TRIDIUM

NS2024

POWER OF PARTNERSHIP

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MONITORING
NIAGARA STATION
WITH DATADOG
VAYANDATA

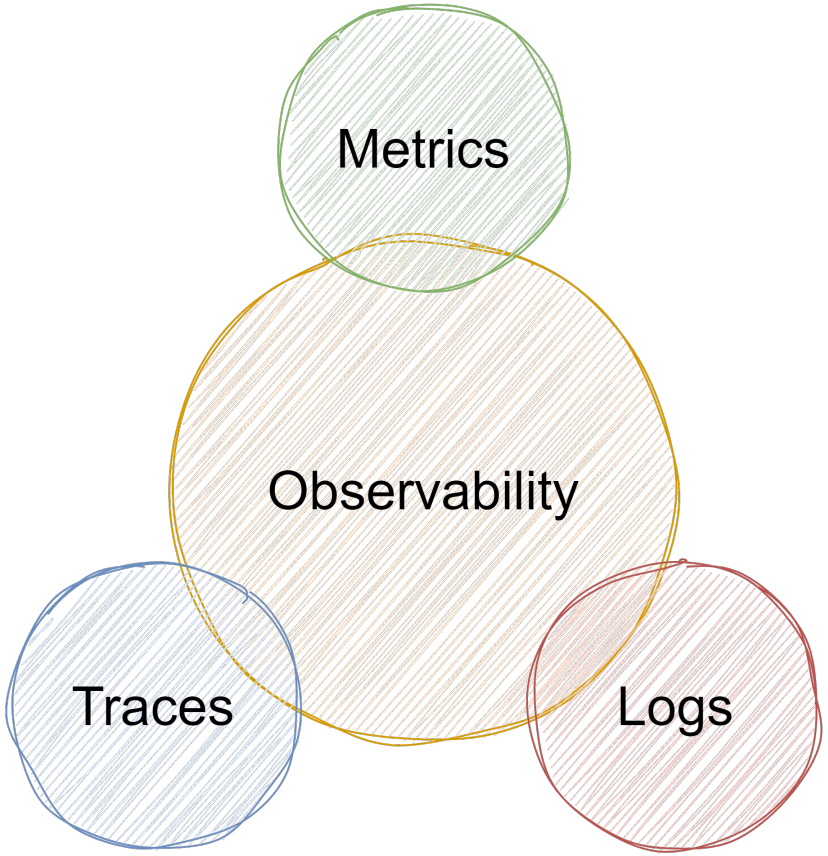
CONTEXT

We deploy more and more Niagara stations accross Europe and we need to keep them operational.

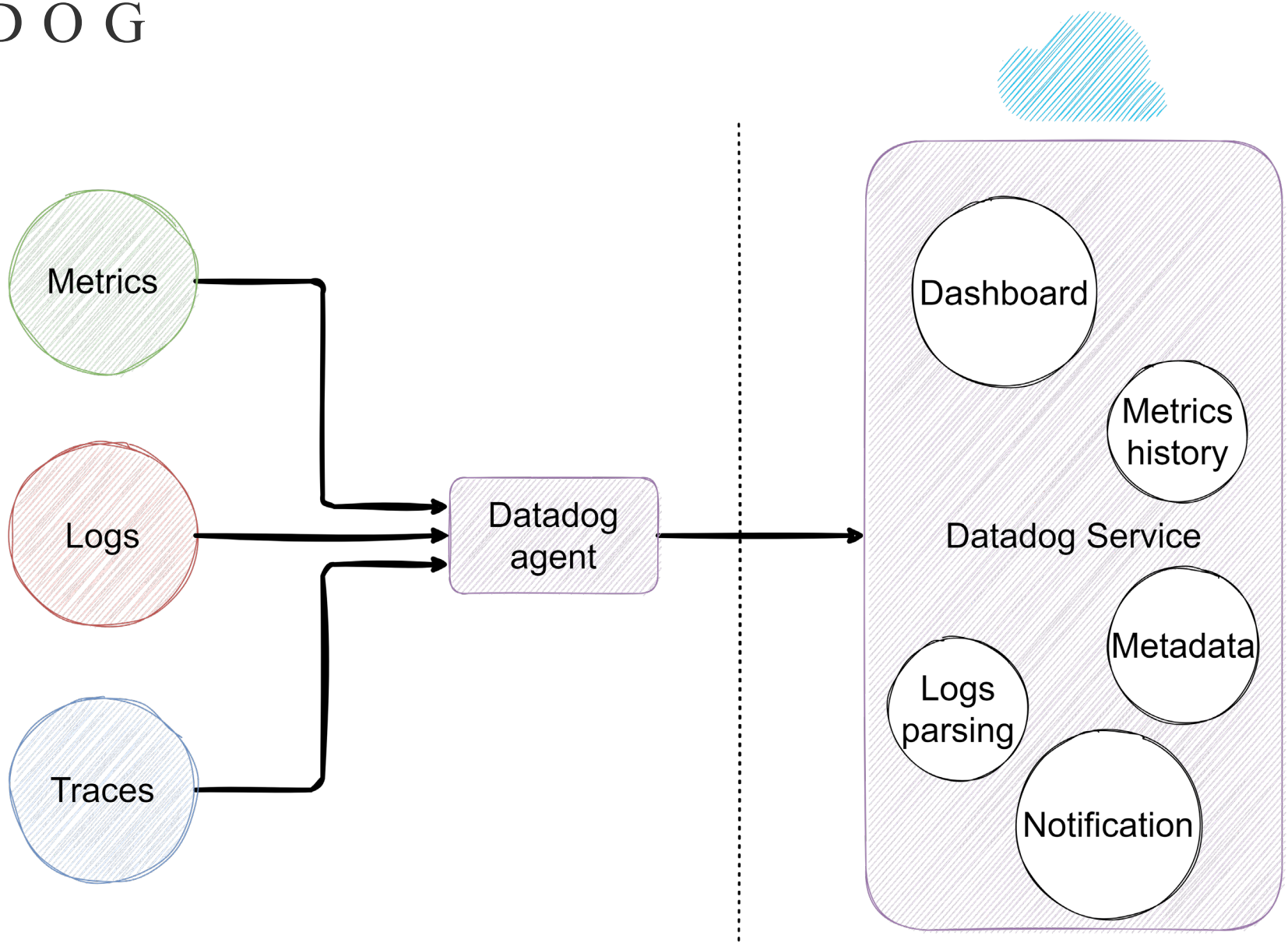
But so many things can go wrong:

- Watchdog timeout
- Internet connection issues
- Station is stopped manually and never restarted
- NTP synchronisation issue
- Certificate expiration
- And so on …

OUR ANSWER : OBSERVABILITY

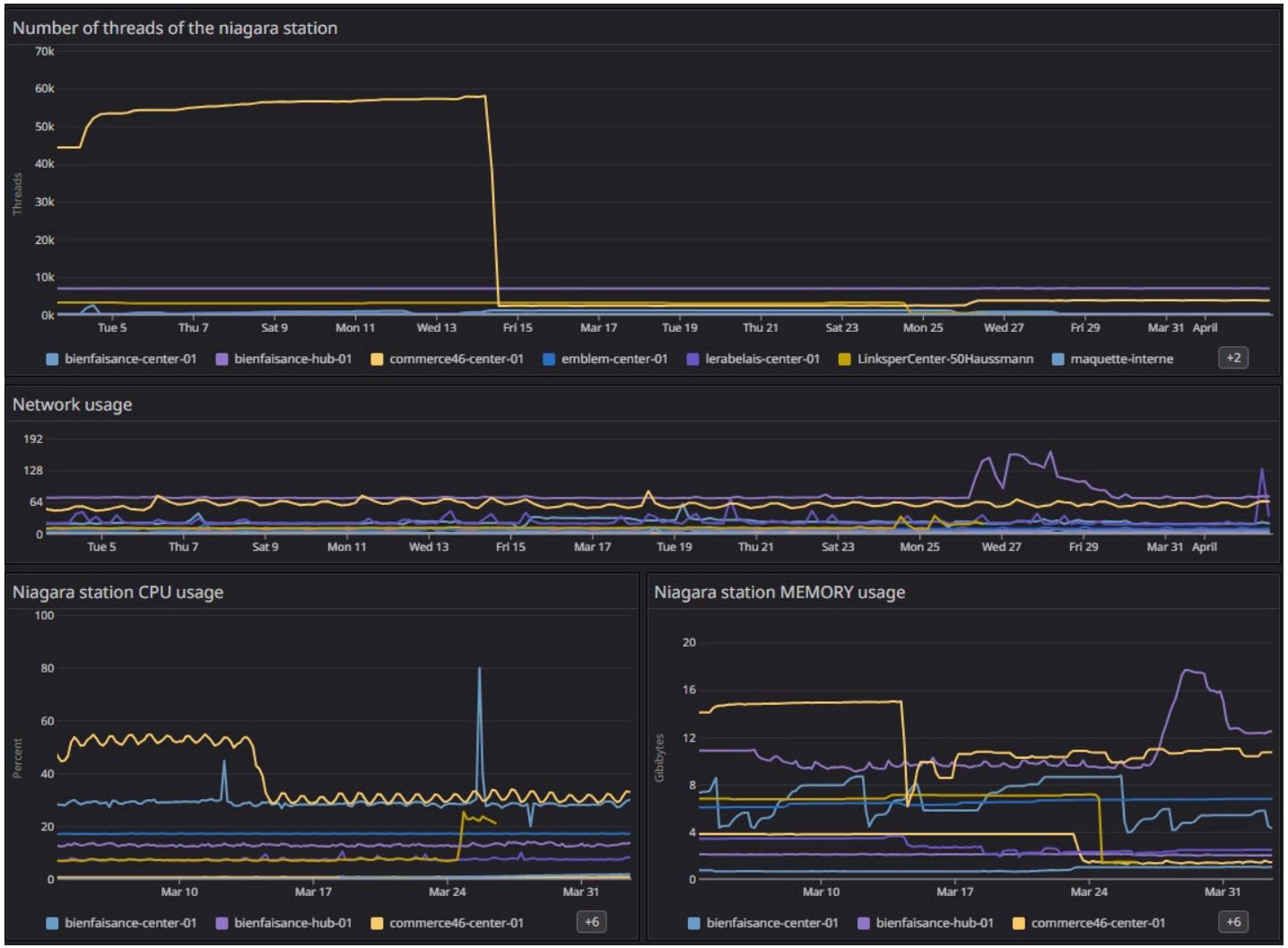


DATADOG


Metrics
Logs
Traces
Datadog agent
Dashboard
Metrics history
Datadog Service
Metadata
Logs parsing
Notification

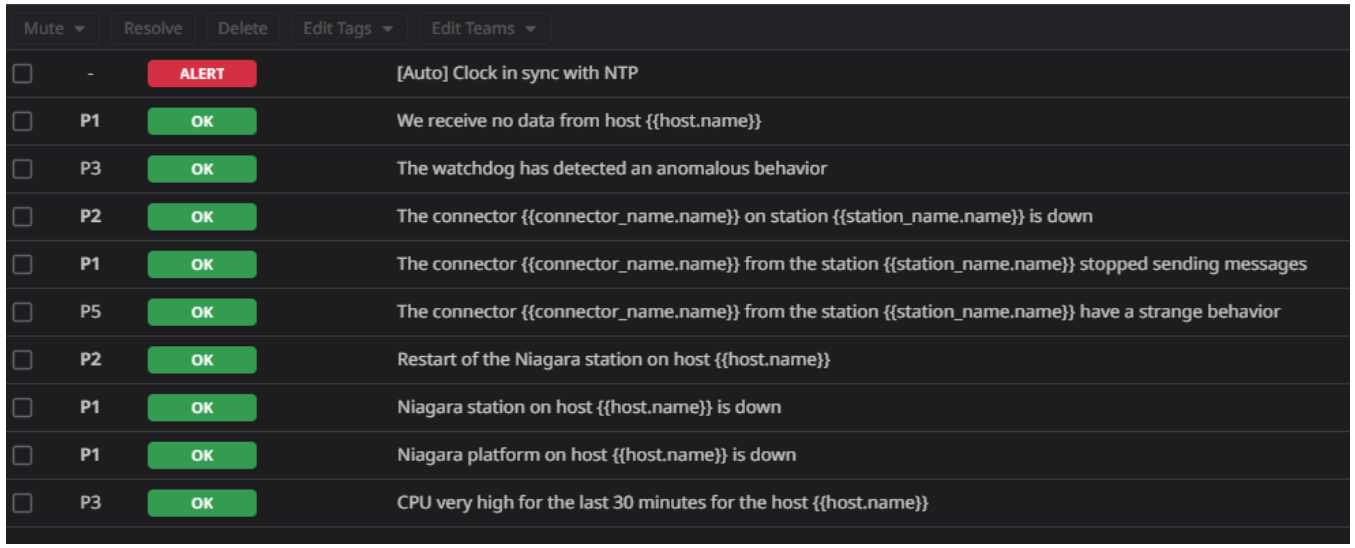
HOST METRICS

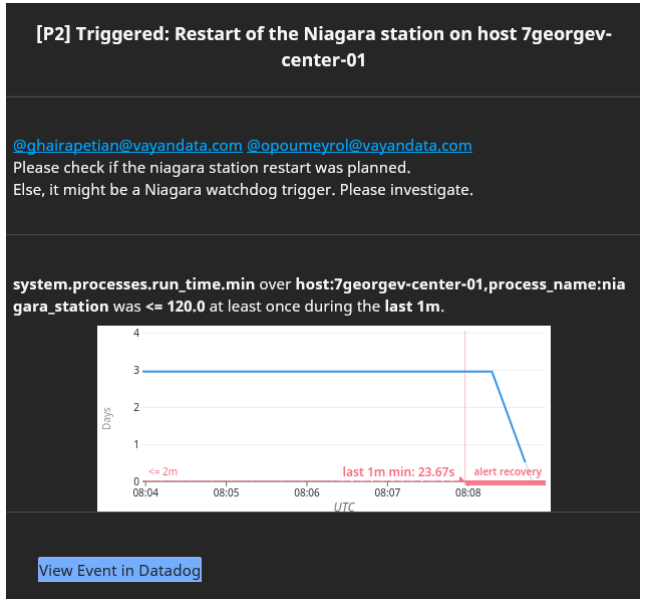
- CPU Usage
  - Total
  - Niagara station
- RAM Usage
  - Total
  - Niagara station
- Network Usage
- Time Synchronization
- Niagara Process (station/platform)
  - Status
  - Uptime
- Niagara Station threads number

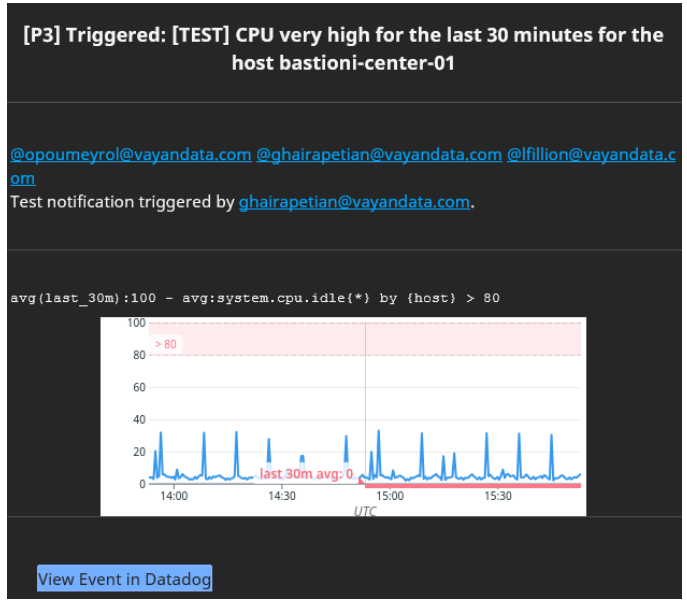


NOTIFICATIONS

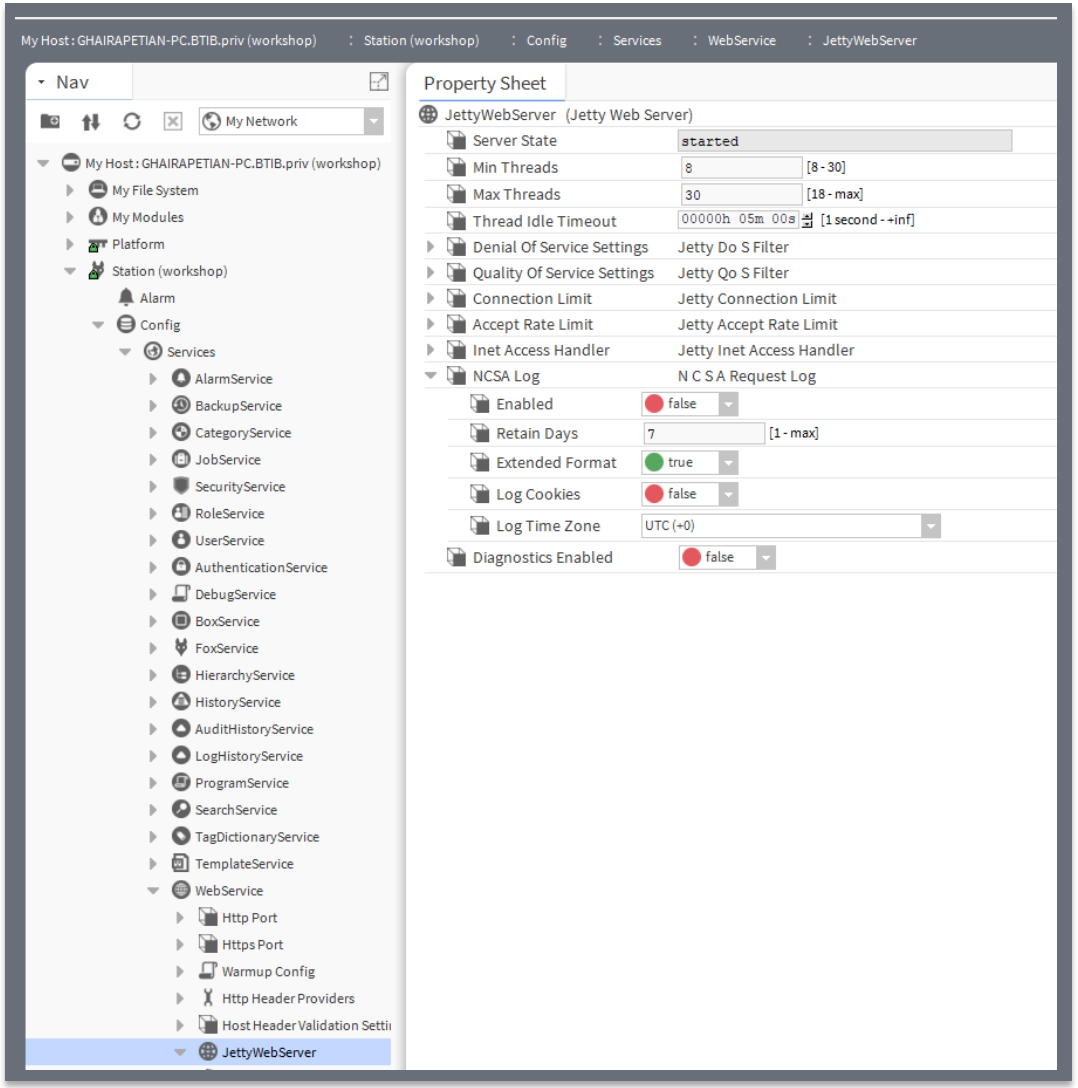
- When ?
  - Threshold reached
  - Abnormal behavior
  - Process down
  - ...
- How ?
  - Email
  - Slack
  - Zendesk Ticket
  - ...

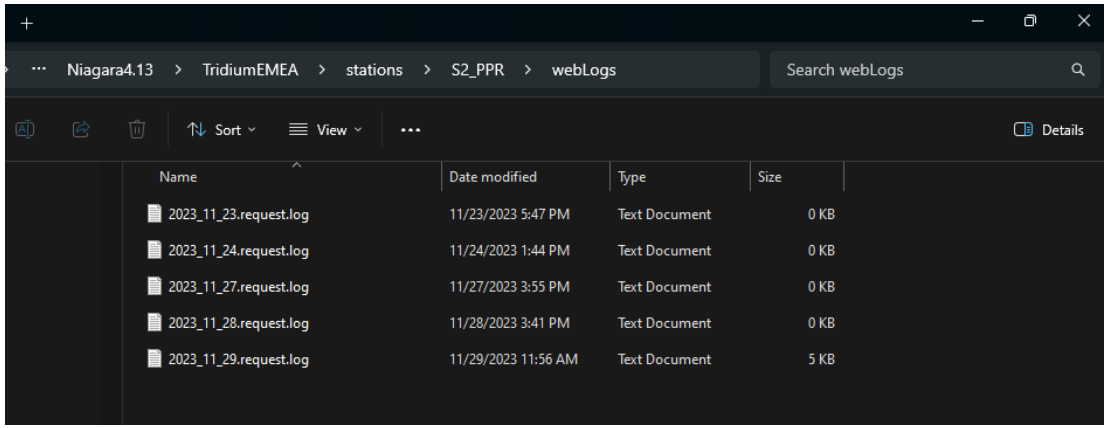


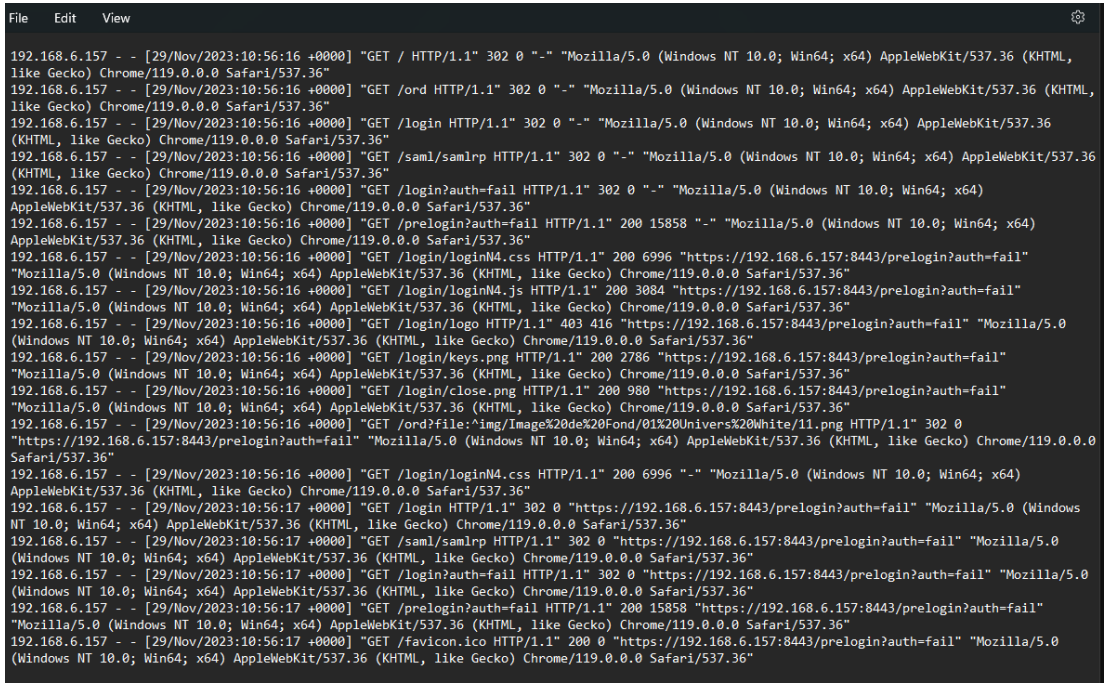




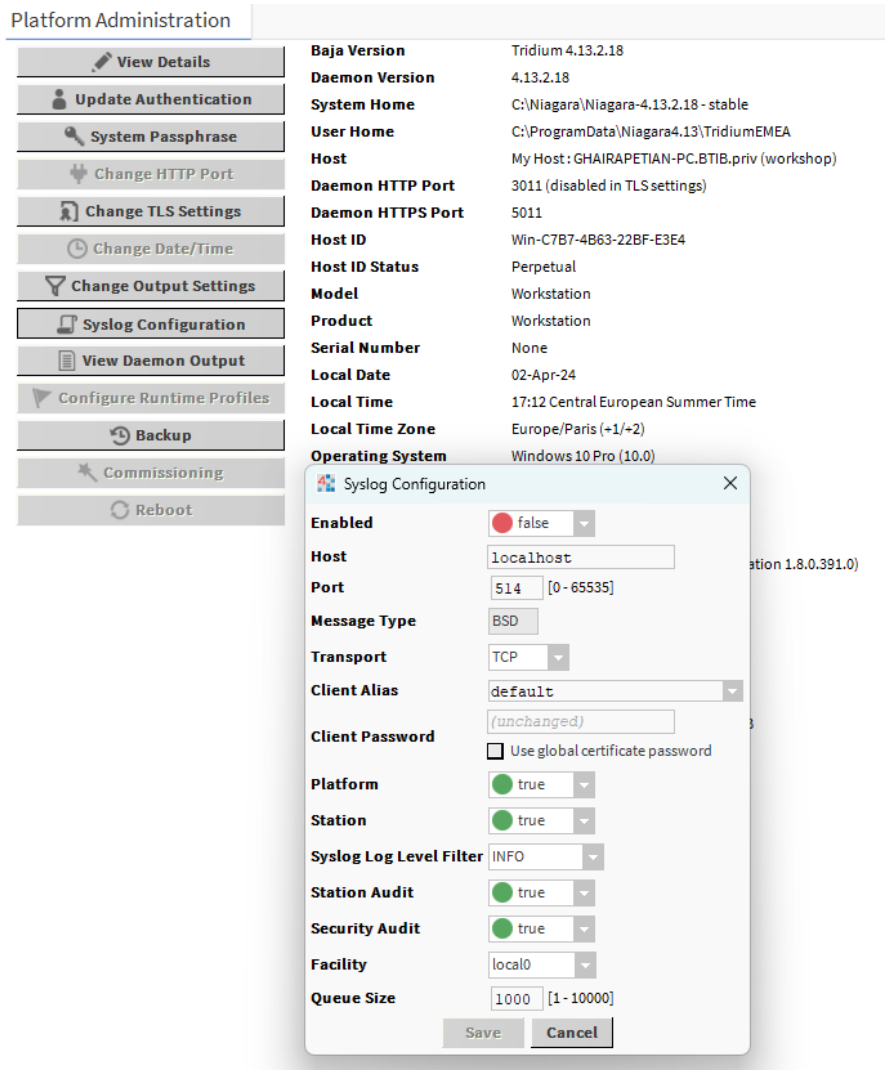
NIAGARA LOGS : WEB

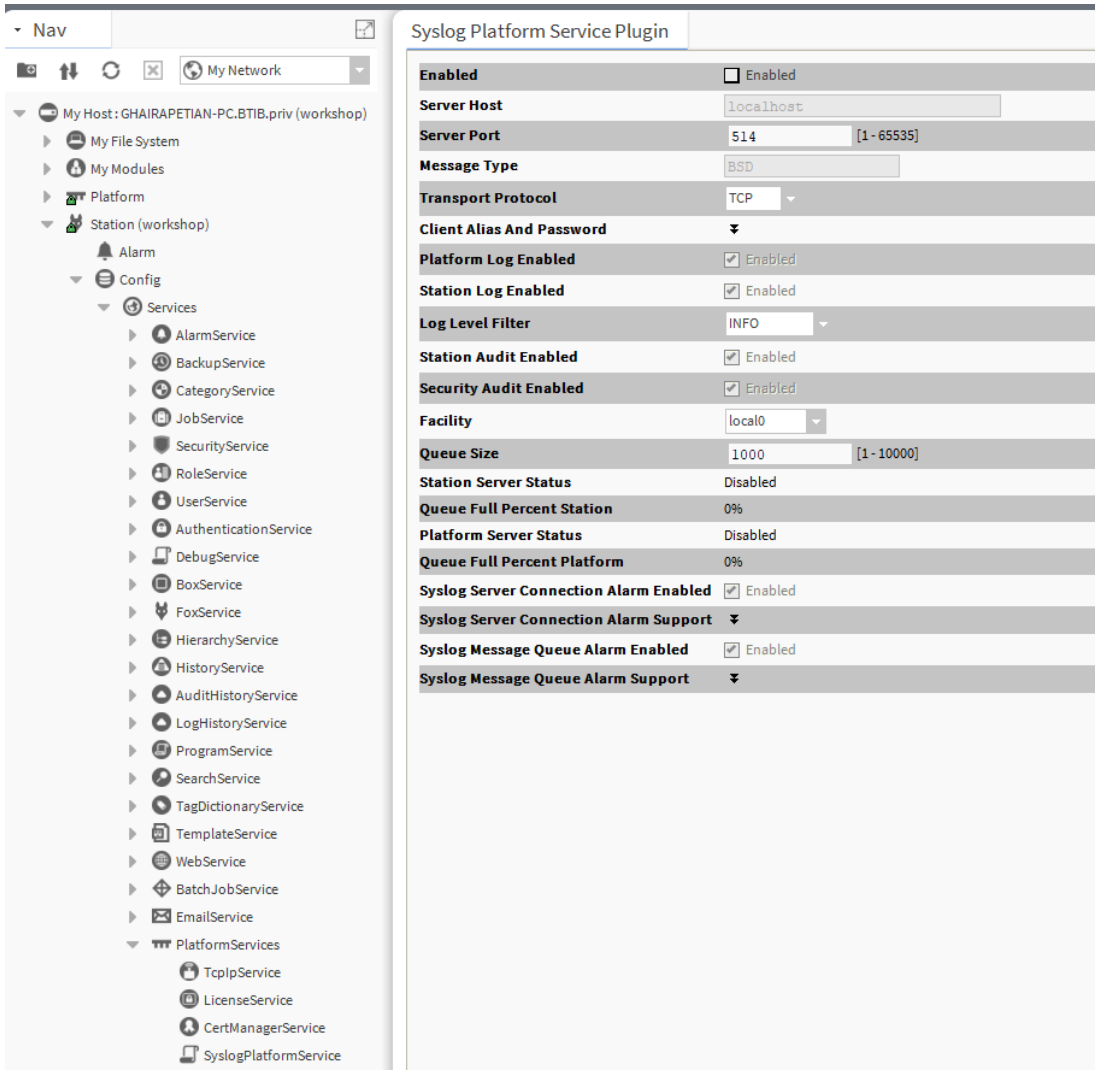




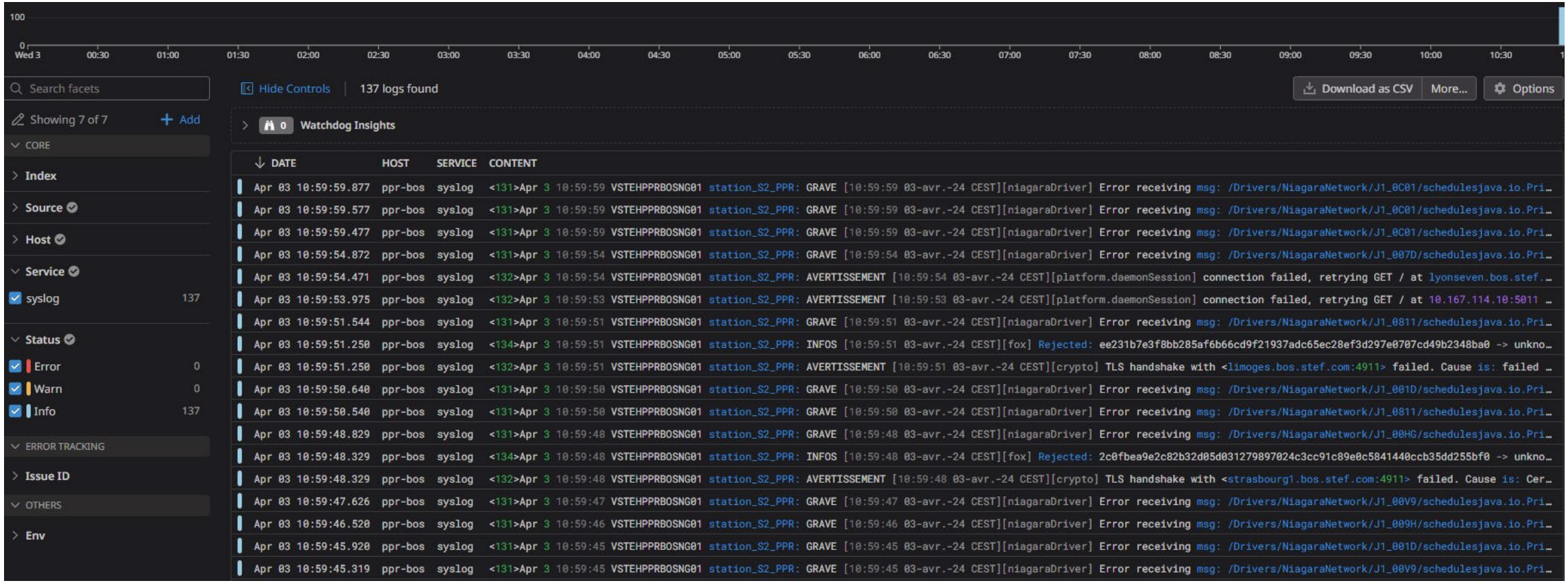


NIAGARA LOGS : SYSLOG

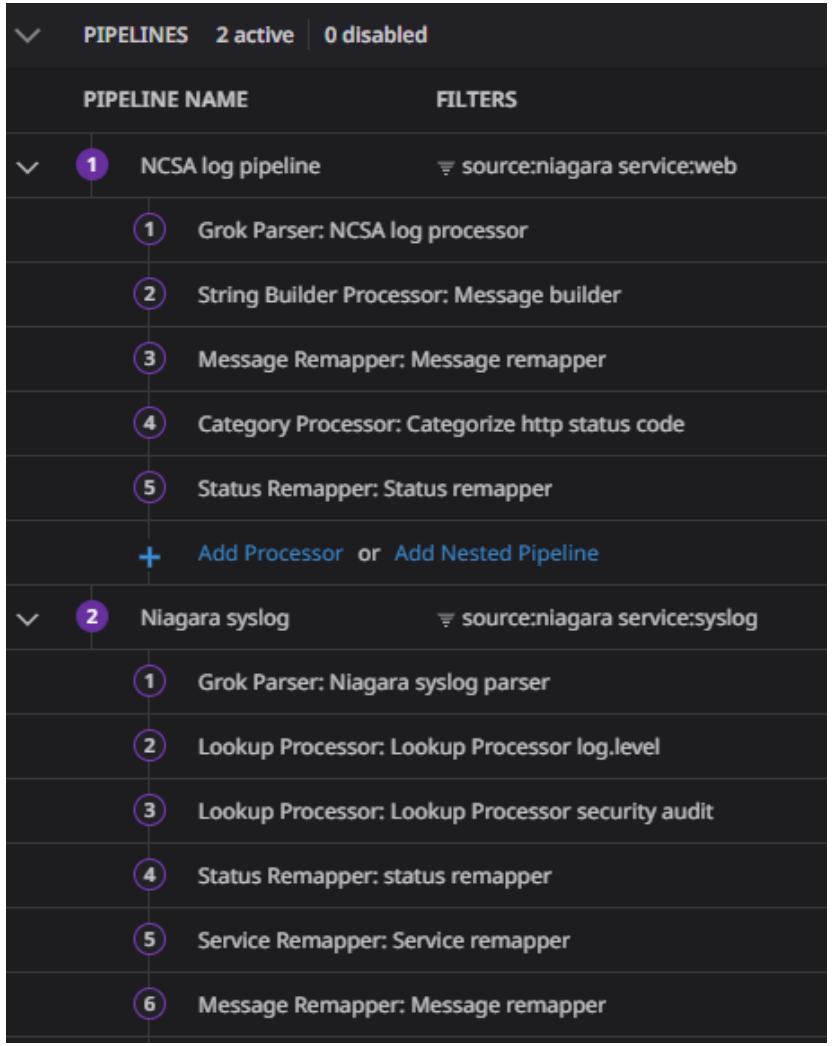


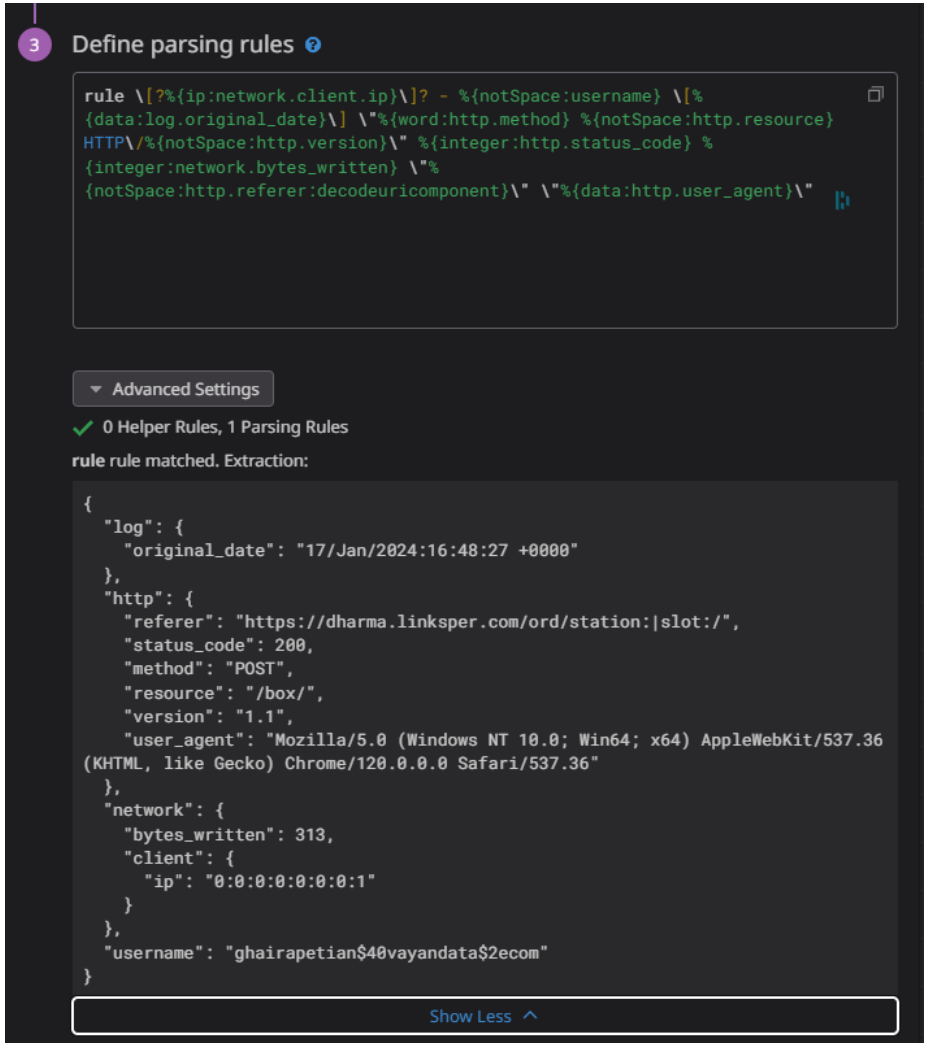


NIAGARA LOGS : RAW FORMAT

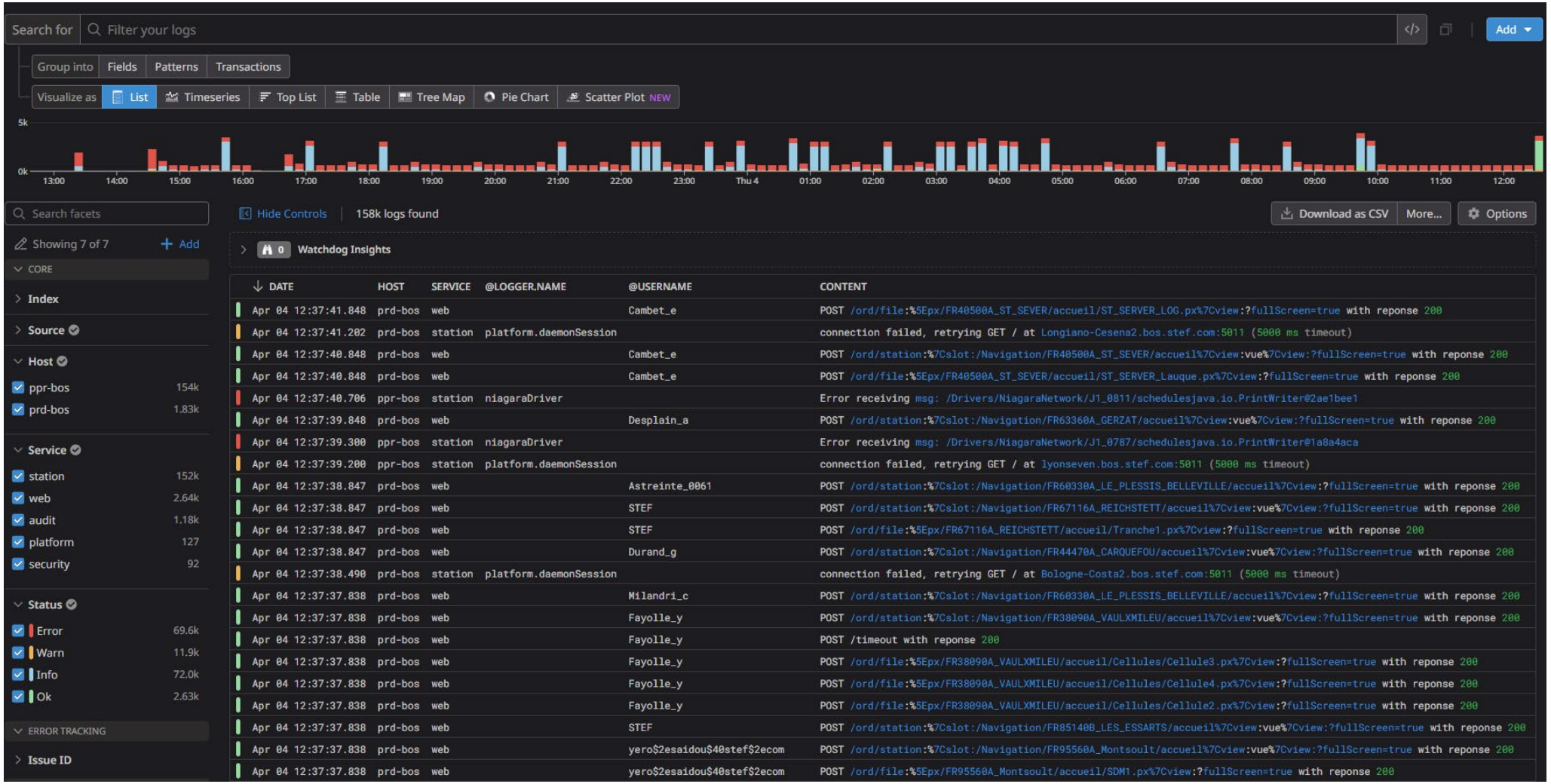


NIAGARA LOGS : PARSING AND MAPPING





NIAGARA LOGS : PARSED FORMAT



COMING SOON : NIAGARA METRICS

- The goals is to get metrics from the station directly …
  - engine.scan.recent
  - engine.scan.lifetime
  - engine.scan.usage
  - Certificate expiration
  - And so on …
- … And send it to Datadog

Property Sheet

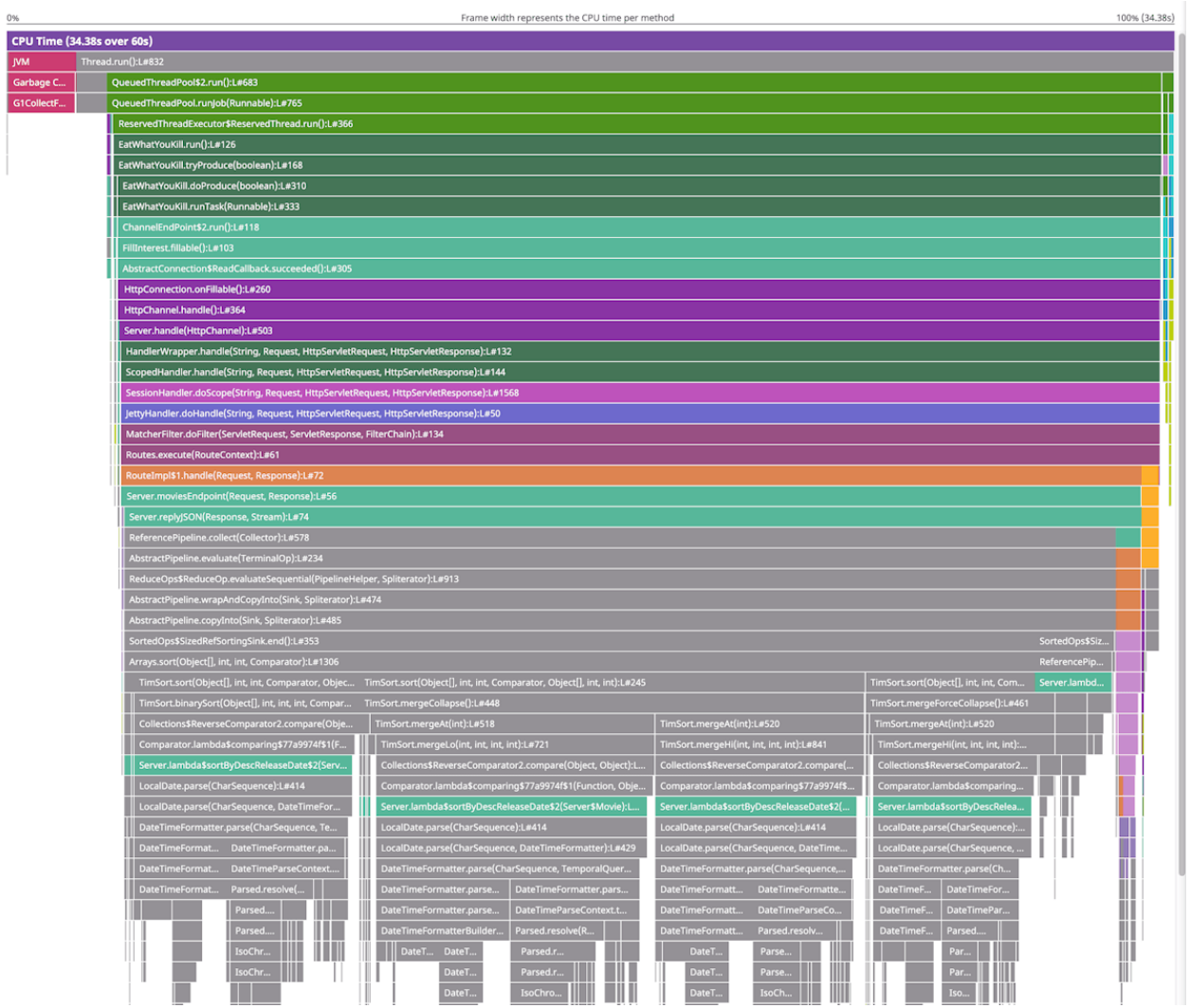
SecurityService (Security Service)	
Status	{ok}
Fault Cause	
Enabled	true
Certificates	Certificate Folder
default	Certificate Info
Alias	default
Expiry	288.0 {ok}
Used In	Folder
Save Dashboard Data To Bog	false
Station Link Config	Display remote station dashboard

Resource Information

Name	Value
component.count	1182
cpu.usage	0%
engine.queue.actions	0 (Peak 3)
engine.queue.longTimers	4 (Peak 4)
engine.queue.mediumTimers	3 (Peak 3)
engine.queue.shortTimers	0 (Peak 0)
engine.scan.lifetime	.000 ms
engine.scan.peak	.000 ms
engine.scan.peakInterscan	47.000 ms
engine.scan.recent	.000 ms
engine.scan.timeOfPeak	04-Apr-24 3:22 PM CEST
engine.scan.timeOfPeakInterscan	04-Apr-24 3:22 PM CEST
engine.scan.usage	0%
heap.free	260 MB
heap.max	910 MB
heap.total	558 MB
heap.used	304 MB
history.count	6
mem.total	16103 MB
mem.used	12383 MB

NIAGARA TRACES : THE CHRISTMAS GIFT

- Permit to know which Java method consume a lot of CPU in real time
- Not able to use it for now because it needs to use a jar as a java agent and it is against Tridium Java Security Policy.
- Maybe one day ? Please ?

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