

KNIME Edge Release Notes and Update Guide

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Version 1.2 (last updated on 2024-07-10)



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KNIME Edge Release Notes and Update Guide

This guide outlines the latest changes to KNIME Edge as well as steps for updating from prior versions.

Release history

Version	Release Date
v1.2.0	2023-04-27
v1.1.0	2022-05-14
v1.0.0	2021-09-29

What's new in KNIME Edge 1.2

Enhancements

KNIME Edge Values File Configuration Options

- **Additional images are now configurable.**
 - Busybox
 - Minio and Minio Client
 - Rclone
- **Fluentd can now be disabled.**
- **Resource requests and limits are now configurable for all pods.**
 - Parameters for memory and cpu have been added to multiple sections.
- **A default PodSecurityContext can now be specified.**
 - Parameters can be found in the podSecurityContext section:
 - RunAsUser
 - RunAsGroup
 - FsGroup

- **RunAsNonRoot**
- **Inference deployment emptyDir volumes can now be specified.**
- **The host field for ingresses can now be specified**

Server Adapter

- **Mounted necessary volumes as emptyDirs to conform to a PodSecurityPolicy with readOnlyRootFilesystem=true.**

Minio

- **Mounted necessary volumes as emptyDirs to conform to a PodSecurityPolicy with readOnlyRootFilesystem=true.**

Inference Agent

- **Mounted configured volumes as emptyDirs to conform to a PodSecurityPolicy with readOnlyRootFilesystem=true.**

KNIME Server Control Plane and Initialization Workflows

- **The PostgreSQL Connector connects via SSL to the database if possible.**
- **Removed the maximum limit of the cpu and memory prompts when creating or updating Inference Deployments.**
- **Increased the timeout of all REST request nodes from two to ten seconds.**
- **The KNIME Edge Initialization workflow can now be successfully executed without internet access.**
- **Added the Delete Execution Image workflow to the KNIME Server Control Plane**

Bugfixes

Inference Agent

- **The KNIME Inference Agent no longer encodes the workflow URL and now requires an encoded URL. This fixed a bug in which the workflow URL is encoded twice.**

Server Adapter

- **The KNIME Edge Server Adapter no longer logs the KNIME Server password and the Minio store secret**

KNIME Edge 1.2 Update Guide

This section outlines the steps needed to upgrade an existing KNIME Edge installation from version 1.1 to 1.2.

You will find a complete guide to installing KNIME Edge in the [KNIME Edge Installation Guide](#).

If you have any questions or need assistance with the update process, please contact your dedicated KNIME support specialist.

Update KNIME Server Control Plane Workflows

*1. Download the latest "Initialize Edge Server" workflow from KNIME Hub: [KNIME Edge Initialization Workflow](#) *

2. Upload the "Initialize Edge Server" workflow to KNIME Server.

3. Execute the "Initialize Edge Server" workflow from WebPortal on KNIME Server.

Initialize Edge Server

This workflow is used to setup a KNIME Server to be used as the orchestration piece for a KNIME Edge cluster.

Further information can be found at <https://docs.knime.com>

☐ Notify me when workflow has run

 **Run**

4. Select the Edge root path. Optionally override the automatic detection of KNIME Server URL and credentials by deselecting "Use current KNIME Server login details for requests".

KNIME Edge

Edge Root Path

☒ Use current KNIME Server login details for requests

5. If "Use current KNIME Server login details for requests" was deselected in the prior step, fill out the KNIME Server credentials as appropriate before moving on.

KNIME Edge

KNIME Server Information

The field below should be filled out automatically. Please double-check if the input is correct and change it accordingly. The KNIME Server URL has to include the context root at the end (e.g. /knime/).

KNIME Server Address

KNIME Server Credentials

User

Password

6. When selecting the KNIME Edge version to initialize, ensure that 1.2.0-experimental or 1.2.0 is selected.

KNIME Edge

Edge Version - Default is latest



7. Ensure that "Update Database Schema to latest version" is *selected* and "Reset Database Schema before Updating" is *deselected* before proceeding. This configuration will update the PostgreSQL database schema without truncating the existing tables.

KNIME Edge

☒ Update Database Schema to latest version

☐ Reset Database Schema Before Updating

Uninstall existing Edge Deployment

1. Run `helm list --all-namespaces` in terminal to see all Helm releases for the current Kubernetes context.

```
user@computer ~ % helm list --all-namespaces
```

NAME	NAMESPACE	REVISION	UPDATED	STATUS
CHART		APP VERSION		
edge-current	edge	1	2022-03-03 11:56:06.615987 -0500 EST	deployed
knime-edge-operator-1.0.0		1.16.0		

2. Once the existing KNIME Edge release has been identified, run `helm uninstall [-n namespace] <release_name>` to uninstall KNIME Edge. A successful uninstallation will look similar to the output below.

```
user@computer ~ % helm uninstall -n edge edge-current
```

```
W0303 13:55:47.802827 92191 warnings.go:70] rbac.authorization.k8s.io/v1beta1
RoleBinding is deprecated in v1.17+, unavailable in v1.22+; use
rbac.authorization.k8s.io/v1 RoleBinding
W0303 13:55:47.825723 92191 warnings.go:70] rbac.authorization.k8s.io/v1beta1 Role is
deprecated in v1.17+, unavailable in v1.22+; use rbac.authorization.k8s.io/v1 Role
W0303 13:55:47.867231 92191 warnings.go:70] rbac.authorization.k8s.io/v1beta1
ClusterRoleBinding is deprecated in v1.17+, unavailable in v1.22+; use
rbac.authorization.k8s.io/v1 ClusterRoleBinding
W0303 13:55:47.913994 92191 warnings.go:70] rbac.authorization.k8s.io/v1beta1
ClusterRole is deprecated in v1.17+, unavailable in v1.22+; use
rbac.authorization.k8s.io/v1 ClusterRole
release "edge-current" uninstalled
```

Update KNIME Edge Custom Resource Definitions (CRDs)

1. Run `kubectl get crds` to see a full list of Custom Resource Definitions (CRDs) that are installed to the cluster.

```
user@computer ~ % kubectl get crds
```

NAME	CREATED AT
edgedeployments.edge.knime.com	2022-03-03T16:56:02Z
inferencedeployments.edge.knime.com	2022-03-03T16:56:02Z
kongclusterplugins.configuration.konghq.com	2022-03-03T16:56:02Z
kongconsumers.configuration.konghq.com	2022-03-03T16:56:02Z
kongingresses.configuration.konghq.com	2022-03-03T16:56:02Z
kongplugins.configuration.konghq.com	2022-03-03T16:56:02Z
tcpingresses.configuration.konghq.com	2022-03-03T16:56:02Z
tensorflowservingdeployments.edge.knime.com	2022-03-03T16:56:02Z

2. Run the following command to delete all KNIME Edge CRDs.

```
kubectl delete crd \  
  edgedeployments.edge.knime.com \  
  inferencedeployments.edge.knime.com \  
  tensorflow-serving-deployments.edge.knime.com
```

3. Run `kubectl get crds` to confirm successful deletion.

```
user@computer ~ % kubectl get crds
```

NAME	CREATED AT
kongclusterplugins.configuration.konghq.com	2022-03-03T16:56:02Z
kongconsumers.configuration.konghq.com	2022-03-03T16:56:02Z
kongingresses.configuration.konghq.com	2022-03-03T16:56:02Z
kongplugins.configuration.konghq.com	2022-03-03T16:56:02Z
tcpingresses.configuration.konghq.com	2022-03-03T16:56:02Z

4. Run through the "Install new Edge Deployment" section below to reinstall Edge, which will in turn reinstall the CRDs to your cluster.

Install new Edge Deployment

1. Run `helm repo ls` to confirm that the KNIME Edge chart repository is available in Helm. If not, see the [KNIME Edge documentation](#) for details on how to add the repository.

```
user@computer ~ % helm repo ls
```

NAME	URL
knime-edge	https://registry.hub.knime.com/chartrepo/knime-edge

2. Run `helm repo update` to retrieve the latest updates to the KNIME Edge Helm Chart.

```
user@computer ~ % helm repo update
```

```
Hang tight while we grab the latest from your chart repositories...  
...Successfully got an update from the "knime-edge" chart repository  
Update Complete. Happy Helming!
```

3. Run the following command to retrieve the updated values file definition for KNIME Edge v1.2.0 and save it as a local `values.yaml` file.

```
helm show values knime-edge/knime-edge-operator --version 1.2.0 > values.yaml
```

4. Review the `values.yaml` file and update configuration as needed. All values in `<brackets>` are placeholders intended to be replaced with actual configuration.

5. Optionally verify the configuration that will be applied to the Kubernetes cluster in the next step.

```
helm template -n edge knime-edge knime-edge/knime-edge-operator \  
  --version 1.2.0 \  
  -f values.yaml
```

6. When ready, run the following command to install KNIME Edge v1.2.0 into your cluster.

```
helm install -n edge knime-edge knime-edge/knime-edge-operator \  
  --version 1.2.0 \  
  -f values.yaml
```

7. See the [Verify Installation of KNIME Edge Cluster](#) docs for verifying that the cluster is operational. If you have any questions or need assistance with the update process, please contact your dedicated KNIME support specialist.

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