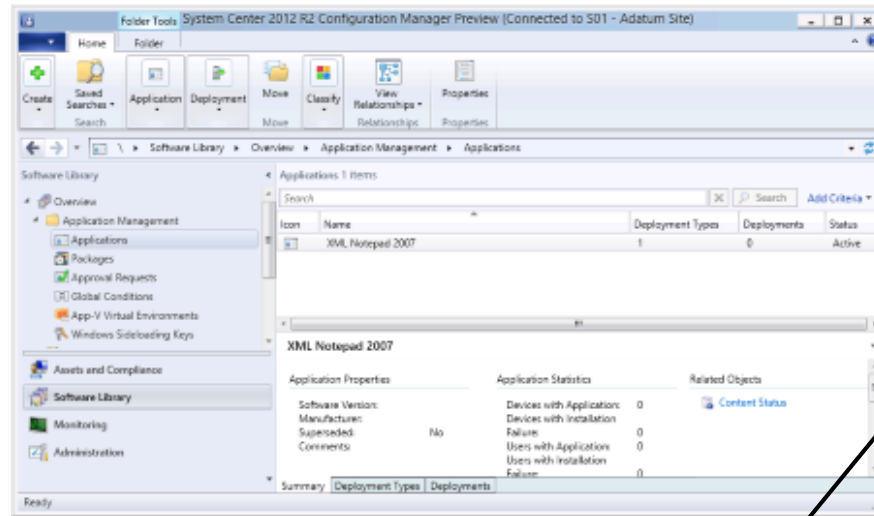


# Overview of System Center 2012 R2 Configuration Manager

# Lesson 1: Introduction to System Center 2012 R2 Configuration Manager

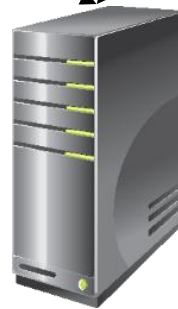
- Overview of the System Center 2012 Environment
- Overview of System Center 2012 R2 Configuration Manager

# Overview of the System Center 2012 Environment Configuration Manager



Manage clients on the organizational network and the Internet

Single admin console



# Overview of System Center 2012 R2 Configuration Manager

## Asset management

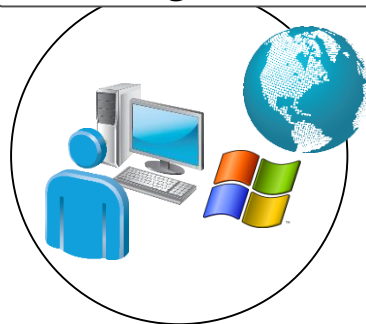


**Hardware and Software Inventory**

**Asset Intelligence**

**Software Metering**

## Change management



**Application Management**

**Software Update Management**

**Operating System Deployment**

**Content Management**

**Compliance Settings**

**Power Management**

**Client Health**

**Endpoint Protection**

## Administrative features



**Role-Based Administration**

**Remote Management**

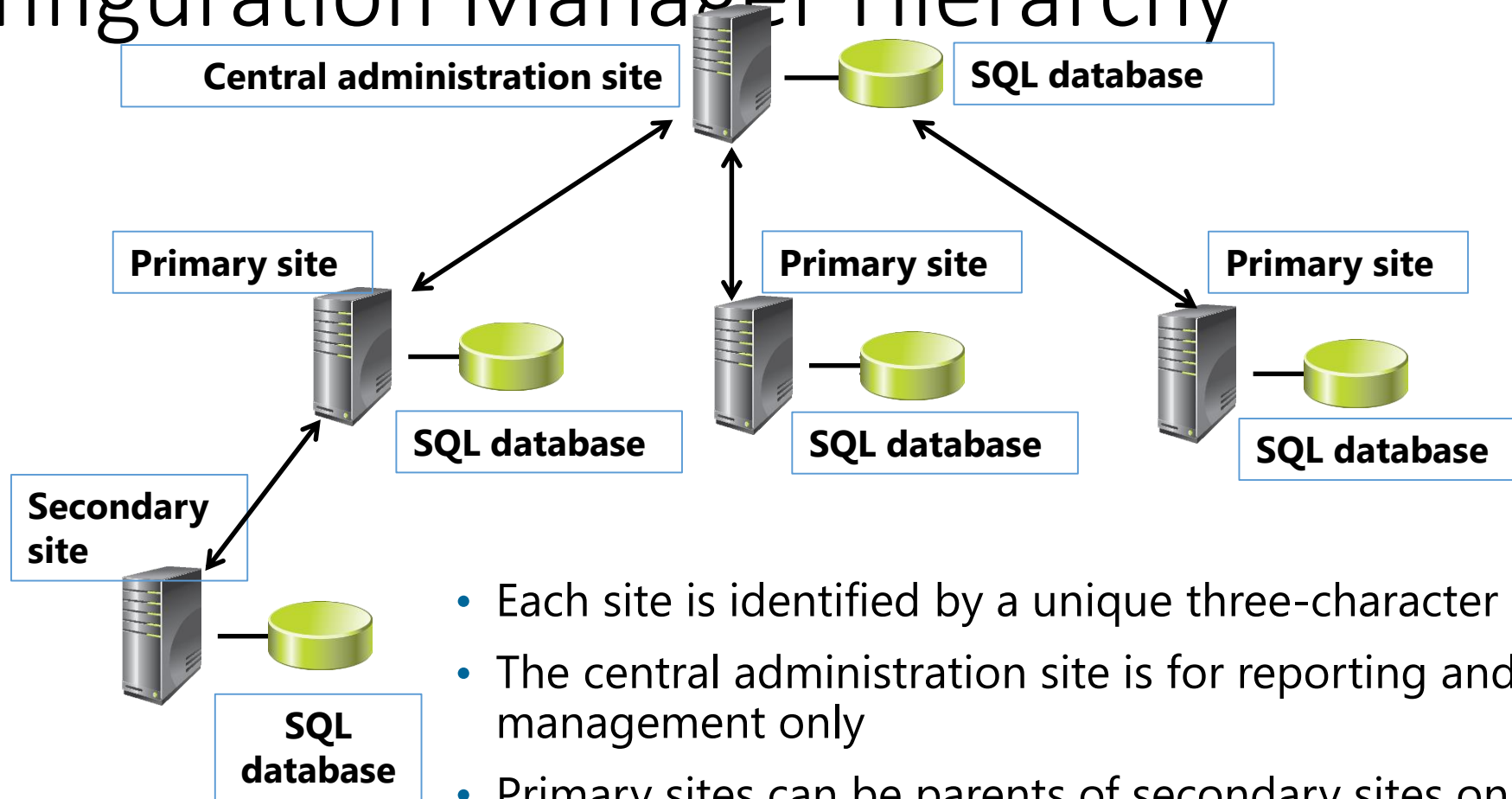
**Reporting**

**Monitoring**

# Center 2012 R2 Configuration Manager Architecture

- Overview of the System Center 2012 R2 Configuration Manager Hierarchy
- Site System Roles in Configuration Manager
- What Is a Central Administration Site?
- What Is a Primary Site?
- What Is a Secondary Site?
- Configuration Manager in a Small- to Medium-Sized Organization
- Configuration Manager in a Medium- to Large-Sized Organization
- Configuration Manager in a Global Organization
- How Data Flows and Replicates in a Hierarchy
- How Configuration Manager Integrates with Cloud Services

# Overview of the System Center 2012 R2 Configuration Manager Hierarchy



- Each site is identified by a unique three-character code
- The central administration site is for reporting and management only
- Primary sites can be parents of secondary sites only
- Secondary sites now have their own database

# Site System Roles in Configuration Manager

- Default site system roles are installed when Configuration Manager setup is run
- Optional site system roles are added post-installation to support specific features

## **Default site system roles**

- Site server
- Site system
- Component server
- Site database server
- SMS Provider: does not display in the console

## **Optional site system roles**

- Certificate registration point
- Distribution point
- Management point
- Reporting services point
- Software update point
- State migration point

# What Is a Central Administration Site?

A central administration site:

- Is required to use a multisite hierarchy
- Is used for administration and reporting
- Requires an SQL database
- Does not process client data
- Does not support client assignment
- Has a limited number of site system roles



# What Is a Primary Site?

- To use Configuration Manager, you must have at least one primary site
- Primary sites:
  - Can be in a child relationship to a central administration site, which can only be set during installation
  - Cannot be a child to another primary site
  - Manage clients in well-connected networks
  - Require a SQL Server database
  - Replicate their data to a central administration site if part of a hierarchy
  - Support client assignment
  - Consist of one or more systems that host various site system roles

# What Is a Secondary Site?

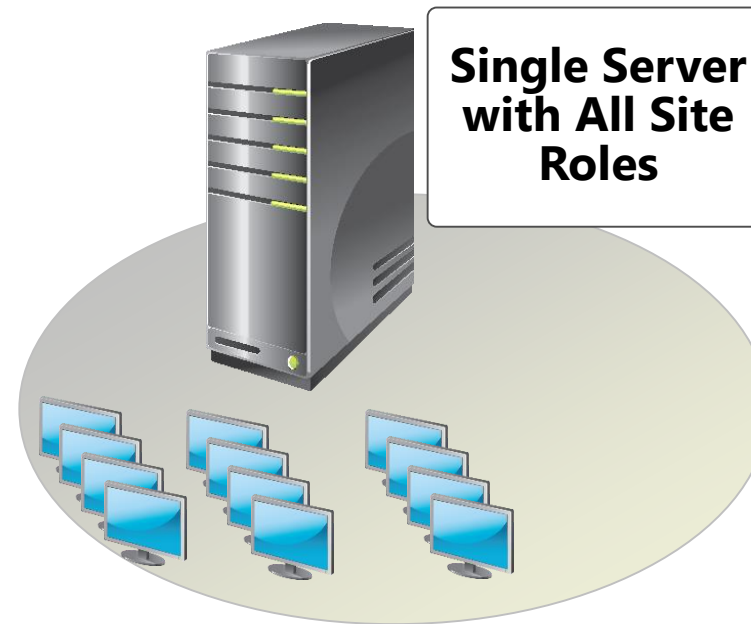
A secondary site:

- Is optional
- Must be in a child relationship to a primary site, which is set in the secondary site during installation
- Is used when you need to control network bandwidth
- Requires SQL Server Express or a SQL Server database to store configuration information
- Replicates its collected client data to its parent site by using file-based replication
- Does not support client assignment
- Consists of one or more systems that host various site system roles

# Configuration Manager In a Small- to Medium-Sized Organization

Small- to medium-sized organizations often use a single primary site that includes:

- Mandatory:
  - Site server
  - Site database
  - Management point
  - Distribution point
- Optional:
  - Reporting services point
  - Software update point
  - Fallback status point
  - Other roles as required



# Configuration Manager in a Medium- to Large-Sized Organization

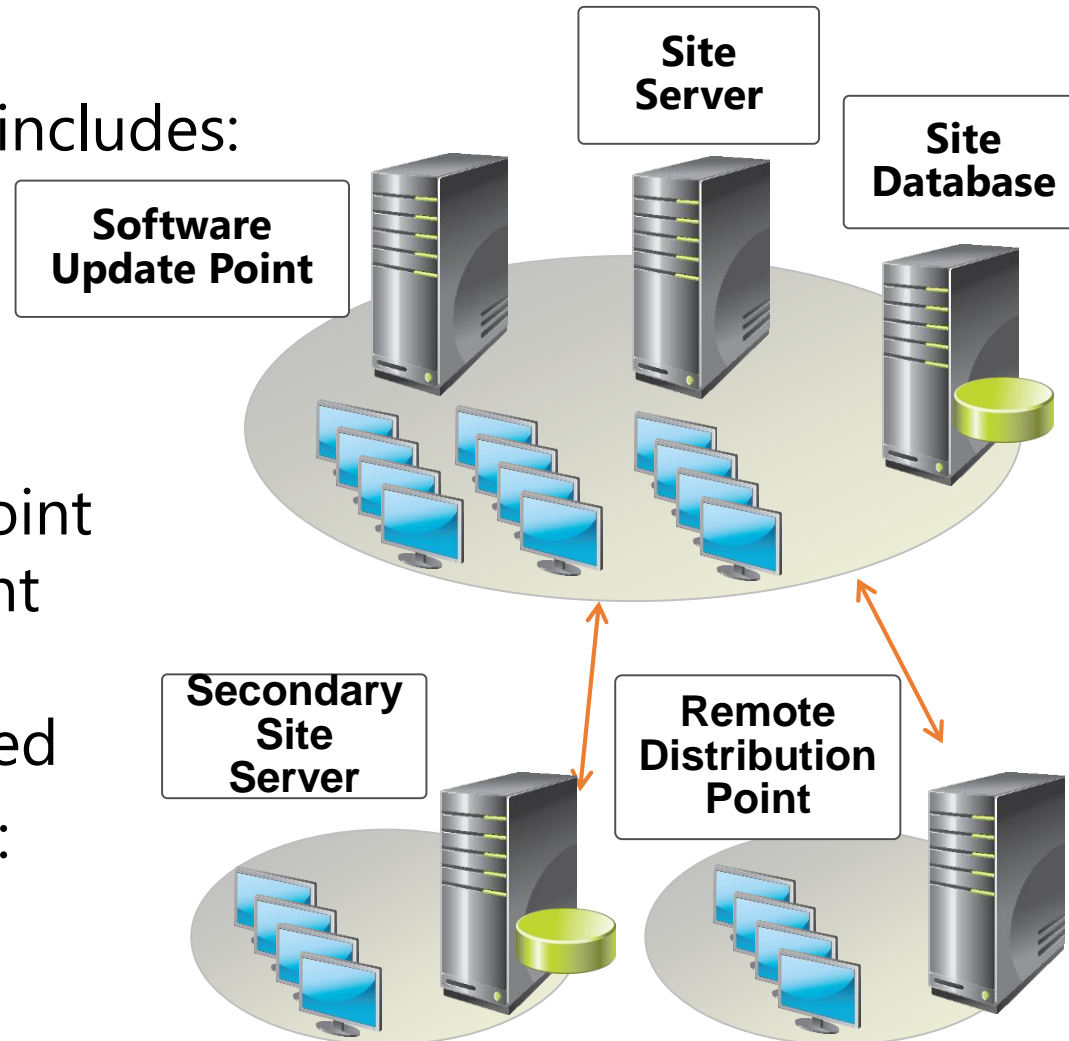
Medium- to large-sized organizations use primary and secondary sites

- A primary site typically includes:

- Site server
- Site database
- Management point
- Distribution point
- Reporting services point
- Software update point
- Fallback status point
- Other roles as required

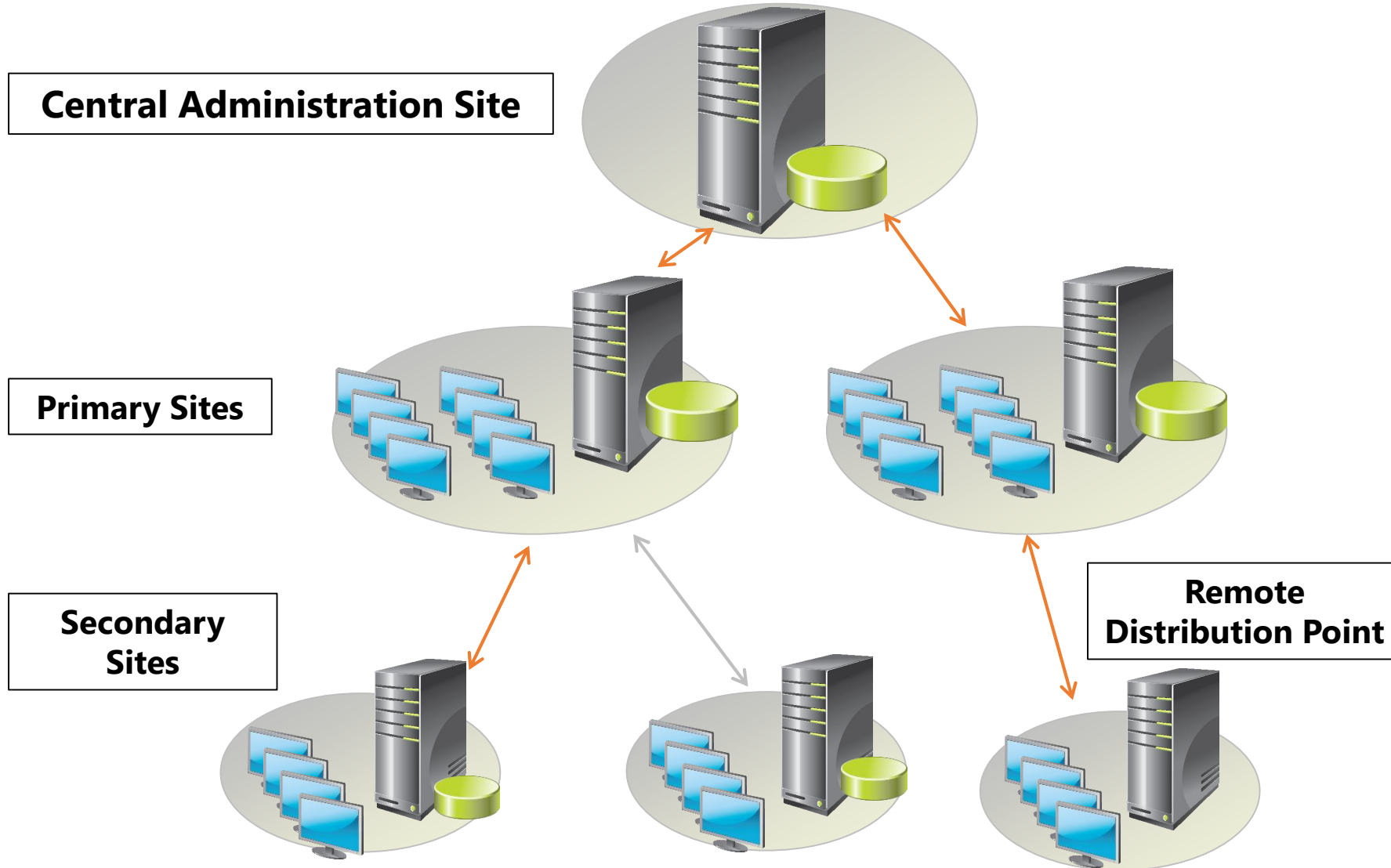
- Secondary sites include:

- Management point
- Distribution point

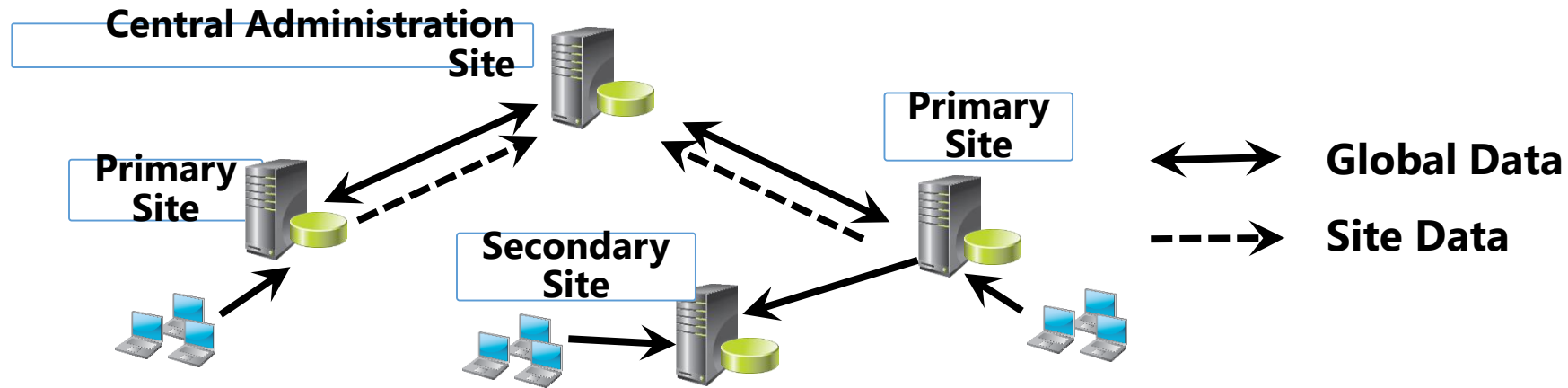


# Configuration Manager in a Global Organization

Example of a complex hierarchy implementation:



# How Data Flows and Replicates in a Hierarchy



Global data	Site data
<ul style="list-style-type: none"><li>• Alert rules</li><li>• Client discovery</li><li>• Collections rules and count</li><li>• Configuration items metadata</li><li>• Deployments</li><li>• Operating system images</li><li>• Package metadata</li><li>• Program metadata</li><li>• Site control file</li><li>• Site security objects</li><li>• Software updates metadata</li><li>• System resource list</li></ul>	<ul style="list-style-type: none"><li>• Alert messages</li><li>• Asset intelligence CAL tracking</li><li>• Client Health data</li><li>• Client Health history</li><li>• Collection membership results</li><li>• Component and Site Status Summarizers</li><li>• Hardware inventory</li><li>• Software distribution status details</li><li>• Software inventory and metering</li><li>• Software updates site data</li><li>• Status messages</li></ul>

# Manager by Using Configuration

## Manager Administration Tools

- Overview of the Configuration Manager Administration Tools
- Using the Configuration Manager Console
- Using the Assets and Compliance Workspace
- Using the Software Library Workspace
- Using the Monitoring Workspace
- Using the Administration Workspace
- Managing Data in the Configuration Manager Console

# Using the Configuration Manager Console

The screenshot shows the Configuration Manager console interface. The **Ribbon** is located at the top, containing tabs like Home, Saved Searches, Add Selected Items, Set Security Scopes, and Properties. The **Navigation Pane** is on the left, showing a tree view of the console's structure. The **Workspaces** are located at the bottom left, including Assets and Compliance, Software Library, Monitoring, and Administration. The **Results Pane** is the central area displaying a table of Distribution Points. The **Preview Pane** is at the bottom right, showing details for the selected item.

Icon	Location	Type	Pull Distribution Point	Region	Distribution Point Group Member	Count
	LON-CFG.ADATUM.COM	On-premises	No		No	0

**Properties**

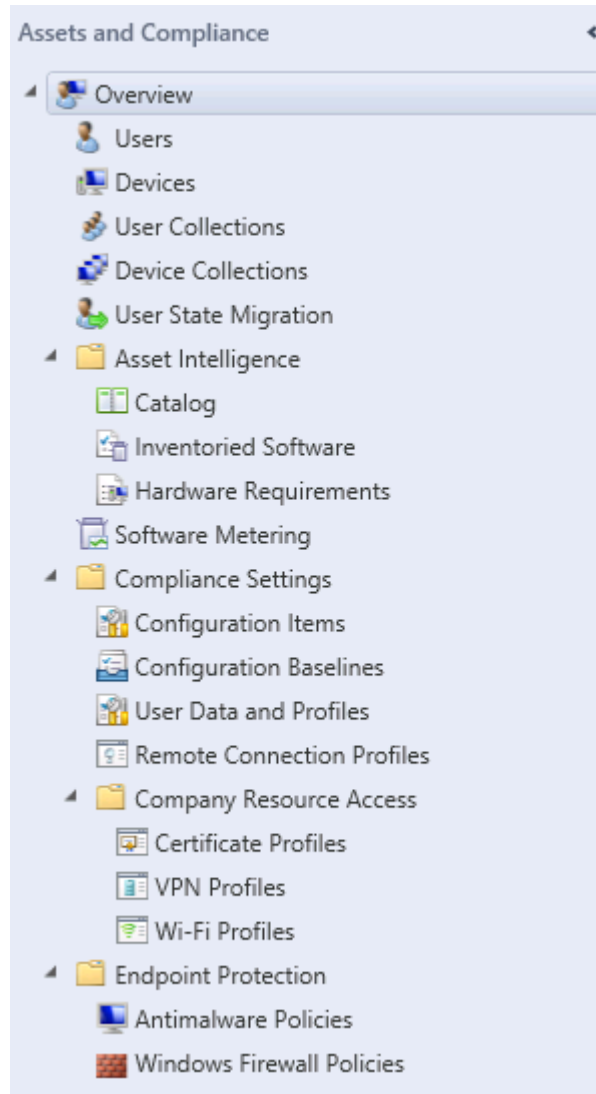
Location:	LON-CFG.ADATUM.COM
Distribution Point Group Member:	No
Count of Group Memberships:	0
Allow Fallback:	Yes

**Related Objects**

- Applications
- Packages
- Software Update Packages
- Driver Packages



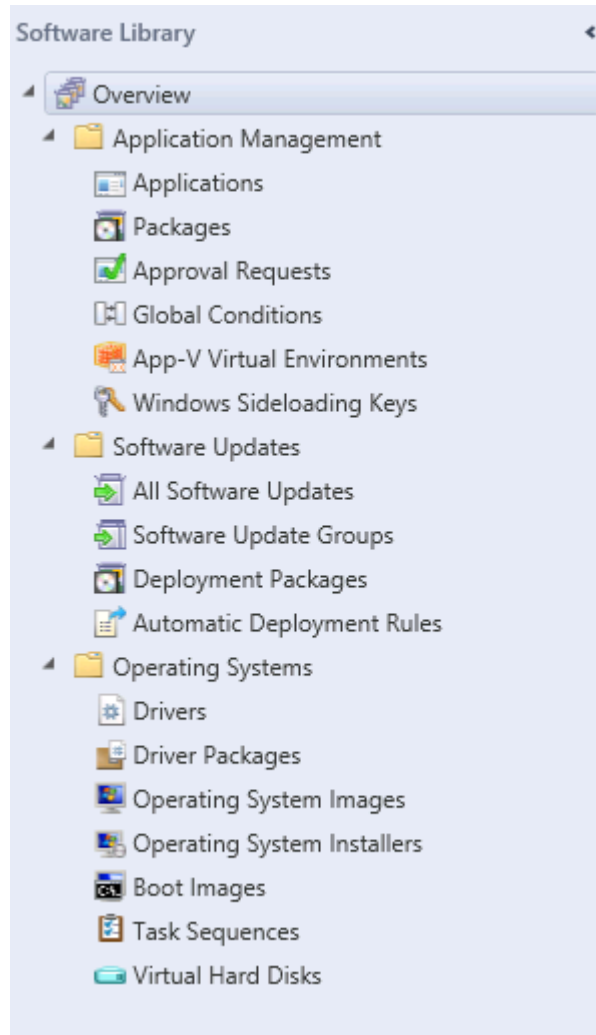
# Using the Assets and Compliance Workspace



The Assets and Compliance workspace has:

- Nodes for the users and devices discovered in your hierarchy
- Nodes for the collection that you use to organize the users and devices in your hierarchy
- Other nodes that you can use to monitor and manage the software and configuration settings on the client devices in the hierarchy

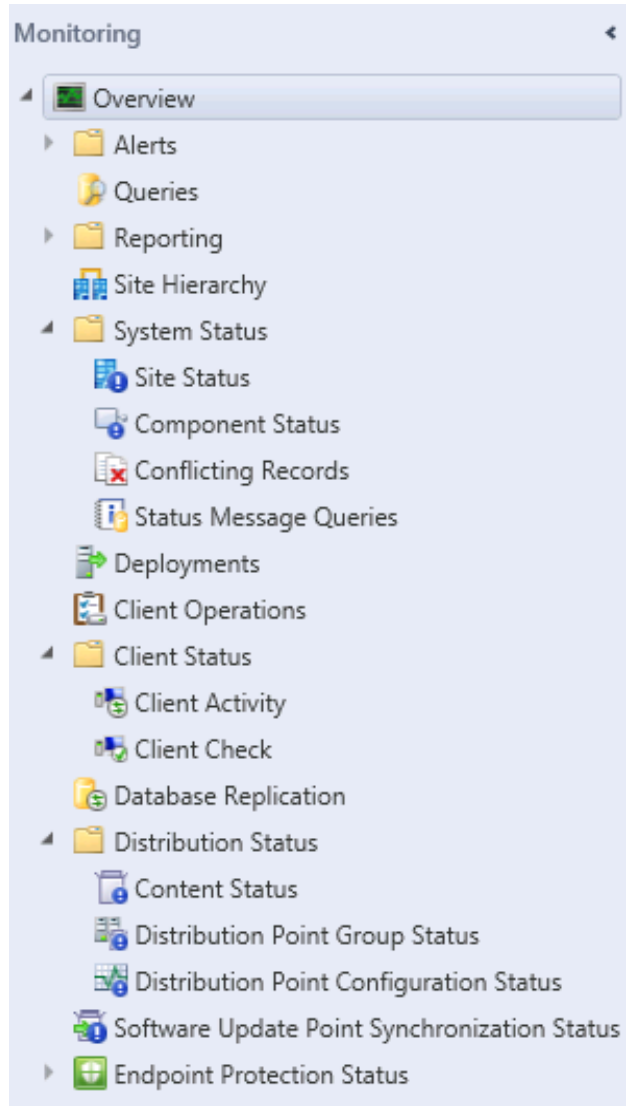
# Using the Software Library Workspace



The Software Library workspace is split into three main nodes:

- Use the Application Management folder to create and manage the software that you deploy in your hierarchy
- Use the Software Updates folder to manage the updates for operating systems and software
- Use the Operating Systems folder to manage the operating systems that you deployed through Configuration Manager

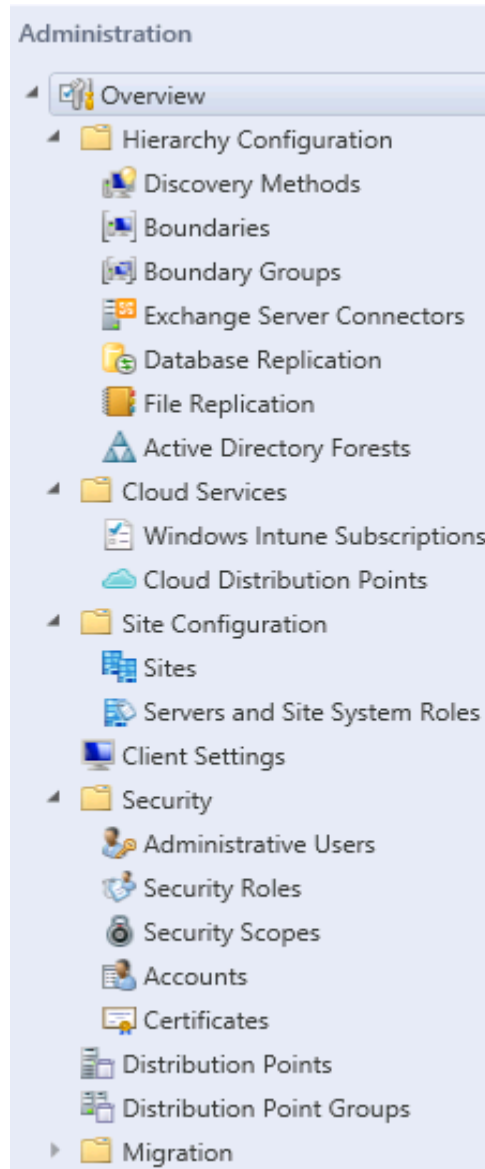
# Using the Monitoring Workspace



## The Monitoring workspace:

- Centralizes all features that you use to extract information about your hierarchy's operations
- Contains alerts that an administrator can configure and that pop up in the management console
- Contains queries that can find any information in the database
- Contains reporting that provides management-friendly reports about stored data
- Contains status-based nodes that report client and system processes for ongoing operations

# Using the Administration Workspace



The Administration workspace provides management capability for the Configuration Manager components:

- Hierarchy configuration contains the settings for discovering users and devices in your hierarchy
- Site configuration contains the settings for the sites and the servers in the sites
- Security contains the settings for the security applied to your hierarchy

# What Are Configuration Manager Log Files?

- All client and site components in Configuration Manager record process information in individual log files
- By default:
  - Logging is enabled for all services
  - Server log files have a maximum size of 2 MB
  - Server logs are in the *<InstallationPath>*\LOGS folder

# Viewing Log Files with the Configuration Manager Trace Log Tool

The Configuration Manager Trace Log Tool:

- Is manually installed
- Simplifies analysis of log files because of its highlighting, filtering, and error-lookup features

The screenshot shows the 'System Center Trace (64-bit)' application window. The title bar indicates the file path: [\Nyc-cfg\sms\_s01\Logs\SMSProv.log]. The interface includes a menu bar (File, Tools, Window, Help) and a toolbar with icons for file operations and a 'Pause Button' (indicated by an arrow). The main area displays a table of log entries with columns for Log Text, Component, Date/Time, and Thread. The table contains several entries, with some highlighted in yellow and one in red. The red entry is an error message: 'Error retrieving object FileType=2'. An arrow points from the text 'Errors automatically identified with a red background' to this red entry.

Log Text	Component	Date/Time	Thread
CSspClassManager::PreCallAction, dbname=CM_S01	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
User Context: CONTOSO\Administrator	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
GetObjectAsync : SMS_SCI_SysResUse.FileType=2,ItemName=["Display=\\Nyc-CFG\\MSWNET:\SMS_SITE=S0...	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
Requested class =SMS_SCI_SysResUse	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
Requested num keys=4	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
~~~~e:\nts_sccm_retail\sms\site\server\sdks\provider\smsprov\SpInterface.h(1190) : Error retrieving object FileType=2~~~~	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
~~~~Error retrieving object FileType=2~~~~	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
CExtUserContext::LeaveThread : Releasing IWBemContextPtr=58744400	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
CExtUserContext::EnterThread : User=CONTOSO\Administrator Sid=0x010500000000005150000006B7142FC0BE0D7E24...	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)
Context: SMSAnnName=SMS Administrator Profile	SMS Provider	8/3/2011 11:05:09 PM	2744 (0xAB8)

Entries with specific text identified with the Highlight tool

The 'Highlight' dialog box is shown, featuring a search input field containing 'Contoso\Administrator' and a 'Case sensitive' checkbox. The dialog includes 'OK' and 'Cancel' buttons. An arrow points from the text 'Entries with specific text identified with the Highlight tool' to the search input field.

Errors automatically identified with a red background