

NOS 03

Implementing Group Policy

Module Overview

- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs

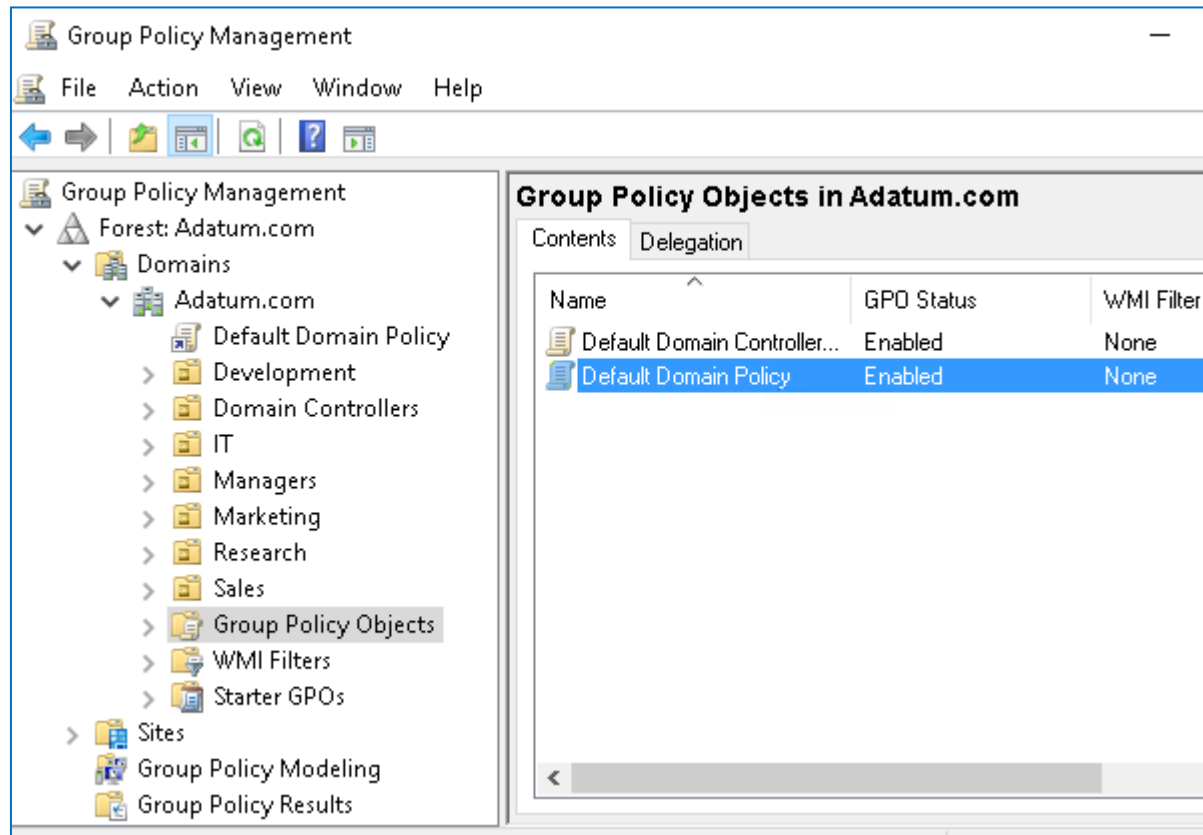
Lesson 1: Introducing Group Policy

- What is configuration management?
- Overview of Group Policy tools and consoles
- Demonstration: Exploring Group Policy tools and consoles
- Benefits of using Group Policy
- Group Policy Objects
- Overview of GPO scope
- Overview of GPO inheritance

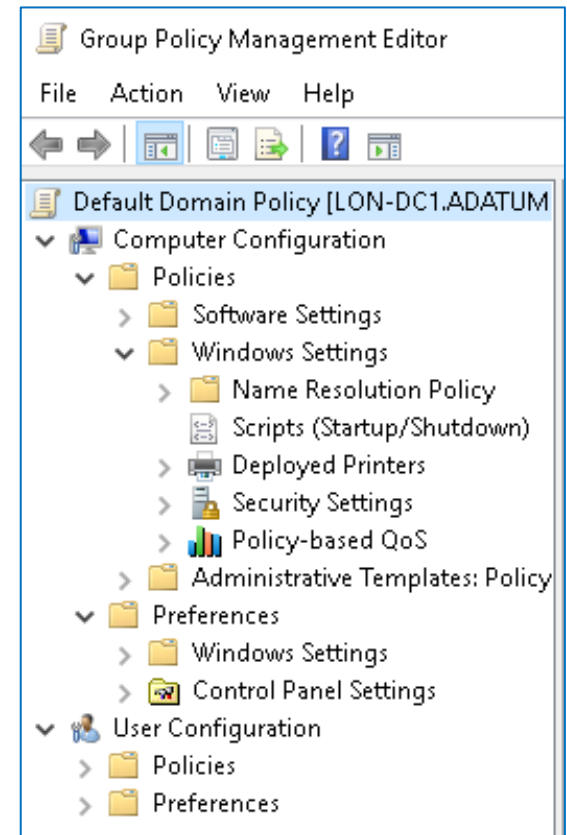
What is configuration management?

- *Configuration management* is a centralized approach to applying one or more changes to more than one user or computer
- The key elements of configuration management are:
 - Setting
 - Scope
 - Application

Overview of Group Policy tools and consoles



Group Policy Management Console



Group Policy Management Editor

Command-line utilities: **GPUpdate** and **GPRresult**

Demonstration: Exploring Group Policy tools and consoles

- In this demonstration, you will learn how to:
 - Navigate the GPMC
 - Create a new GPO
 - Configure a setting
 - Perform a Group Policy refresh
 - Examine which GPOs apply to the computer and user

Group Policy Objects

A GPO is:

- A container for one or more policy settings
- Managed with the GPMC
- Stored in the GPOs container
- Edited with Group Policy Management Editor
- Applied to a specific level in the AD DS hierarchy

Overview of GPO scope

- The *scope* of a GPO is the collection of users and computers that will apply the settings in the GPO
- You can use several methods to scope a GPO:
 - Link the GPO to a container, such as an OU
 - Filter by using security settings
 - Filter by using WMI filters
- For Group Policy preferences:
 - You can filter or target the settings that you configure by Group Policy preferences within a GPO based on several criteria

Overview of GPO inheritance

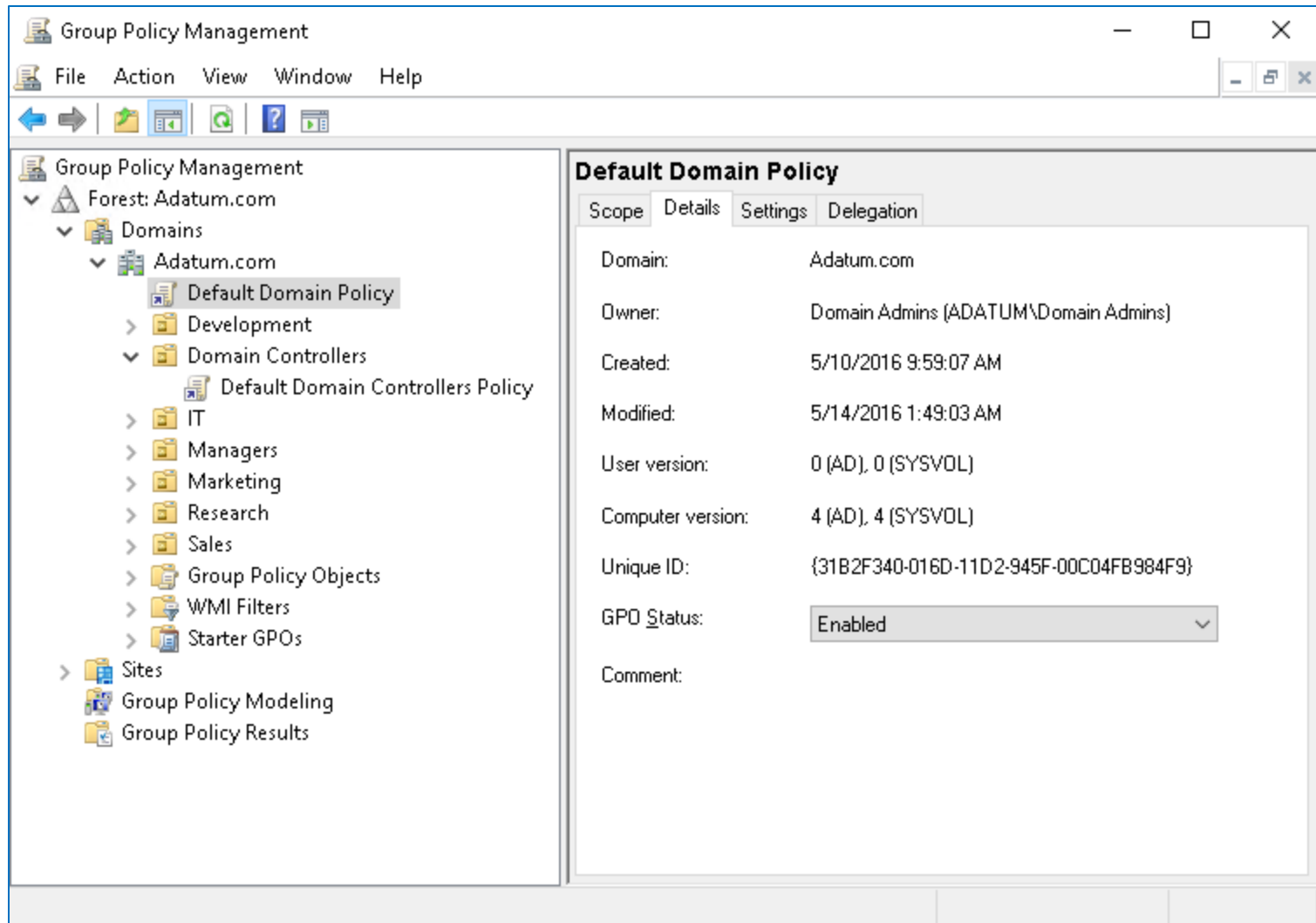
GPOs are processed on a client computer in the following order:

1. Local GPOs
2. Site-level GPOs
3. Domain-level GPOs
4. OU GPOs, including any nested OUs

Lesson 2: Implementing and administering GPOs

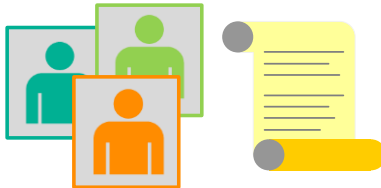
- What are domain-based GPOs?
- GPO storage
- What are starter GPOs?
- Common GPO management tasks
- Delegating administration of Group Policy
- Demonstration: Delegating administration of Group Policy

What are domain-based GPOs?



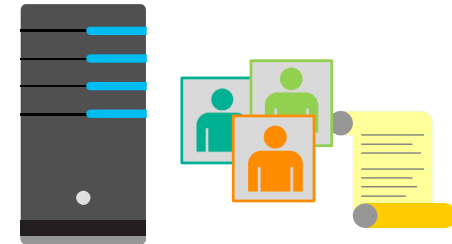
GPO storage

GPO



- Contains Group Policy settings
- Stores content in two locations

Group Policy container



- Stored in AD DS
- Provides version information

Group Policy template

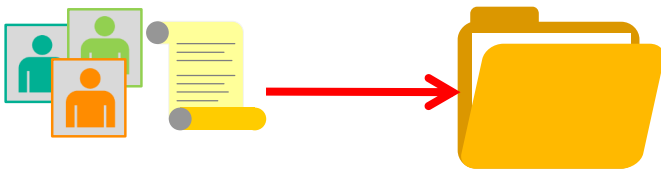


- Stored in shared SYSVOL folder
- Provides Group Policy settings

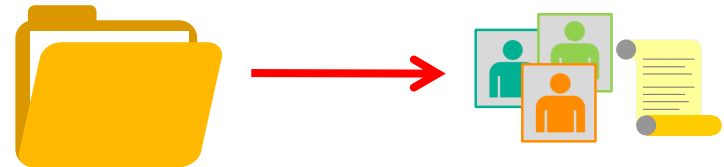
Common GPO management tasks

You can manage GPOs by using GPMC or Windows PowerShell. These are some of the options for managing the state of GPOs:

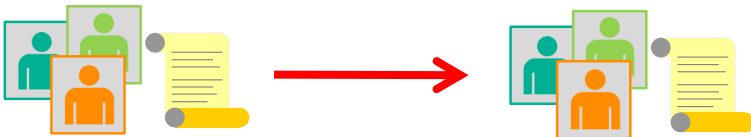
Back up GPOs



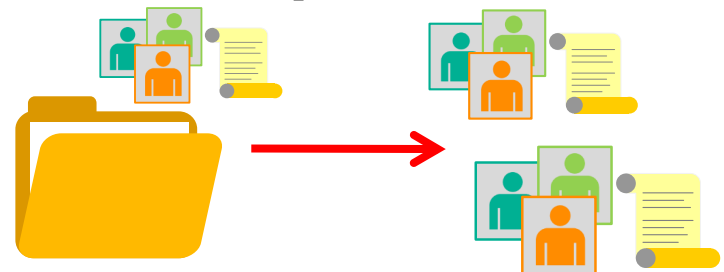
Restore GPOs



Copy GPOs



Import GPOs



Delegating administration of Group Policy

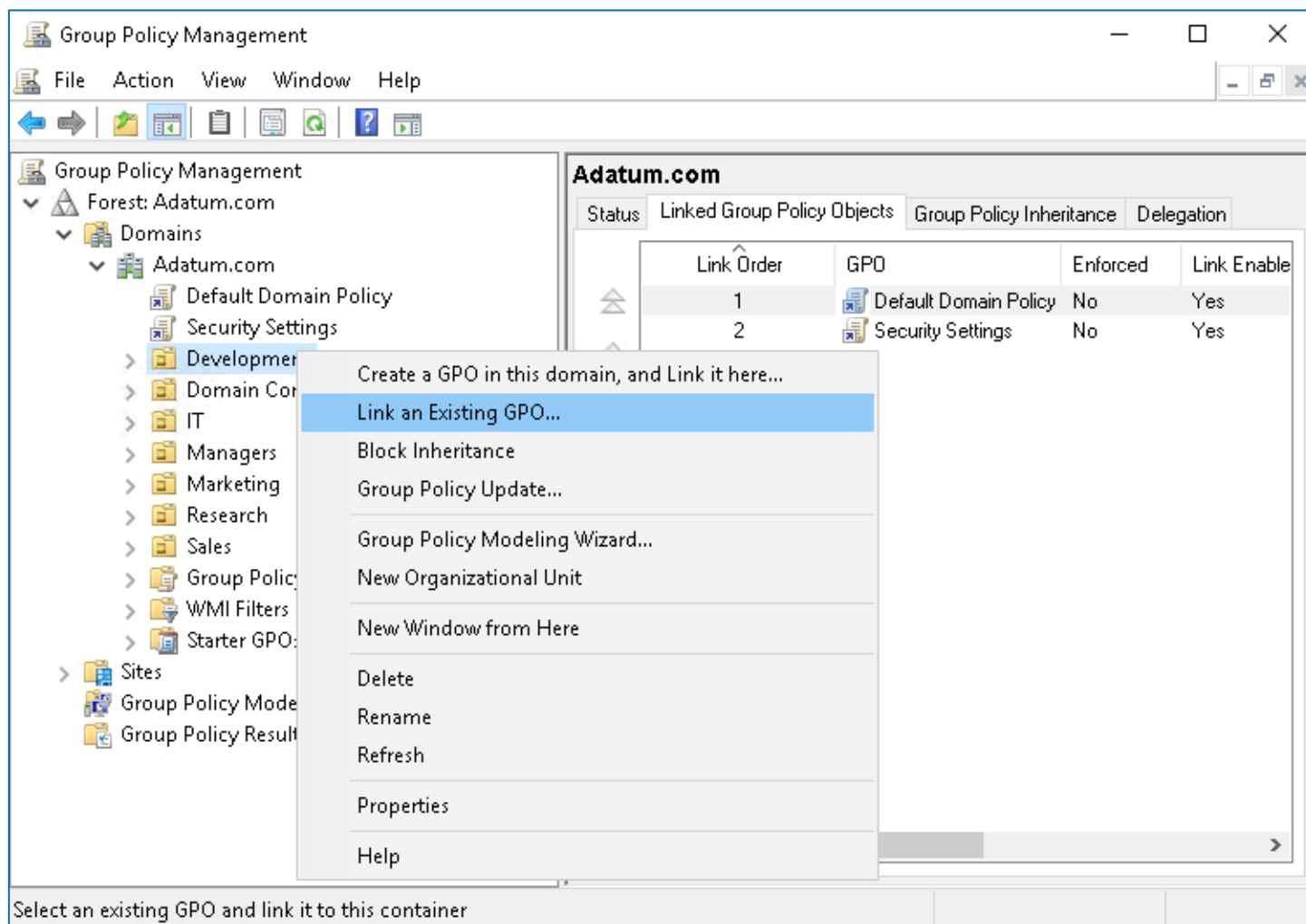
- Delegation of GPO-related tasks allows the administrative workload to be distributed across the enterprise
- You can delegate the following Group Policy tasks independently:
 - Creating GPOs
 - Editing GPOs
 - Managing Group Policy links for a site, domain, or OU
 - Performing Group Policy modeling analysis in a domain or OU
 - Reading Group Policy results data in a domain or OU
 - Creating WMI filters in a domain

Lesson 3: Group Policy scope and Group Policy processing

- What are GPO links?
- Demonstration: Linking GPOs
- Group Policy processing order
- Configuring GPO inheritance and precedence
- Using security filtering to modify Group Policy scope
- What are WMI filters?
- Demonstration: Filtering Group Policy application
- How to enable or disable GPOs and GPO nodes
- Loopback policy processing
- Considerations for slow links and disconnected systems
- Identifying when settings become effective

What are GPO links?

After you have linked a GPO, the users or computers in that container are within the scope of the GPO, including computers and users in child OUs

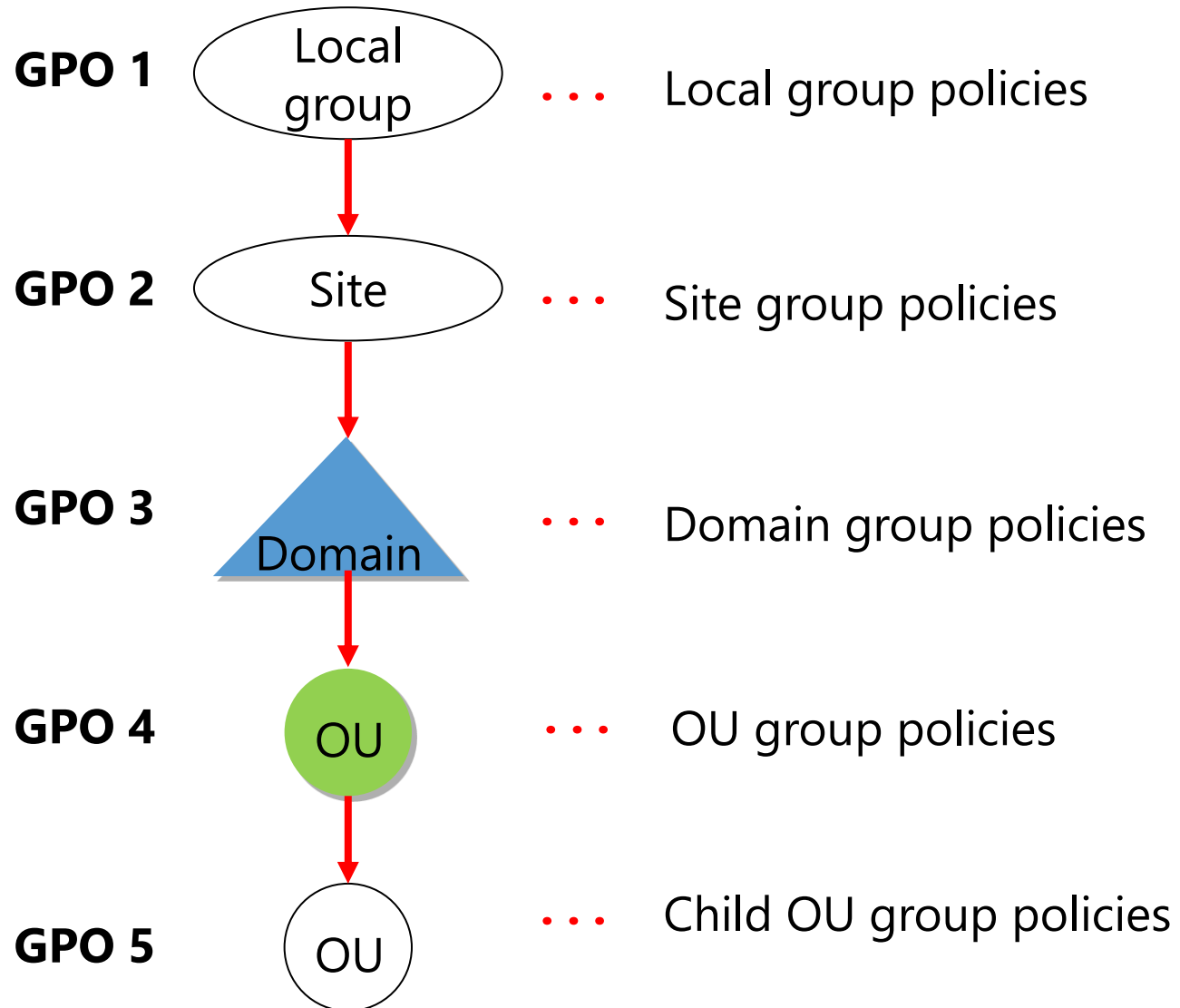


Demonstration: Linking GPOs

In this demonstration, you will learn how to:

- Create and edit two GPOs
- Link the GPOs to different locations
- Disable a GPO link
- Delete a GPO link

Group Policy processing order



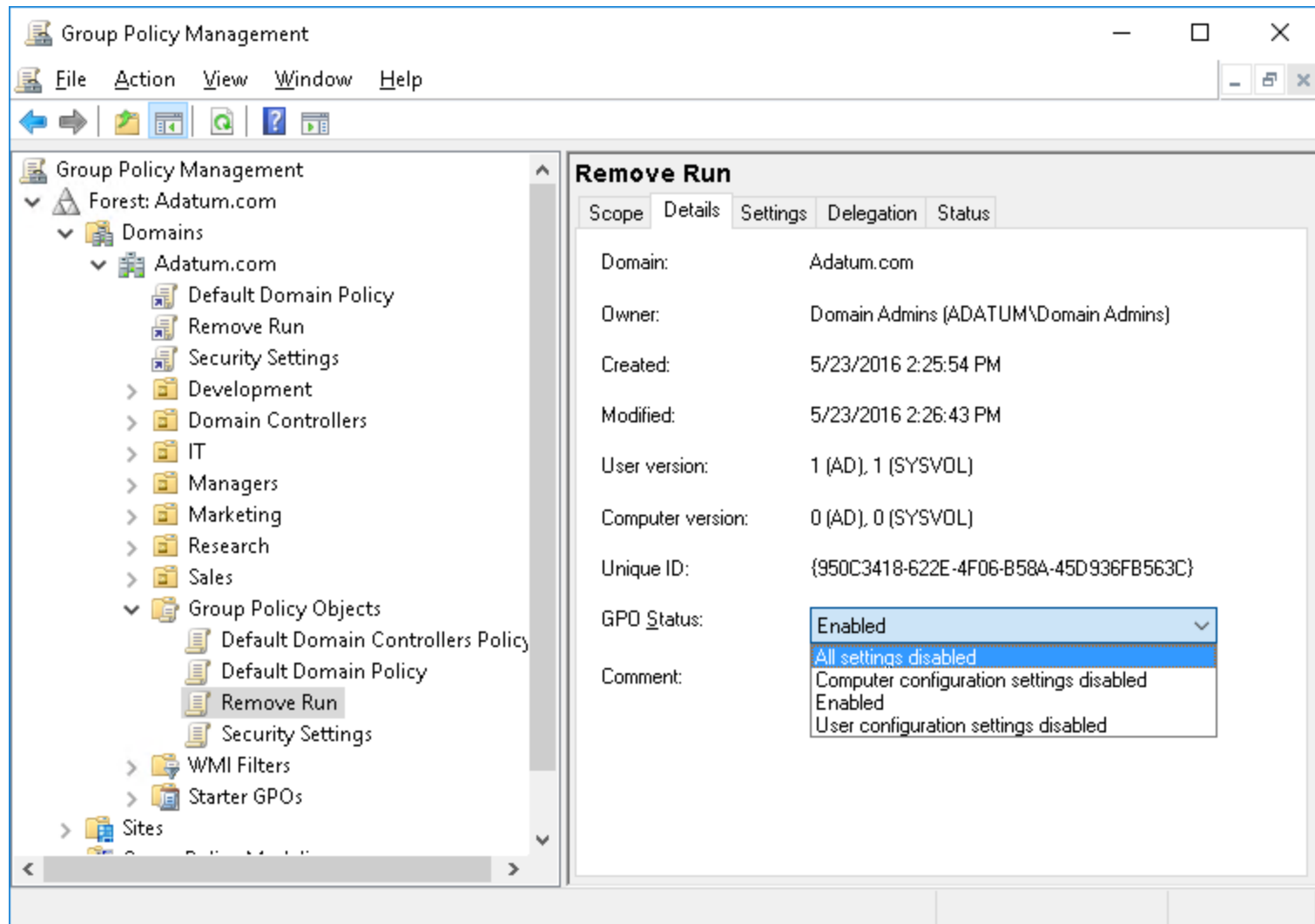
Configuring GPO inheritance and precedence

- The application of GPOs linked to each container results in a cumulative effect called *policy inheritance*:
 - Default precedence: Local → Site → Domain → OU → Child OU... (LSDOU)
 - Visible on the **Group Policy Inheritance** tab
- Link order (attribute of GPO link):
 - Lower number → Higher on list → Precedence
- Block Inheritance (attribute of OU):
 - Blocks the processing of GPOs from a higher level
- Enforced (attribute of GPO link):
 - Enforced GPOs override Block Inheritance
 - Enforced GPO settings win over conflicting settings in lower GPOs

Using security filtering to modify Group Policy scope

- Apply Group Policy permission:
 - GPO has an ACL (**Delegation** tab → **Advanced**)
 - Members of the Authenticated Users group have Allow Apply Group Policy permissions by default
- To scope only to users in selected global groups:
 - Remove the Authenticated Users group
 - Add appropriate global groups: Must be global groups (GPOs do not scope to domain local)
- To scope to users except for those in selected groups:
 - On the **Delegation** tab, click **Advanced**
 - Add appropriate global groups
 - Deny the Apply Group Policy permission

How to enable or disable GPOs and GPO nodes

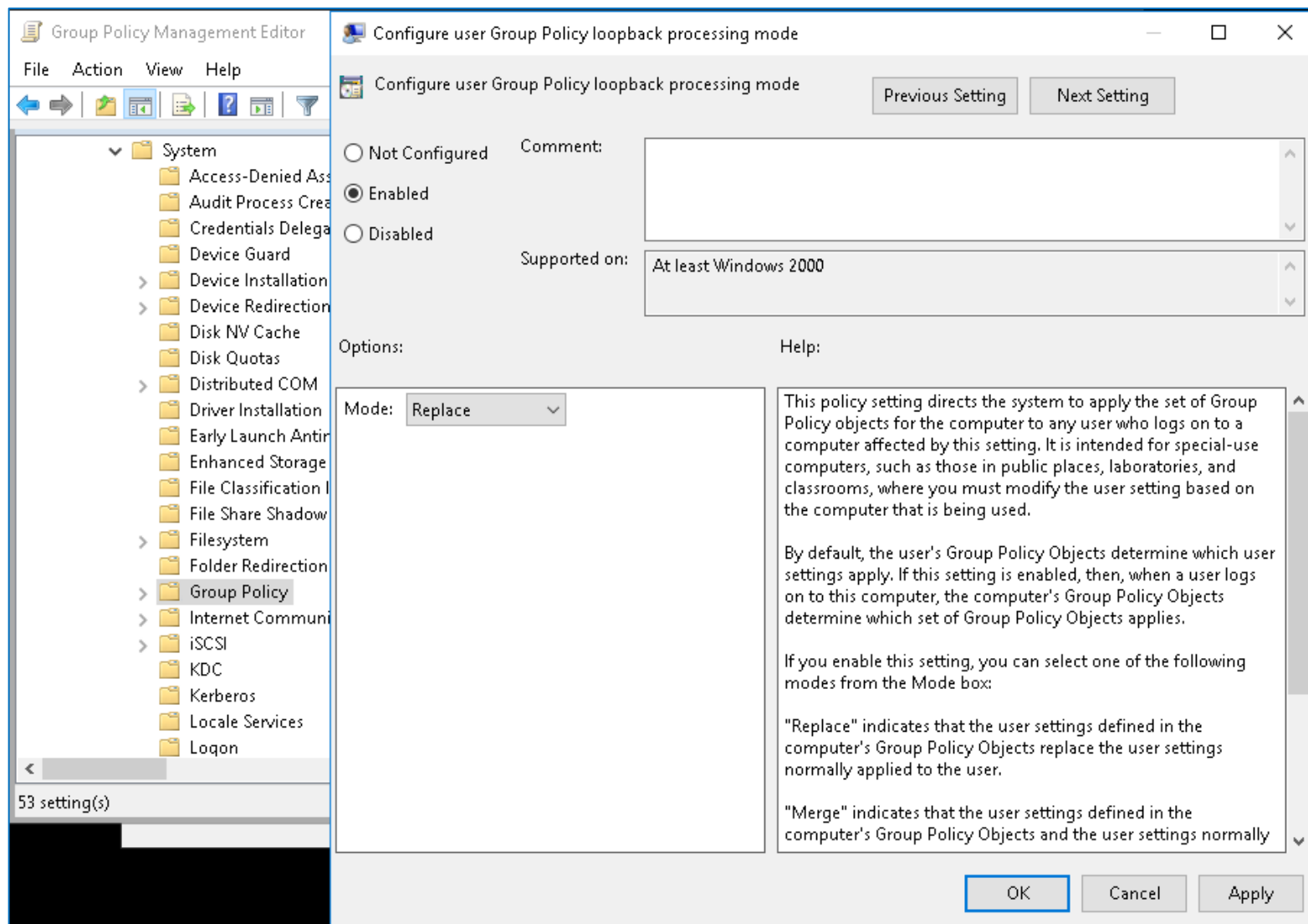


Loopback policy processing

- Provides the ability to apply user Group Policy settings based on the computer to which the user is signing in
- Replace mode:
 - Only the list of GPOs based on the computer object is used
- Merge mode:
 - The list of the GPOs based on the computer have higher precedence than the list of GPOs based on the user
- Useful in closely managed environments and special-use computers, such as:
 - Terminal servers, public-use computers, and classrooms



Loopback policy processing



Lesson 4: Troubleshooting the application of GPOs

- Refreshing GPOs
- What is RSoP?
- Generating RSoP reports
- Demonstration: Performing a what-if analysis with Group Policy Modeling Wizard
- Examining Group Policy event logs
- Detecting Group Policy health issues

Refreshing GPOs

- When you apply GPOs, remember that:
 - Computer settings apply at startup
 - User settings apply at sign-in
 - Policies refresh at regular, configurable intervals
 - Security settings refresh at least every 16 hours
 - Policies refresh manually by using:
 - The **gpupdate** command-line utility
 - With the Remote Group Policy Refresh feature, you can refresh policies remotely

What is RSoP?

RSoP is the net effect of GPOs applied to a user or computer

Group Policy Management

The screenshot displays the Group Policy Management console. The left pane shows the tree structure: Group Policy Management > Forest: Adatum.com > Sites > Group Policy Modeling > Group Policy Results > Alan on LON-CL1. The right pane shows the 'Summary' tab for 'Alan on LON-CL1'. The main content area is titled 'Group Policy Results' and shows 'ADATUMAlan on ADATUMLON-CL1' with data collected on 11/12/2013 1:30:59 AM. Below this, there are sections for 'Computer Details', 'General', 'Component Status', 'Settings', and 'Policies'. The 'Component Status' section contains a table with the following data:

Component Name	Status	Time Taken	Last Process Time	Event Log
Group Policy Infrastructure	Success	484 Millisecond(s)	11/12/2013 1:29:45 AM	View Log
Registry	Success	437 Millisecond(s)	11/6/2013 2:52:48 AM	View Log
Security	Success	8 Second(s) 313 Millisecond(s)	11/6/2013 2:52:56 AM	View Log

The 'Settings' section is expanded, showing 'Policies' with sub-sections: 'Windows Settings', 'Security Settings', 'Account Policies/Password Policy', 'Account Policies/Account Lockout Policy', and 'Local Policies/Security Options'. Each sub-section has a 'show' or 'hide' link.



What is RSoP?

Group Policy Modeling Wizard

Group Policy Modeling Wizard

User and Computer Selection

You can view simulated policy settings for a selected user (or a container with user information) and computer (or a container with computer information).

Example container name: CN=Users,DC=Adatum,DC=com
Example user or computer: ADATUM\Administrator

Simulate policy settings for the following:

User information

☒ Container:

☐ User:

Computer information

☐ Container:

☒ Computer:

☐ Skip to the final page of this wizard without collecting additional data

< Back **Next >** Cancel



Generating RSoP reports

Group Policy Results Wizard

The screenshot displays the Group Policy Management console. The left pane shows the hierarchy: Adatum.com > Group Policy Objects > Administrator on LON-CL1. The right pane shows the 'Group Policy Results' for this GPO. The 'Summary' tab is selected, showing a table of component statuses. The data collected is from 6/6/2012 9:05:16 AM.

Administrator on LON-CL1

Summary | Details | Policy Events

Group Policy Results

ADATUM\administrator on ADATUM\LON-CL1
Data collected on: 6/6/2012 9:05:16 AM [show all](#)

Computer Details [hide](#)

General [hide](#)

Component Status [hide](#)

Component Name	Status	Time Taken	Last Process Time	Event Log
Group Policy Infrastructure	Success	3 Second(s) 703 Millisecond(s)	6/6/2012 9:01:22 AM	View Log
Registry	Success	47 Millisecond(s)	5/14/2012 6:12:58 AM	View Log
Security	Success	1 Second(s) 78	5/14/2012	View Log



Examining Group Policy event logs

Event Viewer

File Action View Help

Operational Number of events: 1,280

Level	Date and Time	Source	Event ID
Information	6/6/2012 9:06:04 AM	Group...	5315
Information	6/6/2012 9:06:04 AM	Group...	8006
Information	6/6/2012 9:06:04 AM	Group...	5320
Information	6/6/2012 9:06:04 AM	Group...	5320
Information	6/6/2012 9:06:04 AM	Group...	5320
Information	6/6/2012 9:06:04 AM	Group...	5314
Information	6/6/2012 9:06:04 AM	Group...	5313
Information	6/6/2012 9:06:04 AM	Group...	5312
Information	6/6/2012 9:06:04 AM	Group...	5017
Information	6/6/2012 9:06:04 AM	Group...	4017
Information	6/6/2012 9:06:04 AM	Group...	5017

Event 5315, GroupPolicy (Microsoft-Windows-GroupPolicy)

General Details

Next policy processing for ADATUM\LON-DC1\$ will be attempted

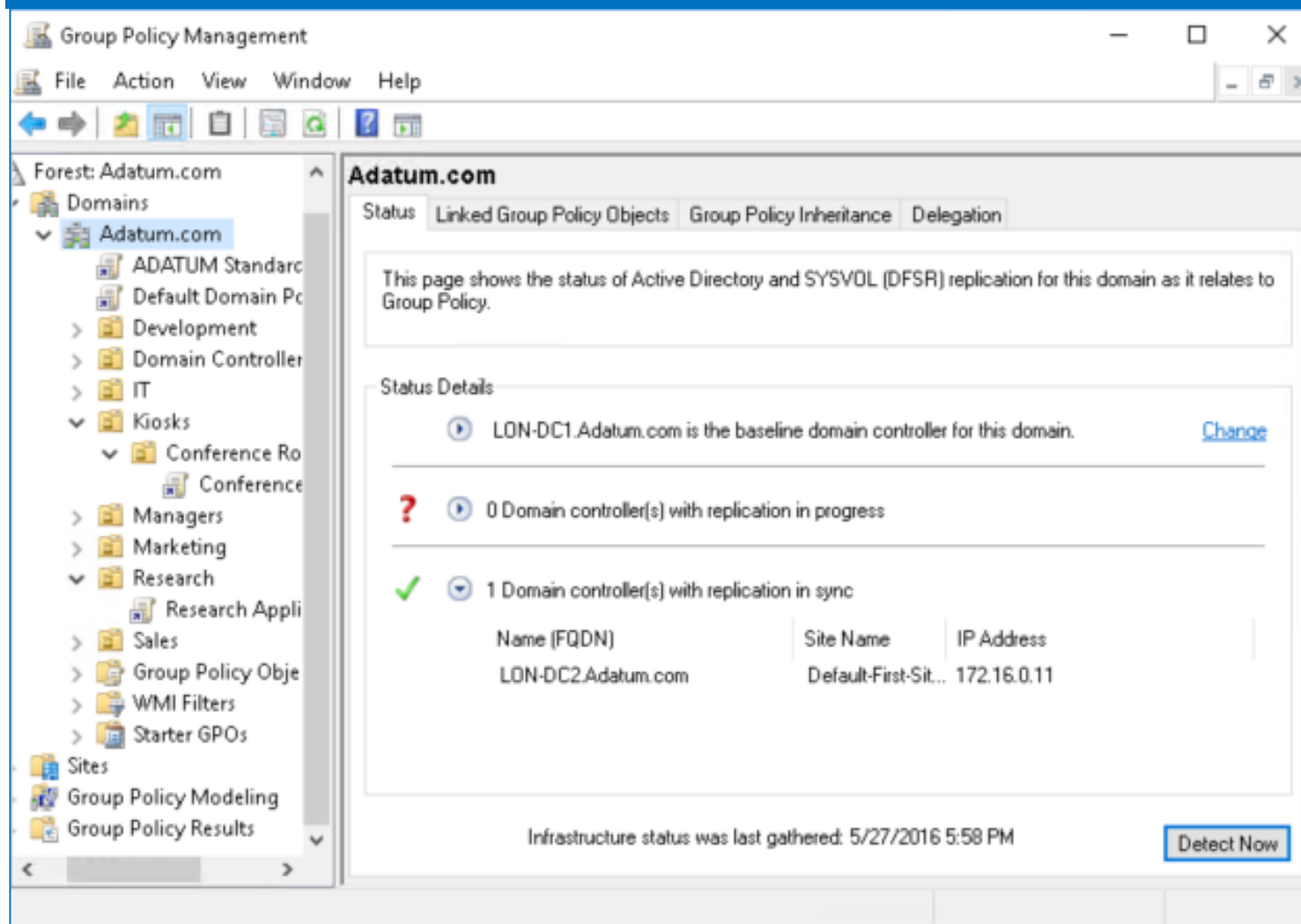
Actions

- Operational
- Open Saved Log...
- Create Custom View...
- Import Custom View...
- Clear Log...
- Filter Current Log...
- Properties
- Disable Log
- Find...
- Save All Events As...
- Attach a Task To this...
- View
- Refresh
- Help
- Event 5315, GroupP...
- Event Properties
- Attach Task To This...

Refreshes the current selection.

Detecting Group Policy health issues

Group Policy health check in Group Policy Management Console



The screenshot displays the Group Policy Management console for the Adatum.com domain. The left-hand navigation pane shows the domain structure, including various organizational units like ADATUM Standard, Development, and Research. The main pane is titled 'Adatum.com' and features tabs for 'Status', 'Linked Group Policy Objects', 'Group Policy Inheritance', and 'Delegation'. The 'Status' tab is active, showing a summary of Active Directory and SYSVOL (DFS) replication. It indicates that LON-DC1.Adatum.com is the baseline domain controller. Below this, it shows '0 Domain controller(s) with replication in progress' (marked with a red question mark) and '1 Domain controller(s) with replication in sync' (marked with a green checkmark). A table lists the domain controller LON-DC2.Adatum.com, its site (Default-First-Sit...), and its IP address (172.16.0.11). At the bottom, it states 'Infrastructure status was last gathered: 5/27/2016 5:58 PM' and includes a 'Detect Now' button.

Group Policy Management

File Action View Window Help

Forest: Adatum.com

Domains

Adatum.com

ADATUM Standard

Default Domain Policy

Development

Domain Controller

IT

Kiosks

Conference Room

Conference Room

Managers

Marketing

Research

Research Applications

Sales

Group Policy Objects

WMI Filters

Starter GPOs

Sites

Group Policy Modeling

Group Policy Results

Adatum.com

Status Linked Group Policy Objects Group Policy Inheritance Delegation

This page shows the status of Active Directory and SYSVOL (DFS) replication for this domain as it relates to Group Policy.

Status Details

LON-DC1.Adatum.com is the baseline domain controller for this domain. [Change](#)

? 0 Domain controller(s) with replication in progress

✓ 1 Domain controller(s) with replication in sync

Name (FQDN)	Site Name	IP Address
LON-DC2.Adatum.com	Default-First-Sit...	172.16.0.11

Infrastructure status was last gathered: 5/27/2016 5:58 PM

[Detect Now](#)

