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Oracle Demantra System Requirements Guide, Release 12.2

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Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle Demantra System Requirements Guide.*

See Related Information Sources on page vii for more Oracle E-Business Suite product information.

Documentation Accessibility

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Access to Oracle Support

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Structure

Related Information Sources

Oracle Demantra products share business and setup information with other Oracle Applications products. Therefore, refer to other user guides when you set up and use Oracle Demantra. In particular, refer to the *Oracle Demantra Implementation Guide* for more information about how to set up and customize Demantra for your environment,

Oracle Demantra Analytical Engine Guide for more information about tuning the Analytical Engine, and *Oracle Demantra Integration Guide* for detailed information about the various integrations supported. All guides can be accessed from My Oracle Support Note 443969.1 – Oracle Demantra Documentation Library.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

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Overview

This chapter covers the following topics:

- Purpose
- Scope

Purpose

This document provides a complete, up-to-date description of Oracle Demantra system requirements for Release 12.2. For the latest version of the Oracle Demantra Systems Guide, please refer to My Oracle Support Note 443969.1 -- Oracle Demantra Documentation Library which lists all the current guides for this release.

Scope

This document provides the system requirements for the Oracle Demantra 12.2 release.

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System Requirements

This chapter covers the following topics:

- Client Requirements
- Using Other Software
- Software Requirements for Servers
- Oracle Demantra Analytical Engine
- Trade Promotion Optimization (TPO) Engine
- Hardware Architecture
- Hardware Requirements for the Servers
- Network Requirements

Client Requirements

The minimum requirements for client machines for all Demantra products is:

- 1 CPU at 1.3 GHz or faster
- 512 MB RAM minimum (1 GB RAM recommended) and 500 MB of free disk space
- Minimum screen resolution of 1280 x 1024 (preferred: 1400 x1050)

Demantra Local Application

The Demantra Local Application is run as a stand-alone desktop application with no web browser dependency. As such, the client requirements to run the Demantra Local Application are different than those of previous versions for the web-based worksheet plug-in and the Demantra Local Application web page.

The Demantra Local Application requires Java 8 Update 77 or above. Both 32-bit and 64-bit versions of Java are supported.

The Demantra Local Application supports the following operating systems:

- Microsoft Windows 7, 8, and 10
- Apple MAC OS X 10.10 and 10.11

Demantra Anywhere

Demantra Anywhere is a browser-based user interface that supports mobile platforms as well PCs and Apple computers.

Demantra Anywhere supports the following:

Operating System	Chrome	Firefox	Internet Explorer / Microsoft Edge	Safari
Android	Supported*	Not Supported	N/A	N/A
iOS	Not Supported	Not Supported	N/A	Supported
Mac OS X	Supported	Supported	N/A	Supported
Windows	Supported	Supported	Supported**	N/A

* - Support on the Android operating system is limited to Chrome for Android. The Native Android browser that shipped with version prior to 4.4.x is not supported.

** - Support for Internet Explorer and Microsoft Edge is limited to the most recent version plus one previous release. As of January 12th 2016, this means the most recent version of Microsoft Edge and IE11 only.

Compatibility Mode: For Internet Explorer and Microsoft Edge, only Native mode is supported. View Compatibility mode should be disabled.

JavaScript: JavaScript support must be enabled.

Doctype: Demantra Anywhere relies on css attribute selectors, some versions of IE support attribute selectors only if a !DOCTYPE is specified, therefore to use Demantra Anywhere on IE a doctype is required.

Support is provided by Oracle on all platforms that the browser vendor provides support for. For mobile device operating systems, Oracle provides support for the most recent browser delivered by the device operating system only.

Demantra Workflow Manager

The Demantra Workflow Manager is a feature of the Demantra Local Application and does not have any additional system requirements. You access the Workflow Manager from the Settings and Actions menu.

Demantra Administrative and Configuration Tools

All Demantra Administrative and Configuration Tools have migrated from 32-bit to 64-bit. This includes:

- Installer
- Business Modeler
- Demand Management Tools (Chaining Management and Member Management)
- Encryption Tool

You must have a 64-bit Oracle Database client installed to run these.

If you have both a 32-bit and a 64-bit Oracle Database Client installed and if the ORACLE_HOME Environment Variable points to the 32-bit client, then you must do the following for the Oracle Demantra Administrative and Configuration Tools to use the 64-bit client:

- Include the bin directory where the 64-bit Oracle Database Client is installed in the Path Environment Variable.
- Business Modeler must be launched using the modeler.bat batch file rather than invoking the modeler.exe directly.
- The Demand Management Tools (used for Member Management and Chaining Management) must be launched using the dp.bat batch file rather than invoking the dp.exe directly.
- The Encryption Tool must be launched using the encryption.bat batch file rather than invoking the encryption.exe directly.

Microsoft Windows 7, 8, and 10 and Windows Server 2012 are supported.

Known Apple Mac OS X Limitations

The Oracle Demantra administrative utilities (Business Modeler, Chaining Management, Member Management, Engine Administrator) are not supported on the Mac OS X operating system. These utilities are supported only on Windows platforms. This means the Demantra Silent Installer in the Demantra Local Application is not supported on the Mac operating system. See Oracle Demantra Administrative Utilities, for details.

Only the web browsers listed in the table above are supported for Demanta Anywhere. Apple Mac support is limited to the Demantra Local Application and Demantra Anywhere. Database and application server software is not supported on Mac OS X. See Software Requirements for the Servers, page 2-4.

Additionally, ending a Demantra Anywhere session using the browser's X icon may

cause unexpected errors, and it is therefore not recommended to end a session in this manner. Always click the Logout link to properly end a Demantra session.

Using Other Software

Oracle Demantra supports the Windows Terminal Services. It also supports Excel integration for XP, 2003, 2007 and 2010 for Dynamic Open Link (DOL). Open Office 3 is supported for export.

> **Note:** Dynamic Open Link (DOL) is not yet certified on Microsoft Office for Mac. However, Demantra's 'Export to Excel' option generates XLS files that can be opened by most Mac-based applications that support this format.

Software Requirements for Servers

This section lists the software stacks that support the Oracle Demantra Web Platform Server, Administrative Utilities, and Analytical Engine. For the latest, most up-to-date information on supported platforms, refer to the Certifications section on My Oracle Support.

Oracle Demantra Web Platform Server

These are the stacks on which Oracle Demantra receives rigorous testing. Other variations are possible. In principle, Oracle supports any:

- Database operating system for the database server that the database software supports
- Application server operating system for the application server that the application server software supports

Refer to certification details for Oracle VM support for Oracle WebLogic and Oracle database).

Both the Analytical Engine and Trade Promotion Optimization engine are also certified on Oracle VM using any of the Demantra-certified Windows platforms and Linux.

VMWare is not officially supported. Please see My Oracle Support Note 249212.1 for Oracle's policy on VMWare image support.

Oracle Demantra supports the following software:

Entity	Supported Product and Version

Application Server	• Oracle WebLogic 11g (10.3.6 or higher) and 12c (12.1.1.0.0 or higher) • Tomcat 7 and 8.5 • IBM WebSphere 8.5.5
Java	• Java JDK 8 64-bit Update 77 or above on the Application Server **Note:** : 32-bit versions of Java are not supported. • JVM as included with application server installation **Note:** Available Java heap memory must be at least 512 MB to create and run the JVM.
Database	• Oracle 12c (12.1.0.1 +) - Enterprise Edition **Note:** For details about required configuration steps, see Additional Steps for Configuring Oracle 12c., page 2-6 • Oracle 11gR2 (11.2.0.4 +) - Enterprise Edition • Oracle Real Application Clusters (RAC) • Oracle Connection Manager (CMAN) • Oracle Exadata platform

Note: If you are using Oracle JRockit, refer to My Oracle Support note 978098.1 for important configuration guidelines.

Note: The database health check procedures are supported on both the Standard Edition (SE) and Enterprise Edition (EE) of the Oracle database. However, the Enterprise Edition is required to leverage the online table reorganization functionality. Additionally, the Standard Edition does not include the database functions parallel query/DML or

database partitioning. For details on how these functions can be used to improve database performance, see Database Health Check, Database Partitioning for the Analytical Engine, and the UseParallelDML procedures in the *Oracle Demantra Implementation Guide*.

Caution: There is a known issue when using parallel hints to improve Demantra performance on Oracle 11g version 11.2.0.1 and earlier. If your Oracle 11g version is earlier than 11.2.0.1, refer to My Oracle Support note 1249314.1 before installing Demantra.

Additional Steps for Configuring Oracle 12c Pluggable Databases

A Pluggable Database (PDB) is a new, optional multi-tenancy feature of Oracle 12c. This feature enables a single container database (CDB) to contain multiple pluggable databases. The Demantra Installer does not automatically create or configure a PDB, Demantra with Oracle 12c, a PDB must be defined before running the Oracle Demantra Installer to install a new or upgrade an existing installation. Note that PDB is not mandatory for using Oracle Demantra, and the following steps are only required if you are using a PDB. For information on how to create a PDB, see http://docs.oracle.com/cd/E16655_01/server.121/e17209/statements_6009.htm.

You must also create an entry in your TNSNAMES file and enter the PDB name as the SERVICE_NAME before running Oracle Demantra Installer.

For example, assume the PDB you want to use is called "PDBORCL". In this case, create a new entry in your TNSNAMES file as follows:

```
pdborcl =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST10064.my-domain.com)(PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVER=DEDICATED)
      (SERVICE_NAME = PDBORCL.MY-DOMAIN.COM)
    )
  )
```

Running the Oracle Demantra Installer

After creating the TNSNAMES entry as described above, run the Oracle Demantra Installer.

In the 'DBA Details' screen, specify the pluggable database you want to use in the 'TNS Name' field. Using the example above as a guideline, you would enter 'pdborcl' here.

In the 'Configure JDBC Connection' screen, specify the pluggable database you want to use. For the example above, you would enter:

- Host Machine (DNS or IP address): host10064.my-domain.com

- Service Name: PDBORCL.MY-DOMAIN.COM

For more information about the Oracle 12c Database, please refer to Oracle 12c documentation.

Oracle Database Servers

These are the Oracle Demantra components that the Oracle database supports:

- Oracle Demantra Demand Management
- Oracle Demantra Advanced Forecasting and Demand Modeling
- Oracle Demantra Sales and Operations Planning
- Oracle Demantra Predictive Trade Planning
- Oracle Demantra Trade Promotion Optimization
- Oracle Demantra Settlement Management

These are the Oracle Demantra integrations that the Oracle database supports:

- Oracle Demantra Demand Management / Oracle eBusiness Suite integration
- Oracle Demantra Demand Management / Oracle EBS Service Parts Planning
- Oracle Demantra Integration with EBS Advanced Planning Command Center
- Oracle Demantra Sales and Operations Planning / Oracle eBusiness Suite integration
- Oracle Demantra Sales and Operations Planning / Oracle Hyperion Planning integration
- Oracle Demantra Demand Management / Oracle EnterpriseOne integration
- Oracle Demantra Predictive Trade Planning / Oracle EnterpriseOne integration
- Oracle Demantra Settlement Management / Oracle EnterpriseOne integration
- Oracle Demantra Demand Management / Oracle Peoplesoft
- Oracle Demantra Demand Management with Asset-Intensive Planning Applications
- Oracle Demantra integration with Demand Signal Repository

Note: Oracle does not support Microsoft SQL Server. To learn which Demantra versions support SQL Server, please review previous versions of the Installation Guide and Release Notes on My Oracle Support.

Oracle Demantra Analytical Engine

The Demantra Analytical Engine supports the following:

- Solaris (SPARC) versions 10 and 11
- Microsoft Windows 7, 8, and 10 and Windows Server 2012
- Oracle Enterprise Linux (OEL) versions 6 and 7
- Red Hat Linux versions 6 and 7

The following prerequisite for Demantra Analytical Engine deploying on UNIX-like OS:

- Install the 12c Oracle Client.
- The 64 bit engine must be deployed on a 64-bit operating system.
- Engine Administrator is not available on Linux or Windows. However, it is possible to access Engine Administrator to modify engine configuration settings. For details, see Modify Engine Settings using Engine Administrator on Linux, *Oracle Demantra Installation Guide for Release 12.2*.

For additional details, see Deploying Demantra on UNIX, Solaris or Linux, *Oracle Demantra Installation Guide for 12.2*.

For information on deploying the Demantra Analytical Engine on Linux, see Deploying the Demantra Analytical Engine on Linux, .

Trade Promotion Optimization (TPO) Engine

The Demantra Trade Promotion Optimization (TPO) Engine has been tested and certified on the following:

Entity	Supported Versions (32-bit or 64-bit)
Operating System	• Windows versions 2008 and 2012 • Oracle Enterprise Linux (OEL) versions 5 and 6 • SUSE Linux version 10 (SP3) • Solaris (SPARC) versions 10 and 11 **Note:** TThe TPO engine supports version 12 of both the ILOG CPLEX and OPL libraries.
Application Server	• Tomcat • WebLogic • IBM WebSphere • IBM WebSphere Express
Database	TPO engine supports any of the databases listed in Oracle Demantra Web Platform Server, page 2-4.

* Both the 32-bit and 64-bit versions of the operating systems listed above are supported. However, please note that the TPO engine runs on a 64-bit application server. For more information, see 32-bit Oracle Client Requirements, .

> **Note:** If you are deploying the TPO engine on a platform other than Windows, see Configure Promotion Optimization (PMO) on a UNIX-like Operating System, *Oracle Demantra Installation Guide for 12.2*

Hardware Architecture

For solution architecture, the most important consideration is the size of the implementation:

- Small implementations have 5-50 users and a relatively low volume of data.

- Medium implementations have 50-150 users.
- Large implementations have hundreds of users across multiple time zones, complex data structures, and a relatively high volume of data.

For larger systems, consider running the database and application server on a UNIX platform such as Linux, Solaris, HPUX, or AIX and be sure to size the hardware accordingly. Demantra is a data process-intensive application and database clustering using Oracle database Real Application Clusters (RAC) is supported. The application server is not the load point in the Demantra application architecture, so J2EE clustering is not supported.

> **Note:** RAC supports several methods of connection configurations, and not all forms are currently supported by the Demantra Web-based applications. (The analytical engine, Business Modeler, and Member Management/Chaining applications support all forms of RAC configuration through TNSname configuration.). The Demantra Web applications support only a single VIP host name configuration form. For more information see "Overview of Connecting to Oracle Database Using Services and VIP Addresses" in the *Oracle® Real Application Clusters Administration and Deployment Guide 11g Release 2 (11.2)*.

Two-Tier and Multi-Tier Architectures

The architecture of Oracle Demantra implementations fall into two main categories:

- Two-tier architecture: All the server components and the Analytical Engine are on a single, dedicated machine; client software is on other machines. This type of architecture is sufficient for small to medium implementations.
- Multi-tier architecture (required for large implementations): In the most general case, each server component listed previously is on a different dedicated machine; client software is on other machines. A typical variation is for one machine to run the database server, and for a second machine to run the Analytical Engine and the rest of the server software.

Architectures Using the Distributed Engine

Commonly you use one machine as the server for the Analytical Engine, and you run one instance of the engine (single-instance mode). If your system includes the Distributed Engine, other variants are possible:

- Multiple-instance mode: One machine acts as the server for the Analytical Engine and runs many instances of the engine. This requires a multi-CPU machine. In some situations when using a machine based on Intel Xeon hardware, it is possible to run more than one instance per CPU.

- Distributed mode: A cluster of equally powered machines are configured to run one instance of the Analytical Engine server. The minimum recommended system is Pentium 4 1Ghz and 128MB RAM for each machine.

- Mixed mode: A cluster of unequally powered machines are configured to run one or more instances of the Analytical Engine server. The selected number of instances per machine is done during configuration. Faster machines may be configured to run more instances of the engine. For the minimum recommended system, refer to the table below.

Hardware Requirements for the Servers

This section lists sample hardware requirements for the servers used in an Oracle Demantra installation, as well as for the Analytical Engine. These are basic guidelines; please contact your account representative or Oracle Support Services for detailed guidelines.

Requirements for Two-Tier Solution

For a two-tier solution, you must use the Windows stack or a variation, because Oracle Demantra Administrative Utilities (the Business Modeler and other desktop utilities) are supported only on Windows. You can run these administrative utilities using the Demantra Local Applicationon any Windows client. These are the minimum hardware requirements.

Entity	Windows Stacks	UNIX Stack
Processor	Four Pentium 4 processors, 1 GHz	Contact Oracle Support Services
Memory	Dedicated server with 4 GB of memory	At least 1 GB
Disk	80 GB disk space consisting of: • Minimum 8 disks at RAID level 5 • 2 channel RAID controller	6 GB disk space

General Comments Regarding Multi-Tier Solution

In a multi-tier solution, the servers and the Analytical Engine are potentially all on different machines. Note the following general comments:

- The hardware requirements are different for the different components and depend upon the operating system/software stack.
- In each case, a dedicated server is recommended.
- Oracle Demantra is a relational system, in which many records (potentially all) can be pulled up at the same time, rather than a single record at a time. It therefore requires larger and faster hardware than a transactional database would.
- Oracle Demantra does not support the J2EE clustering feature, because the Web Platform Server cache is not designed to be shared by multiple machines.
- Using fewer machines does not necessarily provide a cost savings. When a given machine runs multiple solution components, that machine generally must have more disk space, more memory, and greater speed than if it ran fewer components.

Database Server

The table below shows the database server requirements.

Entity	Windows Stacks	UNIX Stack
Processor	Four Pentium 4 processors (with extension ability to 8), 2.5 GHz	Contact Oracle Support
Memory	At least 16 GB	At least 16 GB
Disk	160 GB disk space consisting of: • High-end storage system, for example SAN • Minimum 8 disks at RAID level 10 • 2 channel RAID controller	160 GB disk space consisting of: • High-end storage system (for example, SAN) • Minimum 8 disks at RAID level 10 • 2 channel RAID controller

Application Server

The table below shows the application server requirements.

Entity	Windows Stacks	UNIX Stack
Processor	Two Pentium 4 Xeon processors (with extension ability to four), 1 GHz	Contact Oracle Support
Memory (depends on number of concurrent users)	3 GB	3 GB
Disk	20 GB disk space, configured RAID 1+0	20 GB disk space, configured RAID 1+0

Analytical Engine

The table below shows the Analytical Engine requirements.

Entity	Windows Stacks	Linux Stacks
Processor	Pentium 4 processor, 1 GHz	Contact Oracle Support
Memory (depends on number of concurrent users)	At least 1 GB	At least 1 GB
Disk	6 GB disk space	6 GB disk space

If your system includes the Distributed Engine, refer to Architectures Using the Distributed Engine, page 2-10.

Oracle Demantra Administrative Utilities

The table below shows the Oracle Demantra Administrative Utilities requirements.

Entity	Windows Stacks
Processor	Two Pentium 4 Xeon processors (with extension ability to four), 1 GHz

Entity	Windows Stacks
Memory	2 GB of memory (depends on number of concurrent users)
Disk	20 GB disk space, configured RAID 1+0

Network Requirements

For a Web-based solution, the WAN requirements vary by implementation; here are some guidelines:

- Connect the servers by high-speed network lines (1 GBps).
- For a web-based solution, the WAN requirements may vary by implementation and will depend on whether the environment is shared, the size of the data set, performance expectations, and so on. However, Oracle recommends high-speed network lines capable of at least 1 GBps.
- For client-server requirements, Oracle recommends 100 Gigabit Ethernet (100 Gbit/s).

Note: Oracle Demantra is SAN aware.

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