Oracle® Fusion Middleware

Oracle Fusion Middleware Bundle Patch Release Notes for IDM Stack Patch Bundle

12.2.1.4.250429
G32897-02
April 2025

ORACLE

Oracle Fusion Middleware Oracle Fusion Middleware Bundle Patch Release Notes for IDM Stack Patch Bundle, 12.2.1.4.250429

G32897-02

Primary Authors: Oracle, Panendra Puttachar

Contributing Authors: Madhusudhanan Venugopalan, Bruce Bergeron, Sree Ramanan

Contents

1

Bundle Patch Release Notes for IDM SPB

This README provides information about the SPBAT utility used for applying Oracle Identity Management SPB.

This document contains the following sections:

2

About the Oracle Identity Management Stack Patch Bundle (SPB)

Oracle Identity Management Stack Patch Bundle (SPB) which is released every quarter, is essentially a collection of latest upper stack and lower stack mandatory patches applicable for IDM 12.2.1.4 installed environments. IDM 12.2.1.4 customer environments are broadly divided into following categories:

1. OAM - Oracle Access Manager
2. OIG - Oracle Identity Governance
3. OUD - Oracle Universal Directory
4. OID - Oracle Internet Directory

IDM customers belonging to above categories are required to apply the mandatory Patches prescribed for their respective installed environments. Please go through the remaining sections in this document for more information on applying the above patches on IDM 12.2.1.4 installed environments.

3

About the SPBAT Utility

Stack Patch Bundle Automation Tool (SPBAT) applies IDM patches (delivered via IDM Quarterly Stack Patch Bundle) on IDM 12.2.1.4 installed environments. On-Premise customers can use this tool directly. In case of any issues or additional guidance the Customers can open a Service Request (SR) with Oracle Support.

4

System Overview

The SPBAT utility is developed by using SHELL and Python scripts. This utility is supported only for LINUX X86-64, SOLARIS_SPARC64, SOLARIS64(x86), WINDOWS64 platforms on which IDM 12.2.1.4 suite is deployed.

ORACLE_HOME (Oracle Home) setup for IDM 12.2.1.4 is broadly divided into the following categories:

1. OAM - Oracle Access Manager
2. OIG - Oracle Identity Governance
3. OUD - Oracle Universal Directory
4. OID - Oracle Internet Directory

In the following sections, the above categories are described as separate install types, each containing a dedicated ORACLE_HOME deployed in dedicated VMs/Hosts.

In case the setup is spread across multiple VMs/Hosts, then perform the patching steps for each ORACLE_HOME on respective VMs. If there are multiple ORACLE_HOME locations on the same VM, then perform the patching steps for each ORACLE_HOME separately. If two or more install types share the same ORACLE_HOME, then perform the patching steps for each install type against the ORACLE_HOME.

5
Prerequisites

Ensure that you meet the following requirements before you attempt to run the SPBAT utility on IDM 12.2.1.4 installed environment.

5.1 Staging and verification

1. Decide where you want to install the SPB bundle. The location should have 50GB of free space. The location should be accessible to all IDM hosts with "read", "write" and "execute" rights enabled on the file system. Extract the zip to this location and verify it contains the following directory structure:

   IDM_SPB_12.2.1.4_<VERSION>/

   spbat-bundle.properties (file)

   README.txt (file)

   README.html (this file)

   binary_patches (dir)

   tools (dir)

   etc (dir)

   upgrade_installers (dir)

2. Navigate to the SPBAT directory and verify it contains the following directory structure:

   IDM_SPB_12.2.1.4_<VERSION>/tools/spbat/generic/SPBAT

   ExecEngine (dir)

   README.txt (file)

   bin(dir)

   config(dir)

   env (dir)

   spbat.bat (file)

   spbat.sh (file)

   tools (dir)

   version.txt (file)

3. DO NOT make any changes to the directory structure under `IDM_SPB_12.2.1.4_<VERSION>` location.

5.2 Minimum OPatch Version Check

Ensure that `ORACLE_HOME` has minimum required OPatch version, that is, 13.9.4.2.13 or higher.

To verify, run the following command under the `ORACLE_HOME/OPatch` directory:

```
-bash-4.2$ ./opatch


versionOPatch Version: 13.9.4.2.13


OPatch Succeeded.
```

5.3 Backup

1. Create a complete backup of `ORACLE_HOME` and `DOMAIN_HOME` locations before Downtime phase.
2. Create a cold backup of the entire IDM setup by using standard backup software/utilities.

5.4 Setting Heap size for OPatch

OPatch sets the default Heap size to 3 GB for LinuxX86-64 and to 1.5GB for other platforms. It is suggested to override this default value for platform patches (except LinuxX86-64) before OPatch session is invoked by setting the parameter as:

```
export OPATCH_JRE_MEMORY_OPTIONS="-Xmx3072m"
```

5.5 Removing Inactive Patches

Customers who want to improve storage and SPB patching performance should consider the following steps:

1. Choose the level of rollback capability needed.

   To keep the rollback level of SPB environment at N-1 (where N is the current patch level), update the `RETAIN_INACTIVE_PATCHES` parameter to value `1` (`RETAIN_INACTIVE_PATCHES=1`) in the `<ORACLE_HOME>/OPatch/config/opatch.properties` file.

2. Run the following command to delete the inactive patches:

   ```
   <ORACLE_HOME>/OPatch/opatch util deleteinactivepatches -oh <ORACLE_HOME>
   ```

   Known Issue :

   Currently the `deleteinactivepatches` option deletes only 1 PSU/BP/RU chain and its overlays. In Oracle Homes where there are more than 1 inactive PSU/BP/RU chain (for

example, DBRU, GIRU applied/installed on `ORACLE_HOME`), the user needs to run `opatch` command with `deleteinactivepatches` option multiple times.

As a verification point, after each run of `opatch` command with `deleteinactivepatches` option, run the following command:

```
<ORACLE_HOME>/OPatch/opatch util listorderedinactivepatches -oh
<ORACLE_HOME>
```

When the output of this command looks like the following:

```
Total: 1 inactive RU/CPU patch (es) and 1 inactive overlay patch (es).
```

then there is no need to run again the `opatch` command with `deleteinactivepatches` option as the desired rollback level has been achieved.

3. Run the following command to perform cleanup:

```
<ORACLE_HOME>/OPatch/opatch util cleanup -oh <ORACLE_HOME>
```

This would cleanup any stale files.

6

SPB Patches and their Applicability

Following is the list of patches included in the SPB and which will be applied on the respective ORACLE_HOME using SPBAT utility:

Patches	Patch Number	Applicability			
MERGE REQUEST ON TOP OF 12.2.1.4.0 FOR BUGS 34065178 34113169	36649916	OAM	OIG	OUD	OID
OIM 12CPS3 UPGRADE STUCK AT SCHEMAREADINESSQUERIES QUERYINDEXNAMES	32999272	OAM	OIG	OUD	OID
FMWCONTROL BUNDLE PATCH 12.2.1.4.240814	36946553	OAM	OIG	OUD	OID
OID BUNDLE PATCH 12.2.1.4.221222	34947852	-	-	-	OID
DATABASE RELEASE UPDATE 19.26.0.0.0 FOR FMW DBCLIENT	37526122	-	-	-	OID
ONE OFF PATCH TO RELINK OID WITH DBCLIENT - APR'25 BP	37733880	-	-	-	OID
PROVIDE PATCH ON WINDOWS WHICH INCLUDES DMS AND OPMNPERF BUILT WITH VS2017	35106635	-	-	-	OID
OINAV PATCH 12.2.1.4.241015	37054395	OAM	OIG	-	-

Patches	Patch Number	Applicability			
MERGE REQUEST ON TOP OF 12.2.1.4.0 FOR BUGS 20623024 29790738	31676526	OAM	OIG	-	-
OAS 12.2.1.4.5 - RCU CREATION WITH RAC DB SHOWS INCORRECT PORT WARNING	30540494	OAM	OIG	-	-
OAM BUNDLE PATCH 12.2.1.4.250428	37882456	OAM	OIG	-	-
WLS PATCH SET UPDATE 12.2.1.4.250317	37714186	OAM	OIG	OUD	OID
JDBC19.25 BUNDLE PATCH 12.2.1.4.241107	37258699	OAM	OIG	OUD	OID
FMW THIRDPARTY BUNDLE PATCH 12.2.1.4.250314	37710654	OAM	OIG	OUD	OID
Coherence 12.2.1.4 Cumulative Patch 25 (12.2.1.4.25)	37658278	OAM	OIG	OUD	OID
RDA release 25.2-2025415 for FMW 12.2.1.4.0	37506516	OAM	OIG	OUD	OID
OCT 2024 CLONING SPU FOR FMW 12.2.1.4.0	37056593	OAM	OIG	OUD	OID
WEBLOGIC SAMPLES SPU 12.2.1.4.240416	36426672	OAM	OIG	OUD	OID
OSS 19C BUNDLE PATCH 12.2.1.4.241119	37297691	OAM	OIG	OUD	OID

Patches	Patch Number	Applicability			
ADR FOR WEBLOGIC SERVER 12.2.1.4.0 - SIZE OPTIMIZED FOR JAN 2024	35965629	OAM	OIG	OUD	OID
FMW PLATFORM BUNDLE PATCH 12.2.1.4.240812	36789759	OAM	OIG	OUD	OID
OPSS BUNDLE PATCH 12.2.1.4.240220	36316422	OAM	OIG	OUD	OID
OWSM BUNDLE PATCH 12.2.1.4.250309	37684007	OAM	OIG	OUD	OID
OIM BUNDLE PATCH 12.2.1.4.250409	37807383	OAM	OIG	-	-
OUD BUNDLE PATCH 12.2.1.4.241003	37129794	-	-	OUD	-
ADF BUNDLE PATCH 12.2.1.4.250416	37836334	OAM	OIG	OUD	OID
SOA BUNDLE PATCH 12.2.1.4.250307	37680629	-	OIG	-	-
WebCenter Core Bundle Patch 12.2.1.4.241114	37284722	OAM	OIG	OUD	OID

Customers upgrading from Oct'22 IDM SPB or earlier, please note:

From April 2025 Bundle Patch cycle, the underlying DB Client in OID 12.2.1.4 ORACLE HOME should be updated to 19.26 version.

This update is delivered via the following patches:

- DB Client 19c Installer - 34761383
- DB Client 19.26 - 37526122
- OSS 19c BP - 37668631
- OID BP - 34947852

`IDM SPB 12.2.1.4_<VERSION>` includes all the above-mentioned deliverables (along with other OID dependent patches) and helps in installing the updates.

The SPBAT utility (in the PreStop phase) will detect DB Client version in OID Home and if the DB Client version is found to be 12c (12.1.0.2 series), the SPBAT PreStop phase will fail. In the SPBAT execution log, we will see the recommendation to update DB Client to 19c (12.2.1.19.0) version.

Sample snippet of SPBAT PreStop execution log:

```
[FAILED] Environment has not met the minimum DBClient version(Database_Client
12.2.1.19.0) requirement.Please perform the following steps

1)Shutdown all IDM services running on oid12214ga19cdbserv4dbpsu

2)Take a backup of MW_HOME : /scratch/oseidmqa/MW/Oracle and the
CENTRAL_INVENTORY: /scratch/oseidmqa/oraInventory

3)Run following script to upgrade dbclient

/scratch/oseidmqa/IDM_SPB_12.2.1.4_<VERSION>/tools/spbat/generic/SPBAT/logs/
oid12214ga19cdbserv4dbpsu_oid_12.2.1.4_<VERSION>/preCheck/dbclient/
dbclient_upgrade.sh
```

OSS Bundle Patch and OID Bundle Patch will be updated via the SPBAT Downtime phase update.

7

SPB usage Instructions

To run the SPBAT utility, navigate to the `IDM_SPB_12.2.1.4_<VERSION>/tools/spbat/generic/SPBAT/` directory.

The SPBAT utility usage and execution steps are as follows:

- To get usage details on the command line, enter:

```
[Unix]
./spbat.sh


[Windows]
spbat.bat
```

- To obtain SPBAT utility version, enter:

```
./spbat.sh -version
```

- To apply the patches using SPBAT utility, enter:

```
[Unix]
./spbat.sh -type <install_type> -phase <phase> -mw_home <mw_home> -
spb_download_dir <spb_download_dir> -log_dir <log_dir>


[Windows]
spbat.bat -type <install_type> -phase <phase> -mw_home <mw_home> -
spb_download_dir <spb_download_dir> -log_dir <log_dir>
```

Here:	
`-install_type:`	The install type or IDM component, such as `oam/oig/oud/oid`.
`-phase:`	The various phases of applying the patch, such as `PreStop/Downtime/PostStart`.
`-mw_home:`	The path to Oracle Home directory.
`-spb_download_dir:`	The path to IDM_SPB_12.2.1.4_<VERSION> stage location directory.
`-log_dir (optional):`	The path to `log_dir` directory, this is where you want logs to go on your file system. The default directory is created under `IDM_SPB_<VERSION>/tools/spbat/generic/SPBAT/logs` location, or you can set your

	own location which exists and has "write" access.
`-verbose (optional):`	To be set to "true" or "false" value. This is to display additional information on the default output stream (STDOUT).
`-force (optional and applicable for PreStop phase):`	To be set to "true" or "false" value. When set to "true", it forces performing all the validations.

- To know the status of SPBAT anytime once the patching has started, enter:

```
[Unix]
./spbat.sh -status report -type <install_type> -mw_home <mw_home> -log_dir
<log_dir>


[Windows]
spbat.bat -status report -type <install_type> -mw_home <mw_home> -log_dir
<log_dir>
```

Here:	
`-report:`	is a constant implying status report.
`-install_type:`	refers to install type, such as oam/oig/oud/oid.
`-mw_home:`	is the path to Oracle Home directory.
`-log_dir (optional):`	The path to `log_dir` directory, this is where you want logs to go on your file system. The default directory is created under `IDM_SPB_<VERSION>/tools/spbat/generic/SPBAT/logs` location, or you can set your own location which exists and has "write" access.

Important Note for Windows users: Please open the Command Prompt as Administrator and execute the spbat.bat script for patching.

8
Phases in the Patching Process

Once the steps described in section **Prerequisites** are completed, the sequences of phases in applying the SPB patches using SPBAT utility on the IDM 12.2.1.4 installed environment are:

a. PreStop	Run the SPBAT utility for the PreStop phase to evaluate the environment prior to patching. Verify the html report summary and refer to the logs and reports, if needed. This phase can be run while the services, instances and/or servers are up and running.
b. Stop Services	Stop all IDM related services (including WebLogic Servers) running on IDM hosts.
c. Backup	Create a cold backup of the entire ORACLE_HOME and DOMAIN_HOME directories.
d. Downtime Patching	Run the SPBAT utility for the Downtime phase.
e. Start Services	Start all IDM related services (including WebLogic Servers) running on IDM hosts, and make sure these are up and running.
f. PostStart	Run the SPBAT utility for the PostStart phase.
g. Complete Validation	Once the SPB patching activity is complete, verify the environment and URLs.

For detailed information about the steps in the execution phases, please refer to section "8 Applying the SPB Patches using SPBAT".

9

Applying the SPB Patches using SPBAT

After completing the steps described in section **Prerequisites**, follow the next steps to apply the SPB patches in the IDM 12.2.1.4 environment:

PreStop:

To be done on all IDM hosts, as described in section System Overview:

1. Run the SPBAT utility with appropriate options for the PreStop phase based on the install type:
   [Unix - Please open the bash shell and execute]

   ```
   cd IDM_SPB_12.2.1.4.<VERSION>/tools/spbat/generic/SPBAT
   ./spbat.sh -type <oam/oig/oud/oid> -phase prestop -mw_home <path to
   mw_home> -spb_download_dir <path to IDM_SPB_12.2.1.4.<VERSION> stage
   location> -log_dir <log_dir>
   ```

   [Windows - Please open the Command Prompt as Administrator and execute]

   ```
   cd IDM_SPB_12.2.1.4.<VERSION>\tools\spbat\generic\SPBAT
   spbat.bat -type <oam/oig/oud/oid> -phase prestop -mw_home <path to
   mw_home> -spb_download_dir <path to IDM_SPB_12.2.1.4.<VERSION> stage
   location> -log_dir <log_dir>
   ```

2. Perform the following after running the script:
   a. Review the html reports before proceeding with the next phase. The analysis reports are generated under `<log_dir>/<hostname_type>patch_log_dir/spbat-logs/reports` location.
   b. Upgrade OPatch after creating a full backup of ORACLE_HOME if the minimum OPatch version requirement is not met.
   c. If there are any issues that need to be addressed, you can run the **PreStop** phase again but will need to create and use a new logs directory prior to doing so.
   d. If no issues are found, for Downtime and **PostStart** phases please use the same log directory as in the **Prestop** phase.
3. For IDM cluster, repeat steps 1 and 2 on each VM. Make sure that the patching user and `ORACLE_HOME` install user/owner are same to avoid permission issues.
4. If two or more install types share the same `ORACLE_HOME`, then repeat steps 1 and 2 against `ORACLE_HOME` for each install type.

Stop Services:

1. Stop all IDM related services (including WebLogic servers) running on IDM hosts.
2. Make sure that no services are accessing the `ORACLE_HOME` binaries.

Backup:

1. Create a complete backup of `ORACLE_HOME` and `DOMAIN_HOME` locations.
2. Create a cold backup of the entire IDM setup by using standard backup software/utilities.
3. Create a backup of the database.

Downtime Patching:

To be done on all IDM hosts, as described in section System Overview:

1. Run the SPBAT utility with appropriate options for the Downtime phase based on the install type:
   [Unix - Please open the bash shell and execute]

   ```
   cd IDM_SPB_12.2.1.4.<VERSION>/tools/spbat/generic/SPBAT
   ./spbat.sh -type <oam/oig/oud/oid> -phase downtime -mw_home <path to
   mw_home> -spb_download_dir <path to IDM_SPB_12.2.1.4.<VERSION> > -log_dir
   <log_dir>
   ```

   [Windows - Please open the Command Prompt as Administrator and execute]

   ```
   cd IDM_SPB_12.2.1.4.<VERSION>\tools\spbat\generic\SPBAT
   spbat.bat -type <oam/oig/oud/oid> -phase downtime -mw_home <path to
   mw_home> -spb_download_dir <path to IDM_SPB_12.2.1.4.<VERSION> > -log_dir
   <log_dir>
   ```

2. Perform the following after running the script:
   a. In case of any failure, review the patching logs before proceeding to next steps.
3. Perform appropriate Post-Install and Configuration steps before the servers are started up:
   a. OAM - Please refer to item **A. Before Server Startup** of section Post-Install and Configuration Steps - OAM in this document.
   b. OIG - Please refer to item **A. Before Server Startup** of section Post-Install and Configuration Steps - OIG in this document.
   c. OUD - Please refer to item **A. Before Server Startup** of section Post-Install and Configuration Steps - OUD in this document.
   d. OID - Please refer to item **A. Before Server Startup** of section Post-Install and Configuration Steps - OID in this document.
4. For IDM cluster, repeat steps 1, 2 and 3 on each VM. Make sure that the patching user and `ORACLE_HOME` install user/owner are the same to avoid permission issues.
5. If two or more install types share the same `ORACLE_HOME`, then repeat steps 1, 2 and 3 against `ORACLE_HOME` for each install type.

Start Services:

Start all IDM related services (including WebLogic Servers) running on IDM hosts.

PostStart:

To be done on all IDM hosts, as described in section System Overview:

1. Run the SPBAT utility with appropriate options for the PostStart phase based on the install type:

[Unix - Please open the bash shell and execute]

```
cd IDM_SPB_12.2.1.4.<VERSION>/tools/spbat/generic/SPBAT
./spbat.sh -type <oam/oig/oud/oid> -phase poststart -mw_home <path to
mw_home> -spb_download_dir <path to IDM_SPB_12.2.1.4.<VERSION> > -log_dir
<log_dir>
```

[Windows - Please open the Command Prompt as Administrator and execute]

```
cd IDM_SPB_12.2.1.4.<VERSION>\tools\spbat\generic\SPBAT
spbat.bat -type <oam/oig/oud/oid> -phase poststart -mw_home <path to
mw_home> -spb_download_dir <path to IDM_SPB_12.2.1.4.<VERSION> > -log_dir
<log_dir>
```

2. After running the script, review the patching logs generated under `/patch_log_dir/spbat-logs` for any failures.
3. Perform appropriate Post-Install and Configuration steps after the servers are started up:
   a. OAM - Please refer to item "B. After Server Startup" of section "9 Post-Install and Configuration Steps - OAM" in this document
   b. OIG - Please refer to item "B. After Server Startup" of section "10 Post-Install and Configuration Steps - OIG" in this document
   c. OUD - Please refer to item "B. After Server Startup" of section "11 Post-Install and Configuration Steps - OUD" in this document
   d. OID - Please refer to item "B. After Server Startup" of section "12 Post-Install and Configuration Steps - OID" in this document
4. For IDM cluster, repeat steps 1 and 2 on each VM. Make sure that the patching user and `ORACLE_HOME` install user/owner are the same to avoid permissions issues.
5. If two or more install types share the same `ORACLE_HOME`, then repeat steps 1,2 and 3 against `ORACLE_HOME` for each install type.

Complete Validation:

Once the SPB patching activity is completed, restart and verify the environment and URLs.

10

Post-Install and Configuration Steps - OAM

Following are the post-install and configuration steps which are required to be performed after Downtime phase once the OAM binaries are applied using OPatch:

A. Before Server Startup

After applying patches, clear out the contents of any `cache/tmp/stage` directories which exist in all `$DOMAIN_HOME/servers/<SERVER_NAME>` locations, prior to restarting.

B. After Server Startup

There are no post-install and configuration actions to be performed currently.

11

Post-Install and Configuration Steps - OIG

Following are the post-install and configuration steps which are required to be performed after Downtime phase once the OIG binaries are applied using OPatch:

A. Before Server Startup

After applying patches, clear out the contents of any `cache/tmp/stage/dc` directories which exist in all `$DOMAIN_HOME/servers/<SERVER_NAME>` locations, prior to restarting.

B. After Server Startup

1. Update `$OIM_ORACLE_HOME/server/bin/patch_oim_wls.profile` file.
   For detailed instructions, please refer to the section *Stage 2: Filling in the patch_oim_wls.profile File* in `IDM_SPB_12.2.1.4.<VERSION>/etc/OIG_Bundle_Patch_Readme.html`.
2. Execute `$OIM_ORACLE_HOME/server/bin/patch_oim_wls.sh` script.

12

Post-Install and Configuration Steps - OUD

Following are the post-install and configuration steps which are required to be performed after Downtime phase once the OUD binaries are applied using OPatch:

A. Before Server Startup

After applying patches, clear out the contents of any `cache/tmp/stage` directories which exist in all `$DOMAIN_HOME/servers/<SERVER_NAME>` locations, prior to restarting.

B. After Server Startup

There are no post-install and configuration actions to be performed currently.

13

Post-Install and Configuration Steps - OID

There are no post-install and configuration actions to be performed currently.

14
Troubleshooting

1. If the minimum OPatch version requirement is not met, then upgrade the OPatch after creating a full backup of `ORACLE_HOME`.
2. If you encounter an error in roll-back of OID one-off patch, please refer to Doc ID 2944818.1 for further details.
3. As more and more patches are applied, OPatch backs up subset patches in the `ORACLE_HOME/.patch_storage` directory to facilitate a rollback. This might result in performance issues. If you observe such performance issues, please refer to Doc ID 2942050.1 for further details.
4. If you encounter any errors during any phase of applying the patch, contact Oracle Support.

15
Limitations

1. The SPBAT utility automates the binary patch apply for the patches that are obtained through the SPB bundle only. It excludes the configuration actions and server restart operations.
2. The SPBAT utility does not handle the start, stop, and post-patching configuration operations of the servers. The user can use either custom startup/shutdown scripts or the ones available with the product. The post-patching configuration operations, if any, must be manually performed, as documented in the SPB `README.html`.
3. The SPBAT utility supports only IDM 12.2.1.4 and 12.2.1.3 versions deployed on `LinuxX86-64`, `SOLARIS_SPARC64`, `SOLARIS64(x86)`, `WINDOWS64` platforms.
4. The SPBAT utility has minimalistic error handling, and it relies on the correctness of the input values provided by the user while using the tool.
5. The SPBAT utility does not create any backup of the environment/application/configuration/data prior to individual patching of the product or component.
6. The SPBAT utility does not provide rollback support. For any issues, use the backups (created before Downtime phase) to restore the environment. However, while applying SPB, existing one-offs present in the `ORACLE_HOME` can be rolled back. Manually review the `ORACLE_HOME` inventory and re-apply any one-offs that might have been rolled back during the application of IDM SPB.