

State of Maine
CTS Oracle Team

**Oracle Exa-Platform
CTS In-Take Questionnaire
(Database, Middleware & Unix)**



2/2/2018
Version 1.14



Oracle Exa-Platform In-Take Questionnaire
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1.0 PURPOSE & OVERVIEW

This In-Take Questionnaire is specifically designed to assist the AppDev & CTS teams in our collaborative efforts to migration into Oracle 12cR2. This document is meant to help in the collection of relevant information to create, migrate and host your application on the Oracle hosting Exa-Platform running Oracle 12cR2. *All information is confidential and will only be shared with required personnel.*

1.1 Steps to Complete this Questionnaire

1. There are strict standards being applied to this platform to ensure the security & stability of the environment. One off by application in general will not be supported due to the stringent patching cycles that must be enforced by Oracle. You **MUST** read, understand and comply with these standards in order to migrate onto the platform. Please review the “Oracle Exa-Platform Standards” section, i.e. section 1.2 below, before proceeding.
2. The “General Questions” and “Contact Information” sections are required sections that must always be filled out for any/all requests.
 - a. “If applicable” sections are noted as such and are optional on a case-by-case-basis.
3. This completed questionnaire must be completed and attached to your corresponding Footprint Ticket(s).

1.1.1 Exa-Platform Environmental Guidance:

There is now only a Pre-Prod and Prod infrastructure. The pre-production and development environments are on the same physical hardware in the new Exalogic environment. This impacts application development it that the hardware layer is shared. So, firmware and other Engineer Level System patching may impact both environments. Software such as OS, Oracle database and Oracle Fusion Middleware patching will remain independent to the environments. With the new EXA environments configuration there is an added performance benefit that can be taken advantage of in specific situations. We want to ensure if application communication can remain internal in the configuration that we properly configure and/or code in that manner. This would allow the networking to remain on the high-speed network of the EXA and improve performance.

You must have at least 2 databases and if you only have 2 databases; one will be your production environment and the other will be a pre-prod environment that will be configured to be the same as your production environment as much as possible. The Exa-Data environment will host three types of databases; Production, Pre-Production and Development. Note: that all Production databases will stand alone on their own clustered environment. The Pre-Production and Development databases will reside in the same clustered environment, but in different Oracle Homes. The Prod and Pre-Production databases will be Data Guarded (PreProd will not if they undergo routine refreshes) and the Development databases will not.



1.1.2 How to submit Footprint Tickets! (Please read carefully)

- a. Separate footprint tickets need to be created for Database and Middleware Requests.
 - i. Please “link” all related tickets to one another within Footprints.
- b. **Database:** When requesting a database, please fill out a footprints ticket and attach all associated forms, outputs, (and this form).
 - i. (Limit of one database-instance per ticket please).
 - ii. *Example:* if you have three different database instances (Dev, Pre-Prod, and Prod) – then we’d be asking you to open three, separate, DB-tickets please.
- c. **Middleware:** When requesting middleware services, please fill out a footprints ticket and attach all associated forms, outputs, (and this form).
 - i. (Limit of one application-deployment per ticket please, the only exception to this rule are web services sharing resources).
 - ii. *Example:* if you have three different environmental needs (Dev, Pre-Prod, and Prod) and need MW for each of those environments – then we’d be asking you to open three, separate, MW-tickets please.

Yes, in the above examples, an application that needs to reside in three different environments (Dev, Pre-Prod, and Prod) and has a MW-front-end would need to open a TOTAL of 6 separate tickets. However, once you fill this questionnaire out the first time, we strongly suggest you use that as your next “baseline” in completing your next questionnaire/ticket; making only the necessary minor edits/updates where applicable.

1.2 Oracle Exa-platform Standards

All applications migration onto the new Oracle Exa-Platform must comply with the standards set forth within: the [Oracle Template](#). Please review this in detail before submission of this form.



1.3 General Questions (Required Section):

This section is mandatory and must be filled out for any/all requests.

Please provide the following information:

1. New or Existing application/database?

2. Application Name:

3. Database Name (One):

- a. Source database name that you would like copied/cloned:
- b. New database name:
 - i. Note: the database name must adhere to the standards set forth in [the Oracle Template](#).

4. Application ID*:

*Application ID is needed until the new system (M-Pwr) goes live.

- a. Please provide your Application ID here:
- b. If you do not already have one:
 - i. The Application ID is typically created and placed into the application inventory by the application manager or a representative from the Project Management Office responsible for the application implementation.
 - ii. To create an ID follow the below steps:
 - Log in to the application inventory at https://portal.lb.state.me.us/appinv/appinvgui.app_inventory.login
 - Select "Administration Menu"
 - From the "Application Inventory Administration", Select "Applications"
 - This will display the Applications Menu. Select "Add Application"
 - Complete the form displayed. An Application ID is provided after selecting "Add".
 - If you are unable to create an ID, its likely due to permissions. You should contact ApplicationInventory@maine.gov and confirm your permissions to the app-inventory.

5. Billing Code:

6. Concurrent Users: What is the anticipated average and maximum number of concurrent users utilizing this application?

- a. Average:
- b. Peak (High Water Mark):



1.4 Contact Information (Required Section):

This section is mandatory and must be filled out for any/all requests.

We strongly encourage the use of email-group-distributions whenever possible to avoid single-points-of failure. If your team does not already have one, you can request one by opening a footprints ticket and requesting one of the CTS Exchange Team (<mailto:ExchangeTeam@Maine.gov>).

Please use distributions whenever possible below; If email distribution lists are not used, please ensure you list a minimum of two technical-contacts below.

Technical Contact(s) 1:

Name:
Work Phone:
Cell Phone:
Home Phone:

Technical Contact(s) 2:

Name:
Work Phone:
Cell Phone:
Home Phone:

Technical Contact(s) 3:

Name:
Work Phone:
Cell Phone:
Home Phone:



1.5 Database

1.5.1 Database Core Questions (Required of all DB-Requests):

Note: that in the EXADATA Development, Pre-Prod and Production environments we will no longer be doing export type backups on non-shared databases. We will only be doing RMAN type backups. This means that if you corrupt or lose data or Oracle objects within these environments you will not be able to recover data nor these singular objects via the export/import process. If you do need recovery, CTS will either refresh the environment from production or do a point in time recovery of the entire database up to the point in time where the data/object was lost. The size of the database will determine the length of time needed for this type of recovery. This change is being made as part of our commitment to keep the cost of Oracle down by saving roughly 1TB a month in storage cost. Please see our [service catalog](#) for cost with DB-recovery. Reminder: Cross-Platform-Pointing is prohibited.

1. Will this database be used for OLTP (On Line Transactional Processing) or Data Warehousing?
Note: (OLTP databases will be created at an 8K blocksize, Data Ware Houses will be created at a 16k blocksize).
 - a. (OLTP / Data Warehousing)

2. Excluding those [privileges already granted to the Application_DBA](#) role are there other necessary privileges that need to be given to the Application_DBA role? Note: These additional privileges will be reviewed by the CTS Oracle Database group who will determine if the privileges can be given.

3. Do you require a special character set? Note: that if this is a migration we will the original character set, if it is a new database we will use the Unicode (AL32UTF8) codeset.

4. Please run this script to determine how many invalid objects are in the database to be migrated:

```
Select owner, object_type, count(*) from dba_objects where status = 'INVALID' group by owner, object_type;
```

Please use this script to identify and then fix or drop invalid objects as no databases will be migrated with invalid objects.

5. Do you require external network services such as HTML, Mail, etc?
6. Do you use external file directories?
 - a. If yes, do you use UTIL_FILE_DIR?
 - b. If yes, these must be altered to use Oracle Directories.
7. Does the database use any External Tables?
 - a. If yes, please provide list of external tables and their oracle directory requirements (e.g. location, etc.).
8. How many DB-Instances do you want moving forward?



- a. (Please see “[Exa-Platform Environmental Guidance](#)” above for more information.)
9. Do you have SYS or SYSTEM owned object to perform application DBA operations?
- a. If so, please provide the object name and object type.
10. Does this database contain Federal Tax Information or State Tax Information (FTI or MTI)?
- a. If yes, please indicate which is held.
- b. Also, please list out which datafiles should be designated to FTI or MTI so that we can include that in the datafile and tablespace name. FTI will also be included in the backup file to meet audit expectations. Please review the standards set forth in the [Oracle Template](#).
11. Does this database have data that needs to be Encrypted in Flight (EIF) at a FIPS 140-2 compliance level? (This FIPS 140-2 level will require SSL Certificates with encryption at an AES256 level; Otherwise the default is EIF at an AES256 level with no SSL Certificate).
12. Do you have any database links in this database that connect to a non-Exadata-hosted-database?
- a. If yes, a security waiver will be required.
- b. NOTE: In 12c, SSL1.0 is not allowed at the server level and will be turned on at the database level for those database’s that have database links that connect to a non-Exadata hosted database. A waiver will be required to be in place until the targeted database has been migrated over to 12c. Once the database link to the non-Exadata hosted database is no longer needed the waiver will no longer be required.
13. If this database meets the criteria, do you want it in an Agency Shared Database?
- a. If yes, please provide the Agency Shared Database which should host.
- b. Please see [Criteria for an Agency Shared Database Environment.doc](#) more information.
14. Please provide memory size, if known. Note that memory allocation will be tailored to use the minimum amount required. The amount of memory allocated will be determined through performance testing and memory advisors.
15. Please provide any customized init parameters if known. The list of parameters that we will be using in a 12.2 database can be found here:
- a. [\\oit-teaqfsemc11.som.w2k.state.me.us\oit-dbase\Projects\Oracle Refresh\Questionnaires\12.2RDBMS_Params](http://oit-teaqfsemc11.som.w2k.state.me.us/oit-dbase/Projects/Oracle Refresh/Questionnaires/12.2RDBMS_Params)
16. Does your database currently contain clob/blob/lob type objects that are of the BASICFILE type?
- a. If requested, the DB Group will work with app dev to convert to the SECUREFILE type as part of the migration.
- i. If so, please use this run this script to determine your file-type:
- ii. `SELECT owner, table_name, column_name FROM all_tab_columns WHERE data_type IN ('LOB', 'CLOB', 'BLOB') AND owner = :schema_owner;`
17. Does your database perform any Internal batch processing (i.e. are you using Oracle-Jobs, Oracle-Job-Scheduler, or Oracle-DBMS-Scheduler?).



18. Does your database perform any external batch processing (i.e. CAWA or CRON-Jobs)

If yes, please open a footprints ticket with the Unix team... They will assist you in setting up User IDs and Group IDs for creating for batch processing.

19. Does your application require any of the following privileges?

- EXECUTE ON DBMS_ADVISOR
- EXECUTE ON DBMS_CRYPTO
- EXECUTE ON DBMS_JAVA
- EXECUTE ON DBMS_JAVA_TEST
- EXECUTE ON DBMS_LDAP
- EXECUTE ON DBMS_LOB
- EXECUTE ON DBMS_OBFUSCATION_TOOLKIT
- EXECUTE ON DBMS_RANDOM
- EXECUTE ON DBMS_SYS_SQL
- EXECUTE ON WWV_DBMS_SQL
- EXECUTE ON DBMS_FILE_TRANSFER

If not explicitly requested, these privileges will **NOT** automatically be granted during the migration process. If you are requesting these privileges, you must also let us know the corresponding userid(s) related to that privilege in order for us to process your request.

Caveat on the below Query: Output of this SQL does not cover ad-hoc usage from Anonymous-Blocks or Dynamic-SQL; typically, it would only be an Application-Owner-Schema that needs the Direct-Grant.

```
SELECT owner,name,referenced_owner,referenced_type FROM dba_DEPENDENCIES
WHERE REFERENCED_OWNER IN (SELECT USERNAME FROM DBA_USERS WHERE
DEFAULT_TABLESPACE NOT IN ('SYSTEM','SYSAUX')) and owner not in ('SYS','PUBLIC')
and referenced_name IN
('DBMS_ADVISOR','DBMS_CRYPTO','DBMS_JAVA','DBMS_JAVA_TEST','DBA_LDAP','DBA_
LOB','DBMS_RANDOM','DBMS_SYS_SQL','DBMS_FILE_TRANSFER','DBMS_OBFUSCATION
_TOOLKIT'
);
```

20. Is this database subject to any regulatory compliance standards?

- a. If so, which standards and who is the auditing body?

21. Additional notes: (e.g. Custom deviations, process automation requests, etc.)

22. Please review Section 1.1 “Steps to Complete this Questionnaire”, before submission of this form.



1.6 Middleware:

1.6.1 Middleware Core Questions (Required for all MW Requests):

1. What type of product(s) and/or programming language(s) was used to development this application? Please select one or more of the following:
 - a. (JAVA, Web PL/SQL, Oracle Forms, Oracle Reports)
2. Is this a new application or a migration of an existing application to a new-URL/environment? If a migration, please provide the old application URL and any additional information that you may feel relevant.
 - a. Do you want a new-URL?
 - If yes, Java applications must provide us with the new-URL name. We will not be able to deploy your application without this.
 - Please provide a suggestion for your new-URL.
 - b. Do you plan on using the old-URL?
 - If yes, you'll need to request a Temporary-URL created in the new exa-environment since you cannot have a single URL pointing at two separate environments.
 - Please provide a suggestion for your temporary-URL.
3. Does this application need to be accessed via the internet (i.e. an external application)?
 - a. Please respond "Yes", "No", or "N/A" (N/A if this does not apply to your application)
4. In the CTS environment, we currently share URLs with many systems we define the application URLs via a context root. For example: (<https://portal.lb.state.me.us/tams>). In this example "tams" this is the context root. Please provide a context root that best fits your application. Please do not use agency name and please use something that could easily identify your application. The short name or alias of your application may be a suitable solution. If left blank, the middleware team will suggest one.
5. How many environments (Dev, Pre-Prod, Prod) do you want moving forward?
 - a. (Please see "[Exa-Platform Environmental Guidance](#)" above for more information.)
6. Moving into the Exalogic environment a "Jump Server" will be provided to allow you to gain access to logs, auto-deployment, and/or forms/reports compiling requirements. If you need access to any of these please specify which and the users/accounts required. No shared accounts will be allowed due to security requirements. (Multi-protocol CIFS-shares are not available in the new environment. (e.g. the logs are no longer available through windows explorer; access is provided via the new Unix jump server).
 - a. Need Jump Server access?
 - If yes, please create a separate ticket asking for access and assign this ticket to the Middleware team.
7. Is there a requirement to upload images, cascading style sheets, etc. for this application? (The new environment no longer contains functionality for the end-users to upload these.)



- a. *If "Yes" please provide links to where these can be located within the legacy environment.*
- 8.** Additional notes: (e.g. Custom deviations, process automation requests, etc.)
- 9.** Please review Section 1.1 "Steps to Complete this Questionnaire", before submission of this form.



1.6.2 JAVA Specific Questions (if applicable):

1. Have you compiled your application on Java 8, 131 successfully? If no, stop filling in this questionnaire as your application is not ready for migration. *(This version changes rapidly and critical updates to Java will need to be addressed promptly i.e. more frequently than quarterly).*
2. Please provide copy(s) of current deployment(s) that you would like deployed in production, pre-production, development, etc. Also, any information needed to complete these deployments.
3. Please provide the suggested heap-size of this application. (If left blank, we will configure the heap with an initial of 512 MB; Total allowable max is 1024 MB)
4. Will this application be used only for batch?
5. Please provide any custom Connection Pool Attributes.
6. Please send us a copy(s) of your JDBC Data Source information and/or the following information:
 - a. Name:
 - b. JNDI Location:
 - c. Database Username/password "Service Account" i.e. what is used to connect the MW to the Database:
 - i. *(Please send the password to the middleware team; be aware they will reset the password and that password will not be shared per the SOM [Security Policy: Section 5.15](#))*
 - ii. *Refer to the "[The Database Account Operating Procedure](#)"*
 1. This account must have the minimum privileges required to operate the application successfully. This user-account cannot be the development or schema-owner-account.
 - d. New Exa-Database SID/service name
 - i. (We will pull this information from your DB-ticket. Please ensure the tickets are "linked")
 - e. New Exa-Database Port
 - i. (We will pull this information from your DB-ticket. Please ensure the tickets are "linked")
 - f. Hostname where New Exa-Database instance resides
 - i. (We will pull this information from your DB-ticket. Please ensure the tickets are "linked")
 - g. Does this application have a database connection that needs to be Encrypted in Flight (EIF) at a FIPS 140-2 compliance level? *(This FIPS 140-2 level will require SSL Certificates with encryption at an AES256 level; Otherwise the default is EIF at an AES256 level with no SSL Certificate).*
7. Do you consider this to be a Web Service?
 - a. Please see below for definition of a Web Service:
 - b. http://en.wikipedia.org/wiki/Web_service
8. Additional notes: (e.g. Custom deviations, process automation requests, properties files, etc.)



9. Please review Section 1.1 “Steps to Complete this Questionnaire”, before submission of this form.

1.6.3 Web PL/SQL Specific Questions (if applicable):

1. Please provide us with the following:

- a. New Exa-Database Name (We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
 - b. Database Username/password (if required):
 - i. *This account must have the minimum privileges required to operate the application successfully. This user account cannot be the development or schema owner account.*
 - c. New Exa-Database SID/service name (We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
 - d. New Exa-Database Port (We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
 - e. Does this application have a database connection that needs to be Encrypted In Flight (EIF) at a FIPS 140-2 compliance level? *(This FIPS 140-2 level will require SSL Certificates with encryption at an AES256 level; Otherwise the default is EIF at an AES256 level with no SSL Certificate)*
 - f. Hostname where New Exa-Database instance resides (We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
 - g. Default Application Page:
 - i. *This is a required parameter to validate the application is functioning normally when accesses from the application server.*
 - h. What version of the web toolkit are you using?
 - i. To determine run the following: *select owa_util.get_version from dual;*
 - ii. Any other custom components that may be needed in the DAD definition.
2. Additional notes: (e.g. Custom deviations, process automation requests, etc.)
3. Please review Section 1.1 “Steps to Complete this Questionnaire”, before submission of this form.



1.6.4 Oracle Forms Specific Questions (if applicable):

1. Please provide us with all databases you plan to connect to via the application. We will be configuring with InfinBand addressing to ensure top performance. Hence this information will be needed.
 - a. Database Name (We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
2. Does this application require webUtil?
 - a. If yes, please provide any customizations other than default configuration.
3. Please provide the formsweb.cfg file. If this isn’t available, please answer the following questions: provide it where? Attached it to the ticket or in the auto deploy directory? FP that is how we are going to get these forms correct? We always work via FPs...
 - a. Default Form Name:
 - b. width=
 - c. height=
 - d. colorScheme=*Options are (teal, blue, red, titanium, olive, default)*
 - e. pageTitle= *(Typically this is the application name)*
 - f. otherParams=
 - g. separateFrame=true/false
4. The latest version of the java end-client plugin is required. *The minimum version of Java allowed is 8, update 131. (This version changes rapidly and critical updates to Java will need to be addressed promptly i.e. more frequently than quarterly).*
5. Are you using any custom JAR files?
 - a. If yes, please provide.
6. Have you customized the environment file?
 - a. If yes, please provide a copy.
7. Is there any custom key mapping file?
 - a. If yes, please provide.
8. Additional notes: (e.g. Custom deviations, process automation requests, etc.)
9. Please review Section 1.1 “Steps to Complete this Questionnaire”, before submission of this form.



1.6.5 Oracle Reports Specific Questions (if applicable):

Please provide us with all databases you plan to connect to via the application. We will be configuring with InfiniBand addressing to ensure top performance. Hence this information will be needed.

1. Are these reports being called from another product or programming language?
2. Is this being called via URLs?
 - a. If yes, do you pass the username/password in clear text?
3. Are you using the cgicmd.dat file?
 - a. If yes, please provide a copy of this file.
4. Are there any reports being called via a batch job?
5. “Web Commands”*
 - a. **Web Commands have known security vulnerabilities. Currently we have allowed limited use and are in the process of deprecating them from our environment. It has not been determined if the end-user commands will be allowed (i.e. pending a response from the SOM security team).*
 - a. Web commands (rwservlet keywords) are now categorized for added security.
 - i. End user Web commands:
 1. GETJOBID, KILLJOBID, SHOWAUTH, SHOWJOBID
6. Additional notes: (e.g. Custom deviations, process automation requests, etc.)
7. Please review Section 1.1 “Steps to Complete this Questionnaire”, before submission of this form.



1.6.6 Unix Core Questions (To be completed by the CTS-MW Team Only)

The MW and Unix teams will define system profiles for vServers. The profiles will identify the pre-requisite Oracle Linux packages that need to be installed, the users and groups that will be granted access to the system, the Sudo privileges that will be granted to those users and the base shares that need to be mounted on those systems.

Example: If the MW team asks the Unix team to deploy a vServer of type 'Oracle App Server', the Unix team will deploy a vServer from the common base template and deploy all Oracle Application Server pre-requisite packages, create the MW team users, Oracle user, dba and oinstall groups, mwadmin group, and grant the MW team users the ability to run any command as the Oracle user on that vServer.

The following information would be needed on a vServer-by-vServer basis to deploy a vServer and hand it off to the MW team in no more than 48-hours from the initial request:

1. EMOC account/project pool that the vServer will be drawing resources from.
2. Hostname of vServer
3. Environment vServer is being deployed into (dev, pre-prod or prod)
 - a. Note: this will determine both the subnet the vServer will be deployed to as well as providing ½ of the needed information to assign a Chef profile.
 - b. Note: By default, all pre-prod and prod requests assume that a companion DR vServer will be created in addition to the requested vServer.
4. Checkbox / Exclude the creation of a DR vServer for this system?
5. Number of vCPUs to be assigned to vServer.
6. Amount of RAM in MBs to be assigned to vServer.
7. Additional groups/users that need to be assigned to vServer.
8. Additional file shares that need to be assigned to vServer.
9. Profile of vServer (as discussed above).
10. Additional incoming TCP/UDP port firewall rules. Example: Allow 80/TCP, 443/TCP, 8080/TCP incoming from all sources.
11. Additional notes: (e.g. Custom deviations, process automation requests, etc.)



Appendix A: Release Notes

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1.1 8/22/2017 Release Updates:

1.1.1 Summary: modified the “invalid-objects-in-DB-script”

I have made updates to the database portion of the questionnaire (Section 1.5.1 -à question 4) Question four now reads as the below. In summary – we made some minor tweaks to the query in red-bold.

(Section 1.5.1 - question 4)

“Please run this script to determine how many invalid objects are in the database to be migrated: **Select owner, object_type, count(*) from dba_objects where status = 'INVALID' group by owner, object_type;**

Please use this script to identify and then fix or drop invalid objects as no databases will be migrated with invalid objects.”

1.2 9/18/2017 Release Updates:

1.2.1 Summary: Clarified that FP-tickets should be “LINKED” within the overview section. Clarified language to call out for NEW-database names, where applicable.

Quick summary of changes:

- a. We clarified up front in the overview-section, that the MW and DB tickets be “linked” within Footprints so that we could defer the MW-based “database questions” back to their original answers within the DB-section.
 - i. Thus, you’ll notice new text in the MW section such as the following:
(We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
- o We also made a point to specifically ask for “the new database name” where applicable throughout to avoid confusion.

1.3 9/20/2017 Release Updates:

1.3.1 Summary: Added the DB-Privileges Question.

This is newly seen as question number 17 in the DB section of the questionnaire.

1. Does your application require any of the following privileges?

- a. (If not explicitly requested, these privileges will be not automatically be granted during the migration process.)



- b. If you are requesting these privileges, you must also let us know the corresponding userid(s) related to that privilege in order for us to process your request.

- EXECUTE ON DBMS_ADVISOR
- EXECUTE ON DBMS_CRYPTO
- EXECUTE ON DBMS_JAVA
- EXECUTE ON DBMS_JAVA_TEST
- EXECUTE ON DBMS_LDAP
- EXECUTE ON DBMS_LOB
- EXECUTE ON DBMS_OBFUSCATION_TOOLKIT
- EXECUTE ON DBMS_RANDOM
- EXECUTE ON DBMS_SYS_SQL
- EXECUTE ON WWV_DBMS_SQL
- EXECUTE ON DBMS_FILE_TRANSFER

1.4 9/25/2017 Release Updates:

1.4.1 Summary: Added cross-platform-pointing clause to TEMPLATE & added this reminder to the questionnaire's DB-Intro-section, "Reminder: Cross-Platform-Pointing is prohibited."

I've moved forward with making the following addition to the DB-section of the **Template** (currently seen as the last item in the template as #75) to prohibit the cross-platform pointing that we discussed last week:

"Cross-Platform-Pointing is prohibited. (e.g. 12c Exalogic app to 11g RAC db OR 12c Exadata DB to 11g non-exalogic MW and vice versa)"

In addition, I've placed this high-level reminder in the introductory portion of the DB-section of the **Questionnaire** (See Red Text):

Database Core Questions (Required of all DB-Requests):

Note: that in the EXADATA Development, Pre-Prod and Production environments we will no longer be doing export type backups on non-shared databases. We will only be doing RMAN type backups. This means that if you corrupt or lose data or Oracle objects within these environments you will not be able to recover data nor these singular objects via the export/import process. If you do need recovery, CTS will either refresh the environment from production or do a point in time recovery of the entire database up to the point in time where the data/object was lost. The size of the database will determine the length of time needed for this type of recovery. This change is being made as part of our commitment to keep the cost of Oracle down by saving roughly 1TB a month in storage cost. *Please see our [service catalog](#) for cost with DB-recovery.* **Reminder: Cross-Platform-Pointing is prohibited.**

1.5 10/6/2017 Release Updates:

1.5.1 Summary: Added one new MW-Question (Apache) – Modified two DB-Questions (Clob & SYS-DBA)

DB Question modifications to the DB-Core Questions:



- ~~8.~~ Do you have any application specific objects owned by SYS or SYSTEM?
8. Do you have SYS or SYSTEM owned object to perform application DBA operations? [Slightly modified language]
- b. If so, please provide the object name and object type. [Newly Added]
14. Does your database currently contain clob/blob/lob type objects that are of the BASICFILE type?
- i. If so, please use this run this script to determine your file-type: [Newly Added]
 - ii. SELECT owner, table_name, column_name FROM all_tab_columns WHERE data_type IN ('LOB', 'CLOB', 'BLOB') AND owner = :schema_owner; [Newly Added]
- b. The DB Group will convert to the SECUREFILE type. [moved down to 14.b, rather than its original 14.a location]

MW Question Added to the Java Section (see red-text addition).

JAVA Specific Questions (if applicable):

- 10. How you compiled your application on Java 8, 144 successfully? If no, stop filling in this questionnaire as your application is not ready for migration. *(This version changes rapidly and critical updates to Java will need to be addressed promptly i.e. more frequently than quarterly).*
- 11. Please provide copy(s) of current deployment(s) that you would like deployed in production, pre-production, development, etc. Also, any information needed to complete these deployments.
- 12. Please provide the suggested heap-size of this application. (If left blank, we will configure the heap with an initial of 512 MB; Total allowable max is 1024 MB)
- 13. Will this application be used only for batch?
- 14. Is "Apache Struts" bundled in with the application-build-file?
 - a. If yes, please specify the version.
- 15.

1.6 10/23/2017 Release Updates:

1.6.1 Summary: Added the release-notes as an appendix; Clarified the MW Core question (access via internet) as "Yes, No, or N/A"; Clarified that if jump server access is needed that users should open a separate ticket w/MW; Updated MW Java question 7: i.e. send password to the MW Team w/a reminder of the SOM security Policy.

Middleware:

- 2. Does this application need to be accessed via the internet (i.e. an external application)?
 - a. Please respond "Yes", "No", or "N/A" (N/A if this does not apply to your application)
 - b. If yes, for what environments?
 - i. Production, Pre-production, Development?
- 6. Moving into the Exalogic environment a "Jump Server" will be provided to allow you to gain access to logs, auto-deployment, and/or forms/reports compiling requirements. If you need



access to any of these please specify which and the users/accounts required. No shared accounts will be allowed due to security requirements. (Multi-protocol CIFS-shares are not available in the new environment. (e.g. the logs are no longer available through windows explorer; access is provided via the new Unix jump server).

- a. **Need Jump Server access?**
 - i. **If yes, please create a separate ticket asking for access and assign this ticket to the Middleware team.**

JAVA Specific Questions (if applicable):

7. Please send us a copy(s) of your JDBC Data Source information and/or the following information:
 - a. Name:
 - b. JNDI Location:
 - c. Database Username/password (if required)
 - i. *(Please send the password to the middleware team; be aware they will reset the password and that password will not be shared per the [SOM Security Policy: Section 5.15](#))*
 - ii. **This account must have the minimum privileges required to operate the application successfully. This user account cannot be the development or schema owner account.**

1.7 10/27/2017 Release Notes:

1.7.1 Summary: Flipped the order of questions 2 & 3 in the MW-Core question section (i.e. process-flow-correction); Extracted the “Environmental-Guidance-Note” from the DB-Core section and moved it up to the “Purpose & Overview section” as #1.1.1; deleted the Apache-Strut Question; corrected the questionnaire to read as 1-Questionnaire-to-1-Ticket throughout; extensively expanded upon the “how to fill out a footprints ticket” section.

Flipped the order of questions 2 & 3 in the MW-Core question section (i.e. process-flow-correction):

- Originally seen as #3... now moved to #2 “Is this a new application or a migration of an existing application to a new-URL/environment...”
- Originally seen as #2...now moved to #3, “Does this application need to be accessed via the internet (i.e. an external application)?”

Extracted the “Environmental-Guidance-Note” from the DB-Core section and moved it up to the “Purpose & Overview section” as #1.1.1 while leaving a hyper-linked reminder-reference in the DB-section to refer to this guidance. Also, merged this section with the “Infrastructure-Guidance” paragraph as cut from section 1.2 “Oracle Exa-platform Standards”. Also, made the following word-smiting updates:



You must have at least 2 databases and if you only have 2 databases; ~~they will be created in the Pre-Prod~~ **one will be your production environment and the other will be a pre-prod environment that will be configured to be the same as your production environment as much as possible.** The Exa-Data environment will host three types of databases; Production, Pre-Production and Development. Note: that all Production databases will stand alone on their own clustered environment. The Pre-Production and Development databases will reside in the same clustered environment, but in different Oracle Homes The **Prod and** Pre-Production databases will be Data Guarded (**PreProd will not** if they undergo routine refreshes) and the Development databases will not.

Deleted question 5 from the MW-Java section. This is no longer needed. The security team will use the app-deployment-cert-steps to ensure no applications are migrating with known Struts-Issues:

~~Is “Apache Struts” bundled in with the application-build-file?
If yes, please specify the version.~~

Removed the multi-environment request from the MW-Core section question as follows:

“Does this application need to be accessed via the internet (i.e. an external application)?
Please respond “Yes”, “No”, or “N/A” (N/A if this does not apply to your application)
~~If yes, for what environments?
Production, Pre-production, Development?”~~

Removed the multi-environment request from the MW PL/SQL section question:

“New Exa-Database Name (We will pull this information from your DB-ticket. Please ensure the tickets are “linked”)
~~Dev
Pre-Prod
Prod”~~

Extensively added to the “How to submit Footprint Tickets! (Please read carefully)” section:

- a. **Database:** When requesting a database, please fill out a footprints ticket and attach all associated forms, outputs, (and this form).
 - iii. (Limit of one database-instance per ticket please).
 - iv. **Example: if you have three different database instances (Dev, Pre-Prod, and Prod) – then we’d be asking you to open three, separate, DB-tickets please.**
- b. **Middleware:** When requesting middleware services, please fill out a footprints ticket and attach all associated forms, outputs, (and this form).
 - v. (Limit of one application-deployment per ticket please, the only exception to this rule are web services sharing resources).
 - vi. **Example: if you have three different environmental needs (Dev, Pre-Prod, and Prod) and need MW for each of those environments – then we’d be asking you to open three, separate, MW-tickets please.**



Yes, in the above examples, an application that needs to reside in three different environments (Dev, Pre-Pro, and Prod) and also has a MW-front-end would need to open a TOTAL of 6 separate tickets. However, once you fill this questionnaire out the first time, we strongly suggest you use that as your next “baseline” in completing your next questionnaire-ticket; making only the necessary minor edits/updates where applicable.

1.8 11/14/2017 Release Notes:

1.8.1 Summary: Provided a list of named-privileges in section 1.5.1 to make clear for the requestor what options are available.

Does your application require any of the following privileges?

- EXECUTE ON DBMS_ADVISOR
- EXECUTE ON DBMS_CRYPTO
- EXECUTE ON DBMS_JAVA
- EXECUTE ON DBMS_JAVA_TEST
- EXECUTE ON DBMS_LDAP
- EXECUTE ON DBMS_LOB
- EXECUTE ON DBMS_OBFUSCATION_TOOLKIT
- EXECUTE ON DBMS_RANDOM
- EXECUTE ON DBMS_SYS_SQL
- EXECUTE ON WWV_DBMS_SQL
- EXECUTE ON DBMS_FILE_TRANSFER

If not explicitly requested, these privileges will **NOT** automatically be granted during the migration process.

- a. If you are requesting these privileges, you must also let us know the corresponding userid(s) related to that privilege in order for us to process your request.
 - SELECT GRANTEE, PRIVILEGE
 - FROM DBA_SYS_PRIVS
 - WHERE PRIVILEGE IN (
 - 'EXECUTE ON DBMS_ADVISOR'
 - , 'EXECUTE ON DBMS_CRYPTO'
 - , 'EXECUTE ON DBMS_JAVA'
 - , 'EXECUTE ON DBMS_JAVA_TEST'
 - , 'EXECUTE ON DBMS_LDAP'
 - , 'EXECUTE ON DBMS_LOB'
 - , 'EXECUTE ON DBMS_OBFUSCATION_TOOLKIT'
 - , 'EXECUTE ON DBMS_RANDOM'
 - , 'EXECUTE ON DBMS_SYS_SQL'
 - , 'EXECUTE ON WWV_DBMS_SQL'
 - , 'EXECUTE ON DBMS_FILE_TRANSFER'



-);

1.9 11/22/2017 Release Notes:

1.9.1 Summary: Clarified that the Basic→Secure file question (i.e. Blobs) are now optional and also newly added a question about the application’s Auditing standards/body etc.

Modified question #14 within he DB-Core Section to make the question optional:

1. Does your database currently contain clob/blob/lob type objects that are of the BASICFILE type?
 - a. If requested, the DB Group will work with app dev to convert to the SECUREFILE type as part of the migration.
 - i. If so, please use this run this script to determine your file-type:
 - ii. `SELECT owner, table_name, column_name FROM all_tab_columns WHERE data_type IN ('LOB', 'CLOB', 'BLOB') AND owner = :schema_owner;`

Newly Added as #18 in the DB-Core Section:

2. Is this database subject to any regulatory compliance standards?
 - a. If so, which standards and who is the auditing body?

1.10 1/17/2018 Release Notes:

1.10.1 Summary: Updated Java-Language to ensure Java 131 is being referenced. Added a new question to the database section asking about “External Databases”.

Updated section 1.6.2 (Java Specific Questions). This section erroneously was asking that Java 144 be used, whereas both the Template specifies Java 8, 131 be used and section 1.6.4 (Oracle Forms) also specified 131 be used. All three locations now call for Java 8, 131 to be used.

JAVA Specific Questions (if applicable):

1. Have you compiled your application on **Java 8, 131** successfully? If no, stop filling in this questionnaire as your application is not ready for migration. *(This version changes rapidly and critical updates to Java will need to be addressed promptly i.e. more frequently than quarterly).*

Added a new question to the Database Core Questions as a new #19:

2. Does the database use any External Tables?
 - i. If yes, please provide list of external tables and their directory requirements

1.11 1/18/2018 Release Notes:

1.11.1 Summary: Dropped the “or tables” clause from of the DB-question 6 and moved up the Database “external tables” tables to co-reside next to question 6.

6. Do you use external file directories **or tables**?
 - i. If yes, do you use UTIL_FILE_DIR?



- ii. If yes, these must be altered to use Oracle Directories.

7. Does the database use any External Tables?

- a. If yes, please provide list of external tables and their oracle directory requirements (e.g. location, etc.).

1.12 1/23/2018 Release Notes:

1.12.1 Summary: Updated the “Java-Specific-Questions” section 1.6.2 to update the language and hyperlinks for “Service Accounts” and their policy documents.

- b. Database Username/password “Service Account” i.e. what is used to connect the MW to the Database:
 - i. *(Please send the password to the middleware team; be aware they will reset the password and that password will not be shared per the [SOM Security Policy: Section 5.15](#))*
 - ii. *Refer to the “[The Database Account Operating Procedure](#)”*
 - 1. This account must have the minimum privileges required to operate the application successfully. This user-account cannot be the development or schema-owner-account.

1.13 1/24/2018 Release Notes:

1.13.1 Summary: Updated query found within question #18 in the “Database Core Questions Section” and provided a caveat.

Caveat on the below Query: Output of this SQL does not cover ad-hoc usage from Anonymous-Blocks or Dynamic-SQL; typically, it would only be an Application-Owner-Schema that needs the Direct-Grant.

```
SELECT owner,name,referenced_owner,referenced_type FROM dba_DEPENDENCIES
WHERE REFERENCED_OWNER IN (SELECT USERNAME FROM DBA_USERS WHERE
DEFAULT_TABLESPACE NOT IN ('SYSTEM','SYSAUX')) and owner not in ('SYS','PUBLIC')
and referenced_name IN
('DBMS_ADVISOR','DBMS_CRYPTO','DBMS_JAVA','DBMS_JAVA_TEST','DBA_LDAP','DBA_
LOB','DBMS_RANDOM','DBMS_SYS_SQL','DBMS_FILE_TRANSFER','DBMS_OBFUSCATION
_TOOLKIT'
);
```

1.14 2/2/2018 Release Notes:

1.14.1 Summary: Newly added this “non-exadata-hosted-databases” question to the DB-Core-Questions as the new #12.

- 8. Do you have any database links in this database that connect to a non-Exadata-hosted-database?**
- a. If yes, a security waiver will be required.



- b. NOTE: In 12c, SSL1.0 is not allowed at the server level and will be turned on at the database level for those database's that have database links that connect to a non-Exadata hosted database. A waiver will be required to be in place until the targeted database has been migrated over to 12c. Once the database link to the non-Exadata hosted database is no longer needed the waiver will no longer be required.