



Pulse Metrics Enablement

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Work History

- Idea originated from Server-Side Profiling in OpenEdge 12.2
 - <https://docs.progress.com/bundle/pas-for-openedge-management-122/page/What-is-Server-Side-Profilng.html>
 - Uses a separate “diagnostic store” PAS instance + DB for holding collected data
 - Enabled via OEJMX query on PAS instance with customer’s business logic
- Original OE 12.2 Work: OCTA-23323 (OPENEDGE-1555)
- OE 12.4 Enhancements: OCTA-31992 [Agent Start Time]
- Internal Publication: OCTA-36241 [Iceberg Repository]
- Supports OE 11.7.x and 12.2+ (latter is preferred, primary focus)

Collector

Centralized collection point for metrics reported by applications



```
$ sudo /usr/dlc122/bin/proenv
```

```
DLC: /usr/dlc122
```

```
WRKDIR: /usr/wrk122
```

```
OEM: /usr/oemgmt122
```

```
OEMWRKDIR: /usr/wrk_oemgmt122
```

Inserting /usr/dlc122/bin to beginning of path and
setting the current directory to /usr/wrk122.

OpenEdge Release 12.2 as of Tue Mar 17 18:15:25 EDT 2020

```
proenv>cd /home/ec2-user/Collector/
```

```
proenv>proant  
Buildfile: /home/ec2-user/Collector/build.xml
```

usage:

```
[echo] DLC Home: /usr/dlc122  
[echo] OpenEdge Version: 12.2.4  
[echo]  
[echo] Usage Instructions:  
[echo]  
[echo] proant create - Create the monitor PAS instance and pasmon database  
[echo]   -Dhttp=8850 = Port for HTTP connections  
[echo]   -Dhttps=8851 = Port for HTTPS connections  
[echo]   -Dajp=8852 = Port for AJP13 connections  
[echo]   -Dshut=8853 = Tomcat shutdown port  
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance  
[echo]   -Dinstance=monitor = Name of PAS instance  
[echo]   -Dalias=monitor = Alias for PAS instance  
[echo]   -Dablapp=monitor = Dedicated ABL App name  
[echo]   -Dwebapp=ROOT = WebApp name for UI deployment  
[echo]   -Dcodepage=UTF-8 = Codepage for DB/instance  
[echo]   -Dcollation=Basic = Collation for Codepage
```

. . .

```
[echo] Instance Management:  
[echo]   proant startup - Uses TCMAN to start the monitor PAS instance  
[echo]   proant query - Uses TCMAN to query the monitor PAS instance  
[echo]   proant shutdown - Uses TCMAN to stop the monitor PAS instance  
[echo]  
[echo] Location Assumptions:  
[echo]   DLC Environment: /usr/dlc122  
[echo]   CATALINA_BASE: /usr/wrk/monitor  
[echo]   Database Path: /usr/wrk/monitor/db
```

```
proenv>proant  
Buildfile: /home/ec2-user/Collector/build.xml
```

usage:

. . .

```
[echo] proant update - [Optional] Re-deploy static content and ABL code  
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance  
[echo]   -Dinstance=monitor = Name of PAS instance  
[echo]  
[echo] proant rebuild_db - [Optional] Re-create the pasmon database from scratch  
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance  
[echo]   -Dinstance=monitor = Name of PAS instance
```

. . .

```
proenv>proant -Dwrk=/usr/wrk122 create
Buildfile: /home/ec2-user/Collector/build.xml
```

```
create:
[echo] DLC Home: /usr/dlc122
[echo] OpenEdge Version: 12.2.4
[echo]
[echo] Creating PAS instance 'monitor' at /usr/wrk122/monitor with ports 8850/8851/8852/8853...
[echo] See file create_monitor.txt for details of PAS server creation.
[echo] Deploying UI files to ROOT WebApp...
[unzip] Expanding: /home/ec2-user/Collector/ui.zip into /usr/wrk122/monitor/webapps/ROOT
[echo] Deploying ABL code to monitor ABLApp...
[copy] Copying 8 files to /usr/wrk122/monitor/ablapps/monitor/openedge
[echo]
[echo] Creating DB instance at /usr/wrk122/monitor/db...
[mkdir] Created dir: /usr/wrk122/monitor/db
[PCTCreateBase] Generating pasmon structure
[PCTCreateBase] Copying DB /usr/dlc122/empty8 to pasmon
[PCTCreateBase] Loading /home/ec2-user/Collector/schema/pasmon.df in database
[echo] Truncating BI: -C truncate bi -G 1 -bi 262128 -biblocksize 16 -cpinternal UTF-8 -cpcoll Basic
[echo] BI Grow: -C bigrow 4 -r -cpinternal UTF-8 -cpcoll Basic
[copy] Copying 1 file to /usr/wrk122/monitor/openedge
[copy] Copying /home/ec2-user/Collector/openedge/logging.config to /usr/wrk122/monitor/openedge/logging.config
[copy] Copying 4 files to /usr/wrk122/monitor/bin
[copy] Copying 1 file to /usr/wrk122/monitor/openedge
[copy] Copying 1 file to /home/ec2-user/Collector/openedge
[echo] Merging initial properties from 'merge_monitor.openedge.properties'.
```

```
proenv>proant startup  
Buildfile: /home/ec2-user/Collector/build.xml
```

startup:

```
[echo] DLC Home: /usr/dlc122  
[echo] OpenEdge Version: 12.2.4  
[exec] Starting stopped PASOE instance monitor  
[exec] info: Archiving previous log files  
[exec] info: Waiting for PASOE instance startup to complete...  
[exec] .....  
[exec]  
[exec] info: Getting PASOE instance process ids for 27443 ...  
[exec] info: Scanning for startup errors...  
[exec] info: Scanning ABL applications for errors: monitor  
[exec] info: No errors found in the PASOE instance /logs folder  
[exec] info: PASOE startup in 15 seconds  
[exec] {  
[exec] "start-action": "start",  
[exec] "initial-state": "stopped",  
[exec] "initial-processes": [ 0 ],  
[exec] "exit-state": "started",  
[exec] "exit-description": "Starting stopped PASOE instance monitor",  
[exec] "exit-processes": [ 27443, 27695 ],  
[exec] "exit-status": "0",  
[exec] "exit-errors": [  
[exec] ]  
[exec] }
```


📄

Export to Excel

Agent	Elapsed Runtime	Min Mem. (MB)	Max Mem. (MB)	Avg. Mem. (MB)	Delta (MB)	Max Objects	Avg. Response	Requests	Req. %	Requests/Sec



Application

Sends metrics from active MSAgents of an ABL Application



```
$ sudo /usr/dlc122/bin/proenv
```

```
DLC: /usr/dlc122
```

```
WRKDIR: /usr/wrk122
```

```
OEM: /usr/oemgmt122
```

```
OEMWRKDIR: /usr/wrk_oemgmt122
```

Inserting /usr/dlc122/bin to beginning of path and
setting the current directory to /usr/wrk122.

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```
proenv>cd /home/ec2-user/Application/
```

```
proenv>proant
Buildfile: /home/ec2-user/Application/build.xml
```

usage:

```
[echo] DLC Home: /usr/dlc122
[echo] OpenEdge Version: 12.2.0
[echo]
[echo] Usage Instructions:
[echo]
. . .
[echo] proant deploy_metrics - Configure the PAS instance for metrics collection
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance
[echo]   -Dinstance=oepas1 = Name of PAS instance
[echo]   -Dablapp=oepas1 = Dedicated ABL App name
[echo]   -Dwebapp=ROOT = Demo webapp name
[echo]   -Dmonitor=127.0.0.1 = IP of the monitor endpoint
[echo]   -Dport=8850 = Port of the monitor endpoint
[echo]
[echo] proant health - Enable the HealthScanner function for the instance
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance
[echo]   -Dinstance=oepas1 = Name of PAS instance
[echo]   -DhealthPort=8899 = Port for HealthCheck
. . .
[echo] Instance Management:
[echo]   proant startup - Uses TCMAN to start the oepas1 PAS instance
[echo]   proant query - Uses TCMAN to query the oepas1 PAS instance
[echo]   proant shutdown - Uses TCMAN to stop the oepas1 PAS instance
[echo]
[echo] Location Assumptions:
[echo]   DLC Environment: /usr/dlc122
[echo]   CATALINA_BASE: /usr/wrk/oepas1
```

```
proenv>proant
Buildfile: /home/ec2-user/Application/build.xml
```

```
usage:
[echo] DLC Home: /usr/dlc122
[echo] OpenEdge Version: 12.2.0
[echo]
[echo] Usage Instructions:
[echo]
[echo] proant create - [Optional] Create a standard oepas1 PAS instance
[echo]   -Dhttp=8810 = Port for HTTP connections
[echo]   -Dhttps=8811 = Port for HTTPS connections
[echo]   -Dajp=8009 = Port for AJP13 connections
[echo]   -Dshut=8812 = Tomcat shutdown port
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance
[echo]   -Dinstance=oepas1 = Name of PAS instance
[echo]   -Dalias=oepas1 = Alias for PAS instance
[echo]
[echo]
[echo] proant deploy_demos - [Optional] Recompile and update demo ABL code
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance
[echo]   -Dinstance=oepas1 = Name of PAS instance
[echo]   -Dablapp=oepas1 = Dedicated ABL App name
[echo]   -Dwebapp=ROOT = Demo webapp name
[echo]
[echo]
[echo] proant metrics - Enable/Disable collection for the instance
[echo]   -Dwrk=/usr/wrk = Parent directory for PAS instance
[echo]   -Dinstance=oepas1 = Name of PAS instance
[echo]   -Dablapp=oepas1 = ABL App for collection
[echo]   -DlocalIP=127.0.0.1 = IP of this server
[echo]   -Dtype=pulse [pulse|profiler]
[echo]   -Dstate=on [on|off]
[echo]   -Dopts=sessions,requests,calltrees,ablobjs [logmsgs,sessions[,requests[,calltrees[,callstacks]],ablobjs]]
[echo]   -Dmonitor=127.0.0.1 = IP of the monitor endpoint
[echo]   -Dport=8850 = Port of the monitor endpoint
```

```
proenv>proant create
Buildfile: /home/ec2-user/Application/build.xml
```

create:

```
[echo] DLC Home: /usr/dlc122
[echo] OpenEdge Version: 12.2.0
[echo] Creating PAS instance 'oepas1' at /usr/wrk/oepas1 with ports 8810/8811/8009/8812...
[echo] See file create_oepas1.txt for details of PAS server creation.
```

```
proenv>proant deploy_demos
Buildfile: /home/ec2-user/Application/build.xml
```

deploy_demos:

```
[echo] DLC Home: /usr/dlc122
[echo] OpenEdge Version: 12.2.0
[copy] Copying 1 file to /usr/wrk/oepas1/webapps/ROOT/WEB-INF/openedge
[copy] Copying /home/ec2-user/Application/deploy/tests.map to /usr/wrk/oepas1/webapps/ROOT/WEB-INF/openedge/tests.map
[copy] Copying 1 file to /usr/wrk/oepas1/webapps/ROOT/static
[copy] Copying /home/ec2-user/Application/deploy/tests.json to /usr/wrk/oepas1/webapps/ROOT/static/tests.json
[PCTCompile] PCTCompile - Progress Code Compiler
[PCTCompile] 5 file(s) compiled
[delete] Deleting directory /usr/wrk/oepas1/webapps/ROOT/WEB-INF/openedge/.pct
[copy] Copying 1 file to /home/ec2-user/Application
[echo] Merging initial properties from 'merge_demo_oepas1.openedge.properties'...
```

```
proenv>proant deploy_metrics -Dmonitor=172.31.90.73  
Buildfile: /home/ec2-user/Application/build.xml
```

```
deploy_metrics:
```

```
[echo] DLC Home: /usr/dlc122  
[echo] OpenEdge Version: 12.2.0  
[echo] Creating backup of original openedge.properties file...  
[copy] Copying 1 file to /usr/wrk/oepas1/conf  
[copy] Copying /usr/wrk/oepas1/conf/openedge.properties to /usr/wrk/oepas1/conf/openedge.properties.bak  
[echo] Installing application metrics logic into /usr/wrk/oepas1...  
[copy] Copying 10 files to /usr/wrk/oepas1/bin  
[copy] Copying 1 file to /usr/wrk/oepas1/openedge  
[copy] Copying /home/ec2-user/Application/deploy/oe122/logging.config to /usr/wrk/oepas1/openedge/logging.config  
[copy] Copying 9 files to /usr/wrk/oepas1/openedge  
[echo] Adjusting logging-tomcat.properties to add %D token (elapsed time in ms)...  
[copy] Copying 1 file to /usr/wrk/oepas1/conf  
[copy] Copying /usr/wrk/oepas1/conf/logging-tomcat.properties to /usr/wrk/oepas1/conf/logging-tomcat.properties.bak
```

```
proenv>proant health  
Buildfile: /home/ec2-user/Application/build.xml
```

```
health:
```

```
[echo] DLC Home: /usr/dlc122  
[echo] OpenEdge Version: 12.2.0  
[copy] Copying 1 file to /usr/wrk/oepas1/conf  
[copy] Copying /usr/wrk/oepas1/conf/health.config to /usr/wrk/oepas1/conf/health.config.bak  
[echo] Please restart the PASOE instance to complete enablement.
```



```
proenv>proant startup
Buildfile: /home/ec2-user/Application/build.xml
```

```
startup:
```

```
[echo] DLC Home: /usr/dlc122
[echo] OpenEdge Version: 12.2.0
[exec] Starting stopped PASOE instance oepas1
[exec] info: Archiving previous log files
[exec] info: Waiting for PASOE instance startup to complete...
[exec] .....
[exec]
[exec] info: Getting PASOE instance process ids for 25455 ...
[exec] info: Scanning for startup errors...
[exec] info: Scanning ABL applications for errors: oepas1
[exec] info: No errors found in the PASOE instance /logs folder
[exec] info: PASOE startup in 13 seconds
[exec] {
[exec] "start-action": "start",
[exec] "initial-state": "stopped",
[exec] "initial-processes": [ 0 ],
[exec] "exit-state": "started",
[exec] "exit-description": "Starting stopped PASOE instance oepas1",
[exec] "exit-processes": [ 25455, 25654, 25665 ],
[exec] "exit-status": "0",
[exec] "exit-errors": [
[exec] ]
[exec] }
```

```
proenv>proant metrics -Dmonitor=172.31.90.73
Buildfile: /home/ec2-user/Application/build.xml
```

metrics:

```
[echo] DLC Home: /usr/dlc122
```

```
[echo] OpenEdge Version: 12.2.0
```

```
[PCTRun] PASOE Instance: /usr/wrk/oepas1
```

```
[PCTRun] Metrics Type: pulse (on)
```

```
[PCTRun] Agent PID 25654: AVAILABLE
```

```
[PCTRun] Query: {"O":{"PASOE:type=OEManager,name=AgentManager", "M":["debugTest", "25654", "LiveDiag",
"http://172.31.90.73:8850/web/pdo/monitor/intake/liveMetrics", 20, "sessions,requests,calltrees,ablobjs|app=oepas1|host=172.31.88.221|name=Metrics_2021-05-
27T14:12:36.985+00:00|health=http://172.31.90.73:8850/web/pdo/monitor/health/collect"]}}
```

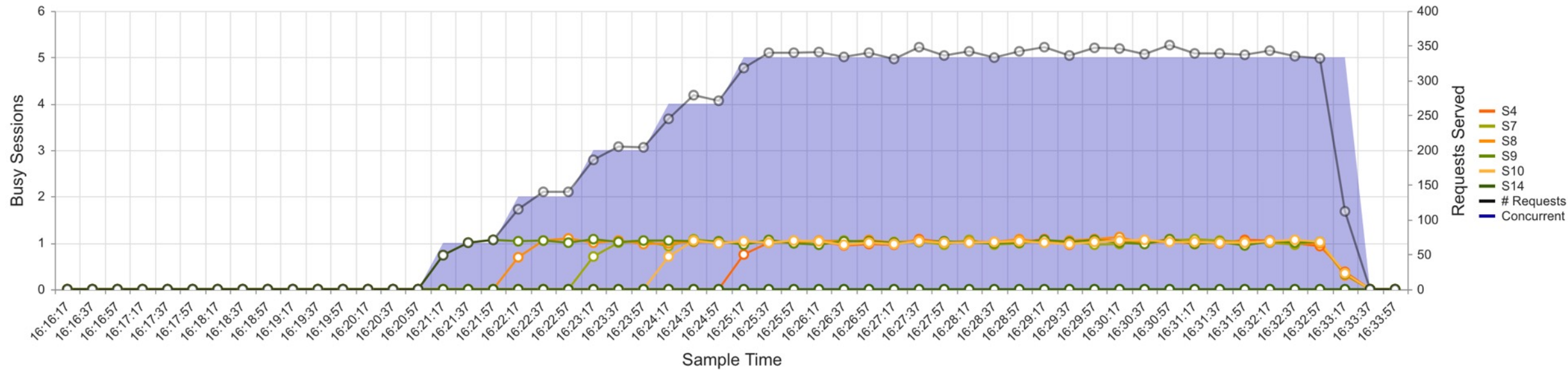
```
[PCTRun] Result: {"debugTest":{"ABLOutput":{"description":"sessions,requests,calltrees,ablobjs|app=oepas1|host=172.31.88.221|name=Metrics_2021-05-
27T14:12:36.985+00:00|health=http://172.31.90.73:8850/web/pdo/monitor/health/collect","interval":20,"operation":"LiveDiag","target":"http://172.31.90.73:8850/web\
/pdo/monitor/intake/liveMetrics"},"ABLReturnVal":true,"agentId":"MWBfzgqpS62DatXXSCxUYw","pid":"25654"}}
```

```
[PCTRun] Agent PID 25665: AVAILABLE
```

```
[PCTRun] Query: {"O":{"PASOE:type=OEManager,name=AgentManager", "M":["debugTest", "25665", "LiveDiag",
"http://172.31.90.73:8850/web/pdo/monitor/intake/liveMetrics", 20, "sessions,requests,calltrees,ablobjs|app=oepas1|host=172.31.88.221|name=Metrics_2021-05-
27T14:12:36.985+00:00|health=http://172.31.90.73:8850/web/pdo/monitor/health/collect"]}}
```

```
[PCTRun] Result: {"debugTest":{"ABLOutput":{"description":"sessions,requests,calltrees,ablobjs|app=oepas1|host=172.31.88.221|name=Metrics_2021-05-
27T14:12:36.985+00:00|health=http://172.31.90.73:8850/web/pdo/monitor/health/collect","interval":20,"operation":"LiveDiag","target":"http://172.31.90.73:8850/web\
/pdo/monitor/intake/liveMetrics"},"ABLReturnVal":true,"agentId":"5MyQ5uW8Sn-ppS4JTf9waQ","pid":"25665"}}
```

Agent 7737 - Concurrent Sessions (172.31.88.221:8810 - oepas1)



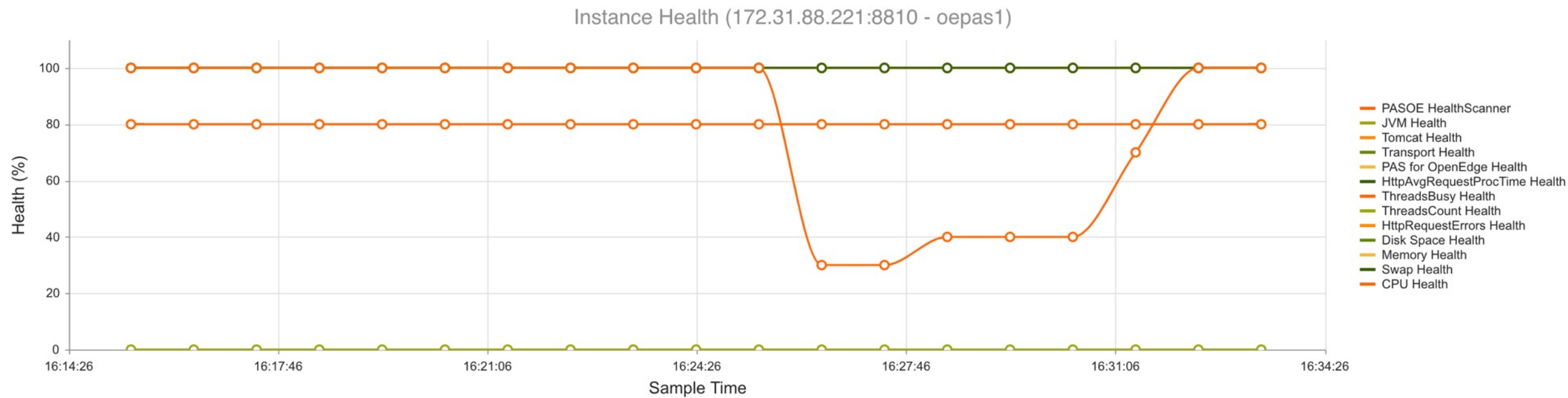
Server/Application: 172.31.88.221:8810 / oepas1

Admin Features

Sample Group: All Chart Time Scaled By: Fit

Overview Health Trends Agent Activity Memory/Objects ABL Requests

Trend Period (Hours): 1



[Refresh] [Export to PNG]

```
proenv>proant metrics -Dstate=off
Buildfile: /home/ec2-user/Application/build.xml
```

metrics:

[echo] DLC Home: /usr/dlc122

[echo] OpenEdge Version: 12.2.0

[PCTRun] PASOE Instance: /usr/wrk/oepas1

[PCTRun] Metrics Type: pulse (off)

[PCTRun] Agent PID 25654: AVAILABLE

[PCTRun] Query: {"O":"PASOE:type=OEManager,name=AgentManager", "M":["debugTest", "25654", "LiveDiag", "", 0, ""]}

[PCTRun] Result: {"debugTest":{"ABLOutput":{"description":"sessions,requests,calltrees,ablobjs|app=oepas1|host=172.31.88.221|name=Metrics_2021-05-27T14:12:36.985+00:00|health=http://172.31.90.73:8850/web/pdo/monitor/health/collect","interval":0,"operation":"LiveDiag","target":"http://172.31.90.73:8850/web/pdo/monitor/intake/liveMetrics"},"ABLReturnVal":true,"agentId":"MWBfzgqpS62DatXXSCxUYw","pid":"25654"}}

[PCTRun] Agent PID 25665: AVAILABLE

[PCTRun] Query: {"O":"PASOE:type=OEManager,name=AgentManager", "M":["debugTest", "25665", "LiveDiag", "", 0, ""]}

[PCTRun] Result: {"debugTest":{"ABLOutput":{"description":"sessions,requests,calltrees,ablobjs|app=oepas1|host=172.31.88.221|name=Metrics_2021-05-27T14:12:36.985+00:00|health=http://172.31.90.73:8850/web/pdo/monitor/health/collect","interval":0,"operation":"LiveDiag","target":"http://172.31.90.73:8850/web/pdo/monitor/intake/liveMetrics"},"ABLReturnVal":true,"agentId":"5MyQ5uW8Sn-ppS4JTf9waQ","pid":"25665"}}