Vendor Oracle Identity Manager

Standard Operating Procedures

Rolling restart Guide

**Document Details**

|  |  |
| --- | --- |
| Project Name | BestBuy IDAM |
| Account | BestBuy |
| Current Version | 3.0 |
| List of Contributors | Prathyusha |
| Customer Contact Information |  |

**Revision History:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| * + 1. Version | * + 1. Date of Revision | * + 1. Description | * + 1. Author | * + 1. Reviewed By | * + 1. Approved By |
| 1.0 | 10/17/2020 | VOIM Restart Guide | OIG Team | Prathyusha | Vineeth |
| 2.0 | 12/05/2021 | VOIM Restart Guide - NoChanges | OIG Team | Balvardhan | Vineeth |
| 3.0 | 25/08/2021 | VOIM Restart Guide – Steps to remove states folder for OHS issues | OIG Team | Balvardhan | Vineeth |

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# Purpose

The purpose of this SOP is to provide information on various Server Restart activities performed by Vendor OIM Team.

# Scope

Servers if not restarted for a long time will not be working in efficient way and can be in warning/hung state during business hours. This document covers oim, soa, ui, connector and node manager restarts

# Responsibility

OIM Support Team is listed in the procedure who needs to follow SOP for restarting any servers and Event Management Team is also included as they need to disable/ignore the BSM (APM) alerts.

# Definition

**Cold Restart-** Cold Restart is the processing of shutting down all at once and then starting them. This involves an outage of VOIM

**Rolling Restart:** Rolling restart is the process of restarting servers one after the other. This is performed in the following scenarios

* When servers are in hung state and not coming up
* During the change request in the system.

Rolling restart will not cause any outage

# Procedure

**Pre-requisite:** Before re-starting any servers, please notify the event management team so that they can disable the alerts. If Event management Team is not informed about the Restart activity then P2 incidents will be auto-triggered by BSM (APM) Team.

An example mail is as below:

To: [**EventManagementTeam@bestbuy.com**](mailto:EventManagementTeam@bestbuy.com)  
CC: **IAM Intake <IAMIntake@bestbuy.com>; VendorIdentitySupport <VendorIdentitySupport@bestbuy.com>; OIMWIPROSupport <OIMWIPROSupport@bestbuy.com> Incident Manager <IncidentManager@bestbuy.com>**

**Subject: Performing rolling restart on the Vendor OIM servers | 12th Nov 2019**

Hi Team,

We are performing rolling restart on the below servers as a part of scheduled maintenance.  Please disable monitoring for the below probes until the activity is completed.

PDL01FBHAP011

PDL01FBHAP012

PDL01FBHAP013

PDL01FBHAP014

PDL01FBHWB001

PDL01FBHWB002

PDL01FBHWB003

PDL01FBHWB004

**Note:**  
Please disable the probes during the restart.  
PFA for the service manager approved details.

Regards  
OIMSupport

Note: We need to attach service manager approval while sending mail to the BSM(APM) team to disable the alerts. Below is the Service Manager approval mail.



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## Vendor OIM ADMIN SERVER RESTART

Admin server is to manage all the managed servers in the WebLogic Console. In the Vendor OIM Production System, we have following Admin server Running

Adminserver 🡪 pdl01fbhap011

Admin Server needs to be restarted after any change which will involve the Admin Server to be restarted.

### Stopping the Admin Server

* Go to WebLogic console by hitting mentioned below URL in DMZ browser and provide credentials to login

<http://pdl01fbhap011.bbydmz.com:7001/console>

* Login:

Username: WebLogic

password: \*\*\*\*\*\*\*

* Go to Environments, Click on the servers.
* We will find servers, Move on to the control tab and select the Adminserver and shutdown the server by clicking the *shutdown* button and select *force shutdown* now. The following would be prompted.

You have selected the following servers to be immediately shut down. Press 'Yes' to continue or 'No' to cancel.

Adminserver

* Click Yes to continue.
* Refresh the console page and page will be no longer available.

### Starting the Admin Server

* Login to Unix box of Admin server (pdl01fbhap011 )
* check for the process of the Admin server by following cmd
  + *ps -ef |grep Adminserver* if any process exists kill them by following
  + *kill -9 <process id>*
* Go to the following directory and start the Admin server with below mentioned commands:
  + *cd /opt/oracle/Middleware/user\_projects/domains/oim\_domain/bin*
  + *nohup ./startWebLogic.sh &*
* Tail the logs of the WebLogic sever by running the cmd.
  + *tail -f nohup.out*
* Once the server comes to Running mode in logs then login to the WebLogic console.

## Vendor OIM NODES RESTART

In Vendor OIM Production System we have 4 OIM managed servers up and running of which 2 are frontend servers and other 2 are backend servers.

Frontend Servers are the following

oim\_server1 🡪 pdl01fbhap011

oim\_server2 🡪 pdl01fbhap012

Backend Servers are the following

oim\_server3 🡪 pdl01fbhap013

oim\_server4 🡪 pdl01fbhap014

### Restart Method for OIM Services

|  |  |  |
| --- | --- | --- |
| NO | STEP NAME | STEP DESCRIPTION |
| 1 | Scheduled job status | If there are any jobs in RUNNING state, execute the below query to find on which node the job is running and consider restarting these servers only on job completion:  *select \* from QRTZ92\_FIRED\_TRIGGERS;* |
| 2 | Stop OIM servers | 1. Login to the web console by providing the credentials:   <http://pdl01fbhap011.bbydmz.com:7001/console/>  *login: weblogic*  *password: \*\*\*\*\*\*\**   1. Go to Environments🡪Servers.   Locate servers from oim\_server1 to oim\_server4   1. Navigate to control tab, select two oim nodes (basically one backend and one frontend) considered for restart, then click on 🡪 shutdown 🡪 force shutdown now. Click ok in the next page. 2. Keep on monitoring the servers by after clicking refresh button. 3. Wait for “TASK COMPLETED” in the “Status of Last Action” |
| 3 | Clear OIM cache | Clear all the data, tmp, stage and cache folders from servers that are stopped.   1. To perform the above task, login into the Unix box through putty providing the jump server name : dlp10jmp. 2. Provide the Dash Aid and cyberark ODSEE password. 3. Login to the server by doing ssh and provide the cyberark ODSEE password.   Eg: ssh pdl01fbhap011   1. Go to the following location by typing the below command:   *cd /opt/oracle/Middleware/user\_projects/domains/OIMDomain/servers/oim\_server1*   1. Find the below folders by typing “*ls –ltr*” command:   *“data”,“tmp”, “cache”*   1. Rename these folders by typing the following command:   *mv data data\_backup\_MM-DD-YYYY*  *mv tmp tmp\_backup\_MM-DD-YYYY*  *mv cache cache\_backup\_MM-DD-YYYY*   1. Follow the above steps in all other nodes while performing restart of the respective servers. |
| 4 | Start OIM servers | 1. Navigate to the web page where the oim servers were stopped. 2. Select the servers that were stopped. Click on Start Button. 3. Click Yes on the next page. 4. Keep monitoring until we get RUNNING in the “State” column. |

### Logs Location:

The logs can be monitored under the below Directory in the Unix box, we can tail the out logs for the individual oim managed servers by following command

*/opt/oracle/Middleware/user\_projects/domains/OIMDomain/servers/oim\_server1/logs*

E.g.: *tail -f oim\_server1.out*

### Issues:

* **Issue-1:** In the server restart process sometimes, servers move to the Failed Not Restartable status.

**Work** **Around**: Check if any process is running for particular node, if yes kill the process(kill -9 <processid>) and start the server.

* **Issue-2:**In some cases, servers move to the Admin status.

**Work** **Around**: Select the Managed server and Click on the resume Tab of the console page.

5.3 SOA and UI NODE RESTART

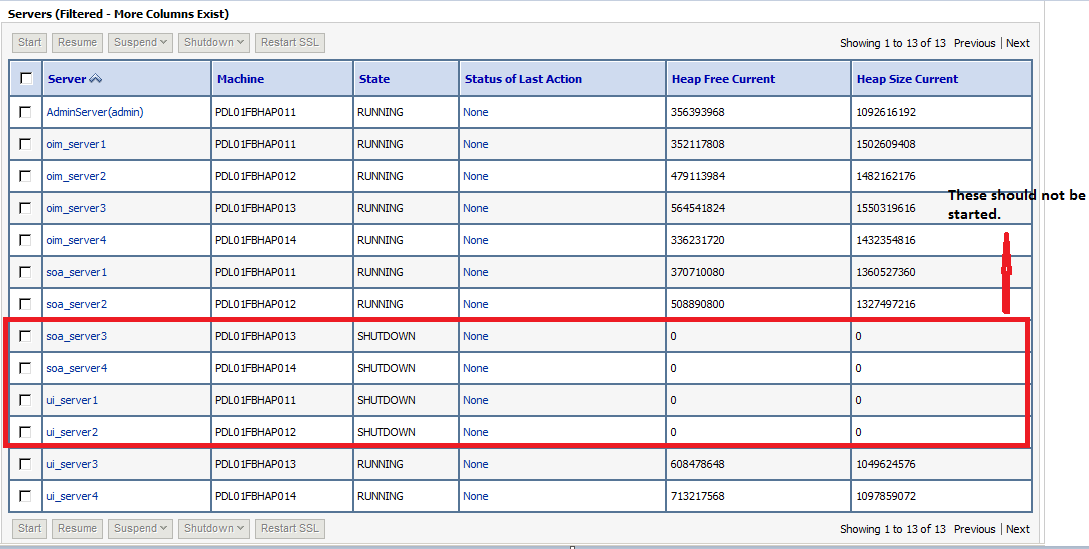
In the Vendor OIM Production System, Following SOA and UI Managed services are Running on frontend Servers

soa\_server1 🡪 pdl01fbhap011

soa\_server2 🡪 pdl01fbhap012

ui\_server3 🡪 pdl01fbhap013

ui\_server4 🡪 pdl01fbhap014



Soa services are used for request flow of the catalog items when an end user request for the catalog item. UI services are used for the Application access.

### Restart Method for SOA and UI Services

|  |  |  |
| --- | --- | --- |
| NO | STEP NAME | STEP DESCRIPTION |
| 1 | Stop SOA servers | 1. Login to the web console in DMZ IE browser by providing the Credentials:   <http://pdl01fbhap011.bbydmz.com:7001/console/>  *username: weblogic*  *password : \*\*\*\*\*\*\*\*\**   1. Navigate to Environments🡪Servers.   2 SOA servers would be running which on front end servers i.e. 11,12 servers.   1. Go to control tab. Select first SOA server soa\_server1 and click on 🡪 Shutdown 🡪 Force shutdown now 2. Click Yes on the next page. 3. Keep on monitoring the server’s until status becomes SHUTDOWN |
| 2 | Clear SOA cache | To clear all data, tmp and cache folders from SOA server, the following steps need to be performed:   1. Login to the Unix box through putty providing the jump server name : dlp10jmp. 2. Provide the Dash Aid and cyberark ODSEE password. 3. Login to the server by doing ssh and provide the cyberark ODSEE password.   Eg: ssh pdl01fbhap011   1. Go to the following location by typing the following command:   *cd /opt/oracle/Middleware/user\_projects/domains/OIMDomain/servers/soa\_server1*   1. Locate the below folders by typing **“***ls –ltr***”** command:   “data”, “tmp”, “cache”   1. Rename these four folders by typing the following command:   *mv data data\_backup\_MM-DD-YYYY*  *mv tmp tmp\_backup\_MM-DD-YYYY*  *mv cache cache\_backup\_MM-DD-YYYY* |
| 3 | Start SOA server | 1. Navigate the web page where the SOA servers were stopped. 2. Select the SOA servers. Click on start Button. 3. Click Yes on the next page. 4. Keep monitoring until the server is in RUNNING state 5. Similarly, perform the above three steps for other SOA server. [soa\_server2] |
| 4 | Stop UI node | 2 UI Servers would be RUNNING which are Backend Servers i.e. 13,14 servers.  We have to do rolling restart on these servers.  Follow the below steps to restart UI nodes :   1. Login to the web console by providing the Credentials:   <http://pdl01fbhap011.bbydmz.com:7001/console/>  *username : weblogic*  *password : \*\*\*\*\*\*\*\**   1. Navigate to Environments🡪Servers. 2. Navigate to control tab. Select first UI server ui\_server3 and click on 🡪 Shutdown 🡪 Force shutdown now 3. Click ok in the next page. 4. Keep monitoring until the server is in RUNNING state |
| 5 | Clear UI cache | Clear all the tmp, stage and cache folders from the servers that are stopped.   1. Login to the Unix box through putty providing the jump server name : dlp10jmp. 2. Provide the Dash Aid and cyberark ODSEE password. 3. Login to the server by doing ssh and provide the cyberark ODSEE password.   Eg: ssh pdl01fbhap013   1. Go to the following location by typing the below command:   *cd /opt/oracle/Middleware/user\_projects/domains/OIMDomain/servers/ui\_server3*   1. Find the below folders by typing “*ls –ltr*” command:   *“data”,“tmp”, “cache”,”stage”*   1. Rename these folders by typing the following command:   *mv data data \_backup\_MM-DD-YYYY*  *mv tmp tmp\_backup\_MM-DD-YYYY*  *mv cache cache\_backup\_MM-DD-YYYY*  *mv stage stage \_backup\_MM-DD-YYYY*   1. Follow the above steps in all other nodes while performing restart of the respective servers. |
| 6 | Start UI server | 1. Navigate the web page where the UI servers were stopped. 2. Select the first UI servers. Click on start Button. 3. Click Yes on the next page. 4. Keep monitoring until the server is in RUNNING state 5. Similarly, perform the above three steps for other 1 UI server. [ui\_server4] |

### Logs Location:

The logs can be monitored under the below Directory in the Unix box, we can tail the out logs for the individual soa managed servers by following command

*/opt/oracle/Middleware/user\_projects/domains/OIMDomain/servers/soa \_server1/logs*

E.g.: *tail -f soa\_server1.out*

The logs can be monitored under the below Directory in the Unix box, we can tail the out logs for the individual ui managed servers by following command

*/opt/oracle/Middleware/user\_projects/domains/OIMDomain/servers/ui \_server3/logs*

E.g.: *tail -f ui\_server3.out*

### Issues:

* **Issue-1:** In the server restart process sometimes, servers move to the Failed Not Restartable status.

**Work** **Around**: Check if any process is running for particular node, if yes kill the process(kill -9 <processid>) and start the server.

* **Issue-2:** In some cases, servers move to the Admin status.

**Work Around**: Select the Managed server and Click on the resume Tab of the console.

### Connector Server Restart

Connector server is present in **PDL01FBHAP011**

|  |  |  |
| --- | --- | --- |
| NO | STEP NAME | STEP DESCRIPTION |
| 1 | Stop connector server | Restarting java connector server:  Login to PDL01FBHAP011   1. Login to the Unix box through putty providing the jump server name : dlp10jmp. 2. Provide the Dash Aid and cyberark ODSEE password. 3. Login to the server by doing ssh and provide the cyberark ODSEE password.   Eg: ssh pdl01fbhap011   1. Go to the location - /opt/oracle/connector\_server\_java-1.4.0/bin   Execute the following command :  **./connectorserver.sh/stop**   1. Check the status :ps –ef | grep –i connector |
| 2 | Start connector server | 1. Login to the server pdl01fbhap011 2. Go to the location - /opt/oracle/connector\_server\_java-1.4.0/bin   Execute the following command :  **./connectorserver.sh/ start**   1. Check the status :ps –ef | grep –i connector |

# CONNECTOR SERVERS

In the OIG Production System, we have 2 types of connector servers

* Java Connector Sever
* Ad Connector Sever

## JAVA Connector Server

Java Connector server is present in only one server **pdl01ggmap01a**.

### Restart Method for Java connector

|  |  |  |
| --- | --- | --- |
| NO | STEP NAME | STEP DESCRIPTION |
| 1 | Stop connector server | 1. Restarting java connector servers:   Login to pdl01fbhap011 server through putty  Login as :dlp10jmp    **/opt/oracle/connector\_server\_java-1.4.0/bin**  Execute the following command :  **./connectorserver.sh/stop**   1. Go to the following location using the command:   *cd /opt/oracle/oim\_connector\_server/bin*   1. Execute the following command:   *./connectorserver.sh/stop*  Verify*: ps -eaf|grep -i connector* |
| 2 | Start connector server | 1. Once the server is stopped start using the following command:   *./connectorserver.sh /start* |

### Logs Location:

The connector server log file is present in server PDL01FBHAP011 under the directory:

*/opt/oracle/connector\_server\_java-1.4.0/logs*

### Issues:

If we are getting any. PID error, like PID is not generated

1. Go to *cd /opt/oracle/connector\_server\_java-1.4.0*
2. Execute *ls –latr*(to get hidden. files)
3. Move the .PID file to another folder
4. Restart the Connector server again

# OHS Restart

## Stopping OHS Server

* Login to one of the web server using Unix box

e.g. putty 🡪 dlp10jmp 🡪 dash Aid 🡪 cyber ark password 🡪 ssh pdl01fbhwb001

* Navigate to the following directory

*cd /opt/oracle/Middleware/Oracle\_WT1/instances/oim\_instance/bin*

* Execute the command *ls -ltrh*
* Check the status of the OHS server by the following command (status should be alive)

*./opmnctl status*

* Execute the below command to stop OHS server

*./opmnctl stopall*

* Check the status of the OHS server by the following command (status should be not Running)

*./opmnctl status*

## Starting OHS Server

* Login to one of the web server using Unix box

e.g. putty 🡪 dlp10jmp 🡪 dash Aid 🡪 cyber ark password 🡪 ssh pdl01fbhwb001

* Navigate to the following directory

*cd /opt/oracle/Middleware/Oracle\_WT1/instances/oim\_instance /bin*

* Execute the command *ls -ltrh*
* Check the status of the OHS server by the following command (status should be not running)

*./opmnctl status*

* Execute the below command to start OHS server

*./opmnctl startall*

* Check the status of the OHS server by the following command (status should alive)

*./opmnctl status*

Follow the same steps for rest of the servers. – (pdl01fbhwb002, pdl01fbhwb003, pdl01fbhwb004)

## Issues

* When OHS status goes to ‘Init’, remove states folder and try restarting opmn again
* Path for states folder

/opt/oracle/oim/Middleware/Oracle\_WT1/instances/oim\_instance/config/OPMN/opmn/

* Refer 7.2 to start OHS server

# Validations Needs to be Performed

* Validation After the Restart of the servers

If BSM team disable the probes or if alert is shown at BSM then please reverify with BSM team on the status post restart of the service.

Else status can be checked via ( <https://bsm.na.bestbuy.com> ) / applications/server health

* For Vendor OIM servers Restart:
  + 1. Check availability of identity and admin consoles on each node.
    2. Check availability of Vendor Portal by examining all scenarios including Forgot Password, Registration, Functionality of other options inside the portal
    3. Check if the schedulers are running successfully.

**Note:** After the restart, please make sure to check data, tmp and stage folders has been created on all restarted servers.