

Welcome

Business iQ Webinar Series Transaction Analytics

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Logistics

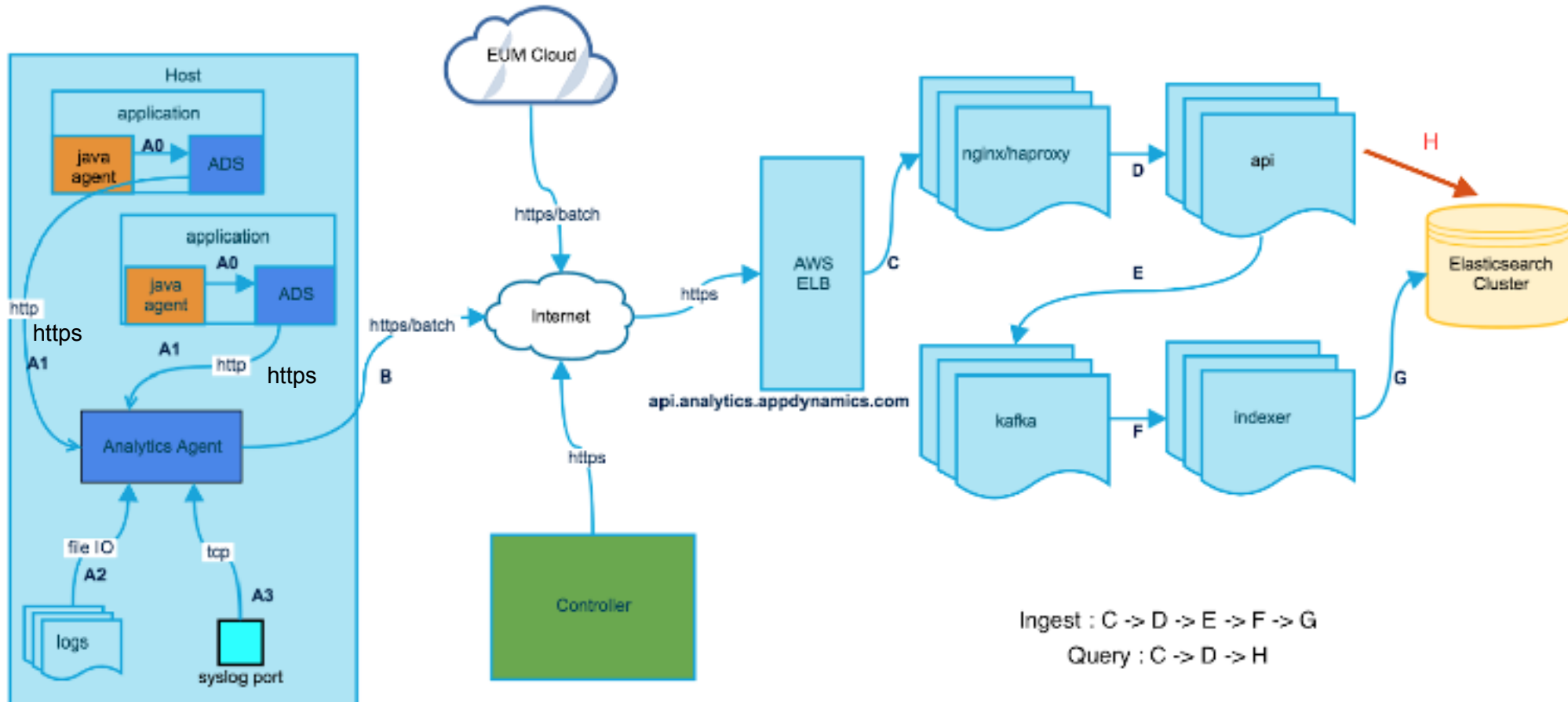
- Listen only mode – the session is being recorded.
- Please post questions or issues in Q&A pane.
- During Q&A, raise hand if you would like to come off mute and speak.
- We'll follow up with:
 1. Recording
 2. Survey

<https://community.appdynamics.com>

Agenda

- **Transaction analytics architecture & data flow.**
- Transaction analytics overview.
- How BT analytics events are generated.
- **Transaction analytics event metadata and custom user data.**
- **4.4 Transaction analytics update**
- **Common issues/Troubleshooting.**
- **Demo**

TRANSACTION ANALYTICS DATA FLOW IN A SAAS DEPLOYMENT



On-Prem events-service doesnt use Kafka

What is Transaction Analytics ???

- Slice/Dice of data (monitoring events) to extract useful business & performance data of APM BT.
- Business Transaction events can be defined as an invocation of a BT per tier

One BT generates events at a rate = calls per minute times the number of tiers reporting analytics data for the BT

- So we can estimate the number of events using the following formula:

#events for one BT = calls per minute times # of tiers

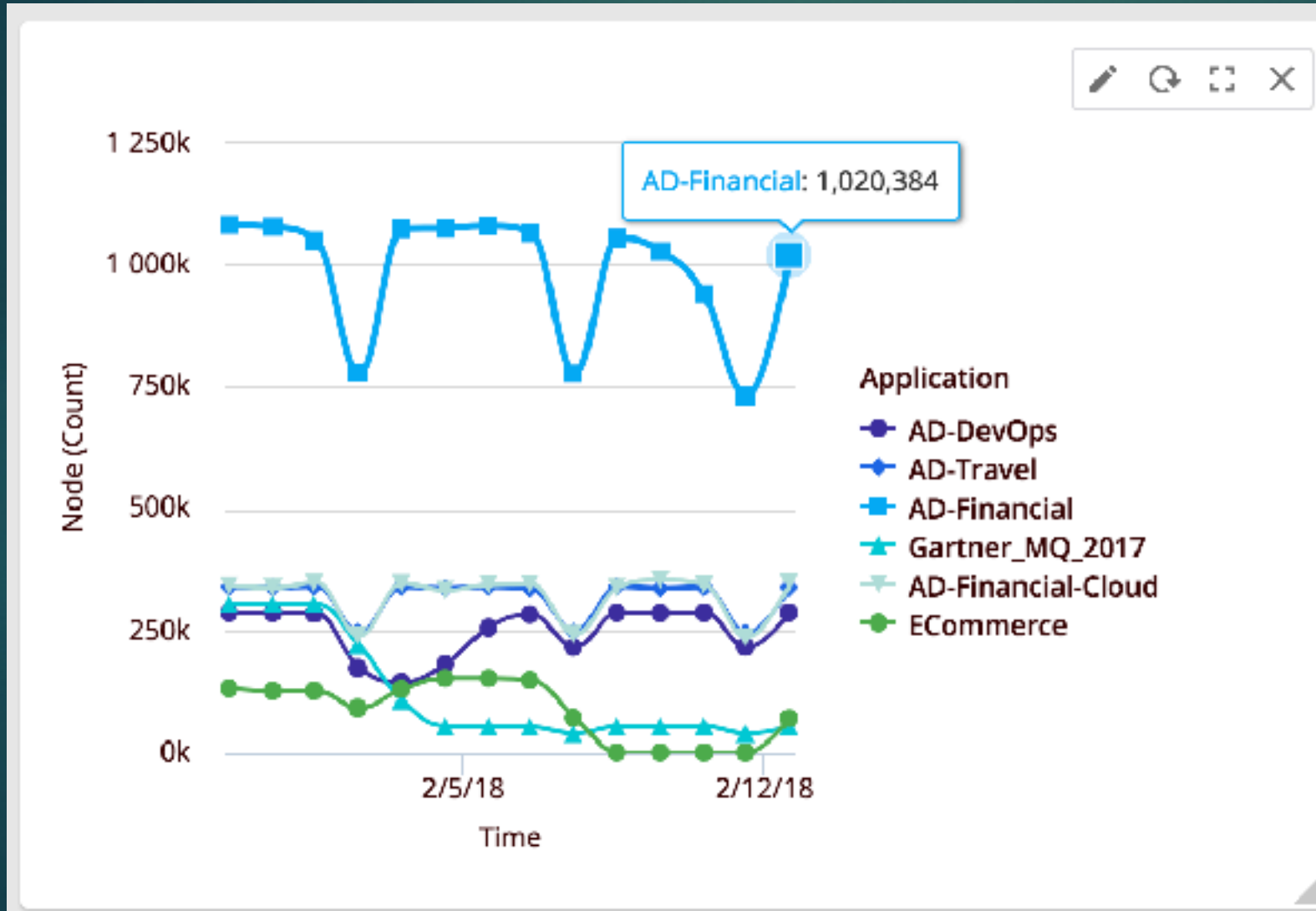
How many requests per BT?

- 1 BT can traverse many Tiers (N)
- In each Tier 1 BT traverses 1 Node
- 1 Node produces 1 Request per 1 BT



APPDYNAMICS

Tracking no. of BT events generated by application or BT using the time-series widget



One unit of TA license provides 1 million events/day

Types of Data collected:

Default BT event data collected for Transaction Analytics:

[Application, Business Transaction, Error codes, details & Response time etc]

Custom data can be collected by using any of the below three methods:

1. Method Invocation Data Collectors (MIDC)

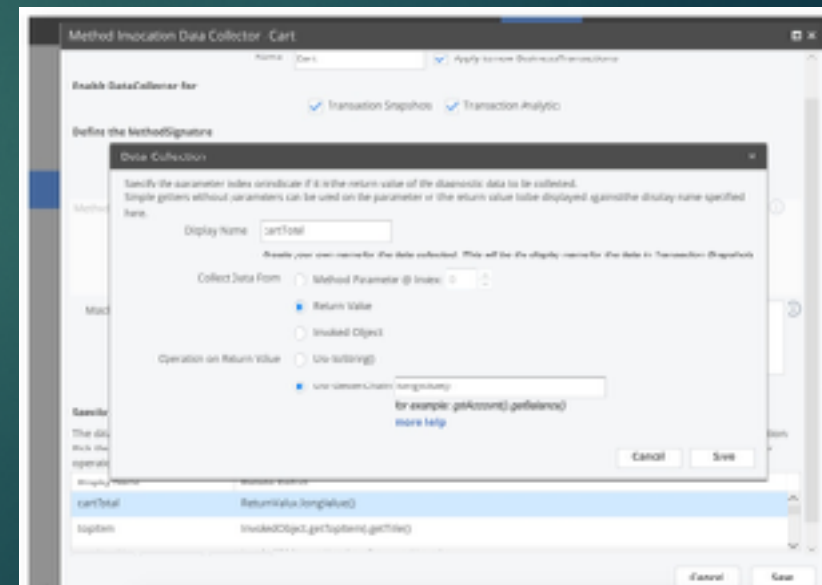
[segments.userData.CustomerName, segments.userData.LoanType] etc

2. HTTP Data Collectors:

[segments.httpData.cookies & segments.httpData.url] etc

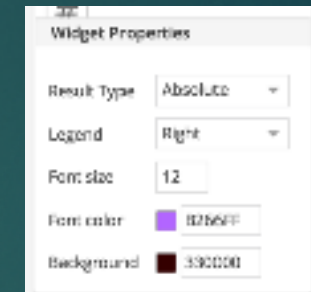
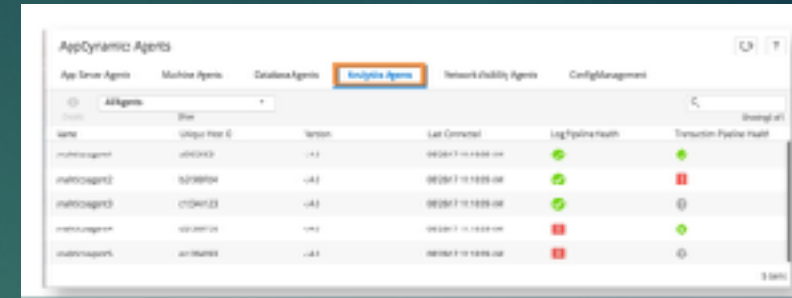
3. Transaction APIs for Custom Data

segments.userData.*



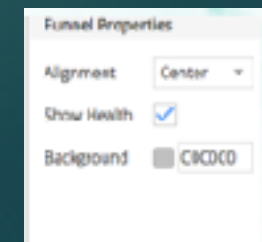
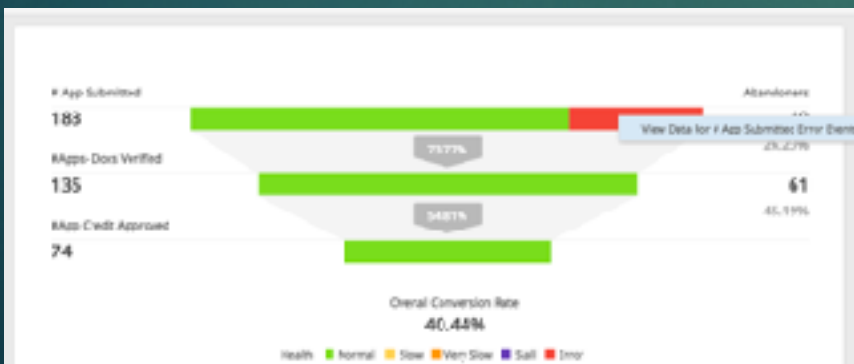
4.4 BizIQ updates:

- View Analytic Agent Health in the controller UI
- Widget properties added to provide more control over the widget appearance
- Limit Improvements for UI & Rest API
10k records in UI data tab & 10k aggregate query records in REST API



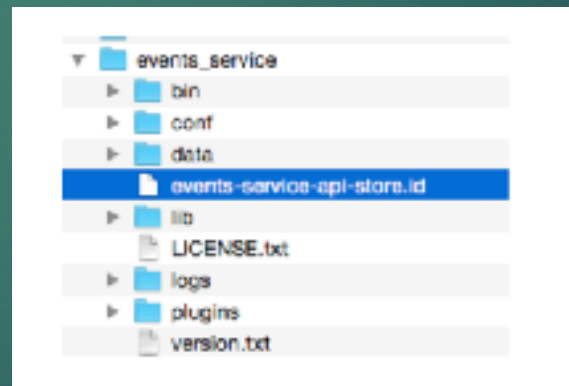
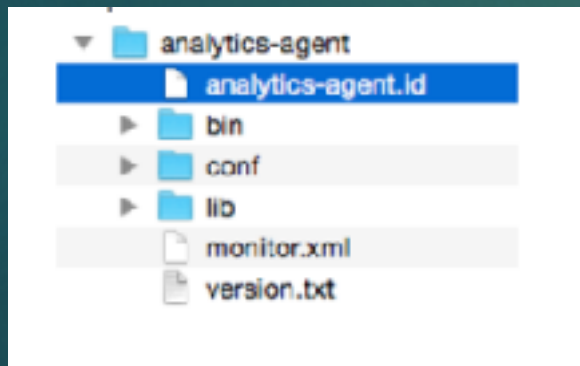
- Funnel Improvement:

Ability to display the performance overlay on the funnel bar and show how many of the participating events in the step are in normal or slow or in error category. This is the Show Health option in the properties pane. Allows drill down to the events that back each step (conversions, health segments, abandoners)



Common Issues/Troubleshooting

- If the Analytics Agent java process/events-service java process is not shut down gracefully, it will leave an analytics-agent.id/events-service-api-store.id artifact in your analytics-agent directory or events-service dir which will not allow the process to startup next time.
- Make sure to delete the file manually or use the -f flag which will delete the file automatically and start the process



Common Issues/Troubleshooting

Verify Analytics Dynamic Service is Running:

1. In some cases the Analytics Dynamic Service may stop producing BT events, for example in the following cases:

If the Analytics Agent is down for an extended period of time (approximately 5 hours) the sink writer tasks will error out and stop trying to send events to the Analytics Agent. You can tell if this happened by looking for the following log message in the application agent logs.

```
Transaction ...could not be saved. Internal buffers appear to be full .....
```

```
[appdynamics-analytics-writer0] 09 Feb 2018 22:19:18,480 FATAL SinkWriterTask - Stopping abruptly due to error org.apache.http.conn.HttpHostConnectException: Connect to localhost:9090 [localhost/127.0.0.1, localhost/
```

2. If the AnalyticsCollectorFactory.collections bound was exceeded.

```
[dw-27260 - POST /v2/events/biz_txn_v1/event] 24 Jan 2018 06:24:39,229 ERROR AnalyticsCollectorFactory - Bounds exceeded creating analytics collector. Disabling Analytics Collection
```

Common Issues/Troubleshooting

In both cases the Analytics Dynamic Service can be restarted by toggling the "Enable Analytics Data Collection" checkbox to "off" and then "on", see the below image but make sure the analytic-agent is up and running first.

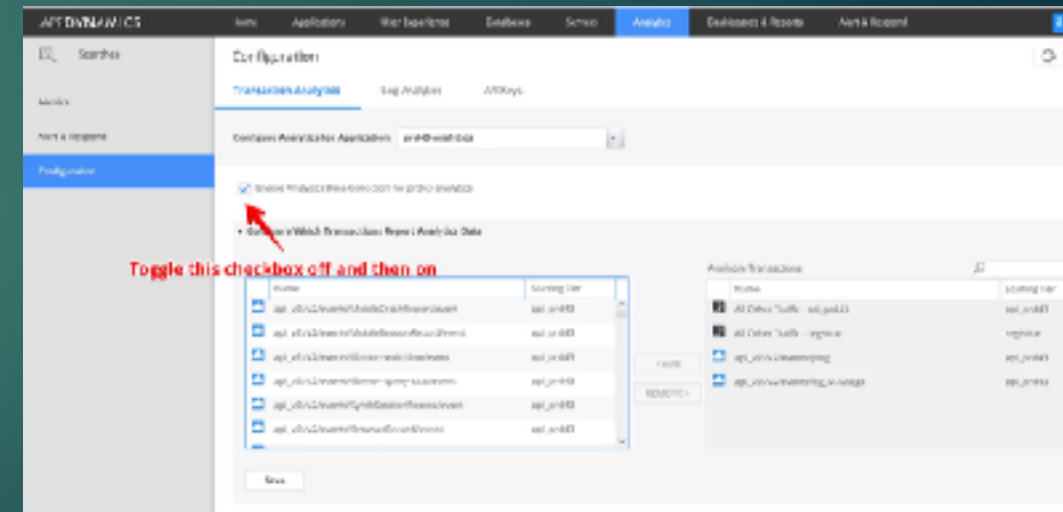
Note, it can take about 5 minutes for configuration changes to propagate from the UI to the agents. To ensure that the properties have reached the application agents you can search for the following log messages in the agent logs:

To verify that the Analytics Dynamic Service has been stopped look for the following log line:

Analytics - Analytics service config [analytics-dynamic-service-enabled] = false

To verify that the Analytics Dynamic Service has been started look for the following log line:

Analytics - Analytics service config [analytics-dynamic-service-enabled] = true



Common Issues/Troubleshooting

License consumed or daily limit reached:

Analytic-agent logs will show something similar in its log:

```
For action [EVENT_UPSERT], you have reached the documents limit of [1000000]
```

Solve it by procuring more analytic license unit

#Perform health check of the analytic agent to verify if its forwarding the data to ES :

```
curl http://localhost:9091/healthcheck?pretty=true
```

Unable to load Analytics HTTP 401 Unauthorised

Make sure the keys are set and matching between controller & events-service server

```
appdynamics.on.premise.event.service.key == ad.accountmanager.key.controller
```

For On-Prem events-service Deployment:

If the shards are stuck in unassigned state or cluster state of ES is RED: check the output of the below commands

```
curl http://localhost:9081/healthcheck?pretty=true  
curl http://localhost:9200/_cat/shards?v  
curl http://localhost:9200/_cat/indices?v  
curl http://localhost:9200/_cat/allocation?v
```

```
curl -XGET localhost:9200/_cat/shards?h=index,shard,prirep,state,unassigned.reason| grep UNASSIGNED
```

Frequently Used KB articles:

Analytic Agent related KB articles:

- <https://community.appdynamics.com/t5/Knowledge-Base/Analytic-Agent-fails-to-start/ta-p/29574>
- <https://community.appdynamics.com/t5/Knowledge-Base/How-to-verify-Analytics-Dynamic-Service-is-enabled-running-and/ta-p/28795>
- <https://community.appdynamics.com/t5/Knowledge-Base/How-to-resolve-Analytics-Agent-startup-failure/ta-p/26285>
- <https://community.appdynamics.com/t5/Knowledge-Base/How-to-use-the-Analytics-Agent-health-check-URL/ta-p/25783>
- <https://community.appdynamics.com/t5/Knowledge-Base/Troubleshooting-common-issues-with-Business-iQ/ta-p/28436>

Events-service related KB articles:

- <https://community.appdynamics.com/t5/Knowledge-Base/Events-Service-debugging-port-disabled-by-default-in-version-4-3/ta-p/26128>
- <https://community.appdynamics.com/t5/Knowledge-Base/How-to-fix-unwanted-indices-created-in-Events-Service-cluster/ta-p/25938>
- <https://community.appdynamics.com/t5/Knowledge-Base/Events-service-cluster-stuck-in-Red-State-with-Unallocated/ta-p/29188>
- <https://community.appdynamics.com/t5/Knowledge-Base/Events-service-cluster-stuck-in-translog-state/ta-p/29560>
- <https://community.appdynamics.com/t5/Knowledge-Base/How-to-check-the-availability-and-status-of-the-Events-Service/ta-p/25779>
- <https://community.appdynamics.com/t5/Knowledge-Base/How-to-migrate-from-single-node-Events-Service-to-a-Cluster/ta-p/22287>

Demo

Demo walkthrough

Self Demo:

<https://github.com/Appdynamics/AD-Capital-Docker>

Thank you