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# Directory and Resource Administrator and Exchange Administrator User Guide

February 2016

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# About This Book and the Library

The *User Guide* provides conceptual information about Directory and Resource Administrator (DRA) and Exchange Administrator (ExA). This book defines terminology, provides quick tours of all user interfaces, and guides users step-by-step through administration and Exchange tasks.

## Intended Audience

This book provides information for individuals responsible for performing directory, resource, and Exchange administration tasks within a secure, distributed administration model.

## Other Information in the Library

The library provides the following information resources:

### **Installation Guide**

Provides detailed planning and installation information.

### **Administrator Guide**

Provides conceptual information about the DRA and ExA. This book defines terminology and includes implementation scenarios.

### **Trial Guide**

Provides product trial and evaluation instructions and a product tour.

### **Help**

Provides context-sensitive information and step-by-step guidance for common tasks, as well as definitions for each field on each window.

# Conventions

The library uses consistent conventions to help you identify items throughout the documentation. The following table summarizes these conventions.

Convention	Use
<b>Bold</b>	<ul style="list-style-type: none"><li>◆ Window and menu items</li><li>◆ Technical terms, when introduced</li></ul>
<i>Italics</i>	<ul style="list-style-type: none"><li>◆ Book and CD-ROM titles</li><li>◆ Variable names and values</li><li>◆ Emphasized words</li></ul>
<b>Fixed Font</b>	<ul style="list-style-type: none"><li>◆ File and folder names</li><li>◆ Commands and code examples</li><li>◆ Text you must type</li><li>◆ Text (output) displayed in the command-line interface</li></ul>
Brackets, such as [value]	<ul style="list-style-type: none"><li>◆ Optional parameters of a command</li></ul>
Braces, such as {value}	<ul style="list-style-type: none"><li>◆ Required parameters of a command</li></ul>
Logical OR, such as value1   value2	<ul style="list-style-type: none"><li>◆ Exclusive parameters. Choose one parameter.</li></ul>

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# About NetIQ Corporation

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# 1 Introduction

NetIQ Enterprise Administration solutions provide enterprise customers with the ability to safely and securely delegate administrative privileges across their Windows server, Active Directory, Group Policy and Exchange server environments. Combined with detailed auditing of and reporting on administrative activities, NetIQ Enterprise Administration solutions provide organizations with unprecedented levels of accountability while reducing the costs associated with daily operations, internal policy, and regulatory compliance activities.

Organizations have increasingly relied upon Active Directory for the central management of identities and for the authentication and authorization of those identities to the network and IT services. However, assuring the security, availability and integrity of Active Directory requires more than just delegating permissions or changing group memberships. IT Governance and auditors also require proof that policies and procedures are enforced, that changes are tracked, and that administrators are not able to manage beyond the scope of their responsibilities.

NetIQ Directory and Resource Administrator (DRA) delivers an unparalleled ability to control who can manage what within Active Directory while protecting the consistency and integrity of its information by validating all administrative changes. Through granular delegation of permissions, robust change management policies, and automation that simplifies workflows, DRA reduces down time and operational risks to Active Directory that are posed by the consequences of malicious or accidental changes.

NetIQ Exchange Administrator (ExA) extends the powerful features of DRA to provide seamless management of Microsoft Exchange. Through a single, common user interface, ExA delivers policy-based administration for the management of directories, mailboxes and distribution lists across your Microsoft Exchange environment.

Together, DRA and ExA provide the solutions you need to control and manage your Active Directory, Microsoft Windows, and Microsoft Exchange environments.

Key benefits of DRA include:

## **Policy and regulation compliance**

Involves the assessment, operation, and control of systems and resources in accordance with security standards, best practices, and regulatory requirements and provides logging and auditing capabilities that help demonstrate compliance.

## **Operational integrity**

Prevents malicious or incorrect changes that affect the performance and availability of systems and services by providing granular access control for administrators and managing access to systems and resources.

## **Process enforcement**

Maintains the integrity of key change management processes that help you improve productivity, reduce errors, save time, and increase administration efficiency.

## 1.1 What are DRA and ExA?

DRA and ExA are comprehensive account and resource management products for the key Microsoft identity and messaging platforms, Active Directory and Exchange. Using a flexible, rules-based management model, both DRA and ExA deliver capabilities that streamline administration, increase security, assure operational integrity, and ease the challenges of regulatory compliance for your Active Directory and Microsoft Exchange messaging environments.

An enterprise-scale directory and resource management product, DRA controls and manages Active Directory administration. Its powerful policy-based management, coupled with its safe, distributed administration, dramatically reduces administration efforts and costs. DRA provides increased data security while protecting the integrity of your Active Directory content.

ExA extends the power and flexibility of DRA to include Microsoft Exchange management. Within the context of account administration, you can manage mailboxes, Microsoft Exchange permissions, contacts, and distribution lists. DRA and ExA provide a single, integrated solution for controlling and managing complex IT environments.

## 1.2 What DRA and EXA Provide

DRA and ExA allow you to manage your enterprise within the context of a dynamic security model. This model ensures that your enterprise management and security remains current as your enterprise changes and evolves.

DRA and ExA provide advanced delegation and robust, policy-based administration features that improve the security and efficiency of your Microsoft Windows environment. They provide a secure, integrated administration solution for the following environments:

- ♦ Microsoft Windows Server 2008 Active Directory, Microsoft Windows Server 2008 R2 Active Directory, Microsoft Windows Server 2012 Active Directory, and Microsoft Windows Server 2012 R2 Active Directory
- ♦ Microsoft Exchange Server 2007, Microsoft Exchange Server 2010, Microsoft Exchange Server 2013, and Microsoft Exchange Online

DRA and ExA offer significant flexibility using patented ActiveView technology and granular delegation. An ActiveView is a dynamic set of objects, such as user accounts or computers, that you want an administrator to collectively manage. ActiveViews can include or exclude objects from multiple domains, OUs, and groups into virtual containers for easy administration. With ActiveViews, administrators only see the objects they can manage, without exposing them to the other objects present across the managed environment.

Granular delegation lets you securely distribute specific tasks, such as resetting a user password or modifying Microsoft Exchange mailbox rights. The flexibility of ActiveViews helps eliminate many of the problems associated with managing data in difficult-to-change, hierarchical structures.

DRA and ExA also help you assure compliance with internal policies and with regulatory requirements. For example, DRA offers dual-key security, so you can require two people to independently confirm portions of the same workflow. You can delegate one administrator to send a user account to the Recycle Bin, and another administrator to review the action and either approve the decision or revoke the change. DRA provides additional reports, logging, and auditing capabilities to help you demonstrate compliance with policies and with regulatory requirements.

With the Web Console, DRA and ExA provide out-of-the-box relief where you want to delegate administrative tasks, but do not want to deploy the product console. For example, you may want employees to manage their personal information, or provide limited privileges to a Help Desk



organization. This easy-to-use, task-based interface significantly reduces administration time and lets you securely delegate specific tasks without additional training. You can quickly and easily customize the scope of the administration tasks you want to make available from the Web Console

These technologies seamlessly join and manage data from multiple sources across your enterprise, including Active Directory, Microsoft Exchange, and computer resources. To further expand these benefits, DRA and ExA let you apply policies to directory updates that can extend beyond the directory itself to other applications and databases, making the task of enterprise management easy.

DRA lets you define administration policies that it then automatically propagates and enforces for all DRA users, increasing security and reducing administration costs. This model is dynamic, so as your enterprise changes, objects inherit the appropriate level of security.

DRA and ExA help you automate and streamline many routine administration tasks, such as creating a user account and home share for a new employee. While many automated Active Directory administration tasks are provided out-of-the-box, you can also extend DRA and ExA using well-known standard interfaces such as the Active Directory Service Interfaces (ADSI) and Windows Terminal Server (WTS). DRA and ExA also provide tools, such as automation triggers and the DRA Software Development Kit (SDK), so you can integrate enterprise administration with your current business systems.

DRA supports 64-bit platforms, providing you with increased scalability, increased performance, reduced query time, and more effective use of memory.

Using state-of-the-art technology, these products provide the features you need to create a more secure, productive, and manageable Active Directory and Microsoft Exchange environment.

## 1.3 How DRA and ExA Help You

Managing Active Directory and Microsoft Exchange mailboxes offers specific challenges for administrators. You can benefit from using DRA and ExA regardless of where your enterprise is in the Microsoft Windows evolution.

### 1.3.1 Provide Regulatory Compliance

DRA and ExA provide a number of features to help you maintain compliance with the ever-increasing number of regulations your organization must meet. For example, DRA provides the following features:

#### **Recycle Bin**

Holds certain inactive objects, like user accounts, groups, contacts, and computer accounts to meet retention policy requirements and helps restore these objects to their original state.

#### **Dual-Key Tasks**

Let you require task confirmation by two independent administrators to complete the action.

#### **Policy Enforcement and Automation**

Help you define and enforce change management processes, access control, and auditing.

#### **Naming Convention Enforcement**

Controls data entries so they comply with specific conventions you establish and maintain data consistency.

## Transform User Tasks

Help you control access to resources, pruning unnecessary permissions and adding appropriate permissions when users in your organization change positions.

By providing granular access control and change management for Microsoft Windows permissions, your organization can document its compliance with regulations that affect your industry.

## 1.3.2 Maintain Control of Active Directory

Using DRA and ExA, you can reduce the number of privileged accounts and provide much more granular access control for administrators, Help Desk personnel, and even your employees. Tightly managing access and permissions helps protect your Microsoft Windows environment from the risks of power escalation or inadvertent security threats. With over 60 roles and more than 300 granular powers, you can always delegate *who can do what to whom or what* to exactly the right person.

DRA and ExA help you maintain control by logging all administrator actions and presenting information in clear and comprehensive reports. DRA includes logging before and after values of changed properties and stores data in a tamper-resistant, write-once technology that stands up to the rigors of chain of custody processes. This accountability helps you meet internal and external audit goals. The Recycle Bin lets you disable unused objects but store information about them to meet retention policy requirements.

## 1.3.3 Increase Administration Efficiency

DRA allows you to create and use a management model that reflects how you think and work rather than confining you to an inflexible directory topology. For example, IT planners can use the Delegation and Configuration Console to design a dynamic ActiveView security model and delegate administration to span OUs, domains, trees, or forests.

By providing multiple user interfaces, DRA lets you easily delegate other operations to the correct administrator in your organization. IT administrators can manage the logically grouped user accounts, computers, mailboxes, and resources in their ActiveViews using the Account and Resource Management Console. Help Desk personnel can use the Web Console to manage routine user account and mailbox changes.

The DRA dynamic security and management model and role-based user interfaces help streamline Active Directory management and increase efficiency for every level of administrator in your organization. Because DRA and ExA each support multiple versions of Microsoft Windows and Microsoft Exchange, the products provide a unified administrative interface for your entire Microsoft Windows and Microsoft Exchange environment.

## 1.3.4 Reduce Administration Costs

Automation and extensibility features make DRA and ExA the perfect choice as you seek ways to reduce administration expense. By automating repetitive and complex tasks and using granular delegation, you can enhance your security efforts, improve regulatory compliance, and distribute account administration duties to reduce costs and improve service.

The following features help you automate, streamline, control, audit, and unify user account, computer, mailbox, and resource administration:

- ♦ Automation triggers that automatically perform specific tasks before and after an administrator action is completed

- ♦ Support for automated, rules-based provisioning of Active Directory based on external datasources
- ♦ Scriptable LDAP-compatible ADSI provider so you can query Active Directory and run scripts to automate your routine processes
- ♦ SDK that supports multiple development languages, making customized workflows accessible to most organizations
- ♦ Domain controller-directed actions let you unlock accounts or reset passwords in near real time to minimize end-user down time caused by replication delay

DRA and ExA can help you slash administrative costs enforcing business and security policies.

### 1.3.5 Ensure Data Integrity

Managing any data set that contains inconsistencies creates security risks and may interfere with efficient operations. You can publish naming policies and permission guidelines for different accounts, but users may not remember to follow the guidelines. DRA can automatically enforce your policies, ensuring Active Directory consistency and reducing data clutter. DRA and ExA help enforce best practices for change management, access control, and auditing to help you maintain a trouble-free and consistent Active Directory environment.

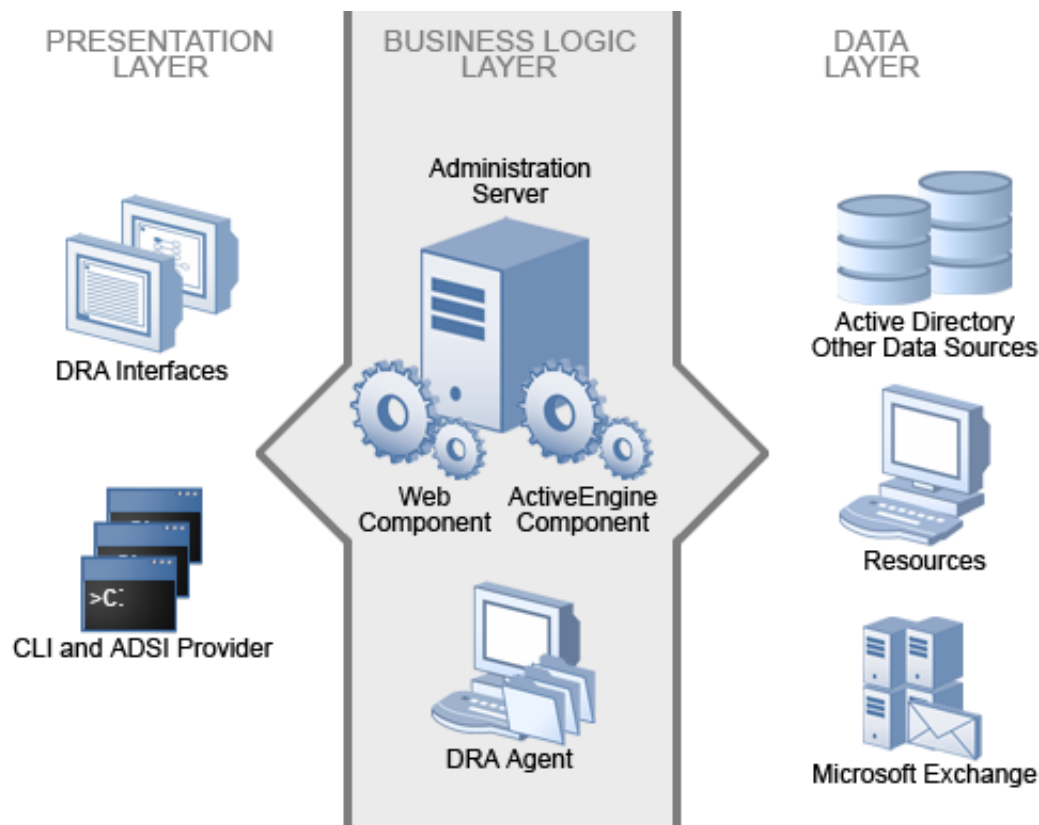
## 1.4 How DRA and ExA Work

DRA and ExA support several open, extensible standards and services. DRA and ExA include the following user-friendly interfaces for Active Directory and Microsoft Exchange:

- ♦ Account and Resource Management Console
- ♦ Delegation and Configuration Console
- ♦ Web Console
- ♦ DRA Reporting (in the DRA consoles and through NetIQ Reporting Center)
- ♦ Command-Line Interface (CLI)
- ♦ Active Directory Service Interfaces (ADSI)

These products use the same native interfaces as the native Active Directory and Microsoft Exchange administration consoles. Therefore, DRA and ExA are as secure and reliable as Active Directory and Exchange. These products do not modify Active Directory in any way.

DRA and ExA support a three-tiered architecture that efficiently distributes workload into three functional layers, namely the presentation layer, business logic layer, and data layer. Each layer addresses different processes and functions and enables fast performance and reduced network load.



## 1.4.1 Presentation Layer

The Presentation layer provides a variety of user interfaces to meet various needs, including distributed administration, auditing and reporting, and batch processing across domains. This layer includes the following interfaces:

### Delegation and Configuration Console

Allows administrators to define the security model and associated policies, delegate network administration, report on changes, and perform all administration tasks in an object-oriented workflow. This console is intended for full-time system administrators.

### Account and Resource Management Console

Allows Help Desk personnel and departmental administrators to perform various day-to-day user administration and provisioning tasks. This console is intended for Help Desk personnel in their primary job function.

### Web Console

Allows users to quickly and easily perform common tasks, such as changing an account password or modifying personal information, from a task-based interface. The Web Console is a Web client for Help Desk personnel, data owners, and occasional administrators who perform occasional administration tasks in addition to their primary job functions.

### **NetIQ Reporting Center Console**

Allows administrators to view and deploy Management reports that include activity reports, configuration reports, and summarization reports. Many of these reports can be viewed in a graphical representation.

### **Command-Line Interface**

Allows an administrator to make modifications from the command-line to implement broad administration changes.

### **DRA ADSI Provider**

Allows administrators develop custom user interfaces and applications, as well as custom policy and automation trigger scripts.

## **1.4.2 Business Logic Layer**

The Business Logic layer establishes a virtual firewall, buffering users from direct interaction with the Data layer. This layer performs the central processing and provides information to the user interfaces. The Business Logic layer also manages Web services, business rules and policy, content integrity, embedded best practices, and transactions across data sources in your enterprise.

The Business Logic layer consists of the NetIQ Administration server (Administration server) and DRA agents. These components work together to efficiently collect information from computers in the managed domains.

## **1.4.3 Administration Server**

The Business Logic layer consists of the NetIQ Administration server (Administration server). The Administration server uses transaction processing to identify and authenticate administrators, enforce policy, automate operations, and log all administration activity. To provide fault tolerance, load balancing, and continuous operation, you can install secondary Administration servers on one or more computers. The Administration server runs as a secure Windows service.

This layer includes the following components:

### **ActiveEngine component**

Runs as a service under an administrator account within the Active Directory. The ActiveEngine component accepts requests from multiple clients in the Presentation layer, and then validates and processes these requests. This component interacts with the Data layer components to retrieve or manage the appropriate information.

### **NetIQ DRA Core**

Runs as a service under an administrator account. The NetIQ DRA Core service collects data from Active Directory and DRA for reporting requests. Additionally, the service generates Activity Detail reports when they are requested from clients in the Presentation layer. This service interacts with the Data layer components to retrieve or manage the appropriate information.

### **Log Archive Service**

Runs as a service under an administrator account within the Active Directory. The log archive service tracks all DRA activity, compresses the data, and stores it on the Administration server in a secure, tamper-resistant repository. The service also categorizes the audit events and summarizes events based on these categories.

## Web component

Runs on a standard Internet Information Server (IIS) computer to provide administration capabilities across your Intranet. The Web component communicates between the ActiveEngine component and the Web Console. This component is required only if you use the Web Console.

### 1.4.4 Data Layer

The Data layer comprises every network data source. The Administration server manages data stored in the Active Directory and Microsoft Exchange directory. The Data layer can also include other enterprise data sources, such as a Human Resources database. All these data sources provide important information about your enterprise. When the Administration server receives a request from the Business Logic layer, the server validates this request and allows a client to access and modify this data. This additional layer of authentication ensures that your business data remains protected and secure.

DRA and ExA help you use and manage these data sources. These products also let you define and enforce the business rules and policies that can help you keep these data sources current and correct.

## 1.5 Supported Environments

DRA and ExA support several different types of environments, including the following installations:

- ◆ Managed and trusted domains
- ◆ Microsoft Exchange support
- ◆ Microsoft Office 365 and Exchange Online support
- ◆ Departmental support through managed subtrees
- ◆ Multiple Administration servers

You can meet the exact demands of your environment. The power and flexibility of the product architecture allow you to install these products in environments that require special configurations, such as installing the Web component on a separate Web server computer. For more information, see [“Installing DRA in Complex Environments”](#) in the *Installation Guide*.

### 1.5.1 Managed and Trusted Domains

DRA and ExA let you securely administer account and resource objects and Microsoft Exchange mailboxes from multiple managed domains. You can manage Microsoft Windows domains as well as multiple subtrees from specific Microsoft Windows domains. You can also perform the following administration tasks on objects in trusted domains:

- ◆ View objects in trusted domains
- ◆ Add accounts from trusted domains to groups in your managed domains

For more information about configuring managed and trusted domains, see the *Administrator Guide for Directory Resource Administrator and Exchange Administrator*.

## 1.5.2 Microsoft Exchange Support

ExA lets you manage Microsoft Exchange Server 2007, Microsoft Exchange Server 2010, Microsoft Exchange Server 2013, and Microsoft Office 365 mailboxes as you manage the associated user accounts, contacts, and groups. You can implement many integrated Microsoft Exchange management features across your enterprise, including the following functions:

- ♦ Automatically create, move, and delete mailbox stores when managing accounts
- ♦ Automatically generate email addresses based on account naming conventions
- ♦ Delegate administration of specific mailbox properties, such as mailbox security settings

ExA supports and extends your security model. By integrating Microsoft Exchange management into your DRA workflow, you save time and money with streamlined administrative processes. For more information about securely managing Microsoft Exchange mailboxes and implementing Microsoft Exchange policy, see the *Administrator Guide for Directory Resource Administrator and Exchange Administrator*.

## 1.5.3 Departmental Support through Managed Subtrees

Departmental support lets you manage multiple subtrees of specific Microsoft Windows domains. By managing a subtree, you can use DRA to secure a department or division within a larger corporate domain. Departmental support also limits your licensing requirements to only those objects you manage in the subtree.

For example, you can configure DRA to manage the Houston subtree in the Southwest domain. You can control the scope of administration to only those objects contained in the Houston OU and its child OUs. This flexibility lets you manage one or more subtrees without requiring administrative permissions across the entire domain. You can implement departmental support without compromising any of the power and security DRA offers.

For more information about implementing departmental support, see the *Administrator Guide for Directory Resource Administrator and Exchange Administrator*.

## 1.5.4 Multiple Administration Servers

You can install multiple Administration servers across your managed domain. Called a Multi-Master Set (MMS), these servers help distribute administration loads and provide fault tolerance within a site. Each MMS consists of one primary Administration server and multiple secondary Administration servers.

For example, if the primary Administration server becomes unavailable, secondary Administration servers can fulfill most account and resource administration requests. If you cannot recover an unavailable primary Administration server, or if you need to take the server offline for maintenance, you can promote any secondary Administration server to be the primary Administration server. This flexibility lets you keep important services running.

For more information about Administration servers, see the *Administrator Guide for Directory Resource Administrator and Exchange Administrator*. For more information about implementing an MMS, see [“Installing DRA in Complex Environments”](#).





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# 2 Working with the User Interfaces

The user interfaces for DRA and ExA address a variety of administration needs. These interfaces include:

## Web Console

Allows you to perform common account and resource administration tasks through a Web-based interface. This simple interface allows the occasional administrator to easily perform everyday administration tasks. You can access the Web Console from any computer, iOS device, or Android device running a Web browser.

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**NOTE:** The Web Console was updated with the release of DRA 9.0.1. However, the older version of the Web Console can still be installed and used. For more information about the older Web Console, see [Appendix A, “The Pre-DRA 9.0.1 Web Console,”](#) on page 159.

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## Account and Resource Management Console

Allows you to administer objects in any managed domain. Through the Account and Resource Management console, you can view and modify accounts, resources, temporary group assignments, and Microsoft Exchange mailboxes. This interface addresses enterprise management needs from basic administration to advanced Help Desk issues.

## Delegation and Configuration Console

Allows you to securely delegate administrative tasks in the managed domain, set policies and automation triggers, report on real-time changes, and configure the Administration server.

## Command-Line Interface

Allows you to perform DRA and ExA operations from the command line. Through the CLI, you can manage multiple objects with a single command and administer batch processes.

## REST Services and PowerShell

DRA provides the RESTful interfaces and PowerShell module that allow clients from products other than Directory and Resource Administrator to request DRA operations. To learn how you can develop a client for making DRA requests using .NET managed code or using PowerShell, see the *DRA REST Extensions Technical Reference* that is installed with the REST Services.

## User-Developed Interfaces

You can create your own interfaces using the DRA Software Development Kit (SDK). For more information about creating custom applications and user interfaces, see the SDK Help.

## NetIQ Reporting Center Console

Allows you to view and deploy Management reports so you can audit your enterprise security and track administration activities. Management reports include activity reports, configuration reports, and summarization reports. Many of these reports can be viewed in a graphical representation.

## 2.1 Web Console

The Web Console is a Web-based user interface that provides quick and easy access to many user account, group, computer, resource, and Microsoft Exchange mailbox tasks. It is easy to learn and simple to use, which makes it a great tool for occasional or beginning administrators.

### 2.1.1 Starting the Web Console

You can start the Web Console from any computer, iOS device, or Android device running a Web browser. To start the Console, specify the appropriate URL in your Web browser address field. For example, if you installed the Web component on the HOUserver computer, type `https://HOUserver/draclient` in the address field of your Web browser.

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**NOTE:** To display the most current account and Microsoft Exchange information in the Web Console, set your Web browser to check for newer versions of cached pages at every visit.

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### 2.1.2 Customizing the Web Console

You can quickly and easily customize the Web Console in the following ways:

#### **Modify property pages**

You can modify the property page template that is used when creating or editing an object. For example, you can modify the property page for users so that it displays an additional phone number field,

#### **Modify branding**

For example, you can add your company's logo to the Web Consoles header.

#### **Create a NetIQ Aegis form**

You can create a new form to start an Aegis workflow.

## 2.2 Account and Resource Management Console

The Account and Resource Management console provides access to all tasks, addressing enterprise management needs from basic administration to advanced Help Desk issues. Through the Account and Resource Management console, you can perform all account and resource management tasks and manage Microsoft Exchange mailboxes.

The Account and Resource Management console contains the following nodes:

#### **All My Managed Objects**

Allows you to manage objects, such as user accounts, groups, contacts, and resources, for each domain in which you have some power.

#### **Temporary Group Assignments**

Allows you to manage group memberships for users who only need group membership for a specific time period.

#### **Advanced Search Queries**

Allows you to manage advanced queries available on the Administration server.

## Recycle Bin

Allows you to manage deleted user accounts, groups, contacts, and resources, for any Microsoft Windows domain where the Recycle Bin is enabled.

To start the Account and Resource Management console interface, click **Account and Resource Management** in the Directory and Resource Administrator program folder.

When you start the Account and Resource Management console, you initially connect to the best available Administration server in the local domain. The best-available Administration server is the closest server, which is typically a server in the network site. By seeking the best available Administration server, DRA provides a quicker connection and improved performance.

## 2.3 Delegation and Configuration Console

The Delegation and Configuration console provides access to all configuration and delegation tasks, addressing enterprise management needs from distributed administration to policy enforcement. Through the Delegation and Configuration console, you can set up the security model and server configurations you need to effectively manage your enterprise.

The Delegation and Configuration console contains the following nodes:

### Delegation Management

Allows you to implement and maintain your security model by defining and modifying ActiveViews, roles, powers, and Assistant Admin groups.

### Policy and Automation Management

Allows you to define policies and create automation triggers. You can define Microsoft Exchange policies, set Home directory rules, and create custom policies.

### Configuration Management

Allows you to configure your Administration servers, managed domains, and Office 365 tenants. You can view and modify domain properties, add or remove managed domains, implement user interface extensions, and change the cache refresh schedules for each Administration server. You can create custom tools, manage file replication between Administration servers and DRA client computers, specify clone exceptions to use when cloning user accounts, manage virtual attributes, and manage reporting configuration. You can add or remove Office 365 tenants.

### Account and Resource Management

Provides the same administration features available through the Account and Resource Management console.

To start the Delegation and Configuration console interface, click **Delegation and Configuration** in the Directory and Resource Administrator program folder.

To start the Account and Resource Management console interface, click **Account and Resource Management** in the Directory and Resource Administrator program folder. The following sections provide common tasks for the Account and Resource Management console.

When you start the Delegation and Configuration console, you initially connect to the best-available Administration server in the local domain. The best-available Administration server is the closest server, which is typically a server in the network site. By seeking the best available Administration server, DRA provides a quicker connection and improved performance.

## 2.4 Command-Line Interface

The CLI allows you to access and apply powerful Administration product capabilities using commands or batch files. With the CLI, you can issue one command to implement changes across multiple objects.

For example, if you need to relocate the home directories of 200 employees to a new server, using the CLI, you could enter the following single command to change all 200 user accounts:

```
EA USER @GroupUsers (HOU_SALES) ,@GroupUsers (HOU_MIS) UPDATE  
HOMEDIR: \\HOU2\USERS\@Target ()
```

This command directs DRA to change the home directory field of each of the 200 user accounts in the HOU\_SALES and HOU\_MIS groups to \\HOU2\USERS\user\_id. To accomplish this task with the native Microsoft Windows administration tools, you would need to perform a minimum of 200 separate actions. For more information about the CLI, see [“The Command-Line Interface”](#).

## 2.5 Licensing Affects Available Features

Your license key file determines which DRA and ExA functions you can use. For example, you need a license key file for DRA to create a new user account. Your license key file can also support ExA. Installing the Administration server automatically installs the license key file. The setup program uses either a trial license or a production license key. The license key file defines an expiration date, a grace period, the number of user accounts you can manage with your current DRA and ExA license. When you reach the license grace period, the Administration server displays warning messages in the DRA console. After the grace period expires, DRA no longer allows you to connect to a DRA server. For more information about licensing, see the *Installation Guide*.

## 2.6 Customizing and Extending the User Interface

You can customize and extend the DRA consoles by implementing user interface extensions. User interface extensions allow you to add proprietary account and OU properties, such as Active Directory schema extensions and virtual attributes, to specific wizards and property windows. These extensions allow you to customize DRA to meet your specific requirements. Using the New Custom Page wizard in the Delegation and Configuration console, you can quickly and easily create a custom page to extend the appropriate user interface.

If your AAs require unique powers to securely manage the custom page, you can also create and delegate custom powers. For example, you may want to limit user account management to properties on the custom page only. For more information, see [“Understanding the Dynamic Security Model”](#).

## 2.6.1 How User Interface Extensions Work

User interface extensions are custom pages DRA displays in the appropriate wizard and properties windows. You can configure custom pages to expose Active Directory attributes, schema extensions, and virtual attributes in the Delegation and Configuration console and the Account and Resource Management console.

When you select any supported Active Directory attribute, schema extension, or virtual attribute, you can use custom pages in the following ways:

- ♦ Limit AAs to manage a well-defined and controlled set of properties. This property set can include *standard properties* and schema extensions. Standard properties are Active Directory attributes exposed by default through the Accounts and Resource Management console.
- ♦ Expose Active Directory attributes other than the standard properties managed by DRA.
- ♦ Extend the Account and Resource Management console and Delegation and Configuration console to include proprietary properties.

You can also configure how DRA displays and applies these properties. For example, you can define user interface controls with default property values.

DRA applies custom pages to all applicable managed objects in your enterprise. For example, if you create a custom page to add Active Directory schema extensions to the Group Properties window, DRA applies the properties on this page to each managed group in a domain supporting the specified schema extensions. Each custom page requires a unique set of properties. You cannot add an Active Directory attribute to more than one custom page.

You cannot disable individual windows or tabs in the existing user interface. An AA can select a property value using either the default user interface or a custom page. DRA applies the most recently selected value for a property.

DRA provides a full audit trail for user interface extensions. DRA logs the following data to the Application event log:

- ♦ Changes to custom pages
- ♦ Creation and deletion of custom pages
- ♦ Exposed schema extension, Active Directory attributes, and virtual attributes included on custom pages

You can also run change activity reports to monitor configuration changes for the user interface extensions.

Implement and modify user interface extensions (custom pages) from the primary Administration server. During synchronization, DRA replicates user interface extension configurations across the Multi-Master Set. For more information, see [“Managing a Multi-Master Set Environment”](#).

## 2.6.2 Supported Custom Pages

Each custom page you create allows you to select a set of Active Directory properties, schema extensions, or virtual attributes and expose these properties as a custom tab. You can create the following types of custom pages:

### Custom User Page

Allows you to display custom tabs in the following windows:

- ♦ User Properties window

- ◆ Create User wizard
- ◆ Clone User wizard

#### **Custom Group Page**

Allows you to display custom tabs in the following windows:

- ◆ Group Properties window
- ◆ Create Group wizard
- ◆ Clone Group wizard

#### **Custom Computer Page**

Allows you to display custom tabs in the following windows:

- ◆ Computer Properties window
- ◆ Create Computer wizard

#### **Custom Contact Page**

Allows you to display custom tabs in the following windows:

- ◆ Contact Properties window
- ◆ Create Contact wizard
- ◆ Clone Contact wizard

#### **Custom OU Page**

Allows you to display custom tabs in the following windows:

- ◆ OU Properties window
- ◆ Create OU wizard
- ◆ Clone OU wizard

#### **Custom Resource Mailbox Page**

Allows you to display custom tabs in the following windows:

- ◆ Resource Mailbox Properties window
- ◆ Create Resource Mailbox wizard
- ◆ Clone Resource Mailbox wizard

#### **Custom Dynamic Distribution Group Page**

Allows you to display custom tabs in the following windows:

- ◆ Dynamic Distribution Group Properties window
- ◆ Create Dynamic Distribution Group wizard
- ◆ Clone Dynamic Distribution Group wizard

### **2.6.3 Supported User Interface Controls**

When you add an Active Directory attribute, schema extension, or virtual attribute to a custom page, you also configure the user interface control with which an AA inputs the property value. For example, you can specify property values in the following ways:

- ◆ Define specific value ranges
- ◆ Set default property values
- ◆ Indicate whether a property is required

You can also configure the user interface control to display proprietary information or instructions. For example, if you define a specific range for an employee identification number, you can configure the text box control label to display **Specify employee identification number (001 to 100)**.

Each user interface control provides support for a single Active Directory attribute, schema extension, or virtual attribute. Configure the following user interface controls based on the property type:

Type of Active Directory attribute	Supported User Interface Controls
Boolean	Check box
Date	Calendar control
Integer	Text box (default) Selection list
String	Text box (default) Selection list Object selector
Multivalued String	Selection list

## 2.6.4 Accessing the User Interface Extensions Node

Use the User Interface Extensions node to define and maintain your custom pages. You can access the User Interface Extensions node from the console tree.

**To access User Interface Extensions through the console tree:**

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.

## 2.6.5 Implementing User Interface Extensions

User interface extensions, such as custom pages, allow you to extend and customize the user interface. For each customization you want to configure, create a custom page and assign the appropriate power or role to the AA.

**To implement user interface extensions:**

- 1 To ensure DRA recognizes your Active Directory attributes, schema extension attributes, or virtual attributes, restart the NetIQ Administration Service service on each Administration server.
- 2 Identify the type of custom page you want to create and the properties you want AAs to manage with this custom page. You can select any Active Directory attribute, including schema extension attributes and attributes in existing DRA wizards and property windows or any virtual attribute you create. However, each custom page requires a unique set of properties. You cannot add an Active Directory attribute to more than one custom page.

Custom pages do not replace the existing user interface. For more information, see [Section 2.6.1, “How User Interface Extensions Work,”](#) on page 29 and [Section 2.6.2, “Supported Custom Pages,”](#) on page 29.

- 3 Determine how you want AAs to specify these properties. For example, you may want to limit a specified property to three possible values. You can define an appropriate user interface control for each property. For more information, see [Section 2.6.3, “Supported User Interface Controls,”](#)

on page 30.

- 4 Determine whether your AAs need proprietary information or instructions to successfully manage these properties. For example, determine whether Active Directory requires a syntax for the property value, such as a distinguished name (DN) or an LDAP path.
- 5 Identify the order in which these properties should display on the custom page. You can change the display order at any time.
- 6 Determine how DRA should use this custom page. For example, you can add a user custom page to the New User wizard and the User Properties window.
- 7 Using your answers from [Step 1 on page 31](#)[Step 5 on page 32](#), create the appropriate custom pages. For more information, see [Section 2.6.6, "Creating User Interface Extensions," on page 32](#).
- 8 Determine whether your AAs need a custom power to manage the properties on this page. For example, if you add a custom page to the User Properties window, delegating the Modify All User Properties power may give an AA too much power. Create any custom powers needed to implement your custom page. For more information, see ["Understanding Power Creation"](#).
- 9 Use the Assignments tab on the AA details pane to verify that your AAs have the appropriate powers for the correct set of objects. For more information, see ["Viewing Your Assigned Powers and Roles"](#). If you created custom powers for this custom page, delegate those powers to the appropriate AAs.
- 10 Distribute information about the user interface extensions you implemented to the appropriate AAs, such as your Help Desk.

To implement user interface extensions, you must have the powers included in the DRA Administration role. For more information about custom pages, see [Section 2.6.1, "How User Interface Extensions Work," on page 29](#).

## 2.6.6 Creating User Interface Extensions

You can create different user interface extensions by creating different custom pages. By default, new custom pages are enabled.

When you create a custom page, you can disable it. Disabling a custom page hides it from the user interface. If you are creating multiple custom pages, you may want to disable the pages until your customizations are tested and complete.

---

**NOTE:** Computer accounts inherit Active Directory attributes from user accounts. If you extend your Active Directory schema to include additional attributes for user accounts, you can select these attributes when you create a custom page to manage computer accounts.

---

### To create a user interface extension:

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.
- 3 On the Task menu, click **New**, and then click the appropriate menu item for the custom page you want to create. For example, to create a custom page for the Computer Properties window, click **New > Computer Page**.
- 4 On the General tab, type the name of this custom page, and then click **OK**. If you want to disable this page, clear the **Enabled** check box.



- 5 For each property you want to include on this custom page, complete the following steps:
  - 5a On the Properties tab, click **Add**.
  - 5b To select a property, click **Browse**.
  - 5c In the **Control label** field, type the property name DRA should use as the label for the user interface control. Ensure the control label is user-friendly and highly descriptive. You can also include instructions, valid value ranges, and syntax examples.
  - 5d Select the appropriate user interface control from the **Control type** menu.
  - 5e Select where in the Account and Resource Management console you want DRA to display this custom page.
  - 5f To specify additional attributes, such as minimum length or default values, click **Advanced**.
  - 5g Click **OK**.
- 6 To change the order in which DRA displays these properties on the custom page, select the appropriate property, and then click **Move Up** or **Move Down**.
- 7 Click **OK**.

## 2.6.7 Modifying User Interface Extension Properties

You can change a custom page by modifying the user interface extension properties.

**To modify user interface extension properties:**

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.
- 3 In the list pane, select the appropriate user interface extension.
- 4 On the Tasks menu, click **Properties**.
- 5 Modify the appropriate properties and settings for this custom page.
- 6 Click **OK**.

## 2.6.8 Identifying Active Directory Attributes Managed With User Interface Extensions

You can quickly identify which Active Directory properties, schema extensions, or virtual attributes are managed using a particular user interface extension.

**To identify Active Directory properties managed using user interface extensions:**

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.
- 3 In the list pane, select the appropriate user interface extension.
- 4 In the details pane, click the **Properties** tab. To view the details pane, click **Details** on the View menu.
- 5 To verify how DRA displays and applies a property, select the appropriate Active Directory attribute, schema extension, or virtual attribute from the list, and then click the **Properties** icon.

## 2.6.9 Enabling User Interface Extensions

When you enable a user interface extension, DRA adds this custom page to the associated wizards and windows. To specify which wizards and windows display a custom page, modify the user interface extension properties.

---

**NOTE:** To ensure each custom page exposes a unique set of properties, DRA does not enable custom pages that contain properties exposed on other custom pages.

---

**To enable a user interface extension:**

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.
- 3 In the list pane, select the appropriate user interface extension.
- 4 On the Tasks menu, click **Enable**.

## 2.6.10 Disabling User Interface Extensions

When you disable a user interface extension, DRA removes the custom page from the associated wizards and windows. DRA does not delete the custom page. To ensure a custom page never displays in the user interface, delete the user interface extension.

**To disable a user interface extension:**

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.
- 3 In the list pane, select the appropriate user interface extension.
- 4 On the Tasks menu, click **Disable**.

## 2.6.11 Deleting User Interface Extensions

When you delete a user interface extension, DRA removes the custom page from the associated wizards and windows. You cannot restore a deleted custom page. To temporarily remove a custom page from the user interface, disable the user interface extension. For more information, see [Section 2.6.10, "Disabling User Interface Extensions," on page 34](#).

**To delete a user interface extension:**

- 1 In the left pane, expand **Directory and Resource Administrator**.
- 2 Expand **Configuration Management**, and then click **User Interface Extensions**.
- 3 In the list pane, select the appropriate user interface extension.
- 4 On the Tasks menu, click **Delete**.

## 2.7 User Interface Tasks

You can perform the following common user interface tasks. Most user interface tasks can be performed in the Account and Resource Management console and the Delegation and Configuration console.

## 2.7.1 Configuring Internet Explorer for the Web Console

The Web Console requires you to enable active scripting and per-session cookies in Internet Explorer. Active scripting and per-session cookies are enabled by default when you install Internet Explorer. If you customized your security settings and disabled either of these settings, you must re-enable them.

### To enable active scripting and per-session cookies:

- 1 Start Internet Explorer.
- 2 On the Tools menu, click **Internet Options**.
- 3 On the Security tab, select the appropriate Web content zone. For example, click **Internet**.
- 4 Click **Custom Level**.
- 5 Enable the following security settings:
  - ◆ Cookies/Allow per-session cookies
  - ◆ Scripting/Active scripting
- 6 Click **OK**.
- 7 Click **Yes**.

## 2.7.2 Accessing a User's Change History

You can use the Web Console to view a history of the changes made to or by a user. You can view the following types of changes:

- ◆ Changes made by the user
- ◆ Changes made to the user
- ◆ User mailboxes created by the user
- ◆ User mailboxes deleted by the user
- ◆ Group and contact email addresses established by the user
- ◆ Group and contact email addresses deleted by the user
- ◆ Virtual attributes created or disabled by the user
- ◆ Objects moved by the user

### To view or generate the Change History report:

- 1 Start the Web Console.
- 2 Search for the object whose history you want to view.
- 3 Click the **View Change History Reports** icon.
- 4 To change the report generation criteria, click **Modify**.

You can change the start or end dates, the object being tracked, the report type, and other criteria.
- 5 To create a CSV file of the report, click **Generate**.

## 2.7.3 Connecting to an Administration Server

By default, DRA connects to the best available Administration server for a managed domain or computer. The best available Administration server is the closest server, which is typically a server in the network site. If the site does not include an Administration server, DRA connects to the first available server in the managed domain or managed subtree. However, you can specify the Administration server to which you want to connect.

The best-available Administration server is the closest server, which is typically a server in the network site. If the site does not include an Administration server, DRA connects to the next available server in the managed domain or managed subtree. You can also specify the Administration server to which you want to connect.

When you first start the user interfaces, DRA initially connects to the domain of your logon account. If you are logged on to a domain that is not managed by an Administration server, or if DRA cannot connect to the Administration server for that domain, DRA may display an error message. Ensure the Administration server is available and try again.

### To connect to an Administration server:

- 1 On the File menu, click **Connect to DRA server**.
- 2 Click **Connect to this DRA server**.
- 3 Type the name of the Administration server, using the following format: *computername*.
- 4 Click **OK**.

## 2.7.4 Connecting to a Managed Domain or Computer

By default, DRA connects to a managed domain or computer through the best available Administration server. The best available Administration server is the closest server, which is typically a server in the network site. If the site does not include an Administration server, DRA connects to the first available server in the managed domain or managed subtree. However, you can specify the domain or computer to which you want to connect. You can also specify which Administration server you want DRA to use.

By default, the Account and Resource Management console connects to a managed domain or computer by using the best-available Administration server. The best-available Administration server is the closest server, which is typically a server in the network site. If the site does not include an Administration server, DRA connects to one of the servers managing the domain of the client computer. However, you can specify the domain or computer to which you want to connect. You can also specify which Administration server you want DRA to use.

When you first start the user interfaces, DRA initially connects to the domain of your logon account. If you attempt to log on to a domain or computer that is not managed by an Administration server, or if DRA cannot connect to the Administration server for your managed domain or computer, DRA may display an error message. Ensure the Administration server is available and try again.

### To connect to a managed domain or computer:

- 1 On the File menu, click **Connect to DRA server**.
- 2 Select the appropriate option, and then type the name of the managed domain or computer.
- 3 For example, to connect to the HOULAB domain, click **Connect to a DRA server that manages this domain**, and then type `HOULAB`.

- 4 To specify an Administration server for the managed domain or computer, click **Advanced**, and then select the appropriate option.
- 5 Click **OK**.

## 2.7.5 Modifying the Console Title

You can modify the information displayed in the title bar of both the Delegation and Configuration console and the Account and Resource Management console. For convenience and clarity, you can add the user name with which the console was launched and the Administration server to which the console is connected. In complex environments in which you need to connect to multiple Administration servers using different credentials, this feature helps you quickly discern which console you need to use.

**To modify the console title bar:**

- 1 Start the Account and Resource Management console.
- 2 Click **View > Options**.
- 3 Select the Window Title tab.
- 4 Specify the appropriate options, and then click **OK**. For more information, click the **?** icon.

## 2.7.6 Customizing List Columns

You can select which object properties DRA displays in list columns. This flexible feature allows you to customize the user interface, such as lists for search results, to better meet the specific demands of administrating your enterprise. For example, you can set columns to display the user logon name or group type, letting you quickly and effectively find and sort the data you need.

**To customize list columns:**

- 1 Select the appropriate node. For example, to choose which columns display when viewing search results on managed objects, select **All My Managed Objects**.
- 2 On the View menu, click **Choose Columns**.
- 3 From the list of properties available for this node, select the object properties you want to show.
- 4 To change the column order, select a column, and then click **Move Up** or **Move Down**.
- 5 To specify the column width, select a column, and then type the appropriate number of pixels in the provided field.
- 6 Click **OK**.

## 2.7.7 Using Custom Tools

DRA enables you to seamlessly integrate the DRA interface with other products by using the custom tools feature. Using custom tools, you can execute external applications, launch scripts, open a web page, and enter parameters for any object from within the DRA interface. For example, if you select a computer in your domain, you can launch any of the custom tools defined and enabled for computers by your DRA Administrator.

**To use custom tools:**

- 1 Start the Account and Resource Management console.
- 2 In the left pane, expand **All My Managed Objects**.

- 3 To specify the object for which you want to use the custom tool, complete the following steps:
  - 3a **If you know the object location**, select the domain and OU that contains this object.
  - 3b In the search pane, specify the object attributes, and then click **Find Now**.
  - 3c In the list pane, select the appropriate object.
- 4 On the Tasks menu, click **Custom Tools**.

---

**NOTE:** When you try to select custom tools for an object, if DRA does not display any custom tools for that object, it implies your DRA administrator has not enabled custom tools for that object.

---

- 5 Select the appropriate custom tool.

## 2.7.8 Executing Saved Advanced Queries

Using advanced queries, you can search for users, contacts, groups, computers, printers, OUs, and any other object that DRA supports. If you have the Execute Saved Advanced Queries power, you can execute advanced queries available in the **Saved Queries** list for any container in the Account and Resource Management console. For more information about your assigned powers, see [Section 2.7.18, “Viewing Your Assigned Powers and Roles,” on page 42](#).

**To execute saved advanced queries:**

- 1 Start the Account and Resource Management console.
- 2 In the left pane, expand **All My Managed Objects**.
- 3 Select the appropriate container. For example, if you want DRA to search for user account information, select **Users**.
- 4 To view the advanced search pane, click **Advanced Search**.
- 5 In the advanced search pane, select an advanced query from the **Saved Queries** list.
- 6 Click **Load Query**, and then click **Find Now**.

## 2.7.9 Enabling Collection of Application Logs

To enable collection of application logs, you can install Dr. Watson to gather debugging information about applications you run on the Administration server computer. The Administration server uses this data to create logs for the Diagnostic Utility.

DRA provides a Diagnostic Utility to gather important data about your environment. For more information, see [“Diagnostic Utility”](#).

**To enable collection of application logs:**

- 1 Log on with an administrator account to the Administration server computer.
- 2 On the Start menu, open the Command Prompt window.
- 3 At the command prompt, enter `DrWtsn32 -i`.
- 4 Click **OK**.
- 5 Repeat Steps [Step 1 on page 38](#) through [Step 4 on page 38](#) on each Administration server computer.

## 2.7.10 Reporting on Object Changes

You can view real-time change information for objects in your domains by generating Activity Detail reports. For example, you can view a list of changes made to an object or by an object during a specified time period. You can also export and print Activity Detail reports.

### To report on object changes:

- 1 Find the objects that match your criteria.
- 2 Right-click on an object, and select **Reporting > Changes made to objectName** or **Reporting > Changes made by objectName**.
- 3 Select the start and end dates to specify the changes you want to view.
- 4 **If you want to change the number of rows to be displayed**, type a number over the default value of 250.

---

**NOTE:** The number of rows displayed applies to each Administration server in your environment. If you include 3 Administration servers in the report and use the default value of 250 rows to display, up to 750 rows can be displayed in the report.

---

- 5 **If you want to include only specific Administration servers in the report**, select **Restrict query to these DRA servers** and type the server name or names you want the report to include. Separate multiple server names with commas.
- 6 Click **OK**.

## 2.7.11 Reporting on Object Lists

You can export or print data from object lists. With this feature, you can quickly and easily report on and distribute general information about your managed objects.

When you export an object list, you can specify the file location, name, and format. DRA supports HTML, CSV, and XML formats, so you can export this information to database applications or post list results to a Web page

---

**NOTE:** You can also select multiple items in a list and then copy these items to a text application, such as Notepad.

---

### To report on object lists:

- 1 Find the objects that match your criteria.
- 2 To export this object list, click **Export List** on the File menu.
- 3 To print this object list, click **Print List** on the File menu.
- 4 Specify the appropriate information to save or print this list.

## 2.7.12 Reporting on Object Details

You can export or print data from details tabs that list object attributes, such as group memberships. With this feature, you can quickly and easily report on and distribute frequently needed details about specific objects.

When you export an object details tab, you can specify the file location, name, and format. DRA supports HTML, CSV, and XML formats, so you can export this information to database applications or post list results to a Web page.

### To report on object details:

- 1 Find the object that matches your criteria.
- 2 On the View menu, click **Details**.
- 3 In the details pane, select the appropriate tab.
- 4 To export these object details, click **Export Details List** on the File menu.
- 5 To print these object details, click **Print Details List** on the File menu.
- 6 Specify the appropriate information to save or print this list.

## 2.7.13 Saving Console Windows

By saving the Account and Resource Management console window, you can quickly create a custom user interface that includes your specific settings. You can save different window configurations to different files, preserving specific console settings for your unique administration needs.

To save your console window, click **Save** on the File menu.

## 2.7.14 Saving Custom Console Files

By saving the Account and Resource Management console window, you can quickly create a custom user interface that includes your specific settings. You can save different window configurations to different files, preserving specific console settings for your unique administration needs.

To save your console window, click **Save** on the File menu.

## 2.7.15 Restoring Console Settings

DRA allows you to resize windows and persists your window sizes. DRA also persists many other settings, including the last Administration server to which you connect, the columns you add or remove from list results, and column widths. If you want to restore these settings to the original setting with which you installed DRA, the Restore Default Settings option allows you to do so.

### To restore default console settings:

- 1 Start the appropriate console.
- 2 Click **View > Options**.
- 3 Select the Saved Settings tab.
- 4 Review the information provided on the window, and then click **Restore Default Settings**. For more information, click the **?** icon.



## 2.7.16 Using Special Characters

You cannot use the following special characters when naming user accounts, groups, contacts, OUs, computers, ActiveViews, AA groups, roles, policies, or automation triggers. These naming restrictions apply to the name of the object as well as the name of the rule that defines the object.

### Naming user accounts, groups, and computers

When specifying a pre-Windows 2000 name, you cannot use the following special characters:

Backslash	\
Colon	:
Comma	,
Double quote	"
Equal sign	=
Forward slash	/
Greater than	>
Left bracket	[
Less than	<
Plus sign	+
Right bracket	]
Semi colon	;
Vertical bar	

When naming user accounts, groups, and computers in Microsoft Windows domains, you can use any special character.

### Managing groups through the Web Console

When managing a Microsoft Windows domain, the Web Console does not support managing groups whose names contain the following special characters:

- ◆ Comma ,
- ◆ Double quote "
- ◆ Forward slash /

### Naming contacts and OUs

When naming contacts and OUs, you can use any special character.

### Naming ActiveViews, AA groups, and roles

When naming ActiveViews, AA groups, and roles, you cannot use the backslash (\).

### Naming policies and automation triggers

When naming policies and automation triggers, you cannot use the backslash (\).

You can include wildcard characters (\*, ?, and #) when naming Microsoft Windows objects. Use wildcard characters when creating rules to narrow or broaden the context of a rule.

## 2.7.17 Using Wildcard Characters

DRA and ExA support wildcard characters in many fields in the DRA consoles and in CLI commands. Wildcards allow you to define rules that match multiple objects to a specific condition or standard, such as a naming convention. You can use wildcards instead of regular expressions to narrow or broaden the scope of the rule. Wildcard matching is not case-sensitive. You can also use the question mark (?), asterisk (\*), or number sign (#) wildcard characters as normal characters by prefixing a backslash (\) to the particular wildcard character. For example, to search for `abc*`, type the search text `abc\*`.

DRA and ExA support the following wildcard characters. You cannot use wildcard characters in names.

Match Item	Character	Definition
Any character	Question mark ?	Matches exactly one character
Any digit	Number sign #	Matches one digit
Any character, 0 or more matches	Asterisk *	Matches zero or more characters

The following table provides examples of wildcard character specifications and what they match and do not match.

Example	Matches	Does Not Match
Den???	Denton and Dennis	Denison
El ?????o	El Campo and El Indio	El Paso
Houston, TX #####	Houston, TX 77024	Houston, TX USOFA

DRA and ExA do not support wildcard specifications that contain logical operations.

## 2.7.18 Viewing Your Assigned Powers and Roles

Roles and powers define how you manage objects. A role is a set of powers that provides the permissions required to perform a specific administration task, such as creating a user account or moving shared directories.

The DRA Admin assigns roles, adds you to specific AA groups, and associates you with ActiveViews (sets of domain objects you can manage). You can view these assignments through the Account and Resource Management console and the Delegation and Configuration console. You do not need any auxiliary powers to view the roles and powers assigned to you.

For more information about the DRA security model, see the *Administrator Guide for Directory and Resource Administrator and Exchange Administrator*.

**To view your assigned powers and roles:**

- 1 On the File menu, click **DRA Properties**.
- 2 Click **Powers**.
- 3 Select the appropriate view. For example, click **Flat View** to see a table of your AA group memberships, assigned powers and roles, and associated ActiveViews.

- 4 Expand the appropriate item. For example, under **Has Power** column, expand **Roles and Powers** to view the individual roles or powers assigned to you.
- 5 Click **OK**.

## 2.7.19 Viewing the Product Version Number and Installed Hotfixes

You can view the product version number and installed hotfixes from the DRA Properties window. This window provides version numbers and lists of installed hotfixes for the Administration server and the DRA client computer.

**To view the product version number and installed hotfixes:**

- 1 On the File menu, click **DRA Properties**.
- 2 Click **General**.
- 3 View the information you need. For more information about a particular field, click the ? icon.
- 4 Click **OK**.

## 2.7.20 Suppressing the License Warning Message

DRA provides you with an option to suppress the license warning message that appears when you reach the remaining user count threshold limit. DRA allows you to set the threshold limit for the number of remaining licensed users in the registry, which overrides the remaining user count threshold limit value available in the license file. DRA suppresses the license warning message until you reach the threshold limit you have set in the registry. The value you set as the threshold limit in the registry is optional and you can still use the threshold limit available in the license file.

---

**WARNING:** Be careful when editing your Windows Registry. If there is an error in your Registry, your computer may become nonfunctional. If an error occurs, you can restore the Registry to its state when you last successfully started your computer. For more information, see the Help for the Windows Registry Editor.

---

**To update the threshold limit value in the registry:**

- 1 Click **Start > Run**. The Run dialog box is displayed.
- 2 In the **Open** field, type `regedit` and then click **OK**. The Registry Editor window is displayed.
- 3 In the left pane, expand `HKLM\SOFTWARE\WOW6432Node\Mission Critical Software\OnePoint\Administration\License`.
- 4 In the right pane, right-click and select **New > DWORD value**.
- 5 Name the `DWORD` value as "WarnThreshold" and set the value that you wish to warn at. For example, if you set this value to 10, then DRA will not warn you until your license has less than 10 users left.

## 2.7.21 Viewing Your Current License

DRA and ExA require a license key file. You can view your product license from any Administration server computer. You do not need any auxiliary powers to view the product license.

**To view your license:**

- 1 On the File menu, click **DRA Properties**.

- 2 Click **License**.
- 3 Review the license properties, and then click **OK**.

## 2.7.22 Upgrading Your License

DRA and ExA require a license key file. This license key file contains your license information. DRA installs the license key file on the Administration server. When you install the Administration server, the setup program allows you to use the default (trial) license key file or a production license key file (`CustomLicense.lic`) provided for you by NetIQ Corporation. As your administration needs change, you can upgrade your license to accommodate your new requirements.

---

### NOTE

- ◆ If you are upgrading your DRA installation, ensure you schedule your upgrade during off-peak hours.
- ◆ If you are using multiple Administration servers, you must upgrade your license key file on the primary Administration server and all secondary Administration servers.
- ◆ Close all open applications on the Administration server you are upgrading before you start the setup program.

---

### To upgrade your license:

- 1 Start the DRA Delegation and Configuration console and click **Configuration Management** on the left pane.
- 2 On the right pane, click **Update License**.
- 3 Browse to and select your license key and click **OK**.
- 4 Click **OK** to reconnect to the Administration server.

---

### NOTE

- ◆ If you are using a trial license and upgrading to a production license, DRA will replace your trial license with your production license.
  - ◆ If you are using a production license and upgrading to a new production license, DRA will add your new production license to your existing production license.
  - ◆ If you are using an existing trial license and you would like to extend your trial license please contact your NetIQ sales representative or an authorized NetIQ reseller or partner to obtain a new trial license.
- 

## 2.8 DRA Reporting

DRA Reporting provides built-in, ready-to-use reports that let you quickly track duplicate accounts, last account logons, Microsoft Exchange mailbox details, and much more. Reporting also provides real-time details of changes made in your environment, including before and after values for changed properties. You can export, print, or view reports, or publish them to SQL Server Reporting Services.

Directory and Resource Administrator provides two methods of generating reports that allow you to collect and review user account, group, and resource definitions in your domain. **Activity Detail reports**, viewed through the Delegation and Configuration console, provide real-time change information for objects in your domain. For example, you can view a list of changes made to an object or by an object during a specified time period using Activity Detail reports.

The following figure shows a sample Activity Detail report:

Operation Status	UTC Date a...	Assistant Admi...	Operation Name	Action	Object Type
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	GroupMemberAdd	MemberAdd	Group
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	GroupMemberAdd	MemberAdd	Group
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	OLUMoveHere	MoveHere	User
Success	10/16/2009 1:00:00 PM	DRDOM910\Ad...	UserSetInfo	SetInfo	User

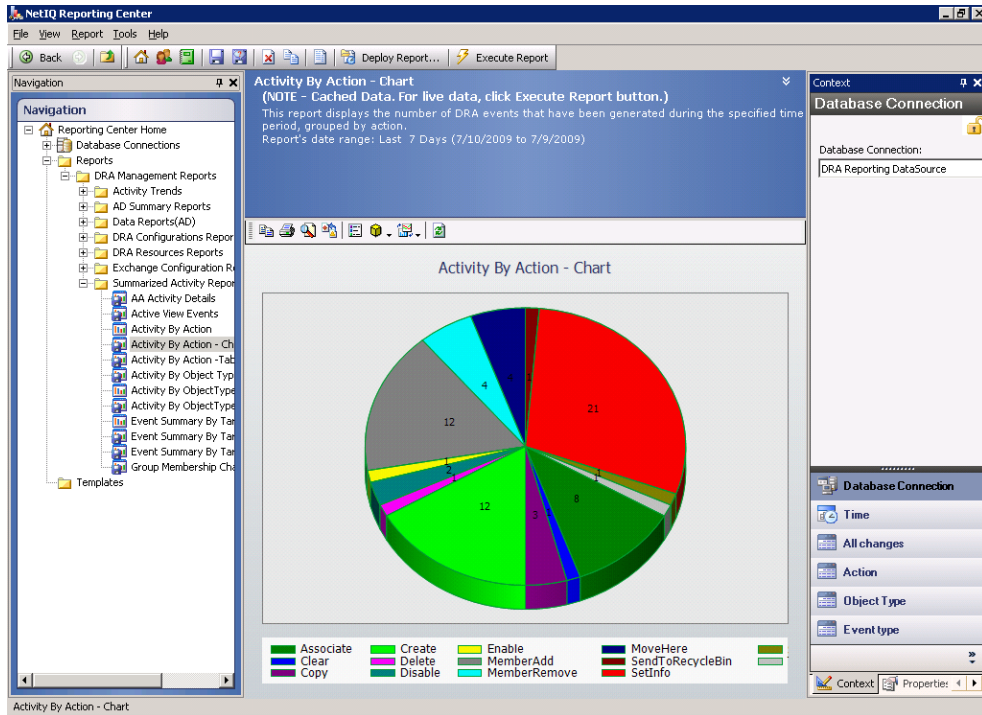
Optional **DRA Management reports**, viewed through the NetIQ Reporting Center (Reporting Center), provide activity, configuration, and summarization information about events in your managed domains. Some Management reports are available as graphical representations of the data. These built-in reports can also be customized to give you exactly the information you need.

For example, you can view a graph showing the number of events in each managed domain during a specified time period using Management reports. Reporting allows you to view details about the DRA security model, such as ActiveView and AA group definitions.

You must install and configure the optional Management reports before you can view these reports. For more information about installing reporting components, see the *Installation Guide*. For more information about configuring data collection for reporting, see [“Reporting Configuration Tasks”](#). For more information about DRA Reporting, see [Chapter 22, “Generating Reports,” on page 153](#).

Start Reporting Center Console in the NetIQ > Reporting Center program group.

The following figure shows the Reporting Center interface with DRA Management reports selected.



---

# 3 Managing User Accounts

Microsoft Windows relies on the user account type to determine access permissions for the associated user account. A user account can be global or local. DRA also supports InetOrgPerson objects, but recognizes InetOrgPerson objects as normal users.

## Global user account

A user account that can be used in any domain that trusts the domain in which the user account was created. You can grant specific permissions to a user account. You can also make a user account a member of a group and then assign permissions to that group. Grouping user accounts helps simplify the process of managing network permissions for many user accounts.

## Local user account

A user account that is restricted to the computer on which it was created. Local user accounts allow users from NetWare, LAN Manager, and IBM LAN Server environments to use resources in a Microsoft Windows computer.

## 3.1 User Accounts in Trusted Domains

Microsoft Windows stores user account and group definitions in the directory of the managed domain. Therefore, an Administration server cannot modify the directory information from a trusted domain unless that domain is also managed by DRA.

For example, in the Account and Resource Management console, you may see user accounts and groups that you cannot modify. These user accounts and groups are defined in domains trusted by one of the managed domains. However, you can add accounts and groups from a trusted domain to other groups in the managed domain.

To modify user accounts or groups in a managed domain, you must first connect to the Administration server managing that domain. You must also have the appropriate powers to modify those user accounts or groups. For more information about specific user account administration tasks, see [Section 3.2, "User Account Management Tasks," on page 47](#).

## 3.2 User Account Management Tasks

This section guides you through administering user accounts in the Account and Resource Management console. With the appropriate powers, you can perform various user account management tasks, such as creating and deleting accounts. If you select multiple user accounts, you can perform selected tasks in one operation, such as deleting, moving, or adding users to a group. The Tasks menu indicates which tasks you can perform when you select single or multiple user accounts.

You also can perform these tasks using the Web Console or CLI. For more information about your assigned powers, see ["Viewing Your Assigned Powers and Roles"](#).

## 3.2.1 Creating a User Account

You can create user accounts in the managed domain or managed subtree. You can also modify properties, create a mailbox, enable email, and specify group memberships for the new account.

---

### NOTE

- ♦ Your company may have a naming convention enforced through policy that determines the name you can assign to the new user account.
  - ♦ By default, DRA places the new user account in the Users OU of the managed domain.
  - ♦ You cannot create InetOrgPerson objects in DRA.
- 

#### To create a user account:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create this account.  
For example, if you want to create this account in a specific OU of the managed domain, expand the domain and then select the appropriate OU.
- 3 On the Tasks menu, click **New > User**.
- 4 On each tab, specify the appropriate settings and properties for the new user account, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 3.2.2 Cloning a User Account

By cloning a user account, you can quickly create user accounts based on other accounts with similar properties. When you clone a user account, DRA populates the Clone User Wizard with values from the selected account. You can also modify properties, enable email, and specify group memberships for the new account.

---

**NOTE:** When you clone an InetOrgPerson object, you create a user account.

---

#### To clone a user account:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to clone, complete the following steps:
  - 2a** *If you know the account location*, select the domain and OU that contains this user account.
  - 2b** In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Clone**.
- 4 On each tab, specify the appropriate settings and properties for the new user account, and then click **Next**.
- 5 Review the summary, and then click **Finish**.



## 3.2.3 Managing User Account Properties

You can manage the properties of user accounts in the managed domain or managed subtree. The powers you have determine which properties you can modify for a user account. If you installed ExA and enabled Microsoft Exchange support, you can modify the associated mailbox properties while managing user accounts.

---

### NOTE

- ♦ You cannot modify mailbox properties of user accounts managed on member servers.
  - ♦ If home directory policies are enabled, DRA automatically modifies the home directory of a user account when you manage that account. For example, when you change the home directory location, DRA attempts to create the specified home directory and move the contents of the previous home directory to the new location. DRA also applies the assigned ACLs from the previous directory to the new directory. For more information, see the *Administrator Guide for Directory and Resource Administrator and Exchange Administrator*.
- 

### To manage user account properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to modify, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 **If you selected a single user account**, on the appropriate tab, change the properties and settings you want to modify.
- 5 **If you selected multiple user accounts**, complete the following steps:

---

**NOTE:** You can manage selected property values on the General, Address, Account, Profile, and Organization property pages for user accounts. If you are also managing Microsoft Exchange mailboxes, when you select multiple user accounts, you can perform selected Exchange tasks, such as creating or cloning mailboxes.

---

- 5a On the appropriate tab, click the pencil icon next to the property or setting you want to modify.
- 5b Change the property or settings you want to modify. Changing the property or settings value applies the same value to all selected objects.
- 5c Click **Apply**.
- 5d **If you want to copy the contents of the Results window**, click the copy to clipboard icon on the lower left of the window.
- 5e Click **OK**.
- 6 To save changes before you modify other properties, click **Apply**.
- 7 Click **OK**.

## 3.2.4 Managing Your Own Account

You can manage your own account by modifying general properties, such as your telephone number. Before you manage your account, ensure you have the appropriate power.

### To manage your own account:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Use the search pane to find your account.
- 3 In the list pane, select your account.
- 4 On the Tasks menu, click **Properties**.
- 5 On the appropriate tab, change the properties and settings you want to modify.  
To save these changes before you modify other properties, click **Apply**.
- 6 Click **OK**.

## 3.2.5 Renaming a User Account

You can rename user accounts in the managed domain or managed subtree. Changing the user logon name also changes the name of the mailbox associated with the user account.

### To rename a user account:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to rename, complete the following steps
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Rename**.
- 4 Change the appropriate naming properties.
- 5 Click **OK**.

## 3.2.6 Enabling a User Account

You can enable a user account in the managed domain or managed subtree. If you are managing a Microsoft Windows account, you can specify the domain controller at which DRA applies this change.

---

**NOTE:** When you apply this change to a specific domain controller, DRA also applies this change to the default domain controller for this managed domain. To verify which default domain controller DRA is using, view the domain properties. For more information, see the *Administrator Guide for Directory and Resource Administrator and Exchange Administrator*.

---

### To enable a user account:

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To specify the user account you want to enable, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Enable User Account**.
- 4 To apply this change at a specific domain controller, click **Specify domain controller**, and select the appropriate domain controller.
- 5 Click **Yes**.

## 3.2.7 Disabling a User Account

You can disable a user account in the managed domain. If you are managing a Microsoft Windows account, you can specify the domain controller at which DRA applies this change.

---

**NOTE:** When you apply this change to a specific domain controller, DRA also applies this change to the default domain controller for this managed domain. To verify which default domain controller DRA is using, view the domain properties. For more information, see the *Administrator Guide for Directory and Resource Administrator and Exchange Administrator*.

---

### To disable a user account:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to disable, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Disable User Account**.
- 4 To apply this change at a specific domain controller, click **Specify domain controller**, and select the appropriate domain controller.
- 5 Click **Yes**.

## 3.2.8 Unlocking a User Account

You can unlock a user account in the managed domain or managed subtree.

Because DRA retrieves the user account status from the accounts cache, the user interface may indicate that the selected account is unlocked when it is actually locked. DRA allows you to unlock a user account even if the account status indicates it is currently unlocked. You can also specify a domain controller when unlocking a user account using the DRA console without having to reset the user account password. For more information about the accounts cache refresh, see the *Administrator Guide for Directory and Resource Administrator and Exchange Administrator*.

### To quickly unlock a user account:

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To specify the user account you want to unlock, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Unlock User Account**.

## 3.2.9 Resetting a User Account Password

You can reset the password for an account in the managed domain or managed subtree. The powers you have determine the fields you can change for that user account.

When you reset the password for a user account, DRA automatically unlocks the account. You can select whether DRA generates a new password for the user account. You can also modify several password-related options for the account. If you are managing a Microsoft Windows account, you can specify the domain controller at which DRA applies these changes.

---

**NOTE:** When you apply this change to a specific domain controller, DRA also applies this change to the default domain controller for this managed domain. To verify which default domain controller DRA is using, view the domain properties. For more information, see the *Administrator Guide for Directory and Resource Administrator and Exchange Administrator*.

---

### To quickly reset a user account password:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose password you want to reset, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Reset password**.
- 4 Specify the new password and select the appropriate account options.

If you request a generated password, record the password DRA displays. If you specify a domain controller, record which domain controller you chose. DRA generates a password based on the Password Policy defined in the domain of the user account.
- 5 To apply this change at a specific domain controller, click **Specify domain controller**, and select the appropriate domain controller.
- 6 Click **OK**.

## 3.2.10 Copying a User Account to Another ActiveView

You can copy a user account to another ActiveView. This action is called **transferring** a user account. To copy a user account to another ActiveView, you need the Copy User to Another ActiveView power in both the source and target ActiveViews. Transferring a user account to another ActiveView does not remove the user account from the source ActiveView.

### To copy a user account to another ActiveView:

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To specify the user account you want to copy to another ActiveView, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Transfer**.
- 4 Specify the appropriate ActiveViews.
- 5 Click **OK**.

### 3.2.11 Moving a User Account to Another Container

You can move a user account to another container, such as an OU, in the managed domain or managed subtree.

**To move a user account to another container:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to move to another container, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Move**.
- 4 Select the appropriate container.
- 5 Click **OK**.

### 3.2.12 Deleting a User Account

You can delete a user account in the managed domain or managed subtree. If the Recycle Bin is disabled for that domain, deleting a user account permanently removes the user account from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a user account moves the user account to the Recycle Bin.

For more information about using the Recycle Bin, see [Chapter 21, “Managing the Recycle Bin,” on page 151](#).

---

**WARNING:** When you create a user account, Microsoft Windows assigns a Security Identifier (SID) to that account. The SID is not generated from the account name. Microsoft Windows uses SIDs to record privileges in access control lists (ACLs) for each resource. If you delete a user account, you cannot return access capabilities for that account by creating a new user account with the same name.

---

**To delete a user account:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To specify the user account you want to delete, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Delete**.
- 4 Click **Yes**.

### 3.2.13 Specifying Group Membership for User Accounts

You can add or remove user accounts from a specific group in the managed domain or managed subtree. You can also view or modify properties of existing groups to which this account belongs.

**To specify group membership for user accounts:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to manage, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 In the details pane, click **Member of**. To view the details pane, click **Details** on the View menu.
- 4 To check a group to which the user account already belongs, select the group, and then click **Properties**.
- 5 To add the user account to a group, complete the following steps:
  - 5a Click **Add to Groups**.
  - 5b Find and select the appropriate group, and then click **OK**.
- 6 To remove the user account from a group, select the group, and then click **Remove**.

## 3.3 Transforming User Accounts

DRA offers you the ability to quickly and efficiently transform user accounts. When the individual associated with a user account transitions to new job responsibilities, you can use the transform capabilities of DRA. Taking advantage of job role templates, you can quickly add, remove, or update the group memberships associated with an account. Whether an individual is promoted, changes departments, or leaves the company, the ability to transform a user account will save you time, money, and guesswork.

### 3.3.1 Understanding the Transformation Process

You can use the transform user account capabilities to fulfill any of the following needs:

- ♦ Remove group memberships from a user account
- ♦ Add group memberships to a user account
- ♦ Change user properties
- ♦ Remove particular group memberships while adding other group memberships to a user account

Consider the following process before attempting to transform a user account:

- 1 Decide whether you need to add, remove, or both add and remove group memberships.
- 2 Review your current subtractive and additive templates to ensure you have the necessary template user accounts.
- 3 If necessary, create any required template accounts.
- 4 Complete the Transform User wizard.

As DRA transforms a user, the group memberships designated by the subtractive template are removed from the user account, while those memberships designated by the additive template are assigned to the user account. DRA leaves any memberships outside of the subtractive or additive templates intact. For example, an individual in your outside sales department is transferred from US sales to European sales. Within your organization, you have both distribution groups and security groups that are unique for these sales teams and a number that are shared across all sales teams. The US sales team has the US Hotspots DL and the US Sales Mang DL distribution groups while the European sales team has Euro Hotspots and Euro Sales Mang distribution groups. Both teams are members of the Global Sales Sec security group, but also have individual site-specific security groups.

Your subtractive template, named US Sales Template, would be assigned the following group memberships:

- ◆ US Hotspots DL
- ◆ US Sales Mang DL
- ◆ Global Sales Sec
- ◆ US Sec

Your additive template, named Euro Sales Template, would be assigned the following group memberships:

- ◆ Euro Hotspots DL
- ◆ Euro Sales Mang DL
- ◆ Global Sales Sec
- ◆ Euro Sec

During the transformation process, the user account of the transferred sales person is first removed from all the group memberships designated by the US Sales Template, and then added to all the group memberships designated by the Euro Sales Template. If this individual was also a member of the Poker Players distribution group, this group membership remains untouched.

The following powers allow an Assistant Admin to further modify a user account during the transformation process:

- ◆ Modify Address Properties while Transforming a User Account
- ◆ Modify Description while Transforming a User Account
- ◆ Modify Office while Transforming a User Account
- ◆ Modify Telephone Properties while Transforming a User Account

You can also restrict the ability to add or remove group memberships by giving an Assistant Admin only one of the following powers:

- ◆ Add a user to groups found in a template
- ◆ Remove a user from groups found in a template

You can use either of these power-based limiting options to create a layer of security within your organization. By allowing certain individuals the power to only remove groups found in a template, you can create interim user accounts. These interim accounts can then be reviewed before a different Assistant Admin uses an additive template account to grant the new group memberships.

## 3.3.2 Creating User Transformation Templates

Transformation of user accounts is directly tied to the roles and job ladders of your organization. Consider creating a template for each role or job within your company. DRA makes no distinction between a user account template used as subtractive versus additive. Create a single template user account for each role within your organization. During the transformation, you select the template as subtractive or additive. Selecting a template as subtractive does not stop the same template from being used as additive in a future transformation.

To create a user transformation template, you must have the powers to create a user account and assign that user account to the appropriate groups. These powers can be obtained through associating your account with the Create and Delete User Accounts and the Group Administration roles in the appropriate ActiveViews or through the assigning of individual powers.

## 3.3.3 Transforming User Accounts

Transforming a user account allows you to add, remove, or both add and remove user account group memberships. Use this workflow to help you when individuals transition from one job responsibility to another within your organization. You must have the Transform a User role or a role that contains the appropriate powers to transform user accounts.

### To transform a user account:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account you want to manage, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 Click **Tasks > Transform**.
- 4 Review the Welcome window, and then click **Next**.
- 5 On the Select User Template window, use **Browse** to select the appropriate subtractive template user.
- 6 **If you want to review the properties of the subtractive template user account**, click **View**.
- 7 Use **Browse** to select the appropriate additive template user.
- 8 **If you want to review the properties of the additive template user account**, click **View**.
- 9 **If you have the appropriate powers**, you can check **Change other properties of the user** and select properties to modify. Click **Next** to navigate through the properties available. For more information, click **?**.
- 10 Click **Next**.
- 11 Review the Summary window, and then click **Finish**.



---

# 4 Managing Groups

As an Assistant Admin (AA), you can use DRA and ExA to manage groups and modify group properties. Groups allow you to give specific permissions to a defined set of user accounts. Groups let you control which data and resources a user account can access in any domain.

You can manage groups of any type and scope. For example, you can nest groups, allowing one group can inherit permissions from another group. You can also effectively control group memberships across domains by adding groups from trusted domains to other groups in the managed domain and by managing temporary group assignments.

## 4.1 Group Contents

Groups can contain the following objects:

- ◆ User Accounts (UA)
- ◆ Contacts (CON)
- ◆ Computers (CPT)
- ◆ Global Groups (GG)
- ◆ Local Groups (LG)
- ◆ Universal Groups (UG)
- ◆ Foreign Security Principals (FSP)

Depending on your network environment, groups can only contain certain objects. The following table indicates what type of objects a group can contain when groups are in the same domain or in a trusted domain, mixed mode or native mode domain environment.

	Local Groups		Global Groups		Universal Groups	
Domain	Same	Trusted	Same	Trusted	Same	Trusted
<b>Mixed Mode</b>	UA	UA	UA	None	UA	UA
	CON	CON	CON		CON	CON
	CPT	CPT	CPT		CPT	CPT
	GG	GG	FSP		GG	GG
	LG	UG			FSP	LG
	UG	FSP				FSP
	FSP					

	Local Groups		Global Groups		Universal Groups	
Domain	Same	Trusted	Same	Trusted	Same	Trusted
<b>Native Mode</b>	UA	UA	UA	None	UA	UA
	CON	CON	CON		CON	CON
	CPT	CPT	CPT		CPT	CPT
	GG	GG	GG		GG	GG
	LG	UG	FSP		UG	UG
	UG	FSP			FSP	FSP
	FSP					

## 4.2 Group Types

In mixed mode and native mode domains, you can create the following group types:

### Security Groups

Let you assign rights and permissions to a collection of members and manage their permissions collectively. Each security group is assigned a Security Identifier (SID).

### Distribution Groups

Let you identify a set of user accounts and contacts to use as an Exchange distribution list. Distribution groups are not assigned SIDs.

## 4.3 Group Scope

In mixed or native mode domains, you can define the group scope as domain local, global, or universal. With group type and scope combined in mixed mode domains, you can create groups with several different types and scopes, including the following groups:

- ♦ Domain local security groups
- ♦ Domain local distribution groups
- ♦ Global security groups
- ♦ Global distribution groups
- ♦ Universal distribution groups

You can use universal security groups only in native mode domains.

## 4.4 Group Scopes in Mixed and Native Modes

A mixed mode domain has some limitations on the use of group types and scopes. For example, you can create universal distribution groups, but you cannot create universal security groups. You can only nest distribution groups in a mixed mode domain. Once you create a group, you cannot change the type or scope or convert the group to another type or scope.

In a native mode domain, groups are more flexible than in mixed mode domains. You can use universal groups for security or distribution. You can nest any type of group in a universal group. You can freely convert groups between security and distribution group scopes. You can convert global and domain local groups to universal group types with a few exceptions.

The following table compares some aspects of group scope in mixed mode domains and in Microsoft Windows native mode domains.

<b>Group Scope</b>	<b>Mixed Mode Domains</b>	<b>Microsoft Windows Native Mode Domains</b>
Domain Local	Groups can contain user accounts and global groups from any domain. You can include these groups only in other domain local groups and permission lists in the same domain.	Groups can contain user accounts, global groups, and universal groups from any domain, as well as domain local groups from the same domain. You can convert domain local groups that do not contain other domain local groups to universal groups.
Global	Groups can contain user accounts from the same domain and any domain can reference a domain that trusts the domain in which it was created. You can assign a global group permissions for anywhere in the network. Global groups cannot contain other groups.	Groups can contain the same objects as in mixed mode domains, except global groups can contain other global groups from the same domain. You can convert global groups that are not a member of any other global groups to universal groups.
Universal	You can only create universal distribution groups in a mixed mode domain.	Groups can contain members from any domain in the forest. Universal groups can appear in ACLs anywhere in the forest, and can contain other universal groups, global groups, and user accounts.

## 4.5 Group Management Tasks

This section guides you through administering groups in the Account and Resource Management console. With the appropriate powers, you can perform various group management tasks, such as modifying group memberships. If you select multiple groups, you can perform selected tasks in one operation, such as deleting, moving, or adding members to a group. The Tasks menu indicates which tasks you can perform when you select single or multiple groups.

You also can perform these tasks using the Web Console or CLI. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

## 4.5.1 Adding Accounts to Groups

You can add user accounts, contacts, and computers to a managed group. For more information about nesting groups, see [Section 4.5.2, “Adding Groups to Other Groups,”](#) on page 60.

---

### NOTE

- ◆ This task adds multiple accounts to a selected group. You can add a single account to a group by selecting the appropriate account and then clicking **Add to groups** on the Tasks menu.
  - ◆ If adding an account to another group increases your powers for the account, DRA does not permit you to add the account.
- 

### To add an account to a group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group to which you want to add accounts, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Add members**.
- 4 Find and select the appropriate accounts. You can select more than one account type, such as a contact and a user account.
- 5 Click **OK**.

## 4.5.2 Adding Groups to Other Groups

You can nest groups by adding a group to another managed group. When a group is nested in another group, the child group can inherit permissions from the parent group.

---

**NOTE:** If adding a group to another group increases your powers for the source group, DRA does not permit you to add the group.

---

### To add a group to another group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to add within another group, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Add to Groups**.
- 4 Find and select the appropriate group. You can select more than one group from different OUs or managed domains.
- 5 Click **OK**.

## 4.5.3 Managing Group Properties

You can manage properties for local and global groups. The powers you have determine which properties you can modify for a group in the managed domain or managed subtree. If you installed ExA and enabled Microsoft Exchange support, you can modify distribution list properties while managing groups.

**To manage group properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to manage, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Properties**.
- 4 **If you selected a single group**, on the appropriate tab, change the properties and settings you want to modify.
- 5 **If you selected multiple groups**, complete the following steps:

---

**NOTE:** You can manage selected property values on the General and Managed by property pages for groups.

---

- 5a On the appropriate tab, click the pencil icon next to the property or setting you want to modify.
  - 5b Change the property or settings you want to modify. Changing the property or settings value applies the same value to all selected objects.
  - 5c Click **Apply**.
  - 5d **If you want to save the contents of the Results window**, click **Export** on the lower left corner of the window.
  - 5e Click **OK**.
- 6 To save your changes before you modify other properties, click **Apply**.
  - 7 Click **OK**.

## 4.5.4 Creating a Group

You can create a group in the managed domain or managed subtree. You can also modify properties, such as group members, for the new group.

---

### NOTE

- ♦ Your company may have a naming convention enforced through policy that determines the name you can assign to the new group.
  - ♦ By default, DRA places the new group in the Users OU of the managed domain.
- 

**To create a group:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create this group.

For example, if you want to create this group in a specific OU of the managed domain, expand the domain and then select the appropriate OU.

- 3 On the Tasks menu, click **New > Group**.
- 4 On each tab, specify the appropriate settings and properties for the new group, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 4.5.5 Specifying Group Members

You can add or remove user accounts, contacts, computers, or other groups from the managed group. DRA allows you to only remove foreign security principals. You can also view or modify properties of existing group members, except for foreign security principals.

When you remove members from a group, DRA does not delete the objects. When you add members to a group, you must have the power to modify the objects you want to add.

---

**NOTE:** You cannot add user accounts or groups to any of the Windows special groups (Administrators, Account Operators, Backup Operators, or Server Operators) unless you are a Windows administrator or a member of that specific special group.

---

### To manage group members:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group whose members you want to modify, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 In the details pane, click **Members**. To view the details pane, click **Details** on the View menu.
- 4 To check an existing group member, select the object, and then click **Properties**.
- 5 To add an object to this group, complete the following steps:
  - 5a Click **Add Members**.
  - 5b Find and select the appropriate object, and then click **OK**.
- 6 To remove an object from this group, select the object, and then click **Remove**.

## 4.5.6 Specifying Group Membership for Groups

You can add or remove a group from other groups in the managed domain or managed subtree. You can also view or modify properties of existing groups to which this group belongs.

### To manage group memberships:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group whose membership you want to modify, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 In the details pane, click **Member of**. To view the details pane, click **Details** on the View menu.

- 4 To check a group, select the group, and then click **Properties**.
- 5 To add this group to another group, complete the following steps:
  - 5a Click **Add to Groups**.
  - 5b Find and select the appropriate group, and then click **OK**.
- 6 To remove this group from another group, select the group, and then click **Remove**.

## 4.5.7 Setting Group Membership Security Permissions

You can set Active Directory security permissions for group memberships. These permissions specify who can view (read) and modify (write) group memberships using Microsoft Outlook. These settings let you more effectively secure distribution lists and security groups in your environment. You cannot modify inherited security permissions.

---

**NOTE:** When you manage group membership security, disabled permissions may indicate inherited permissions.

---

### To set group membership security permissions:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group whose membership you want to secure, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Membership security**.
- 5 Select the user account or group you want to grant or deny security permissions. To specify a different user account or group, click **Add**.
- 6 Under Permissions, select the appropriate security settings:
  - ◆ To allow the selected user account or group the ability to view this group membership, click **Allow** under **Read members**.
  - ◆ To deny the selected user account or group the ability to view this group membership, click **Deny** under **Read members**.
  - ◆ To allow the selected user account or group the ability to modify this group membership, click **Allow** under **Write members**.
  - ◆ To deny the selected user account or group the ability to modify this group membership, click **Deny** under **Write members**.
- 7 To remove all security permissions from a user or group, select the appropriate user or group, and then click **Remove**.
- 8 To check if a user or group has security permissions, select the appropriate user or group, and then click **Properties**.
- 9 Click **OK**.

## 4.5.8 Setting Group Ownership

You can set the ownership of any Microsoft Windows distribution or security groups. You can grant the group ownership permission to a user account, group, or contact. Granting group ownership allows the specified user account, group, or contact to modify the membership of this group.

---

**NOTE:** DRA disables the **Manager can update membership list** check box when group membership is hidden from the Microsoft Exchange server. To enable this check box, click **Expose Group Membership** on the Exchange tab of the Group Properties window. For more information, see [Section 4.5.13, “Exposing Group Memberships in Distribution Lists,” on page 66.](#)

---

### To set group ownership:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group whose ownership you want to set, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Managed by**.
- 5 To specify a different manager for this group, click **Change**.
- 6 Select the **Manager can update membership list** check box, and then click **OK**.

## 4.5.9 Cloning a Group

You can clone both local groups and global groups in managed domains. Cloning groups creates new groups of the same type and attributes as the original group. DRA also attempts to add all members from the original group to the new group.

By cloning a group, you can quickly create groups based on other groups with similar properties. When you clone a group, DRA populates the Clone Group Wizard with values from the selected group. You can also modify properties for the new group.

---

### NOTE

- ♦ Your company may have a naming convention enforced through policy that determines the name you can assign to the new group.
  - ♦ By default, DRA places the new group in the Users OU of the managed domain.
- 

### To clone a group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to clone, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Clone**.



- 4 On each tab, specify the appropriate settings and properties for the new group, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 4.5.10 Renaming a Group

You can rename groups in the managed domain or managed subtree.

### To rename a group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to rename, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Rename**.
- 4 Change the appropriate naming properties.
- 5 Click **OK**.

## 4.5.11 Deleting a Group

You can delete local and global groups in the managed domain or managed subtree. If the Recycle Bin is disabled for that domain, deleting a group permanently removes the group from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a group moves the group to the Recycle Bin and disables the group properties.

For more information on the Recycle Bin, see [Chapter 21, "Managing the Recycle Bin," on page 151](#).

---

**WARNING:** When you create a group, Microsoft Windows assigns a Security Identifier (SID) to that group. The SID is not generated from the group name. Microsoft Windows uses SIDs to record privileges in access control lists (ACLs) for each resource. If you delete a group, you cannot return access capabilities for that group by creating a new group with the same name.

---

### To delete a group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to delete, complete the following steps:
  - 2a **If you know the group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Delete**.
- 4 Click **Yes**.

## 4.5.12 Moving a Group to Another Container

You can move a group to another container, such as an OU, in the managed domain or managed subtree.

**To move a group to another container:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to move to another container, complete the following steps:
  - 2a If you know the group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Move**.
- 4 Select the appropriate container.
- 5 Click **OK**.

## 4.5.13 Exposing Group Memberships in Distribution Lists

You can expose group memberships in distribution lists for groups in the managed domain or managed subtree.

**To expose group memberships in distribution lists:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to modify, complete the following steps:
  - 2a If you know the group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Exchange Tasks**.
- 4 Click **Expose Group Membership**.
- 5 Click **Finish**, and then click **Done**.

## 4.5.14 Hiding Group Memberships from Distribution Lists

You can hide group memberships in distribution lists for groups in the managed domain or managed subtree.

---

**NOTE:** **Hide Group Membership** option is disabled for Microsoft Exchange 2007 distribution lists.

---

**To hide group memberships in distribution lists:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group want to modify, complete the following steps:
  - 2a If you know the group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the group attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate group.
- 3 On the Tasks menu, click **Exchange Tasks**.

- 4 Click **Hide Group Membership**.
- 5 Click **Finish**, and then click **Done**.

## 4.6 Temporary Group Assignment Tasks

Temporary group assignments allow you to manage group memberships for users who only need group membership for a specific time period. This section guides you through administering temporary group assignments in the Account and Resource Management console. With the appropriate powers, you can perform tasks such as creating new temporary group assignments or removing expired temporary group assignments. You can perform these tasks only on the primary Administration server. The Tasks menu indicates which tasks you can perform when you select single or multiple temporary group assignments.

For more information about your assigned powers, see “[Viewing Your Assigned Powers and Roles](#)”.

### 4.6.1 Managing Temporary Group Assignment Properties

You can manage properties for temporary group assignments or saved expired temporary group assignments only on the primary Administration server. The powers you have determine which properties you can modify for a temporary group assignment.

**To manage temporary group assignment properties:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Select **Temporary Group Assignment**.
- 3 **If you want to specify global properties for all temporary group assignments**, complete the following steps:
  - 3a On the Tasks menu, click **Properties**.
  - 3b Change the properties and settings you want to modify.
  - 3c To save your changes, click **Apply**.
- 4 **If you want to specify the properties for a temporary group assignment**, complete the following steps:
  - 4a In the list pane, select the appropriate temporary group assignment.
  - 4b On the Tasks menu, click **Properties**.
  - 4c On the appropriate tab, change the properties and settings you want to modify.  
To save your changes before you modify other properties, click **Apply**.
- 5 Click **OK**.

### 4.6.2 Creating a New Temporary Group Assignment

You can create a temporary group assignment only on the primary Administration server. You can also modify properties, such as schedules, for the new temporary group assignment.

**To create a temporary group assignment:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Select **Temporary Group Assignment**.
- 3 On the Tasks menu, click **New Temporary Group Assignment**.

- 4 On each tab, specify the appropriate settings and properties for the new temporary group assignment, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

### 4.6.3 Managing User Accounts in a Temporary Group Assignment

You can add or remove user accounts from temporary group assignments on the primary Administration server.

---

**NOTE:** You can only manage user accounts for temporary group assignments that are not yet active.

---

**To manage user accounts in a temporary group assignment:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Select **Temporary Group Assignment**.
- 3 In the list pane, select the appropriate temporary group assignment.
- 4 On the Tasks menu, click **Properties**.
- 5 Click **Group Members**.
- 6 **If you want to remove a user account**, select the user account and click **Remove**.
- 7 **If you want to add a new user account**, complete the following steps:
  - 7a Click **Add > User**.
  - 7b Find and select the appropriate user account, and then click **OK**.
- 8 Click **Apply**, and then click **OK**.

### 4.6.4 Rescheduling a Temporary Group Assignment

You can reschedule temporary group assignments only on the primary Administration server. You can also reschedule a saved expired temporary group assignment.

---

**NOTE:** When a temporary group assignment expires, DRA automatically deletes it, unless you saved it for future use.

---

**To reschedule a temporary group assignment:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Select **Temporary Group Assignment**.
- 3 In the list pane, select the appropriate temporary group assignment.
- 4 On the Tasks menu, click **Properties**.
- 5 Click **Schedule**.
- 6 Specify new start and end times. If the temporary group assignment is active, you can only specify the end time.
- 7 **If you want to save a temporary group assignment for future use**, select the **Keep this temporary assignment for future use** check box.
- 8 Click **OK**.

## 4.6.5 Deleting a Temporary Group Assignment

You can delete any temporary group assignment on the primary Administration server.

**To delete a temporary group assignment:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Select **Temporary Group Assignment**.
- 3 In the list pane, select the appropriate temporary group assignment.
- 4 On the Tasks menu, click **Delete**.
- 5 Click **Yes**.



---

# 5 Managing OUs and the Active Directory

An organizational unit (OU) is a container in the Active Directory. OUs can contain user accounts, groups, computers, contacts, and other OUs. However, an object can only be a member of one OU at a time. OUs cannot contain objects from other domains. In Microsoft Windows, an OU may be the smallest unit in which you can use your administration powers.

## 5.1 Built-in Containers

In addition to OUs, Microsoft Windows creates built-in containers automatically. You can neither rename these containers nor create another OU with the names of these containers. There may be additional limits on what objects these containers may contain. DRA presents only the valid options for each type of OU, object, or container.

## 5.2 OU Management Tasks

This section guides you through administering OUs in the Account and Resource Management console. With the appropriate powers, you can perform various OU management tasks, such as moving an OU to another container. You also can perform these tasks using the CLI. For more information about your assigned powers, see “[Viewing Your Assigned Powers and Roles](#)”.

### 5.2.1 Managing OU Properties

You can manage properties for OUs. The powers you have determine which properties you can modify for an OU in the managed domain or managed subtree.

**To manage OU properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the OU you want to manage, complete the following steps:
  - 2a **If you know the OU location**, select the domain or OU that contains this OU.
  - 2b In the search pane, specify the container attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate OU.
- 3 On the Tasks menu, click **Properties**.
- 4 On the appropriate tab, change the properties and settings you want to modify.

To save these changes before you modify other properties, click **Apply**.
- 5 Click **OK**.

## 5.2.2 Creating an OU

You can create an OU in the managed domain or managed subtree. You can also modify general properties, such as the OU description.

### To create an OU:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create this OU.  
For example, if you want this new OU to be a child of a specific OU in the managed domain, expand the domain and then select the appropriate parent OU.
- 3 On the Tasks menu, click **New > OU**.
- 4 On each tab, specify the appropriate settings and properties for the new OU, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 5.2.3 Cloning an OU

You can create a new OU by cloning an existing OU from the managed domain or managed subtree. You can also modify general properties for new OU, such as the OU description. Cloning an OU does not clone the objects contained in the OU.

### To clone an OU:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the OU you want to clone, complete the following steps:
  - 2a **If you know the OU location**, select the domain or OU that contains this OU.
  - 2b In the search pane, specify the container attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate OU.
- 3 On the Tasks menu, click **Clone**.
- 4 On each tab, specify the appropriate settings and properties for the new OU, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 5.2.4 Opening the Active Directory Tree to an OU Location

You can quickly and easily open the Active Directory tree to the location of a specific OU in the managed domain or managed subtree.

### To open the Active Directory tree:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the OU, complete the following steps:
  - 2a In the search pane, specify the container attributes, and then click **Find Now**.
  - 2b In the list pane, select the appropriate OU.
- 3 On the Tasks menu, click **Open in Tree**.
- 4 In the left pane, the tree opens to the location of the selected OU.



## 5.2.5 Moving an OU to Another Container

You can move an OU to a different container in the managed domain. When managing a subtree of a domain, you can move OUs within the hierarchy of that subtree.

---

### NOTE

- ♦ If moving an OU to another container increases your powers for the moved OU, DRA does not permit you to move the OU.
  - ♦ You can also move an OU by dragging it to the new location.
- 

#### To move an OU to another container:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the OU you want to move, complete the following steps:
  - 2a **If you know the OU location**, select the domain or OU that contains this OU.
  - 2b In the search pane, specify the container attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate OU.
- 3 On the Tasks menu, click **Move**.
- 4 Select the appropriate container.
- 5 Click **OK**.

## 5.2.6 Renaming an OU

You can quickly and easily rename an OU in the managed domain or managed subtree.

---

**NOTE:** When you rename objects, including OUs, consider the naming restriction. The names of OUs cannot contain leading or trailing spaces.

---

#### To rename an OU:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the OU you want to rename, complete the following steps:
  - 2a **If you know the OU location**, select the domain or OU that contains this OU.
  - 2b In the search pane, specify the container attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate OU.
- 3 On the Tasks menu, click **Rename**.
- 4 Change the appropriate naming properties.
- 5 Click **OK**.

## 5.2.7 Deleting an OU

You can delete OUs from the managed domain or managed subtree. You can only delete empty OUs. If an OU contains objects, you cannot delete the OU. In order to delete an OU that contains objects, delete all of the objects first, and then delete the OU.

### To delete an OU:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the OU you want to delete, complete the following steps:
  - 2a **If you know the OU location**, select the domain or OU that contains this OU.
  - 2b In the search pane, specify the container attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate OU.
- 3 On the Tasks menu, click **Delete**.
- 4 Click **Yes**.

---

# 6 Managing Contacts

DRA and ExA allows you to manage many network objects, including contacts and the associated email addresses. Contacts are available only in mixed mode or native Microsoft Windows domains. Contacts do not have a Security Identifier (SID), as do user accounts and groups. Use contacts to add members to distribution lists or groups without granting them access to the network services.

You can add contacts to security or distribution groups in mixed and native mode domains. Because security groups can be used as distribution lists in Microsoft Windows, you may want to add contacts to these groups. Having a contact in a global security group does not prevent the group from being converted to a universal security group when you migrate to a native mode Microsoft Windows domain.

## 6.1 Contact Management Tasks

This section guides you through administering contacts in the Account and Resource Management console. With the appropriate powers, you can perform various contact management tasks, such as cloning a contact. If you select multiple contacts, you can perform selected tasks in one operation, such as deleting, moving, or adding contacts to a group. The Tasks menu indicates which tasks you can perform when you select single or multiple contacts.

You also can perform these tasks using the Web Console or CLI. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 6.1.1 Managing Contact Properties

You can manage contact properties. The powers you have determine which properties you can modify for a contact in the managed domain. If you installed ExA and enabled Exchange support, you can modify email address properties while managing the contacts.

**To manage contact properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the contact you want to manage, complete the following steps:
  - 2a **If you know the contact location**, select the domain and OU that contains this contact.
  - 2b In the search pane, specify the contact attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate contact.
- 3 On the Tasks menu, click **Properties**.
- 4 **If you selected a single contact**, on the appropriate tab, change the properties and settings you want to modify.
- 5 **If you selected multiple contacts**, complete the following steps:

---

**NOTE:** You can manage selected property values on the General, Address, and Organization property pages for contacts.

---

- 5a On the appropriate tab, click the pencil icon next to the property or setting you want to modify.
  - 5b Change the property or settings you want to modify. Changing the property or settings value applies the same value to all selected objects.
  - 5c Click **Apply**.
  - 5d **If you want to copy the contents of the Results window**, click the copy to clipboard icon on the lower left of the window.
  - 5e Click **OK**.
- 6 To save your changes before you modify other properties, click **Apply**.
  - 7 Click **OK**.

## 6.1.2 Creating a Contact

You can create contacts in the managed domain or managed subtree. You can also modify properties, enable email and specify email addresses, and specify group memberships for the new contact.

**To create a contact:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create this contact.  
For example, if you want to create this contact in a specific OU of the managed domain, expand the domain and then select the appropriate OU.
- 3 On the Tasks menu, click **New > Contact**.
- 4 On each tab, specify the appropriate settings and properties for the new contact, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 6.1.3 Cloning a Contact

By cloning a contact, you can quickly create contacts based on other contacts with similar properties. When you clone a contact, DRA populates the Clone Contact Wizard with values from the selected contact. You can also modify properties, enable email and specify email addresses, and specify group memberships for the new contact.

**To clone a contact:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the contact you want to clone, complete the following steps:
  - 2a **If you know the contact location**, select the domain and OU that contains this contact.
  - 2b In the search pane, specify the contact attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate contact.
- 3 On the Tasks menu, click **Clone**.

- 4 On each tab, specify the appropriate settings and properties for the new contact, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 6.1.4 Managing Group Memberships for Contacts

You can add or remove contacts from a specific group in the managed domain or managed subtree. You can also view or modify properties of existing groups to which this contact belongs.

**To specify group membership for contacts:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the contact you want to manage, complete the following steps:
  - 2a **If you know the contact location**, select the domain and OU that contains this contact.
  - 2b In the search pane, specify the contact attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate contact.
- 3 In the details pane, click **Member of**. To view the details pane, click **Details** on the View menu.
- 4 To check a group to which the contact already belongs, select the group, and then click **Properties**.
- 5 To add the contact to a group, complete the following steps:
  - 5a Click **Add**.
  - 5b Find and select the appropriate group, and then click **OK**.
- 6 To remove the contact from a group, select the group, and then click **Remove**.

## 6.1.5 Moving a Contact to Another OU

You can move a contact to another container, such as an OU, in the managed domain or managed subtree.

**To move a contact to another container:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the contact you want to move to another container, complete the following steps:
  - 2a **If you know the contact location**, select the domain and OU that contains this contact.
  - 2b In the search pane, specify the contact attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate contact.
- 3 On the Tasks menu, click **Move**.
- 4 Select the appropriate container.
- 5 Click **OK**.

## 6.1.6 Renaming a Contact

You can quickly and easily rename a contact in the managed domain or managed subtree.

**To rename a contact:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To specify the contact you want to rename, complete the following steps:
  - 2a **If you know the contact location**, select the domain and OU that contains this contact.
  - 2b In the search pane, specify the contact attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate contact.
- 3 On the Tasks menu, click **Rename**.
- 4 Change the appropriate naming properties.
- 5 Click **OK**.

## 6.1.7 Deleting a Contact

You can delete a contact from the managed domain or managed subtree. If the Recycle Bin is disabled for that domain, deleting a contact permanently removes the contact from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a contact moves the contact to the Recycle Bin.

For more information on the Recycle Bin, see [Chapter 21, "Managing the Recycle Bin," on page 151](#).

### To delete a contact:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the contact you want to delete, complete the following steps:
  - 2a **If you know the contact location**, select the domain and OU that contains this contact.
  - 2b In the search pane, specify the contact attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate contact.
- 3 On the Tasks menu, click **Delete**.
- 4 Click **Yes**.

---

# 7 Managing Dynamic Distribution Groups

A dynamic distribution group is a mail-enabled Active Directory group object that you can create to expedite the mass sending of email messages and other information.

The membership list for a dynamic distribution group is calculated each time a message is sent to the group, based on the filters and conditions that you define. This differs from a regular distribution group, which contains a defined set of members. When an email message is sent to a dynamic distribution group, it is delivered to all recipients in the organization that match the criteria defined for that group.

DRA supports the following features:

- ◆ Audit and UI reporting
- ◆ Enumeration support for dynamic distribution groups
- ◆ NetIQ Reporting Center (NRC) report for dynamic distribution groups
- ◆ Trigger operation support for dynamic distribution groups
- ◆ UI extension support for Exchange dynamic distribution groups

## 7.1 Dynamic Distribution Group Tasks

You can perform the following dynamic distribution group management tasks with DRA:

- ◆ Create a dynamic distribution group
- ◆ Modify a dynamic distribution group
- ◆ Clone a dynamic distribution group
- ◆ Delete a dynamic distribution group
- ◆ Restore a dynamic distribution group from the NetIQ Recycle Bin container

### 7.1.1 Creating a Dynamic Distribution Group

You can create a dynamic distribution group in the managed domain or managed subtree. You can also modify properties, such as group members, for the new dynamic distribution group.

---

#### NOTE

- ◆ Your company may have a naming convention enforced through policy that determines the name you can assign to the new dynamic distribution group.
  - ◆ By default, DRA places the new dynamic distribution group in the Users OU of the managed domain.
- 

**To create a dynamic distribution group:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create this dynamic distribution group.

For example, if you want to create this group in a specific OU of the managed domain, expand the domain and then select the appropriate OU.

- 3 On the Tasks menu, click **New > Dynamic Distribution Group**.
- 4 On each tab, specify the appropriate settings and properties for the new group, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 7.1.2 Cloning a Dynamic Distribution Group

You can clone both local and global dynamic distribution groups in managed domains. Cloning dynamic distribution groups creates new dynamic distribution groups of the same type and attributes as the original dynamic distribution group.

By cloning a dynamic distribution group, you can quickly create dynamic distribution groups based on other dynamic distribution groups with similar properties. When you clone a dynamic distribution group, DRA populates the Clone Dynamic Distribution Group Wizard with values from the selected dynamic distribution group. You can also modify properties for the new dynamic distribution group.

---

### NOTE

- ♦ Your company may have a naming convention enforced through policy that determines the name you can assign to the new dynamic distribution group.
  - ♦ By default, DRA places the new dynamic distribution group in the Users OU of the managed domain.
- 

#### To clone a dynamic distribution group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic distribution group you want to clone, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate dynamic distribution group.
- 3 On the Tasks menu, click **Clone**.
- 4 On each tab, specify the appropriate settings and properties for the new group, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 7.1.3 Moving a Dynamic Distribution Group to Another Container

You can move a dynamic distribution group to another container, such as an OU, in the managed domain or managed subtree.

#### To move a dynamic distribution group to another container:

- 1 In the left pane, expand **All My Managed Objects**.



- 2 To specify the dynamic distribution group you want to move to another container, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate group and select **Move**.

---

**NOTE:** You can select and move more than one dynamic distribution group.

---
- 3 Select the appropriate container.
- 4 Click **OK**.

## 7.1.4 Deleting a Dynamic Distribution Group

You can delete local and global dynamic distribution groups in the managed domain or managed subtree. If the Recycle Bin is disabled for that domain, deleting a dynamic distribution group permanently removes the dynamic distribution group from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a dynamic distribution group moves it to the Recycle Bin and disables the dynamic distribution group's properties.

For more information on the Recycle Bin, see [Chapter 21, "Managing the Recycle Bin," on page 151](#).

---

**WARNING:** When you create a dynamic distribution group, Microsoft Windows assigns a Security Identifier (SID) to that dynamic distribution group. The SID is not generated from the dynamic distribution group name. Microsoft Windows uses SIDs to record privileges in access control lists (ACLs) for each resource. If you delete a dynamic distribution group, you cannot return access capabilities for that dynamic distribution group by creating a new dynamic distribution group with the same name.

---

### To delete a dynamic distribution group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic distribution group you want to delete, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate dynamic distribution group and select **Delete**.

---

**NOTE:** You can select and delete more than one dynamic distribution group.

---

- 3 Click **Yes**.

## 7.1.5 Renaming a Dynamic Distribution Group

You can rename dynamic distribution groups in the managed domain or managed subtree.

### To rename a dynamic distribution group:

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To specify the dynamic distribution group you want to delete, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate dynamic distribution group and select **Properties**.
- 3 Change the appropriate naming properties.
- 4 Click **OK**.

## 7.1.6 Managing Dynamic Distribution Group Properties

You can manage properties for local and global dynamic distribution groups. The powers you have determine which properties you can modify for a group in the managed domain or managed subtree.

### To manage dynamic distribution group properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to manage, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate group and select **Properties**.
- 3 On the appropriate tab, change the properties and settings you want to modify.
- 4 To save your changes before you modify other properties, click **Apply**.
- 5 Click **OK**.

## 7.1.7 Specifying a Filter

A dynamic distribution list's membership is determined by its filter.

### To specify a dynamic distribution group's filter:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to manage, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate group and select **Properties**.
- 3 Click **Filter**.
- 4 Select the OU (recipient container) from which the dynamic distribution group's member will be selected.

- 5 **If you do not want all objects in the OU to be added to the dynamic distribution group**, do one of the following:
  - 5a Select **Recipient Filter** and type it into the text box.
  - 5b Select **The following specific types** and select the appropriate check boxes.
- 6 Click **OK**.

## 7.1.8 Specifying Conditions

Conditions define the criteria that an object must meet in order to be a member of the dynamic distribution group.

### To specify a dynamic distribution group's conditions:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to manage, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate group and select **Properties**.
- 3 Click **Conditions**.
- 4 In **Step 1: Select Conditions**, select the check boxes for the appropriate conditions. For example, if you want to add users from the IT department, you would select the 'Recipient is in a Department' condition.

---

**NOTE:** To be added to the dynamic distribution group, a user must meet ALL of the conditions that you select in this step.

---

- 5 In **Step 2: Edit the conditions by selecting an underlined value**, do the following for each condition:
  - 5a Click '**specified**'.
  - 5b Type the appropriate value. To continue the example from Step 4, you would type 'IT'.
  - 5c Click **Add**.
  - 5d **If you want to specify a group of filtering values, one of which the user must match**, type a value and click **Add**, and then repeat the process for the next value. For example, if you want to add users who are from the IT department or who are from the Finance department, you would enter 'IT', click **Add**, type 'Finance', and click **Add**.
  - 5e Click **OK**.
- 6 To preview the list of members, click **Preview**.
- 7 Click **OK**.

## 7.1.9 Finding Out Which Users Are Members of a Dynamic Distribution Group

You can view dynamic distribution group memberships in the managed domain or managed subtree.

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to manage, complete the following steps:
  - 2a **If you know the dynamic distribution group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic distribution group attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate group and select **Properties**.
- 3 Click **Conditions**.
- 4 Click **Preview**.

# 8 Managing Dynamic Groups

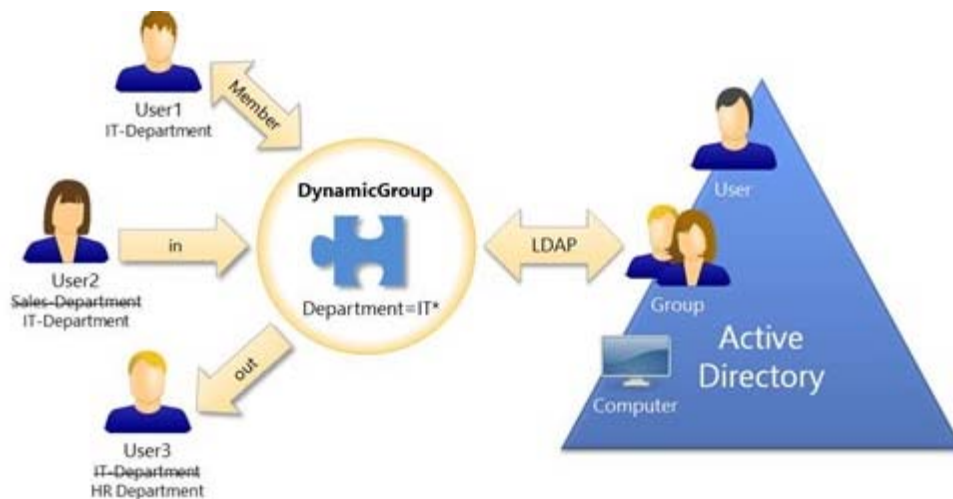
A dynamic group is one whose membership changes based on a defined set of criteria. Until now dynamic groups were only possible in the Exchange environment, but now they can also be created in the Active Directory setting.

The graphic below describes a typical use for an Active Directory dynamic group. There are three dynamic groups in the graphic. Each group has a set of criteria that determines who can be added to the group and who can not. Each group controls access to a specific set of files, folders, and applications.

---

**TIP:** You can create a *static member list* that contains permanent members of the dynamic group; you can also create an *excluded member list* that denies those users membership in the dynamic group.

---



User2 has recently joined the IT department. When the IT department's dynamic group is updated, she will be added to the group. When the Sales department's dynamic group is updated, User2 will be removed from its members list.

---

**TIP:** You can refresh a dynamic group's member list by right-clicking it and selecting **Update Members**.

---

User3, who has left the IT department for the HR department, will be removed from the IT department dynamic group and added to the HR department dynamic group.

## 8.1 Dynamic Group Tasks

You can perform the following dynamic group tasks with DRA:

- ♦ Create a dynamic group
- ♦ Modify a dynamic group

- ♦ Clone a dynamic group
- ♦ Delete a dynamic group

## 8.1.1 Creating a Dynamic Group

You can create a dynamic group in the managed domain or managed subtree. You can also modify properties, such as group members, for the new dynamic group.

---

### NOTE

- ♦ Your company may have a naming convention enforced through policy that determines the name you can assign to the new dynamic group.
  - ♦ By default, DRA places the new dynamic group in the Users OU of the managed domain.
- 

#### To create a dynamic group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create this dynamic group.  
For example, if you want to create this group in a specific OU of the managed domain, expand the domain and then select the appropriate OU.
- 3 On the Tasks menu, click **New > Dynamic Group**.
- 4 On each tab, specify the appropriate settings and properties for the new group, and then click **Next**.
- 5 *If you want to create a filter*, see [Section 8.1.2, “Creating a Filter,” on page 86](#).
- 6 *If you want to add members to the group’s static member list*, see [Section 8.1.3, “Managing the Static Member List,” on page 86](#).
- 7 *If you want to add members to the group’s excluded member list*, see [Section 8.1.4, “Managing the Excluded Member List,” on page 87](#).
- 8 Review the summary, and then click **Finish**.

## 8.1.2 Creating a Filter

The dynamic group uses the filter to add or remove users from its membership list each time the group is refreshed.

#### To create a filter:

- 1 From the dynamic group’s Properties page, click **Dynamic member filter**.
- 2 Click **Add filter** and use the Query Builder to configure the filter.
- 3 Click **Finish**.

## 8.1.3 Managing the Static Member List

Users placed on a dynamic group’s static member list become permanent member of the group until you manually remove them.

When you remove members from a dynamic group, DRA does not delete the objects. When you add members to a dynamic group, you must have the power to modify the objects you want to add.

**To add a user:**

- 1 From the dynamic group's Properties page, click **Dynamic member filter**.
- 2 On the Static Member List section, click **Add member** and use the Object Selector to locate the member you want to add.
- 3 Click **Finish**.

**To remove a user:**

- 1 From the dynamic group's Properties page, click **Dynamic member filter**.
- 2 Select the member from the Static Member List section and click **Remove**.
- 3 Click **Finish**.

## 8.1.4 Managing the Excluded Member List

Users placed on a dynamic group's excluded member list will not be allowed to join the group until you manually remove them from this list.

**To add a user:**

- 1 From the dynamic group's Properties page, click **Dynamic member filter**.
- 2 On the Excluded Member List section, click **Add member** and use the Object Selector to locate the member you want to add.
- 3 Click **Finish**.

**To remove a user:**

- 1 From the dynamic group's Properties page, click **Dynamic member filter**.
- 2 Select the member from the Excluded Member List section and click **Remove**.
- 3 Click **Finish**.

## 8.1.5 Refreshing the Member List

**To update the dynamic group's member list:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to refresh, complete the following steps:
  - 2a** *If you know the dynamic group location*, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate dynamic group and select **Update Members**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

## 8.1.6 Cloning a Dynamic Group

You can clone both local and global dynamic groups in managed domains. Cloning dynamic groups creates new dynamic groups of the same type and attributes as the original dynamic group.

By cloning a dynamic group, you can quickly create dynamic groups based on other dynamic groups with similar properties. When you clone a dynamic group, DRA populates the Clone Dynamic Group Wizard with values from the selected dynamic group. You can also modify properties for the new dynamic group.

---

### NOTE

- ♦ Your company may have a naming convention enforced through policy that determines the name you can assign to the new dynamic group.
  - ♦ By default, DRA places the new dynamic group in the Users OU of the managed domain.
- 

#### To clone a dynamic group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to clone, complete the following steps:
  - 2a If you know the dynamic group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate dynamic group and select **Clone**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 On each tab, specify the appropriate settings and properties for the new group, and then click **Next**.
- 5 **If you want to create a filter**, see [Section 8.1.2, “Creating a Filter,” on page 86](#).
- 6 **If you want to change the group’s static member list**, see [Section 8.1.3, “Managing the Static Member List,” on page 86](#).
- 7 **If you want to change the group’s excluded member list**, see [Section 8.1.4, “Managing the Excluded Member List,” on page 87](#).
- 8 Review the summary, and then click **Finish**.

## 8.1.7 Moving a Dynamic Group to Another Container

You can move a dynamic group to another container, such as an OU, in the managed domain or managed subtree.

#### To move a dynamic group to another container:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to move to another container, complete the following steps:
  - 2a If you know the dynamic group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate group and select **Move**.



---

**NOTE**

- ◆ Dynamic group icons have two facing arrows at the bottom.
  - ◆ You can select and delete more than one dynamic group.
- 

- 4 Select the appropriate container.
- 5 Click **OK**.

## 8.1.8 Deleting a Dynamic Group

You can delete local and global dynamic groups in the managed domain or managed subtree. If the Recycle Bin is disabled for that domain, deleting a dynamic group permanently removes it from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a dynamic group moves it to the Recycle Bin and disables the dynamic group's properties.

For more information on the Recycle Bin, see [Chapter 21, "Managing the Recycle Bin," on page 151](#).

---

**WARNING:** When you create a dynamic group, Microsoft Windows assigns a Security Identifier (SID) to that dynamic group. The SID is not generated from the dynamic group name. Microsoft Windows uses SIDs to record privileges in access control lists (ACLs) for each resource. If you delete a dynamic group, you cannot return access capabilities for that dynamic group by creating a new dynamic group with the same name.

---

### To delete a dynamic group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to delete, complete the following steps:
  - 2a **If you know the dynamic group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate dynamic group and select **Delete**.

---

**NOTE**

- ◆ Dynamic group icons have two facing arrows at the bottom.
  - ◆ You can select and delete more than one dynamic group.
- 

- 4 Click **Yes**.

## 8.1.9 Renaming a Dynamic Group

You can rename dynamic groups in the managed domain or managed subtree.

### To rename a dynamic group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to delete, complete the following steps:
  - 2a **If you know the dynamic group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate dynamic group and select **Properties**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 Change the appropriate naming properties.
- 5 Click **OK**.

## 8.1.10 Managing Dynamic Group Properties

You can manage properties for local and global dynamic groups. The powers you have determine which properties you can modify for a group in the managed domain or managed subtree.

**To manage dynamic group properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to manage, complete the following steps:
  - 2a If you know the dynamic group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate group and select **Properties**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 On the appropriate tab, change the properties and settings you want to modify.
- 5 To save your changes before you modify other properties, click **Apply**.
- 6 Click **OK**.

## 8.1.11 Adding Dynamic Groups to Other Dynamic Groups

You can nest dynamic groups by adding a dynamic group to another managed dynamic group. When a dynamic group is nested in another dynamic group, the child dynamic group can inherit permissions from the parent dynamic group.

---

**NOTE:** If adding a dynamic group to another dynamic group increases your powers for the source dynamic group, DRA will not permit you to add the dynamic group.

---

**To add a dynamic group to another dynamic group:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group you want to add within another dynamic group, complete the following steps:
  - 2a If you know the dynamic group location**, select the domain and OU that contains this dynamic group.
  - 2b** In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate group and click **Add to Groups**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 Find and select the appropriate group. You can select more than one group from different OUs or managed domains.
- 5 Click **OK**.

## 8.1.12 Setting Group Membership Security Permissions

You can set Active Directory security permissions for dynamic group memberships. These permissions specify who can view (read) and modify (write) dynamic group memberships using Microsoft Outlook. These settings let you more effectively secure distribution lists and security dynamic groups in your environment. You cannot modify inherited security permissions.

---

**NOTE:** When you manage dynamic group membership security, disabled permissions may indicate inherited permissions.

---

### To set dynamic group membership security permissions:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the dynamic group whose membership you want to secure, complete the following steps:
  - 2a **If you know the dynamic group location**, select the domain and OU that contains this group.
  - 2b In the search pane, specify the dynamic group attributes, and then click **Find Now**.
- 3 In the list pane, select the appropriate dynamic group.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 On the Tasks menu, click **Properties**.
- 5 Click **Membership security**.
- 6 Select the user account or group you want to grant or deny security permissions. To specify a different user account or group, click **Add**.
- 7 Under Permissions, select the appropriate security settings:
  - ◆ To allow the selected user account or group the ability to view this dynamic group membership, click **Allow** under **Read members**.
  - ◆ To deny the selected user account or group the ability to view this dynamic group membership, click **Deny** under **Read members**.
  - ◆ To allow the selected user account or group the ability to modify this group membership, click **Allow** under **Write members**.
  - ◆ To deny the selected user account or group the ability to modify this dynamic group membership, click **Deny** under **Write members**.
- 8 To remove all security permissions from a user or group, select the appropriate user or group, and then click **Remove**.
- 9 To check if a user or group has security permissions, select the appropriate user or group, and then click **Properties**.
- 10 Click **OK**.

## 8.1.13 Setting Dynamic Group Ownership

You can grant the dynamic group ownership permission to a user account, group, or contact. Granting dynamic group ownership allows the specified user account, group, or contact to modify the membership of this dynamic group.

### To set group ownership:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group whose ownership you want to set, complete the following steps:
  - 2a If you know the group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the group attributes, and then click **Find Now**.
- 3 In the list pane, select the appropriate dynamic group.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 On the Tasks menu, click **Properties**.
- 5 Click **Managed by**.
- 6 To add a manager, click **Add**.
- 7 Select the **Manager can update membership list** check box, and then click **OK**.

## 8.1.14 Exposing Dynamic Group Memberships in Distribution Lists

You can expose dynamic group memberships in distribution lists for groups in the managed domain or managed subtree.

### To expose dynamic group memberships in distribution lists:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group you want to modify, complete the following steps:
  - 2a If you know the group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate dynamic group and select **Exchange Tasks**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 Click **Expose Group Membership**.
- 5 Click **Finish**, and then click **Done**.

## 8.1.15 Hiding Dynamic Group Memberships from Distribution Lists

You can hide dynamic group memberships in distribution lists for groups in the managed domain or managed subtree.

---

**NOTE:** **Hide Group Membership** option is disabled for Microsoft Exchange 2007 distribution lists.

---

### To hide dynamic group memberships in distribution lists:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the group want to modify, complete the following steps:
  - 2a If you know the group location**, select the domain and OU that contains this group.
  - 2b** In the search pane, specify the group attributes, and then click **Find Now**.
- 3 In the list pane, right-click the appropriate dynamic group and select **Exchange Tasks**.

---

**NOTE:** Dynamic group icons have two facing arrows at the bottom.

---

- 4 Click **Hide Group Membership**.
- 5 Click **Finish**, and then click **Done**.



---

# 9 Managing Exchange Mailboxes

DRA and ExA let you manage Microsoft Exchange mailboxes as an extension of user account properties. This integration allows you to simplify your administration workflows so you can effectively administer Exchange properties.

You can manage Microsoft Exchange mailboxes for user accounts in the managed domain or managed subtree. Each aspect of managing Microsoft Exchange mailboxes requires different powers. The powers you have control which mailbox properties you can modify, or whether you can create, clone, view, or delete Microsoft Exchange mailboxes. You can also manage mailbox rights and permissions associated with a user account, allowing you to control the security of your Microsoft Exchange environments. If you do not have the required power to modify a tab or field for the selected mailbox, DRA disables the tabs and fields that you cannot modify.

## 9.1 Mailbox Management Tasks

This section guides you through administering Microsoft Exchange mailboxes in the Account and Resource Management console. With the appropriate powers, you can perform various user account management tasks, such as creating and deleting mailboxes. You also can perform these tasks using the Web Console or CLI. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 9.1.1 Creating a Mailbox

You can create a Microsoft Exchange mailbox for an existing user account. You can also modify properties for the new mailbox.

---

**NOTE:** When you create a mailbox, ExA generates the necessary proxy strings based on your Exchange policy settings. Microsoft Exchange also generates default proxy strings. As a result, when you view the properties of the newly created mailbox, you see both types of proxy strings.

---

**To create a Microsoft Exchange mailbox:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account for whom you want to create a mailbox, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Exchange Tasks**.
- 4 Click **Create a Mailbox**.
- 5 On each tab, specify the appropriate settings and properties for the new mailbox, and then click **Next**.
- 6 Review the summary, and then click **Finish**.

## 9.1.2 Moving a Mailbox

You can move a Microsoft Exchange mailbox for a user account to another mailbox store or Microsoft Exchange server.

### To move a Microsoft Exchange mailbox:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to move, complete the following steps:
  - 2a If you know the account location**, select the domain and OU that contains this user account.
  - 2b** In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Exchange Tasks**.
- 4 Click **Move Mailbox**.
- 5 Select the new Exchange server and mailbox store to which you want to move the mailbox, and then click **Next**.
- 6 Review the summary, and then click **Finish**.

## 9.1.3 Managing Mailbox Properties

You can manage properties for Microsoft Exchange mailboxes as you manage the associated user accounts. The powers you have determine which mailbox properties you can modify.

---

**NOTE:** You cannot modify mailbox properties of user accounts managed on member servers.

---

### To manage Microsoft Exchange mailbox properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to manage, complete the following steps:
  - 2a If you know the account location**, select the domain and OU that contains this user account.
  - 2b** In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 On the appropriate Exchange tab, change the properties and settings you want to modify.  
To save these changes before you modify other properties, click **Apply**.
- 5 Click **OK**.

## 9.1.4 Setting Mailbox Security Permissions

You can specify which user accounts, groups, or computers you want to grant or deny the ability to send and receive email using a specific Microsoft Exchange mailbox. These settings let you more effectively secure your Exchange environment. You cannot modify inherited security permissions.

---

**NOTE:** When you manage mailbox security, disabled permissions may indicate inherited permissions.

---



### To set mailbox security:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to secure, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Mailbox security**.
- 5 Select the user account, group, or computer you want to grant or deny the mailbox permissions. To specify a different user account, group, or computer, click **Add**.
- 6 Under Permissions, select the appropriate security settings.
  - ◆ To allow the selected user account, group, or computer to receive messages using this mailbox, click **Allow** under **Receive as**.
  - ◆ To deny the selected user account, group, or computer the ability to receive messages using this mailbox, click **Deny** under **Receive as**.
  - ◆ To allow the selected user account, group, or computer to send messages using this mailbox, click **Allow** under **Send as**.
  - ◆ To deny the user account, group, or computer the ability to send messages using this mailbox, click **Deny** under **Send as**.
- 7 Click **OK**.

## 9.1.5 Removing Mailbox Security Permissions

You can remove mailbox security permissions from a user account, group, or computer associated with a Microsoft Exchange mailbox. Removing mailbox security permissions prevents the user account, group, or computer account from sending and receiving email through the specified mailbox. You cannot remove inherited security permissions.

### To remove mailbox security:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox security you want to change, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Mailbox security**.
- 5 Select the user account, group, or computer you want to prevent from using this mailbox, and then click **Remove**.
- 6 Click **OK**.

## 9.1.6 Setting Mailbox Rights

You can grant or deny other user accounts, groups, or computers rights to a specific Microsoft Exchange mailbox. These settings let you more effectively secure your Exchange environment. You cannot modify inherited mailbox rights.

---

**NOTE:** When you manage mailbox rights, disabled permissions may indicate inherited permissions.

---

### To set mailbox rights:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to secure, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Mailbox rights**.
- 5 Select the user account, group, or computer you want to grant or deny the mailbox rights. To specify a different user account, group, or computer, click **Add**.
- 6 Under Permissions, select the appropriate settings for the mailbox right.
- 7 Click **OK**.

## 9.1.7 Removing Mailbox Rights

You can remove mailbox rights from user accounts, groups, or computers associated with a specific Microsoft Exchange mailbox. Removing mailbox rights prevents the user account, group, or computer account from using the specified mailbox. You cannot remove inherited mailbox rights.

### To remove mailbox rights:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to secure, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Mailbox rights**.
- 5 Select the user account, group, or computer you want to prevent from using the mailbox, and then click **Remove**.
- 6 Click **OK**.

## 9.1.8 Deleting a Mailbox

You can delete a mailbox associated with a user account in the managed domain or managed subtree. Deleting a mailbox also deletes all messages in the mailbox.

### To delete a mailbox:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to delete, complete the following steps:
  - 2a **If you know the account location**, select the domain and OU that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Exchange Tasks**.
- 4 Click **Delete Mailbox**.
- 5 Click **Finish**.

## 9.1.9 Adding an Email Address

You can specify email addresses for mailboxes associated with user accounts in your managed domain or managed subtree. You can also assign email addresses to user accounts who do not yet have mailboxes. When managing Microsoft Exchange mailboxes, you can add only the email address types defined by your proxy generation policies.

### To add an email address:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account to whom you want to assign an email address, complete the following steps:
  - 2a **If you know the account location**, select the domain that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 To specify a new email address for a Microsoft Windows account that does not have a Microsoft Exchange mailbox, complete the following steps:
  - 4a Click **Exchange Tasks**, and then click **Establish Email Addresses**.
  - 4b Specify the appropriate properties and settings for this new email address. To review the summary, click **Next**.
  - 4c Click **Finish**.
- 5 To specify a new email address for an account that has a mailbox, complete the following steps:
  - 5a Click **Email**.
  - 5b Click the add icon at the top of the window.
  - 5c Specify the appropriate properties and settings for this new email address, and then click **OK**.
- 6 Click **OK**.

## 9.1.10 Specifying an Email Address

You can modify email addresses for mailboxes associated with user accounts in the managed domain or managed subtree.

**To change an email address:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account for whom you want to modify an email address, complete the following steps:
  - 2a If you know the account location**, select the domain that contains this user account.
  - 2b** In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Email**.
- 5 Select the email address type you want to modify, and then click the edit icon at the top of the window.
- 6 In the **Email Address** field, type the new address, and then click **OK**.
- 7 Click **OK**.

## 9.1.11 Specifying a Reply Address

You can set reply addresses for a mailbox associated with a user account in the managed domain or managed subtree. You can set several reply addresses for a mailbox. However, you cannot set more than one email address type as a reply address. For example, you cannot specify more than one Internet address as a reply address.

**To specify a reply address:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to modify, complete the following steps:
  - 2a If you know the account location**, select the domain and OU that contains this user account.
  - 2b** In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Email**.
- 5 Select the email address type you want to use as the reply address. To specify a different email address type, click the add icon at the top of the window.
- 6 Click the appropriate icon at the top of the window for setting the email address as the reply address.
- 7 Click **OK**.

## 9.1.12 Deleting an Email Address

You can delete an email address by removing the address from the mailbox.

**To delete an email address:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account for whom you want to delete an email address, complete the following steps:
  - 2a **If you know the account location**, select the domain that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Email**.
- 5 Select the email address type you want to delete, and then click the remove icon at the top of the window.
- 6 Click **OK**.

## 9.1.13 Setting Delivery Options

You can specify which mailboxes the user can use to send messages, set forwarding options, and specify recipient limits.

**To set delivery options:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to modify, complete the following steps:
  - 2a **If you know the account location**, select the domain that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Delivery options**.
- 5 Specify the appropriate options for the mailbox of this user account.
- 6 Click **OK**.

## 9.1.14 Setting Delivery Restrictions

By setting delivery restrictions, you can limit the size of incoming and outgoing messages and the acceptance incoming messages to a specific mailbox.

**To set delivery restrictions:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to modify, complete the following steps:
  - 2a **If you know the account location**, select the domain that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.

- 3 On the Tasks menu, click **Properties**.
- 4 Click **Delivery restrictions**.
- 5 Specify the appropriate restrictions for the mailbox of this user account.
- 6 Click **OK**.

## 9.1.15 Setting Storage Limits

You can specify storage limits, such as warnings based on the size of a mailbox. You can also specify retention times for deleted items.

### To specify storage limits:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox you want to modify, complete the following steps:
  - 2a **If you know the account location**, select the domain that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Storage limits**.
- 5 Specify the appropriate storage limit information.
- 6 Click **OK**.

## 9.1.16 Checking Mailbox Move Status

You can check the status of mailbox moves and take actions on them, such as clearing the status, canceling a move, and resuming a move that has been interrupted.

### To check the status of mailbox moves:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the user account whose mailbox move status you want to check, complete the following steps:
  - 2a **If you know the account location**, select the domain that contains this user account.
  - 2b In the search pane, specify the account attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate user account.
- 3 On the Tasks menu, click **Properties**.
- 4 Click **Move Mailbox Status**.
- 5 View the details and status of the mailbox move and select an action, if needed.
- 6 Click **Refresh** to update the status while the window is open.
- 7 Click **OK**.

---

# 10 Managing Mailboxes Resources

Microsoft Exchange's resource mailbox feature allows you to create a mailbox that represents a resource such as a conference room so that you can reserve it by sending it a meeting invitation, just as you would a person.

DRA contains a set of roles, powers, and policies that allow you to manage your resource mailboxes efficiently.

You can perform the following resource mailbox management tasks with DRA:

- ◆ Create or update a resource mailbox
- ◆ Clone a resource mailbox
- ◆ Delete a resource mailbox
- ◆ Restore a resource mailbox
- ◆ Create a resource mailbox for an existing user
- ◆ Search for a resource mailbox room or equipment in the Delegation and Configuration console

DRA has UI extension support for resource mailboxes as well as support for generating audit or UI reports. Support for ADSI scripts is also integrated into DRA.

## 10.1 Mailbox Management Tasks

This section guides you through administering mailbox resources in the Account and Resource Management console. With the appropriate powers, you can perform various management tasks such as creating and deleting resource mailboxes. You also can perform these tasks using the Web Console or CLI. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 10.1.1 Creating a Resource Mailbox

You can create resource mailboxes in the managed domain or managed subtree.

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**NOTE:** Your company may have a naming convention enforced through policy that determines the name you can assign to the new resource mailbox.

---

**To create a resource mailbox:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to create the resource mailbox.  
For example, if you want to create the resource mailbox in a specific OU of the managed domain, expand the domain and then select the appropriate OU.
- 3 On the Tasks menu, click **New > Resource Mailbox**.

- 4 On each tab, specify the appropriate settings and properties for the new resource mailbox, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 10.1.2 Moving a Resource Mailbox to Another Container

You can move a resource mailbox to another container, such as an OU, in the managed domain or managed subtree.

**To move a resource mailbox to another container:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox you want to move to another container, complete the following steps:
  - 2a **If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate resource mailbox and select **Move**.
- 3 Select the appropriate container.
- 4 Click **OK**.

## 10.1.3 Moving a Resource Mailbox to Another Mailbox Store or Exchange Server

You can move a resource mailbox to another mailbox store or Microsoft Exchange server.

**To move a resource mailbox to another mailbox store or Exchange server:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox you want to move to another mailbox store or Exchange server, complete the following steps:
  - 2a **If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate resource mailbox and select **Exchange Tasks**.
- 3 Click **Move Request** and click **Next**.
- 4 Select the new Exchange server and mailbox store to which you want to move the resource mailbox, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 10.1.4 Cloning a Resource Mailbox

By cloning a resource mailbox, you can quickly create other resource mailboxes with similar properties. When you clone a resource mailbox, DRA populates the Clone Resource Mailbox Wizard with values from the selected resource.

**To clone a resource mailbox:**

- 1 In the left pane, expand **All My Managed Objects**.



- 2 To specify the resource mailbox you want to clone, complete the following steps:
  - 2a **If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate resource mailbox and select **Clone**.
- 3 On each tab, specify the appropriate settings and properties for the new resource mailbox, and then click **Next**.
- 4 Review the summary, and then click **Finish**.

## 10.1.5 Renaming a Resource Mailbox

You can rename resource mailboxes in the managed domain or managed subtree. Changing the user logon name also changes the name of the mailbox associated with the user account.

### To rename a resource mailbox:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox you want to rename, complete the following steps:
  - 2a **If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate resource mailbox and select **Rename**.
- 3 Change the appropriate naming properties.
- 4 Click **OK**.

## 10.1.6 Adding a Resource Mailbox to a Group

You can add resource mailboxes to a specific group in the managed domain or managed subtree.

### To add a resource mailbox to a group:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox you want to add to a group, complete the following steps:
  - 2a **If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c In the list pane, right-click the appropriate resource mailbox and select **Add to Groups**.
- 3 Find and select the appropriate group, and then click **OK**.

## 10.1.7 Deleting a Resource Mailbox From a Container

You can delete a resource mailbox from a managed domain or managed subtree. If the Recycle Bin is disabled for that domain, deleting a resource mailbox permanently removes it from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a resource mailbox moves it to the Recycle Bin.

For more information about using the Recycle Bin, see [Chapter 21, “Managing the Recycle Bin,” on page 151](#).

#### To delete a resource mailbox:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox you want to delete, complete the following steps:
  - 2a If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b** In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c** In the list pane, right-click the appropriate resource mailbox and select **Delete**.
- 3 Click **Yes**.

## 10.1.8 Deleting a Mailbox

You can delete a resource mailbox in the managed domain or managed subtree. Deleting a resource mailbox also deletes all messages in the mailbox.

#### To delete a mailbox:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox you want to delete, complete the following steps:
  - 2a If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b** In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c** In the list pane, right-click the appropriate resource mailbox and select **Exchange Tasks**.
- 3 Click **Delete Mailbox**.
- 4 Click **Finish**.

## 10.1.9 Managing Resource Mailbox Properties

You can manage the properties of resource mailboxes in the managed domain or managed subtree. The powers you have determine which properties you can modify.

#### To manage resource mailbox properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the resource mailbox whose properties you want to update, complete the following steps:
  - 2a If you know the resource mailbox location**, select the domain and OU that contains this resource mailbox.
  - 2b** In the search pane, specify the resource mailbox attributes, and then click **Find Now**.
  - 2c** In the list pane, right-click the appropriate resource mailbox and select **Properties**.

---

**NOTE:** You can select more than one resource mailbox. After selecting them, click **Properties** on the Task menu.

---

- 3 **If you selected a single user account**, on the appropriate tab, change the properties and settings you want to modify.
- 4 **If you selected multiple user accounts**, complete the following steps:

---

**NOTE:** You can manage selected property values on the General, Account, Address & Phone, Resource Policy, Resource Info, and Storage limits, property pages for resource mailboxes. If you are also managing Microsoft Exchange mailboxes, when you select multiple user accounts, you can perform selected Exchange tasks, such as moving or deleting mailboxes.

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- 4a** On the appropriate tab, click the pencil icon next to the property or setting you want to modify.
  - 4b** Change the property or settings you want to modify. Changing the property or settings value applies the same value to all selected objects.
  - 4c** Click **Apply**.
  - 4d** *If you want to copy the contents of the Results window*, click the copy to clipboard icon on the lower left of the window.
  - 4e** Click **OK**.
- 5** To save changes before you modify other properties, click **Apply**.
- 6** Click **OK**.



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# 11 Managing Office 365 Mailboxes

This section guides you through administering Microsoft Office 365 mailboxes in the Account and Resource Management console. With the appropriate powers, you can perform various user account management tasks, such as placing litigation holds and setting up email forwarding.

## 11.1 Placing a Litigation Hold

A litigation hold may be necessary when there is a reasonable expectation of a lawsuit. Organizations are required to preserve electronically stored information, including e-mail, that is relevant to the case.

Set a litigation hold on a mailbox to preserve all mailbox content, including deleted items and original versions of modified items. Placing a user's mailbox on litigation hold also preserves content, if it exists, in the user's archive mailbox as well. The hold can last for a specified period, or until you remove the Litigation Hold from the mailbox.

You must have an Exchange Online Enterprise E3 license to place a litigation hold.

### To set a litigation hold on a mailbox:

- 1 To specify the user account for whom you want to place the hold, complete the following steps:

1a

If Account Location	Then
Known	Expand <b>All My Managed Objects</b> and select the domain and OU that contains this user account.
Unknown	Select <b>All My Managed Objects</b> . There is no need to expand it.

1b In the search pane, specify the account attributes, then click **Find Now**.

1c In the list pane, select the appropriate user account.

- 2 Right-click the user account and select **Properties** from the menu.
- 3 In the left pane, select **Litigation Hold**.
- 4 Select the **Enable Litigation Hold** check box, then do one of the following:

If Hold Duration Is	Then
Unlimited	Select the <b>Indefinite</b> check box.
Specified Time Period	Select the <b>Number of days</b> check box and type the appropriate value in the field beneath the checkbox.

- 5 Click **Ok**.

## 11.2 Delegating Mailbox Permissions

There are three types of permissions that you can delegate:

- ◆ Send as
- ◆ Send on behalf of
- ◆ Full access

The types of permission that can be delegated depends upon the receiving object type. [Table 11-1 on page 110](#) explains which permissions can be granted to which object type.

*Table 11-1 Available Mailbox Permissions by Object*

Object	Send As authority	Send on Behalf of authority	Full mailbox access
User	Yes	Yes	Yes
Group	Yes	Yes	Yes

### To delegate mailbox permissions:

- 1 To specify the account that will receive the mailbox permission, complete the following steps:

**1a**

If Account Location	Then
Known	Expand <b>All My Managed Objects</b> and select the domain and OU that contains this user account.
Unknown	Select <b>All My Managed Objects</b> . There is no need to expand it.

- 1b** In the search pane, specify the account attributes, then click **Find Now**.

- 1c** In the list pane, select the appropriate user account.

- 2 Right-click the user account and select **Properties** from the menu.

- 3 In the left pane, select **Mailbox delegation**.

- 4 In the right pane:

- ◆ To allow a user or group to send messages using this mailbox, click the plus (+) sign beneath the Send As label and select the appropriate user or group.
- ◆ To revoke the ability of a user or group to send messages using this mailbox, select the account and click the delete (x) sign beneath the Send As label.
- ◆ To allow a user to send messages on behalf of this mailbox, click the plus (+) sign beneath the Send on Behalf label and select the appropriate user.
- ◆ To revoke the ability of a user to send messages on behalf of this mailbox, select the account and click the delete (x) sign beneath the Send on Behalf label.
- ◆ To allow a user or group full access to this mailbox, click the plus (+) sign beneath the Full Access label and select the the appropriate user or group.
- ◆ To deny a user or group full access to this mailbox, select the account and click the delete (x) sign beneath the Full Access label.

- 5 Click **OK**.

## 11.3 Setting up Email Forwarding

To set up email forwarding for an Office 365 mailbox:

- 1 To specify the account that you want to forward, complete the following steps:

1a

If Account Location	Then
Known	Expand <b>All My Managed Objects</b> and select the domain and OU that contains this user account.
Unknown	Select <b>All My Managed Objects</b> . There is no need to expand it.

1b In the search pane, specify the account attributes, then click **Find Now**.

1c In the list pane, select the appropriate user account.

- 2 Right-click the user account and select **Properties** from the menu.
- 3 In the left pane, select **Mail flow**.
- 4 Select **Enable email forwarding** then click **Browse** to select the recipient of the forwarded emails.
- 5 (Conditional) If you want this mailbox to continue to receive emails, select **Deliver email to both forwarding address and this mailbox**.
- 6 Click **OK**.

## 11.4 Managing the Office 365 Archive Mailbox

To enable or disable the Office 365 Archive Mailbox:

- 1 To specify the mailbox that you want to enable or disable, complete the following steps:

1a

If Account Location	Then
Known	Expand <b>All My Managed Objects</b> and select the domain and OU that contains this user account.
Unknown	Select <b>All My Managed Objects</b> . There is no need to expand it.

1b In the search pane, specify the account attributes, then click **Find Now**.

1c In the list pane, select the appropriate user account.

- 2 Right-click the user account and select **Properties** from the menu.
- 3 In the left pane, select **Office 365 tasks**.
- 4 Click the appropriate option to enable or disable the archive mailbox.





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# 12 Managing Computers

DRA allows you to administer computers in the managed domain or managed subtree. For example, you can add or remove computer accounts in the managed domains, as well as manage the resources on each computer. When you add a computer to a domain, DRA creates a computer account in that domain for that computer. You can then connect the computer in that domain and configure the computer to use that computer account. You can also view and modify the properties of computer accounts. DRA also lets you shut down a computer and synchronize domain controllers in a managed domain.

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**NOTE:** You cannot manage hidden domain controllers. The domain cache does not include hidden domain controllers. Therefore, DRA does not display hidden domain computers in lists or property windows

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## 12.1 Computer Management Tasks

This section guides you through administering computers in the Account and Resource Management console. With the appropriate powers, you can perform various computer management tasks, such as shutting down a computer. If you select multiple computers, you can perform selected tasks in one operation, such as deleting, moving, or adding computers to a group. The Tasks menu indicates which tasks you can perform when you select single or multiple contacts.

You also can perform these tasks using the CLI and the Web Console (for Microsoft Windows domains and OUs). For more information about your assigned powers, see “[Viewing Your Assigned Powers and Roles](#)”.

### 12.1.1 Specifying Group Membership for Computers

You can add or remove computers from a specific group in the managed domain or managed subtree. You can also view or modify properties of existing groups to which this computer belongs.

**To specify group membership for computers:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the computer you want to manage, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Member of**. To view the details pane, click **Details** on the View menu.
- 4 To check a group to which the computer already belongs, select the group, and then click **Properties**.

- 5 To add the computer to a group, complete the following steps:
  - 5a Click **Add to Groups**.
  - 5b Find and select the appropriate group, and then click **OK**.
- 6 To remove the computer from a group, select the group, and then click **Remove**.

## 12.1.2 Managing Computer Account Properties

You can manage computer account properties. The powers you have determine which properties you can modify for a computer in the managed domain or managed subtree.

### To manage computer account properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to manage, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Properties**.
- 4 **If you selected a single computer**, on the appropriate tab, change the properties and settings you want to modify.
- 5 **If you selected multiple computers**, complete the following steps:

---

**NOTE:** You can manage selected property values on the General, Location, and Managed by property pages for computers.

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- 5a On the appropriate tab, click the pencil icon next to the property or setting you want to modify.
- 5b Change the property or settings you want to modify. Changing the property or settings value applies the same value to all selected objects.
- 5c Click **Apply**.
- 5d **If you want to copy the contents of the Results window**, click the copy to clipboard icon on the lower left of the window.
- 5e Click **OK**.
- 6 To save your changes before you modify other properties, click **Apply**.
- 7 Click **OK**.

## 12.1.3 Adding a Computer to a Domain

You can add a computer to a managed domain or managed subtree by creating a new computer account.

### To add a computer to a domain:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 Select the location where you want to add this computer.

For example, if you want to create this computer in a specific OU of the managed domain, expand the domain and then select the appropriate OU.

- 3 On the Tasks menu, click **New > Computer**.
- 4 On each tab, specify the appropriate settings and properties for the new computer account, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 12.1.4 Removing a Computer from a Domain

You can remove a computer from a managed domain or managed subtree by deleting the computer account.

### To remove a computer from a domain:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to remove, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Delete**.
- 4 Click **Yes**.

## 12.1.5 Shutting Down or Restarting a Computer

You can shutdown and restart a computer immediately or at a set date and time.

### To shutdown or restart a computer:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to shutdown or restart, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Start Shutdown**.
- 4 To shut down the selected computer now, click **Immediately**.
- 5 To shut down the selected computer at a scheduled time, click **Time**, and then specify the appropriate date and time.
- 6 To restart the computer after shutdown, select the **Restart after shutting down** check box.
- 7 Click **Start Shutdown**.

## 12.1.6 Resetting the Administrator Account Password

To reset the administrator account password for a computer, you must have the Reset Password for Local Administrator power or be associated with a role that contains this power. You can reset the administrator password for member servers in your managed domain or managed subtree. You cannot reset the administrator password for a domain controller.

**To reset the administrator password:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the computer whose administrator password you want to reset, complete the following steps:
  - 2a If you know the computer location**, select the domain and OU that contains this computer.
  - 2b** In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Reset Admin Password**.
- 4 Specify and confirm the new password.
- 5 To request a generated password, select **Generate password**. Be sure to record the password DRA generates. DRA generates a password based on the Password Policy defined in the domain of the user account.
- 6 Click **OK**.

## 12.1.7 Resetting the Computer Account

You can reset a computer account for member servers in your managed domain or managed subtree. You cannot reset the computer account for a domain controller.

**To reset the computer account:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the computer account you want to reset, complete the following steps:
  - 2a If you know the computer location**, select the domain and OU that contains this computer.
  - 2b** In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Reset Account**.
- 4 Click **Yes**.

## 12.1.8 Deleting a Computer Account

You can delete a computer account from the managed domain or managed subtree. If you are managing a Microsoft Windows domain, you can delete computer accounts that contain other objects, such as a shared resource. If the Recycle Bin is disabled for that domain, deleting a computer account permanently removes the computer account from the Active Directory. If the Recycle Bin is enabled for that domain, deleting a computer account moves the computer account to the Recycle Bin.

For more information on the Recycle Bin, see [Chapter 21, "Managing the Recycle Bin,"](#) on page 151.

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**NOTE:** You cannot delete computer accounts for member servers in the managed domain or managed subtree.

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**To delete a computer account:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to delete, complete the following steps:
  - 2a **If you know the computer location**, select the domain or OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Delete**.
- 4 Click **Yes**.

## 12.1.9 Disabling a Computer Account

You can disable a computer account in the managed domain or managed subtree. Disabling a computer account prevents users on that computer from logging on to any domain.

**To disable a computer account:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to disable, complete the following steps:
  - 2a **If you know the computer location**, select the domain or OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Properties**.
- 4 On the General tab, select the **Disabled** check box.
- 5 Click **OK**.

## 12.1.10 Enabling a Computer Account

You can enable a computer account in the managed domain or managed subtree. Enabling a computer account allows users on that computer to log on to any domain.

**To enable a computer account:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to enable, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Properties**.
- 4 On the General tab, clear the **Disabled** check box.
- 5 Click **OK**.

## 12.1.11 Managing Computer Resources

For each computer account in the managed domain or managed subtree, you can manage the associated resources, such as services, shares, devices, printers, and print jobs.

**To manage computer resources:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer you want to enable, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 On the Tasks menu, click **Manage**, and then select the appropriate resource type.

---

# 13 Managing Services

A service is a type of application that gets special treatment from the Windows operating system. Services can run even when no user is currently logged on to a computer. DRA allows Assistant Admins (AAs) with the appropriate powers to manage services through the Account and Resource Management console.

## 13.1 Service Management Tasks

You can manage services running on computers in the managed domain or managed subtree. You can manage services while managing other resources for that computer.

DRA allows you to start, stop, or restart a service, as well as view or modify the properties of a service. You can also modify the startup type and whether the service logs on as a system or a user account when the service starts. However, some administration tasks may not be available for specific services, depending on the service type or whether the selected service has dependencies on other services.

This section guides you through administering services in the Account and Resource Management console. With the appropriate powers, you can perform various service management tasks. You also can perform these tasks using the Web Console. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 13.1.1 Managing Service Properties

You can manage properties for services running on computers in the managed domain or managed subtree. You can manage services while managing other resources for that computer.

#### To modify service properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to manage service properties, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to manage, and then click **Properties**.
- 5 On the appropriate tab, change the properties and settings you want to modify.
- 6 To save these changes before you modify other properties, click **Apply**, and then click **OK**.

## 13.1.2 Starting a Service

You can start a service on any computer in the managed domain or managed subtree.

### To start a service:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to start a service, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, on the View menu click **Details**.
- 4 Select the service you want to start, and then click **Start**.

## 13.1.3 Starting a Service with Parameters

When you start services that accept parameters, you can specify these parameters at start up. You can start services on computers in the managed domain or managed subtree.

### To start a service with parameters:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to start a service, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to start, and then click **Start with parameters**.
- 5 Specify the appropriate parameters for the service startup, and then click **OK**.

## 13.1.4 Specifying the Service Startup Type

You can change the startup type of a service, such as requiring a manual startup.

### To change the startup type of a service:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to manage service properties, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service for which you want to change the startup type, and then click **Properties**.



- 5 On the General tab, under **Startup Type**, select the appropriate option. For example, to require a manual startup for this service, click **Manual**.
- 6 Click **OK**.

## 13.1.5 Specifying a Service Log On Account

You can change the service logon account to an account other than the current system account. You can specify logon accounts for services running on computers in the managed domain or managed subtree. You can specify the local system account or a specific user account.

**To specify a service log on account:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer for which you want to specify a service logon account, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to manage, and then click **Properties**.
- 5 Click **Log On**, and then select **This account**.
- 6 Specify the appropriate account name and password, and then click **OK**.

## 13.1.6 Restarting a Service

You can restart a service running on a computer in the managed domain or managed subtree.

To restart a service, you must have both the Stop a Service and Start a Service powers or be associated with a role that contains these powers, such as the Start and Stop Service role.

**To restart a service:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to restart a service, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to restart, and then click **Restart**.

## 13.1.7 Stopping a Service

You can stop a service running on a computer in the managed domain or managed subtree.

**To stop a service:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the computer on which you want to stop a service, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to stop, and then click **Stop**.

## 13.1.8 Pausing a Service

You can pause a service running on a computer in the managed domain or managed subtree. Whether a service can be paused or not depends on the type of service. For example, you may not be able to pause a service that has dependent services.

### To pause a service:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to pause a service, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to pause, and then click **Pause**.

## 13.1.9 Resuming a Paused Service

You can resume a service that was paused on a computer in the managed domain or managed subtree.

### To resume a paused service:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to resume a service, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Services**. To access the details pane, click **Details** on the View menu.
- 4 Select the service you want to resume, and then click **Resume**.

---

# 14 Managing Printers and Print Jobs

To manage printers, you manage the print queues that service those printers. DRA allows you to pause or resume, start, modify, stop, and view resource printers and published printers. DRA also lets you modify the properties and priorities of print jobs. To add or delete a printer, use the native Windows tools.

A print server is a computer on which one or more logical printers are installed. A logical printer is defined on the computer that has the printer device driver. A logical printer includes the print driver, print queue, and ports for a printer. The print server associates logical printers with printer devices.

A connected printer is defined on the computers from which documents are selected for printing. A connected printer is a connection to a print share on the network. Therefore, you can manage printers and print jobs through the associated computers.

A published printer is a printer published in Active Directory. A published printer can be a network printer that is not directly connected to a server or it can be a printer hosted by cluster server.

## 14.1 Printer Management Tasks

You can manage printers associated with computers in the managed domain or managed subtree. DRA lets you manage printers while managing other resources for that computer.

This section guides you through administering printers in the Account and Resource Management console. With the appropriate powers, you can perform various printer management tasks, such as stopping a printer. You also can perform these tasks using the Web Console. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 14.1.1 Managing Printer Properties

You can manage properties for printers in the managed domain or managed subtree. DRA lets you manage printers while managing other resources for that computer.

**To manage printer properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the printer you want to manage, and then click **Properties**.
- 5 On the appropriate tab, change the properties and settings you want to modify.

To save these changes before you modify other properties, click **Apply**.
- 6 Click **OK**.

## 14.1.2 Pausing a Printer

You can pause a printer associated with a computer in the managed domain or managed subtree. DRA lets you manage printers while managing other resources for that computer.

**To pause a printer:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the printer you want to pause, and then click **Pause**.

## 14.1.3 Resuming a Printer

You can resume a printer associated with a computer in the managed domain or managed subtree. DRA lets you manage printers while managing other resources for that computer.

**To resume a printer:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the printer you want to resume, and then click **Resume**.

## 14.2 Print Job Management Tasks

You can manage print jobs associated with printers in the managed domain or managed subtree. Because print jobs are associated with a printer, you can manage print jobs while managing the printer.

This section guides you through managing print jobs in the Account and Resource Management console. With the appropriate powers, you can perform various print job management tasks, such as canceling a print job. You also can perform these tasks using the Web Console. The CLI allows you to manage only resource printer print jobs. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

## 14.2.1 Managing Print Job Properties

You can modify print job properties as part of your printer management workflow. Because print jobs are associated with printers, you can modify the print job while managing the corresponding printer. The print job properties you can modify depend on the type of power you have. To modify print job properties, you must be able to access the corresponding printer and computer.

**To modify print job properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate printer, and then click **Manage Print Jobs**.
- 5 Select the print job you want to modify, and then click **Properties**.
- 6 Modify the appropriate properties, and then click **OK**.

## 14.2.2 Pausing a Print Job

You can pause a print job on a printer in a managed domain or managed subtree. To pause a print job, you must be able to access the corresponding printer and computer. Pausing a print job does not delete the print job from the print queue.

**To pause a print job:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 3 **If you know the computer location**, select the domain and OU that contains this computer.
    - 3a In the search pane, specify the computer attributes, and then click **Find Now**.
    - 3b In the list pane, select the appropriate computer.
    - 3c In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate printer, and then click **Manage Print Jobs**.
- 5 Select the print job you want to pause.
- 6 Click **Pause**.

## 14.2.3 Resuming a Print Job

You can resume a print job that was paused. To resume a print job, you must be able to access the corresponding printer and computer.

**To resume a print job:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a *If you know the computer location*, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate printer, and then click **Manage Print Jobs**.
- 5 Select the print job you want to resume.
- 6 Click **Resume**.

## 14.2.4 Restarting a Print Job

You can restart a print job that was stopped. To restart a print job, you must be able to access the corresponding printer and computer.

**To restart a print job:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a *If you know the computer location*, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate printer, and then click **Manage Print Jobs**.
- 5 Select the print job you want to restart.
- 6 Click **Restart**.

## 14.2.5 Canceling a Print Job

You can cancel a print job that is in the printer queue. When you cancel a print job, DRA permanently deletes the print job from the printer queue. To cancel a print job, you must be able to access the corresponding printer and computer.

**To cancel a print job:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose printer you want to manage, complete the following steps:
  - 2a *If you know the computer location*, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Printers**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate printer, and then click **Manage Print Jobs**.
- 5 Select the print job you want to cancel.
- 6 Click **Cancel**.

## 14.3 Published Printer Management Tasks

You can manage published printers in the managed domain or managed subtree. You can add or search for any printer that is published in the Active Directory or printers that are hosted by cluster server.

This section guides you through administering published printers in the Account and Resource Management console. With the appropriate powers, you can perform various printer management tasks, such as stopping a printer. You also can perform these tasks using the Web Console. For more information about your assigned powers, see “[Viewing Your Assigned Powers and Roles](#)”.

### 14.3.1 Managing Published Printer Properties

You can manage properties for published printers in the managed domain or managed subtree. DRA lets you manage published printers while managing other resources.

#### To manage published printer properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer you want to manage, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 On the Tasks menu, click **Properties**.
- 4 On the appropriate tab, change the properties and settings you want to modify.
- 5 To save these changes before you modify other properties, click **Apply**.
- 6 Click **OK**.

### 14.3.2 Refreshing Published Printer Information

You can refresh the published printer information in the managed domain or managed subtree. DRA lets you manage published printers while managing other resources.

#### To refresh published printer information:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer you want to manage, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.

---

**NOTE:** You can refresh multiple published printers at the same time.

---

- 3 Click **Refresh**.

### 14.3.3 Pausing a Published Printer

You can pause a published printer in the managed domain or managed subtree. DRA lets you manage published printers while managing other resources.

**To pause a published printer:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer you want to pause, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.

---

**NOTE:** You can pause multiple published printers at the same time.

---

- 3 On the Tasks menu, click **Pause**.

### 14.3.4 Resuming a Published Printer

You can resume a published printer that was paused in the managed domain or managed subtree. DRA lets you manage published printers while managing other resources.

**To resume a published printer:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer you want to resume, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.

---

**NOTE:** You can resume multiple published printers at the same time.

---

- 3 On the Tasks menu, click **Resume**.

### 14.3.5 Moving a Published Printer

You can move a published printer available in one container in the managed domain to another container in the same domain. DRA lets you manage published printers while managing other resources.

**To move a published printer:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer you want to move, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.



---

**NOTE:** You can move multiple published printers at the same time.

---

- 3 On the Tasks menu, click **Move**.
- 4 Select the appropriate container, and then click **OK**.

## 14.3.6 Renaming a Published Printer

You can rename a shared published printer in the Active Directory. DRA lets you manage published printers while managing other resources.

---

**NOTE:** Renaming a published printer in Active Directory does not change the resource printer share name or propagate the name change to the resource printer you want to manage. For example, if the resource printer name is `Emerald` and you rename the printer to `Ruby` in Active Directory, other users will see the printer name as `Ruby`, but the resource printer name will continue to be `Emerald`.

---

**To rename a published printer:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer you want to rename, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 On the Tasks menu, click **Rename**.
- 4 Type the new printer name, and then click **OK**.

## 14.4 Print Job Management Tasks for Published Printers

You can manage printer jobs associated with published printers in the managed domain or managed subtree. Because print jobs are associated with a printer, you can manage print jobs while managing the published printer.

This section guides you through administering published printers in the Account and Resource Management console. With the appropriate powers, you can perform various print job management tasks, such as canceling a print job. You also can perform these tasks using the Web Console. For more information about your assigned powers, see "[Viewing Your Assigned Powers and Roles](#)".

### 14.4.1 Managing Print Job Properties

You can modify print job properties as part of your published printer management workflow. Because print jobs are associated with printers, you can modify the print job while managing the corresponding published printer. The print job properties you can modify depend on the type of power you have. To modify print job properties, you must be able to access the corresponding published printer.

**To manage print job properties:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the published printer that is processing the print jobs that you want to manage, complete the following steps:
  - 2a *If you know the published printer location*, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 In the details pane, click **Manage Print Jobs**. To access the details pane, click **Details** on the View menu.
- 4 Select the print job you want to modify, and then click **Properties**.

---

**NOTE:** You can manage multiple print jobs of a published printer at the same time.

---

- 5 Modify the appropriate properties, and then click **OK**.

## 14.4.2 Pausing a Print Job

You can pause a print job on a published printer in a managed domain or managed subtree. To pause a print job, you must be able to access the corresponding published printer. Pausing a print job does not delete the print job from the print queue.

### To pause a print job:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer that is processing the print job that you want to pause, complete the following steps:
  - 2a *If you know the published printer location*, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 In the details pane, click **Manage Print Jobs**. To access the details pane, click **Details** on the View menu.
- 4 Select the print job you want to pause.

---

**NOTE:** You can pause multiple print jobs of a published printer at the same time.

---

- 5 Click **Pause**.

## 14.4.3 Resuming a Print Job

You can resume a print job that was paused in a managed domain or managed subtree. To resume a print job, you must be able to access the corresponding published printer.

### To resume a print job:

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the published printer that is processing the print job you want to resume, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 In the details pane, click **Manage Print Jobs**. To access the details pane, click **Details** on the View menu.
- 4 Select the print job you want to resume.

---

**NOTE:** You can resume multiple print jobs of a published printer at the same time.

---

- 5 Click **Resume**.

## 14.4.4 Restarting a Print Job

You can restart a print job that was stopped in a managed domain or managed subtree. To restart a print job, you must be able to access the corresponding published printer.

**To restart a print job:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the published printer that is processing the print job you want to restart, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 In the details pane, click **Manage Print Jobs**. To access the details pane, click **Details** on the View menu.
- 4 Select the print job you want to restart.

---

**NOTE:** You can restart multiple print jobs of a published printer at the same time.

---

- 5 Click **Restart**.

## 14.4.5 Canceling a Print Job

You can cancel a print job that is in the printer queue in a managed domain or managed subtree. When you cancel a print job, DRA permanently deletes the print job from the printer queue. To cancel a print job, you must be able to access the corresponding published printer.

**To cancel a print job:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the published printer that is processing the print job you want to cancel, complete the following steps:
  - 2a **If you know the published printer location**, select the domain and OU that contains this printer.
  - 2b In the search pane, specify the printer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate printer.
- 3 In the details pane, click **Manage Print Jobs**. To access the details pane, click **Details** on the View menu.
- 4 Select the print job you want to cancel.

---

**NOTE:** You can cancel multiple print jobs of a published printer at the same time.

---

- 5 Click **Cancel**.

---

# 15 Managing Shares

A share is a way to make resources, such as files or printers, available to other users on the network. Each share has a share name that refers to a shared folder on the server. DRA manages the shares only on the computers in the managed domains. To successfully manage shares, the access account must have administrator permissions, such as being a member of the local Administrators group, on all computers where you want to manage resources. To assign these permissions, add the access account to the native Domain Admins group in the domain of the computer.

## 15.1 Share Management Tasks

You can manage shares associated with computers in the managed domain or managed subtree. Because shares are associated with a computer, you can manage shares while managing other resources for that computer.

DRA allows you to create, clone, or delete a share, as well as view and modify the properties of a share. You can modify the path or comment of a share. You can also limit the number of user accounts able to connect to a share at one time to conform to licensing agreements or to reduce activity on busy servers.

This section guides you through administering shares in the Account and Resource Management console. With the appropriate powers, you can perform various share management tasks, such as managing share properties. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 15.1.1 Managing Share Properties

You can manage properties for shares in the managed domain or managed subtree. DRA lets you manage shares while managing other resources for that computer.

#### To manage share properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to manage shares, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Shares**. To access the details pane, click **Details** on the View menu.
- 4 Select the share you want to manage, and then click **Properties**.
- 5 On the appropriate tab, change the properties and settings you want to modify.  
To save these changes before you modify other properties, click **Apply**.
- 6 Click **OK**.

## 15.1.2 Creating a Share

You can create a share for a computer in the managed domain or managed subtree. You can also modify properties for this share.

### To create a share:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to create a share, complete the following steps:
  - 2a If you know the computer location**, select the domain and OU that contains this computer.
  - 2b** In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate computer.
- 3 In the details pane, click **Shares**, and then click **New**. To access the details pane, click **Details** on the View menu.
- 4 On each tab, specify the appropriate settings and properties for the new share, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 15.1.3 Cloning a Share

You can clone a share for a computer in the managed domain or managed subtree. By cloning a share, you can quickly create shares based on other shares with similar properties. This flexibility lets you enforce consistent settings for all shares you create in a given domain.

When you clone a share, DRA populates the Clone Share Wizard with values from the selected share. You can also modify properties for the new share.

### To clone a share:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer on which you want to manage shares, complete the following steps:
  - 2a If you know the computer location**, select the domain and OU that contains this computer.
  - 2b** In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate computer.
- 3 In the details pane, click **Shares**, and then click **Clone**. To access the details pane, click **Details** on the View menu.
- 4 On each tab, specify the appropriate settings and properties for the new share, and then click **Next**.
- 5 Review the summary, and then click **Finish**.

## 15.1.4 Deleting a Share

You can delete shares from computers in the managed domain or managed subtree.

### To delete a share:

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the computer whose share you want to delete, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Shares**. To access the details pane, click **Details** on the View menu.
- 4 Select the share you want to delete, and then click **Delete**.
- 5 Click **Yes**.





---

# 16 Managing Advanced Queries

Regular DRA search functionality allows you to search on attributes of objects in Active Directory such as users, computers, printers, groups, and OUs. It also allows you to specify wildcard character searches. However, you cannot use DRA search functionality to search on customized attributes, like account lockout status or account expired status. Advanced search queries enable you to perform searches using customized attributes that are not available through the DRA search functionality. DRA uses LDAP to support the advanced queries feature. You can use advanced queries to search for users, contacts, groups, computers, printers, OUs, and any other object that DRA supports.

## 16.1 Advanced Search Query Management Tasks

DRA allows you to save, modify, copy, delete, and share advanced queries that you create. If you are familiar with the LDAP query language, you can type your LDAP query, validate the query, and share it with other AAs by saving it as a public query. If you are not familiar with the LDAP query language, you can use saved queries or import queries from the Active Directory User and Computers (ADUC) management console. You can manage advanced search queries on both the primary Administration server and secondary Administration servers.

This section guides you through administering advanced queries in the Account and Resource Management console. Different advanced query management tasks require different powers. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 16.1.1 Creating a New Advanced Query

You can create an advanced query on either the primary Administration server or the secondary Administration server. You can also modify properties, such as the query string, for the new advanced query.

**To create an advanced query:**

- 1 In the left pane, expand **Account and Resource Management** and select **All My Managed Objects**.
- 2 Click the Advanced Search toolbar button.
- 3 Expand **Advanced Queries**.
- 4 Select either **Public Queries** or **My Queries**.
- 5 On the Tasks menu, click **New Query**.
- 6 Specify the appropriate settings and properties, such as the query string, for the new advanced query, and then click **OK**.

---

**NOTE:** Alternatively, you can create a new advanced query using the advanced search pane of a container. In the advanced search pane, select the criteria for your query, click **Find Now**, and then click **Save**.

---

## 16.1.2 Modifying an Advanced Query

You can change certain properties of a saved advanced query under **Public Queries** only if you have the necessary permissions to modify shared advanced queries. You can modify the properties of any query that you save under **My Queries**.

**To modify an advanced query:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Expand **Advanced Queries**.
- 3 Select either **Public Queries** or **My Queries**.
- 4 In the list pane, select the advanced query you want.
- 5 On the Tasks menu, click **Edit Query**.
- 6 Change the properties you want, click **Apply**, and then click **OK**.

---

**NOTE:** Alternatively, you can edit a saved advanced query using the advanced search pane of a container. In the advanced search pane, select an advanced query from the **Saved Queries** list, click **Load Query**, and then click **Find Now**. DRA displays the query details in the details pane and allows you to modify the query string. To save the changes to the query string, click **Save As**.

---

## 16.1.3 Copying an Advanced Query

You can copy advanced queries between **Public Queries** and **My Queries**. When you copy an advanced query to **Public Queries**, Assistant Admins with the necessary powers can modify and execute the advanced query.

**To copy an advanced query:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Expand **Advanced Queries**.
- 3 Select either **Public Queries** or **My Queries**.
- 4 In the list pane, select the advanced query you want.
- 5 If you want to copy an advanced query from **Public Queries**, click **Copy to My Queries** on the Tasks menu.
- 6 If you want to copy an advanced query from **My Queries**, click **Copy to Public Queries** on the Tasks menu.

## 16.1.4 Customizing Advanced Query Results

DRA provides you with a default set of columns in the search results list. To customize your search results, you can add or remove columns in the list of search results. You can customize the search results when you are creating a new advanced query or modifying an advanced query.

**To customize advanced query results:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Expand **Advanced Queries**.
- 3 Select either **Public Queries** or **My Queries**.
- 4 In the list pane, select the advanced query you want.

- 5 On the Tasks menu, click **Edit Query**.
- 6 In the Edit Query window, click **Choose Columns**.
- 7 **If you want to use the default set of columns that DRA provides**, select the **Use default columns** radio button.
- 8 **If you want to add or remove columns**, select the **Use specific columns** radio button.
- 9 Select the columns you want, and then click **OK**.

---

**NOTE**

- ♦ You can view or modify object properties in the search results if you have the relevant powers.
  - ♦ To change the order of the columns in the advanced search pane, click **Move Up** or **Move Down**.
- 

## 16.1.5 Importing an Advanced Query

You can import advanced queries that you create in ADUC instead of creating these advanced queries again using DRA. You can only import advanced queries that are in XML format.

**To import an advanced query:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Expand **Advanced Queries**.
- 3 Select either **Public Queries** or **My Queries**.
- 4 On the Tasks menu, click **Import Query**.
- 5 Browse and select the appropriate advanced query, and then click **Open**.

## 16.1.6 Exporting an Advanced Query

You can export advanced queries that you create in DRA instead of creating these advanced queries again in ADUC.

**To export an advanced query:**

- 1 In the left pane, expand **Account and Resource Management**.
- 2 Expand **Advanced Queries**.
- 3 Select either **Public Queries** or **My Queries**.
- 4 In the list pane, select the advanced query you want you want to export.
- 5 On the Tasks menu, click **Export Query**.
- 6 Browse and select the folder you want, and then click **Save**.

## 16.1.7 Deleting an Advanced Query

You can delete advanced queries under **Public Queries** only if you have the necessary permissions to delete shared advanced queries. You can delete any advanced query that is under **My Queries**.

**To delete an advanced query:**

- 1 In the left pane, expand **Account and Resource Management**.

- 2 Expand **Advanced Queries**.
- 3 Select either **Public Queries** or **My Queries**.
- 4 In the list pane, select the advanced query you want to delete.
- 5 On the Tasks menu, click **Delete**.
- 6 Click **Yes**.

---

# 17 Managing Connected Users

A session is established whenever a user connects to a particular resource on a remote computer. A connected user is a user connected to a shared resource on the network.

DRA manages the connected users only on the computers in the managed domains. The access account must have administrator permissions, such as being a member of the local Administrators group, on all computers where you want to manage connected users. To assign these permissions, add the access account to the native Domain Admins group in the domain of the computer.

## 17.1 Connected User Management Tasks

You can view and disconnect users from resources on the network. When you disconnect a session, it does not log the user out or keep the user from connecting to the resource again.

This section guides you through administering connected users in the Account and Resource Management console. With the appropriate powers, you can perform these connected user management tasks. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 17.1.1 Disconnecting a User

You can disconnect a connected user from a computer in the managed domain or managed subtree. You must be able to access the computer and this open session. Disconnecting a connected user ends the open session.

**To disconnect a connected user:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Connected Users**. To access the details pane, click **Details** on the View menu.
- 4 Select the user account you want to disconnect, and then click **Disconnect**.

### 17.1.2 Refreshing the List of Connected Users

To ensure you are viewing the latest information about open sessions on a computer, manually refresh the list of connected users. You must be able to access the computer and this open session.

**To refresh the list of connected users:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the computer, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Connected Users**. To access the details pane, click **Details** on the View menu.
- 4 Click **Refresh**.

---

# 18 Managing Devices

A device is any piece of equipment attached to a network, such as a computer, printer, modem, or any other peripheral equipment.

Although a device may be installed on your computer, Windows cannot recognize the device until you install and configure the appropriate driver. A device driver enables a specific piece of hardware to communicate with the operating system.

DRA allows you to configure and manage the devices only on the computers in the managed domains. The access account must have administrator permissions, such as being a member of the local Administrators group, on all computers where you want to manage devices. To assign these permissions, add the access account to the native Domain Admins group in the domain of the computer.

## 18.1 Device Management Tasks

The built-in resource roles provide a range of powers to let you manage devices. DRA lets you manage devices while managing other resources for that computer.

This section guides you through administering devices in the Account and Resource Management console. With the appropriate powers, you can perform various device management tasks, such as stopping a device. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 18.1.1 Managing Device Properties

You can modify the properties of a device on a specific computer. Modifying the device properties for a device allows you to modify the startup type for a device.

**To modify device properties:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose device you want to modify, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Devices**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate device, and then click **Properties**.
- 5 Change the appropriate device properties, and then click **OK**.

## 18.1.2 Starting a Device

You can start a device on a specific computer in the managed domain or managed subtree.

### To start a device:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose device you want to start, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Devices**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate device, and then click **Start**.

## 18.1.3 Stopping a Device

You can stop a device on a specific computer in the managed domain or managed subtree.

### To stop a device:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose device you want to stop, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Devices**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate device, and then click **Stop**.



---

# 19 Managing Event Logs

An event is an important system or application occurrence. The Windows operating system records information about events in event log files. There may be several event logs stored on each computer. Use the native Windows Event Viewer to view event logs. DRA manages the event logs only on the computers in the managed domains.

DRA records user-initiated operations in the log archive, a secure repository. You have the option to have DRA also record user-initiated operations in the Windows Event Log in addition to recording the information in the DRA log archive. For more information, see [Section 22.2, “How DRA Uses Log Archives,”](#) on page 154.

## 19.1 Event Log Types

Computers running Microsoft Windows record additional information in various logs. The logs are briefly described as follows:

<b>ADAM</b>	Records events logged by the ADAM repository.
<b>Application</b>	Records events logged by an application on the computer, such as a service startup or failure. For example, DRA and ExA store events in the Application log.
<b>Directory service</b>	Records events related to domain controllers maintaining the security database.
<b>File replication service</b>	Records events related to file replication services provided by the operating system.
<b>Security</b>	Records events that include logon attempts, file and directory access, and security policy changes that are based on the audit policy options.
<b>System</b>	Records events logged by the Windows system components, such as the failure of a driver or services starting and stopping.

## 19.2 Event Log Management Tasks

You can specify the maximum size of an event log file and what happens to an event log when it becomes full. The properties window also displays the name of the log, the log file path and filename, when the log was created, when it was last modified, and when it was last accessed. If you choose to back up the log file, DRA saves the event log with a unique file name in a standard location on the selected computer.

DRA lets you manage event logs while managing other resources for that computer. This section guides you through administering shares in the Account and Resource Management console. With the appropriate powers, you can perform various share management tasks, such as changing event log properties. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

## 19.2.1 Enabling and Disabling Windows Event Log Auditing for DRA

When you install DRA, audit events are not logged in the Windows event log by default. You can enable this type of logging by modifying a registry key.

---

**WARNING:** Be careful when editing your Windows Registry. If there is an error in your Registry, your computer may become nonfunctional. If an error occurs, you can restore the Registry to its state when you last successfully started your computer. For more information, see the Help for the Windows Registry Editor.

---

### To enable event auditing:

- 1 Click **Start > Run**.
- 2 Type `regedit` in the **Open** field and click **OK**.
- 3 Expand the following registry key:  
`HKLM\Software\WOW6432Node\Mission Critical  
Software\OnePoint\Administration\Modules\ServerConfiguration\`
- 4 Click **Edit > New > DWORD Value**.
- 5 Enter `IsNTAuditEnabled` as the key name.
- 6 Click **Edit > Modify**.
- 7 Enter `1` in the **Value data** field and click **OK**.
- 8 Close Registry Editor.

### To disable event auditing:

- 1 Click **Start > Run**.
- 2 Type `regedit` in the **Open** field and click **OK**.
- 3 Expand the following registry key:  
`HKLM\Software\WOW6432Node\Mission Critical  
Software\OnePoint\Administration\Modules\ServerConfiguration\`
- 4 Select the `IsNTAuditEnabled` key.
- 5 Click **Edit > Modify**.
- 6 Enter `0` in the **Value data** field and click **OK**.
- 7 Close Registry Editor.

## 19.2.2 Managing Event Log Properties

You can modify event log properties for a specific computer.

### To modify event log properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose event log you want to modify, complete the following steps:
  - 2a** *If you know the computer location*, select the domain and OU that contains this computer.
  - 2b** In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c** In the list pane, select the appropriate computer.

- 3 In the details pane, click **Event Logs**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate event log, and then click **Properties**.
- 5 Change the appropriate log size properties.
- 6 Click **OK**.

## 19.2.3 Viewing Event Log Entries

You can view entries in a specific event log for a computer in the managed domain or managed subtree. When you view an event log, DRA launches the native Windows Event Viewer.

### To view event log properties:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose event log you want to view, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Event Logs**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate event log, and then click **Launch Event Viewer**.

## 19.2.4 Clearing the Event Log

You can clear entries in a specific event log for a computer in the managed domain or managed subtree. You can also save the event log entries before clearing the log.

---

**WARNING:** Clearing an event log is an irreversible action. You cannot recover a cleared event log unless you save the event log before you clear the event log.

---

### To clear event logs:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose event log you want to clear, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Event Logs**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate event log, and then click **Clear**.
- 5 **If you want to save the current event log entries before clearing the log**, click **Yes**. Note the location where DRA saves the event log file, and then click **OK**.
- 6 **If you want to clear the log without saving the event log entries**, click **No**.



---

# 20 Managing Open Files

An open file is a connection to shared resources, such as files or pipes. A pipe is an inter-process communication mechanism that allows one process to communicate with another local or remote process.

DRA manages open files only on computers in the managed domain and managed subtree. Because open files are associated with a computer, you can manage open files while managing other resources for that computer. For example, you may want to close open files when you shut down a system or install a new device or service. You can also monitor which files users access most often, helping you better assess file security.

## 20.1 Open File Management Tasks

This section guides you through administering open files in the Account and Resource Management console. With the appropriate powers, you can close an open file or view open files for a specific computer. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 20.1.1 Closing a File

You can close open files from resources on the network. It is a good idea to notify users when you intend to close open files. They may need time to save their data. To close an open file, you must be able to access the corresponding computer.

**To close open files:**

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To select the computer whose open file you want to close, complete the following steps:
  - 2a **If you know the computer location**, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Open Files**. To access the details pane, click **Details** on the View menu.
- 4 Select the appropriate open file, and then click **Close**.

### 20.1.2 Refreshing the List of Open Files

To ensure you are viewing the latest information about open sessions on a computer, manually refresh the list of connected users. To refresh the open file list, you must be able to access the corresponding computer.

**To refresh open files:**

- 1 In the left pane, expand **All My Managed Objects**.

- 2 To select the computer whose open file you want to list, complete the following steps:
  - 2a ***If you know the computer location***, select the domain and OU that contains this computer.
  - 2b In the search pane, specify the computer attributes, and then click **Find Now**.
  - 2c In the list pane, select the appropriate computer.
- 3 In the details pane, click **Open Files**. To access the details pane, click **Details** on the View menu.
- 4 Click **Refresh**.

---

# 21 Managing the Recycle Bin

The Recycle Bin provides a safety net by allowing you to delete user accounts, groups, contacts, and computer accounts on a temporary basis. You can then restore these objects to their original state with all data, such as SIDs, ACLs, and group memberships intact or permanently delete these objects. This flexibility provides a safer way to manage user accounts, groups, contacts, and computer accounts.

## 21.1 Recycle Bin Tasks

By default, the Recycle Bin is enabled. This means that when you delete an object, that object is automatically retained in the Recycle Bin until you take further action. Use the Recycle Bin to permanently delete objects, restore objects, or view disabled object properties. For more information about the Recycle Bin, see the *Administration Guide for Directory Resource Administrator and Exchange Administrator*.

If you have the appropriate powers, you can delete user accounts, groups, contacts, and computer accounts to the Recycle Bin using the Web Console, Account and Resource Management console, or Delegation and Configuration console. If you have the appropriate powers, you can also restore these deleted objects from the Recycle Bin using the Web Console, Account and Resource Management console, or Delegation and Configuration console. For more information about your assigned powers, see [“Viewing Your Assigned Powers and Roles”](#).

### 21.1.1 Restoring an Object from the Recycle Bin

You can restore deleted objects back to the containers from which you deleted the objects. DRA restores these objects to their original state with all data, such as SIDs, ACLs, and group memberships intact. An object can be a user account, group, contact, dynamic group, resource mailbox, dynamic distribution group, or computer account.

**To restore an object from the Recycle Bin:**

- 1 In the left pane, expand **Recycle Bin**.
- 2 Select the appropriate domain.
- 3 In the right pane, select the object you want to restore.

---

**NOTE:** You can restore multiple similar objects at the same time. For example, you can restore multiple user accounts at the same time.

---

- 4 To check the object before you restore it, click **Properties** on the Tasks menu.
- 5 On the Tasks menu, click **Restore**.

## 21.1.2 Restoring All Objects

You can restore all objects from the Recycle Bin for a managed domain. You can restore objects from the Recycle Bin for a specific domain or across all managed domains. To restore objects from a Recycle Bin for a specific domain, the Recycle Bin must be enabled for that domain.

### To restore all objects from the Recycle Bin:

- 1 In the left pane, expand **Recycle Bin**.
- 2 To restore objects from the Recycle Bin for a specific domain, select the appropriate domain.
- 3 On the Tasks menu, click **Restore All**.

## 21.1.3 Deleting an Object from the Recycle Bin

You can permanently delete objects from the Recycle Bin for a managed domain. Once you delete an object from the Recycle Bin, you cannot restore the object. An object can be a user account, group, contact, dynamic group, resource mailbox, dynamic distribution group, or computer account.

### To delete an object from the Recycle Bin:

- 1 In the left pane, expand **Recycle Bin**.
- 2 Select the appropriate domain.
- 3 In the right pane, select the object you want to delete.

---

**NOTE:** You can delete multiple similar objects at the same time. For example, you can delete multiple user accounts at the same time.

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- 4 To check the object before you delete it, click **Properties** on the Tasks menu.
- 5 On the Tasks menu, click **Delete**.

## 21.1.4 Emptying the Recycle Bin

You can empty the Recycle Bin for a managed domain. Emptying the Recycle Bin permanently deletes any objects currently in the Recycle Bin. You can empty the Recycle Bin for a specific domain or across all managed domains. To empty a Recycle Bin for a specific domain, the Recycle Bin must be enabled for that domain. Once you empty the Recycle Bin, you cannot restore the deleted objects.

### To empty the Recycle Bin:

- 1 In the left pane, expand **Recycle Bin**.
- 2 To empty the Recycle Bin for a specific domain, select the appropriate domain.
- 3 On the Tasks menu, click **Empty Recycle Bin**.



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# 22 Generating Reports

Auditing user actions is among the most important aspects of a sound security implementation. To allow you to review and report on Assistant Admin (AA) actions, DRA logs all user operations in the log archive on the Administration server computer. DRA provides clear and comprehensive reporting that includes before and after values of the audited events so that you can see exactly what changed.

## 22.1 Understanding DRA Reporting

DRA Reporting provides two methods of generating reports that allow you to see the latest changes in your environment and to collect and review user account, group, and resource definitions in your domain.

### Activity Detail reports

Accessed through the ARM console and the Delegation and Configuration console, these reports provide real-time change information for objects in your domain.

### DRA Management reports

Accessed through NetIQ Reporting Center (Reporting Center), these reports provide activity, configuration, and summarization information about events in your managed domains. Some reports are available as graphical representations of the data.

For example, you can view a list of changes made to an object or by an object during a specified time period using Activity Detail reports. You can also view a graph showing the number of events in each managed domain during a specified time period using Management reports. Reporting also allows you to view details about the DRA security model, such as ActiveView and AA group definitions.

DRA disables functions and reports that your license does not support. You must also have the appropriate powers to run and view reports. Therefore, you may not have access to some reports.

Activity Detail reports are available as soon as you install DRA through the ARM console and the Delegation and Configuration console to provide the latest details on your network changes.

DRA Management reports can be installed and configured as an optional feature and are viewed in Reporting Center. When you enable and configure data collection, DRA collects information about audited events and exports it to a SQL Server database on a schedule that you define. When you connect to this database in Reporting Center, you have access to over 60 built-in reports:

- ♦ Activity reports that show who did what, and when
- ♦ Configuration reports that show the state of AD or DRA at a specific point in time
- ♦ Summarization reports that show activity volume

For more information about configuring data collection for Management reports, see the *Administrator Guide*.

## 22.2 How DRA Uses Log Archives

To allow you to review and report on Assistant Admin (AA) actions, DRA logs all user operations in the log archive on the Administration server computer. User operations include all attempts to change definitions, such as updating user accounts, deleting groups, or redefining ActiveViews. DRA also logs specific internal operations, such as Administration server initialization and related server information. In addition to logging these audit events, DRA logs the before and after values for the event so that you can see exactly what changed.

DRA uses a folder, **NetIQLogArchiveData**, called a **log archive** to securely store archived log data. DRA archives the logs over time and then deletes older data to make room for newer data through a process called grooming.

DRA uses the audit events stored in the log archive files to display Activity Detail reports, such as showing what changes have been made to an object during a specified time period. You can also configure DRA to export information from these log archive files to a SQL Server database that NetIQ Reporting Center uses to display Management reports.

DRA always writes audit events to the log archive. You can enable or disable having DRA write events to the Windows event logs as well. For more information, see [Section 19.2.1, “Enabling and Disabling Windows Event Log Auditing for DRA,” on page 146](#).

For more information about DRA auditing, see the *Administrator Guide*.

## 22.3 Understanding Dates and Times

DRA uses the **Short date style** and **Time style** specified in the Regional Settings application in Control Panel for report display. DRA reports show UTC date and time as well as local date and time for events. DRA reports support the following date formats:

- ◆ m/d/yy
- ◆ m-d-yy
- ◆ m/d/yyyy
- ◆ m-d-yyyy
- ◆ mm/dd/yy
- ◆ mm-dd-yy
- ◆ mm/dd/yyyy
- ◆ mm-dd-yyyy
- ◆ dd/mm/yy
- ◆ dd-mm-yy
- ◆ dd/mm/yyyy
- ◆ dd-mm-yyyy

## 22.4 DRA Reporting Tasks

To generate DRA Management reports, install Reporting Center and enable data collection in DRA. For more information about enabling data collection, see the *Administrator Guide*. To generate Activity Detail reports, right-click over any object and click **Reporting** to see your choices for reports on that object. The following sections guide you through the various Reporting tasks.

## 22.4.1 Viewing Activity Detail Reports

Activity Detail reports display information about changes in your environment. You can view or print a report, as well as save a report in Excel, CSV, or TXT format. To view or print reports, you must be associated with the Reporting Administration role.

When viewing reports, enter criteria to specify the time period you want to display information about. You can also choose to view a report limited to changes made on specific DRA servers, and you can limit the number of rows to be included in the report. If the report size exceeds one of the following limits, DRA displays a message stating that the report is not complete:

- ◆ Size exceeds 500 MB
- ◆ Time needed to query all DRA servers exceeds 5 minutes
- ◆ Number of rows to be displayed exceeds 1000

You have the option of viewing the report containing only the information retrieved before reaching one of these limits, or you can change the report criteria to view a report that meets these limits.

### To view a report:

- 1 In the left pane, expand **All My Managed Objects**.
- 2 To specify the object for which you want to view a report, complete the following steps:
  - 2a **If you know the object location**, select the domain and OU that contains this object.
  - 2b In the search pane, specify the object attributes, and then click **Find Now**.
- 3 In the list pane, right-click the object and click **Reporting**.
- 4 Select the type of report, such as **Changes made to objectName** or **Changes made by objectName**. The available reports vary depending on the type of object you have selected.
- 5 Select the start and end dates to specify the changes you want to view.
- 6 **If you want to change the number of rows to be displayed**, type a number over the default value of 250.

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**NOTE:** The number of rows displayed applies to each Administration server in your environment. If you include 3 Administration servers in the report and use the default value of 250 rows to display, up to 750 rows can be displayed in the report.

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- 7 **If you want to include only specific Administration servers in the report**, select **Restrict query to these DRA servers** and type the server name or names you want the report to include. Separate multiple server names with commas.
- 8 Click **OK**.

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**NOTE:** DRA might take up to 5 seconds to display recent changes in reports. Therefore, wait at least 5 seconds after making a change before you attempt to view a report that contains the change.

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## 22.4.2 Exporting Activity Detail Reports

You can export Activity Detail reports in the following formats: XLS, CSV, and TXT. The default format is Microsoft Excel format.

### To export Activity Detail reports:

- 1 In the report window, on the File menu, click **Preview and Export**.

- 2 In the Preview window, on the File menu, click **Export Document > Excel File**.
- 3 Select your export options and click **OK**.
- 4 In the Save as window, type a name for the file and click **Save**.

### 22.4.3 Printing Activity Detail Reports

To print reports, you must be associated with the Reporting Administration role. You can view or print Activity Detail reports, as well as save a report in various formats.

**To print Activity Detail reports:**

- 1 In the report window, on the File menu, click **Preview and Export**.
- 2 In the Preview window, on the File menu, click **Print**.

### 22.4.4 Viewing Management Reports

You must install DRA Reporting and configure the DRA data collectors to be able to view Management reports in Reporting Center. For more information about installing DRA Reporting and configuring the DRA Collectors, see the *Installation Guide*.

When you log on to the Reporting Center, the Web Service uses IIS to validate the account credentials according to the way you configured the Web Service during installation.

**To view Management reports:**

- 1 Log on to the computer that is running the Reporting Center Console.
- 2 Start **Reporting Center Console** in the NetIQ > Reporting Center program group.
- 3 Provide the required information in the Logon dialog box and click **Logon**.
- 4 In the Navigation pane, expand **Reports > DRA Management Reports**.
- 5 Expand the report categories until you find a report you want to view.
- 6 Click the report name in the Navigation pane and the report will load in the center Results pane, displaying cached data.
- 7 **If you want to see the report using the latest data**, click **Execute Report** in the Results Pane.

You can change the default context settings to display different report results. For more information about context settings in Reporting Center, see the *Administrator Guide*.

### 22.4.5 Customizing Management Reports

More than 60 Management reports are shipped with DRA. Reporting Center gives you the flexibility to customize and deploy these reports in many ways. For more information about customizing and deploying Management reports in Reporting Center, see the *Administrator Guide*.

**To customize a Management report:**

- 1 View a report that is similar to a report you want to create. For more information, see [Section 22.4.4, "Viewing Management Reports," on page 156](#).
- 2 Customize the report by changing the report properties and context settings to display the information you want.
- 3 Click **Execute Report**.

- 4 On the Report menu, click **Save Report As** and specify a report title and location to save the new report.
- 5 Click **Save**.

For more information about working with Management reports in Reporting Center, see the *Administrator Guide*.



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# A The Pre-DRA 9.0.1 Web Console

The pre-DRA 9.0.1 Web Console is still available for use. Consult the *NetIQ Directory and Resource Administrator and Exchange Administrator Installation Guide* for information about installing this version of the Web Console.

The Web Console is a Web-based user interface that provides quick and easy access to many user account, group, computer, resource, and Microsoft Exchange mailbox tasks. You can also manage general properties of your own user account, such as the street address or cell phone number.

The Web Console is easy to learn and simple to use, which makes it a great tool for occasional or beginning administrators. The Web Console provides step-by-step help as it guides you through each task. When you complete a task, it displays links to other related tasks, so you can quickly address an entire workflow. The Web Console displays a task only if you have the power to perform that task.

## A.1 Starting the Web Console

You can start the Web Console from any computer running Internet Explorer. To start the Web Console, specify the appropriate URL in your Web browser address field or use the link provided in the Account and Resource Management console. For example, if you installed the Web component on the HOUserver computer, type `http://HOUserver/dra` in the address field of your Web browser.

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**NOTE:** To display the most current account and Microsoft Exchange information in the Web Console, set your Web browser to check for newer versions of cached pages at every visit.

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You can also start the Web Console from the DRA program group, and from the File menu in the Account and Resource Management console and the Delegation and Configuration console.

## A.2 Using Quick Start to Solve Issues

Quick Start allows you to quickly and easily resolve account issues. You can view vital statistics and properties for a specific user account, computer, or group. You can then link to the appropriate task, such as resetting the password for a user account, which addresses your problem.

## A.3 Customizing the Web Console

You can quickly and easily customize the Web Console in the following ways:

### **Modify provided tasks**

For example, you can modify the update user's properties task to include a new field that manages a proprietary setting. You can hide specific tasks you do not want Assistant Admins (AAs) to use regardless of their delegated powers. You can also publish reports generated from Directory and Resource Reporting.

**Develop new tasks**

For example, you can develop a new update user's properties task that meets your unique administration needs. You can replace provided tasks with custom tasks without losing built-in functionality.

**Modify workflows**

For example, you can modify the Web Console framework and navigation, changing how AAs step through a given task. This flexibility allows you to add, remove, or move steps to create the exact solution you require.

**Deploy multiple Web Console applications**

You can install and configure multiple Web Console applications. For example, you can deploy one custom Web Console application for your Houston facility and another custom Web Console application for your Atlanta facility. Each application can support a unique set of tasks that meet the specific needs of your facility. For more information, see the Deploying DRA in Unique Environments Technical Reference. For more information about customizing the Web Console, see the Directory and Resource Administrator Software Development Kit.