Platform

DEMANTRA SPECTRUM INSTALLATION GUIDE

Version 7.0.2

CREATE DEMAND. MANAGE DEMAND. FULFILL DEMAND.

Demantra Spectrum Installation Guide
Version 7.0.2
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http://www.demantra.com

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Demantra Spectrum Installation Guide

Contents

Preface

This preface includes the following sections:

About This Manual

This manual is intended for use by system implementors, while you implement a Demantra Spectrum solution. For details on this manual, see the following section.

Overview of the Core Demantra Spectrum Documentation

The Demantra Spectrum documentation is divided into the following categories.

For Use During Installation

Manual	Contents
Demantra Spectrum Release Notes	• New and changed features • Defects fixed in this release • Known defects in this release • Late-breaking information, as needed
Demantra Spectrum Installation Guide	• Hardware and software prerequisites • Running the Demantra Spectrum installer • Upgrading from a previous release • Starting the server and logging on • Initiating the Citrix Metaframe Server, if you use this product • Uninstalling Demantra Spectrum • Tips on configuration settings and on Tomcat (used for demos)

For Use During Implementation

Manual	Contents
Demantra Spectrum Concepts	• Detailed discussion of basic Demantra Spectrum concepts • Separate chapters with further conceptual details on configuring series, levels, worksheets, and so on • Overview of the implementation tools and process • Tips on information needed to hand off the solution to users and administrators
TPMO Demo Script	Standalone document to get readers acquainted with the TPMO application.
Demantra Spectrum Consultant's Guide	Information on configuring everything apart from the Analytical Engine.
Analytical Engine Guide for Demand Planning	Information on configuring the Analytical Engine, for use with Demand Planner Web, Demand Planner, and Demand Replenisher.
Analytical Engine Guide for Promotions Effectiveness	Applies to Promotions Effectiveness. Same general contents as *Analytical Engine Guide for Demand Planning.*
Demantra Spectrum Reference Guide	Provides reference material on the following: • Demantra Spectrum URLs • Parameters • Database procedures • Base data fields • Functions and operators used in server and client expressions • Theoretical forecast models • Workflow step types • Glossary

For the System Administrator

Manual	Contents
Demantra Spectrum Administrator's Guide	• Overview of administrative tasks • Creating users and groups of users; maintaining security of menu items • Managing workflow instances • Managing the worksheets • Maintaining the database and using the Scheduler to schedule database procedures; wrapping database procedures • Using the desktop BLE user interface and defining safety stock levels • Configuring the menus and links in Collaborator Workbench • Upgrading the Demantra Spectrum license • Troubleshooting appendix

For End Users

The following manuals apply to Demantra Web-based products:

- *Promotions Effectiveness User's Guide*
- *Demand Planner Web User's Guide*
- *Demantra Settlement Management User's Guide*
- *Collaborator Workbench User's Guide*
- *Demantra Settlement Management User's Guide*
- *TPMO User's Guide*

The following manuals apply to Demantra desktop products:

- *Demand Planner User's Guide*
- *Demand Replenisher User's Guide*

Location of HTML and PDF Manuals

All Demantra Spectrum manuals are available in PDF format, within the directory *Demantra_root*/**Documents**. To read a PDF file, use Adobe Acrobat version 4.0 or higher. These files are formatted for double-sided printing and contain color graphics (which can be printed in color or in black and white).

Most of the manuals are also available in HTML format, as follows:

Help Title	Contents
User Help	HTML versions of the following: • *Demand Planner Web User's Guide* • *Promotions Effectiveness User's Guide* • *Demantra Settlement Management User's Guide* • *Collaborator Workbench User's Guide* • Member Management and Chaining Management chapters from *Demand Planner User's Guide* • *Demantra Spectrum Administrator's Guide* • Combined glossary and index
Offline Help	Condensed version of the preceding, covering only the topics that apply to working offline.
Consultant Help	HTML versions of the following: • *Demantra Spectrum Concepts* • *Demantra Spectrum Installation Guide* • *Demantra Spectrum Consultant's Guide* • *Analytical Engine Guide for Demand Planning* • *Analytical Engine Guide for Promotions Effectiveness* • *Demantra Spectrum Administrator's Guide* • *Demantra Spectrum Reference Guide* • Combined glossary and index
Demand Planner Help	HTML version of the *Demand Planner User's Guide*.
Demand Replenisher Help	HTML version of the *Demand Replenisher User's Guide*.

Each help file is contained in a subdirectory of *Demantra_root*/**Documents**. Each of these directories contains the file **helpset.htm**. To open the help, open that file from an internet browser.

In this release, there is no HTML version of the TPMO documentation.

For Customer Support

For customer support, call 1-866-Demantra (x501) or send email to **support@demantra.com**.

1 System Requirements for Release 7.0.2

This chapter lists the required hardware and software for release 7.0.2. For a description of the solution components, see the manual Demantra Spectrum Concepts.

Client Requirements

Depending on which Demantra Spectrum software the users need, the requirements for their machines are as follows:

All desktop products	Web-based products apart from Demantra Anywhere	Demantra Anywhere
Pentium 4 processor, 500 MHz	Pentium 4 processor, 500 MHz	Any hardware that supports the browser
Minimum 512 MB memory	Minimum 512 MB memory	Minimum 512 MB memory
Either: • Windows NT • Windows 2000 (SP4 or better) • Windows XP	Either: • Windows NT • Windows 2000 (SP4 or better) • Windows XP	Any operating system that supports the supported browser
Windows settings: • Date format: mm-dd-yyyy hh24:mi:ss • locale: English	Windows settings: • Date format: mm-dd-yyyy hh24:mi:ss • locale: English	Windows settings: • Date format: mm-dd-yyyy hh24:mi:ss • locale: English
	Microsoft Internet Explorer 5.5 or higher	Microsoft Internet Explorer 5.5 or higher
	JRE* (installed automatically)	
	Client software for terminal server, same version as on Web server (if terminal server is used)	

*Either Sun JRE 1.4.2_10 (default) or Sun JRE 1.5_05. This does not have to be the same JRE version that is used on the server, but all client machines must use the same JRE version as each other. If you do not use the default JRE on the clients, manual steps are needed after running the installer.

Software Requirements for the Servers

This section lists the software stacks on which the Demantra Web Platform Server, the Demantra Administrative Utilities, and the Analytical Engine are supported.

Web Platform Server

For release 7.0.2, the Web Platform Server is formally supported on both Oracle and SQL Server stacks. The Oracle stacks are as follows.

	Windows Stacks				**Unix Stack**
	Oracle Stack 1	**Oracle Stack 2**	**Oracle Stack 3**	**Oracle Stack 4**	**Oracle Stack 5**
operating system	Windows 2000 (SP4 or better)	Windows 2000 (SP4 or better)	Windows 2003	Windows 2003	Solaris 8
database	Oracle Enterprise 9.2.0.x				
Web server	Microsoft IIS 5	Microsoft IIS 5	IBMHttpServer 1.3.x	Microsoft IIS 5	Apache Web Server 2.0.x
J2EE server	Macromedia JRun 4.0, Patch 3	IBM WebSphere 5.1	IBM WebSphere 5.1	IBM WebSphere 5.1	BEA WebLogic 8.1 (SP4)
Java	Sun JRE as included with the application server installation, from the vendor				

The SQL Server stacks are *mostly* similar and are as follows.

	Windows Stacks			**Unix Stack**
	SQL Server Stack 1	**SQL Server Stack 2**	**SQL Server Stack 3**	**SQL Server Stack 4**
operating system	Windows 2000 (SP4 or better)	Windows 2003	Windows 2003	Solaris 9
database	Microsoft SQL Server 2000 Enterprise Edition, Version 8.0 (SP3)			
Web server	Microsoft IIS 5	IBMHttpServer 1.3.x	Microsoft IIS 5	Apache Web Server 2.0.x
J2EE server	Macromedia JRun 4.0, Patch 3	IBM WebSphere 5.1	IBM WebSphere 5.1	BEA WebLogic 8.1 (SP4)
Java	Sun JRE as included with the application server installation, from the vendor			

Important Notes

These tables describe the stacks that receive rigorous testing. Other variations are possible. See “Stack Variants for Servers” on page 3.

In principle, Demantra supports any operating system for the database server that the database software supports. In practice, the database server has been explicitly tested on Windows 2000, Windows 2003, AIX 5.2L, AIX 5.3L, and RedHat Linux AS 3.1.

For demo purposes, the Demantra Spectrum installer provides Tomcat and JDK (if you perform a custom installation). Demantra Spectrum is not formally supported on Tomcat.

Demantra Administrative Utilities

The Demantra Administrative Utilities (the Business Modeler and other desktop utilities) are formally supported on all Windows stacks.

Analytical Engine

The Analytical Engine is formally supported on all Windows stacks.

Stack Variants for Servers

The preceding tables describe the stacks that receive rigorous testing. Other variations are possible.

Operating Systems

Demantra Spectrum has been tested on the following operating systems and no problems have been detected:

- Windows XP
- Windows NT
- RedHat Linux AS 3.1 (applies only to the Demantra Web Platform Server; the Admin Utilities and the Analytical Engine run only on Windows operating systems)

Windows 98, however, is not recommended.

Database Software

Demantra Spectrum has been tested with Oracle 8i; no problems are known with it.

Using Terminal Software

Demantra has tested using the following terminal software and has not detected problems:

- Citrix Server 8.0 (available on Unix and Windows)
- Windows Terminal Services

Using Tomcat as the Web Server

For demos, you can use Tomcat as the Web server, and the installer provides this option for convenience. Demantra has tested with both Apache Jakarta Tomcat 5.x and Apache Jakarta Tomcat 4.0.x.

Tomcat is not supported and is not recommended for production systems. For notes, see “Tomcat Tips (Demos Only)” on page 51.

Other Permutations

Many other permutations are possible, such as Windows NT/Oracle/WebLogic. Specific problems are not known, but Demantra recommends using the formally supported stacks wherever possible.

Hardware Architecture

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

- Small implementations have 5–50 users and 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, you should consider running the database on Unix and clustering a group of application servers with software like Citrix. (This does not refer to the J2EE clustering feature, which Demantra Spectrum does not support.)

Two-Tier and Multi-Tier Architectures

The architecture of Demantra Spectrum 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 you have a license for 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.
- *Distributed mode*—A Citrix cluster of equally powered machines are configured to run one instance of the Analytical Engine server.
- *Mixed mode*—A Citrix cluster of unequally powered machines are configured to run one or more instances of the Analytical Engine server.

Hardware Requirements for the Servers

This section lists the hardware requirements for the server or servers used in a Demantra Spectrum solution, as well as the Analytical Engine.

Requirements for Two-Tier Solution

For a two-tier solution, you must use the Windows stack or a variation, because the Analytical Engine and Demantra Administrative Utilities (the Business Modeler and other desktop utilities) are supported only on Windows. The hardware requirements are as follows:

	Windows Stacks
processor	Four Pentium 4 processors, 1Ghz
memory	Dedicated server with 4GB of memory
disk	80 GB disk space consisting of: • Minimum 8 disks at RAID level 5 • 2 Channel RAID controller

Requirements for 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.
- Demantra Spectrum 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.
- Demantra Spectrum 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

	Windows Stacks	Solaris Stack
processor	Four Pentium 4 processors (with extension ability to 8), 2.5 Ghz	*
memory	At least 4GB	At least 4 GB
disk	160 GB disk space consisting of: • High-end storage system (e.g., SAN) • Minimum 8 disks at RAID level 10 • 2 Channel RAID controller	

*For information on hardware requirements, contact Demantra customer support.

Application Server

	Windows Stacks	Solaris Stack
processor	Two Pentium 4 Xeon processors (with extension ability to four), 1 GHz	Two UltraSPARC II or UltraSPARC III processors
memory*	2GB	3GB
disk	20 GB disk space, configured RAID 1+0	

*Depends on number of concurrent users

Analytical Engine

	Windows Stacks
processor	Pentium 4 processor, 1Ghz
memory*	At least 1GB
disk	6GB disk space

*Depends on number of concurrent users

If you have a license for the Distributed Engine, you can configure variations like the following:

- Multiple-instance mode—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—The minimum recommended system is Pentium 4 1Ghz and 128MB RAM for each machine.

- Mixed mode—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, see the table.

Demantra Administrative Utilities

	Windows Stacks
processor	Two Pentium 4 Xeon processors (with extension ability to four), 1 GHz
memory	2GB 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, but the following guidelines might be useful.

- The servers should be connected by high-speed network lines (1 GBps).
- The clients can be connected by slower lines. ISDN lines can be used but are slow. DSL and cable are recommended where dial-up connections are needed. Analog lines are not recommended.

Note Demantra Spectrum is SAN aware.

2 Preparing for Installation or Upgrades

This chapter describes preparatory work that you should do before installing or upgrading Demantra Spectrum.

Also see the Demantra Spectrum Release Notes for any possible defects in the upgrade or installer process.

Installer Options Worksheet

To make installation quick and simple, use the following worksheet to collect the information that the installer requires.

Screen	Item	Examples	Your value
Product License	Location of license file	c:/licenses	
DBA Information	DBA username	system	
	Password	manager	
	TNS Name	wysiwyg	
Configure Demantra Database User	User	demo	
	Password	d	
	Database (SQL Server only)		
Configure JDBC Connection	Server name (host machine or IP address on which database resides)	wysiwyg	
	Port	1521	
	Oracle SID (Oracle only)	usco	
Database Options	Export by user	dp	
Select Tablespaces	For default data	TS_DP	
	For temporary data	TEMP	
	For sales data	TS_SALES_DATA	
	For index data	TS_SALES_DATA_X	
	For simulation data	TS_SIM	
	For simulation index data	TS_SIM_X	
	For sales data engine index	TS_SALES_DATA_ENGINE_X	
	For sales data engine	TS_SALES_DATA_ENGINE	
Specify Web Address	Root address	http://www.mycompany.com https://www.mycompany.com http://localhost:8080	
	Virtual directory	**demantra**	
Designate Administrator Account	Mail server	mayflower.demantra.net	
	Administrator email address	demantra-admin@acme.com	
	Administrator username	admin	
	Administrator password		
Settlement Management Stage	ID of location level associated with settlements	22	
	ID of item level associated with settlements	9	

See the following subsections for details.

Product License

Get a license file (**securitykey.ini**) from Demantra Customer Support and place that in a permanent location.

Note The path to the license file should not include brackets.

DBA Information

The installer must usually access your database as the database administrator so that it can create a new database user to store Demantra Spectrum data (or modify an existing database user for that purpose).

You will need the following basic information:

Item	Details	Examples
DBA username	Username that has DBA access to the database.	system
Password	Password for that user.	manager
TNS Name	Use the *TNS name* as specified in the tnsnames.ora file. To verify that you have the correct TNS name, enter the following command in DOS: **tnsping** *TNS_name* If the command returns successfully, you have the correct TNS name. Note that the TNS name is also referred to as the *service name*; it is often the same as the host name.	wysiwyg

Configure Demantra Database User

For your solution, the Demantra Spectrum data is stored in a database user (for example, called **dp**). One of the most important considerations is deciding how to set up this database user. You have the following options:

- If this database user is new, you can do either of the following:
  - Load the Demantra data model and demo that is supplied with the installer.
  - Load a database dump file that was created from another Demantra database.
- If you already have a Demantra Spectrum database, you can do any of the following:
  - Replace the database user, which removes it entirely and replaces it with the Demantra data model and demo that is supplied with the installer.
  - Upgrade the database user, which updates the schema and various default settings (such as parameter values).
  - Do nothing to the database user.

The installer can create this database user for you, or you can create it ahead of time. If you create the database user, be sure to give the user DBA access. On SQL Server, this user must have **db_owner** and **bulkadmin** permissions.

For the Demantra Spectrum database user, you will need the following information.

Item	Details	Examples
User	Username where you will store the Demantra Spectrum data.	demo
Password	Password for that userrname.	d
Database	**(SQL only)** Machine where SQL Server is installed. This is often the same as the user name.	demo

Configure JDBC Connection

Demantra Spectrum uses a JDBC connection to access the database, and you specify the following information during the installation.

Item	Details	Examples
Server name	Specify the host machine or IP address on which database resides.	wysiwyg
Port	Specify the port to which the database is listening. If you are using Windows XP (not supported formally), avoid using the default port number.	1521
Oracle SID	**(Oracle only)** Specify the Oracle *SID* or *service name* (**Service_Name** in the **TNSNames.ora** file). Note that the SID or service name is also called the *database name*; it is often the same as the host name.	usco

Database Options

In most cases, the installer loads a database dump file.

Item	Details	Examples
Database to import	Choose one of the following: • NF (the National Foods demo/sample) • TPMO (the TPMO demo/sample) • CUSTOM (your own database dump file, which was exported from another Demantra database)	
Export by user	Name of the database user who created this dump file. Needed only if you are importing a CUSTOM database.	dp

Select Tablespaces

(Oracle only) By default, Demantra Spectrum stores its data up to eight separate tablespaces as follows.

Item	Examples
For default data	TS_DP
For temporary data	TEMP
For sales data*	TS_SALES_DATA
For index data*	TS_SALES_DATA_X
For simulation data	TS_SIM
For simulation index data	TS_SIM_X
For **sales_data_engine** index*	TS_SALES_DATA_ENGINE_X
For **sales_data_engine***	TS_SALES_DATA_ENGINE

*For these tablespaces, the examples are the recommended names. If you use these standard names for these tablespaces and you map them in the default way, then it is easier for you to share your database with Demantra Customer Support in case of problems.

Specify Web Address

For the Web-based products, Demantra Spectrum uses Web addresses that start with a core URL that you specify. You specify this URL in two parts, as follows:

Item	Details	Examples
Root Address	All Demantra Spectrum Web addresses start with this URL. This address does not include the virtual directory. Instead of **http**, you can use **https** for SSL security; also see “Configuring Web Applications for SSL and/or Firewalls” on page 35. In some cases, external notifications (such as simulation and security changes), are missed because the Web server is overloaded. If you are using IIS and JRun, you can work around this by pointing all the external notifications to the internal JRun web server rather than to the IIS and JRun connector. To do so, include the default JRun port (8100) at the end of the root address. For example: http://mayflower:8100	http://www.mycompany.com https://www.mycompany.com http://localhost:8080
Virtual Directory	The virtual directory is added to the root address, in all Demantra Spectrum URLs. This is case sensitive.	**demantra**

These two items are used together in all Demantra Spectrum Web addresses. For example, the Web address for Collaborator Workbench is as follows:

http://*server name/virtual directory***/portal/loginpage.jsp**
For example:
http://frodo/demantra/portal/loginpage.jsp

Designate Administrator Account

If you are using any of the Demantra Spectrum Web-based software, Demantra Spectrum can automatically send email on specific occasions, for example, within workflows.

In order to enable this, you should set up an administrator email account on an SMTP server; this account will be the originator of all Demantra Spectrum's automatic messages. You will probably need to work with the IT department to make sure that Scheduler has the needed permissions on the mail server.

Then, when you run the installer, you will provide the following details of that account.

Item	Details	Examples
Mail server	Specify the SMTP server that is hosting the email service.	frodo.demantra.net
Administrator email address	Specify the email address of the administrator email account.	demantra-admin@acme.com
Administrator username	Specify the administrator username; this is usually the network username of the administrator.	admin
Administrator password	Specify the administrator password; this is *also* usually the network username of the administrator.	admin

You can also set up the administrator email account *after* running the installer. See the chapter "Fine-Tuning Demantra Spectrum" in the *Demantra Spectrum Consultant's Guide*.

Settlement Management Stage

If you have a license for Settlement Management, the installer prompts you for information about your configuration, so that it can set up the internal tables for Settlement Management.

Item	Details	Examples
ID of location level associated with settlements	Specify the location level that is associated with settlements; normally this is the Account level or the Billto level. Specify the level ID as given in the **group_tables** table (in the database)	22
ID of item level associated with settlements	Specify the item level that is associated with settlements; normally this is the level at which you run promotions.	9

Basic Preparation Checklist

In addition to collecting information needed for the installer, be sure to complete the following steps in any order:

Item	Details	Done?
License file	Get a license file (**securitykey.ini**) from Demantra Customer Support. The license file specifies which modules can be used, how many users can access those modules, and an expiration date. To support customers who extend their contracts and receive a new license, Demantra can supply an *upgrade license*. With an upgrade license, the installer exits after reading and using the license file—rather than performing a complete installation. See the *Demantra Spectrum Administrator's Guide*.	
Decide SSL needs	Decide whether you will need to use SSL protocol for all pages. If so, obtain a VeriSign certificate or equivalent certificate authority.	
Hardware and software requirements	See Chapter 1, "System Requirements for Release 7.0.2" on page 1. Install any patches or service patches for the third-party software that you use, including the database software.	
Java	Check carefully for Java (JRE or JDK) versions that are older or newer than supported by Demantra Spectrum. Remove these.	

Item	Details	Done?
Oracle (if used)	Make sure that the database uses the following encodings: • NLS_LANG = AMERICAN_AMERICA.WE8ISO8859P1 • NLS_DATE_FORMAT = MM-DD-YYYY HH24:MI:SS • NLS_LANGUAGE = AMERICAN • NLS_TERRITORY = AMERICA	
	Set the compatibility parameter in the init.ora file to 8.1.7 or higher.	
	Make sure the **nls_date_format** environment variable is set appropriately, the same as in the database.	
	If you are performing a new installation, create tablespaces within Oracle for use by the Demantra Spectrum database user. Demantra recommends that you set up tablespaces with the following names: • TS_SALES_DATA • TS_SALES_DATA_X • TS_SALES_DATA_ENGINE • TS_SALES_DATA_ENGINE_X If you are not familiar with Oracle tablespaces, consult an Oracle administrator or Demantra Customer Support. If you use these standard names and map them in the standard way, then it is easier for you to share your database with Demantra Customer Support in case of problems. See “Installer Options Worksheet” on page 10. You will need up to eight tablespaces. These four contain the data that is most commonly shared with Demantra Spectrum.	
SQL Server (if used)	Demantra recommends the following settings. • SQL Server Database Options: Autoshrink = Off • SQL Server Datafile Options: Datafile = Autogrow 20% Logfile = Autogrow 20%	
Microsoft IIS (if used)	Install Microsoft IIS 5. Make a note of the name and path of the Microsoft IIS Web server site required for user access.	
	Install Macromedia JRun 4.0, Patch 3. For more information, visit www.macromedia.com. After you install Macromedia JRun 4.0, connect it to Microsoft IIS.	
	If you are using Windows 2000, install the option pack for IIS 5.0 or higher.	
Administrator email account	Set up the email account as needed; see “Designate Administrator Account” on page 14.	
Terminal Services (if used)	Install this via the Windows **Add/Remove Programs** control panel.	

Item	Details	Done?
Java (on each client machine)	Check to see whether a different version of JRE is present on the machine. If so, uninstall it before starting the Demantra Spectrum installation.	
	Clear the Java cache and any competing Java certificates. To do so, go to the **Java Plug-in** control panel.	
	Also on the **Java Plug-in** control panel, set the maximum Java cache to 100 MB (or higher).	
	Make sure that the browser option "Use Java2 v1.4.1_03 for applet" is unchecked. To access this option in the browser, click Tools > Internet Options... and then click the Advanced tab. Scroll to the Java (Sun) options.	
	If you are planning to use Microsoft IIS, go to the Web server and create a virtual directory called **collaboratorjavaplugin**, which points to *Demantra_root*/**plugin.** The client software will not function without this virtual directory.	
Windows settings (on each client machine)	Make sure that the Windows system date format is set to mm-dd-yyyy hh24:mi:ss. To specify the date format, use the System control panel.	
	On the Regional Settings control panel, set the locale to English.	

Upgrade Preparation Checklist

Before upgrading Demantra Spectrum, complete the following additional steps:

Item	Details	Done?
System path	Remove previous installations from the system **PATH** variable. (Leaving them does not necessarily cause a problem, but ultimately the variable can become too long, and the later additions to the variable cannot be seen.)	
Back up database	Save a dump of the database user that currently stores the Demantra Spectrum data. On SQL Server, also back up the **avail_units** table so that you can recover it after backup.	
Back up file customizations	Back up any customizations you made, including customizations to database procedures, login screens, and so on.	

3 Installing or Upgrading Demantra Spectrum

This chapter describes how to run the Demantra Spectrum installer to perform either a new installation or an upgrade.

Also see the Demantra Spectrum Release Notes for any possible defects in the upgrade or installer process.

About the Installer

The options that the installer displays depend on the following things:

- Contents of your license
- Whether the installer detects a previous installation
- Whether you are using Oracle or SQL Server
- Choices you make in the installer

In order to make the installation process clear, this manual lists the installation steps in a table, with information about the conditions under which you see each step. This allows you to skim easily to the next step that applies to you.

In general, to proceed from step to step, you click the **Next** button. You can also go back to previous screens, if you have not yet reached the step where the installer begins copying files.

Running the Installer

To run the Demantra Spectrum installer

1. See Chapter 2, “Preparing for Installation or Upgrades” on page 9 and complete the worksheets, which explain all the information needed by the installer.
2. Make sure that the database is running. The installer requires access to the database.

3. Make sure all applications (including virus-checking programs) are closed before you run the installer.
4. Check the screen resolution. The installer requires a screen resolution of at least 800x600 dpi. An error may occur if the resolution is lower, particularly if you are installing remotely via an application such as Citrix.
5. Insert the Demantra Spectrum CD-ROM into your CD-ROM drive.
6. Run **InstallWindowsW.exe** from the CD-ROM.
7. On the welcome screen, click **Install Demantra Spectrum**.

The installer displays the following screens, in order. Complete the steps that apply to you.

Screen	When screen is displayed	Action/Notes
8. Specify general Information.		
Introduction	Always	Click **Next**.
Product License	Always	Specify the permanent location of license file.
Choose Installation Set	Always	Choose the type of installation to perform. This option controls which screens the installer displays later, among other things. • **Complete** (installs all files permitted by your license) • **Administrative Tools** (installs only the desktop utilities such as the Business Modeler and the Engine Administrator) • **Upgrade License** (upgrades the license but does not install any files) • **Install Database** (imports a database dump file but does not install any files) • **Custom**
Review Details of Installation Set	If you chose **Custom**	Browse the hierarchy and specify the items to install.
Choose Install Folder	If you are installing files	Specify the directory to install software into. The path must be no more than 40 characters long and must not include brackets.
Specify Shortcut Location	If you are installing files	Specify the location of program shortcuts. If you install more than one version of Demantra Spectrum, give each installation a distinct name (for example: Demantra1 and Demantra2) so that each shortcut works properly. To make the shortcuts available to all users of this machine, click **Create Icons for All Users**.
Select Database Home	If more than one copy of the database software is installed	Select the database home that Demantra Spectrum will use.
9. Specify how to access the database as a DBA.		
DBA Information	Always	Specify how to access the database as a database administrator: • **DBA username**: DBA username • **Password**: DBA password • **TNS Name**: TNS name of the database

Screen	When screen is displayed	Action/Notes
10. Specify the database user to store Demantra Spectrum data.		
Configure Demantra Database User	Always	Specify the user that will store the Demantra Spectrum data. You do not have to create this database user ahead of time. • **User**: Database user name • **Password**: Associated password • **Database**: Machine where database is installed (SQL Server only)
Configure JDBC Connection	Always	Specify the JDBC connection that you will use to connect to the Demantra Spectrum database: • **Server name**: Host or IP address where database resides • **Port**: Port to which database is listening (if you are using Windows XP, avoid using the default port number) • **Oracle SID**: Oracle SID or service name (Oracle only)
Database Options	If the database user already exists	Specify what to do with the existing database user: • **Upgrade**: Runs a database procedure that updates the schema and default definitions for the specified user. It will not be possible to reverse this change. This option is available only if the database user is a valid Demantra Spectrum database instance from a previous version of Demantra Spectrum. • **Replace user with new dump file**: Completely removes the existing data for this user and installs the newest schema and data. It will not be possible to reverse this change. You generally use this option only for demo installations. • **Leave user alone**: Leaves the database user unchanged.
Question (rebuild sales_data)	**Upgrade**; Oracle only	Specify whether to rebuild the **sales_data** table. You can run a database procedure to rebuild this table later if needed; see the *Demantra Spectrum Administrator's Guide*.
Database Options	If replacing a database user or if database user does not exist	Specify whether to load one of the demo/sample databases supplied with Demantra Spectrum or load your own database dump file (created from a Demantra Spectrum database). If you load your own database dump file, you must also provide the name of the database user who performed that export.
Select Tablespaces	If replacing a database user or if database user does not exist; Oracle only	Specify the tablespaces you planned in "Installer Options Worksheet" on page 10. If you use the Demantra Spectrum standard names and map them in the standard way, then it is easier for you to share your database with Demantra Customer Support in case of problems. See "Running the Installer" on page 19.
11. Specify details for the Demantra Spectrum Web site (if installing Web-based software).		
Web Server Type	Depends on the license	Click **Production**, the default, which uses Microsoft IIS as the Web server. The **Demo** option use (Apache Jakarta Tomcat 5.x as the Web server. This option is not suitable for use in production environments and is not documented in this manual.

Screen	When screen is displayed	Action/Notes
Specify Web Address	If installing Web-based software	Specify the starting part of all Demantra Spectrum web addresses. You specify two basic parts that are used together: • **Root Address** is the root URL of the Web site. • **Virtual Directory** is the next section of the Demantra Spectrum URL. This is case sensitive. The bottom part of this screen shows you how these are used together. See "Installer Options Worksheet" on page 10.
12. Optionally specify details of Demantra Spectrum administrator email account.		
Designate Administrator Account	Always	Click one of the radio buttons to indicate whether to configure Demantra Spectrum so that it can automatically send email from within workflows. Specify the account details. See "Administrator email account" on page 16.
13. Optionally run database procedures to set up specific environments.		
Set Up Environments	Depends on license and current environment	Demantra Spectrum provides scripts that set up default database structures needed for some of the products. For each structure you want to set up now, click the check box. Or you can run these procedures later. See "Configuring the Database for Use with Specific Products" on page 34.
14. Install the files and load or upgrade the database.		
Pre-Installation Summary	Always	Review the installation options you have chosen. To make changes, click **Back** until you reach the appropriate dialog box. Or click **Install**. The installation process may take some minutes. Among other actions, the installer runs a database process that creates or updates the database user.
Question (procedures log)	Always	Click **Yes** to view the procedures log.
Information	If you chose to view the procedures log	Scan for any problems. In particular, check for any procedures, functions, or views that are noted as "invalid." • If you are installing a new system, all procedures, functions, or views should be valid. • If you are upgrading an existing system, the installer will consider any existing custom procedures, functions, or views as invalid. Carefully check the list to be sure that you recognize all the items as custom items. • If you see an error referring to the table **mdp_matrix**, you will have to set the system date in the correct format (as described in "Basic Preparation Checklist" on page 15) and then run the installer again. You can also view the log afterwards; see "Checking the Log Files and Tables" on page 23.

Screen	When screen is displayed	Action/Notes
Settlement Management Stage	Depends on license	This step creates additional database elements for use by Settlement Management. Here you specify the following level IDs, as specified in the **group_tables** in the database: • ID of location level associated with settlements • ID of item level associated with settlements
15. Install Java.		
Question (Java)	If Java is not yet installed	Click **Yes** to install Java components. The Demantra installer launches the installer for JRE. After Java is installed, you are returned to the Demantra Spectrum installation. If you do not install Java now, you can install it later. The installer is in *Demantra_root***Collaborator***virtual_directory***plugin**.
16. Specify final details.		
InstallShield Wizard Complete	Always	Click the check box if you want to view the Release Notes. Click **Finish** to exit the installer.

Checking the Log Files and Tables

To check the installation logs

- Check the basic installer log file: **c:\tmp\outputfile.txt**.
- Check the database log files written by the installer. Depending on the installation, the installer writes some or all of the following log files into *Demantra_root***Demand Planner\Database Objects***database_type_name*:
  - **import.log** (Information on the import process of the dump file)
  - For Oracle: **run_build_procedures.LST** (Information on the loading of the procedures into the new user.) and other *.LST files.
  - For SQL Server: **build.log**
- Check the **db_exception_log** table.
- *If you upgraded the database user*, also check the following:
  - The **upgrade.log** file provides details on the database upgrade process. This file is in the same directory as the other installer log files.
  - **version_detail** table is updated to the new version only if the upgrade procedure finishes successfully.

Optionally Changing the Client JRE Version

The client machines can use either Sun JRE 1.4.2_10 (default) or Sun JRE 1.5_05, and this JRE version does not have to be the same as used on the server. Note that all client machines must use the same JRE version as each other.

To change the JRE version of the client machines

1. Copy the installer for Sun JRE 1.5_05 into the *Demantra_root*/**Collaborator/** *virtual_directory*/**plugin** directory on the server machine.
2. Edit the **AppServer.properties** file and change the value of the **client.javaPlugin.version** parameter to the following:

   1.5.0_05

4 Additional Steps if Upgrading

This chapter describes the additional steps that may be needed if you have upgraded from a previous version of Demantra Spectrum. It includes the following sections:

Also see the Demantra Spectrum Release Notes for any possible defects in the upgrade process.

Notes

- The installer does not make any changes to your custom procedures, functions, or views. It is your responsibility to make adjustments to your custom features as needed so that they work with the new release.
- The installer's upgrade procedure does not change the current values of any existing parameters, although it may change the default value of an existing parameter. This chapter will specify any suggested manual parameter changes. (Of course, the upgrade procedure does add new parameters and set their values.)
- For information on upgrading just your Demantra Spectrum license, see the *Demantra Spectrum Administrator's Guide*.

Verifying the Database Upgrade

If you upgraded the database user, make sure that upgrade ran correctly. See "Checking the Log Files and Tables" on page 23.

Also, on SQL Server, restore your backup of the **avail_units** table.

Upgrading from Before 7.0

If you upgraded from a version earlier than 7.0, you may need to upgrade as follows:

- "Upgrading Server Expressions" on page 26
- "Upgrading Promotional Causal Factors" on page 26

Upgrading Server Expressions

For technical reasons, a worksheet cache cannot be created if any server expressions in that worksheet return null or zero-length values. This means in general that you should check the server expressions for all series and modify them if any return such values.

Use the expression **to_number(null,0)** to express null values that can be cached.

Upgrading Promotional Causal Factors

The internal mechanism for promotional causal factors has changed slightly. In this release:

- The **Transpose By** expression for a promotional causal factor must be an aggregating expression such as max(promotion_data.Delivery_type).
- The **Filter By Column** expression for a promotional causal factor must be an aggregating expression such as max(promotion_data.Delivery_type).

Each of these expressions must be aggregating because it is used within an SQL GROUP BY clause. In earlier releases, these expressions did not have to be aggregating, so an expression such as promotion_data.Delivery_type was permitted.

Upgrading Rolling Data Expressions from Before 6.2

The general token **#FORE#** has been replaced with tokens that represent specific forecast versions: **#FORE@1#, #FORE@2#**, and so on.

In most cases, you can upgrade by simply replacing **#FORE#** with **#FORE@1#**.

See the *Demantra Spectrum Reference Guide*.

Upgrading from Before 6.1

If you upgraded from a version earlier than 6.1, you may need to upgrade as follows:

- "Updating Users" on page 27
- "Upgrading Proport" on page 27

Updating Users

Because of the new licensing mechanism in Demantra Spectrum 6.1, you must reassociate all existing users with the appropriate modules.

Note This process is a one-time effort due to the change in the licensing mechanism in release 6.1.

1. On the **Start** menu, click **Programs**.
2. Click Business Modeler.

   A login window appears.
3. Type the user name and password of a component and then click **Login**.
4. Click **Security** > **Create/Modify User**.
5. Double-click the icon of the user whose details you want to modify.
6. Click **Next** to access the **User Modules** dialog box.

   Here you specify which Demantra Spectrum modules the user can access, from a list that includes Collaborator Workbench, Demand Planner Web, and so on. The specific choices depend upon your license.
7. Click the check box next to each module that the user needs to work with.
8. Click **Finish**.
9. Repeat for each existing user and for each component.

Upgrading Proport

As of 6.1, Demantra Spectrum has a new parameter (**Run_full_matrix_proport**) which specifies whether to run the proport mechanism on all the item-location combinations. The upgrade adds this parameter and sets it equal to 0, which means that proport runs only on the combinations that have **prop_changes**=1.

To edit this parameter, use the Business Modeler. For full details on this parameter, see the *Demantra Spectrum Reference Guide*.

Upgrading from Before 6.0.1

If you upgraded from a version earlier than 6.0.1, you may need to upgrade as follows:

- “Controlling Forecast Generation” on page 28
- “Upgrading Series That Refer to Previous Forecast Versions” on page 28
- “Updating Server Expressions That Use NVL2” on page 30

Controlling Forecast Generation

Before 6.0.1, the Analytical Engine generated a forecast for all past periods. Release 6.0.1 provides a new parameter (**ForecastGenerationHorizon**), which specifies what historical fit data the engine will write to the database.

- If this parameter is 0 (the default), the engine writes the forecast only.
- If this parameter is a positive integer N, the engine writes the last N historical fit values.

To preserve the previous behavior, set this parameter. For example, if you keep two years worth of weekly data, set this parameter to 104.

Upgrading Series That Refer to Previous Forecast Versions

This section applies only to series that meet both the following conditions:

- Were created before 6.0.1
- Refer to previous forecast versions

In 6.0.1, the Forecast and Sales tables were combined, and now Demantra Spectrum uses only the Sales table. This creates a problem with any series that refers to previous forecast versions. These series are stored in the old Forecast table and are ignored by the current software. After you upgrade to Demantra Spectrum 7.0.2, the unified SALES table contains only the latest forecast.

To upgrade these series, you need to define new series that are stored in the unified SALES table and then copy the existing series data into these new series.

Note Perform these steps *after* running the Demantra Spectrum 7.0.2 installer.

Step 1: Create New Series

The first step is to create a new series to replace each old series (that is, each series that was created before 6.0.1 *and* that refers to previous forecast versions). There is no need to migrate any series that refer to the latest forecast.

Use the Business Modeler as usual. For more details, see the *Demantra Spectrum Consultant's Guide*.

Tip Use the **Save As** feature to quickly create multiple, similar series.

Step 2: Copy Data to the New Series

In this step you copy the data from the old series (that Demantra Spectrum) into your new series. To do this, you create and execute a rolling data profile.

Note Each profile copies the data from one series, so you must perform these steps once for each series that you want to migrate.

To create and execute a rolling data profile

1. Within Business Modeler, click **Engine > Rolling Data**.

   The **Rolling Data** screen appears.

2. Click **Insert**.
3. In the **Profile Name** box, type a name for the profile.
4. Select the required source forecast series from the **Series** dropdown list.
5. Select the source forecast table from the **Source Table** dropdown list.
6. In the **Target** area, select a series from the **Series Name** dropdown box. or target series, specify the series you create in “Step 1: Create New Series” on page 28.
7. Select SALES from the **Target Table** dropdown list.
8. Click **Save** to save the changes.
9. Click **Insert** and repeat the steps to create a profile for each required forecast series.

   Tip Pay attention to the forecast versions when creating the profiles, to ensure that the forecast series from the source tables are transferred to the same forecast version in the SALES table.

10. Click **Configure**.

    The **Configure Rolling Session** screen appears.

11. Drag the profiles from the **Unselected Profile** list to the **Selected Profile** list.
12. Click **OK** to save changes, close the window and return to the Rolling Data screen.
13. Click **Execute**.

    The data is copied from the original series into the new series.

    Note This task needs to be performed once only. The upgraded Demantra Spectrum will access the series on the unified SALES table. The previous tables will remain in the system, but will play no part in Demantra Spectrum processes. You can delete the unused tables manually.

Updating Server Expressions That Use NVL2

Demantra Spectrum server expressions used to support an SQL function named NVL2. This release does not support this function. If you are using this function in a server expression or procedure, it will crash. Check to see whether you are using NVL2, and if so, replace it with DECODE.

NVL2 can easily be changed to DECODE as follows:

NVL2(expr1, expr2, expr3) --> DECODE(expr1,NULL,expr3, expr2)

Demantra Spectrum server expressions also used to support a token called **#PART#**, which was used with Parts Planner, no longer supported. If you are using this token in a server expression, the worksheet that uses the series will not load.

Upgrading from Before 5.3

As of 5.3, Demantra Spectrum no longer has separate tables for sales and forecast data; this data is now combined in **sales_data**. If you are upgrading from an earlier release, then replace the client expression for the Final Forecast series with the following client expression:

```
if (  getrow ( )  >=  forecastfirstrow() ,
    if (  is_modified(  coll. forecast override ) ,
       if( isnull(  coll. forecast override) ,
         if ( isnull (ent fc),0,ent fc) * (1- if (  isnull( partner % in fcst  ) ,0,  partner % in
fcst ) )+
  if(isnull(final partner fcst),0, final partner fcst   *
  if (  isnull(    partner % in fcst  ) ,0,  partner % in fcst ) ) ,
  if ( isnull(coll. forecast override),0,coll. forecast override) ) ,
  if (  is_modified(  partner % in fcst  )   or  is_modified(  partner fcst over )
  or  is_modified(  promotion )  or  is_modified(  fc override )  or
  is_modified(  fc factor ) ,     if (isnull(  coll. forecast override) ,
  if ( isnull (ent fc),0,ent fc) * (1- if (  isnull( partner % in fcst  ) ,0,  partner % in fcst ) )
  + if(isnull(final partner fcst),0, final partner fcst *
  if (  isnull(    partner % in fcst  ) ,0,  partner % in fcst )),
  if ( isnull(coll. forecast override),0,coll. forecast override)) ,
  if(isnull(final fc),0,final fc ))),  null value )
```

If you have other custom series that can contribute to the Final Forecast, then those will need to be added into this client expression.

Upgrading from JDE 4.0.1

When you first upgrade from JDE 4.0.1, your series will not be visible in the user interfaces. To make the series visible, do the following:

1. Log onto Business Modeler.
2. Modify the component by selecting all the indexes for inclusion in the component.
3. Save your changes.

Upgrading from Demantra Suite 2.5.9/JDE 3.2.1

The **mdp_matrix** table and the proport procedure have changed in the following way:

In previous releases, the **mdp_matrix** field **lastd_prop** specified whether proport should run on a given combination. This field has been renamed to **prop_changes** and the proport mechanism has been changed to reflect that. If you have any custom procedures that use this flag, be sure to update them accordingly. The flag that proport is looking for is now '1' instead of '1-1-1800'.

5 Additional Configuration Tasks

After you install the software, you may need to make additional configuration changes.

Streamlining the Database (Oracle Only)

If you loaded a large database dump file, you should probably run certain database procedures to make the database run more quickly, before you start using Demantra Spectrum. In particular, run the following procedures at staggered times:

Procedure	Purpose
REBUILD_INDEXES*	Rebuilds table indexes.
REBUILD_TABLES*	Rebuilds the **sales_data** and **mdp_matrix** tables, which are large, core tables used by Demantra Spectrum.
ANALYZE_SCHEMA	Analyzes all the tables in the schema. Run this after running **REBUILD_INDEXES** and **REBUILD_TABLES**

*These procedures require tablespaces equal in size to the current tablespaces.

For performance reasons, it is also useful to move each large table into its own tablespace. The installer places some of the tables into their own tablespaces, depending on your choices, but you may have additional large tables. The following sample SQL moves the table **TABLENAME** and its index into the tablespace called **TS_TABLENAME**:

```
declare
sqlstr varchar2(2000);
begin
sqlstr := 'alter table TABLENAME move tablespace TS_TABLENAME';
dynamic_ddl(sqlstr);
for idx in (select index_name from user_indexes where table_name = 'TABLENAME')
loop
   sqlstr := 'alter index '||idx.index_name||' rebuild tablespace
```

```
TS_SALES_DATA_TEST_X';
   dynamic_ddl(sqlstr);
end loop;
```

After moving tables to different tablespaces, you should run **ANALYZE_SCHEMA** again.

Configuring the Database for Use with Specific Products

Depending on your license, the installer provides options to perform additional configuration steps that make the database to work with certain Demantra Spectrum products. You can perform these configuration steps afterwards instead, if necessary.

To configure the database for Settlement Management (added IN 7.0)

1. Using a database tool, find the internal identifiers for the following two levels:
   - The location-type level with which settlements should be associated. This generally represents the entity that is being billed or refunded.
   - The item-type level with which settlements should be associated. This generally represents a promoted product or a product group.
2. Rerun the installer and choose the option to run the **UPGRADE_TO_DSM** database procedure.
3. When prompted, specify these two level IDs.
4. Use the Business Modeler to complete the configuration. See *Demantra Spectrum Consultant's Guide*.

To configure the database for Promotions Effectiveness

- Using a database tool, run the **CREATE_PE_STRUCT** database procedure.

You will also need to configure the Analytical Engine appropriately for Promotions Effectiveness, as described in the *Analytical Engine Guide for Promotions Effectiveness*.

To configure the database for Promotion Optimization

- Using a database tool, run the **CREATE_OPT_STRUCT** database procedure.

You will also need to configure the optimization methods as needed, as described in the *Demantra Spectrum Consultant's Guide*.

Configuring the Web Client Startup (Added in 7.0)

You can start the Web client (Demand Planner Web, for example) in either of two ways:

- Using Java Web Start
- Using Sun Java Plug-in

The first method is generally safer. To specify how to start the client, set the parameter **client.activationMethod**. To edit this parameter, use the Business Modeler.

If you use Sun Java Plug-in, double-check the **Java Plug-In** control panel to make sure it uses the correct version of JRE.

Configuring Web Applications for SSL and/or Firewalls

To use SSL security (added in 7.0) or if users need to work through a firewall, do the following:

1. When you install Demantra Spectrum, be sure to configure all URLs with **https** instead of **http**.
2. Switch off the HTTP server on port 80. The actual way to do this is dependent on the Web server.
3. Configure the Web server for SSL support. You will need to obtain a VeriSign certificate or equivalent certificate authority.
4. Configure the firewalls to allow connections to port 443.
5. Optionally configure the firewall to disallow all communication to port 80 instead of disabling it on the Web server.
6. If you have a firewall between the Web Platform Server and the database, you will also need to open the port that is defined for the connection between the Application Server and the database.
   - For Oracle, this port is 1521 by default.
   - For SQL Server, this port is 1433 by default.
7. If you change any of the default port numbers, make sure to also change them in the Demantra Spectrum URLs, the Web server, and the firewall. See “Other Configuration Files” on page 49.

Configuring the Demantra Web Platform Server

You may need to adjust the settings of parameters used by the Web Platform Server.

Parameter	Recommended Setting and Notes
MaxDBConnections	Number of concurrent users multiplied by 2
DBIdleTimeOut	300000 (5 minutes) This setting frees up unused db connections more quickly, because they overstress the database.
threadpool.update.size	Use a size that is less than **MaxDBConnections** and that also leaves space for other system processes.
threadpool.level_method.size	
threadpool.copy_paste.size	
threadpool.query_run.size	
threadpool.level_method.timeout	300000 (5 minutes) This setting frees up unused threads.

To edit these parameters, use the Business Modeler. See the *Demantra Spectrum Consultant's Guide*.

Configuring WebSphere to use Demantra Spectrum Graphs

Graphs do not work with WebSphere. To work around this problem, rename the following WebSphere archive file:

WebSphere_directory/**AppServer/lib/chart.jar**

Rename the file using a different extension. This will allow WebSphere to use the chart class from the Demantra Spectrum jar file.

Recommended JRun Settings

If you are using JRun, Demantra recommends the following settings in the **jrun.xml** file:

Area	Attribute	Recommended setting
jrunx.logger.LoggerService	warningEnabled	false
	infoEnabled	false
	debugEnabled	false
jrun.deployment.DeployerService	hotDeploy (Add this attribute just after temporaryDirectory)	false
jrun.servlet.http.WebService	activeHandlerThreads	25
	backlog	500
	maxHandlerThreads	1000
	minHandlerThreads	1
	threadWaitTimeout	20
	timeout	300
jrun.servlet.jrpp.JRunProxyService (This area configures the IIS and Jrun connector)	activeHandlerThreads	Depends on the hardware configuration of the server and on the number of expected concurrent users who are running worksheets and editing data. The average number of http connections per user is about 7 or 8. You should check the performance and adjust this setting if needed.
	backlog	500
	maxHandlerThreads	1000
	minHandlerThreads	1
	threadWaitTimeout	60
	timeout	900
jrunx.metrics.MetricsService	bindToJNDI	true
jrunx.logger.LoggerService	metricsEnabled	true
	metricsLogFrequency	30 This parameter controls how frequently the metrics are logged (specified as the interval in milliseconds between each log). If you log metrics more frequently, that can overload the server.
	metricsFormat	Threads:(Listen/Idle/Busy/Delay/Total)=({jrpp.listenTh}/{jrpp.idleTh}/{jrpp.busyTh}/{jrpp.delayTh}/{jrpp.totalTh}), Requests:(Handled/Delay/Dropped)=({jrpp.handledRq}/{jrpp.delayRq}/{jrpp.droppedRq}), Memory:(Free/Total)=({freeMemory}/{totalMemory})

For information on these attributes, see the Macromedia documentation (such as **http://livedocs.macromedia.com/jrun/4/JRun_Administrators_Guide/jrundotxml2.htm#1117684**).

Configuring Citrix to Work with Demantra Spectrum

The Citrix Metaframe Server, a third-party product, is a platform for terminal services and emulations. It enables the user to access applications directly from the Collaborator Workbench menu, bypassing login screens. This enables seamless integration between Collaborator Workbench and the target application.

The program to be integrated with Collaborator Workbench is installed on the Citrix server. On the client computer, a Citrix environment is created which enables the collaborating program on the Citrix server to be accessed from Collaborator Workbench. Once the Citrix environment has been created, a new menu item is created in Collaborator Workbench.

Note Access to the application is enabled only for users configured as integration users in Security Management.

Before Installation

Make sure that the following software is installed:

- Install Citrix Server.

  The Citrix server should not be installed on the same computer as the Web server or the Demantra Web Platform Server, to prevent performance degradation.
- Install the target program on the Citrix Server computer.
- Install Citrix Program Neighborhood (Citrix client) on each user's computer.
- Add Citrix Program Neighborhood to the **Path** system variable of the client computer.

Configuring the Citrix Client

Each Citrix client must have a custom ICA Connection configured to the target application on the Citrix server. This is configured in the Citrix Client Program Neighborhood. This custom connection must be uniformly named for all clients in the wizard's description field.

To configure the Citrix Client

1. On the client computer, start the **Citrix Program Neighborhood** program.

   The **Citrix Program Neighborhood** screen appears.
2. Double-click the **Application Set Manager** icon.
3. Double-click the **Custom ICA Connection** icon.
4. Double-click the **Add ICA Connection** icon.

   You are prompted for the type of connection to add.
5. Select the connection type and click **Next.**

You are prompted for information about the ICA connection.

6. Complete the fields as follows:

Enter a description for the new ICA connection	This is case sensitive. The same name must be chosen for all clients accessing the target program.
Select the Network Protocol	For example, TCP/IP.
Select the Citrix server or published application	Enter the name of the Citrix server where the target program is installed.

7. Click **Next.**

   You are prompted for information about the encryption to use.

8. Select the required encryption level or select **Default**.

   Higher encryption levels may require additional configuration and may cause the system to work slower.

9. Click **Next.**

   You are prompted for information about user name to use with this connection.

10. Complete the **User Name**, **Password** and **Domain** fields using the domain login information.

    If you leave any of these fields blank, then each time when users attempt to connect to the program, the login prompt will appear.

11. Click **Next.**

    You are prompted for information about the Citrix window to use.

12. Select required Window Colors and Window Size, or select default values.

13. Click **Next.**

    You are prompted for some final details.

14. Complete the fields as follows:

Application	Enter the name of the program .exe file. Using the Browse button is not recommended as it browses the local computer first.
Working Directory	Leave empty.

15. Click **Next.**

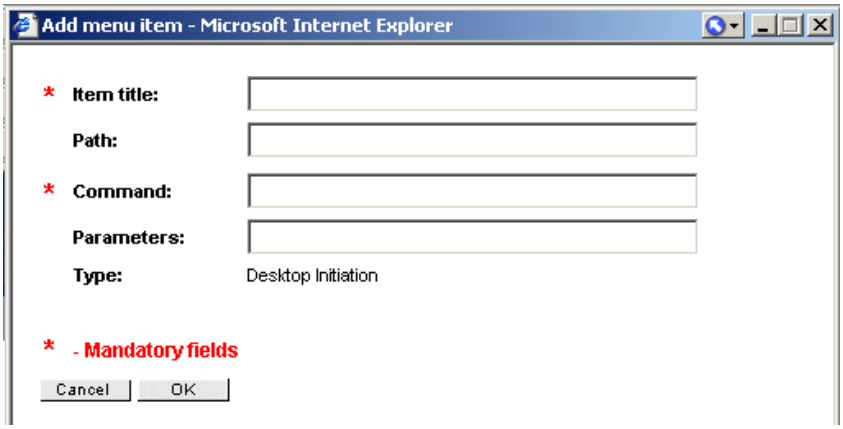
16. Click **Finish** to complete the configuration.

Adding Citrix to the Collaborator Workbench Menus

Once you have configured the Citrix client, you should create a new menu item in Collaborator Workbench to initiate the program through Citrix.

To add a Collaborator Workbench menu item

1. Log into the Collaborator Workbench page and click **Add** for the menu and group required.



2. Complete the fields as follows:

Item Title	Type a user-friendly name for the menu item.
Path	Leave blank.
Command	Enter **pn.exe/APP***ICA_Connection_Name* Where *ICA_Connection_Name* is the connection name selected during Citrix client configuration. The connection name is case sensitive.
Parameters	Leave blank.
Type	Select **Special Citrix**.

3. Click **OK**.

Terminating the Citrix Program

When you initiate an application via Citrix, you must terminate it by exiting the Citrix client window rather than by using the exit facility of the application that was initiated. If you use the application's exit facility, you will have a persistent connection that the administrator must reset on the Citrix server before the feature can function normally.

Caution Make sure that all users understand that they should never use the application's exit facility, and that they should instead exit the Citrix client window.

6 Starting Demantra Spectrum

This chapter explains how to start the server, if necessary, and start the Demantra Spectrum products. It includes the following sections:

Note For troubleshooting information, see the *Demantra Spectrum Administrator's Guide*.

About the Demantra Sample Databases

If you chose any of the Demantra databases during installation, you can use that database to check that the installation ran correctly. To do so, you need to know the passwords associated with the database.

Passwords for the TPMO Sample

See the *TPMO Demo Script*.

Passwords for the National Foods Demo

The National Foods demo includes multiple components (subdivisions of the data). The following table lists the user names of the component owners and corresponding passwords:

Component	Component owner	Password
Demand Planner - National Foods	**dp**	**dp**
Promotions Effectiveness	**pe**	**pe**
Demantra Inventory Solution - National Foods	**Inv**	**Inv**
Demantra Inventory Planning - National Foods	**ip**	**ip**
Demantra Replenisher - National Foods	**Replenisher**	**r**

Note The National Foods demo does not fully work in the desktop (Demand Planner). Specifically, some of the series in its worksheets are not supported on the desktop. When you run such a worksheet, Demand Planner displays a message listing those series.

Starting the Web-based Products

To verify the installation of the Web-based products, start the Web server and log onto each Web product.

Note Remember that Collaborator Workbench, Demand Planner Web, Promotions Effectiveness, Demantra Anywhere, and Settlement Management are licensed separately.

Starting the Web Server

Starting JRun

1. In Windows, click **Start**, click **Settings** and click **Control Panel**.
2. Click **Administrative Tools** (this step is required in Windows 2000 only).
3. Click **Services**.
4. Right-click **World Wide Web Publishing Service** (IIS) and then select **Run**.
5. Right-click **JRun Default Server** and then select **Run**.

If you are using Tomcat instead, see “Starting the Server if Using Tomcat” on page 52.

Logging onto the Web-based Products

To verify that the Web-based products are running correctly, log onto some of the URLs listed in “Demantra Spectrum URLs” on page 43. For a short test, do the following:

1. Open Microsoft Internet Explorer.
2. Enter the URL for Collaborator Workbench
3. In the **Log On** dialog box, enter the user name **dp** and the password **dp**. Or use a different user name and password, if you installed a database other than the Demantra Spectrum default database.
4. Click **Login**.
5. In **My Worksheets**, click any worksheet. This launches the Demantra Spectrum applet (Demand Planner Web, Promotions Effectiveness, or Settlement Management).

6. Demantra Spectrum installs a small applet on the machine.
7. Optionally click **Yes** if you want the system to always trust content from this source.

Demantra Spectrum URLs

These URLs are based upon information provided during installation. Make sure all users know the specific URLs that they will need.

Item	Example URL
Collaborator Workbench	**http://frodo/demantra/portal/loginpage.jsp**
Collaborator Workbench Administration	**http://frodo/demantra/portal/adminLogin.jsp**
Demand Planner Web, Promotions Effectiveness, or Settlement Management	**http://frodo/demantra/portal/partnerLogin.jsp**
Demantra Anywhere (for users with a license for Collaborator Workbench)	**http://frodo/demantra/portal/remoteloginpage.jsp**
Demantra Anywhere (for users without a license for Collaborator Workbench)	**http://frodo/demantra/portal/anywhereLogin.jsp**
Workflow Manager	**http://frodo/demantra/workflow/login.jsp**
Dynamic Open Link (DOL) access for third-party reporting tools	**http://frodo/demantra/portal/DOL_HTML.htm**
Offline access to Demantra Spectrum worksheets **(added in 7.0)**	**http://frodo/demantra/portal/launchDPWeb.jnlp**

Notes:
- Here **frodo** is an example server name. Substitute the name of the server that is running the Demantra Spectrum Web software.
- Also, **demantra** is an example virtual directory. Substitute the name of the virtual directory that is the root of the Demantra Spectrum Web software.
- The features seen by the user depend on the user's license.

Starting the Desktop Products

You should also try starting each desktop product to be sure it comes up.

1. On the **Start** menu, click **Programs**.
2. Click **Demantra > Demantra Spectrum** *release*.
3. Choose the required Demantra Spectrum product.
4. If prompted, enter the user name and password of one of the component owners, as listed in "About the Demantra Sample Databases" on page 41.

7 Uninstalling Demantra Spectrum

Uninstalling Demantra Spectrum

1. Make sure that none of the Demantra Spectrum software is running, including all background items such as the Scheduler and the Analytical Engine.
2. Use the Windows **Add/Remove** utility to remove the shortcuts and update the system registry, as follows:
   a. From the **Start** menu, click **Settings** > **Control Panel**.
   b. Click **Add/Remove Programs**.
   c. Select **Demantra Spectrum** from the list.
   d. Click **Add/Remove**.
   e. Follow the screen prompts.
3. Remove Demantra software from the system **Path** variable. To do so:
   a. On the Windows **Start** menu, click **Settings > Control Panel > System**.
   b. Click **System**.
   c. Click the **Advanced** tab.
   d. Click **Environment Variables**.
   e. In the **System Variables** section, click **Path** and then click **Edit**.
   f. Carefully remove any Demantra Spectrum additions to this variable, leaving other parts unchanged.
4. Manually delete the Demantra Spectrum files from the machine.
5. Log into the database as the database administrator and delete the Demantra Spectrum database user.

A Tips

This appendix contains additional tips.

Note For troubleshooting information, see the *Demantra Spectrum Administrator's Guide*.

About Demantra Spectrum Configuration Settings

The core Demantra Spectrum configuration details are stored in multiple locations:

- The desktop executables (Business Modeler, Demand Planner, Analytical Engine, and so on) get the configuration information from the following file:

  *Demantra_root***Demand Planner\Security Management\ds.ini**

  Parts of this are encrypted and must be edited with a utility provided by Demantra Spectrum (**encryption.exe**); see "Redirecting Demantra Spectrum to a Different Database" on page 50.

- The Web-based products get configuration information from the following file, which is on the machine where the Web server is installed:

  Demantra_root/**Collaborator\demantra\WEB-INF\classes\com\demantra\applicationServer\services\AppServer.properties**

  Note Almost all the parameters of this file can be edited from within the Business Modeler, and it is better to use the Business Modeler to make changes so that the audit trail can record them. The Business Modeler also provides dropdown menus of possible options, where applicable.

  To access these parameters within Business Modeler, click **Parameters > System Parameters**.

- Other settings are stored in the Demantra Spectrum database, in the form of parameters. These can be edited through the Business Modeler, as well.
- The Web-based products also use configuration information in the XML files.

Key Settings Controlled by the Installer

This section summarizes the key settings that the installer controls and indicates where those settings are stored.

Installer Screen	Installer Option	In AppServer.properties	In ds.ini
DBA Information	DBA username (to access database as DBA and load data)	Not saved in this file.	Not saved in this file.
	Password		
	TNS Name		**Tnsname**
Configure Demantra Database User	Database type (read from the license file)	**DBType**	**DBType**
	User (to store Demantra Spectrum data)	**DBUser**	**LogID****
	Password	**DBPassword**	**LogPassword****
	Database (SQL Server only*)	**DBName**	**Database**
Configure JDBC Connection	Server name (host machine or IP address on which database resides)	**ServerName**	**ServerName**
	Port	**DBPort**	**DBPort**
	Oracle SID (Oracle only)*	**DBName**	**Database**
Specify Web Address	Root address and virtual directory	**AppServerURL** **server.generalurl**	Not saved in this file.

*Notice that the **DBName/Database** parameter is used differently for Oracle than for SQL Server.
Encrypted in the **ds.ini file.

APSMode Parameter

The **APSMode** parameter (stored only in the **ds.ini** file) controls whether to use the Stand-Alone Integration Tool (**aps.exe**). This tool consists of a subset of the APS, packaged as an executable file.

The installer automatically sets this parameter based on the license file. This parameter has the following effect:

- 0: do not use Stand-Alone Integration Tool. When you use **encryption.exe** to edit **ds.ini**, only **General** tab is displayed.
- 1: use the Stand-Alone Integration Tool (*Demantra_root*/**Demand Planner/Integration/aps.exe**). Also, when you use **encryption.exe** to edit **ds.ini**, the **ASP Stand Alone** tab is displayed, in addition to the **General** tab.

Other Parameters

The installer also sets parameters for the following purposes:

- The tablespaces Demantra Spectrum should use
- The configuration of the administrator email account

For these parameters, see the chapter “Fine-Tuning Demantra Spectrum” in the *Demantra Spectrum Consultant’s Guide*.

JAVA_HOME System Environment Variable

Tomcat requires JDK, which means that the **JAVA_HOME** *system* environment variable must be set (not a user environment variable). The installer automatically installs JDK if appropriate and sets this environment variable. **JAVA_HOME** should be set equal to the directory that contains the **bin** directory of JDK.

Other Configuration Files

The installer also makes edits to the following files. If you make a change to a port or protocol or other, you must be sure to make the change in the following files:

- *Demantra_root*/**Collaborator/***virtual_directory*/**WEB-INF/web.xml**
- If you are using Tomcat: *Demantra_root*/**Collaborator/Tomcat/conf/server.xml** (refers to the Demantra Spectrum host and port, as well as the path to the Demantra Spectrum virtual directory).

  Note When you start Tomcat, Tomcat creates or updates the file *Demantra_root*/**Collaborator/Tomcat/conf/Catalina/localhost/***virtual_directory***.xml**, as needed.

- If you are using WebSphere:
  - *WAS_HOME*/**installedApps/***host_name*/**demantra.war/demantra.war/WEB-INF/web.xml**
  - *WAS_HOME*/**config/cells/***host_name*/**applications/demantra.war/deployments/demantra/demantra.war/WEB-INF/web.xml**

Back up any file before making edits, and then carefully search and replace as needed.

Redirecting Demantra Spectrum to a Different Database

To point Demantra Spectrum to a different database without rerunning the installer, complete the following steps:

1. Make a backup copy of the **AppServer.properties** file.
2. Edit the **AppServer.properties** file as follows:

ServerName	Specify the host on which database resides (as in the TNSNAMES.ora file), preceded by an at sign (@).
DBUser	Username that stores the Demantra data.
DBPassword	Corresponding password
DBName	For Oracle, this is the SID of the database. For SQL Server, this is the name of the database.

3. Restart the Web server. All the Web products are now directed to the new database.
4. Back up the **ds.ini** file.
5. Run the following executable:

   *Demantra_root***Demand Planner\Security Management\encryption.exe**

6. On the **General** tab, make the following changes:

Server Name	Specify the host on which database resides (as in the TNSNAMES.ora file), preceded by an at sign (@).
User Name	Username that stores the Demantra data.
Password	Corresponding password

7. Save the changes. All the desktop user interfaces are now directed to the new database.

Java Tips

This section contains background information about how Demantra Spectrum uses Java. The Demantra Spectrum Web client (Demand Planner Web, Promotions Effectiveness, or Settlement Management) uses JRE. Each machine that runs the Web client should have JRE, which Demantra Spectrum automatically downloads when necessary.

Note JDK is needed only if you are using Tomcat (which is not supported and which should be used only for demos). JDK is needed on the machine that runs Tomcat, not on the client machines.

Java Versions and Older Demantra Spectrum Installations

JRE versions are generally backwards compatible. If you are using an older version of the Web client, you can use the same JRE as the current Demantra Spectrum. This means that, from a single machine, you can log into different Demantra Spectrum installations, even if they use different versions of Java.

In such a case, each Demantra Spectrum is likely to have a different version of the jar files. To prevent collisions, be sure to set **client.activationMethod** to use Java Web Start rather than Sun Java Plug-in. With Java Web Start, you can log into different Demantra Spectrum versions, and Java correctly manages the Demantra Spectrum jar files.

Tips for a Clean Java Installation

It is possible, but tricky, to keep multiple versions of Java running on a single machine. Demantra recommends that you carefully remove all Java versions other than the current version used by Demantra Spectrum; to remove them, use the **Add or Remove Programs** control panel.

It is also useful to check your **PATH** system environment variable. Java is added to this, and you should make sure it includes only the Java that you intend to use. Note that Oracle provides Java as well; you do not need to uninstall these, but you should probably remove those versions from the **PATH** system environment variable.

Finally, you should make sure that Internet Explorer is configured to use the correct Java version:

1. Click **Tools > Internet Options**.
2. Click the **Advanced** tab.
3. Within the **Java** item, make sure that the correct version of Java is selected for use with applets, as specified in this manual.

Tomcat Tips (Demos Only)

For demos, you can use Tomcat as the Web server, and the installer supports this option for convenience. Demantra has tested with both Apache Jakarta Tomcat 5.x and Apache Jakarta Tomcat 4.0.x.

Caution Demantra Spectrum is not supported on Tomcat. This configuration is not recommended for production systems.

If you use Java Web Start rather than Sun Java Plug-in, you will need the later version of Tomcat. (To specify how to start the Web client, you set the **client.activationMethod** parameter; see the *Demantra Spectrum Reference Guide*.)

Installing with Tomcat

This section briefly notes the differences between a demo installation and the usual installation.

1. Make sure to get a license file that provides the Tomcat option.
2. Apache Jakarta Tomcat 5.x requires Sun JDK 1.4.1 (This can be obtained free at www.sun.com.) You do not have to pre-install this, but you should make sure you do not have an earlier version of JRE on the machine. If so, uninstall that.
3. Run the installer like usual, except choose **Demo** for Web Server type.
4. If prompted, specify the desired value for the **JAVA_HOME** system environment variable. The installer prompts you for this if more than one Java is installed on the machine.

Changing the Default Tomcat Port

The Tomcat default port is 8080. The installer does not change the default configuration for the port. This must be done manually in the file *Demantra_root*/**Collaborator/Tomcat/conf/server.xml**.

Note If you do use the 8080 port, note that the Oracle XDB database user tries to use that port. See the troubleshooting appendix in the *Demantra Spectrum Administrator's Guide*.

Starting the Server if Using Tomcat

If you chose the Demo Web Server type, the installer adds Start menu options to start and stop Tomcat.

To start Tomcat

1. In Windows, click **Start** and click **Programs**.
2. Click **Demantra > Demantra Spectrum release > Start Web Server**.

Clearing the Tomcat Cache

To clear the Tomcat cache, delete the directory *Demantra_root*/**Collaborator/Tomcat/work/standalone/localhost**.

You may need to do this if you receive the "Object Error" message, discussed in the *Demantra Spectrum Administrator's Guide*.

Renaming the Installation Root Directory

It is safest to reinstall Demantra Spectrum rather than to rename the root directory where it is installed. However, if you are using Tomcat, you can rename the Demantra Spectrum root directory and redirect Tomcat. To redirect Tomcat, edit the file *Demantra_root*/**Collaborator/Tomcat/conf/server.xml**. In this file, edit the parameter **docBase**. This parameter should specify the full path to the Demantra Spectrum virtual directory.

Writing the Tomcat Log to a File

By default, the Tomcat log is written to the console. To reconfigure Tomcat to write its log to a file, edit the file *Demantra_root*/**Collaborator/Tomcat/conf/server.xml**.

Find the **Logger** section and edit it as follows:

```
<Logger name="tc_log"
     path="logs/tomcat.log"
     verbosityLevel = "INFORMATION" /> f
```

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