   AGE
fep-ansible-operator-7675487b97-dwm9p    1/1     Running   0           45h
t3-fep-fepexporter-deployment-859877f7d4-xdk2f  1/1     Running   0           119m
t3-fep-logging-fluentd-c69b48c4d-pwp7x    1/1     Running   0           113m
t3-fep-sts-0                             3/3     Running   0           119m
t3-fep-sts-1                             3/3     Running   0           118m
t3-fep-sts-2                             3/3     Running   0           116m
```


2. Applying Bug Fixes for Fujitsu Enterprise Postgres client

This section describes how to update a package.

2.1. Download a package

Download the package from the following website:

- <https://www.postgresql.fastware.com/fujitsu-enterprise-postgres-client-download>

2.2. Update a package to a specific version

- **Use as Container:** If you are creating a container image for the client, replace the package.
- **Use in VM environments:** If you are using the client in a VM environment, update the package from the downloaded RPM or MSI to a specific version.
- To update a package using a downloaded RPM or MSI, refer to chapter 1.3.3 or 2.1.2 of the "[FUJITSU Software Enterprise Postgres Bug Fix Guide](#)".