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Preface

This document explains the platform utility to be used when building a new forms 12c or upgrading an existing forms 11g to a 12c platform on OPERA 5 Property Services and OPERA Property Cloud Services.

Audience
This document is intended for system administrators, support personnel, and users wanting to build or upgrade to a 12c platform.

Customer Support
To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

• Product version and program/module name
• Functional and technical description of the problem (include business impact)
• Detailed step-by-step instructions to re-create
• Exact error message received and any associated log files
• Screenshots of each step you take

Documentation
Oracle Hospitality product documentation is available on the Oracle Help Center at
http://docs.oracle.com/en/industries/hospitality/

Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Description of Change</th>
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<tr>
<td>April 2019</td>
<td>Initial publication.</td>
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12c Forms Provisioning New / Upgrade Requirements

**WARNING:**

OS Compatibility
- Windows 2012 and 2016 servers
- Make sure the following OS prerequisites are completed before continuing provisioning Click here for the prerequisites.

**WARNING:**

Make sure to back up any customized forms in OPERA V5 and have them manually converted to 12c so that they can be placed back after 12c server provisioning.

**WARNING:**

OPERA artifacts must be downloaded and included into the utility before starting 12C server provisioning.

**NOTE:** Important Instructions on how to include OPERA artifacts into the utility

1. Download the required and compatible OPERA version artifacts from MOS.
3. Once extraction is completed, copy entire “opera” folder.
4. Overwrite copied “opera” folder into the following utility folder structure “Forms12CPlatformUpgrade\scripts\core\stage\MICROS\”.
NOTE: Important Instructions for retaining an existing Java KeyStore (JKS)/V5MACHINE

1. Copy the existing JKS file into the scripts/config/clustering/keystores folder. When clustering with multiple nodes, make sure all JKS files for all nodes are placed in this location before provisioning the AdminServer.

2. Once the JKS file is copied to the designated location, rename the existing JKS files with the appropriate computer name/s for all the nodes. Run `echo %COMPUTERNAME%` from the command line to get the computer name.
   a. Not adhering to the above naming standard will result in unsuccessful provisioning of the servers.
This utility is not supported for the 10G to 12c upgrade path.

Before provisioning 12c, the media will do a clean uninstall of any previously installed 11g installations. This only applies to the upgrade process.

The following components are provisioned as part of this utility.

Uninstalls (applies only to the upgrade process):

- Oracle HTTP Server (OHS)
- Forms and Reports
- Oracle Fusion Middleware
- Oracle SQL Client
- JDK

Installs (applies to both clean and upgrade process):

- JDK 1.8 (8u201-windows-x64)
- Oracle Fusion Middleware 12.2.1.3.0
- Oracle Forms & Reports 12.2.1.3.0
- Oracle OHS 12.2.1.3.0
- Oracle Database Client 32-bit 12.2.0.1
- Provisions and starts Managed Servers (WLS_HOME, WLS_FORMS, WLS_REPORTS)
- Provisions and starts Reports Server instance

---

**NOTE: Important Instructions for retaining the existing JKS / V5MACHINE**

1. Make sure to have all of the computer names for all of the nodes before provisioning the AdminServer. Run echo %COMPUTERNAME% from the command line to get the computer name.

2. Provision the AdminServer first. Do not start provisioning any other nodes until the AdminServer has been provisioned successfully.

3. Once the AdminServer is provisioned successfully, copy the entire Config folder from the AdminServer and paste/overwrite it to the same location on every node (For example, Node 2, Node 3 and so on.).
   a. All installation must be done on the same drive for all nodes. (Example: If "AdminServer" is installed on drive "D:\" then all subsequent nodes should also be installed on drive "D:\")

4. After successful provisioning of AdminServer, all remaining nodes can be provisioned simultaneously.
Figure 1 Provisioning Components (AdminServer Vs Node 2 Succeeding Nodes)

**Admin Server**
- **Shutdown & Installation of database components (only if applicable):**
  - Universal schema
  - \(\text{Universal Schema (AdminServer)}\)
  - \(\text{Universal Schema (Node 2 Succeeding Nodes)}\)
  - **Additions**
  - **Subtractions**
- **Preparation phase**
  - Ongoing
- **Applied CPU Patches:**
  - April 2019

**Node 2 ... Successing Nodes**
- **Shutdown & Installation of database components (only if applicable):**
  - Universal schema
  - \(\text{Universal Schema (AdminServer)}\)
  - \(\text{Universal Schema (Node 2 Succeeding Nodes)}\)
  - **Additions**
  - **Subtractions**
- **Preparation phase**
  - Ongoing
- **Applied CPU Patches:**
  - April 2019

**NOTE:** AdminServer should be provisioned FIRST and DO NOT start provisioning any other nodes
Forms 12c Platform Clean / Upgrade Install via Command Line

The platform utility is used to build a new Forms 12c or upgrade an existing Forms 11g to a 12c platform.

Accessing Platform Upgrade Utility

Download the utility from the following location.

**NOTE:** Important 12c Documentation References

New 12c Directory Paths for Reports Configuration Files
Running Platform Utility (Command Line):

Below are 2 ways to invoke command line utility:

A. Running “12C_Forms_Platform_Upgrade.CMD” from windows explorer by selecting "Run as administrator". This approach requires user to enter configuration data and password at the very first step of 12c provisioning (Please follow steps 1 through 7)

B. Invoking "12C_Forms_Platform_Upgrade.CMD" from command line with required arguments, which is then would be completely silent (Please follow steps 8 through 12)

1. In the 12CPlatformUpgrade folder, select 12C_Forms_Platform_Upgrade. CMD, then right click and select Run as administrator.

2. When prompted, press any key to continue.

Figure 2 Configuration File CMD Prompt

3. The config file opens and the following parameters must be entered and saved before continuing the upgrade.

The following parameters are mandatory for a Single Domain / Node install:

- OPERA_DB_HOST_NAME: Database Host Name. The RAC DB is only supported when the SCAN (Single Client Access Name) feature is configured. SCAN provides a single domain name via DNS, allowing end-users to address a RAC cluster as if it were a single IP address.
- OPERA_DB_LISTEN_PORT: Database listening port
- OPERA_DB_SERVICE_NAME: Database service name
- INFRA_DB_HOST_NAME: INFRA Database Server Name
- INFRA_DB_SERVICE_NAME: Infra DB service name
- INFRA_DB_LISTEN_PORT: Infra DB listening port
• INFRA_DB_SYSDBA_ROLE_USER: Database User can now be either a SYSDBA role user or a normal user who has been granted access to create schemas for RCU.

• INFRA_DB_USER_ROLE: Accepted values are “sysdba” for SYSDBA role user and “normal” or normal user who has granted access.

• OPERA_DB_USER: Database user name

• INFRA_RCU_PREFIX: RCU prefix for Infra Database. Make sure the value is unique within the DB server. The value provided should only be alphanumeric and should not be more than 12 characters.

  – While provisioning a Cluster with multiple nodes, INFRA schemas will be created only once at the time of the AdminServer provisioning.

• INSTALL_ON_DRIVE_LETTER: Enter the drive letter with no colon where 12c provisioning is to be executed (For example: D).

The following parameters are only required when setting up for a Cluster with Multiple Nodes. The Utility can support up to 30 nodes.

• COMPUTER_NAME_1: This computer will be the primary WebLogic node where the AdminServer resides. To find the computer name, logon to the computer and execute the following command from the command line: echo %COMPUTERNAME%

• COMPUTER_NAME_2: This will be WebLogic node 2

• COMPUTER_NAME_3: This will be WebLogic node 3

• COMPUTER_NAME_4: This will be WebLogic node 4

• COMPUTER_NAME_5: This will be WebLogic node 5

• COMPUTER_NAME_6: This will be WebLogic node 6

• COMPUTER_NAME_7: This will be WebLogic node 7

• COMPUTER_NAME_8: This will be WebLogic node 8

• COMPUTER_NAME_9: This will be WebLogic node 9

• COMPUTER_NAME_10: This will be WebLogic node 10

• COMPUTER_NAME_11: This will be WebLogic node 11

• COMPUTER_NAME_12: This will be WebLogic node 12

• COMPUTER_NAME_13: This will be WebLogic node 13

• COMPUTER_NAME_14: This will be WebLogic node 14

• COMPUTER_NAME_15: This will be WebLogic node 15

• COMPUTER_NAME_16: This will be WebLogic node 16

• COMPUTER_NAME_17: This will be WebLogic node 17

• COMPUTER_NAME_18: This will be WebLogic node 18

• COMPUTER_NAME_19: This will be WebLogic node 19

• COMPUTER_NAME_20: This will be WebLogic node 20

• COMPUTER_NAME_21: This will be WebLogic node 21

• COMPUTER_NAME_22: This will be WebLogic node 22

• COMPUTER_NAME_23: This will be WebLogic node 23

• COMPUTER_NAME_24: This will be WebLogic node 24
Chapter 2
Forms 12c Platform Clean / Upgrade Install via Command Line

- COMPUTER_NAME_25: This will be WebLogic node 25
- COMPUTER_NAME_26: This will be WebLogic node 26
- COMPUTER_NAME_27: This will be WebLogic node 27
- COMPUTER_NAME_28: This will be WebLogic node 28
- COMPUTER_NAME_29: This will be WebLogic node 29
- COMPUTER_NAME_30: This will be WebLogic node 30

The Command window will display values entered in the config file for final user verification. Once everything is validated, enter the OPERA DB password when prompted and press Enter.

Figure 3 Schema Password Prompt

![Configuration file will be opened in Notepad. Update and review accordingly. Afterwards, close the Notepad, and installation will continue automatically.](image)

4. The Utility prompts the user to enter a single password, which will be used for login to the WebLogic console, Node Managers, JKS, cacerts, and wallet passwords. Type the password and press Enter.
When the JKS is being retained as part of provisioning, make sure that the current password for JKS is the same as the one that is being supplied. Not adhering to this standard will result in an unsuccessful upgrade.

5. The Utility prompts for the INFRA SYSDBA role password. Enter the password and press Enter.

6. The Utility prompts for the INFRA schemas password. Enter the password and press Enter.
Chapter 2
Forms 12c Platform Clean / Upgrade Install via Command Line

Figure 6 RCU Schemas Password Prompt

7. Copy config.txt from the following location
   "Forms12CPlatformUpgrade\scripts\config\sample" and paste it in
   "Forms12CPlatformUpgrade\scripts\config"

8. Open the "config.txt" file from "Forms12CPlatformUpgrade\scripts\config", fill out all
   the required information, and then save the file.

9. Open Command Prompt by right clicking the program icon and selecting "Run as an
   administrator"

10. Run "12C_Forms_Platform_Upgrade.CMD" with the following arguments as shown
    below and press Enter. In case of OPERA DB and SYS DB passwords with an
    exclamation point (!) character, the exclamation point character must be prefaced by
    two carrot (^) characters. (Ex: If the password is "operadbwpwd!" then it should be
    passed as "operadbwpwd^^!") as shown below in Figure 7.1

    OPERA_DB_PASSWORD
    PROV_PASSWORD_FOR_ALL
    INFRA_RCU_SYSDBA_PASSWORD
    INFRA_RCU_PASSWORD

Figure 7 12c_Forms_Platform_Upgrade.CMD Arguments Order
11. Once message "Press any key to continue...." is displayed, press **any key**. The config.cmd file is then displayed with pre-populated information for final user verification. After everything is validated, close the Config file.

12. While installing Forms and Reports, the installation might take longer when it reaches 90% completion.

13. Once the installation is complete, press **Ctrl + BREAK** or **Ctrl + C** and answer N to the question Terminate batch job.
14. The WebLogic Console window will open after being successfully upgraded. Log in with username and password credentials.

15. After logging into the WebLogic console, click Environment under Domain Structure and then click on Servers.

16. Verify that the managed servers are up and running.
Upgrade Logs

Logs can be found in the following locations:

Utility Drive (for example: D):\Forms12CPlatformUpgrade\logs\Users\<<user name>>\AppData\Local\Temp
3

Forms 12c Platform Clean / Upgrade Install via Upgrade Utility

OPERA Forms Upgrade Utility (UI)

The OPERA Forms Upgrade Utility (OFUU) provides a seamless transition when provisioning new or from existing forms 11g to 12c platforms.

OPERA Forms Upgrade

In the 12CPlatformUpgrade folder, select OFUU.BAT, then right-click and click Run as administrator.

1. OPERA Forms Upgrade Utility should be displayed.

2. OPERA Database Details: Enter the OPERA DB and INFRA DB parameters. Successful connection is required before moving to the next step. Check your connection by clicking the Test Connection button.

The following lists the mandatory parameters that are required for Single Domain / Node install:

- OPERA DB Host Name: Database Host Name. RAC DB is only supported when the SCAN (Single Client Access Name) feature is configured. SCAN provides a single domain name via DNS, allowing you to address a RAC cluster as if it were a single IP address.
• OPERA DB Listening Port: Database listening port.
• OPERA DB Service Name: Database service name.
• OPERA DB User Name: Opera Database user name.
• OPERA DB Password: Opera Database password.
• OPERA Host is the same as INFRA machine: Selecting this checkbox will auto-populate INFRA DB Host Name and INFRA DB Service Name.
• INFRA DB Host Name: INFRA Database Server Name.
• INFRA DB Service Name: Infra DB service name.
• INFRA DB SYS User: INFRA Database User with Sys DBA role.
• INFRA DB SYS Password: INFRA Database password.

3. Checklist Step: This screen validates certain prerequisites. After clicking the Start button click Next after a successful validation.

• Choose the drive to install: Select the drive from list of values where 12c provisioning is to be executed.
• Verify Hardware: Verifies hardware requirements. Required minimum of 2 core CPU and 12 GB RAM.
• Verify DB Version: Required DB of 11.2.0.4.0 or higher.
• Verify Invalid Objects in Database: Checks for any invalid objects in the DB and notifies the user about invalid objects before continuing 12c provisioning. The utility does not recompile existing invalid objects.
• Verify OPERA Version: Checks for underlying OPERA version. OPERA version 5.0.05.00 or higher is required for 12c provisioning.

Figure 15 OFUU Checklist Screen

4. Parameter Settings Step:
• Unified Password: User has to enter a single password, which will be used for the WebLogic console, Node Managers, JKS, cacerts, and wallet passwords.

**NOTE:**

If JKS is being retained as part of provisioning, make sure that the current password for JKS is the same as the one that is being supplied. Not adhering to this standard will result in unsuccessful provisioning of servers.

• RCU Schemas Password: Enter INFRA schemas password. The password that is going to be entered here will be used to access the newly created Infra schemas that gets created as part of 12c provisioning.

• INFRA RCU Prefix: RCU prefix for Infra Database. Make sure the value is unique within DB server. Value provided should only be alphanumeric and should not be more than 12 characters. While provisioning Cluster with multiple nodes, INFRA schemas will only get created once, at the time of the AdminServer provisioning.

• Node Specification:
  - Single Node: Selecting this option will create a cluster with single node. Click **OK** button and then Click **Next**.

  *Figure 16 OFUU Parameter Settings Screen*

  – Multiple Nodes: Selecting this option allows users to enter computer names for all nodes. The first computer name that is entered will be marked as the AdminServer and all other consecutive nodes will be marked in sequential order.

  – The Utility can support up to 30 nodes. Users can update existing computer names by double clicking on the computer name. Then Click the **OK** button and then Click **Next**.
5. Parameter Review: This step allows users to review the information that has been entered in previous steps and all information will be displayed in read-only mode. By clicking the Back button users can update existing parameters if required. Click the Next button once confirmed.
6. **Installation**: This step lists out all core components that will be provisioned and will display individual component progress and overall progress of the installation. Click the **Start** button to start 12c provisioning.

**NOTE:**

While 12c provisioning is running, users will see command windows and Oracle Universal Installers being opened and/or closed automatically. Refrain on taking any actions while the process completes.
Figure 20 OFUU Installation Screen
7. The WebLogic console window should be opened after the successful upgrade. If not, access the console and login with appropriate credentials.

Figure 21 WebLogic Login Screen

8. After logging into WebLogic console, click Environment under Domain Structure and then click Servers.
9. Verify that the managed servers are up and running.

## Logs

Logs can be found in the following locations:

- Utility Drive (for example, D)\Forms12CPlatformUpgrade\logs
- \Users\<<user name>>\AppData\Local\Temp
Expand an Existing Cluster by Adding New Node

**NOTE: Important Instructions for retaining the existing JKS / V5MACHINE**

1. Copy the existing JKS file into the scripts/config/clustering/keystores folder. When clustering with multiple nodes, make sure all JKS files for all nodes are placed in this location before provisioning the AdminServer.

2. Once the JKS file is copied to the designated location, rename the existing JKS files with the appropriate computer name/s for all the nodes. Run echo %COMPUTERNAME% from the command line to get the computer name.

   b. Not adhering to the above naming standard will result in unsuccessful provisioning of the servers.

**NOTE: Important Instructions for expanding an existing cluster**

1. Make sure to have all of the computer names for all of the nodes before provisioning the AdminServer. Run echo %COMPUTERNAME% from the command line to get the computer name.

2. Provision the AdminServer first. Do not start provisioning any other nodes until the AdminServer has been provisioned successfully.

3. Once the AdminServer is provisioned successfully, copy the entire Config folder from the AdminServer and paste/overwrite it to the same location on every node (For example, Node 2, Node 3 and so on.).

4. Multiple provisioning utilities should not be run simultaneously, so provisioning should be one node at a time.

   a. All installation must be done on the same drive for all nodes. (Example: If "AdminServer" is installed on drive "D:\" then all subsequent nodes should also be installed on drive "D:\")
Adding a New Node on AdminServer

1. Select "Expand_existing_cluster.cmd" in the scripts folder, right click and select "Run as administrator" option.

Figure 24 Expand Existing Cluster Command Prompt

2. Config.txt file will be opened, enter COMPUTER_NAME of the new nodes that are going to be added to existing cluster. Do not change any other configuration values from this file other than providing computer names for new nodes. Once completed, save the file and close.
3. Enter the password which will be used for Weblogic console, Node Managers, JKS, cacerts, and wallet passwords and press Enter.

**NOTE:**

If JKS is being retained as part of provisioning, make sure that the current password for JKS is the same as the one that is being supplied. In case of clustering, make sure to enter the same password when provisioning nodes that are part of the same cluster. Not adhering to this standard will have adverse impact and will result in unsuccessful upgrade.
4. The script will start executing and wait for the script to complete (as shown below).
Provisioning Platform on New Node

Make sure entire "config" folder is copied to new node before continuing provisioning.
Users can provision new node by either running the command line or UI utility (OFUU)
5 Clean De-Install Of Installed Components (11g & 12C)

The utility can only perform permanent uninstallations of existing 11g and 12C installed components. However, running this utility will not re-install any 12C components. The components listed below will be uninstalled as part of this utility.

Components to be Uninstalled:
- Oracle HTTP Server (OHS)
- Forms and Reports
- Oracle Fusion Middleware
- Oracle SQL Client
- JDK

Running Clean De-Install (Command Line):

1. Run the “Deinstall_11g_and_12c.CMD” file as administrator. It can be found under the Scripts/deinstall folder
2. When prompted, press any key to continue.
3. After pressing any key, configuration file should be opened in notepad. Enter all required details in the config file, then save and close.

   Please refer to step 3 under Running Platform Utility (Command Line) in this document for further details.

4. The utility should continue un-installation of components. Below are few screenshots when utility is in-installing.
Figure 3 Random screenshots while un-installing

1. **Chapter 5: Clean De-Install Of Installed Components (11g & 12C)**
2. **Figure 3 Random screenshots while un-installing**

   - ![Random screenshot 1](image1.png)
   - ![Random screenshot 2](image2.png)
   - ![Random screenshot 3](image3.png)
Chapter 5 Clean De-Install Of Installed Components (11g & 12C)

```
Checking CPU speed is above 300 MHz. Actual 2195. Passed
Checking swap space; must be greater than 121 MB. Passed
Checking if this platform requires a 64-bit JVM. Actual 64. Passed (64-bit not required)
Checking temp space; must be greater than 300 MB. Actual 48271 MB. Passed
Log: C:\Users\John\Desktop\Install\temp\2010-05-19_04.37.18PM\install2010-05-19_04.37.18PM.log
Setting ORACLE_HOME to D:\ORACLE\OracleApps\12cappr2
Copyright (c) 1999, 2017, Oracle and/or its affiliates. All rights reserved.
Reading response file...
Starting silent deinstallation...
Percent Complete: 10
Percent Complete: 20
Percent Complete: 30
Percent Complete: 40
```

```
Checking 12c11 OMS installation on drive C:

Checking 12c11 OMS installation on drive D:

Uninstalling Oracle OAPatch 13.0.4.0.0 of \ORACLE\12c11\oms from drive D:
Uninstalling Oracle HTTP Server 12213 from drive D:
```

```
The specified service does not exist as an installed service.
[SC] OpenService FAILED 1060:
The specified service does not exist as an installed service.
```

```
start_server.sh: line 10: stop_reports_server.sh: No such file or directory
```

```
start_server.sh: line 10: stop_reports_server.sh: No such file or directory
```

```
The system cannot find the path specified.
The system cannot find the path specified.
The system cannot find the path specified.
The system cannot find the path specified.
```

```
start_server.sh: line 10: stop_reports_server.sh: No such file or directory
```

```
The system cannot find the path specified.
The system cannot find the path specified.
The system cannot find the path specified.
The system cannot find the path specified.
```

```
start_server.sh: line 10: stop_reports_server.sh: No such file or directory
```

```
The system cannot find the path specified.
The system cannot find the path specified.
The system cannot find the path specified.
The system cannot find the path specified.
```
Figure 4 Un-Installation Success Prompt

5. Once the uninstallation is complete, press **Ctrl + BREAK** or **Ctrl + C** and answer **N** to the question Terminate batch job