



Microsoft Dynamics® GP 2010
Analysis Cubes (Microsoft® SQL Server® 2005 and 2008)

Copyright

Copyright © 2010 Microsoft. All rights reserved.

Limitation of liability

This document is provided "as-is." Information and views expressed in this document, including URL and other Internet Web site references, may change without notice. You bear the risk of using it.

Some examples depicted herein are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred.

Intellectual property

This document does not provide you with any legal rights to any intellectual property in any Microsoft product.

You may copy and use this document for your internal, reference purposes.

Trademarks

Microsoft, Excel, Microsoft Dynamics, SQL Server, Visual Studio, Windows, Windows Server, and Windows Vista are trademarks of the Microsoft group of companies. FairCom and c-tree Plus are trademarks of FairCom Corporation and are registered in the United States and other countries.

All other trademarks are property of their respective owners.

Warranty disclaimer

Microsoft Corporation disclaims any warranty regarding the sample code contained in this documentation, including the warranties of merchantability and fitness for a particular purpose.

License agreement

Use of this product is covered by a license agreement provided with the software product. If you have any questions, please call the Microsoft Dynamics GP Customer Assistance Department at 800-456-0025 (in the U.S. or Canada) or +1-701-281-6500.

Publication date

May 2010

Contents

Introduction	1
What's in this manual.....	1
Symbols and conventions	2
Resources available from the Help menu.....	2
Send us your documentation comments	3
Chapter 1: System requirements	5
Microsoft Dynamics GP and Analysis Cubes on the same server.....	5
Microsoft Dynamics GP and Analysis Cubes on separate servers	6
Multiple Analysis Cubes servers	8
Client workstation requirements	9
Chapter 2: Installation and configuration	11
Before you upgrade	11
Installation and configuration checklist	12
Security requirements for installing and configuring server components.....	13
Information required for configuring server components.....	13
Use the server setup wizard.....	14
Configure the SSIS service to use a named instance.....	15
Use the server configuration wizard.....	15
Populate the data warehouse database	19
Process the cubes.....	20
Specify budget IDs for Budget and Forecast values	20
Assign users to Analysis Services database roles.....	21
Account category descriptions must match.....	21
Install client components	23
Set up Analysis Services information for the client.....	24
Reconfigure the Analysis Cubes server databases.....	25
Chapter 3: Customization	27
Modify cubes using Business Intelligence Development Studio.....	27
Drillthrough dimensions	27
Customize Business Portal using Web parts to include cube data	30
Chapter 4: Cubes	31
What are cubes?.....	31
How cubes are updated	31
Cubes and dimensions	32
Dimensions and attributes.....	33
Hierarchies for organizing attributes.....	37
Cubes and measures	39
Default drillthrough dimensions.....	44

Chapter 5: PivotTable reports	45
Create PivotTable reports using Microsoft Dynamics GP.....	45
Create reports using Microsoft Office Excel.....	47
Index	49

Introduction

This document includes information for system administrators about how to install, configure, and maintain Analysis Cubes for Microsoft Dynamics® GP (Microsoft® SQL Server® 2005 or 2008) on server and client computers. It also includes information for developers about customizing cubes.

Check for updated instructions

This information was current as of March 30, 2010. The documentation may be updated as new information becomes available. Check the Microsoft Dynamics GP documentation Web site (<http://go.microsoft.com/fwlink/?LinkId=161199>) for the most current documentation.

For business intelligence analysts, this document includes information about the dimensions, attributes, and measures for the cubes. It also includes information about how to create Microsoft Office Excel® worksheets with PivotTable reports and other PivotTable-like reports using data from the cubes.

The following topics are discussed:

- [What's in this manual](#)
- [Symbols and conventions](#)
- [Resources available from the Help menu](#)
- [Send us your documentation comments](#)

What's in this manual

This manual is designed to give you an understanding of how to install, configure, customize, and use Analysis Cubes. To make best use of the product, you should be familiar with Windows®, Microsoft Dynamics GP, SQL Server, OLAP cubes, and Excel PivotTable reports.

You might also need to be familiar with features described in the documentation for the General Ledger, Multidimensional Analysis, Receivables Management, Payables Management, Inventory Control, Sales Order Processing, Purchase Order Processing, and Multicurrency Management modules for Microsoft Dynamics GP.

To view information about the release of Microsoft Dynamics GP that you're using and which modules or features you are registered to use, choose **Help > About Microsoft Dynamics GP**.



The manual is divided into the following chapters.

- [Chapter 1, "System requirements,"](#) includes information for the system administrator about the infrastructure that must be in place before installing Analysis Cubes.
- [Chapter 2, "Installation and configuration,"](#) includes information for the system administrator about how to install and configure Analysis Cubes on server and client computers.
- [Chapter 3, "Customization,"](#) includes information for developers about customizing cubes.

- [Chapter 4, “Cubes,”](#) includes information about the perspectives, dimensions, attributes, and measures for the cubes.
- [Chapter 5, “PivotTable reports,”](#) includes information about how to create Excel worksheets with PivotTable reports and other PivotTable-like reports using data from the cubes.

Symbols and conventions

This document uses the following symbols to indicate hints and warnings.

Symbol	Description
	The light bulb symbol indicates helpful tips, shortcuts and suggestions.
	The warning symbol indicates situations you should be especially aware of when completing tasks.

This manual uses the following conventions to refer to sections, navigation and other information.

Convention	Description
<i>Create a batch</i>	Italicized type indicates the name of a section or procedure.
File > Print	The (>) symbol indicates a sequence of actions, such as selecting items from a menu or toolbar, or pressing buttons in a window. This example directs you to go to the File menu and choose Print .
TAB or ENTER	All capital letters indicate a key or a key sequence.

Resources available from the Help menu

The Microsoft Dynamics GP **Help** menu gives you access to user assistance resources on your computer, as well as on the Web.

Contents

Opens the Help file for the active Microsoft Dynamics GP component, and displays the main “contents” topic. To browse a more detailed table of contents, click the **Contents** tab above the Help navigation pane. Items in the contents topic and tab are arranged by module.

To find information in Help by using the index or full-text search, click the appropriate tab above the navigation pane, and type the keyword to find.

To save the link to a topic in the Help, select a topic and then select the **Favorites** tab. Click **Add**.

Index

Opens the Help file for the active Microsoft Dynamics GP component, with the **Index** tab active. To find information about a window that’s not currently displayed, type the name of the window, and click **Display**.

About this window

Displays overview information about the current window. To view related topics and descriptions of the fields, buttons, and menus for the window, choose the

appropriate link in the topic. You also can press **F1** to display Help about the current window.

Lookup

Opens a lookup window, if a window that you are viewing has a lookup window. For example, if the Checkbook Maintenance window is open, you can choose this item to open the Checkbooks lookup window.

Show Required Fields

Highlights fields that are required to have entries. Required fields must contain information before you can save the record and close the window. To change the way required fields are highlighted, choose **Microsoft Dynamics GP menu > Tools > Setup > User Preferences > Display**, and specify a different color and type style.

Printable Manuals

Displays a list of manuals in Adobe Acrobat .pdf format, which you can print or view.

Microsoft Dynamics GP Online

Opens a Web page that provides links to a variety of Web-based user assistance resources. Access to some items requires registration for a paid support plan.

Customer Feedback Options

Provides information about how you can join the Customer Experience Improvement Program to improve the quality, reliability, and performance of Microsoft software and services.

Send us your documentation comments

We welcome comments regarding the usefulness of the Microsoft Dynamics GP documentation. If you have specific suggestions or find any errors in this manual, send your comments by e-mail to the following address: bizdoc@microsoft.com. To send comments about specific topics from within Help, click the **Documentation Feedback** link, which is located at the bottom of each Help topic.

Note: By offering any suggestions to Microsoft, you give Microsoft full permission to use them freely.

Chapter 1: System requirements

This part of the documentation describes the server configurations that you can use for Analysis Cubes.

The following topics are included:

- [Microsoft Dynamics GP and Analysis Cubes on the same server](#)
- [Microsoft Dynamics GP and Analysis Cubes on separate servers](#)
- [Multiple Analysis Cubes servers](#)
- [Client workstation requirements](#)

Microsoft Dynamics GP and Analysis Cubes on the same server

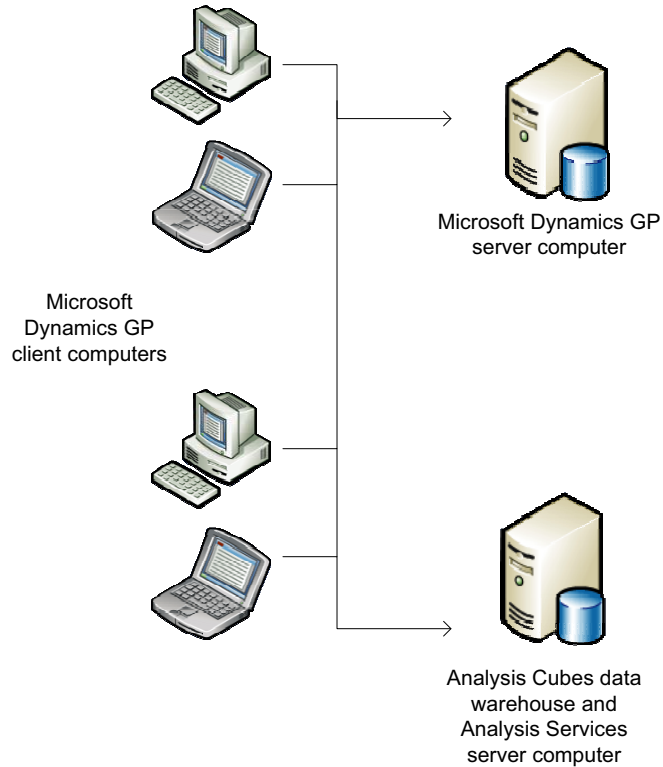
In a single server configuration, one computer functions as the SQL database server and the OLAP data server. It stores your real-time transaction data, and also stores a snapshot of the data for analysis purposes.

If a single computer will serve as both your Microsoft Dynamics GP SQL database server and the OLAP data server, that computer must meet the following requirements.

Item	Requirement
Supported operating systems	Refer to the server requirements for Microsoft Dynamics GP at http://go.microsoft.com/fwlink/?LinkId=161197 .
Processor	
RAM	
Installed applications	Microsoft Dynamics GP 2010 server and client components Microsoft .NET Framework 3.5 with service pack 1 Microsoft SQL Native Client Microsoft SQL Server 2005 with Service Pack 2 or Microsoft SQL Server 2008, including the following components: - SQL Server Database Engine - Integration Services - Analysis Services - Workstation components, Books Online, and development tools

Microsoft Dynamics GP and Analysis Cubes on separate servers

In a separate server configuration, the Microsoft Dynamics GP SQL database and the OLAP database are on separate servers.



Analysis Cubes is compatible with Microsoft Dynamics GP 2010. If you have your Microsoft Dynamics GP company databases installed on SQL Server 2005 or 2008, the Analysis Cubes data warehouse database can be installed on the same server computer. However, for better performance, we recommend that you install the Analysis Cubes data warehouse database on a separate server computer.

Because Integration Services packages for Analysis Cubes are installed in SQL Server, the SQL Server that you will use for the data warehouse must have Integration Services installed.



After you install the data warehouse database, if you move the SQL Server instance for the Microsoft Dynamics GP company databases or the Analysis Cubes data warehouse database, you must reinstall and reconfigure Analysis Cubes server components.

Microsoft Dynamics GP server requirements

The Microsoft Dynamics GP server computer must meet the following requirements.

Item	Requirement
Installed applications	Microsoft Dynamics GP 2010 server and client components Microsoft SQL Native Client Microsoft SQL Server 2005 with Service Pack 2 or later, or Microsoft SQL Server 2008, including the following components: <ul style="list-style-type: none"> - SQL Server Database Services - Workstation components, Books Online, and development tools

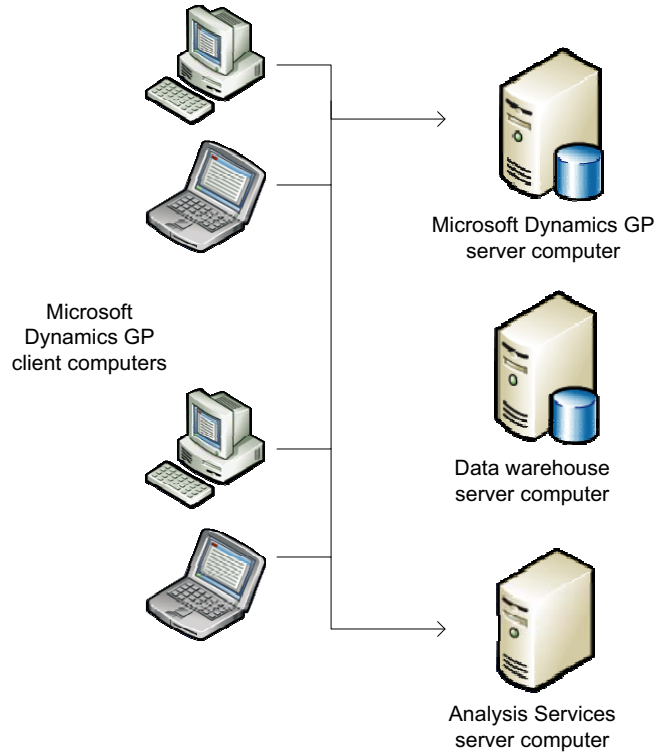
Analysis Cubes server requirements

The Analysis Cubes server computer must meet the following requirements.

Item	Requirement
Installed applications	Microsoft SQL Server 2005 with Service Pack 2 or later, or Microsoft SQL Server 2008, including the following components: <ul style="list-style-type: none"> - SQL Server Database Services - Analysis Services - Integration Services - Workstation components, Books Online, and development tools

Multiple Analysis Cubes servers

You can store your data warehouse and run scheduled Integration Services on one server, and run Analysis Services on another.



Microsoft Dynamics GP server requirements

See [Microsoft Dynamics GP server requirements](#) on page 7.

Data warehouse server requirements

The data warehouse server computer must meet the following requirements.

Item	Requirement
Installed applications	Microsoft SQL Server 2005 with Service Pack 2 or later, or Microsoft SQL Server 2008, including the following components: <ul style="list-style-type: none"> - SQL Server Database Services - Integration Services - Workstation components, Books Online, and development tools

Analysis Services server requirements

The Analysis Services server computer must meet the following requirements.

Item	Requirement
Installed applications	Microsoft SQL Server 2005 with Service Pack 2 or later, or Microsoft SQL Server 2008, including the following components: <ul style="list-style-type: none"> - Analysis Services

Client workstation requirements

The Microsoft Dynamics GP client computers that will be used with Analysis Cubes must meet the following requirements.

Item	Requirement
Installed applications	Microsoft Dynamics GP 2010 client components Microsoft Office Excel 2007 or later Microsoft SQL Native Client Microsoft SQL Server Analysis OLE DB Provider (version 9.0 for SQL Server 2005, or Version 10.0 for SQL Server 2008)

In addition, if you plan to start the Analysis Cubes server setup wizard from a Microsoft Dynamics GP client workstation, that computer also must have Microsoft SQL Server 2005 with Service Pack 2 or later, or Microsoft SQL Server 2008, installed. Only the Workstation components, Books Online, and development tools are required.

Chapter 2: Installation and configuration

This part of the documentation includes information for the system administrator about how to install and configure Analysis Cubes on server and client computers.

The following topics are discussed:

- [Before you upgrade](#)
- [Installation and configuration checklist](#)
- [Security requirements for installing and configuring server components](#)
- [Information required for configuring server components](#)
- [Use the server setup wizard](#)
- [Configure the SSIS service to use a named instance](#)
- [Use the server configuration wizard](#)
- [Populate the data warehouse database](#)
- [Process the cubes](#)
- [Specify budget IDs for Budget and Forecast values](#)
- [Assign users to Analysis Services database roles](#)
- [Account category descriptions must match](#)
- [Install client components](#)
- [Set up Analysis Services information for the client](#)
- [Reconfigure the Analysis Cubes server databases](#)

Before you upgrade

Before you upgrade to Analysis Cubes 2010 or Microsoft Dynamics GP 2010, you must uninstall any previous release of Analysis Cubes. You can uninstall Analysis Cubes by using the Add or Remove Programs or Programs and Features window on your computer.

Installation and configuration checklist

You must complete the following tasks to install and configure Analysis Cubes.

Task	Steps
Install and configure Analysis Cubes server components	Review system requirements for server computers. See Chapter 1, "System requirements."
	Review security requirements for the system administrator. See Security requirements for installing and configuring server components on page 13.
	Gather the information that you will need to install and configure server components. See Information required for configuring server components on page 13.
	Complete server component installation. See Use the server setup wizard on page 14.
	Complete server configuration. See Use the server configuration wizard on page 15.
	Run and schedule the SQL Server Integration Services master jobs to populate data into the data warehouse database. See Populate the data warehouse database on page 19.
	Process the cubes in SQL Server Analysis Services. See Process the cubes on page 20.
	Specify the budget IDs in the GLBudgetSetUp table in the data warehouse database that will be used to calculate various Budget and Forecast values in the cubes. See Specify budget IDs for Budget and Forecast values on page 20.
	Assign users to database roles. See Assign users to Analysis Services database roles on page 21.
	If you're using modified or custom account category descriptions for accounts, or if you're not using category descriptions for some accounts, you must update the modified account category descriptions in Microsoft Dynamics GP so that they match the default account category descriptions, or you must modify the account category descriptions in the data warehouse database so that they match what you're using in Microsoft Dynamics GP. See Account category descriptions must match on page 21.
Install and configure Analysis Cubes client components	Review system requirements for client computers. See Client workstation requirements on page 9.
	Install client components. See Install client components on page 23 for more information.
	Configure client components. See Set up Analysis Services information for the client on page 24.

Security requirements for installing and configuring server components

To install and configure Analysis Cubes server components, your Windows user account must be a member of the following Windows groups.

Server computer	Windows groups
Microsoft Dynamics GP server computer	Administrators
SQL Server computer for Microsoft Dynamics GP company databases	All versions of SQL Server: Administrators SQL Server 2005: SQLServer2005MSSQLUser SQL Server 2008: SQLServerMSSQLUser
Data warehouse database server computer (with Integration Services installed)	All versions of SQL Server: Administrators SQL Server 2005: SQLServer2005MSSQLUser and SQLServer2005DTSUser SQL Server 2008: SQLServerMSSQLUser and SQLServerDTSUser
SQL Server Analysis Services computer	All versions of SQL Server: Administrators SQL Server 2005: SQLServer2005MSOLAPUser SQL Server 2008: SQLServerMSOLAPUser

The Microsoft Dynamics GP server computer also must be given access to read and write data on the data warehouse database server computer.

See the Windows and SQL Server documentation for more information about Windows groups.

Information required for configuring server components

When you use the server configuration wizard, you will be asked to provide the following information.

- The Microsoft Dynamics GP company databases that will be used to populate the data warehouse database.
- The name that you will use for the data warehouse database.
- The name of the SQL Server instance that the data warehouse database will be on.
- The locations of the data and log files for the SQL Server instance that the data warehouse database will be on.
- The SQL Server Integration Services packages to install.
- Whether to populate the data warehouse database with detailed General Ledger transaction information for various modules in Microsoft Dynamics GP. Otherwise, only summary information will be imported.
- For each cube, whether to import all transactions or to enter the earliest date to import transactions from the Microsoft Dynamics GP company databases to the data warehouse database.

- If the data warehouse database will include multicurrency information, the reporting currency to be used and the exchange rate table to be used for each Microsoft Dynamics GP company.
- You must specify a password for the **DynamicsUser** SQL Server logon account. During operations, the company databases will use the **DynamicsUser** logon account to access the data warehouse database using SQL Server authentication.



*If you change the password for the DynamicsUser SQL Server logon account after initial configuration is complete, you must change the password on the analysis cubes server computer using SQL Server Management Studio. Select your Analysis Services database and expand the list. Click **Data Sources** and select the **WarehouseDB** data source, and then click **Configure**. If your Microsoft Dynamics GP company databases and the warehouse database are on separate server computers, you must change the password on the data warehouse database linked server object. In Microsoft SQL Server Management Studio, connect to the Database Engine. In Object Explorer view, select **Server Objects** and then select **Linked Servers**. Right-click **Warehouse Server** and select **Properties**.*

See [Use the server configuration wizard](#) on page 15 for more information about using the server configuration wizard.

Use the server setup wizard

Use the server setup wizard to specify where server components will be installed. Before you use the wizard, you must review system and security requirements and gather the information that you will need to complete the wizard. See [Installation and configuration checklist](#) on page 12 for more information.

1. You can install the Analysis Cubes Server from the Microsoft Dynamics GP media (either a physical DVD disk or a downloaded DVD image). From the Microsoft Dynamics GP installation media, double-click the **Setup.exe** file.

The main Microsoft Dynamics GP installation window is displayed.

2. In the Additional Products section, click **Analysis Cubes Server**, and then click **Install**.
3. The welcome page for the installation wizard is displayed. Click **Next**.
4. Select **I Agree** to accept the terms of the license agreement. Click **Next**.
5. Enter the path for the destination folder to install the server configuration wizard program to. The default path is **C:\Program Files\Microsoft Dynamics\Analysis Cubes for Microsoft Dynamics GP Server**. Click **Next**.
6. Click **Next** to complete installation.
7. Click **Close** to close the wizard.

8. During the installation process, two files, named **Microsoft.Dynamics.GP.AnalysisCubes.ConfigurationWizard2005.exe** and **Microsoft.Dynamics.GP.AnalysisCubes.ConfigurationWizard2008.exe** are extracted to the destination folder. Shortcuts to these files, named **Analysis Cubes Configuration Wizard for SQL Server 2005** and **Analysis Cubes Configuration Wizard for SQL Server 2008** also are created on the desktop.

Configure the SSIS service to use a named instance

If you're using a named instance of the SQL Server, you must configure the SSIS service to use the named instance of the SQL Server instead of the default instance. You must do this before you run the server configuration wizard.

1. Open the MsDtsSrvr.ini.xml file.

For SQL Server 2005 the file is located at:

\Program Files\Microsoft SQL Server\90\DTS\Binn\MsDtsSrvr.ini.xml

For SQL Server 2008 the file is located at:

\Program Files\Microsoft SQL Server\100\DTS\Binn\MsDtsSrvr.ini.xml

2. Add the name of your instance to the **<ServerName>.</ServerName>** line.

For example, if your named instance was called **MYNAMEDINSTANCE**, the line would look like this:

<ServerName>.\MYNAMEDINSTANCE</ServerName>

3. When you are finished, save your changes and close the file.
4. Restart SQL Server Integration Services.

Use the server configuration wizard

Use the server configuration wizard to configure the Microsoft SQL Server Database Engine, Integration Services, and Analysis Services servers for use with Analysis Cubes.

Before you use the wizard, you must review system and security requirements and gather the information that you will need to complete the wizard. See [Installation and configuration checklist](#) on page 12 for more information. Also, if you're using a named instance of the SQL server, you must configure the SSIS service to use the named instance. See [Configure the SSIS service to use a named instance](#) on page 15 for more information.

1. On the desktop, double-click the shortcut that applies to the version of SQL Server you are using, either **Analysis Cubes Configuration Wizard for SQL Server 2005** or **Analysis Cubes Configuration Wizard for SQL Server 2008**.
2. On the **Microsoft SQL Server 2005/2008 Data Warehouse Setup** page, enter information about the data warehouse that will be created.
 - In the **Analysis cubes data warehouse SQL Server name** field, enter the name of the SQL Server instance that the Analysis Cubes data warehouse will be created on. After you enter the instance name, press **TAB**. The **SQL Server data file location for the data warehouse** and **SQL Server log file location for the data warehouse** fields are updated to include the paths to

the folders where the data and log files are located for the SQL Server instance. You can modify the paths as needed, but they will not be validated by the setup wizard.

- In the **Analysis cubes data warehouse name** field, accept the default entry or enter the database name to use for the data warehouse.
- Specify a password for the **DynamicsUser** SQL Server logon account. After you enter the password, press **TAB**.
- Confirm the password, and click **Next**.



*Data files are always expected to be found in a child directory named **Data**. Log files are always expected to be found in a child directory named **LOG**. For example, data files for Analysis Services databases are found under **C:\Program Files\Microsoft SQL Server\MSSQL.n\OLAP\Data**. During SQL Server Setup, an instance ID is generated for each server component. The instance ID is in the format **MSSQL.n**, where *n* is the ordinal number of the component being installed. The first instance ID generated is **MSSQL.1**; ID numbers are increased for additional instances as **MSSQL.2**, **MSSQL.3**, and so on.*

3. On the **Microsoft Dynamics GP Database Selection** page, select the company databases to draw data from.

In the **SQL Server for Microsoft Dynamics GP** field, enter the name of the SQL Server instance where the Microsoft Dynamics GP company databases are installed. Press **TAB**. The **Microsoft Dynamics GP company database(s)** field will be updated to include a list of company databases. Select the company databases for which information will be included in the data warehouse. Click **Next**.

4. On the **Analysis Cubes Integration Setup** page, select the modules to install SQL Server Integration Services packages for.



*When working with the **Analysis Cubes Integration Setup** page, it's a good idea to select only the modules, level of General Ledger detail, and cutoff dates that you think you will need for the analysis you intend to do. Otherwise, your data warehouse will contain unnecessary data, which can take longer to process. You can add or remove modules to your configuration at any time. You'll be able to change these selections later.*

If you have Multidimensional Analysis registered, related dimensions and measures will be installed.

5. Select **Import all General Ledger as detail transactions** to import detailed General Ledger transaction information for all modules that you've selected packages for. Alternatively, you can select to import detailed General Ledger transaction information for specific modules.



*Select **Import financials as detailed transactions** to import detailed transaction information for General Ledger, Bank Reconciliation, Multidimensional Analysis, Payables Management, and Receivables Management.*

If you don't select to import detailed transaction information, only summary information will be imported.

6. Select **Specify a cutoff date for each module individually** to enter cutoff dates for importing information from Microsoft Dynamics GP company databases to the data warehouse. The cutoff date will be the earliest date to import transactions for.

All Cutoff Dates is what is used if you do not mark to Enable cutoff dates. That is the date that all fields in the tables will use. If you mark the Enable, the Financial Cutoff dates field is the cutoff date for the Financial Series within that company and all other dates pull from the entries below based on what date the user enters in them.

In the **Fiscal year cutoff date selection** table, enter cutoff dates for each company database. In the All Cutoff Dates field, enter the cutoff date for importing. In the Fin Cutoff Dates field, enter the cutoff date for importing.

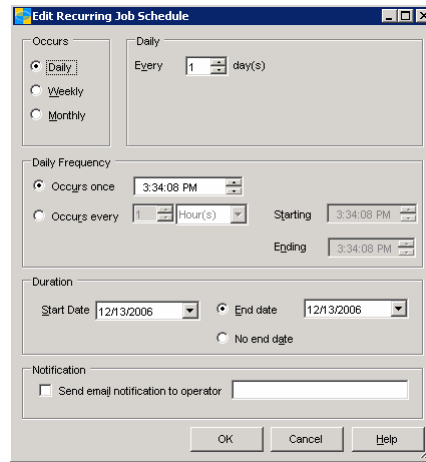
If you don't enter a cutoff date, all transaction information will be imported.

7. Click **Next**.
8. On the **Analysis Services Cube Setup** page, enter SQL Server Analysis Services information.
 - In the **Analysis Services SQL Server name for the cubes** field, enter the name of the SQL Server instance for Analysis Services.
 - In the **Analysis Services database name for the cubes** field, enter the name to use for the Analysis Services OLAP database that will include the cubes.
 - Select the cubes to be processed in the OLAP database.
 - Click **Next**.
9. If you have Multicurrency Management registered, in the **Analysis Cubes Multicurrency Information** page, select whether to include information for multiple currencies. Click **Next**.



Be sure to select the correct reporting currency. Once you have created the analysis cubes the first time, you won't be able to change this selection.

10. On the **Analysis Cubes Scheduling Options** page, select whether to install without scheduling jobs, or to set up a job schedule to process jobs automatically in the future.
 - If you select **Install without scheduling jobs**, Analysis Cubes is installed without setting up a job schedule. Skip to step 17.
 - If you select **Set up a job schedule**, click **Change** to open the **Edit Recurring Job Schedule** page.



The SQL Server Agent must be running in order to process the scheduled jobs.

11. Select whether to process the cube daily, weekly, or monthly.
 - If you select **Daily**, select the number of days to occur between processing.
 - If you select **Weekly**, select the number of weeks to occur between processing. Select the days of the week to process the cube.
 - If you select **Monthly**, select the day of the month to process the cube, and the number of months to occur between processing.
12. Select whether to process the cube once or more than once per day, and select starting and ending times.
13. Select a starting date for the schedule, and either select an ending date for the schedule or select **No end date**.
14. Select whether to send an e-mail notification each time the job is processed and type the name of the operator that was created using the SQL Server Agent.



You must set up SQL Server to work with your e-mail program to receive e-mail notifications. See the SQL Server Books Online or other Microsoft documentation for more information.

15. Click **OK** to save the schedule. On the **SQL Agent Proxy Credentials** page, enter login information (domain\user name) and a password for the SQL Server proxy account that will be used to process the scheduled job and click **OK**.

16. On the **Analysis Cubes Scheduling Options** page, review the schedule information and click **Next**.
17. On the **Analysis Cubes Installation Information** page, verify the information that you entered on previous wizard pages. Click **Install**.
18. The **Analysis Cubes Installation Complete** page provides information about the SQL Server configuration changes that were made. Click **Exit**.
19. After you complete the wizard, you must perform the following tasks.
 - Run and schedule Integration Services packages for populating the data warehouse database and processing the cubes. See [Populate the data warehouse database](#) on page 19 and [Process the cubes](#) on page 20 for more information.
 - Specify the budget IDs in the **GLBudgetSetUp** table in the data warehouse database that will be used to calculate various **Budget** and **Forecast** values in the cubes. See [Specify budget IDs for Budget and Forecast values](#) on page 20 for more information.
 - Assign users to database roles. See [Assign users to Analysis Services database roles](#) on page 21 for more information.
 - If you're using modified or custom account category descriptions for accounts, or if you're not using category descriptions for some accounts, you must update the modified account category descriptions in Microsoft Dynamics GP so that they match the default account category descriptions, or you must modify the account category descriptions in the data warehouse database so that they match what you're using in Microsoft Dynamics GP. See [Account category descriptions must match](#) on page 21 for more information.

Populate the data warehouse database

When you complete the server configuration wizard, two master Integration Services packages are installed. You must use the Microsoft SQL Server Management Studio to run the packages to populate the data warehouse database with data from the Microsoft Dynamics GP company databases. You also should create schedules for the packages. See [Use the server configuration wizard](#) on page 15 for more information about using the job scheduler to create schedules for jobs.



If you're using Multicurrency Management, you cannot set up a data warehouse database for a company database that doesn't have currencies set up.

The names of the master packages are

- **DynamicsGP_<source_db>_to_<warehouse_db>_Package_Master**
- **DynamicsGP_<source_db>_to_<warehouse_db>_Run_GL_Budgets_Master**

where **<source_db>** is the name of a Microsoft Dynamics GP company database and **<warehouse_db>** is the name of the data warehouse database.

See the SQL Server documentation for more information about running and scheduling Integration Services packages.



When you use the server configuration wizard, the authentication mode for the SQL Server that the data warehouse database is created on is set to **Mixed Mode (Windows Authentication and SQL Server Authentication)**. If the SQL Server previously was set to use **Windows Authentication Mode (Windows Authentication)**, you must restart the SQL Server before running and scheduling Integration Services packages for Analysis Cubes. See [Use the server configuration wizard](#) on page 15 for more information about using the server configuration wizard.

Process the cubes

After you run and schedule the master packages to populate the data warehouse database, you must use Microsoft SQL Server Management Studio to run the OLAP processing package in SQL Server Integration Services to process the cubes. The name of the OLAP processing package is **DynamicsGP_<warehouse_db>_OLAP_DB_<server name>_<analysis services database>**, where <warehouse_db> is the name of the data warehouse database.



If you run the OLAP processing package and you receive a message saying, “Internal error, an unexpected exception occurred,” contact your technical support provider and request the Hot Fix that is referenced in Microsoft Knowledge Base article 921294.

See [Use the server configuration wizard](#) on page 15 for more information about using the job scheduler to create schedules for jobs. See the SQL Server documentation for more information about running and scheduling Integration Services packages.



If you're using modified or custom account category descriptions for accounts, or if you're not using category descriptions for some accounts, the Analysis Cubes program won't be able to include information about those accounts in cubes that use the **Accounts** dimension. See [Account category descriptions must match](#) on page 21 for more information.

Specify budget IDs for Budget and Forecast values

The **GLBudgetSetUp** table in the data warehouse database includes the budget IDs for the Microsoft Dynamics GP companies that you selected to import data from.

After you install Analysis Cubes, you must use SQL Server Management Studio to specify the budget IDs in the **GLBudgetSetUp** table that will be used to calculate various **Budget** and **Forecast** values in the cubes. You must select budget IDs for each fiscal year.

To specify that a budget ID will be used for **Budget** values, enter **Budget** in the **BudgetForecast** column for the budget ID. To specify that a budget ID will be used for **Forecast** values, enter **Forecast** in the **BudgetForecast** column for the budget ID. For each budget ID that you specify to be use for **Budget** or **Forecast** values, you also must enter **Yes** for that budget ID in the **UseForReporting** column.



After you make changes in the **GLBudgetSetUp** table in the data warehouse database, you must run the master Integration Services packages and the OLAP processing package for changes to be reflected in the cubes. If you scheduled the packages, the data warehouse and the cubes will be updated at those times. See [Populate the data warehouse database](#) on page 19 and [Process the cubes](#) on page 20 for more information.

Assign users to Analysis Services database roles

To allow users to use the Microsoft Dynamics GP client components to create PivotTable reports in Excel worksheets using data from the data warehouse, you must assign their Windows user accounts and Windows groups to database roles in SQL Server Analysis Services. The following roles will give users Read permissions to the corresponding cubes.

- Financials Cube - read
- Receivables Cube - read
- Payables Cube - read
- Inventory Cube - read
- Purchase Cube - read
- Sales Cube - read

See the SQL Server documentation for more information about the Microsoft SQL Server Management Studio to assign Windows user accounts and groups to database roles and about granting Read permissions to cubes in a data warehouse.

Account category descriptions must match

The **Accounts** dimension includes the following four attributes. These attributes also are included in the **Accounts by Category** hierarchy in the following order.

- Acct Main Category
- Acct Broad Category
- Acct Category
- Acct No.

The **Acct Category** attribute corresponds to the **Category** selected for an account using the Account Maintenance window (**Cards > Financial > Account**) in Microsoft Dynamics GP. The **Acct No** attribute corresponds to the number entered in the **Account** field using that window. The **Acct Main Category** and **Acct Broad Category** attributes, however, are defined by the Analysis Cubes program, based on the default category descriptions in Microsoft Dynamics GP.

If your business has specialized reporting needs, you might have used the Account Category Setup window (**Microsoft Dynamics GP menu > Tools > Setup > Financial > Category**) in Microsoft Dynamics GP to modify the **Category Description** for one or more account categories, or you might have created new account categories.

If you're using modified or custom account category descriptions for accounts, or if you're not using category descriptions for some accounts, the Analysis Cubes program won't be able to include information about those accounts in cubes that use the **Accounts** dimension. The category descriptions in Microsoft Dynamics GP must match the category descriptions that Analysis Cubes uses for creating the **Accounts** dimension. You have two options to make Analysis Cubes work for you.

1. Update the modified account category descriptions in the Account Category Setup window so that they match the default category descriptions.
2. Use the Microsoft SQL Server Management Studio to modify the account category descriptions in the **AccountCategory** column in the **GLAccountCategories** table in the data warehouse database so that they match the modified account category descriptions that you're using in Microsoft Dynamics GP.



*After you make changes in Microsoft Dynamics GP or in the **GLAccountCategories** table in the data warehouse database, you must run the master Integration Services packages and the OLAP processing package for changes to be reflected in the cubes. If you scheduled the packages, the data warehouse and the cubes will be updated at those times. See [Populate the data warehouse database](#) on page 19 and [Process the cubes](#) on page 20 for more information.*

The following table lists the default **Number** and **Category Description** values for the Account Category Setup window, as well as how those values are mapped to the **Acct Main Category** and **Acct Broad Category** attributes in the **Accounts** dimension.

Number	Category Description (Acct Category)	Acct Broad Category	Acct Main Category
1	Cash	Current Asset	Assets
2	Short-Term Investments	Current Asset	Assets
3	Accounts Receivable	Current Asset	Assets
4	Notes Receivable	Current Asset	Assets
5	Inventory	Current Asset	Assets
6	Work in Progress	Current Asset	Assets
7	Prepaid Expenses	Current Asset	Assets
8	Long-Term Investments	Fixed Asset	Assets
9	Property, Plant and Equipment	Fixed Asset	Assets
10	Accumulated Depreciation	Fixed Asset	Assets
11	Intangible Assets	Fixed Asset	Assets
12	Other Assets	Fixed Asset	Assets
13	Accounts Payable	Current Liabilities	Debt
14	Notes Payable	Current Liabilities	Debt
15	Current Maturities of Long-Term Debt	Current Liabilities	Debt
16	Taxes Payable	Current Liabilities	Debt
17	Interest Payable	Current Liabilities	Debt
18	Dividends Payable	Current Liabilities	Debt
19	Leases Payable (Current)	Current Liabilities	Debt
20	Sinking Fund Payable (Current)	Current Liabilities	Debt
21	Other Current Liabilities	Current Liabilities	Debt
22	Long-Term Debt	Long Term Debt	Debt
23	Ordinary Shares	Owners Equity	Equity
24	Preference Shares	Owners Equity	Equity
25	Ordinary Paid-in Capital - Common	Owners Equity	Equity
26	Ordinary Paid-in Capital - Preferred	Owners Equity	Equity
27	Retained Earnings	Owners Equity	Equity
28	Treasury Stock	Owners Equity	Equity
29	Common Dividends	Owners Equity	Equity
30	Preferred Dividends	Owners Equity	Equity

Number	Category Description (Acct Category)	Acct Broad Category	Acct Main Category
31	Sales	Revenue	Equity
32	Sales Returns and Discounts	Revenue	Equity
33	Cost of Goods of Sale	Cost of Sales	Equity
34	Selling Expense	Cost of Sales	Equity
35	Administrative Expense	Overheads	Equity
36	Salary Expense	Overheads	Equity
37	Other Employee Expense	Overheads	Equity
38	Interest Expense	Interest and Tax	Equity
39	Tax Expense	Interest and Tax	Equity
40	Depreciation Tax Expense	Overheads	Equity
41	Income Tax Expense	Interest and Tax	Equity
42	Other Expense	Overheads	Equity
43	Other Income	Overheads	Equity
44	Changes Not Using Working Capital	Overheads	Equity
45	Revenues Not Producing Working Capital	Overheads	Equity
46	Gain/Loss on Asset Disposal	Overheads	Equity
47	Amortization of Intangible Assets	Overheads	Equity
48	Non-financial Accounts	Non - Financial	Non - Financial

Install client components

The client components consist of windows within Microsoft Dynamics GP that you can use to generate PivotTable reports using data from the cubes.

Before you install client components, see [Client workstation requirements](#) on page 9.




1. Start the installation wizard using one of the following methods.
 - On Windows® XP or Windows Server® 2003, open **Control Panel**, then open **Add or Remove Programs**. Select **Microsoft Dynamics GP 2010**, and click **Change** to open the Program Maintenance window.
 - or–
 - On Windows Vista® or Windows Server 2008, open **Control Panel**, then open **Programs and Features**. Right-click **Microsoft Dynamics GP 2010**, and click **Change** to open the Program Maintenance window.
 - or–
 - On Windows 7, open **Control Panel**, then open **Uninstall a program**. Right-click **Microsoft Dynamics GP 2010**, and click **Change** to open the Program Maintenance window.



If you originally installed Microsoft Dynamics GP from a DVD, you will be asked to insert the DVD.

2. Click **Add/Remove Features**.
3. Select **Analysis Cubes Client** and any other features you want to install. When you install a new feature, you won't reinstall features that have been installed previously.

When you click a button for a feature, a pop-up menu of options appears. Refer to the table for more information about each option.

Option	What happens
 Run all from My Computer	Will install the feature and all of its sub-features.
 Run from My Computer	The selected feature will be installed on the local hard disk. (This option installs the feature, but not sub-features.)
 Not Available	Will not install the selected feature or sub-features.

After you have specified the feature or features, click **Next**.

4. In the Install Program window, click **Install**.
5. The Installation Progress window appears, where you can view the status of the installation.
6. In the Installation Complete window, click **Exit**.
7. Start Microsoft Dynamics GP.

Before you can use the client to generate PivotTable reports, you must use the Excel Pivot Table Setup window to enter the name of the SQL Server instance for Analysis Services and the database name for the cubes. See [Set up Analysis Services information for the client](#) for more information.

Set up Analysis Services information for the client

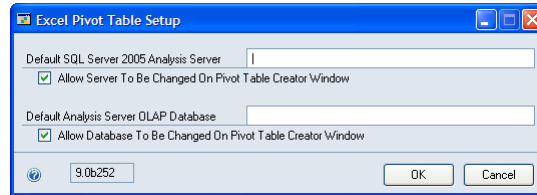
Use the Excel Pivot Table Setup window to enter the name of the SQL Server instance for Analysis Services and the database name for the cubes in Analysis Services.

If you're using multiple Analysis Services databases for cubes, you also can use this window to indicate whether client users can modify Analysis Services information in the Create PivotTable Reports window in Microsoft Dynamics GP. See [Create PivotTable reports using Microsoft Dynamics GP](#) on page 45 for more information about using the Create PivotTable Reports window.

Using the Excel Pivot Table Setup window requires the following:

- Your Windows user account must be assigned to database roles in SQL Server Analysis Services. See [Assign users to Analysis Services database roles](#) on page 21 for more information about the roles that you must be assigned to.
- SQL Server Analysis Services must be started.

1. In Microsoft Dynamics GP, open the Excel Pivot Table Setup window.
Microsoft Dynamics GP menu > Tools > Setup > Analysis Cubes > PivotTable Report Creation Setup



2. In the **Default SQL Server 2005 Analysis Server** field you can modify the name of the SQL Server instance for Analysis Services. This field applies to both SQL Server 2005 and SQL Server 2008.

Select **Allow Server To Be Changed On Pivot Table Creator Window** to allow users to change the instance name for SQL Server Analysis Services in the Create PivotTable Reports window.

3. In the **Default Analysis Server OLAP Database** field you can modify the name of the Analysis Services database for the cubes.

Select **Allow Database To Be Changed On Pivot Table Creator Window** to allow users to change the name of the Analysis Services database for the cubes in the Create PivotTable Reports window.

4. Click **OK** to save changes and close the window.

Reconfigure the Analysis Cubes server databases

It is possible to make changes to the Analysis Cubes server configuration after the data warehouse and Analysis Services databases have been configured. To do so, use the Analysis Cubes server configuration wizard.

If you enter an existing data warehouse database name and an existing Analysis Services database name, you have the option to do one of the following things:

- Use the existing Analysis Services database and repopulate the data or the cubes. You cannot change the location of the data file and log file if you select this option.
- Replace the existing Analysis Services database and create a new database using the same name.
- Create a new Analysis Services database with a different name.



Multicurrency cubes cannot be added by reconfiguring the Analysis Cubes server databases. If you have already configured the data warehouse and Analysis Services database without Multicurrency Management information included, you cannot add Multicurrency Management cubes by using the Analysis Cubes Server Configuration wizard to change your existing databases. Instead, you must create a new data warehouse database.

Chapter 3: Customization

This part of the documentation includes information for developers about customizing cubes.

The following topics are discussed:

- [Modify cubes using Business Intelligence Development Studio](#)
- [Drillthrough dimensions](#)
- [Customize Business Portal using Web parts to include cube data](#)

Modify cubes using Business Intelligence Development Studio

SQL Server includes the Business Intelligence Development Studio, an integrated development environment based on Microsoft Visual Studio®. You can use the Business Intelligence Development Studio to modify cubes.

If you choose to modify cubes, bear in mind the following recommendations.

- Overusing measure groups in a cube will result in decreased data warehouse performance. We recommend using multiple cubes with a small number of measure groups in each cube. You can use linked measure groups to present data from multiple cubes together.
- In a single cube, include only measure groups that share common dimensions and that will be queried together frequently.
- Avoid using calculated measures that always must be calculated at the leaf level.
- Attributes increase the size and decrease the performance of the data warehouse. Therefore, do not make every column in a dimension table an attribute. Include only those columns that must be accessed by the end user.
- Attribute hierarchies increase the size and decrease the performance of the data warehouse. Therefore, do not enable attribute hierarchies for all attributes. Enable attribute hierarchies only for those attributes that frequently will be used for analysis.
- In large dimensions, natural hierarchies are essential for improving the performance of queries. You should identify attribute relationships between the levels of natural hierarchies.



If you modify a default Analysis Cubes cube, you might not be able to update that cube when you upgrade to a future release of Analysis Cubes.

Drillthrough dimensions

You can modify cubes to establish relationships between the cubes and drillthrough dimensions. Default drillthrough dimensions were installed when you completed the server configuration wizard. See [Default drillthrough dimensions](#) on page 44 for more information.

The following table lists the available drillthrough dimensions and attributes.

Drillthrough dimensions	Attributes
Customer Details	Bill To City
	Bill To Country or Region
	Bill To State
	Bill To ZIP
	Credit Limit Amt
	Customer Bal
	Customer Class
	Customer Name
	Sales Mgr Name
	Salesperson Name
	Sales Terr
Sales Details	Co ID
	Customer Class
	Customer Name
	Doc Date
	Doc No
	Doc Type
	Item Description
	Item Location Code
	Item No
	Over Credit Limit
	Requested Ship Date
	Salesperson Name
	Ship To City
	Ship To Country or Region
	Ship To State
	Ship To ZIP
	Shipping Method
Pending Sales Details	Co ID
	Customer Class
	Customer Name
	Doc Date
	Doc No
	Doc Type
	Item Description
	Item Location Code
	Item No
	Over Credit Limit
	Requested Ship Date
	Salesperson Name
	Ship To City
	Ship To Country or Region
	Ship To State
	Ship To ZIP
	Shipping Method

Drillthrough dimensions	Attributes
	Sales Terr
Current Qty Details	Co ID
	Current Cost
	Item Description
	Item No
	Item Type
	Qty Allocated
	Qty Committed
	Qty Damaged
	Qty In Service
	Qty In Use
	Qty On Back Order
	Qty On Hand
	Qty On Order
	Qty Returned
	Qty Sold
Standard Cost	
Unit Cost	
Payables Exp Details	Acct Alias
	Acct Index
	Acct Posting Type
	Cur ID
	Discount
	Distribution Type
	Doc Date
	Doc No
	Due Date
	Entry Type
	Fiscal Year
	Freight
	GST
	Outstanding Amt
	Period Name
	Purchase Amt
	Tax
	Total Amt
Trans Status	

Drillthrough dimensions	Attributes
Revenue Details	Acct Index
	Commission
	Cost Of Sales
	Cur ID
	Customer No
	Distribution Type
	Doc Date
	Doc No
	Doc Type
	Freight
	GST
	Misc
	Payment Terms
	Revenue
	Salesperson Name
	Sales Terr
	Shipping Method
	Tax
	Trade Disc
	Trans Status
Trans Detail	Acct Number
	Acct Type
	Credit Amt
	Currency ID
	Debit Amt
	Orig Credit Amt
	Orig Debit Amt
	Trans Date
Checkbook Register Detail	Amount
	Checkbook Name
	C ID
	Paid to Received From
	Trans Date
	Trans No
	Trans Type

Customize Business Portal using Web parts to include cube data

You can customize Business Portal for Microsoft Dynamics GP using Web parts to include cube data. See the Business Portal SDK documentation for more information about creating Web parts.

Chapter 4: Cubes

This part of the documentation includes information about the dimensions, attributes, and measures for the cubes.

The following topics are discussed:

- [What are cubes?](#)
- [How cubes are updated](#)
- [Cubes and dimensions](#)
- [Dimensions and attributes](#)
- [Hierarchies for organizing attributes](#)
- [Cubes and measures](#)
- [Default drillthrough dimensions](#)

What are cubes?

Using an Excel worksheet, you can gain a two-dimensional view of the relationships between data. OLAP cubes, however, offer more than two dimensions. And while physical cubes offer three dimensions, OLAP cubes can be multi-dimensional. See [Cubes and dimensions](#) on page 32 for more information about the dimensions for each cube.

A single cube dimension includes related attributes. For example, the Customers dimension includes information about customer balances, credit limits, and the salespersons assigned to those customers. The Salesperson dimension includes information about sales managers and sales territories. See [Dimensions and attributes](#) on page 33 for more information about the attributes for each cube dimension.

The attributes of a dimension are organized into hierarchies. The hierarchical relationship between two attributes depends on how data is being viewed. For example, if you select to view customers by salesperson name, the salesperson names will be at the top of the hierarchy, followed by customer names. See [Hierarchies for organizing attributes](#) on page 37 for more information about the hierarchies that are available for organizing cube dimension attributes.

The values that lie at the intersections of attributes are called measures. Measures can be static or calculated values. For example, the extended cost for an item is a static measure, while the margin percentage is a calculated measure. See [Cubes and measures](#) on page 39 for more information about the measures for each cube.

How cubes are updated

The Analysis Cubes server components include a SQL Server Analysis Services online analytical processing (OLAP) database that is designed specifically to help you analyze business data.

To populate the OLAP database and its cubes with data, Integration Services first extracts data from your Microsoft Dynamics GP transactional company databases and then stores that data in a data warehouse database. Analysis Services then aggregates the data in the data warehouse into totals and subtotals and then stores the aggregate data in an Analysis Services database in arrays called cubes. See [What are cubes?](#) for more information about cubes.

Typically, the data warehouse database is updated and the OLAP cubes are processed automatically using schedules. Between updates, the data is static and isn't affected by entries made into the Microsoft Dynamics GP company databases. Because the data warehouse and the OLAP cubes are isolated from the Microsoft Dynamics GP company databases, data can be retrieved more quickly.

Cubes and dimensions

Cubes include the following dimensions.



*If you're using modified or custom account category descriptions for accounts, or if you're not using category descriptions for some accounts, the Analysis Cubes program won't be able to include information about those accounts in cubes that use the **Accounts** dimension. See [Account category descriptions must match](#) on page 21 for more information.*

See [Dimensions and attributes](#) on page 33 for more information about the various attributes for dimensions.

Cubes	Dimensions
Financial	Checkbook Register
	Company
	Periodicity
	Master Date
	Fiscal Periods
	Accounts
	GL Trans
	GLMDA Trans
Receivables	GLMDA Groups
	Company
	Customers
	Salesperson
	Accounts
	Aging Details
	Periodicity
	Receivables Rev
	Master Date
	Due Date
Aging Periods	
Payables	Total Exp
	Company
	Accounts
	Vendors
	Periodicity
	Fiscal Periods
	Master Date
Due Date	

Cubes	Dimensions
Inventory	Company
	Items
	Item Daily Qty
	Item Current Qty
	Master Date
Purchases	Company
	Items
	Vendors
	Purchase Order Promised Date
	Pending Purchase Orders
	Master Date
	Purchase Order Detail
	Periodicity
Sales	Customers
	Periodicity
	Company
	Items
	Master Date
	Pending Sales
	Sales Detail

Dimensions and attributes

Cube dimensions include the following attributes. The **Functional Cur** attribute is available in a dimension only if you installed Analysis Cubes for multiple currencies. The number of **Acct Segment Description** and **Acct Segment** attributes that are available for the **Accounts** dimension depend on how many account segments you're using in Microsoft Dynamics GP. See [Hierarchies for organizing attributes](#) on page 37 for more information about the hierarchies that are available for organizing cube dimension attributes.

Dimensions	Attributes
Accounts	Acct Alias
	Acct Broad Category
	Acct Category
	Acct Description
	Acct Index
	Acct Main Category
	Acct No
	Acct Segment Description 1
	Acct Segment Description 2
	Acct Segment Description 3
	Acct Segment 1
	Acct Segment 2
	Acct Segment 3
	Acct Type
Aging Periods	Period

Dimensions	Attributes
Checkbook Register	Checkbook Name
	Paid To Received From
	Trans Description
	Trans Type
	Functional Cur
Company	Co Name
Customers	Bal Type
	City
	Collection Mgr
	Corp Customer No
	Country or Region
	Customer Class
	Customer Name
	Customer No
	Index
	Over Credit Limit
	Sales Mgr Name
	Salesperson ID
	Salesperson Name
	Sales Terr
	State
ZIP	
Due Date	Day
	Month
	Quarter
	Year
Fiscal Periods	Fiscal Year
	Period Name
GL Trans	Bal Type
	Cur ID
	Entry Type
	Series
	Functional Cur
	Voided
GLMDA Groups	MDA Group ID
	MDA Group Description
	MDA Code ID
	MDA Code Description
GLMDA Trans	Posting Status
	Series
	Document Type
	Functional Cur

Dimensions	Attributes
Item Current Qty	Co Name
	Item Description
	Item Location Code
	Item No
	Item Out of Stock
	Item Primary Vendor
	Functional Cur
Item Daily Qty	Co Name
	Item Description
	Item Location Code
	Item No
	Functional Cur
Items	ABC Code
	Item Class Description
	Item Description
	Item Generic Description
	Item No
	Item Short Name
	Item Type
Master Date	Day
	Month
	Quarter
	Year
Pending Purchase Orders	Buyer ID
	Purchase Order Status
	Purchase Order Type
	Functional Cur
Pending Sales	Doc Type
	Functional Cur
	Sales Terr ID
	Salesperson ID
Periodicity	Periodicity
	Current
	Period to Date
	Prev Year Period to Date
	% Change Period to Date
	Month to Date
	Prev Year Month to Date
	% Change Month to Date
	Quarter to Date
	Prev Year Quarter to Date
	% Change Quarter to Date
	Year to Date
	Prev Year YTD
	% Change Year to Date

Dimensions	Attributes
Purchase Order Promised Date	Day
	Month
	Quarter
	Year
Purchase Order Detail	Buyer ID
	Purchase Order Status
	Purchase Order Type
	Functional Cur
Receivables Rev	Distribution Type
	Doc Type
	Payment Terms
	Trans Status
	Functional Cur
Sales Detail	Customer Name
	Customer No
	Doc Type
	Functional Cur
	Salesperson ID
	Sales Territory
Salesperson	Sales Mgr Name
	Salesperson ID
	Salesperson Index Tab
	Salesperson Name
	Sales Terr
Total Exp	Control Type
	Distribution Type
	Payment Entry Type
	Payment Terms
	Shipping Method
	Trans Status
	Functional Cur
Vendors	City
	Corp Vendor No
	Country or Region
	Credit Limit Amt
	Cur ID
	Primary Payment Terms
	Shipping Method
	State
	UPS Zone
	Vendor Class
	Vendor Index Tab
	Vendor Name
	Vendor No
	Vendor Status
Aging Details	Functional Cur

Hierarchies for organizing attributes

You can select to use the following hierarchies to organize cube dimension attributes.

Dimensions	Hierarchies	Attributes in hierarchical order	
Accounts	Accounts by Category	Acct Main Category	
		Acct Broad Category	
		Acct Category	
		Acct No	
	Accounts by Acct No	Acct Index	
		Acct No	
	Accounts by Acct Alias	Acct Alias	
		Acct No	
	Accounts by Posting Type	Acct Type	
		Acct No	
	Checkbook Register	Checkbook Register by Trans Type	Trans Type
			Trans Description
Checkbook Name			
Paid To Received From			
Checkbook Register by Checkbook		Checkbook Name	
		Trans Type	
		Paid To Received From	
Customers	Customers Over Credit Limit	Over Credit Limit	
		Customer Name	
	Customers by Salesperson Name	Salesperson Name	
		Customer Name	
	Customers by Sales Terr	Sales Terr	
		Sales Mgr Name	
		Salesperson Name	
	Customers by Class	Customer Class	
		Customer Name	
	Customers by Location	Country or Region	
		State	
		City	
		Customer Name	
	Customers by Bal Type	Bal Type	
		Customer Name	
	Customers by Parent Customer No	Corp Customer No	
		Customer No	
		Customer Name	
	Customers	Index	
		Customer No	
	Customer Names	Index	
		Customer Name	

Dimensions	Hierarchies	Attributes in hierarchical order
Due Date	Due Date	Year
		Quarter
		Month
		Day
Fiscal Periods	Periods by Year	Fiscal Year
		Period Name
Item Current Qty	Items by Co by Location	Item Description
		Co Name
		Item Location Code
	Items by Location	Item Location Code
		Item Description
		Item No
Item Daily Qty	Items by Co by Location	Item Description
		Co Name
		Item Location Code
	Items by Location	Item Location Code
		Item Description
		Item No
Items	Items by Class	Item Class Description
		Item Description
	Items by Generic Description	Item Generic Description
		Item Description
Master Date	Date by Month	Month
		Year
	Quarter by Year	Quarter
		Year
	Date	Year
		Quarter
		Month
		Day
Purchase Order Promised Date	Promised Date	Year
		Quarter
		Month
		Day
Salesperson	Salesperson by Sales Terr and Sales Mgr	Sales Terr
		Sales Mgr Name
		Salesperson Name
Vendors	Vendors by Class	Vendor Class
		Vendor Name
	Vendor Names	Vendor Index Tab
		Vendor Name
	Vendors by Location	Country or Region
		State
		City
		Vendor Name

Cubes and measures

Cubes include the following measures. The measures that are included in a cube depend on whether you installed Analysis Cubes for multiple currencies.

Cubes	Measures	Data warehouse type	
		Multicurrency	Non-multicurrency
Financial	Amount – Bank Trans	No	Yes
	Reporting Amt – Bank Trans	Yes	No
	Originating Amt – Bank Trans	Yes	No
	Functional Amt – Bank Trans	Yes	No
	Current Trans – Bank Trans	Yes	Yes
	Beginning Bal – Bank Trans	Yes	Yes
	Ending Bal – Bank Trans	Yes	Yes
	Debit Amt - GL Trans	Yes	Yes
	Credit Amt - GL Trans	Yes	Yes
	Amount - GL Trans	Yes	Yes
	Signed Amt - GL Trans	Yes	Yes
	Budget - GL Trans	Yes	Yes
	Reporting Debit Amt - GL Trans	Yes	No
	Reporting Credit Amt - GL Trans	Yes	No
	Reporting Amt - GL Trans	Yes	No
	YTD Bal - GL Trans	No	Yes
	Current Ratio - GL Trans	No	Yes
	Debt To Equity - GL Trans	No	Yes
	Balance Sheet Amt - GL Trans	No	Yes
	Gross Profit - GL Trans	No	Yes
	Gross Profit Periodic - GL Trans	No	Yes
	Gross Margin % - GL Trans	No	Yes
	YTD Budget - GL Trans	No	Yes
	Reporting YTD Bal - GL Trans	Yes	No
	Reporting Current Ratio - GL Trans	Yes	No
	Reporting Debt To Equity - GL Trans	Yes	No
	Reporting Gross Profit - GL Trans	Yes	No
	Reporting Gross Profit Periodic - GL Trans	Yes	No
	Reporting Gross Margin % - GL Trans	Yes	No
	Reporting Bal Sheet Amt - GL Trans	Yes	No
	Reporting YTD Budget - GL Trans	Yes	No
	Amount - MDA	Yes	Yes
	Quantity - MDA	Yes	Yes
	Reporting Amount - MDA	Yes	No
	YTD Bal - MDA	Yes	Yes
	Gross Profit - MDA	Yes	Yes
	Gross Profit Periodic - MDA	Yes	Yes
	Gross Margin % - MDA	Yes	Yes
	Reporting YTD Bal - MDA	Yes	No
	Reporting Gross Profit - MDA	Yes	No

Cubes	Measures	Data warehouse type	
		Multicurrency	Non-multicurrency
Financial (continued)	Reporting Gross Profit Periodic - MDA	Yes	No
	Reporting Gross Margin % - MDA	Yes	No
Receivables	Revenue - Receivables Rev	Yes	Yes
	Cost Of Sales - Receivables Rev	Yes	Yes
	Discount - Receivables Rev	No	Yes
	Misc - Receivables Rev	No	Yes
	Tax - Receivables Rev	No	Yes
	Commission - Receivables Rev	No	Yes
	Freight - Receivables Rev	No	Yes
	Trans Amt - Receivables Rev	Yes	Yes
	Net Profit - Receivables Rev	No	Yes
	Outstanding Amt - Receivables Rev	No	Yes
	Reporting Rev - Receivables Rev	Yes	No
	Reporting Cost Of Sales - Receivables Rev	Yes	No
	Reporting Trans Amt - Receivables Rev	Yes	No
	Amount - Receivables Aging	No	Yes
	Reporting Amt - Receivables Aging	Yes	No
Functional Amt - Receivables Aging	Yes	No	
Originating Amt - Receivables Aging	Yes	No	
Payables	Purchase Amt - Payables Exp	Yes	Yes
	Discount - Payables Exp	No	Yes
	Misc - Payables Exp	No	Yes
	Tax - Payables Exp	No	Yes
	Freight - Payables Exp	No	Yes
	Total Amt - Payables Exp	Yes	Yes
	Outstanding Amt - Payables Exp	No	Yes
	Reporting Purchase Amt - Payables Exp	Yes	No
Reporting Total Amt - Payables Exp	Yes	No	

Cubes	Measures	Data warehouse type	
		Multicurrency	Non-multicurrency
Inventory	Qty On Order - Inventory Hist	Yes	Yes
	Qty On Hand - Inventory Hist	Yes	Yes
	Qty Sold - Inventory Hist	Yes	Yes
	Qty Adjustment - Inventory Hist	Yes	Yes
	Extended Price - Inventory Hist	Yes	Yes
	Reporting YTD Extended Price - Inventory Hist	Yes	No
	YTD Qty On Hand - Inventory Hist	Yes	Yes
	YTD Extended Price - Inventory Hist	Yes	Yes
	Reporting YTD Ext Price - Inventory Hist	Yes	No
	Qty On Order - Inventory On Hand	Yes	Yes
	Qty On Back Order - Inventory On Hand	Yes	Yes
	Qty Drop Shipped - Inventory On Hand	Yes	Yes
	Qty In Use - Inventory On Hand	Yes	Yes
	Qty In Service - Inventory On Hand	Yes	Yes
	Qty Returned - Inventory On Hand	Yes	Yes
	Qty Damaged - Inventory On Hand	Yes	Yes
	Qty On Hand - Inventory On Hand	Yes	Yes
	Qty Allocated - Inventory On Hand	Yes	Yes
	Qty Committed - Inventory On Hand	Yes	Yes
	Qty Sold - Inventory On Hand	Yes	Yes
	Min Level - Inventory On Hand	Yes	Yes
	Max Level - Inventory On Hand	Yes	Yes
	Unit Cost - Inventory On Hand	Yes	Yes
	Current Inventory Val - Inventory On Hand	No	Yes
	Current Allocated Inventory Val - Inventory On Hand	No	Yes
	Current Committed Inventory Val - Inventory On Hand	No	Yes
	Current Damaged Inventory Val - Inventory On Hand	No	Yes
	Current Back Order Inventory Val - Inventory On Hand	No	Yes
	Current Ordered Val - Inventory On Hand	No	Yes
	Current Returned Val - Inventory On Hand	No	Yes
	Current Sold Val - Inventory On Hand	No	Yes
	Current Qty Available to Sell - Inventory On Hand	Yes	Yes
	Reporting Unit Cost - Inventory On Hand	Yes	No
	Reporting Current Inv Val - Inventory On Hand	Yes	No
	Reporting Current Allocated Inv Val - Inventory On Hand	Yes	No
	Reporting Current Committed Inv Val - Inventory On Hand	Yes	No
Reporting Current Damaged Inv Val - Inventory On Hand	Yes	No	
Reporting Current Back Order Inv Val - Inventory On Hand	Yes	No	
Reporting Current Ordered Val - Inventory On Hand	Yes	No	
Reporting Current Returned Val - Inventory On Hand	Yes	No	
Reporting Current Sold Val - Inventory On Hand	Yes	No	

Cubes	Measures	Data warehouse type	
		Multicurrency	Non-multicurrency
Purchases	Qty Purchased - Pending	Yes	Yes
	Qty In Base Amt - Pending	No	Yes
	Extended Cost - Pending	Yes	Yes
	Qty Outstanding - Pending	Yes	Yes
	Qty Outstanding In Base Amt - Pending	Yes	Yes
	Outstanding Val - Pending	No	Yes
	Qty Received In Base Amt - Pending	Yes	Yes
	Qty Rejected - Pending	Yes	Yes
	Qty Cancelled - Pending	Yes	Yes
	Qty Invoiced - Pending	Yes	Yes
	Tax Amt - Pending	No	Yes
	Freight Amt - Pending	No	Yes
	Misc Amt - Pending	No	Yes
	Reporting Extended Cost - Pending	Yes	No
	Qty Purchased - Detail	Yes	Yes
	Qty In Base Amt - Detail	No	Yes
	Extended Cost - Detail	Yes	Yes
	Qty Outstanding - Detail	Yes	Yes
	Qty Outstanding In Base Amt - Detail	Yes	Yes
	Outstanding Val - Detail	No	Yes
	Qty Received In Base Amt - Detail	Yes	Yes
	Qty Rejected - Detail	Yes	Yes
	Qty Cancelled - Detail	Yes	Yes
	Qty Invoiced - Detail	Yes	Yes
	Tax Amt - Detail	No	Yes
	Freight Amt - Detail	No	Yes
Misc Amt - Detail	No	Yes	
Reporting Extended Cost - Detail	Yes	No	

Cubes	Measures	Data warehouse type	
		Multicurrency	Non-multicurrency
Sales	Extended Price - Pending	Yes	Yes
	Extended Cost - Pending	Yes	Yes
	Qty Sold - Pending	Yes	Yes
	Base Qty Sold - Pending	Yes	Yes
	Trade Disc Amt - Pending	No	Yes
	Markdown Amt - Pending Sales Orders	No	Yes
	Tax Amt - Pending	No	Yes
	Freight Amt - Pending	No	Yes
	Misc Amt - Pending	No	Yes
	Terms Disc Amt - Pending	No	Yes
	Profit - Pending	Yes	Yes
	Reporting Extended Price - Pending	Yes	No
	Reporting Extended Cost - Pending	Yes	No
	Reporting Profit - Pending	Yes	No
	Margin % - Pending	No	Yes
	Markdown % - Pending	No	Yes
	Trade Disc Amt % - Pending	No	Yes
	Terms Disc Amt % - Pending	No	Yes
	YTD Extended Price - Pending	No	Yes
	YTD Profit - Pending	No	Yes
	Reporting YTD Profit - Pending	Yes	No
	Reporting YTD Extended Price - Pending	Yes	No
	Reporting Margin % - Pending	Yes	No
	Extended Price - Detail	Yes	Yes
	Extended Cost - Detail	Yes	Yes
	Qty Sold - Detail	Yes	Yes
	Base Qty Sold - Detail	Yes	Yes
	Trade Disc Amt - Detail	No	Yes
	Markdown Amt - Detail	No	Yes
	Tax Amt - Detail	No	Yes
	Freight Amt - Detail	No	Yes
	Misc Amt - Detail	No	Yes
	Terms Disc Amt - Detail	No	Yes
	Reporting Extended Price - Detail	Yes	No
	Reporting Extended Cost - Detail	Yes	No
	Reporting Profit - Detail	Yes	No
	Profit - Detail	Yes	Yes
	Margin % - Detail	No	Yes
	Markdown % - Detail	No	Yes
	Trade Disc Amt % - Detail	No	Yes
Terms Disc Amt % - Detail	No	Yes	
YTD Extended Price - Detail	No	Yes	
YTD Profit - Detail	No	Yes	
Reporting YTD Profit - Detail	Yes	No	
Reporting YTD Extended Price - Detail	Yes	No	
Reporting Margin % - Detail	Yes	No	

Default drillthrough dimensions

Drillthrough dimensions include information about the underlying data that's used to calculate cube cell values. When you completed the server configuration wizard, the following default drillthrough dimensions were installed.

Cube	Measure group	Drillthrough dimension
Financial	GL Trans	Trans Detail
	Bank Trans	Checkbook Register Detail
Receivables	Receivables Aging	Customer Details
	Receivables Rev	Revenue Details
Payables	Payables Exp	Trans Details
Inventory	Inventory On Hand	Current Qty Details
Sales	Pending Sales Orders	Pending Sales Details
		Customer Details
	Sales Detail	Sales Details
		Customer Details

See [Drillthrough dimensions](#) on page 27 for more information about the attributes that are included in drillthrough dimensions.

You can modify cubes to establish relationships between the cubes and drillthrough dimensions. See [Chapter 3, "Customization,"](#) for more information.

Chapter 5: PivotTable reports

This part of the documentation includes information about how to create Microsoft Office Excel worksheets with PivotTable reports and other PivotTable-like reports using data from cubes.

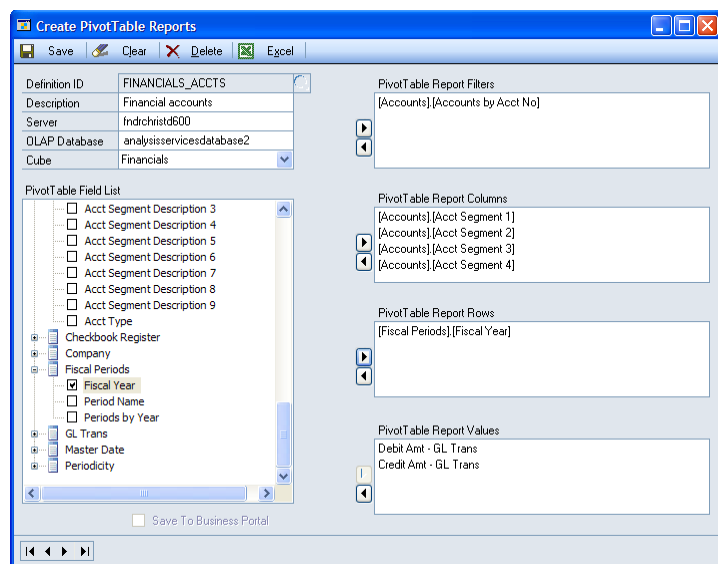
The following topics are discussed:

- [Create PivotTable reports using Microsoft Dynamics GP](#)
- [Create reports using Microsoft Office Excel](#)

Create PivotTable reports using Microsoft Dynamics GP

After you install the Analysis Cubes client, you can use the Create PivotTable Reports window in Microsoft Dynamics GP to create Microsoft Office Excel worksheets with PivotTable reports that use data from the cubes.

1. In Microsoft Dynamics GP, open the Create PivotTable Reports window.
Microsoft Dynamics GP menu > Tools > Analysis Cubes > Create PivotTable Reports



2. Enter the definition ID for the PivotTable report that you're creating. The definition ID is used to save your selections so that you can generate the same PivotTable reports again in the future.
3. Enter a description for the definition ID.

4. You might be able to change the following Analysis Services information.
 - If **Allow Server To Be Changed On Pivot Table Creator Window** is selected in the Excel Pivot Table Setup window, you can change the instance name for SQL Server Analysis Services in the **Server** field.
 - If **Allow Database To Be Changed On Pivot Table Creator Window** is selected in the Excel Pivot Table Setup window, you can change the name of the Analysis Services database for the cubes in the **OLAP Database** field.

See [Set up Analysis Services information for the client](#) on page 24 for more information.

5. Select a cube. The cubes that you can select depend on the Analysis Services database roles that you've been assigned to. See [Assign users to Analysis Services database roles](#) on page 21 for more information.
6. In the **PivotTable Field List**, select the attributes, hierarchies, and measures to include on the PivotTable report. The dimensions, attributes, hierarchies, and measures that you can select depend on the cube that you choose to use. See [Chapter 4, "Cubes,"](#) for more information.

Click the **plus sign (+)** next to a dimension name to view the attributes and hierarchies for that dimension. Select an attribute or hierarchy and click the **right arrow button** to add the attribute to the **PivotTable Report Filters**, **PivotTable Report Columns**, or **PivotTable Report Rows** list.

Click the **plus sign (+)** next to **Values** to view the measures for the cube. Select a measure and click the **right arrow button** to add the measure to the **PivotTable Report Values** list.



*You can remove an item from the **PivotTable Report Columns**, **PivotTable Report Rows**, **PivotTable Report Data**, and **PivotTable Report Filters** lists by selecting the item and then clicking the **left arrow button**. Click **Clear** to remove all items from the lists.*

7. Select **Save To Business Portal** to save the Excel worksheet with the PivotTable report that you're generating to the reports catalog in Business Portal for Microsoft Dynamics GP. The report will be published in the **Sales Center** in Business Portal by default. You must be assigned to the proper role in Business Portal to view the report. See the Business Portal Administrator's Guide for more information about roles and reports.
8. Click **Save** to save the definition. The window will clear. Enter the definition ID again and then click **Excel** to open a new Excel worksheet with the PivotTable report.



*You can right-click a data field in the Excel worksheet and select **Drill to Detail**. A window will open, displaying a list of the transactions that were entered in Microsoft Dynamics GP that affect the calculation in the data field.*

Create reports using Microsoft Office Excel

It's not necessary to use the Create PivotTable Reports window in Microsoft Dynamics GP to create reports for Microsoft Office Excel. You can generate reports directly in Microsoft Office Excel 2007 or 2010.

Refer to the Excel documentation for information about how to set up a connection to the OLAP database and work with cube files.

Index

A

- account categories, requirements 21
- Analysis Cubes server database, reconfiguring 25
- Analysis Services, modifying information for the client 24
- attributes
 - drillthrough dimensions 27
 - for dimensions 33
 - hierarchies 37
 - overview 31

B

- budget IDs, specifying budgets for cube values 20
- Business Portal, customizing to include cube data 30

C

- checklist, installing Analysis Cubes 12
- client components
 - installation 23
 - setup 24
- configuration
 - server components 15
 - SSIS service to use named instances 15
- Create PivotTable Reports window
 - creating PivotTable reports 45
 - opening the window 45
- cubes
 - attribute hierarchies 37
 - creating PivotTable reports using cubes 45
 - creating reports using Microsoft Office Excel 47
 - dimension attributes 33
 - dimensions 32
 - granting users access 21
 - how they are updated 31
 - Integration Services packages for processing 20
 - measures 39
 - modifying 27
 - overview 31
- current installation instructions, accessing on the Web 3
- current upgrade information, accessing on the Web 3

D

- data warehouse database, Integration Services packages for populating 19
- dimensions
 - attributes 33
 - default drillthrough dimensions 44
 - drillthrough dimensions 27
 - for cubes 32
 - overview 31

- documentation
 - accessing on the Web 3
 - symbols and conventions 2
- drillthrough dimensions
 - attributes 27
 - default drillthrough dimensions 44
 - list of 27

E

- Edit Recurring Job Schedule window, displaying 18
- Excel Pivot Table Setup window, opening 24

H

- help, displaying 2
- Help menu, described 2
- hierarchies
 - for attributes 37
 - overview 31

I

- icons, used in manual 2
- installation
 - client components 23
 - server setup wizard 14
- installation instructions, accessing on the Web 3
- Integration Services packages
 - populating the data warehouse database 19
 - processing the cubes 20

L

- lookup window, displaying 3

M

- measures
 - for cubes 39
 - overview 31

N

- navigation, symbols used for 2

P

- PivotTable reports
 - creating reports using Microsoft Office Excel 47
 - creating using Microsoft Dynamics GP 45
- previous versions, uninstalling 11
- product documentation, accessing on the Web 3

R

- required fields, described 3
- resources, documentation 2
- roles, granting users access to cubes 21

S

- Scheduling Options window, displaying 17

- security, server installation requirements 13

- server components
 - configuration 15
 - installation 14
- servers, reconfiguring Analysis Cubes database 25
- SSIS service, configuration to use named instances 15
- symbols, used in manual 2
- system requirements
 - accessing on the Web 3
 - client 9
 - server 5, 6, 8

U

- upgrade information, accessing on the Web 3
- upgrading, uninstall previous version 11

W

- Windows groups, server installation requirements 13
- Windows user accounts, server installation requirements 13

