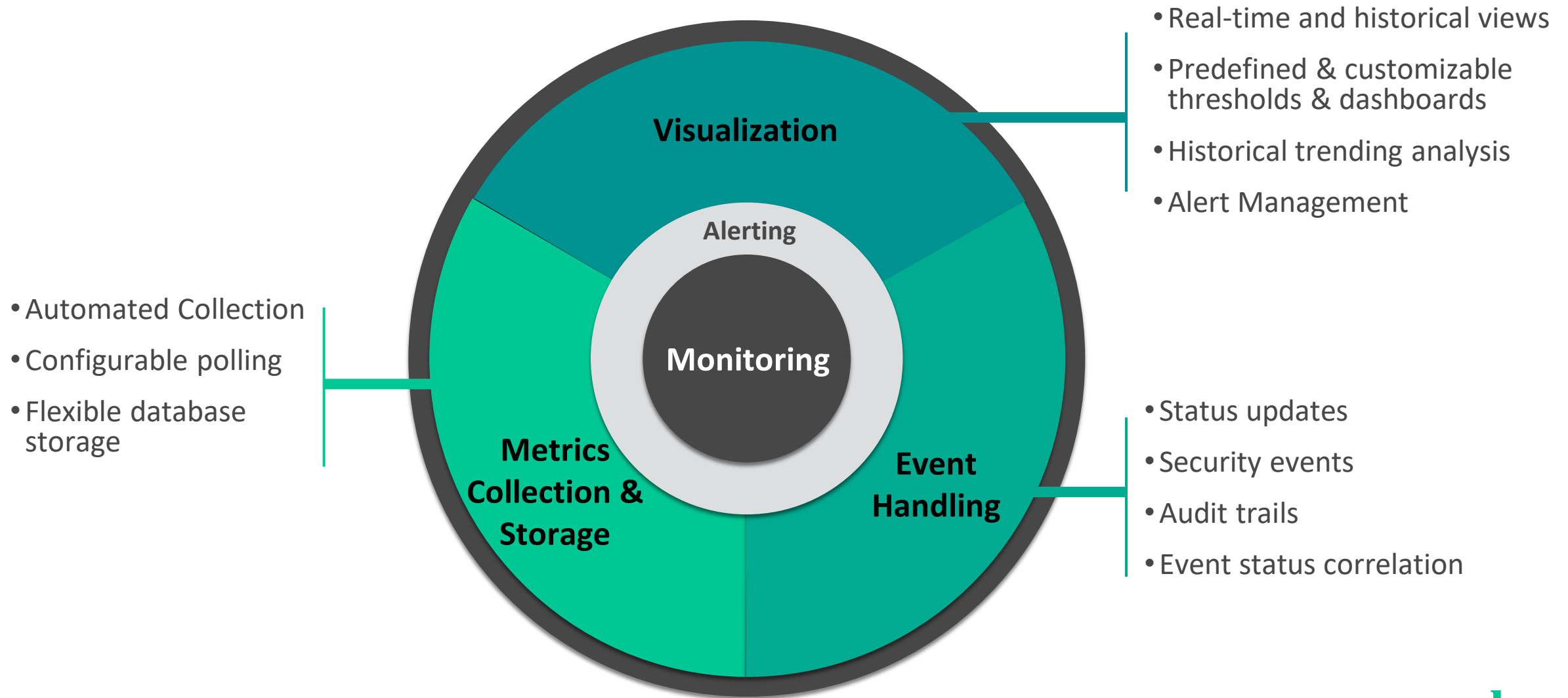


Event Broker Monitoring

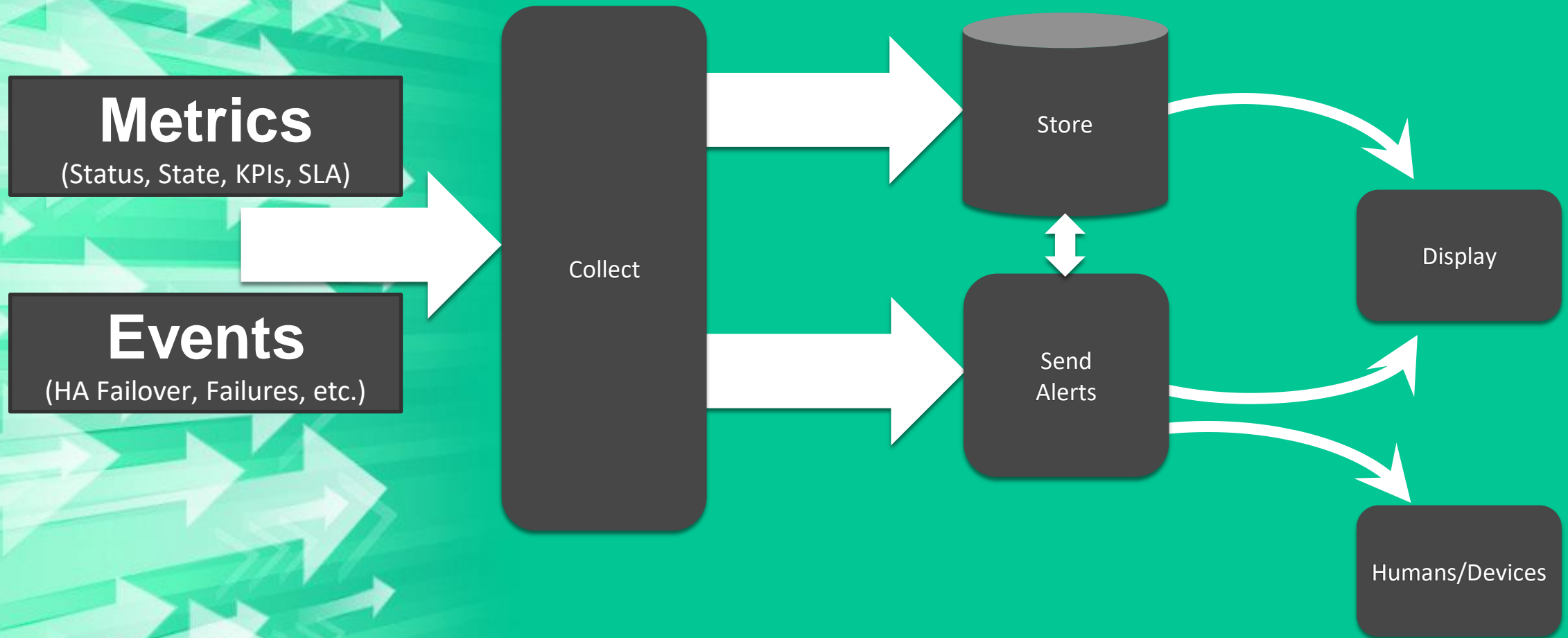
Module Objectives

- **Introduce the monitoring capabilities**
- **Explore the basic statistics and metrics available for monitoring**

Key Monitoring Requirements



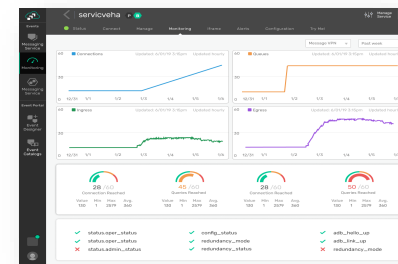
Key Functions of Monitoring:



Ways to Monitor PubSub+ Event Brokers



PubSub+ Monitor



PubSub+ Insights
(coming soon)

A screenshot of the Solace Syslog Events table. The table lists various system events, including 'SOLACE-001', 'SOLACE-002', and 'SOLACE-003'. Each event entry includes a timestamp, a severity level (e.g., 'ERROR'), and a detailed description of the event. The table is organized into columns for event ID, timestamp, severity, and message.

Syslog Events

A screenshot of the Solace SEMP (Solace Event Management Platform) dashboard. It displays a list of events, each with a unique ID, a timestamp, and a description. The events are categorized by severity and type, providing a comprehensive view of system health and performance. The interface is designed for easy navigation and filtering of event data.

SEMP

SEMP for Monitoring

- SEMP can also be used for collecting metrics for monitoring purposes
- For ex. you can monitor queues and client connections
- A separate RESTful API for monitoring available:
 - <https://docs.solace.com/API-Developer-Online-Ref-Documentation/swagger-ui/monitor/index.html>

Object Resources

Objects are composed of attributes and collections, and are described by JSON content as name/value pairs. The collections of an object are not contained directly in the object's JSON content, rather the content includes a URI attribute which points to the collection. This contained collection resource must be managed as a separate resource through this URI.

At a minimum, every object has 1 or more identifying attributes, and its own `uri` attribute which contains the URI to itself. Attributes may have any (non-exclusively) of the following properties:

Property	Meaning	Comments
Identifying	Attribute is involved in unique identification of the object, and appears in its URI	
Required	Attribute must be provided in the request	
Read-Only	Attribute can only be read, not written	See note 3
Write-Only	Attribute can only be written, not read	
Requires-Disable	Attribute can only be changed when object is disabled	
Deprecated	Attribute is deprecated, and will disappear in the next SEMP version	

In some requests, certain attributes may only be provided in certain combinations with other attributes:

Relationship	Meaning
Requires	Attribute may only be changed by a request if a particular attribute or combination of attributes is present
Conflicts	Attribute may only be provided in a request if a particular attribute or combination of attributes is not present

HTTP Methods

The following HTTP methods manipulate resources in accordance with these general principles:

Method	Resource	Meaning	Request Body	Response Body
POST	Collection	Create object	Initial attribute values	Object attributes and metadata
PUT	Object	Create or replace object	New attribute values	Object attributes and metadata
PATCH	Object	Update object	New attribute values	Object attributes and metadata
DELETE	Object	Delete object	Empty	Object metadata
GET	Object	Get object	Empty	Object attributes and metadata
GET	Collection	Get collection	Empty	Object attributes and metadata

Common Query Parameters

The following are some common query parameters that are supported by many methods. Note that multiple query parameters can be used together in a single request.

Method	URI	Meaning
GET	<code>/msg/vpn/{vpnName}/queues</code>	Gets a list of Queue objects
POST	<code>/msg/vpn/{vpnName}/queues</code>	Creates a Queue object
DELETE	<code>/msg/vpn/{vpnName}/queues/{queueName}</code>	Deletes a Queue object
GET	<code>/msg/vpn/{vpnName}/queues/{queueName}</code>	Gets a Queue object
PUT	<code>/msg/vpn/{vpnName}/queues/{queueName}</code>	Updates a Queue object
POST	<code>/msg/vpn/{vpnName}/queues/{queueName}</code>	Replaces a Queue object
GET	<code>/msg/vpn/{vpnName}/queues/{queueName}/subscriptions</code>	Gets a list of Queue Subscription objects
POST	<code>/msg/vpn/{vpnName}/queues/{queueName}/subscriptions</code>	Creates a Queue Subscription object
DELETE	<code>/msg/vpn/{vpnName}/queues/{queueName}/subscriptions/{subscriptionTopic}</code>	Deletes a Queue Subscription object
GET	<code>/msg/vpn/{vpnName}/queues/{queueName}/subscriptions/{subscriptionTopic}</code>	Gets a Queue Subscription object

Basic Operations - curl

The basics of how to create, read, update, and delete a SEMP object using an HTTP client (curl)

[START TUTORIAL](#)

Generating the SEMP Client Library

Generate a SEMP management client library for any of the supported programming languages

[START TUTORIAL](#)

Basic Operations - Java

The basics of how to create, read, update, and delete a SEMP object using a Java client library

[START TUTORIAL](#)

Message VPN with Queue - Java

Sample integration into a Java-based management tool using the SEMP Java Client Library

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Message VPN with Queue - Python

Sample integration into a Python-based management tool using the SEMP Python Client Library

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Message VPN with Queue - Ruby

Sample integration into a Ruby-based management tool using the SEMP Ruby Client Library

[START TUTORIAL](#)

Syslog Events

- **PubSub+ Event Brokers generates syslog messages to record the occurrence of events happening on broker, such as**
 - Routine operations
 - Failure and error conditions, such as a disk failure
 - Emergency or critical conditions
- **Logged to local files**
 - logs can be viewed in the local file system using CLI
- **Optionally can be pushed to a Syslog server over UDP**

SoIOS-TR Message Bus Management Syslog Events

Table of Contents

- [SYSTEM](#)
 - [SYSTEM_AD](#)
 - [SYSTEM_ADB](#)
 - [SYSTEM_AUTHENTICATION](#)
 - [SYSTEM_CFGSYNC](#)
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 - [VPN_SOLCACHE](#)
 - [VPN_VPN](#)
- [CLIENT](#)
 - [CLIENT_AD](#)
 - [CLIENT_CLIENT](#)

Example Log Message

- **Syslog message:**

```
2015-11-03T20:28:52+0800 <local3.warning> solsg1 BLUE_TAGWARN: VPN:  
VPN_AD_MSG_SPOOL_HIGH: Blue - Message VPN (165) Queue testQueue message spool threshold  
819 kB (80%) reached: 878 kB
```

- Header

timestamp <facility.severity> host
2019-11-03T20:28:52+0800 <local3.warning> solsg1

- Message Priority

<tag + severity> <type> <event> vpn
BLUE_TAGWARN: VPN: VPN_AD_MSG_SPOOL_HIGH: Blue

- Message Text

Message VPN (165) Queue testQueue message spool
threshold 819 kB (80%) reached: 878 kB

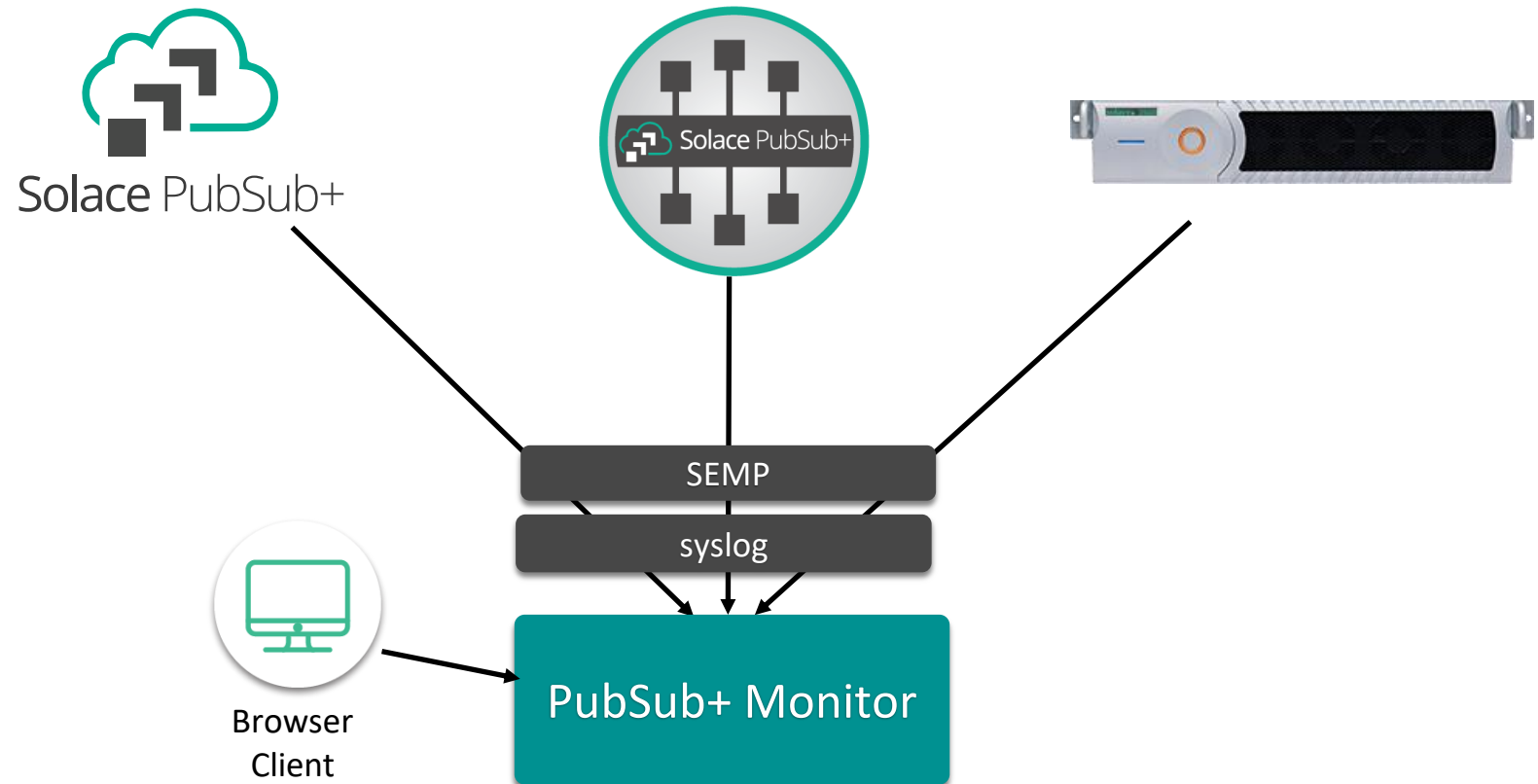
PubSub+ Monitor: What is it?

- Standalone application
- Client – Server Architecture
- Server deployed on VM
- On-Prem or in Cloud
- Browser based client
- Agentless
- Connects to brokers' SEMP interface

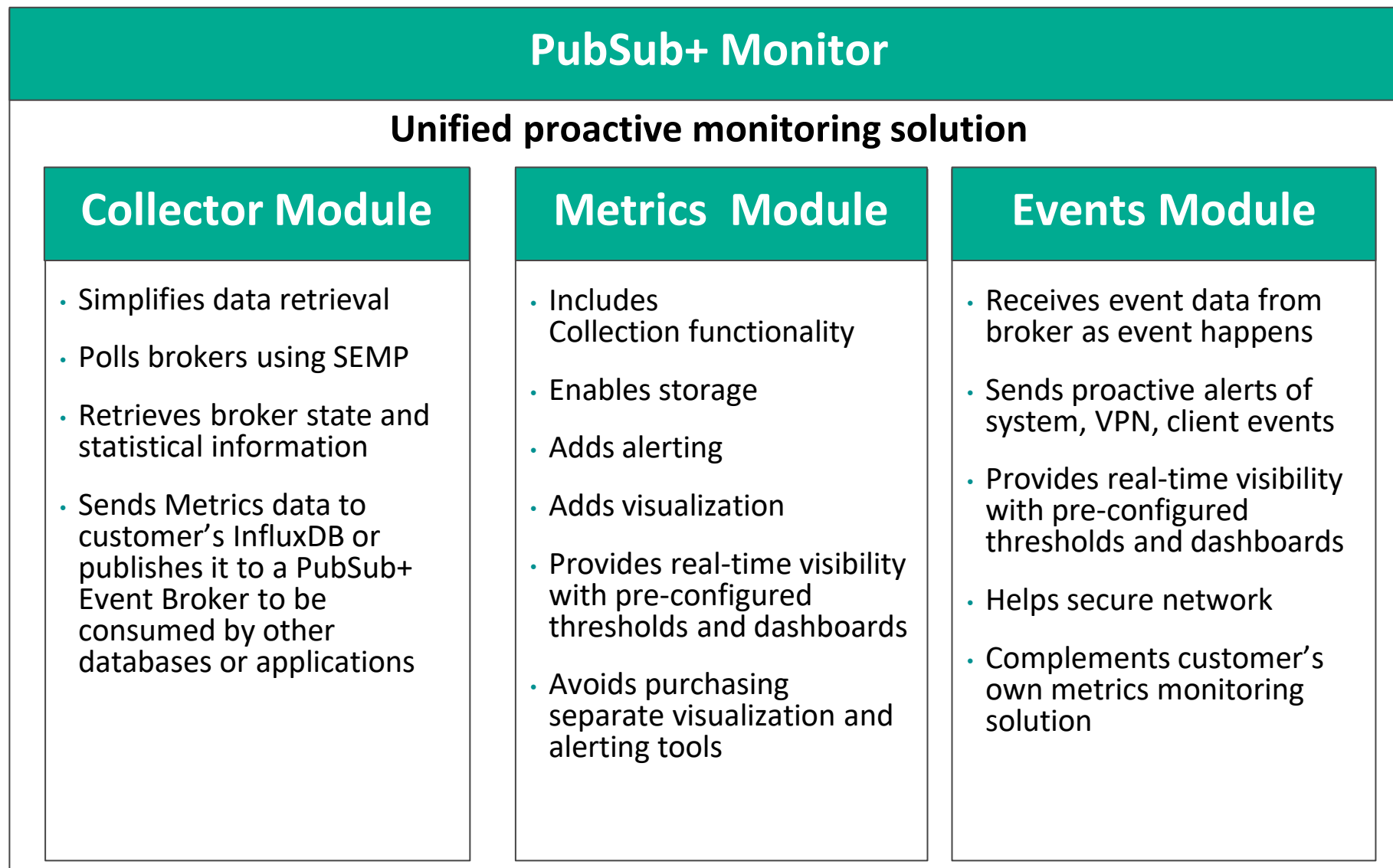
As a Service

Software

Hardware



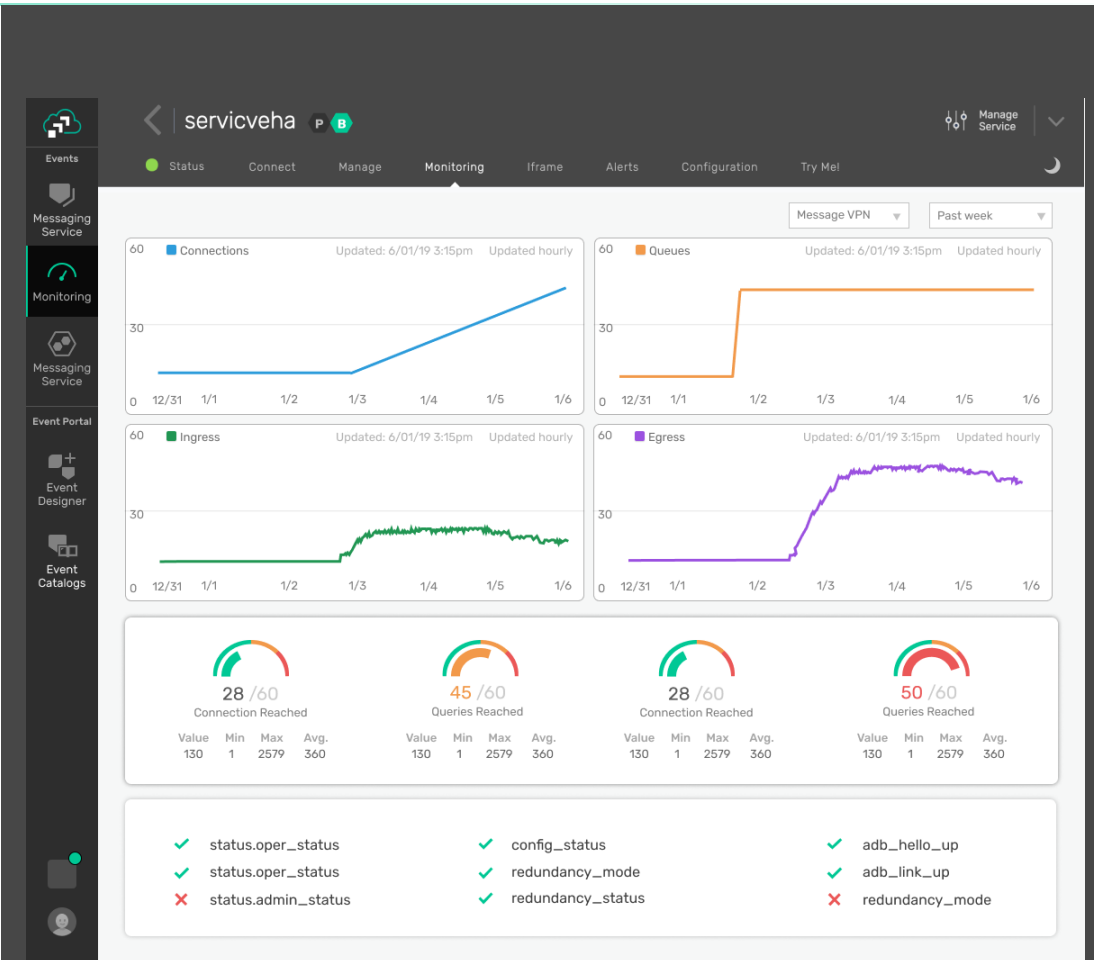
PubSub+ Monitor: 3 à la carte modules available



PubSub+ Insights (coming soon) – What is it?

Centralized, out-of-the-box, proactive monitoring for PubSub+ Event Broker: Cloud Services

- Metrics collection
- Event handling
- Operational Dashboards
- Capacity Planning
- Application Insights
- Alerting
- Simple setup
- Real-time and historical



Getting Support

PubSub+ Support Plans

	Community	Silver	Platinum
Support Hours	n/a	Business Hours	24/7/365
Response Time Severity 1 Severity 2 Severity 3 Severity 4	n/a	8 Business Hours for All	30 Minutes 2 Hours 8 Business Hours 8 Business Hours
Designated Support Contacts	0	4 (can negotiate more)	Unlimited
Support Channel	Community forums	Community forums, Secure web login	Community forums, Secure web login, Phone, Email
Applicability	Software: Standard edition Cloud: Free plan	Software: Standard edition Cloud: Starter plans	Appliances Software: Enterprise edition Cloud: enterprise plans

* Appliance customers can purchase additional support for physical assistance with hardware.



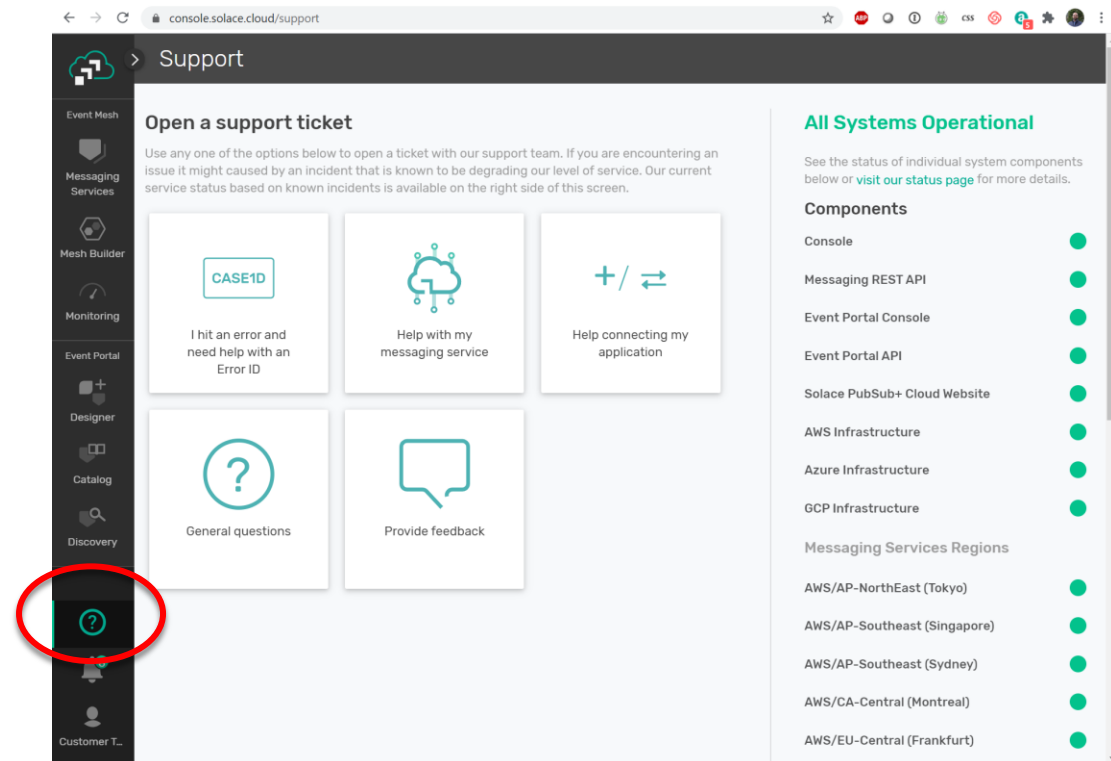


Raising a Support Ticket

- **For severity 2, 3, & 4 issues and enhancement requests**
 - Raise a support ticket by [email](#)
 - [Log into](#) the ticketing system and raise a support ticket
- **For severity 1 issues or critical production issues**
 - Raise a support ticket by phone
- <https://solace.com/support>
- Email: support@solace.com
- **Ticketing System:**
<https://rt.solace.com/rt>
- **Phone**
 - International: +1-613-270-8404
 - **USA/Canada:** 1-866-765-2231
 - **India:** 0008001009483
 - **United Kingdom:** +44 800 014 8187
 - **Singapore:** +65 6221 3660

Support in PubSub+ Cloud Console

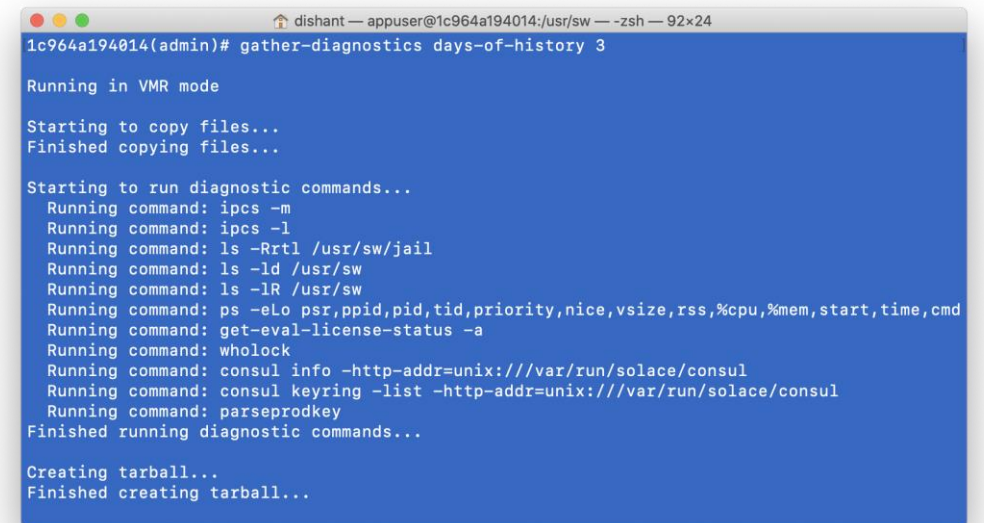
- You can open a support ticket from within PubSub+ Cloud Console
- Recommended way to report issues for your PubSub+ Cloud messaging services and Event Portal



Gathering Diagnostic Files

- For Docker Event Broker containers:
 - `gather-diagnostics-host` utility from the Docker host
 - [Refer to the Docker docs here](#)
- For Cloud/Machine Images based Software Event Brokers:
 - `solacectl gather-diagnostics` utility from the Linux Host shell as root
 - [Refer to the Cloud/MI docs here](#)
- For Appliances
 - `gather-diagnostics` command from the Solace CLI

- Provide diagnostics files to Solace Support
 - Upload to <https://filedrop.solace.com>
 - Raise a support ticket along with the file name uploaded
 - Additionally provide any Solace API log files when troubleshooting application issues



```
dishant — appuser@1c964a194014:/usr/sw — zsh — 92x24
1c964a194014(admin)# gather-diagnostics days-of-history 3

Running in VMR mode

Starting to copy files...
Finished copying files...

Starting to run diagnostic commands...
Running command: ipcs -m
Running command: ipcs -l
Running command: ls -Rtl /usr/sw/jail
Running command: ls -ld /usr/sw
Running command: ls -lR /usr/sw
Running command: ps -eLo psr,ppid,pid,tid,priority,nice,vsize,rss,%cpu,%mem,start,time,cmd
Running command: get-eval-license-status -a
Running command: wholock
Running command: consul info -http-addr=unix:///var/run/solace/consul
Running command: consul keyring -list -http-addr=unix:///var/run/solace/consul
Running command: parseprodkey
Finished running diagnostic commands...

Creating tarball...
Finished creating tarball...
```


Hands-on Activity

- Exploring Syslog events from the CLI
- Gathering diagnostics

Hands-on Activity

- **Exploring Syslog Log Files**

Hands-on Activity

- **Gathering diagnostics**