FUJITSU

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
- Fluentd Container
- Fluentbit Container
- Cronjob Container
- 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 using the OperatorHub

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

Updating the container image using the Helm Chart

This section describes how to update a container image to new version using the Helm Chart.

Updating the container image using the Helm Chart for AWS Marketplace

This section describes how to update a container image to new version using the Helm Chart for AWS Marketplace.

Applying Bug Fixes for Fujitsu Enterprise Postgres client

This section describes how to apply a product package.

Export restrictions

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Issue date and version

Edition 9.0: March 2025

Edition 8.0: October 2024

Edition 7.0: June 2024

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 using the OperatorHub
- 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/4.14/operators/admin/olm-upgrading-operators.html
 - https://docs.openshift.com/container-platform/4.15/operators/admin/olm-upgrading-operators.html
 - https://docs.openshift.com/container-platform/4.16/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, Click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.

					≜ 4 ⊖
📽 Administrator	Project: upgrade-gui 🔹				
Home	Installed Operators				
Operators	Installed Operators are represented b Operator SDK 🗗	y ClusterServiceVersions within this Nam	espace. For more information, see th	e Understanding Operators documentation 🗗 O	Dr create an Operator and ClusterSe
OperatorHub Installed Operators	Name Search by name Name I	/ Managed Namespaces	Status	Last updated	Provided APIs
Workloads	Fujitsu Enterprise Postgres Operator	NS upgrade-gui	Succeeded	🚱 Jul 3, 2023, 5:01 PM	FEPCluster FEPAction
Networking	5.1.4 provided by Fujitsu		approximate)		FEPExporter FEPLogging View 4 more
Storage	2				
Builds					

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

■ ^{Sed} Hat OpenShift		🜲 4 🚭 😧 🛛 testi -
🕫 Administrator	♥ Project: upgrade-gui ♥	
Home	Installed Operators >> Operator detailis ruffins // Fullistu Enterprise Postgres Operator Sult operation de Pratitu	Actions 💌
Operators	Details YAML Subscription Events All instances FEPCluster FEPAction FEPExporter	FEPLogging FEPPgpool2Cert FE
OperatorHub Installed Operators	< FEPClusters	Create FEPCluster
Workloads	Name Search by name.	
Networking	Name I Kind I Status I Labels I	Last updated
Storage	> FEPCluster Condition® Running No labels	🚱 Jul 3, 2023, 5:09 PM 🚦
Builds	>	
Observe	>	
Compute	>	

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 tag<br=""/> .spec.fep .spec.fep .spec.fep	<pre>.image.image: `quay.io/fujitsu/fujitsu-enterprise-postgres-<version>-servers ChildCrVal.backup.image.image: `quay.io/fujitsu/fujitsu-enterprise-postgres- g name>' .remoteLogging.image: `quay.io/fujitsu/fujitsu-enterprise-postgres-fluentbit .pgBadger.image: `quay.io/fujitsu/fujitsu-enterprise-postgres-cronjob:<image .feputils.image: `quay.io/fujitsu/fujitsu-enterprise-postgres-utils:<image< pre=""></image<></image </version></pre>	<pre>' -<version>-backup: ::<image name="" tag=""/>' e tag name>' cag name>'</version></pre>
Installed O	perators > fujitsu-enterprise-postgres-operator.v5.1.4 > FEPCluster details t3-fep	
Details	YAML Resources Events	
	Alt + FI A	
252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 265 266 267 268 269 270	<pre>cpu: 200m memory: 512Mi customAnnotations: allDeployments: {} servicePort: 27500 sysExtraEvent: true remoteLogging: enable: true fluentdName: t3-fen-logging image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentbit:ubi8-15-1.4 image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentbit:ubi8-15-1.4 image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-15-server:ubi8-15-1.4 sysExtraLogging: false podDisruptionBudget: false instances: 3 syncMode: 'off' fepChildCrVal: backup: postScript: ' ' costScript: ' '</pre>	

274	cpu: 0.2		
Save	Reload		

etails	YAML Resources Events	
		Alt + F
286	repol-retention-tull-type=time	
20/	rog-pathe/database/log/backup	
200	schedule: 15 0 3 4 0	
209	Schedule, 15 0 0	
290	cype, har	
292	schedule: 15 0 * * 1.6	
293	type: incr	
294	image:	
295	<pre>image: 'guay.io/fuiitsu/fuiitsu-enterprise-postgres-15-backup:ubi8-15-1.4'</pre>	
296	pullPolicy: IfNotPresent	
297	schedule3:	
298	schedule:	
299	type: * *	
300	schedule4:	
301	schedule: 10	
302	type: '	
303	schedule5:	
304	schedule:	
305	type: '	
306	customPgAudit:	
307	# define pg audit custom params here to override defaults.	
308	<pre># if log volume is not defined, log_directory should be</pre>	
300	# changed to '/database/userdata/data/log'	

Details	YAML Resources Events	
		Alt + F1
234	- fep.fujitsu.io/finalizer	
235	spec: menor for the second	
236	fep:	
237	fenutils:	
238	<pre>image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-utils:ubi8-15-1.4'</pre>	
239	forceSsl: true	
240	pgBadger:	
241	<pre>image: quay.lo/tujitsu/tujitsu-enterprise-postgres-cronjoo:ubi8-15-1.4</pre>	
242	schedures:	
245	Cleanup. 10	
244		
246	podantia/finity: false	
247	mcSpec:	
248	limits:	
249	cpu: 500m	
250	memory: 700Mi	
251	requests:	
252	cpu: 200m	
253	memory: 512Mi	
254	<pre>customAnnotations:</pre>	
255	allDeployments: {}	
256	servicePort: 27500	

5. Click Save.

E Red Hat OpenShift	↓ 4 O
🛠 Administrator 👻	Project: upgrade-gul 💌
Home >	Installed Operators > tuitsu-enterprise-postgres-operator.v5.14 > FEPCluster details FEPC t3-fep
Operators 👻	Details YAML Resources Events
Installed Operators	1 apiVersion: fep.fujitsu.io/v2 2 kind: EBC/luttor 2 kind: EBC/luttor
Workloads 🗸 🗸	3 metadata: 4 anotations: 5 fepBackupCR: Done
Pods Deployments	 6 fepCortigCR: Dome 7 fepCertCR: Dome 8 fepCluster.fep.fujitsu.io/MaxFepVersionSupported: '15'
DeploymentConfigs	9 fepUserCR: Done 10 fepUlameDone: 'True' 11 fepConfigDone: 'True'
StatefulSets Secrets	12 fepBackupDone: 'True' 13 fepCertDone: 'True' 14 fepCPattobefaults: Notlieeded
ConfigMaps	15 fepVolumeCR: Done 16 fepUserDone: 'True' 17 resourceVersion: '213763038'
CronJobs	18 name: t3-fep 19 uld: 9fa2fc2e-342a-42bf-abdf-3e4d2b7d6c13 20 creationTimestamp: '2033-07-03708:09:482'
Jobs DaemonSets	21 generation: 6 22 > managedfields: 239 - innerspace: upgrade-sui
ReplicaSets	
ReplicationControllers	Save Reload Cancel

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

Red Hat OpenShift					
🌣 Administrator	-	Project: upgrade-gui 🔹			
Home	>	Pods			
Operators	~	▼ Filter ▼ Name ▼ t3	-fep-sts 7		
OperatorHub		Name t3-fep-sts X Clear all fil	ters		
Installed Operators		Name 1	Status 1	Ready	Restarts I
Workloads	•	P t3-fep-sts-0	2 Running	3/3	0
Pods		P t3-fep-sts-1	C Running	3/3	0
Deployments		P t3-fep-sts-2	C Running	3/3	0
DeploymentConfigs					
StatefulSets					
Secrets					
ConfigMaps					

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, Click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.

Red Hat OpenShift						≜ 4 O
📽 Administrator		Project: upgrade-gui 🔻				
Home		Installed Operators				
Operators		Installed Operators are represente Operator SDK 🖉	ed by ClusterServiceVersions within this Name	espace. For more information, see th	e Understanding Operators documentation 🗗 O	Dr create an Operator and ClusterS
OperatorHub		Name Search by name	Z			
Installed Operators		Name I	Managed Namespaces	Status	Last updated	Provided APIs
Workloads		Fujitsu Enterprise	NS upgrade-gui	Succeeded	🚱 Jul 3, 2023, 5:01 PM	FEPCluster
Networking		5.1.4 provided by Fujit	su	Up to date		FEPAction FEPExporter FEPLogging View 4 more
Storage		2				
Builds	>					

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

■ [●] Red Hat OpenShift				🌲 3 🗿 😧 testl v
🗱 Administrator	•	Project: upgrage-gul 💌		
Home	*	Installed Operators Operator details FUJITSU Enterprise Postgres Operator 417 provided by Fujitsu		Actions 💌
Overview Projects		Details YAML Subscription Events All instance	s FEPCluster FEPAction FEPExporter	FEPLogging FEPPgpool2Cert FEPPgpool2
Search API Explorer		FEPPgpool2s		Create FEPPgpool2
Events		Name Search by name ()		
Operators	ř	Name I Kind I	Status I Labels I	Last updated
OperatorHub Installed Operators		FEPPgpool2 FEPPgpool2	Condition: Running No labels	Oct 27, 2022, 5:35 PM
Workloads	>			
Networking	,			
Storage	>			
Builds	>			

3. Click the YAML tab.

≡ [●] Red Hat OpenShift	🌲 5 🗘 😯 testi 🗸
🕫 Administrator 🗸 👻	Project: upgrade-gui 👻
Home >	Installed Operators > fujitsu-enterprise-postgres-operator/SL4 > FEPPgpool2 details FEPP t3-fep-pgpool2 Actions •
Operators 🗸 🗸	Details YAML Resources Events
OperatorHub Installed Operators	Alt + F1 Accessibility help Image: Construction of the state of the stateo
Workloads >	2 kind: Heregool2 3 metadata: 4 annotations: 5 feongenol2 fom fuitsu in/MayEenVersionSurported: '15'
Networking >	6 creationTimestamp: '2023-07-04101:14:042' 7 generation: 2 8 N managefield:
Storage >	65 mailtaget/study. 65 name:t3-fep-pgool2 66 name:t3-fep-pgool2 67 name:t3-fep-taget/study.
Builds >	68 uid: aedibe=734-4b3f-96d0-e3da20108924 69 spec:
Observe >	70 CUSCONSILARY. HUNE CONSILARY. THE CONSILARY
Compute >	73 memory 2000 74 custompton none 75 count: 3
User Management	76 Imageviiroitity: Irhotevesent 77 statusport: 988 78 customigsize: 128Mi
Administration >	Save Reload Cancel

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

nstalled C	loerators > fuiitsu-enterprise-postares-operatory5.1.5 > FEPPapool2 details
FEPP	IS-Tep-pgpool2
)etails	YAML Resources Events
	Alt + F1
145	ssl_ecdh_curve = 'prime256v1'
146	ss_dh_params_tile = '
147	reicache expire = 0
148	relations is a state of the sta
149	check_temp_table = tatalog
150	analysis and allocate = off
151	endote_stated_relate = 01
152	wd porta - 0200
154	failover on backend error = off
155	limits:
156	CDU: 400m
157	memory 512Mi
158	image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-15-pgpool2:ubi8-15-1.4'
159	customssicacert: -
160	BEGIN CACERTIFICATE
161	
162	END CACERTIFICATE
163	customsslcert: -
164	BEGIN CERTIFICATE
165	
166	CONTRACTOR CERTIFICATE-CONTRACTOR
167	status:
168	conditions:
169	- lastTransitionTime: '2023-07-04T01:55:40Z'
170	message: '
171	reason:
172	status: 'False'

5. Click Save.

≡ ^{Sed} Hat OpenShift	↓ 5 ○	😧 test1 🗸
🕫 Administrator 👻	Project: upgrade-gui 🔻	
Home >	Installed Operators > fujitsu-enterprise-postgres-operators/SI.4 > FEPPgpool2 details FEPP t3-fep-pgpool2	Actions 👻
Operators 🗸	Details YAML Resources Events	
OperatorHub Installed Operators	1 apiVersion: fep.fujitsu.io/v1	tcuts 1 View sidebar
Workloads >	2 kind: FEP8ppol2 3 metadata: 4 annotations:	
Networking >	 repsycholar.tep.ndjrba.to/naxrepversionapported.ip restionTimestamp: '2023-07-04101:14:042' generation: 2 SegmendFinder.det. 	
Storage >	6 / manager strust	
Builds >	68 uid: aebi36e-734-455-96d0-e3da20108924 69 spec:	
Observe >	70 customsixey: none 71 requests: 72 cpu: 200m	a a a a a a a a a a a a a a a a a a a
Compute >	73 memory: 250%1 74 customycp: none 75 count: 3	
User Management >	76 imagePulPolicy: 1fWoDPresent 77 statusport: 9808 78 customlogsize: 12841 79 forlistonge: now-fon	
Administration >	Save Reload Cancel	La Download

6. Check the state of the FEPPgpool2 and verify that the status is Running.

E Red Hat OpenShift	1				
🏶 Administrator	-	Project: upgrage-gui 🔹			
Home	~	Pods			
Overview		▼ Filter ▼ Name ▼ feppgpool			
Projects Search		Name feppgpool × Clear all filters			
API Explorer		Name Î	Status I	Ready I	Restarts
Events		P t3-pgpool2-feppgpool2-0	2 Running	1/1	0
Operators	~	P t3-pgpool2-feppgpool2-1	2 Running	1/1	0
operators		P t3-pgpool2-feppgpool2-2	C Running	1/1	0
OperatorHub Installed Operators		t3-pgpool2-feppgpool2-cronjob-27781981- v7gpw	Completed	0/1	0

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, Click **Operators > Installed Operators > Fujitsu Enterprise Postgres Operator**.

Red Hat OpenShift					≜ 4 O
S Administrator	Project: upgrade-gui 🔻				
Home	Installed Operators				
Operators	Installed Operators are represented Operator SDK 🗗	by ClusterServiceVersions within this Nam	espace. For more information, see th	e Understanding Operators documentation 🗗 O	Dr create an Operator and ClusterS
OperatorHub	Name Search by name	7			
Installed Operators	Name	Managed Namespaces	Status	Last updated	Provided APIs
Workloads	Fujitsu Enterprise	NS upgrade-gui	Succeeded	🚱 Jul 3, 2023, 5:01 PM	FEPCluster
Networking	5.1.4 provided by Fujitsu		Op to date		FEPExporter FEPLogging View 4 more
Storage					
Builds					

2. Click the FEPExporter tab and select the FEPExporter name to be upgraded.

E SpenShift						▲ 4 O	Ø test1▼
Contemporation 44 Administrator	•	Project: upgrade-gui 👻					
Home	>	Installed Operators → Operator deta Fujitsu Enterprise Postgr 5.14 provided by Fujitsu	ls es Operator				Actions 👻
Operators OperatorHub	×	Details YAML Subscr	iption Events All insta	nces FEPCluster FEPAction	FEPExporter FEPLoggin	g FEPPgpool2Cert	FEPPgpool2 FE
Installed Operators		FEPExporters					Create FEPExporter
Workloads	•	Name Search by name					
Networking	`	Name 1	Kind I	Status 1	Labels 1	Last updated 1	
Storage	>	FEFE t3-fep-exporter	FEPExporter	Conditions: Running, Successfu	I No labels	🚱 Jul 4, 2023, 8:58 AM	I
Builds	>						
Observe	>						
Compute	>						
User Management	>						

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.

EPE) t	3-fep-exporter		
tails	YAML Resources Events		
		Alt + F1 Accessibility help 😯 View shortcuts	
7	generation: 2		
8 >	managedFields:…		
68	name: t3-fep-exporter		1
69	namespace: upgrade-gui		
70	resourceVersion: '214984818'		
71	uid: 06693aed-80c4-40fc-b07b-9b7ff3586506		
72 9	pec:		
73	tepExporter:		
74	forClusterLigt		
76	- new fen1		
77	image.		
78	<pre>image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-exporter::ubi8-15-1.4'</pre>		
79	pullPolicy: ItNotPresent		
80	mcSpec:		
81	limits:		
82	cpu: 500m		
83	memory: 700Mi		
84	requests:		
85	CPU: 200m		
80	nestantPaguinad: falsa		
88	sysEvtraEvent: true		
89	sysExtralogging: false		
02	Systemators and the second sec		1

5. Click Save.

Red Hat OpenShift		4 4	Ø	testl -
📽 Administrator	Project: upgrade-gui ▼			
Home	Installed Operators > fujitsu-enterprise-postgres-operator/51.4 > FEPExporter details FEPE: t3-fep-exporter			Actions 💌
Operators	Details YAML Resources Events			
OperatorHub				
Installed Operators	68 name: t3-fep-exporter	lp 🕜 View	shortcut	5 🜒 View sidebar
Workloads	69 namespace: uggrade-gui 70 resourceVersion: '2140/1888' 71 uid: 5a5ab14a-be6b-40F5-ae85-ed8c538c5d11 72 rotot			
Networking	7			Menner
Storage	75 republic residence in the second secon			
Builds	Tange: quey.up/tg/tsu/tg/tsu/enterprise-postgres-exporter.upis-15-1.4 P			
Observe	81 11MLCS: 82 c.pu: 500m 83 memory: 700M1			
Compute	84 requests: cpu: 200m encory: 512Mi			
User Management	87 restartRequired: false 88 systktrafevnt: true 89 systktralogging: false			
Administration	Save Reload Cancel			🛓 Download

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

≡ ^{Sed} Hat OpenShift	4 4 7				
🏟 Administrator	•	Project: upgrade-gui 🔻			
Home	>	Pods			
Operators	~	▼ Filter ▼ Name ▼ exporter	7		
OperatorHub		Name exporter X Clear all filters			
Installed Operators		Name ↓ Status		Ready 1	Restarts 1
Workloads	~	P t3-fep-exporter-deployment- 65d5f74596-8nxlv		1/1	0
Pods					
Deployments					
DeploymentConfigs					
StatefulSets					
Secrets					

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.

.spec.fepExporter.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-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	ldlh
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 FEPFluentd 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.

■ Red Hat OpenShift				🐥 5 😌 🥝 testl -
🎗 Administrator	• Í	Project: upgrade-gui 🔻		
Home	>	Installed Operators > Operator details Fujifisu Fujitsu Enterprise Postgres Operator 51.4 provided by Fujitsu		Actions 👻
Operators OperatorHub	Ť	Details YAML Subscription Events All instances	FEPCluster FEPAction FEPExporter FEP	FEPPgpool2Cert FEPPgpool2
Installed Operators		FEPLoggings		Create FEPLogging
Workloads	ř	Name Search by name		
Destaurants		Name I Kind I	Status 1 Labels 1	Last updated
DeploymentConfigs		EEPL t3-fep-logging FEPLogging	Conditions: Running, Successful No labels	🛛 Jul 4, 2023, 9:28 AM
StatefulSets				
Secrets				
ConfigMaps		n o bonne e		

3. Click the YAML tab.

Red Hat OpenShift		15 €	0	testl 🕶
🗱 Administrator	Project: upgrade-gui 👻			
Home	Installed Operators > fujitsu-enterprise-poeratorx51.4 > FEPLogging details FEPI t3-fep-logging			Actions 💌
Operators	Details YAML Resources Events			
OperatorHub Installed Operators	1 apiversion: fep-fujitsu.io/v1	View sh	ortcuts	• View sidebar
Workloads	2 kind: FPDogging metadata: 4 annotations: 5 defender for futituu in/MaxEndlorianSummentad: 15		the second s	2
Networking	<pre>> Treprugging.rep.rujitsu.io/maxepyerisionsupporteu: 15 c creationfimestamp 2023-07-04T00:28:002' 7 generation: 2 8 > manaedfieldt:</pre>			<u></u>
Storage	65 name: 13-fep-logging 66 namespace: upgrade-gui 67 resourceVersion: 2124951267'			
Builds				
Observe	71 image: 72 image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentd:ubi8-15-1.3' 73 ullPolicy: IfNorPasent			
Compute	74 mcSpc: 75 limits: 76 cpu: 60m			
User Management	T7 requests: 78 requests:			
Administration	Sale Report 2: 51281 Save Reload Cancel			& Download

4. 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< th=""><th>tag name></th></image<>	tag name>
Installed Operators > fujitsu-enterprise-postgres-operator.v5.1.4 > FEPLogging details		
(FEPL) t3-tep-logging		
Details YAML Resources Events		
Alt + Fl Accessibility help		
1 apiVersion: fep.fujitsu.io/v1		
2 kind: FEPLogging		
3 metadata:		
4 annotations:		
5 reprograms. rep. rujitsu. rumakrepversinisupurcea. 15		
7 seperation: 3		
8 managedFields:		
56 name: t3-feo-logging		
57 namespace: upgrade-gui		
58 resourceVersion: '214978009'		
59 uid: fe56c7fb-684e-4641-bc1c-b9936e5f6648		
60 spec:		
61 fepLogging:		
62 image:		
63 image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-fluentd:ubi8-15-1.4'		
64 pullPolicy: IfNotPresent		
65 mcSpec:		
66 limits:		
67 cpu: 500m		
68 memory: 700ml		
79 Pequests:		
76 cpu: 200m		
71 memory. Size		
72 restor chequiteu. Taise		
Save Reload Cancel		
	J	

5. Click Save.



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

≡ ^l Red Hat OpenShift						
📽 Administrator		Project: upgrade-gui 🔻				
Home	>	Pods				
Operators	•	▼ Filter ▼ Name	✓ fluentd			
OperatorHub		Name fluentd X Clear	all filters			
Installed Operators		Name 1		Status I	Ready	Restarts I
Workloads	•	P t3-fep-logging-fluent	d-594c44cd6b-88z5b	C Running	1/1	0
Pods						
Deployments						
DeploymentConfigs						
StatefulSets						
StatefulSets Secrets						

1.5.2. Using the CLI

1. Edit the FEPLogging resource using the kubectl command.

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

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

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

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

<pre>\$ kubectl get po</pre>				
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. Updating the container image using the Helm Chart

2.1. Updating Operator

1. Refresh Helm Chart repository information.

helm repo update

2. Check the Helm Chart version of the latest operator.

helm search repo fujitsu-enterprise-postgres-operator

3. Run the helm command to upgrade the operator.

helm upgrade fep-operator-release fep-repo/fujitsu-enterprise-postgres-operator --namespace fepoperator

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

1. Edit the 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
<pre>fep-ansible-operator-7dc5fd9bf7-4smzk t3-fep-sts-0 t3-fep-sts-1 t3-fep-sts-2</pre>	1/1 3/3 3/3 3/3	Running Running Running Running	0 0 0	20n 17n 15n 13r

2.3. Updating the PGPool2 container image

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

2.4. Updating the FEPExporter container image

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.

.spec.fepExporter.image.image: 'quay.io/fujitsu/fujitsu-enterprise-postgres-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

- 2.5. Updating the FEPFluentd container image
- 1. Edit the FEPLogging resource using the kubectl command.

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

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

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

3. 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

3. Updating the container image using the Helm Chart for AWS Marketplace

3.1. Updating Operator

1. Check the information before the upgrade.

helm list

2. Run the helm command to upgrade the operator.

```
helm upgrade fep-operator-release oci://709825985650.dkr.ecr.us-east-1.amazonaws.com/fujitsu/fep-operator-
helm --version <version>
```

3. Check that the information is updated.

helm list

3.2. Updating the other container images

The procedure is the same as using the Helm Chart in Chapter 2. Refer to Chapter 2.2 and later.

4. Applying Bug Fixes for Fujitsu Enterprise Postgres client

This section describes how to update a package.

4.1. Download a package

Download the package from the following website:

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

4.2. 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 "<u>FUJITSU Software</u> <u>Enterprise Postgres Bug Fix Guide</u>".