



SOLACE APPLICATION DEPLOYMENT AND CONFIGURATION

CAN 7.0



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Table of Contents

1. Focus.....	3
2. Prerequisites	3
3. Installing Solace Event Broker	3
4. Verifying Solace Event Broker Service.....	3
5. Connecting to Solace CLI	4
5.1 Start Configuration.....	4
5.2 Creating and Configuring a Message VPN	5
5.3 Creating and Configuring a Client Profile	5
5.4 Creating and Configuring a Client Username	6
5.5 Configuring Message Spool.....	6
6. UI Configurations in CAN.....	6

SOLACE APPLICATION DEPLOYMENT AND CONFIGURATION

1. Focus

This document focuses on installation of Solace PubSub+ Event Broker to a Kubernetes cluster with the use of a helm chart, configuring Message VPN, usernames etc. through Solace CLI, and UI configurations in CAN.

2. Prerequisites

This section contains all the mandatory prerequisites and cluster requirements.

- Any Linux Based System preferably UBUNTU v20.04 or lower or RHEL v8.3 or lower.
- Docker v20.10.2 or higher installed.
- Kubernetes v1.20.0 or higher installed.
- Helm should be installed.

3. Installing Solace Event Broker

The Solace PubSub+ Event Broker can be installed with the helm chart **avanseus-solace-chart**, which is present under **kubernetes_resources/Helm_Charts/NFS_STORAGE_HELM/** folder.

This helm chart can be installed by executing the below command:

```
helm install solace-event-broker avanseus-solace-chart/ -n avanseus-workspace
```

Verify if the pod has been deployed successfully using the below command:

```
kubectl get pods -n avanseus-workspace
```

```
[ec2-user@ip-172-31-28-252 NFS_STORAGE_HELM]$ kubectl get pods -n avanseus-workspace
NAME                                READY   STATUS    RESTARTS   AGE
ansibleprocessor-7d58d75df6-lgr2v    2/2     Running   4           153d
batch-54b44c58fc-b2tjg              2/2     Running   14          153d
bcxp-75f8f65b77-qvzs4              2/2     Running   2           127d
can-79777d8d8b-m584m               2/2     Running   0           19h
controller-bd88f5db6-4qmpd          2/2     Running   0           124d
jsprocessor-7696f9c76f-qr9gk        2/2     Running   0           71m
ldap-85fc5bd785-9vqb8              2/2     Running   4           153d
memcached-796f78c8d8-pnqrl         2/2     Running   0           19h
mongo-0                             2/2     Running   0           124d
opendjldap-5459fd8579-4mnfj         2/2     Running   14          153d
pcp-5b654bd96f-bc269               2/2     Running   0           23d
pythonprocessor-6486fc77b6-knq22    2/2     Running   4           153d
record-68875c7cd5-b7l69            2/2     Running   2           70d
rtrca-7cb5fb9d5b-c5k6h             2/2     Running   2           32d
sermetricspusher-796866866-w5stf    2/2     Running   0           103d
solace-event-broker-0               2/2     Running   1           76d
vbi-566875dcc9-tm7p5               2/2     Running   4           153d
worker-56b6d6dbc-6zgt2              2/2     Running   0           70d
worker-56b6d6dbc-w8t7w              2/2     Running   0           70d
worker-56b6d6dbc-wkl7z             2/2     Running   2           70d
```

NOTE: Solace Event Broker will be installed with the default parameters provided in the **values.yaml** file under **kubernetes_resources/Helm_Charts/NFS_STORAGE_HELM/avanseus-solace-chart** folder. These values can be changed as per requirement.

4. Verifying Solace Event Broker Service

To verify that Solace Event Broker service is running successfully execute the below command:

```
kubectl get svc solace-event-broker -n avanseus-workspace
```

```
[ec2-user@ip-172-31-28-252 NFS_STORAGE_HELM]$ kubectl get svc solace-event-broker -n avanseus-workspace
```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)
solace-event-broker	ClusterIP	10.107.62.188	<none>	2222/TCP,8080/TCP,1943/TCP,55555/TCP,55003/TCP,55443/TCP,55556/TCP,8008/TCP,1443/TCP,9000/TCP,9443/TCP,5672/TCP,5671/TCP,1883/TCP,8883/TCP,8000/TCP,8443/TCP

```
[ec2-user@ip-172-31-28-252 NFS_STORAGE_HELM]$
```

From the above image, we can find the Cluster IP (10.107.62.188) of Solace Event Broker will be used to connect to the service.

- Port 2222 – Used to connect to the Solace Command Line Interface (CLI) for advanced configuration through SSH.
- Port 55555 – Used to connect to the message broker to send and receive messages.

5. Connecting to Solace CLI

To send and receive data as messages from Solace, message VPN(s), client-username(s) and client-profile(s) must be created through the Solace Command Line Interface (CLI).

To connect to the Solace CLI, execute the below command:

```
ssh admin@<Solace_Cluster_IP> -p 2222
```

Upon execution, a password (usernameAdminPassword) should be entered, which is available in the **values.yaml** file of the **kubernetes_resources/Helm_Charts/NFS_STORAGE_HELM/avanseus-solace-chart** folder. By default, the password is **secretpassword**.

```
[ec2-user@ip-172-31-28-252 ~]$ ssh admin@10.107.62.188 -p 2222
Solace PubSub+ Standard
Password:

Solace PubSub+ Standard Version 10.3.1.17

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Operating Mode: Message Routing Node

solace-event-broker-0> █
```

Follow the steps below to configure the Solace Event Broker.

5.1 Start Configuration

To start configuration in the Solace CLI, execute the following set of commands after connecting to the Solace CLI:

```
solace-event-broker-0> enable
solace-event-broker-0# configure
```

```
solace-event-broker-0> enable
solace-event-broker-0# configure
solace-event-broker-0(configure)# █
```

5.2 Creating and Configuring a Message VPN

Message VPNs allow the segregation of topic space and messaging space by creating separate messaging domains.

To create a Message VPN and set the basic authentication type, execute the following commands:

```
solace-event-broker-0(configure)# create message-vpn <message_vpn_name>
solace-event-broker-0(configure/message-vpn)# no shutdown
solace-event-broker-0(configure/message-vpn)# authentication
solace-event-broker-0(configure/message-vpn/authentication)# basic
solace-event-broker-0(...gure/message-vpn/authentication/basic)# auth-type internal
solace-event-broker-0(...gure/message-vpn/authentication/basic)# no shutdown
```

```
solace-event-broker-0(configure)# create message-vpn demo-message-vpn
solace-event-broker-0(configure/message-vpn)# no shutdown
solace-event-broker-0(configure/message-vpn)# authentication
solace-event-broker-0(configure/message-vpn/authentication)# basic
solace-event-broker-0(...gure/message-vpn/authentication/basic)# auth-type internal
solace-event-broker-0(...gure/message-vpn/authentication/basic)# no shutdown
solace-event-broker-0(...gure/message-vpn/authentication/basic)#
```

5.3 Creating and Configuring a Client Profile

Client profiles are used to define a set of client behaviours and capabilities that can be applied to multiple client usernames.

To create and configure a client profile (for the message VPN created), to allow certain messaging properties, execute the following commands.

NOTE: Use **exit** command to move back from current directory.

```
solace-event-broker-0(configure)# create client-profile <client_profile_name> message-vpn
<message_vpn_name>
solace-event-broker-0(configure/client-profile)# message-spool
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-endpoint-create
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-endpoint-create-durability
durable
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-message-receive
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-message-send
solace-event-broker-0(configure/client-profile/message-spool)# allow-transacted-sessions
```

```
solace-event-broker-0(...gure/message-vpn/authentication/basic)# exit
solace-event-broker-0(configure/message-vpn/authentication)# exit
solace-event-broker-0(configure/message-vpn)# exit
solace-event-broker-0(configure)# create client-profile demo-profile message-vpn demo-message-vpn
solace-event-broker-0(configure/client-profile)# message-spool
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-endpoint-create
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-endpoint-create-durability durable
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-message-receive
solace-event-broker-0(configure/client-profile/message-spool)# allow-guaranteed-message-send
solace-event-broker-0(configure/client-profile/message-spool)# allow-transacted-sessions
```

5.4 Creating and Configuring a Client Username

To create and configure a client username (for the message VPN created) with password and assign a client profile, execute the following commands:

```
solace-event-broker-0(configure)# create client-username <client_username> message-vpn
<message_vpn_name>
solace-event-broker-0(configure/client-username)# password <password>
solace-event-broker-0(configure/client-username)# client-profile <client_profile_name>
solace-event-broker-0(configure/client-username)# no shutdown
```

```
solace-event-broker-0(configure/client-profile/message-spool)# exit
solace-event-broker-0(configure/client-profile)# exit
solace-event-broker-0(configure)# create client-username demo-client message-vpn demo-message-vpn
solace-event-broker-0(configure/client-username)# password demo-password
solace-event-broker-0(configure/client-username)# client-profile demo-profile
solace-event-broker-0(configure/client-username)# no shutdown
```

5.5 Configuring Message Spool

Guaranteed messages are spooled to an event broker using spool files. These files are stored on a Message Spool and the size you choose should match the number of messages that may need to be stored. If the event broker's spool files are all in use, it cannot receive any more messages until some spooled messages are acknowledged, which could free some space in the message spool.

To set size of the Message Spool in MB (Mega Bytes) for a particular Message VPN, execute the following commands:

```
solace-event-broker-0(configure)# message-spool message-vpn <message_vpn_name>
solace-event-broker-0(configure/message-spool)# max-spool-usage <size_in_MB>
```

```
solace-event-broker-0(configure/client-username)# exit
solace-event-broker-0(configure)# message-spool message-vpn demo-message-vpn
solace-event-broker-0(configure/message-spool)# max-spool-usage 1000
```

6. UI Configurations in CAN

To perform data collection in CAN through Solace, select the interface as Solace in data collection and configuration screen.

Solace needs the following inputs to be entered for a successful connection to be established and perform data load.

Data Collection & Configuration

Collection Time

Cron Pattern*

Job Status ☐

Update

Source Configuration

Interface	Name	User Name	Compression	Collection Status
SFTP	testCollection1	bindiya1	TAR	INACTIVE
SFTP	IntegrationSFTP	testuser	NONE	INACTIVE
PROMETHEUS	Prometheuscollector	--	--	INACTIVE
3GPP5G	test	--	NONE	INACTIVE
CUSTOM	testingone	--	NONE	INACTIVE
SOLACE	SolaceTestCollector	avanseus-client	--	INACTIVE

Configure New Collection

SOLACE

Collection Status ☒

Real Time Prediction ☐

Submit

Cancel

- Name:** Name of the new collector.
- Description:** Description of the new collector.
- Interface:** SOLACE
- Collection Status:** Turn on or off as per requirement.
- Username:** Username created on Solace event broker.
- Password:** Password configured for the username
- Queue Name:** Name of the Queue (Topic endpoint) from which data must be collected. If Queue with the name does not exist, new Queue with the entered name will be created.
- Message VPN Name:** Name of the Message VPN from which data must be received.
- IP Address:** IP Address of the Solace Event Broker.
- Port No.:** Port number configured for connecting to the message broker. (Default Port No.: 55555)
- Real Time Prediction:** Turn on or off as per requirement.
- Cron Pattern:** Cron Pattern to collect data at required intervals.
- Mapper Type:** Name of the required Input Mapper to parse the collected data.