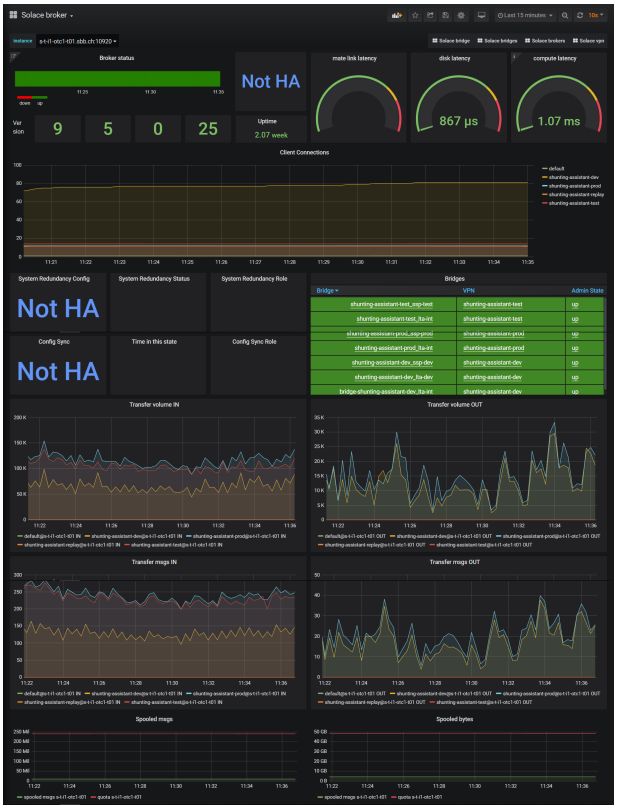
Solace Monitoring Dashboard: Broker

Dashboard "Solace broker" lists the most relevant monitoring data of one particular messaging broker.

This dashboard may be called from any other dashboard with a broker instance already pre-selected. The instance to investigate on can be changed any time on the instance dropdown menu.

Details on Solace message brokers in general can be found at Solace documentation page https://docs.solace.com/Solace-SW-Broker-Set-Up/Setting-Up-SW-Brokers.htm



A Solace message broker provides the general connectivity to services like network and storage. The application details will be configured by vpn and bridge components, which the broker hosts.

Metric	Possible Values	Description	Typical Actions
Broker status	Active (green) Shutdown (red)	This value corresponds to the status from the "Brokers" dashboard. The overall main operational status of this message broker instance is provided as either active or shutdown. The status is provided here as a time series, so dropouts in the past can bee seen from here.	If shutdown, the message broker should be started. In the event of non-success, the log file needs to be consulted for further analysis of the problem. Unexpected shutdowns in the past should be investigated for reason.
Redundancy Status	Local Active (green) Remote Active (yellow) Not HA (blue)	When configured in high availability setup, the Solace broker is arranged in a pair, for which one is the primary part. In case of an error of one instance, the remaining instance would seamlessly take over control. The redundancy status shows whether an instance is part of a HA setup, and if, what role this instance takes in that setup. If the current instance is in paired as HA and is the primary, it would read "Local active".	Activation of HA depends on the order of a message broker. The status should match with what has been ordered.
Mate link latency	Number with unit and colored scale	Mate link latency in the transaction completion to a High Availability (HA) "mate" message broker.In case of an "Not HA" setup, this value is left empty. Data is replicated to a secondary message broker before commit. The latency therefore has an impact to system performance. It is likely relevant to guaranteed messages only. Critical level is above 7ms, error level set above 8ms. https://docs.solace.com/System-and-Software-Maintenance/SW-Health-Monitoring.htm#Mate-lin	A high latency indicates a performance problem at the network layer, disk or broker cpu, caused by overload or to be addressed by the infrastructure team.

Disk latency	Number with unit and colored scale	Disk latency shows the roundtrip time introduced by persisting messages before a commit is given. The latency therefore has an impact to system performance. It is likely relevant to guaranteed messages only. Critical level is above 7ms, error level set above 8ms. https://docs.solace.com/System-and-Software-Maintenance/SW-Health-Monitoring.htm#Disk	A high latency may indicate that the disk, or access to the disk, is oversubscribed. Considerations are for an application on choice of messaging model (guaranteed messaging in particular). Unavailable or slow subscribers may cause excessive disk spool activity.
Compute latency	Number with unit and colored scale	Compute latency show the time the message broker takes to compute a message. The latency therefore has an impact to system performance. It is likely relevant to application scenario with durable endpoints, extensive selectors, queue browsing or transactions. Critical level is above 7ms, error level set above 8ms. https://docs.solace.com/System-and-Software-Maintenance/SW-Health-Monitoring.htm#Compute	A high latency may indicate that the cpu is oversubscribed, the cpu is being blocked by another application, or access to virtual memory is somehow retarded. Considerations to make are leaning towards the application model of message selection and choice of messaging protocol.
Version	Four numbers (green) no version (red)	This value shows the version number of the Solace message broker.	Version numers of HA pairs should be identical. Solace broker can operate with mixed software versions up to one major or minor version difference in a deployed network.
Uptime	time value	how long the broker is operational.	
Client Connections	Line on time graph	The number of current, concurrent connections from clients, either publishing or subscribing towards each of the vpn with the broker, as a time series graph. A click on a vpn's series graph allows to drill down into that vpn details. https://docs.solace.com/Configuring-and-Managing/SW-Broker-Specific-Config/Configuring-Conn-Scale-Tiers.htm	The number of connected clients should match the planned number of clients.
System Redundancy Config	Enabled Disabled Shutdown Not HA	Shows swetting of the configuration for system redundancy for high availability.	Match with order for HA services.
System Redundancy Status	Up Down (none)	Indicator for system redundancy service to be actually operational. In case of non-HA setup, this panel would remain blank.	Applies only if system redundancy configured. If configured, status "Down" would indicate an error.
System Redundancy Role	Primary (green) Backup (green) Undefined (red)	The redundancy role within the HA pair for this instance. In case of non-HA setup, this panel would remain blank.	
Config Sync	Up (green) Down (red) Not HA (blue)	In case of a HA pair, an indicator for config sysnc service being up and running. This is Config-Sync on broker level, not to be confused with Config-Sync on vpn level. https://docs.solace.com/Overviews/Config-Sync-Overview.htm https://docs.solace.com/Configuring-and-Managing/Config-Sync.htm	In case of Config-Sync down, the config sync would need to be re-established by an administrator.
Time in this state	Time value (blank)	In case of Config-Sync being configured, it lists the time since when the current Config-Sync state is present.	
Config Sync Role	Master Slave (blank)	In case of Config-Sync being up, the role this broker instance is taking in the HA pair for Config-Sync.	
Bridges	Table with names	A table of all vpn bridges configured to this message broker. It is possible to drill down into the bridge dashboard from here. In case of a local bridge, this name may appear twice, one for each vpn it is bridging.	

Transfer Volume IN	Line on time graph	The amount of data per second, as it is published into each of the vpn with the broker.	Applications reaching the limits of data transfer have either reconsider the data sent or will need to scale out over more message broker instances. Solace message broker is capable of handling 2x as much data for direct messages vs. guaranteed delivery, which should be taken in consideration for application design and capacity planning.
Transfer Valume OUT	Line on time graph	The amount of data per second, as it is sent from each of the vpn with the broker towards subscribed clients.	Applications reaching the limits of data transfer have either reconsider the data they subscribe to or will need to scale out over more message broker instances.
Transfer msg IN	Line on time graph	The count of messages per second, as they are published into each of the vpn with the broker.	Applications reaching the limits of message count have either reconsider the data sent or will need to scale out over more message broker instances. Solace message broker is capable of handling 2x as much messages for direct messages vs. guaranteed delivery, which should be taken in consideration for application design and capacity planning.
Transfer msg OUT	Line on time graph	The count of messages per second, as they are sent from each of the vpn with the broker towards subscribed clients.	Applications reaching the limits of message count have either reconsider the data they subscribe to or will need to scale out over more message broker instances.
Spooled msgs	Line on time graph	The number of messages spooled to disk for this message broker, over time. The quota line illustraes the quota of spooled messages available to this message broker. This graph is relevant for guarnteed messages only.	Applications would have to create scenario for how to handle a message spool situation. Message spool is a valid instrument for a limited time as a shock absorber functionality or mitigation on planned downtime of consumer systems. Permanent spool would indicate an application design problem, e.g. a slow consumer scenario.
Spooled bytes	Line on time graph	The amount of data spooled to disk for this message broker, over time. The quota line illustraes the maximum amount of data that can be spooled from this message broker. This graph is relevant for guarnteed messages only.	Applications would have to create scenario for how to handle a message spool situation. Message spool is a valid instrument for a limited time as a shock absorber functionality or mitigation on planned downtime of consumer systems. Permanent spool would indicate an application design problem, e.g. a slow consumer scenario.