

IBM Tivoli Netcool/OMNIbus Probe for Tivoli
EIF Helm Chart
2.0.0

Reference Guide
February 28, 2019



Note

Before using this information and the product it supports, read the information in [Appendix A, “Notices and Trademarks,”](#) on page 9.

Edition notice

This edition (SC27-9506-01) applies to version 2.0.0 of IBM Tivoli Netcool/OMNIbus Probe for Tivoli EIF Helm Chart and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC27-9506-00.

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About this guide

The following sections contain important information about using this guide.

Document control page

Use this information to track changes between versions of this guide.

The Probe for Tivoli EIF Helm Chart documentation is provided in softcopy format only. To obtain the most recent version, visit the IBM® Tivoli® Knowledge Center:

<https://www.ibm.com/support/knowledgecenter/SSSHTQ/omnibus/helms/common/Helms.html>

Table 1. Document modification history		
Document version	Publication date	Comments
SC27-9506-00	August 9, 2018	First IBM publication.
SC27-9506-01	February 28, 2019	<p>Guide updated for version 2.0.0 of the helm chart.</p> <p>Helm chart now supports ICP 3.1.x.</p> <p>The following topics were updated:</p> <ul style="list-style-type: none">• “Obtaining the PPA package” on page 1• “Prerequisites” on page 1• “Resources required” on page 2• “Uninstalling the chart” on page 4• “Configurable parameters” on page 4• “Limitations” on page 7 <p>The following topics were added:</p> <ul style="list-style-type: none">• “PodSecurityPolicy requirements” on page 2• “Troubleshooting” on page 8

Chapter 1. Probe for Tivoli EIF Helm Chart

The Probe for Tivoli EIF Helm Chart allows you to deploy a cluster of Probe for Tivoli EIF onto Kubernetes. These probes process EIF events from Tivoli devices to a Netcool Operations Insight operational dashboard.

This guide contains the following sections:

- [“Obtaining the PPA package” on page 1](#)
- [“Chart details” on page 1](#)
- [“Prerequisites” on page 1](#)
- [“Resources required” on page 2](#)
- [“Installing the chart” on page 3](#)
- [“Verifying the chart” on page 4](#)
- [“Uninstalling the chart” on page 4](#)
- [“Configuring the chart” on page 4](#)
- [“Limitations” on page 7](#)

The Knowledge Center contains the following additional topics that contain information that is common to all Helm Charts:

- [Specifying the image repository](#)
- [Loading PPA packages to IBM Cloud Private](#)
- [Exposing the probe service](#)
- [Upgrading to a new version of the probe helm charts](#)
- [Changing the service type during a helm upgrade](#)

Obtaining the PPA package

You can download the installation package from the [IBM Passport Advantage](#) website.

Use the **Find by part number** field to search for the following part number: CC0FAEN

Chart details

The chart deploys the Tivoli Netcool/OMNIbus Probe for Tivoli EIF onto Kubernetes to receive Event Integration Facility (EIF) messages from a range of Tivoli products.

The probe deployment is fronted by a service.

This chart can be deployed more than once on the same namespace.

Prerequisites

This solution requires the following applications:

- IBM Tivoli Netcool/OMNIbus ObjectServer to be created and running prior to installing the probe. To create and run the IBM Tivoli Netcool/OMNIbus ObjectServer, see the following topic on the IBM Knowledge Center: [Creating and running ObjectServers](#).
- Scope-based Event Grouping automation installed and enabled. See installation instructions on the IBM Knowledge Center: [IBM Knowledge Center - Installing scope-based event grouping](#).
- Kubernetes 1.11.1.

Note : Operator role is a minimum requirement to install this chart.

The chart must be installed by a Administrator to perform the following task:

- Enable Pod Disruption Budget policy.

The chart must be installed by a Cluster Administrator to perform the following tasks in addition to the one above:

- Obtain the Node IP using the `kubectl get nodes` command if using the NodePort service type.
- Create a new namespace with custom PodSecurityPolicy if necessary. For details see [“PodSecurityPolicy requirements” on page 2](#).

Resources required

This solution requires the following resources:

- CPU Requested : 250m (250 millicpu)
- Memory Requested : 256Mi (~ 268 MB)

PodSecurityPolicy requirements

This chart requires a PodSecurityPolicy to be bound to the target namespace prior to installation. You can choose either a predefined PodSecurityPolicy or have your cluster administrator create a custom PodSecurityPolicy for you.

The predefined PodSecurityPolicy name `ibm-restricted-psp` has been verified for this chart, see [IBM Cloud Pak Pod Security Policy Definitions](#). If your target namespace is bound to this PodSecurityPolicy, you can proceed to install the chart. The predefined PodSecurityPolicy definitions can be viewed here: <https://github.com/IBM/cloud-pak/blob/master/spec/security/psp/README.md>

This chart also defines a custom PodSecurityPolicy which can be used to finely control the permissions/capabilities needed to deploy this chart. You can enable this custom PodSecurityPolicy using the ICP user interface or the supplied instructions/scripts in the `pak_extension pre-install` directory. For detailed steps on creating the PodSecurityPolicy see https://www.ibm.com/support/knowledgecenter/SSHTQ/omnibus/helms/all_helms/wip/reference/hlm_common_psp.html

From the user interface, you can copy and paste the following snippets to enable the custom Pod Security Policy

- From the user interface, you can copy and paste the following snippets to enable the custom PodSecurityPolicy:
 - Custom PodSecurityPolicy definition:

```
apiVersion: extensions/v1beta1
kind: PodSecurityPolicy
metadata:
  annotations:
    kubernetes.io/description: "This policy is based on the most restrictive policy,
host." requiring pods to run with a non-root UID, and preventing pods from accessing the
    seccomp.security.alpha.kubernetes.io/allowedProfileNames: docker/default
    seccomp.security.alpha.kubernetes.io/defaultProfileName: docker/default
  name: ibm-netcool-probe-tivolieif-prod-psp
spec:
  allowPrivilegeEscalation: false
  forbiddenSysctls:
  - '*'
  fsGroup:
    ranges:
    - max: 65535
      min: 1
    rule: MustRunAs
  hostNetwork: false
  hostPID: false
  hostIPC: false
```



```

requiredDropCapabilities:
- ALL
runAsUser:
  rule: MustRunAsNonRoot
selinux:
  rule: RunAsAny
supplementalGroups:
  ranges:
    - max: 65535
      min: 1
  rule: MustRunAs
volumes:
- configMap
- emptyDir
- projected
- secret
- downwardAPI
- persistentVolumeClaim

```

- Custom ClusterRole for the custom PodSecurityPolicy:

```

apiVersion: rbac.authorization.k8s.io/v1
kind: ClusterRole
metadata:
  name: ibm-netcool-probe-tivolieif-prod-clusterrole
rules:
- apiGroups:
  - extensions
  resourceNames:
  - ibm-netcool-probe-tivolieif-prod-psp
  resources:
  - podsecuritypolicies
  verbs:
  - use

```

- RoleBinding for all service accounts in the current namespace. Replace {{ NAMESPACE }} in the template with the actual namespace:

```

apiVersion: rbac.authorization.k8s.io/v1
kind: RoleBinding
metadata:
  name: ibm-netcool-probe-tivolieif-prod-rolebinding
roleRef:
  apiGroup: rbac.authorization.k8s.io
  kind: ClusterRole
  name: ibm-netcool-probe-tivolieif-prod-clusterrole
subjects:
- apiGroup: rbac.authorization.k8s.io
  kind: Group
  name: system:serviceaccounts:{{ NAMESPACE }}

```

- From the command line, you can run the setup scripts included under pak_extensions.

As a cluster administrator, the pre-install scripts and instructions are in the following location:

pre-install/clusterAdministration/createSecurityClusterPrereqs.sh

As team admin/operator the namespace scoped scripts and instructions are in the following location:

pre-install/namespaceAdministration/createSecurityNamespacePrereqs.sh

Installing the chart

To install the chart, use the following steps:

1. Extract the helm chart archive and customize values.yaml. The configuration section lists the parameters that can be configured during installation.
2. Install the chart with the release name my-tivolieif-probe using the configuration specified in the customized values.yaml using following command:

```

helm install --tls --namespace <your pre-created namespace> --name my-
tivolieif-probe -f values.yaml stable/ibm-netcool-probe-tivolieif-prod

```

Where: *my-tivoliief-probe* is the release name for the chart.

Helm searches for the *ibm-netcool-probe* chart in the helm repository called *stable*. This assumes that the chart exists in the *stable* repository.

Tip : You can list all releases using `helm list --tls` or you can search for a chart using `helm search`.

The command deploys the probe on the Kubernetes cluster using a default configuration. For a list of the parameters that you can configure during installation see [“Configurable parameters” on page 4](#).

Verifying the chart

See the instructions at the end of the helm installation for chart verification. The instructions can also be displayed by viewing the installed helm release under **Menu -> Workloads -> Helm Releases** or by running the following command:

```
helm status <release> --tls
```

Uninstalling the chart

To uninstall or delete the chart, use the following command:

```
helm delete my-tivoliief-probe --purge
```

Where: *my-tivoliief-probe* is the release name for the chart.

The command removes all the Kubernetes components associated with the chart and deletes the release.

Clean up any prerequisites that were created

As a Cluster Administrator, run the cluster administration cleanup script included under *pak_extensions* to clean up cluster scoped resources when appropriate.

```
post-delete/clusterAdministration/deleteSecurityClusterPrereqs.sh
```

As a Cluster Administrator, run the namespace administration cleanup script included under *pak_extensions* to clean up namespace scoped resources when appropriate.

```
post-delete/namespaceAdministration/deleteSecurityNamespacePrereqs.sh
```

Configuring the chart

The integration requires configuration of the chart parameters.

Configurable parameters

You use parameters to specify how the probe interacts with the device. You can override the chart's default parameter settings during installation.

The following table describes the configurable parameters for this chart and lists their default values.

Table 2. Configurable parameters	
Parameter name	Description
license	The license state of the image being deployed. Enter <i>accept</i> to install and use the image. The default value is <i>not accepted</i>


Table 2. Configurable parameters (continued)

Parameter name	Description
replicaCount	The number of deployment replicas generated. This parameter is omitted when autoscaling.enabled is set to true The default value is 1
global.image.secretName	The name of the secret containing the docker config to pull the image from a private repository. Leave this parameter blank if the probe image already exists in the local image repository or the Service Account has a been assigned with an Image Pull Secret. There is no default for this parameter.
image.repository	Use this parameter to specify the probe image repository. Update this repository name to pull from a private image repository. The image name should be set to netcool-probe-tivolieif The default value is netcool-probe-tivolieif
image.tag	Use this parameter to specify the netcool-probe-tivolieif image tag. The default value is 13.0.7_4
image.testRepository	Use this parameter to specify the utility image (busybox) repository. Update this repository name to pull from a private image repository. The default value is busybox
image.testImagetag	Use this parameter to specify the utility image tag. The default value is 1.28.4
image.pullPolicy	The image pull policy. The default value is IfNotPresent
netcool.primaryServer	The primary Netcool/OMNIbus server to connect to. This is usually set to NCOMS or AGG_P. The default value is nil
netcool.primaryHost	The hostname or IP address of the primary Netcool/OMNIbus server. The default value is nil
netcool.primaryPort	The port number of the primary Netcool/OMNIbus server. The default value is nil

Table 2. Configurable parameters (continued)

Parameter name	Description
netcool.backupServer	The backup Netcool/OMNIbus server to connect to. If the backupServer , backupHost and backupPort parameters are defined in addition to the primaryServer , primaryHost , and primaryPort parameters, the probe will be configured to connect to a virtual object server pair called AGG_V. The default value is nil
netcool.backupHost	The host or IP address of the backup Netcool/OMNIbus server. The default value is nil
netcool.backupPort	The port number of the backup Netcool/OMNIbus server. The default value is nil
probe.messageLevel	The probe log message level. The default value is warn
probe.rulesFile.taddm	Set this parameter to true to enable the TADDm rules file, otherwise set it to false. The default value is false.
probe.rulesFile.tpc	Set this parameter to true to enable the TPC rules file, otherwise set it to false. The default value is false.
probe.rulesFile.tsm	Set this parameter to true to enable the TSM rules file, otherwise set it to false. The default value is false.
service.probe.type	The Probe for Tivoli EIF k8 service type exposing ports. The default value is ClusterIP
service.probe.externalPort	The external TCP port for this service. The default value is 9998
autoscaling.enabled	Set this parameter to false to disable auto-scaling. The default value is true
autoscaling.minReplicas	The minimum number of probe replicas. The default value is 2

Table 2. Configurable parameters (continued)

Parameter name	Description
autoscaling.maxReplicas	The maximum number of probe replicas. The default value is 5
autoscaling.cpuUtil	The target percentage CPU utilization. For example, enter 60 for 60% target utilization. The default value is 60
poddisruptionbudget.enabled	Set this parameter to true to enable Pod Disruption Budget to maintain high availability during node maintenance. Administrator role or higher is required to enable Pod Disruption Budget on clusters with Role Based Access Control. The default value is false
poddisruptionbudget.minAvailable	The minimum number of available pods during node drain. This can be set to a number or a percentage, for example: 1 or 10%.  CAUTION : Setting this parameter to 100%, or to the number of replicas, may block node drains entirely. The default value is 1
resources.limits.cpu	The container CPU limit. The default value is 250m
resources.limits.memory	The container memory limit. The default value is 256Mi
resources.requests.cpu	The container CPU requested. The default value is 250m
resources.requests.memory	The container memory requested. The default value is 256Mi
arch	The worker node architecture. This is Fixed to amd64.

Limitations

This solution has the following limitations:

- In addition to the default Rules files, the probe only supports the rules files for TADDM, TPC and TSM. Other rules files that require the extension of the ObjectServer tables are not supported.
- It is validated to run on IBM Cloud Private 3.1.0 and 3.1.1.

For details about the Probe for Tivoli EIF, see https://www.ibm.com/support/knowledgecenter/en/SSSHTQ/omnibus/probes/tivoli_eif_v11/wip/reference/tveifv11_intro.html.

Troubleshooting

The following table describes how to troubleshoot issues when deploying the chart and how to resolve them.

Table 3. Problems		
Problem	Cause	Resolution
The probe logs show an error when loading or reading rules files. Failed during field verification check. Fields <code>CorrScore</code> , <code>AdvCorrCauseType</code> , <code>CauseType</code> , <code>LocalObjRelate</code> , and <code>RemoteObjRelate</code> not found.	The NcKL intra-device correlation automation is not installed, and so the required fields are missing.	Install the NcKL intra-device correlation automation in your ObjectServer and redeploy the chart.

Appendix A. Notices and Trademarks

This appendix contains the following sections:

- Notices
- Trademarks

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