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

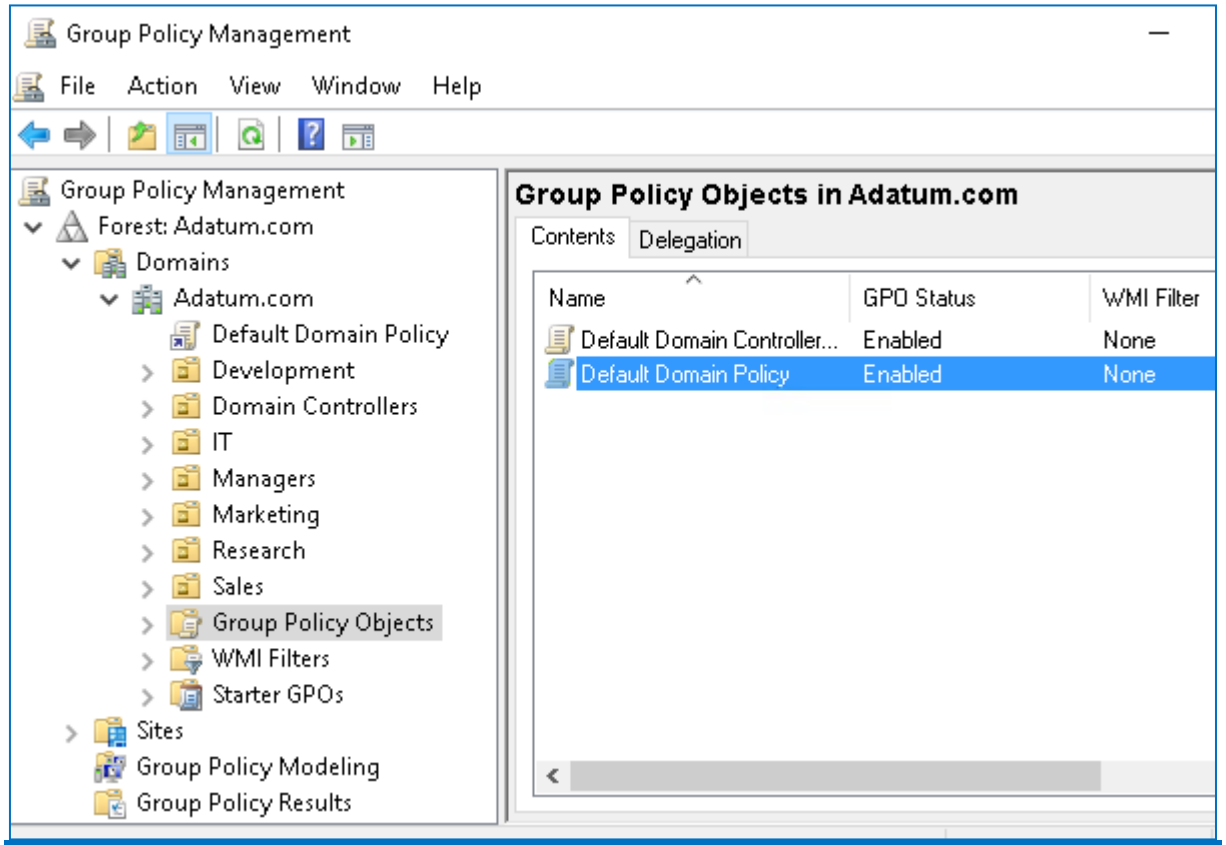
Lesson 1: Introducing Group Policy

- 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

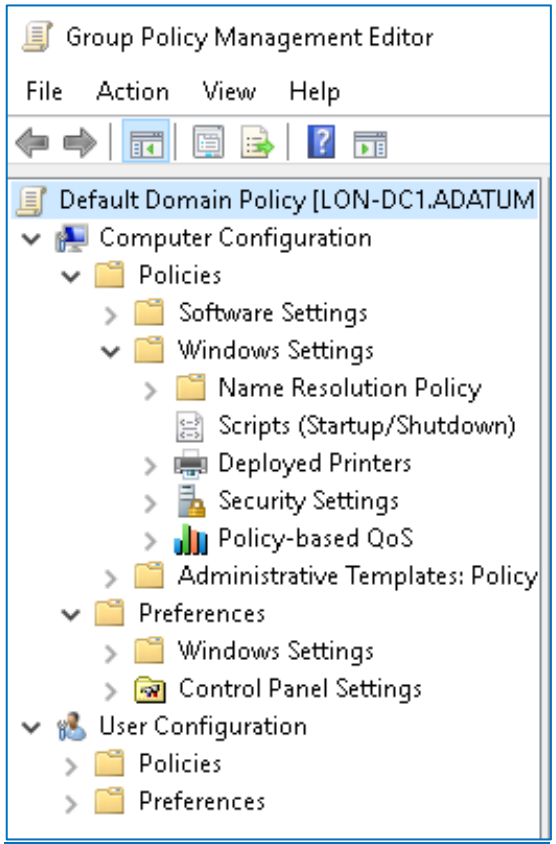
What is configuration management?

- *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 **GPResult**

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

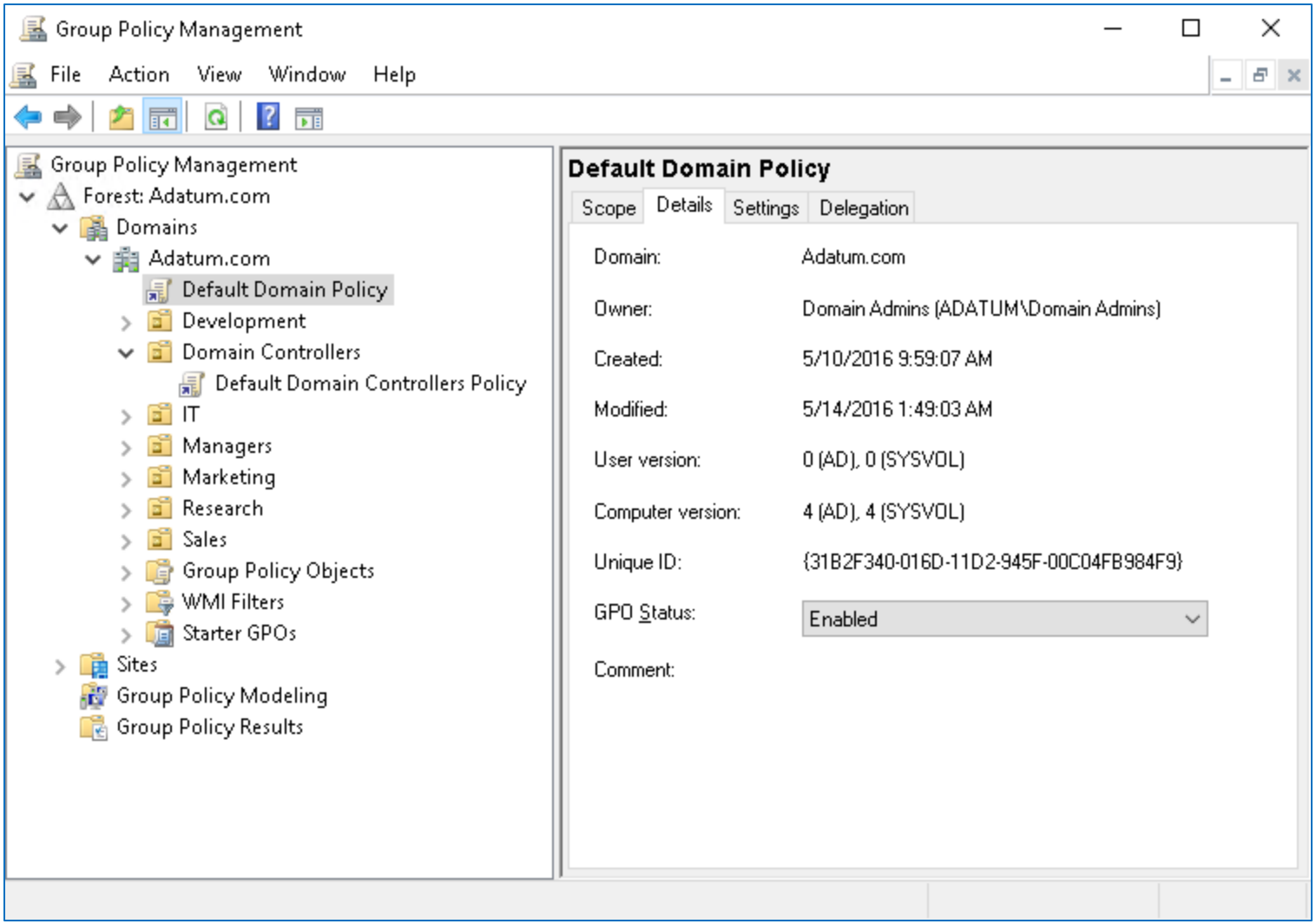
GPOs are processed on a client computer in the following order:

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

Lesson 2: Implementing and administering GPOs

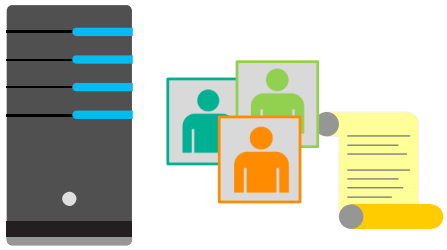
- What are domain-based GPOs?
- GPO storage
- What are starter GPOs?
- Common GPO management tasks
- Delegating administration of Group Policy
- Demonstration: Delegating administration of Group Policy

What are domain-based GPOs?



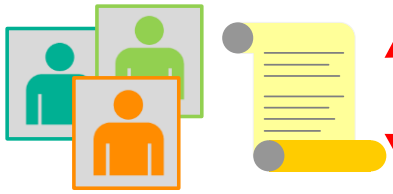
GPO storage

Group Policy container



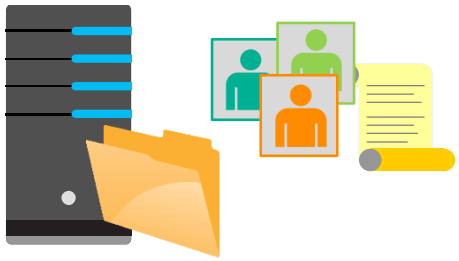
- Stored in AD DS
- Provides version information

GPO



- Contains Group Policy settings
- Stores content in two locations

Group Policy template

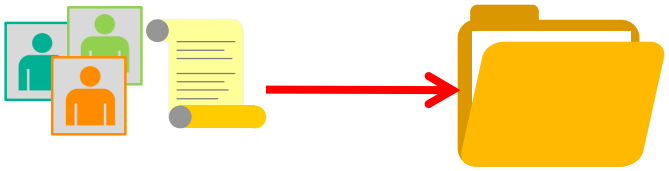


- Stored in shared SYSVOL folder
- Provides Group Policy settings

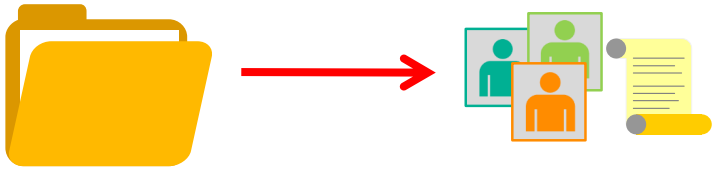
Common GPO management tasks

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

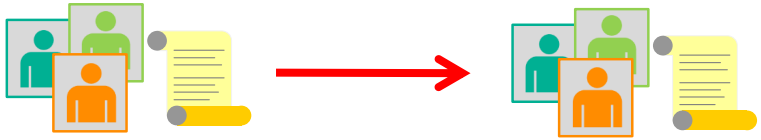
Back up GPOs



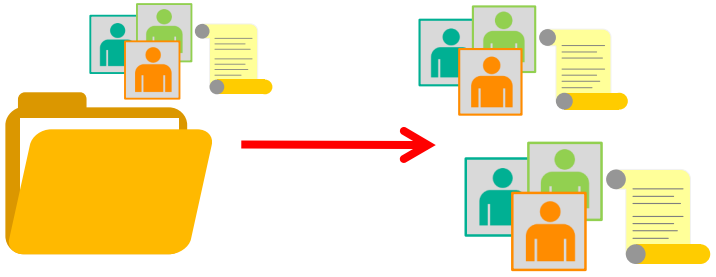
Restore GPOs



Copy GPOs



Import GPOs



Delegating administration of Group Policy

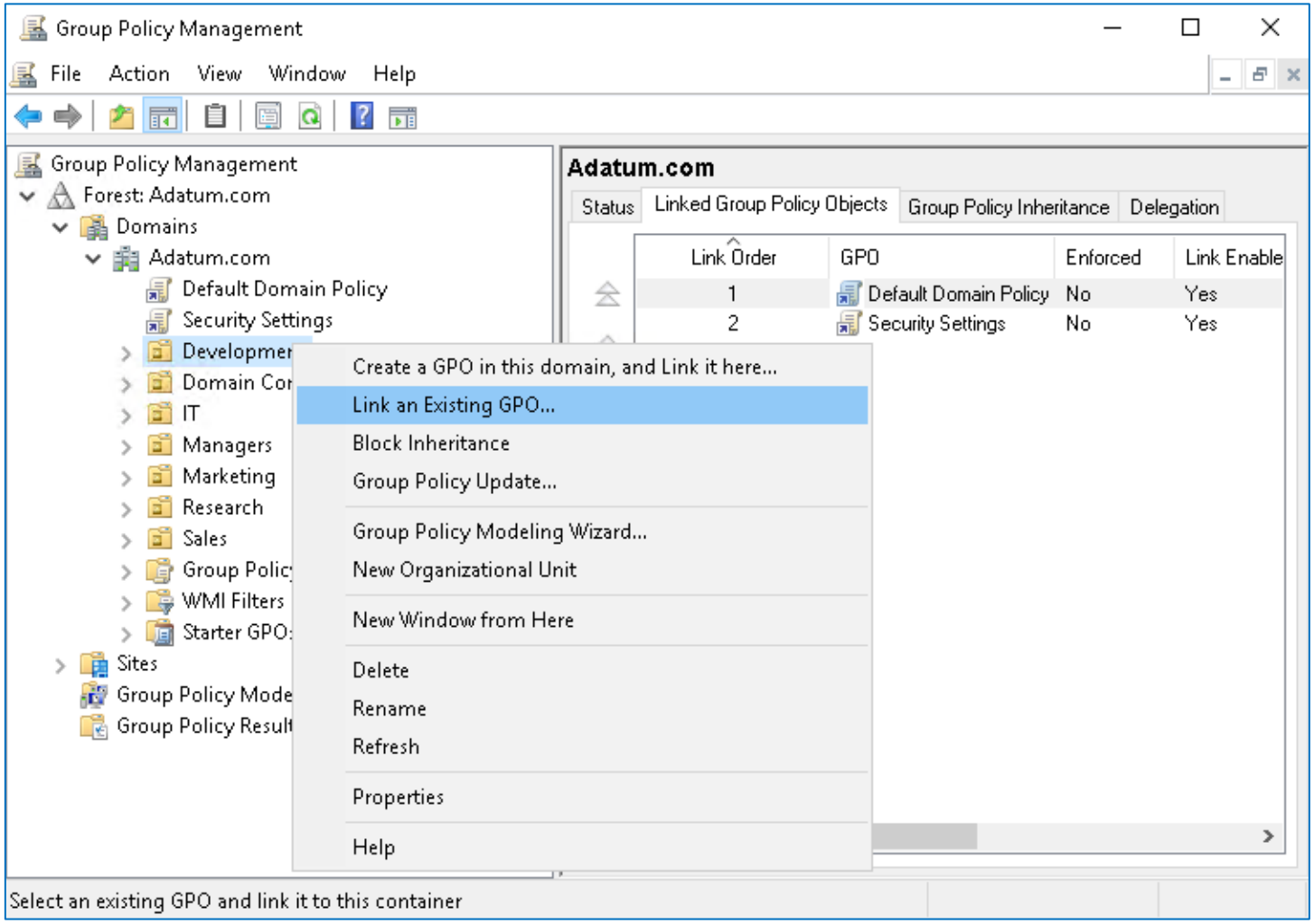
- Delegation of GPO-related tasks allows the administrative workload to be distributed across the enterprise
- You can delegate the following Group Policy tasks independently:
  - Creating GPOs
  - Editing GPOs
  - Managing Group Policy links for a site, domain, or OU
  - Performing Group Policy modeling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

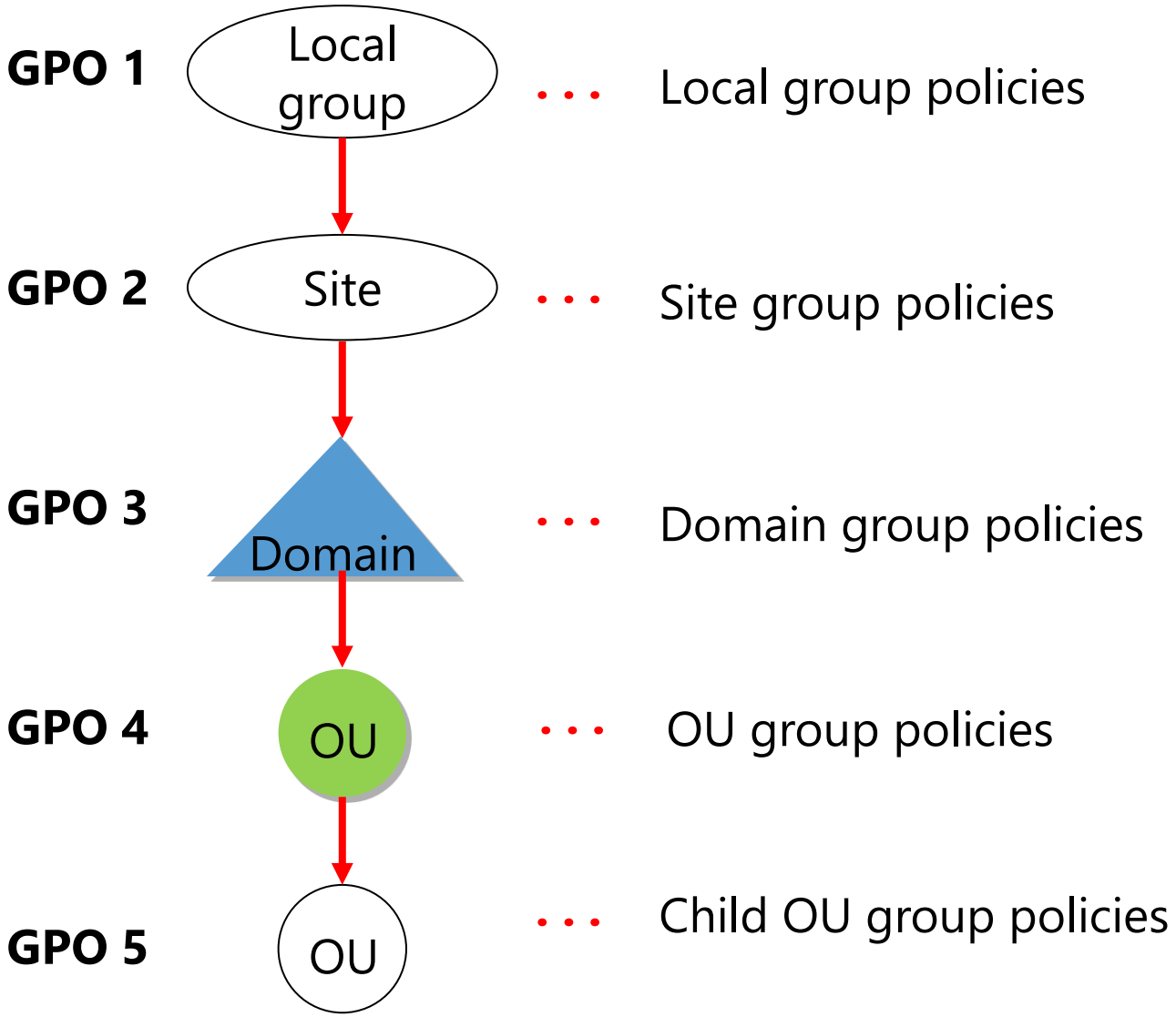


Demonstration: Linking GPOs

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



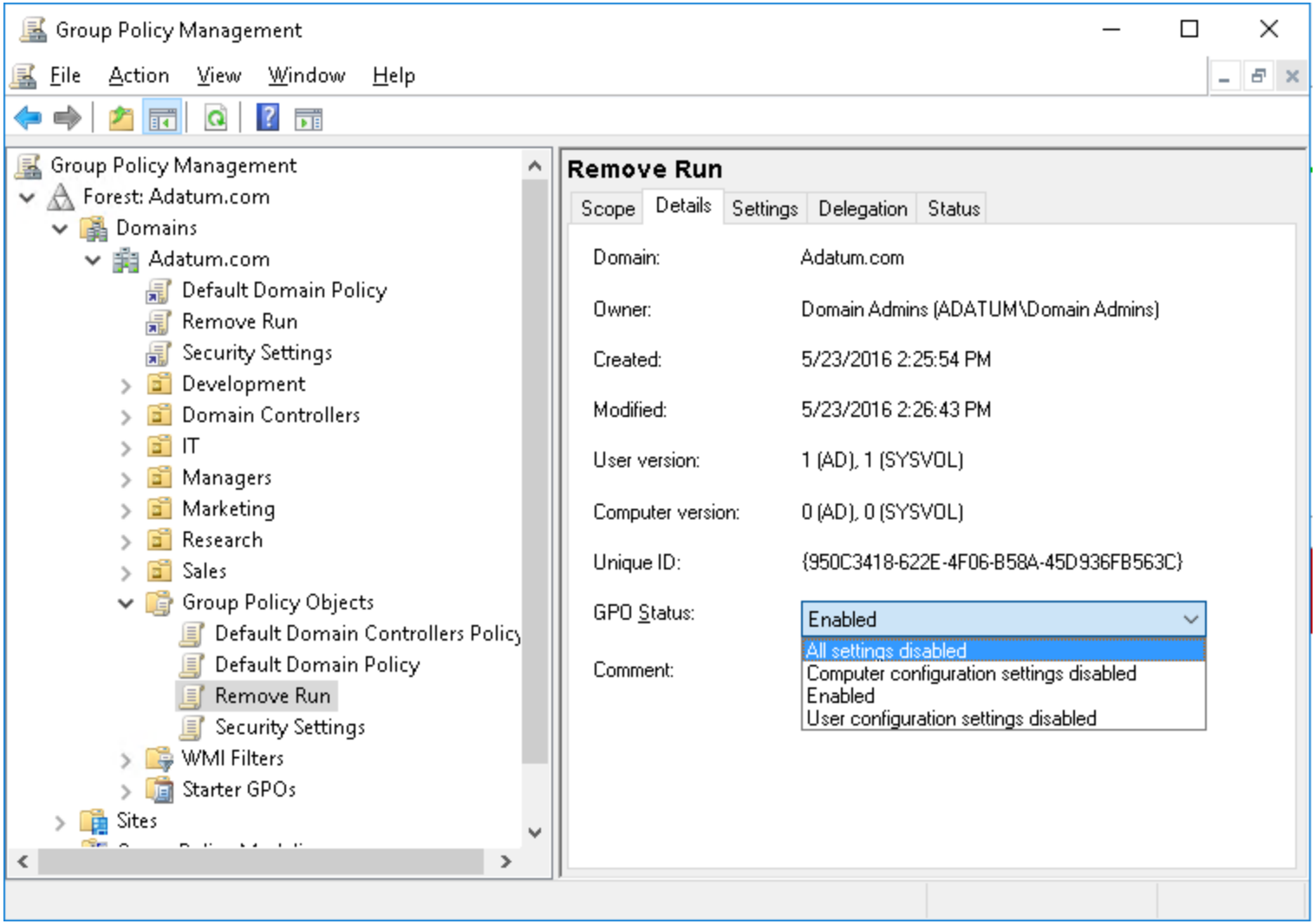
Configuring GPO inheritance and precedence

- 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

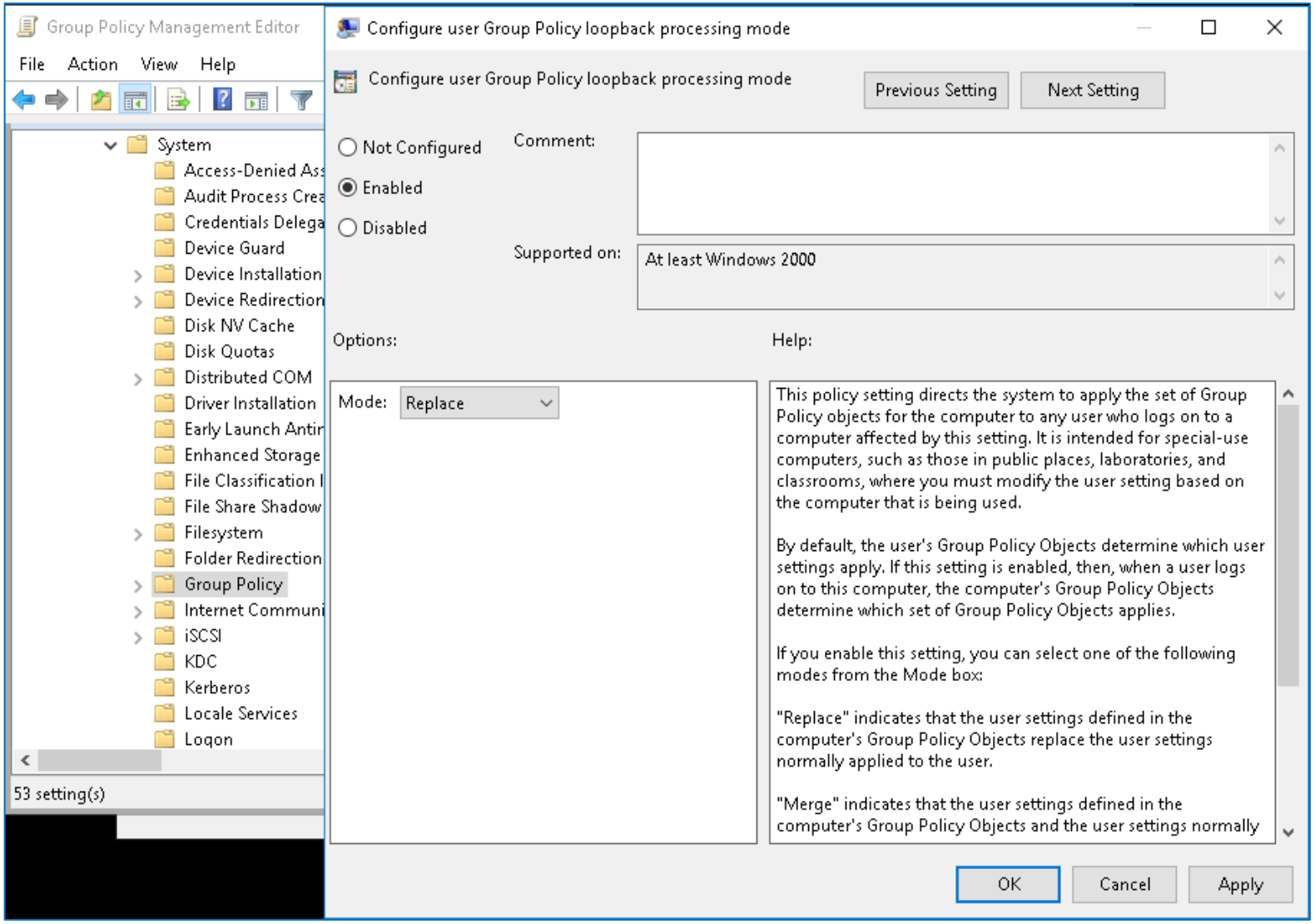
How to enable or disable GPOs and GPO nodes



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

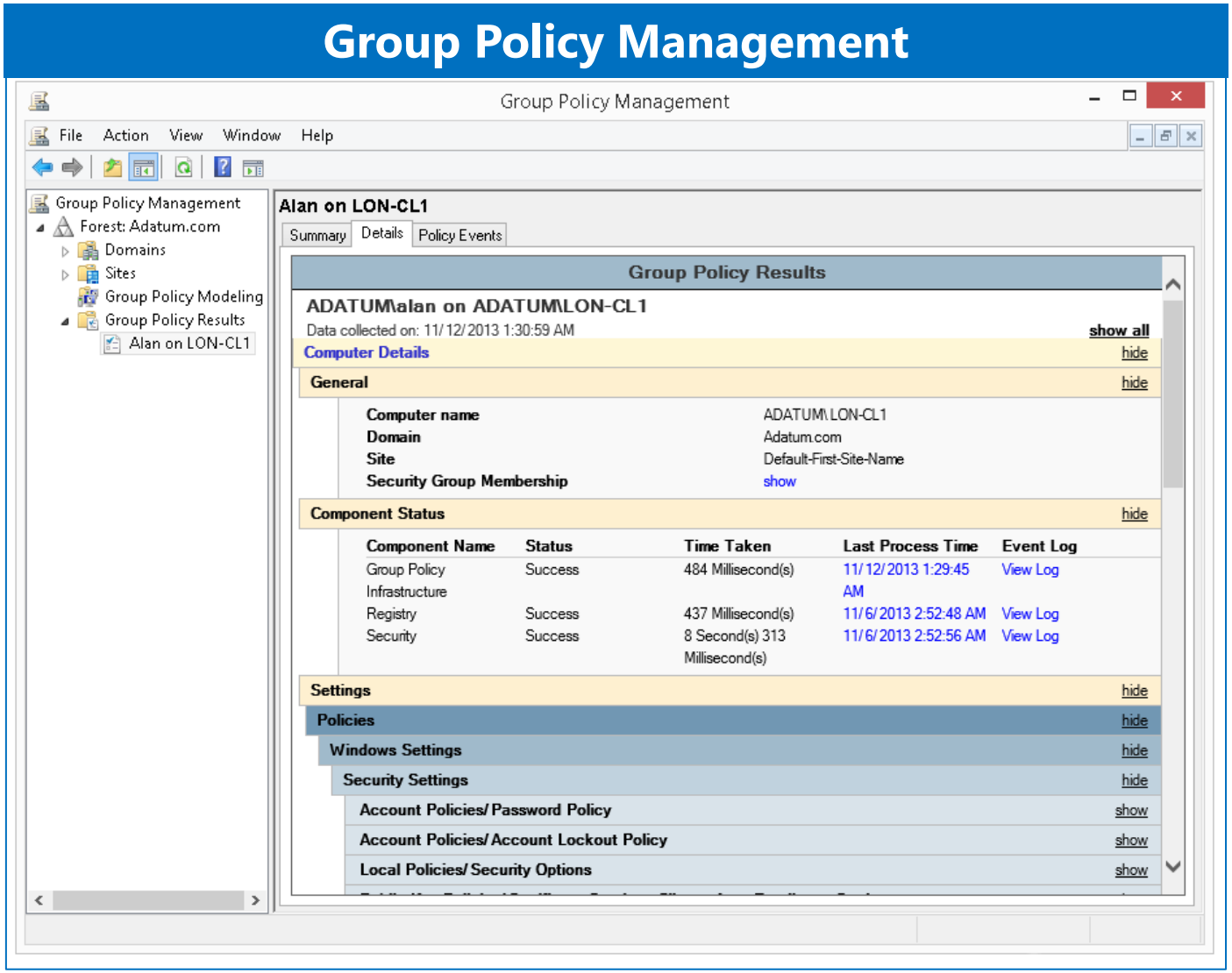
- Refreshing GPOs
- What is RSoP?
- Generating RSoP reports
- Demonstration: Performing a what-if analysis with Group Policy Modeling Wizard
- Examining Group Policy event logs
- Detecting Group Policy health issues

Refreshing GPOs

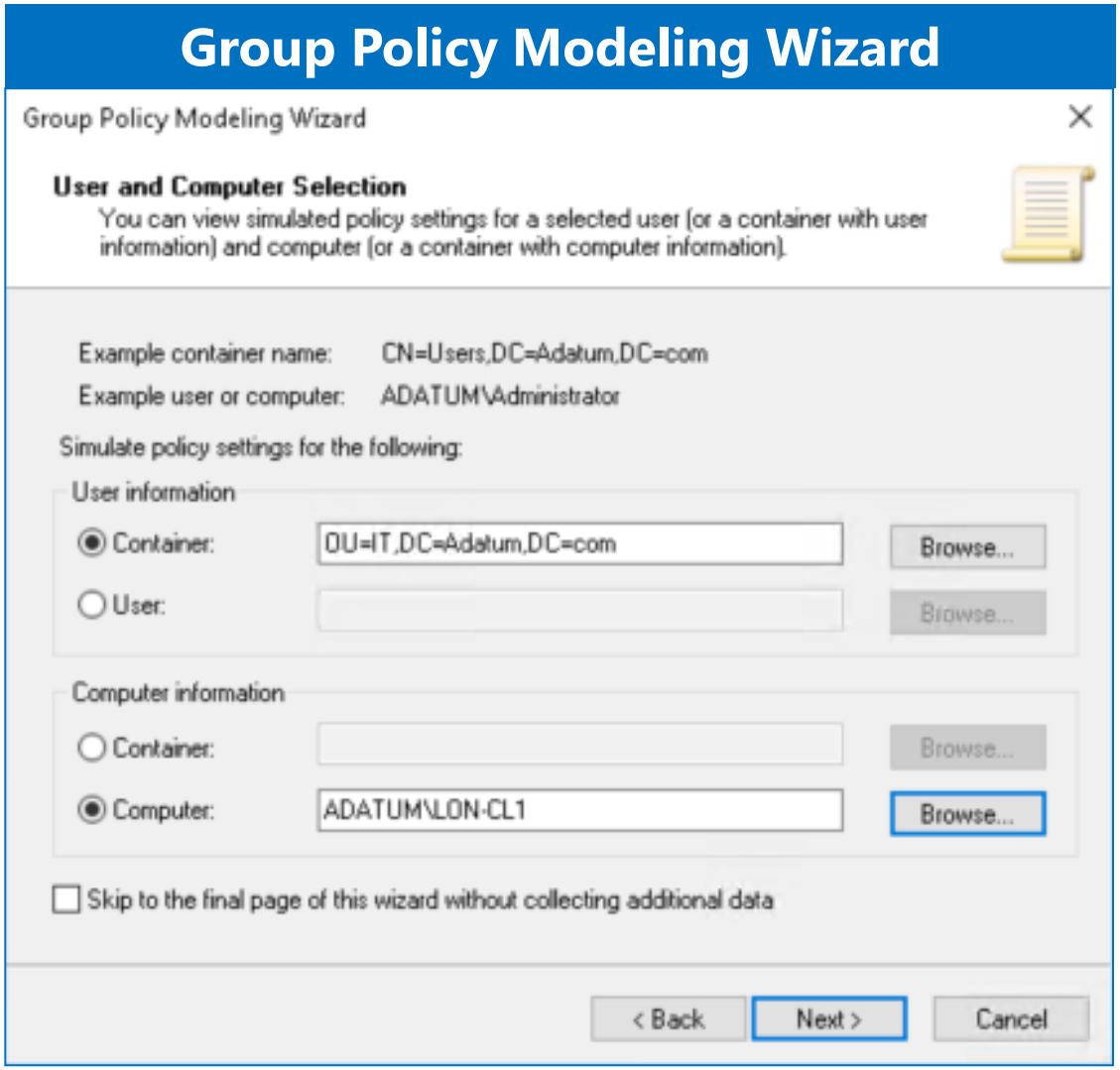
- When you apply GPOs, remember that:
  - Computer settings apply at startup
  - User settings apply at sign-in
  - Polices refresh at regular, configurable intervals
  - Security settings refresh at least every 16 hours
  - Policies refresh manually by using:
    - The **gpupdate** command-line utility
  - 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

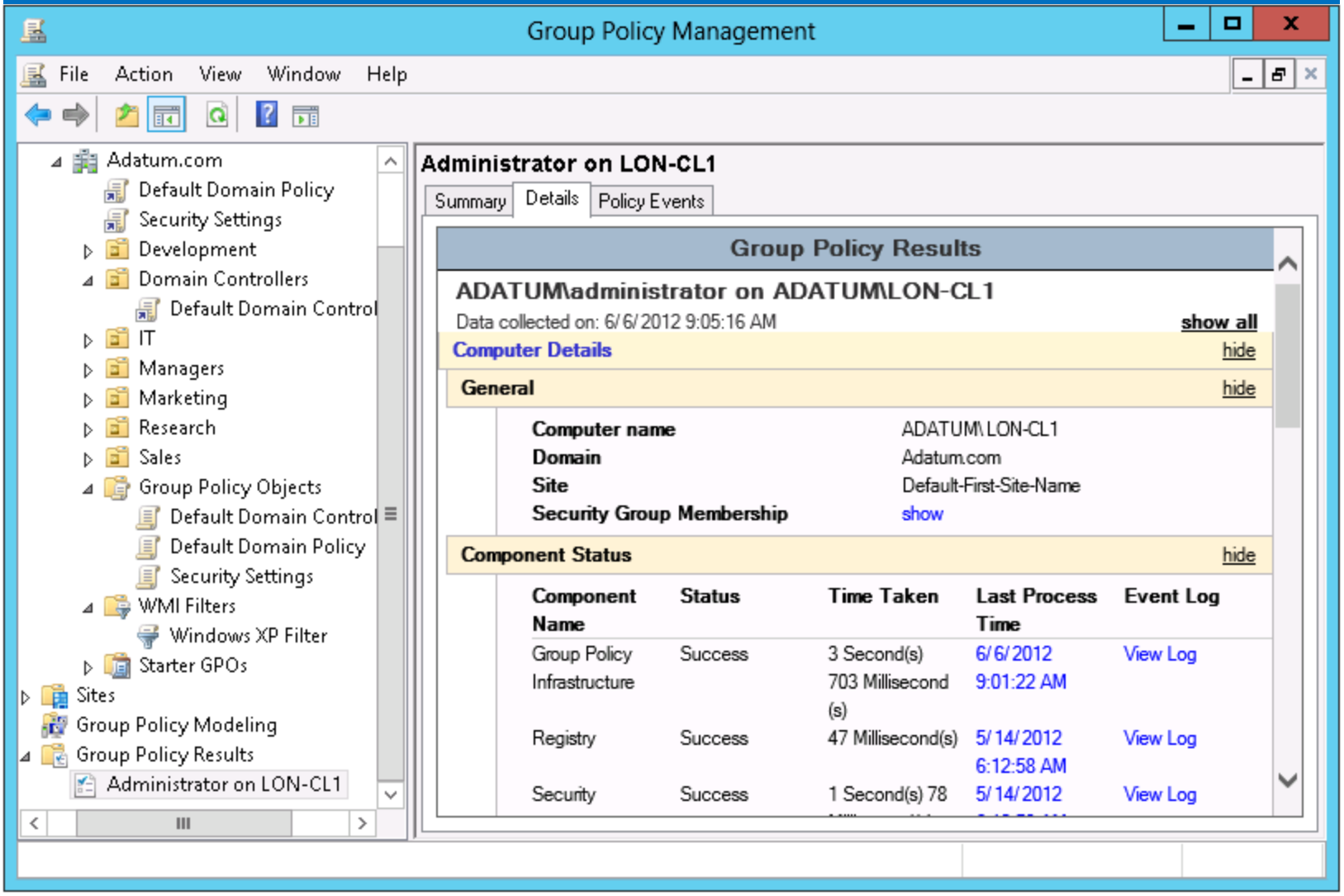


What is RSoP?

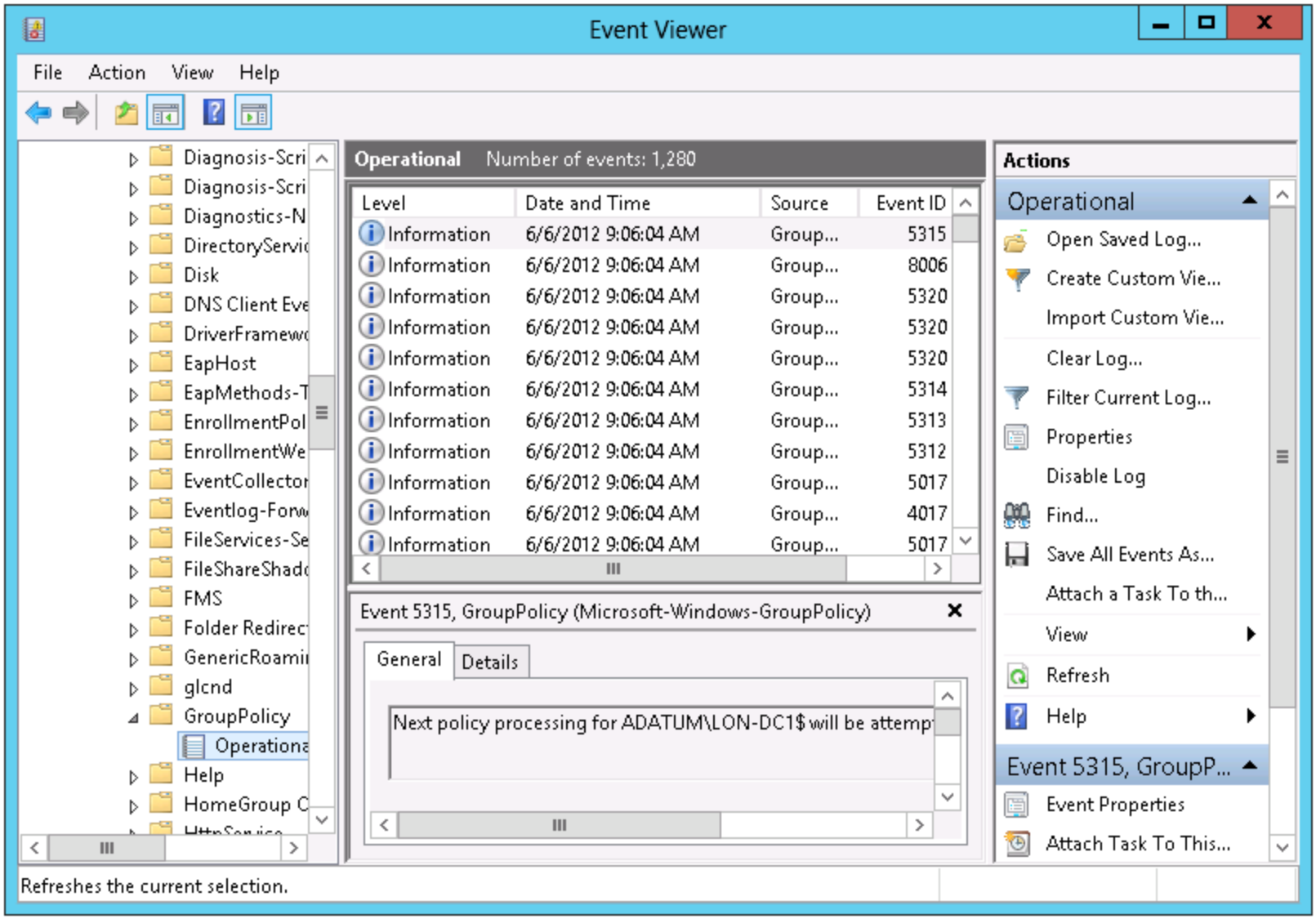

Group Policy Modeling Wizard
Group Policy Modeling Wizard
User and Computer Selection
You can view simulated policy settings for a selected user (or a container with user information) and computer (or a container with computer information).
Example container name: CN=Users,DC=Adatum,DC=com
Example user or computer: ADATUM\Administrator
Simulate policy settings for the following:
User information
Container: OU=IT,DC=Adatum,DC=com
Browse...
User:
Browse...
Computer information
Container:
Browse...
Computer: ADATUM\LON-CL1
Browse...
Skip to the final page of this wizard without collecting additional data
< Back
Next >
Cancel

Generating RSoP reports

Group Policy Results Wizard



Examining Group Policy event logs



Detecting Group Policy health issues

Group Policy health check in Group Policy Management Console