Setup Data Output Location

The first configuration step is to determine the location for the monitoring data. You have three options:

- *"Output Data to PubSub+ Monitor"*
- *"Output Data to InfluxDB"*
- *"Output Data to Solace Broker"*

Output Data to PubSub+ Monitor

To output monitoring data to PubSub+ Monitor, you *"Start and Login to the Solace PubSub+ Monitor"* and *"Configure Data Collection"*.

Proceed to *"Start and Login to the Solace PubSub+ Monitor"*.

Start and Login to the Solace PubSub+ Monitor

Navigate to the **RTViewSolaceMonitor/bin** directory and execute the **start_servers.sh** script (or **start_servers.bat** for Windows).

Open a browser and go to:

- **http://IPAddress:8068/rtview-solmon** if you are executing your browser on a different host than where the monitor is running.
- **http://localhost:8068/rtview-solmon** if you are executing your browser in the same host where the monitor is running.

Use rtvadmin/rtvadmin for username/password.

The Solace PubSub+ Monitor opens. The displays populate with data after you add connection properties for your Solace Message Brokers (which is subsequently described in these instructions).

Proceed to *"Open the RTView Configuration Application"*.

Open the RTView Configuration Application

Open a browser and go to:

- **http://IPAddress:8068/rtview-solmon-rtvadmin** if you are executing your browser on a different host than where the monitor is running.
- **http://localhost:8068/rtview-solmon-rtvadmin** if you are executing your browser in the same host where the monitor is running.

Use **rtvadmin**/**rtvadmin** for username/password.

The RTView Configuration Application **HOME** page opens.
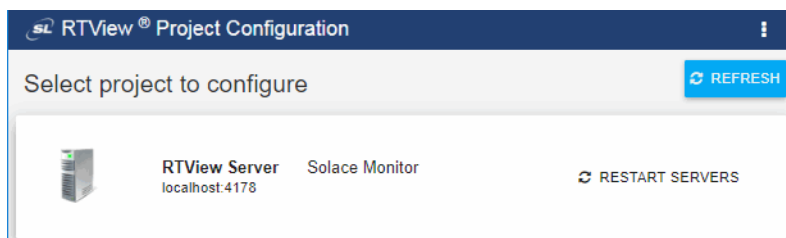
Select the **Solace Monitor** project.

The main configuration page for the **RTView Server - Solace Monitor** project opens.

The navigation tree is in the left panel and the **General** and **Custom Properties** tabs are shown in the upper part of the main page. The name of the selected tab is highlighted and the other tabs are grayed out. You click on either of the grayed tabs to change the selected tab.
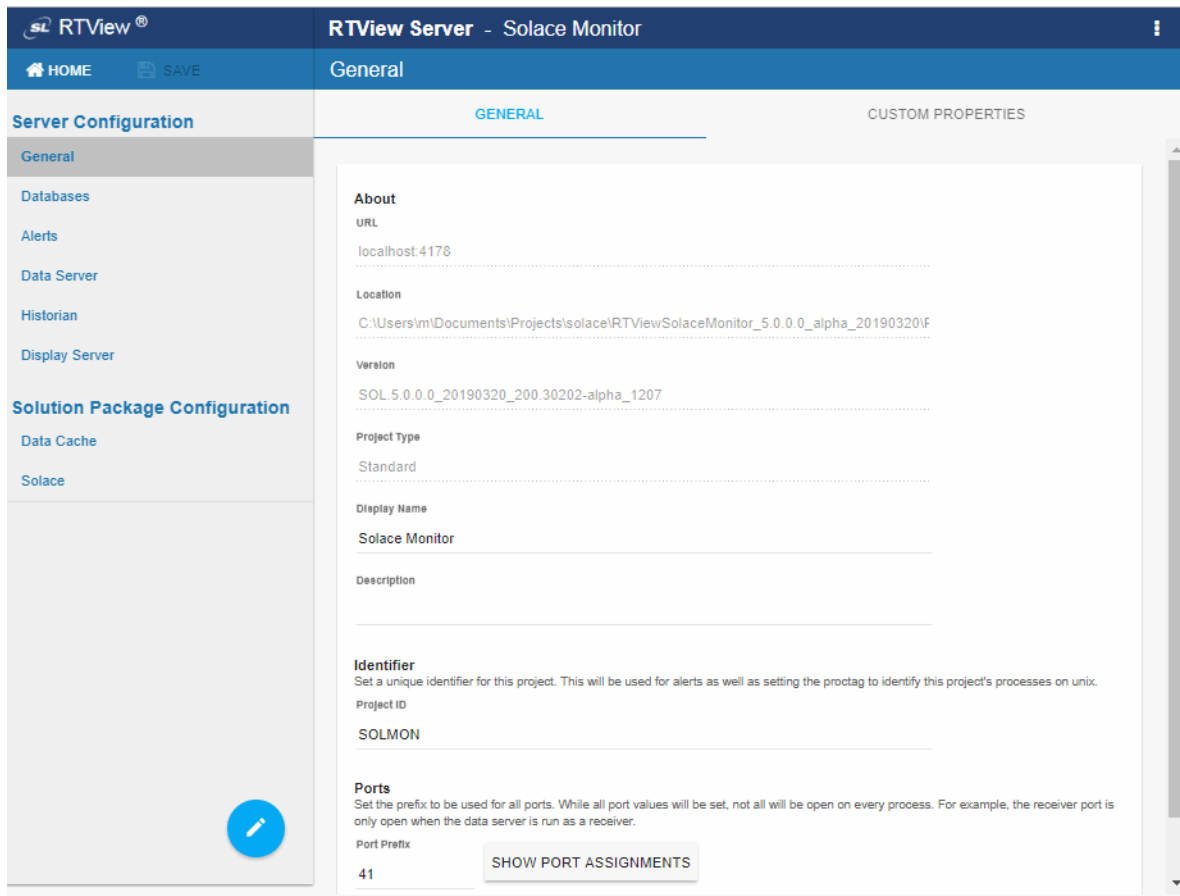
These instructions use the following format to describe navigation to each tab: **Navigation tree>Tab**. For example, the figure above illustrates the **General>GENERAL Tab**.

Proceed to "Configure Data Collection" (a required configuration).

Configure Data Collection

This section describes how to define the connection for the brokers you wish to monitor and verify that data is collected from them. This configuration must be performed before running any deployment of the Monitor. This configuration is the only required configuration.

If you don't have special requirements for running the monitor (such as running multiple data collectors in the same host), there is no need to cover the optional subsections. Consult Technical Support before modifying other configurations to avoid the circumstance of future upgrade issues.

To define Solace Broker connections:

1. "Open the RTView Configuration Application", select **Solace** (in navigation tree)>**CONNECTIONS** tab and click ⊕ .
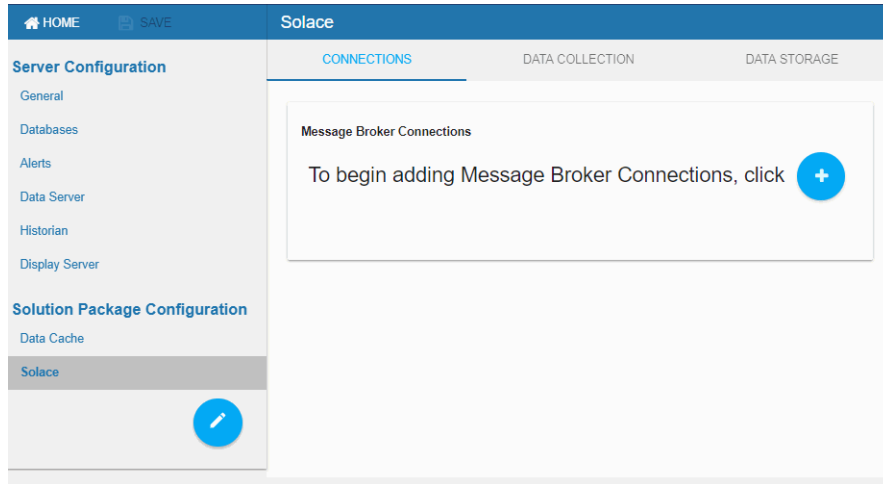
The **Add Connection** dialog opens.

2. In the **Add Connection** dialog choose either "HA Pair" or "Standalone Broker" and make the following entries:

HA Pair

For **HA Pair**, enter the **Connection Name**, **Primary** and **Backup URLs**, **Usernames** and **Passwords**.

Standalone Broker

For **Standalone Broker**, enter the **Connection Name**, **URL**, **Username** and **Password**, and toggle on **Edition** if this is a Solace PubSub+ Cloud service instance. With this setting, two new fields will appear where you enter the **SEMP Version** and the **VPN Name** of your Cloud Broker.

Notes:

- If you don't know the SEMP Version of your Solace PubSub+ Cloud Broker, then leave the defaults. The VPN Name is required.

- Monitoring data is collected through SEMP (Solace Element Management Protocol), which is a RESTful API for managing Solace brokers. If your Solace PubSub+ message brokers are a version prior to 8.7 or your Solace Appliance is version prior to 8.3, see "Obtain SEMP Version" for instructions on getting the SEMP version installed in your message brokers.

3. Repeat these steps to add more brokers and when finished, click [SAVE] to close the dialog and [💾 SAVE] (in title bar) to save your settings.

The connections you created are listed in the **Connections** tab. For the HA Pair, the connection string for the backup broker will have "**-standby**" concatenated to it.

4. Click [⟳ RESTART SERVERS] to apply changes. The data server will be available again in 10-15 seconds.

5. Open a browser and go to the Solace PubSub+ Monitor:

http://IPAddress:8068/rtview-solmon if you are executing your browser on a different host than where the monitor is running.

http://localhost:8068/rtview-solmon if you are executing your browser in the same host where the monitor is running.

Use **rtvadmin**/**rtvadmin** for username/password (if login is enabled).
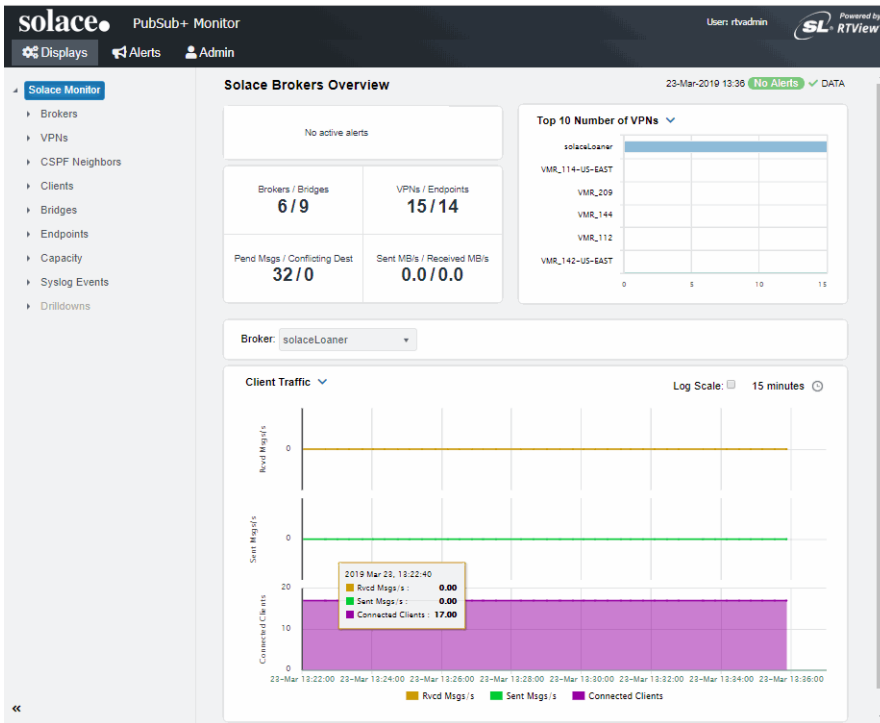
You should now see monitoring data. If you encounter issues, check the log files in the **RTViewSolaceMonitor/projects/rtview-server/log** directory for errors.

6. If you are going to:

- "Output Data to InfluxDB", proceed to "Create Database and User Account".
- "Output Data to PubSub+ Monitor", congrats! You have finished the required setup. You can take advantage of the many optional Solace PubSub+ Monitor features. See "Optional Setup" for details.

Output Data to InfluxDB

To output monitoring data to InfluxDB, you need to "Start and Login to the Solace PubSub+ Monitor", "Open the RTView Configuration Application" to configure connections to Solace Brokers, then "Create Database and User Account".

Create Database and User Account

This section assumes you have already configured connections to your Solace Brokers using the RTView Configuration Application.

To send monitoring data to InfluxDB you edit the **stats-receiver.properties** file, located in the **Data Collector** directory, define the metrics to poll and store, and specify the IP address and port number on the InfluxDB platform.

1. Create a database and a user with read and write privileges in your InfluxDB platform using the following InfluxDB shell commands:

   create database **yourSolaceStatsDB**

   use **yourSolaceStatsDB**

   create user SolaceStatsUser with password '**yourPwdWithSingleQuotes**'

   with all privileges grant all on **yourSolaceStatsDB** to SolaceStatsUser exit

2. Edit the **stats-receiver.properties** file, located in the directory where the data server will be started.

3. Enable InfluxDB Tap by commenting out the following line:

TAP_PLUGIN_CLASS = com.sl.statsds.RTViewStatsTap and uncomment the line:

TAP_PLUGIN_CLASS = com.solace.psg.enterprisestats.receiver.influxdb.InfluxDBStatsTap

This enables the plugin to send monitoring data to InfluxDB.

Note: At present, there is no option to send monitoring data to both InfluxDB and PubSub+ Monitor. To revert back to collect all caches and send data to the PubSub+ Monitor, uncomment the RTViewStatsTap line and comment out the InfluxDBStatsTap line. Also revert **DB_FIELD_SUBSCRIPTIONS** to its initial value (DB_FIELD_SUBSCRIPTIONS =\ which means the filter passes everything, as appropriate for the PubSub+ Monitor).

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4. Select the list of topics identifying the fields to write to InfluxDB by copying the list of topics in the **DB_FIELD_SUBSCRIPTIONS** property. These topics are semicolon separated and multiple lines are identified by **"\"** at the end of the topic. Initially you can choose from the examples that are provided in the **stats-receiver.properties** file itself. For example:

DB_FIELD_SUBSCRIPTIONS=\

SYSTEM_CONFIG-SYNC/authentication/client-certificate/max-certificate-chain-depth;\

SYSTEM_MEMORY/subscription-memory-usage-percent;\

SYSTEM_MEMORY/physical-memory-usage-percent;\

SYSTEM_MEMORY/slot-infos/*/nab-buffer-load-factor;\

SYSTEM_STATS_CLIENT/>;\

SYSTEM_STATS_NEIGHBOR/>;\

SYSTEM_CSPF_NEIGHBOR_STATS/>;\

SYSTEM_MSG-SPOOL_DETAIL/*;\

SYSTEM_MSG-SPOOL_STATS/>;\

VPN_STATS/maximum-spool-usage-mb;\

>;\

Refer to Solace documentation for the complete list of metrics that can be requested.

5. Add the connection properties to InfluxDB by scrolling down to the Influx DB Properties section in the **stats-receiver.properties** file and defining the following:

   ■ **INFLUXDB_HOST**: the hostname and port used for Influx DB. For example, if you run it locally in the default port: **INFLUXDB_HOST = localhost:8086**

   ■ **INFLUXDB_USER**: the user previously created in Influx DB to execute the inserts in the DB. For example: **INFLUXDB_USER = SolaceStatsUser or INFLUXDB_DB = stats** (this is the default)

   ■ **INFLUXDB_PASSWORD**: the password you set in InfluxDB encrypted with the Solace PSG Password Utility. (You can download this tool from Solace download site: **https://solace.com/downloads/**.)

You should now see monitoring data being stored in the InfluxDB database. If you encounter issues, check the log files in the **RTViewSolaceMonitor/projects/rtview-server/log** directory for errors and verify that InfluxDB is available and running.

You have completed configuring data collection! There are no other required configurations.

Output Data to Solace Broker

To send monitoring data to a Solace Broker do the following. The files you edit are located in the **rtvapm/solmon/bin/config** directory. No other configuration steps than those provided here are needed to output monitoring data to a Solace Broker. Refer to Solace documentation for additional information about the available message formats you can choose for sending the data.

1. Define the Solace Brokers to monitor by editing the **appliance_config_demo.xml** file (this adds connection properties to the monitored Solace Brokers). This Step is required.

2. If the data to be polled isn't already defined in the preconfigured XML files or you need additional poller groups for different monitoring options, do the following:

   ■ Define the monitoring data to poll by editing the **pollers_sl.xml** file (this file contains SEMP request details and response parsing specifics which the poller sends to Solace Brokers).

   ■ Define the poller groups that you want to use by editing the **groups_sl.xml** file (this file enables you to separate published statistics into groups of interest, publishes the statistics on the associated topic, and provides the configured poll interval)..

3. Start StatsPump as follows:

   In a Windows command prompt or UNIX terminal, go to the **RTViewSolaceMonitor/ rtvapm** directory and execute **rtvapm_init.bat** (Windows) or **rtvapm_init.sh** (UNIX).

   Change directory (**cd**) to **rtvapm/solmon/bin** directory and execute the following in the order provided (if you change the order it will not execute properly):

   [statspump|statspump.bat] config\pollers_sl.xml config\groups_sl.xml config\appliance_config_demo.xml

You should now see published monitoring data in the receiving Solace Broker.

You have finished configuration instructions to send monitoring data to a Solace Broker!