

Multi-System Administration Guide

GroupWise 8

August 31, 2009

Novell.

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About This Guide

This Novell *GroupWise 8 Multi-System Administration Guide* helps you connect your GroupWise system to other GroupWise systems or non-GroupWise messaging systems, and helps you merge your GroupWise system with another GroupWise system to create one system. The guide is divided into the following sections:

- ◆ “Connecting to Other GroupWise Systems” on page 9
- ◆ “Connecting to Non-GroupWise Messaging Systems” on page 39
- ◆ “Merging GroupWise Systems” on page 45

For troubleshooting assistance, see:

- ◆ *GroupWise 8 Troubleshooting 1: Error Messages*
- ◆ *GroupWise 8 Troubleshooting 2: Solutions to Common Problems*
- ◆ *GroupWise 8 Troubleshooting 3: Message Flow and Directory Structure*
- ◆ Novell Support and Knowledgebase (<http://www.novell.com/support>)

To search the GroupWise documentation from the Novell Support Web site, click *Advanced Search*, select *Documentation* in the *Search In* drop-down list, select *GroupWise* in the *Products* drop-down list, type the search string, then click *Search*.

- ◆ GroupWise Support Forums (<http://forums.novell.com/forumdisplay.php?f=356>)
- ◆ GroupWise Support Community (<http://www.novell.com/support/products/groupwise>)
- ◆ GroupWise Cool Solutions (<http://www.novell.com/coololutions/gwmag/index.html>)

Audience

This guide is intended for network administrators who install and administer GroupWise.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation, or go to [Novell Documentation Feedback \(http://www.novell.com/documentation/feedback.html\)](http://www.novell.com/documentation/feedback.html) and enter your comments there.

Additional Documentation

For additional GroupWise documentation, see the following guides at the [Novell GroupWise 8 documentation Web site \(http://www.novell.com/documentation/gw8\)](http://www.novell.com/documentation/gw8):

- ◆ *Installation Guide*
- ◆ *Administration Guide*
- ◆ *Interoperability Guide*
- ◆ *Troubleshooting Guides*

- ♦ *GroupWise Client User Guides*
- ♦ *GroupWise Client Frequently Asked Questions (FAQ)*

Connecting to Other GroupWise Systems

- ♦ Chapter 1, “Understanding Connection Options,” on page 11
- ♦ Chapter 2, “Using External System Links,” on page 15
- ♦ Chapter 3, “Using Dynamic Internet Links,” on page 17
- ♦ Chapter 4, “Using Direct Links,” on page 27
- ♦ Chapter 5, “Using Gateway Links,” on page 33
- ♦ Chapter 6, “Synchronizing External GroupWise Systems,” on page 35

1 Understanding Connection Options

When connecting your GroupWise 8 system with another GroupWise 5.x, 6.x, or 7, or 8 system, you can choose from several connection methods. To help you choose the best method for your system, the following sections provide brief summaries:

- ♦ [Section 1.1, “Connection Methods Supported by the Various GroupWise Versions,” on page 11](#)
- ♦ [Section 1.2, “External System Links,” on page 12](#)
- ♦ [Section 1.3, “Dynamic Internet Links,” on page 12](#)
- ♦ [Section 1.4, “Direct Links,” on page 12](#)
- ♦ [Section 1.5, “Gateway Links,” on page 13](#)

Depending on the versions of the two GroupWise systems you are trying to connect, some of the methods might not be available. For information about methods available for the two systems you are connecting, see [Section 1.1, “Connection Methods Supported by the Various GroupWise Versions,” on page 11](#).

1.1 Connection Methods Supported by the Various GroupWise Versions

The following chart lists the GroupWise 5.x, 6.x, 7, and 8 versions and the methods that can be used when connecting systems that are these versions:

KEY
D = Direct Link
G = Gateway Link
I = Dynamic Internet Link
E = External System Link

	5.2	5.5	5.5 EP	6.x	7	8
5.2	D G	D G	D G	D G	D G	D G
5.5	D G	D G I	D G I	D G I	D G I	D G I
5.5 EP	D G	D G I	D G I	D G I	D G I	D G I
6.x	D G	D G I	D G I	D G I	D G I	D G I
7	D G	D G I	D G I	D G I	D G I	D G I
8	D G	D G I	D G I	D G I	D G I	D G I E

To use the chart, locate your system’s version in the first column, then read across the row until you reach the version of the system you are connecting to. The methods listed are the methods supported when connecting the two systems.

IMPORTANT: A GroupWise system's version is determined by the version of the Message Transfer Agent (MTA) running in the system. If your system includes multiple versions of the MTA, determine which MTA will be used when connecting to the other system and use that MTA's version when reading the table.

1.2 External System Links

Before GroupWise 8, if you wanted users in your GroupWise system to be able to exchange messages conveniently with users in another GroupWise system, you needed to set up external domains, external post offices, and external users, or use dynamic Internet links, as described in later sections.

Starting with GroupWise 8, you can set up an Internet domain in GroupWise to represent the other GroupWise system. As a result, messages are routed to the other GroupWise system based on links set up in the Link Configuration Tool, rather than through the Internet Agent.

For information about connecting GroupWise systems via external system links, see [Chapter 2, "Using External System Links,"](#) on page 15.

1.3 Dynamic Internet Links

The dynamic Internet link capability of the GroupWise Message Transfer Agent (MTA) enables it to use Domain Name Service (DNS) to associate the domain name in an Internet-style address (for example, `jsmith@novell.com`) to an MTA assigned to receive messages for that domain name. After the address has been resolved, the sending MTA uses the GroupWise Message Transfer Protocol (GWMTP) to connect with and transfer messages to the destination MTA.

Because messages are transferred directly from one MTA to another, no GroupWise client functionality is lost. Users can perform Busy Searches, retract sent messages, and see the status of their outgoing messages, just as if the recipient were in the same GroupWise system. In addition, users are able to use well-known Internet-style address syntax (for example, `jsmith@novell.com`).

Administratively, using dynamic Internet links enables you to avoid defining users from other GroupWise systems in your GroupWise system. As long as the sender knows the recipient's Internet-style address, and the recipient's domain name is registered in DNS and associated with an MTA, the message is properly routed to the recipient.

For information about connecting GroupWise systems via dynamic Internet links, see [Chapter 3, "Using Dynamic Internet Links,"](#) on page 17.

1.4 Direct Links

The direct link capability of the MTA enables it to use a mapped or UNC path to access a domain directory in another GroupWise system or to use TCP/IP to connect to the domain's MTA. This is the same functionality that enables two domains in the same GroupWise system to be connected.

Because messages are transferred directly from one MTA to another, no GroupWise client functionality is lost.

Administratively, you can use the External System Synchronization feature to exchange information between the two systems and enable users to select addresses from the Address Book, or you can choose to not exchange information and require users to enter a fully-qualified address (`userID.post_office.domain` or `user@host`).

For information about connecting GroupWise systems via direct links, see [Chapter 4, “Using Direct Links,”](#) on page 27.

1.5 Gateway Links

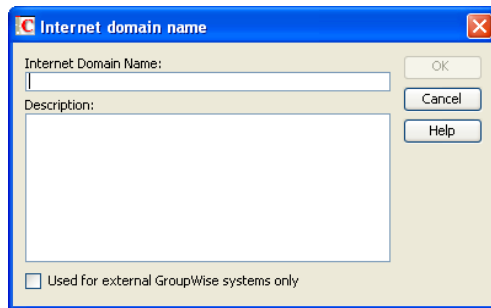
If you can't establish a direct link (mapped path, UNC path, or TCP/IP connection) between domains in two systems, you can use a GroupWise gateway to link the two systems. Depending on the gateway used, some GroupWise functionality might not be available when sending messages between systems.

For information about connecting GroupWise systems via gateways, see [Chapter 5, “Using Gateway Links,”](#) on page 33.

2 Using External System Links

To set up an Internet domain that represents an external GroupWise system:

- 1 In ConsoleOne, click *Tools > GroupWise System Operations > Internet Addressing*.
- 2 On the *Internet Domains* tab, click *Create*.



- 3 Specify the Internet domain name for the external GroupWise system, then provide a description if desired.
- 4 Select *Used for External GroupWise Systems Only*, then click *OK*.

3 Using Dynamic Internet Links

You can connect two GroupWise systems through dynamic Internet links. Dynamic Internet links enable a GroupWise Message Transfer Agent (MTA) to use Domain Name Service (DNS) and GroupWise Message Transfer Protocol (GWMTP) to send messages from one system to another. For an overview of dynamic Internet links, see [Chapter 1, “Understanding Connection Options,” on page 11](#).

To use dynamic Internet links, complete the tasks in the following sections:

- ♦ [Section 3.1, “MTA Version Requirements,” on page 17](#)
- ♦ [Section 3.2, “Installing the GroupWise Internet Agent,” on page 18](#)
- ♦ [Section 3.3, “Setting Up Internet-Style Addressing,” on page 18](#)
- ♦ [Section 3.4, “Adding MTA Resource Records to DNS,” on page 18](#)
- ♦ [Section 3.5, “Configuring the MTA’s Server for DNS Lookups,” on page 20](#)
- ♦ [Section 3.6, “Enabling MTAs to Perform DNS Lookups,” on page 21](#)
- ♦ [Section 3.7, “Understanding Dynamic Internet Links,” on page 22](#)

For a general explanation of how dynamic Internet links work, see [Section 3.7, “Understanding Dynamic Internet Links,” on page 22](#).

3.1 MTA Version Requirements

To use dynamic Internet links to connect your GroupWise system with another GroupWise system, both GroupWise systems must have at least one domain that is running one of the following versions of the GroupWise MTA:

- ♦ GroupWise 5.5
- ♦ GroupWise 5.5 Enhancement Pack
- ♦ GroupWise 6.x
- ♦ GroupWise 7
- ♦ GroupWise 8

Versions of the MTA prior to version 5.5 do not support dynamic Internet links.

3.2 Installing the GroupWise Internet Agent

Before configuring your GroupWise system to use dynamic Internet links, you need to make sure that the GroupWise Internet Agent has been installed. Dynamic Internet links require your GroupWise system to use Internet-style addressing, which is only available if you've installed the Internet Agent and created one or more Internet domains for your GroupWise system.

The only requirement is that the Internet Agent be installed so that an Internet Agent object is created in Novell eDirectory. The Internet Agent does not actually need to be configured correctly or running. However, if there are GroupWise systems that you need to connect to but cannot do so through dynamic Internet links, you can use the Internet Agent to connect to those systems while using dynamic Internet links to connect to supported GroupWise systems.

For information about installing the Internet Agent, see [“Installing the GroupWise Internet Agent”](#) in the *GroupWise 8 Installation Guide*.

3.3 Setting Up Internet-Style Addressing

Dynamic Internet links require your GroupWise system to be configured to use Internet-style addressing (*user@hostname*) rather than standard GroupWise addressing (*userID.post_office.domain*). If you have not enabled Internet-style addressing and defined at least one Internet domain for your GroupWise system, see [“Configuring Internet Addressing”](#) in the *GroupWise 8 Administration Guide*.

The Internet domains you establish when setting up Internet-style addressing (for example, *novell.com*, *groupwise.novell.com*, and *support.novell.com*) are the key to enabling dynamic Internet links. Each MTA that will receive messages must be defined in DNS and associated with the Internet domain (or domains) that it will receive messages for. This allows MTAs in other GroupWise systems to route messages that contain your Internet domain names to the appropriate MTAs in your system.

3.4 Adding MTA Resource Records to DNS

In order for your GroupWise system to receive messages from another GroupWise system via a dynamic Internet link, you need to create a DNS resource record for at least one of your MTAs. The resource record enables the MTA's address, along with the Internet domain names associated with it, to be broadcast throughout the Internet.

You need to create the following resource records in DNS:

- ♦ An address ("A") record that maps the MTA server's host name to its IP address.
- ♦ A service ("SRV") record or a text ("TXT") record that maps the Internet domain name to the host name or IP address assigned to the MTA's server.

You can use your tool of choice to modify DNS. The following sections explain the information required and provide sample records.

- ♦ [Section 3.4.1, “Creating the Address \(“A”\) Record,”](#) on page 19
- ♦ [Section 3.4.2, “Creating the Service \(“SRV”\) or Text \(“TXT”\) Record,”](#) on page 19

3.4.1 Creating the Address ("A") Record

You can create an "A" record to map your MTA server's fully-qualified host name to its IP address. Doing so enables you to use the server's fully-qualified host name in the service ("SRV") or text ("TXT") record rather than the IP address. The "A" record is required if you plan to use a "SRV" record.

The following text shows sample "A" records.

```
;
; Address ("A") records
;
localhost          IN A 172.0.0.1
corp.serv.novl     IN A 172.16.5.18
gwdev.serv.novl   IN A 172.16.5.19
gwsup.serv.novl   IN A 172.16.5.20
```

Host Name (column 1): Use the host name assigned to the MTA's server. In the above example, corp, gwdev, and gwsupport are the host names assigned to three MTA servers.

Class (column 2): Use IN to represent the Internet.

Type (column 3): Use A to specify an address record.

IP Address (column 4): Use the IP address assigned to the MTA's server.

3.4.2 Creating the Service ("SRV") or Text ("TXT") Record

You can use either service records or text records to map your Internet domain names to MTAs. The following text shows sample "SRV" and "TXT" records:

```
;
; Service ("SRV") records
;
gwmtcp.tcp.novell.com 172800 IN SRV 1 0 7100 corp.serv.novl
gwmtcp.tcp.groupwise          IN SRV 1 1 7100 corp.serv.novl
gwmtcp.tcp.groupwise          IN SRV 1 2 7100 gwdev.serv.novl
gwmtcp.tcp.support 172800     IN SRV 1 0 7100 gwsup.serv.novl
gwmtcp.tcp.support 172800     IN SRV 2 0 7100 corp.serv.novl

;
; Text ("TXT") records
;
gwmtcp.tcp.novell.com 172800 IN TXT "1 0 7100 corp.serv.novl"
gwmtcp.tcp.groupwise          IN TXT "1 1 7100 corp.serv.novl"
gwmtcp.tcp.groupwise          IN TXT "1 2 7100 gwdev.serv.novl"
gwmtcp.tcp.support 172800     IN TXT "1 0 7100 gwsup.serv.novl"
gwmtcp.tcp.support 172800     IN TXT "2 0 7100 corp.serv.novl"
```

Service.Protocol.Name (column 1): The service must be specified as gwmtcp. The protocol must be specified as tcp. The name corresponds to the Internet domain name you want associated with the MTA. In the above sample, novell.com, groupwise.novell.com, and support.novell.com are the Internet domain names defined in GroupWise.

Time to Live (column 2): TTL (time to live) is the amount of time the record is cached in memory so it doesn't need to be looked up again. TTL is specified in seconds. In the above sample, 172800 represents 2 days. If you don't specify a TTL, the record is not cached.

Class (column 3): Enter IN to represent the Internet.

Type (column 4): Enter SRV to specify a service record. Enter TXT to specify a text record.

Priority (column 5): If an Internet domain name is associated with two different MTAs, the host with the lowest value is always contacted first. For example, a host with priority 1 is contacted before a host with priority 2. If two records with the same Internet domain name have the same priority, the weight number is used. In the above example, the two `groupwise.novell.com` records have the same priority, so the weight would be used.

Weight (column 6): The weight number specifies how to allocate connections among hosts with equal priorities. In the `groupwise.novell.com` record above, the `corp.serv.novl` host and the `gwdev.serv.novl` host have equal priorities, but the `corp.serv.novl` host has a weight of 1 and the `gwdev.serv.novl` host has a weight of 2. This means that 1 out of 3 times the `corp.serv.novl` host would be contacted first, and 2 out of 3 times, the `gwdev.serv.novl` host would be contacted first.

Port (column 7): The port number specifies the TCP port on which the MTA listens for incoming messages. The default port number for the MTA is 7100.

Host (column 8): The host specifies the fully-qualified host name or IP address of the MTA's server. For a service record, you must specify the host name. For a text record, you can specify either the server's host name or IP address. If you use a host name, it must be mapped to an IP address through an DNS "A" record. In the above example, `corp.serv.novl`, `gwdev.serv.novl`, and `gwsup.serv.novl` are all host names that are mapped to IP addresses through "A" records in DNS.

3.5 Configuring the MTA's Server for DNS Lookups

In order for an MTA in your GroupWise system to use dynamic Internet links to send messages, you must make sure the MTA's server is properly configured for DNS lookups. Basic configuration information is provided below. Consult your DNS documentation for more detailed information about configuring a server for DNS lookups.

- [Section 3.5.1, "Configuring a NetWare 6.5 Server for DNS Lookups," on page 20](#)
- [Section 3.5.2, "Configuring Windows Server 2003/2008 for DNS Lookups," on page 20](#)

3.5.1 Configuring a NetWare 6.5 Server for DNS Lookups

On a NetWare server, you need to have a `resolv.cfg` file in the `sys:\etc` directory that defines the DNS name server for that NetWare server. The `resolv.cfg` file would look similar to the following, based on a `novell.com` domain:

```
domain novell.com
nameserver 172.16.5.18
```

Consult your NetWare documentation for more detailed information about configuring a NetWare server for DNS lookups.

3.5.2 Configuring Windows Server 2003/2008 for DNS Lookups

On the Windows* Server 2003/2008:

- 1 Click the *Start menu > Control Panel > Network Connections > Local Area Connection*.
- 2 In the Local Area Connection dialog box, click *Properties* to display the Local Area Connection Properties dialog box.
- 3 In the list on the *General* tab, select *Internet Protocol (TCP/IP)*, then click *Properties* to display the Internet Protocol (TCP/IP) Properties dialog box.

- 4 Click *Advanced* to display the Advanced TCP/IP Settings dialog box.
- 5 Click the *DNS* tab, then make sure the IP address of at least one DNS name server is listed in the *DNS Server Addresses* list, then click *OK*.

Consult your DNS documentation for more detailed information about configuring a Windows workstation or server for DNS lookups.

3.6 Enabling MTAs to Perform DNS Lookups

After you have performed the necessary configuration to enable an MTA's server to allow DNS lookups (see [Section 3.5, "Configuring the MTA's Server for DNS Lookups,"](#) on page 20), you must configure the MTA to perform DNS lookups.

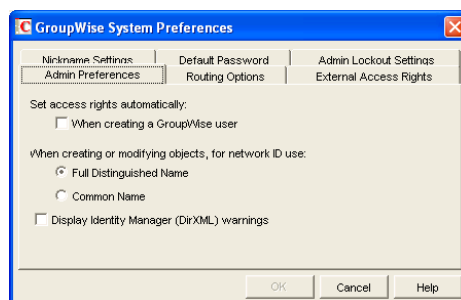
By default, your GroupWise system is configured not to allow MTAs to perform DNS lookups. You can retain the system default of no DNS lookups, then enable DNS lookups for individual MTAs. Or you can enable DNS lookups for all MTAs in your GroupWise system, then selectively disable DNS lookups for individual MTAs.

- ♦ [Section 3.6.1, "Enabling DNS Lookups for All MTAs,"](#) on page 21
- ♦ [Section 3.6.2, "Enabling/Disabling DNS Lookups for Individual MTAs,"](#) on page 22

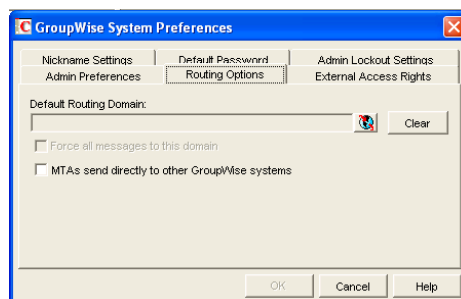
3.6.1 Enabling DNS Lookups for All MTAs

To configure your GroupWise system so all MTAs perform DNS lookups (provided their servers are enabled for DNS lookups):

- 1 In ConsoleOne, click the *Tools menu > GroupWise System Operations > System Preferences* to display the GroupWise System Preferences dialog box.



- 2 Click the *Routing Options* tab.



- 3 Enable the *Allow MTAs to Send Directly to Other GroupWise Systems* option

If the option is dimmed, you have not defined an Internet domain yet. See “[Configuring Internet Addressing](#)” in “[Internet Agent](#)” in the *GroupWise 8 Administration Guide*.

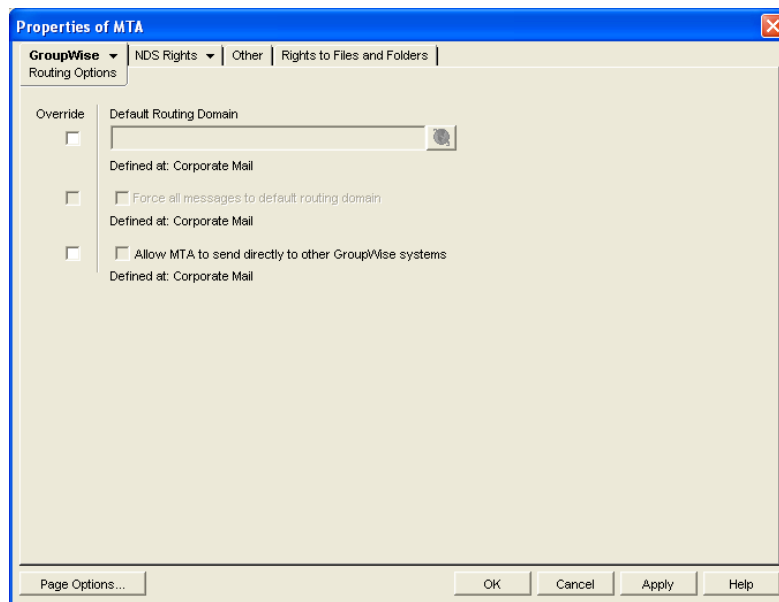
- 4 Click *OK*.

3.6.2 Enabling/Disabling DNS Lookups for Individual MTAs

If you’ve used the GroupWise System Preferences to enable all MTAs to perform DNS lookups in order to send messages directly to other GroupWise systems (see “[Enabling DNS Lookups for All MTAs](#)” on page 21), you can disable DNS lookups for individual MTAs.

If you haven’t used the GroupWise System Preferences to enable all MTAs to perform DNS lookups, you can enable DNS lookups for individual MTAs.

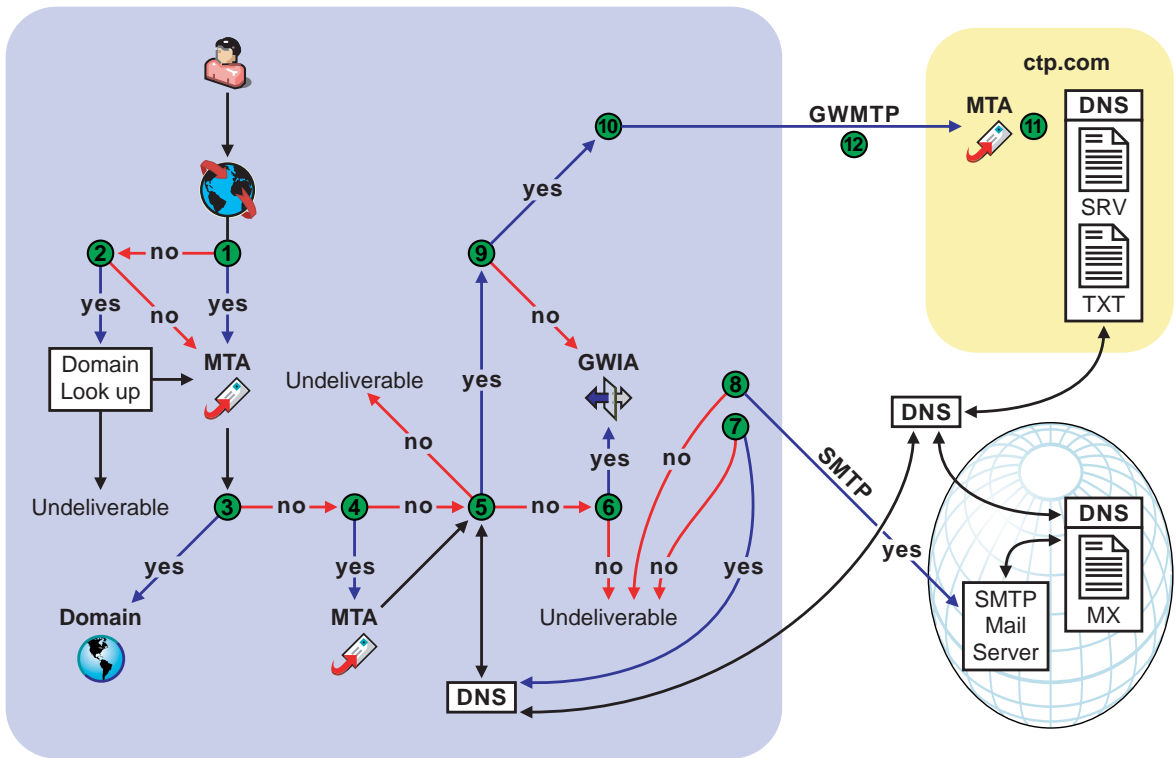
- 1 In ConsoleOne, right-click the MTA object, then click *Properties*.
- 2 Click *GroupWise > Routing Options* to display the Routing Options page.



- 3 Select the *Override* box to the left of the *Allow MTA to Send Directly to Other GroupWise Systems* option.
- 4 Select or deselect *Allow MTA to Send Directly to Other GroupWise Systems* as needed for this MTA.
- 5 Click *OK*.

3.7 Understanding Dynamic Internet Links

The following diagram illustrates the basic process of establishing a dynamic Internet link between GroupWise systems.



3.7.1 Stage 1: GroupWise Client in the Sending System

The GroupWise client parses the address by breaking it down into parts and attempting to map it to the *userID.post_office.domain* syntax. When the parsing is complete, the client looks in its own system address book and asks: "Does the parsed address match any listed in the system address book?"

The address can be typed by the user or obtained from the system address book.

- If Yes: The GroupWise client sends this "internal" message to the MTA to be queued for delivery.
- If No: The GroupWise client attempts to resolve the address further. Go to [Stage 2](#).

3.7.2 Stage 2: GroupWise Client in the Sending System

The GroupWise client checks the Internet domain addressing element listed after an @ sign in the address syntax and asks: "Is this Internet domain defined in my GroupWise system (that is, is it internal)?" If there is no Internet domain element at this point, the message is undeliverable.

- If Yes: The client looks at the address to determine if all parts are present. If they are present, it attempts to find a domain element in the address and resolve the address for local delivery. If a domain element cannot be found, the message is undeliverable.
- If No: The client recognizes the Internet domain as external to its system and queues the message to the MTA. Go to [Stage 3](#).

3.7.3 Stage 3: GroupWise MTA in the Sending System

The GroupWise MTA asks: “Does the Internet domain in this address match any Internet domain defined in the local GroupWise system?”

- ♦ If Yes: The GroupWise MTA recognizes that the Internet domain is internal and routes it to the internal domain.
- ♦ If No: The GroupWise MTA cannot find a matching Internet domain in its system. The GroupWise MTA attempts to find a resource to help it route the message. Go to [Stage 4](#).

3.7.4 Stage 4: GroupWise MTA in the Sending System

The GroupWise MTA checks its system and asks: “Has a route been defined to an alternate MTA configured for Internet domain service?”

- ♦ If Yes: All messages with an external Internet domain are routed to a designated MTA. Go to [Stage 5](#).
- ♦ If No: The local MTA handles messages with an external Internet domain in the address. Go to [Stage 5](#).

3.7.5 Stage 5: GroupWise MTA in the Sending System

The GroupWise MTA asks: “Is this system set up to support DNS lookups?”

- ♦ If Yes: The GroupWise MTA checks DNS. Go to [Stage 9](#).
- ♦ If No: The GroupWise MTA attempts to find another way to connect to the Internet domain. Go to [Stage 6](#).

3.7.6 Stage 6: GroupWise MTA in the Sending System

The MTA checks the system for capability to establish SMTP links and asks: “Does this system have a designated GroupWise Internet Agent?”

- ♦ If Yes: Go to [Stage 7](#).
- ♦ If No: The message is undeliverable.

3.7.7 Stage 7: GroupWise Internet Agent in the Sending System

The MTA passes the message to the designated Internet Agent in this GroupWise system. The Internet Agent checks DNS and asks: “Does DNS have a mail exchange record (MX) for this other system that I can use to establish an SMTP link?”

- ♦ If Yes: The Internet Agent does a DNS lookup for an MX record. Go to [Stage 8](#).
- ♦ If No: The message is undeliverable.

3.7.8 Stage 8: GroupWise Internet Agent in the Sending System

The designated Internet Agent establishes an SMTP link with the Internet domain in the address, converts the GroupWise message to SMTP format, and sends the message to the other messaging system through the SMTP Internet connection. No further information about the message is returned to the sender unless the addressee (or the addressee’s mail server) replies.

3.7.9 Stage 9: GroupWise MTA in the Sending System

The MTA performs a DNS lookup at the DNS name server by asking: “Does DNS have an SRV or TXT resource record associated with this Internet domain name?”

- ♦ If Yes: DNS returns either a SRV or TXT resource record and returns it to the MTA. Go to [Stage 10](#).
- ♦ If No: The GroupWise MTA does not find any resource record. Go to [Stage 7](#).

3.7.10 Stage 10: GroupWise MTA in the Sending System

The MTA reads the name-to-TCP/IP address mappings listed in the resource record for the other GroupWise system’s MTAs, chooses a domain to connect to based on a priority system established in the resource record, and initiates a GroupWise Message Transport Protocol (GWMTP) connection procedure with an MTA in the other system (sending to its port and address). Go to [Stage 11](#).

3.7.11 Stage 11: GroupWise MTA in the Receiving System

The receiving MTA recognizes the sender’s attempt to connect, then completes the GWMTP connection with the sending MTA. Go to [Stage 12](#).

3.7.12 Stage 12: Both GroupWise MTAs

The message is sent unaltered over the GWMTP connection between the two GroupWise MTAs.

4 Using Direct Links

When you connect two domains in different GroupWise systems through direct links (mapped drive, UNC path, or TCP/IP connection), both systems remain external to each other, meaning that they must be administered separately. However, you can exchange information (domains, post office, users, resources, and distribution lists) so that the two systems look like one system to your GroupWise users.

The following sections provide information to help you connect two systems via direct links:

- ♦ [Section 4.1, “Overview,” on page 27](#)
- ♦ [Section 4.2, “Creating an External Domain,” on page 28](#)
- ♦ [Section 4.3, “Linking to the External Domain,” on page 29](#)
- ♦ [Section 4.4, “Checking the Link Status of the External Domain,” on page 30](#)
- ♦ [Section 4.5, “Sending Messages Between Systems,” on page 30](#)
- ♦ [Section 4.6, “Exchanging Information Between Systems,” on page 31](#)
- ♦ [Section 4.7, “Message Flow Between External Domains,” on page 31](#)

4.1 Overview

For the purpose of the following discussion, GroupWise System 1 and GroupWise System 2 represent two separate GroupWise systems.

A direct link requires an MTA in GroupWise System 1 to have access via a mapped drive or UNC path to a domain directory in GroupWise System 2, or to have a TCP/IP connection to a domain’s MTA in GroupWise System 2. Likewise, an MTA in GroupWise System 2 must have the same type of access to GroupWise System 1.

To create a direct link between GroupWise System 1 and GroupWise System 2, you would do the following:

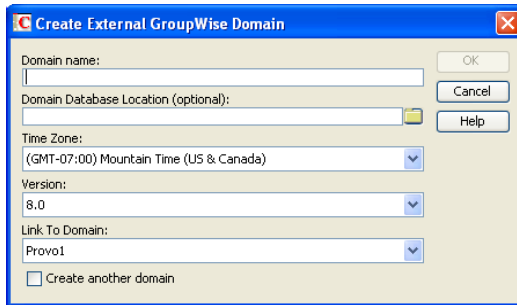
- ♦ In GroupWise System 1, define one domain from GroupWise System 2 as an external domain and then configure a direct link from a domain in GroupWise System 1 to the external domain. This allows GroupWise System 1 to deliver messages to GroupWise System 2.
- ♦ In GroupWise System 2, define one domain from GroupWise System 1 as an external domain and then configure a direct link from a domain in GroupWise System 2 to the external domain. This allows GroupWise System 2 to deliver messages to GroupWise System 1.
- ♦ After you’ve connected the two systems, users can send messages to the other system by entering the recipients’ full addresses (*userID.post_office.domain* or *user@host*). If desired, you can simplify addressing by exchanging information between systems, which causes user information to be displayed in the Address Book. The easiest way to exchange information is to enable the External System Synchronization feature in both systems. When enabled, this synchronization constantly updates the Address Books in both systems so that local users can more easily address messages to and access information about the users in the external system. If you don’t want to enable the External System Synchronization feature, you can manually

exchange information. For information about External System Synchronization, see “[External System Synchronization](#)” in “[GroupWise System Operations](#)” in “[System](#)” in the *GroupWise 8 Administration Guide*.

4.2 Creating an External Domain

The first step in connecting two GroupWise systems via a direct link is to create an external domain in each GroupWise system. The external domain represents a domain in the other GroupWise system and provides the medium through which you define the link to the other system.

- 1 In ConsoleOne, right-click GroupWise System (in the left-pane), click *New > External Domain* to display the Create External GroupWise Domain dialog box.



- 2 Fill in the following fields:

Domain Name: Enter the name of the domain as it is defined in the external GroupWise system.

Domain Database Location (Optional): This is an optional field. If you select the location of the domain database (wpdomain.db) you are connecting to, GroupWise automatically establishes a direct link to the domain, using a UNC path as the link protocol.

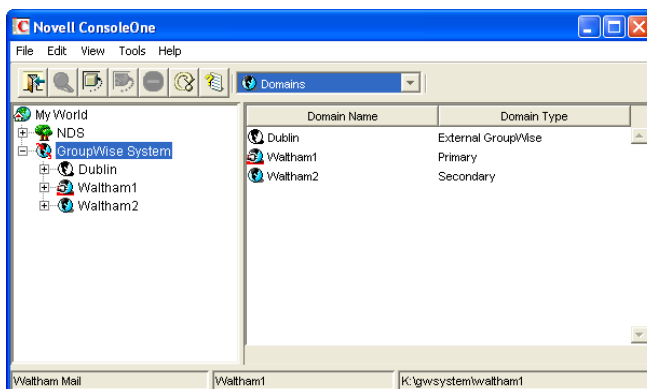
Time Zone: Select the time zone where the domain is physically located.

Version: Select the domain’s GroupWise version. The domain’s version is determined by its MTA version. The options are 4.x, 5.x, 6, 6.5, 7, 7.0.1, and 8.

Link to Domain: Select the domain in your system that you want to link to the external domain. By default, all messages sent to the external GroupWise system are routed to this domain. Your domain’s MTA then routes the messages to the external domain.

- 3 Click *OK* to create the external domain.

The external domain is added to your GroupWise system and is visible in the GroupWise View. In the following example, Dublin is the external domain.



- 4 Repeat [Step 1](#) through [Step 3](#) to define an external domain in the second GroupWise system. If you do not have administrative rights to that system, you need to coordinate with that GroupWise system's administrator.
- 5 Continue with the next section, [Linking to the External Domain](#).

4.3 Linking to the External Domain

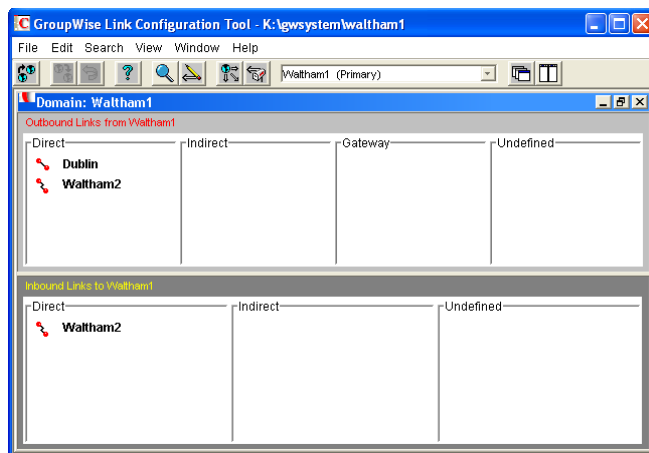
After you define a domain from the other GroupWise system as an external domain in your system, you need to make sure that your system's domains have the appropriate links to the external domain.

One domain in your system needs to have a direct link (mapped drive, UNC path, or TCP/IP) to the external domain. By default, this is the domain you entered in the Link to Domain field when creating the external domain (see [Section 4.2, "Creating an External Domain,"](#) on page 28).

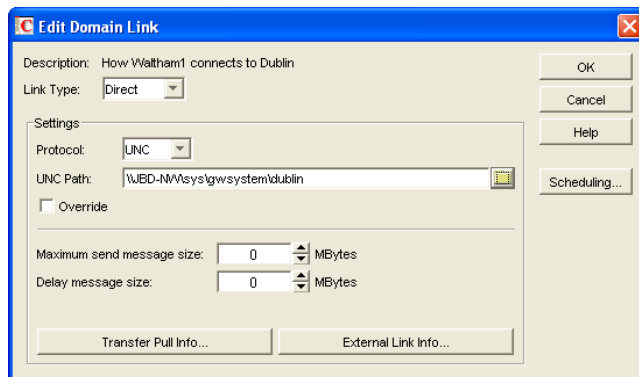
All other domains in your system then have indirect links (through the direct link domain) to the external domain. These links are configured automatically when the external domain was created.

To make sure your links are set up correctly:

- 1 In ConsoleOne, right-click the domain that has the direct link to the external domain, then click *GroupWise Utilities > Link Configuration* to display the Link Configuration tool.



- 2 In the Outbound Links list, double-click the external domain to display the Edit Domain Link dialog box.



- 3 Check the link configuration to make sure that the link type is *Direct*.

- 4 Select the link protocol (*UNC, Mapped, or TCP/IP*), then fill in the information required for the selected protocol.

For more information about link types and protocols, see “[Managing the Links between Domains and Post Offices](#)” in “[Domains](#)” in the *GroupWise 8 Administration Guide*.

- 5 Click *OK* to save your changes.

The external domain is displayed in the *Direct* column of the *Outbound Links* list to show that the current domain is using a direct link to the external domain.

By default, the rest of the domains in your system should have an indirect link to the external domain. To verify this for a domain:

- 6 In the list of domains on the *Link Configuration* utility’s toolbar, select the domain whose link you want to check, then verify that the external domain is displayed in the *Indirect* column of the *Outbound Links* list.
- 7 After verifying your domain links, repeat [Step 1](#) through [Step 6](#) in the second GroupWise system to establish the links to the first GroupWise system. If you do not have administrative rights to that system, you need to coordinate with that GroupWise system’s administrator.
- 8 Continue with [Checking the Link Status of the External Domain](#).

4.4 Checking the Link Status of the External Domain

The GroupWise MTA has monitoring capabilities that let you determine whether the domains in your system are properly linked to the external domain. When you look at the MTA’s operation screen, you should see the external domain added to the domain count in the *Status* box.

If the link to the external domain is closed, the MTA should be logging and displaying the reasons under its *Configuration Status* function. The most common reason that a direct link is closed is that the MTA cannot attach to the server or volume. There can be various reasons for a failure to attach. Make sure the server where the closed domain is located is not down. If you are using a mapped drive or UNC path for the direct link protocol, the NetWare MTA startup file must have valid */user* and */password* switches to connect to the other system. If you are using the Windows MTA, verify the UNC path or drive mapping to the closed domain.

If you are using a TCP/IP connection as the direct link protocol, the MTAs on both systems must be properly configured with the IP addresses and port numbers for the defined TCP/IP links.

For more information about link protocols, see “[Managing the Links between Domains and Post Offices](#)” in “[Domains](#)” in the *GroupWise 8 Administration Guide*.

4.5 Sending Messages Between Systems

After you establish links between a domain in your GroupWise system and a domain in an external GroupWise system, the MTA in your system and an MTA in the other system can route messages to the respective external systems as long as the message is addressed with a fully-qualified GroupWise address:

```
userID.post_office.domain or user@host
```

To simplify addressing for your GroupWise users, you can exchange information between the two systems. This enables users in your GroupWise system to use the *Address Book* when selecting recipients from the other system. For information, continue with [Exchanging Information Between Systems](#).

4.6 Exchanging Information Between Systems

Exchanging information between two GroupWise systems enables users in either system to use the Address Book when addressing messages to users in the other system. To exchange information, you can choose from the following methods:

External System Synchronization: You can use the External System Synchronization feature to automatically exchange domain, post office, user, resource, and distribution list information between the two systems. After the initial exchange of information, any information that changes in one system is automatically propagated to the other system in order to synchronize the information in that system. This is the recommended method for exchanging information between two systems. For information about setting up synchronization between two external systems, see “[External System Synchronization](#)” in “[GroupWise System Operations](#)” in “[System](#)” in the *GroupWise 8 Administration Guide*.

Manual Creation of Information: You can manually create the other systems’ objects (domains, post offices, users, resources, and distribution lists) as external objects in your GroupWise system. When doing so, the names of your external objects need to exactly match the names of the objects as defined in their system. Domains in your system link to the external domains indirectly through the first external domain you created (this is the external domain that one of your system’s domains has a direct link to). The advantage to this method is that you can choose which of the other system’s domains, post offices, users, resources, and distribution lists you want included in your system. The disadvantage is that there is a great amount of administrative overhead involved in creating all the objects and, after the objects are created, no automatic synchronization takes place so updates must be made manually.

4.7 Message Flow Between External Domains

Because a link to an external domain is really just a way of defining a link between a domain on your local GroupWise system and a domain on another GroupWise system, the flow of messages is identical to the flow of messages between any two GroupWise domains. For more information about message flows between domains, choose the type of link that you want to know more about in “[Message Delivery to a Different Domain](#)” in the *GroupWise 8 Troubleshooting 3: Message Flow and Directory Structure*.

5 Using Gateway Links

When you can't use dynamic Internet links (see [Chapter 3, "Using Dynamic Internet Links,"](#) on page 17) or direct links (see [Chapter 4, "Using Direct Links,"](#) on page 27) to connect GroupWise systems that are located on different networks, you can use GroupWise gateways to connect the systems. An MTA in the sending GroupWise system transfers outgoing messages to the gateway, which passes the messages to a gateway in the receiving system. The receiving gateway transfers the messages to an MTA, which then routes the messages to the appropriate post offices for delivery.

The following sections present summaries of the gateway options for connecting GroupWise systems on different networks.

- ♦ [Section 5.1, "Connecting Systems Through the Internet,"](#) on page 33
- ♦ [Section 5.2, "Connecting Systems Through an Asynchronous Phone Line,"](#) on page 33
- ♦ [Section 5.3, "Connecting Systems Through an X.25 Line,"](#) on page 34
- ♦ [Section 5.4, "Connecting GroupWise Systems Through Other E-Mail Systems,"](#) on page 34

GroupWise 4.1 gateways work with GroupWise 4.1, 5.x, 6.x., 7, and 8. GroupWise 5.x gateways work with GroupWise 5.x, 6.x, 7, and 8. For the most current GroupWise gateway product information, contact your local [Novell office](http://www.novell.com) (<http://www.novell.com>).

5.1 Connecting Systems Through the Internet

The Internet now links thousands of networks and workstations throughout the world. GroupWise messages can pass over the Internet from one GroupWise system to another.

You can use the Internet Agent to connect your GroupWise system to the Internet and to connect to other GroupWise systems through the Internet.

For instructions about installing the Internet Agent in a GroupWise 8 system, see "[Installing the GroupWise Internet Agent](#)" in the *GroupWise 8 Installation Guide*.

For instructions about connecting GroupWise systems using the Internet Agent, see "[Connecting GroupWise Systems and Domains Using the Internet Agent](#)" in "[Internet Agent](#)" in the *GroupWise 8 Administration Guide*.

5.2 Connecting Systems Through an Asynchronous Phone Line

Another common way to connect GroupWise systems on different networks is across phone lines, either through dedicated lines or by using modems for more occasional access. The GroupWise Async Gateway provides this capability. For more information, see the *GroupWise Async Gateway Guide* at the [GroupWise Gateways Documentation Web site](http://www.novell.com/documentation/gwgateways) (<http://www.novell.com/documentation/gwgateways>).

5.3 Connecting Systems Through an X.25 Line

X.25 lines can also be used to connect GroupWise systems on different networks. The GroupWise X.25 gateway provides this capability. For more information, see the *GroupWise X.25 Gateway Guide* at the [GroupWise Gateways Documentation Web site \(http://www.novell.com/documentation/gwgateways\)](http://www.novell.com/documentation/gwgateways).

5.4 Connecting GroupWise Systems Through Other E-Mail Systems

Several GroupWise gateways allow GroupWise messages to pass through other e-mail systems with no loss of GroupWise functionality. This setup is termed “passthrough” or “tunneled” messaging. GroupWise messages are encapsulated into the format of the other e-mail system and sent to the GroupWise system on the other end. No GroupWise functionality is lost. This is a convenience when the other e-mail system is already configured to connect sites where GroupWise is also in use.

The gateways that can be used for passthrough messaging include:

- ♦ GroupWise 5.x/6.x Internet Agent
- ♦ GroupWise 4.1/5.0/5.1 SMTP/MIME Gateway
- ♦ GroupWise Gateway for Microsoft* Mail
- ♦ GroupWise Gateway for Lotus* Notes*
- ♦ GroupWise Gateway for Lotus cc:Mail*
- ♦ GroupWise Gateway for OfficeVision/VM*
- ♦ GroupWise X.400 Gateway
- ♦ GroupWise SNADS Gateway

For information about these gateways, see the [GroupWise Gateway Documentation Web site \(http://www.novell.com/documentation/gwgateways\)](http://www.novell.com/documentation/gwgateways).

6 Synchronizing External GroupWise Systems

The External System Synchronization feature lets you automatically synchronize information between your system and an external GroupWise system connected to your system (for information about connecting GroupWise systems, see [“Connecting to Other GroupWise Systems” on page 9](#)). This simplifies message addressing by enabling your users to select the other system’s users from the Address Book. Otherwise, your users are required to enter the recipient’s full address (*userID.post_office.domain* or *user@host*).

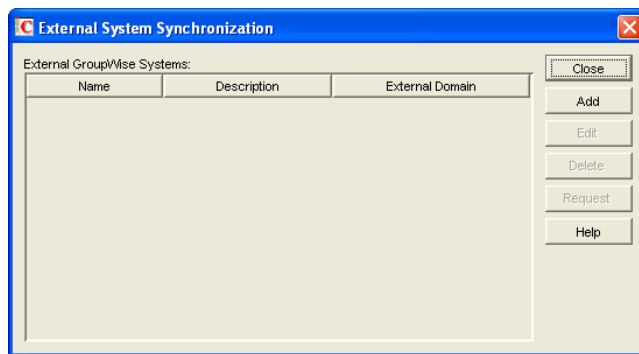
IMPORTANT: The External System Synchronization feature exists in GroupWise 5.x, 6.x, 7, and 8. Therefore, you can use it to synchronize information between 5.x, 6.x, 7, and 8 systems. You cannot use it to synchronize information with GroupWise 4.x or 3.x systems.

External System Synchronization lets you control what information (domains, post offices, users, resources, and distribution lists) you send to the external system and what information you want to accept from the external system. Any user, resource, and distribution list information you receive from the external GroupWise system is displayed in the system Address Book.

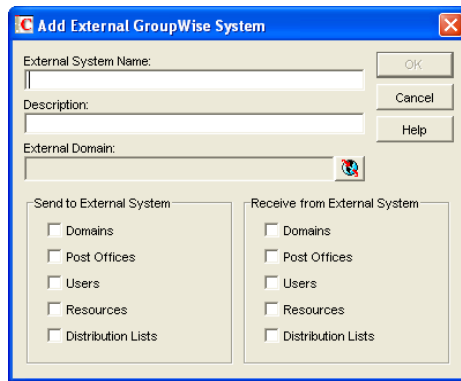
External synchronization must be set up in both GroupWise systems before it can work properly.

To set up synchronization so that all future Address Book changes are propagated to external GroupWise systems:

- 1 In ConsoleOne, click *Tools > GroupWise System Operations > External System Synchronization* to display the External System Synchronization dialog box.



- 2 Click *Add* to display the Add External GroupWise System dialog box.



3 Fill in the following fields:

External System Name: Specify the name of the external GroupWise system. The name needs to match the actual name of that GroupWise system.

Description: If desired, enter a description for the external system. This is an optional field.

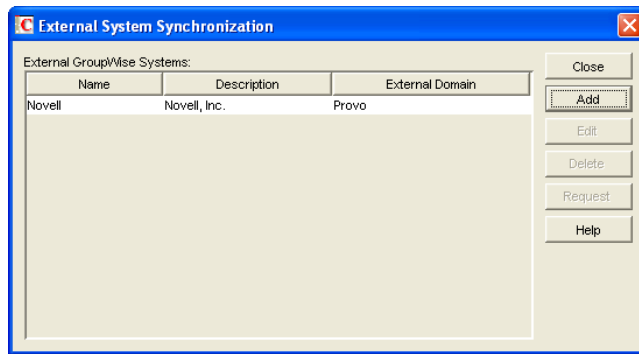
External Domain: Click the External Domain (globe) icon to display a list of the external domains defined in your GroupWise system. Select the external domain that belongs to the external GroupWise system with which you are synchronizing information.

Send to External System: Select the information (Domains, Post Offices, Users, Resources, and Distribution Lists) you want sent to the external GroupWise system during synchronization. Only the information that your system owns is sent. For example, if you've connected to another GroupWise system and its information is contained in your GroupWise system as external domains, post offices, users, resources, and distribution lists, that information is not sent.

A user, resource, or distribution list from your system is added to the external GroupWise system only if its domain and post office exist in the external system (as an external domain and post office in that system). Because of this, you should make sure that the Domains and Post Offices options are selected as well as the desired Users, Resources, and Distribution Lists options. After the initial synchronization takes place, the domains and post offices exist in the external system. You can then choose not to send domain and post office information. However, if you add domains or post offices or change the information for your existing domains and post offices, that information is not sent to the external system until you select Domains and Post Offices again.

Receive from External System: Select the information (Domains, Post Offices, Users, Resources, and Distribution Lists) you are willing to receive from the external GroupWise system. As with sending information, a user, resource, or distribution list is added to your system only if its domain and post office exist as an external domain and post office in your system. Therefore, you should make sure to select the Domains and Post Offices options for at least the initial synchronization.

4 Click *OK* to add the external GroupWise system to the list of external systems you are synchronizing information with.



5 Click *Close* to save your changes.

After External System Synchronization is configured in both GroupWise systems, the two systems exchange information. After the initial synchronization, any time domain, post office, user, resource, or distribution list information in one system changes, the new information is sent to the other system (provided that information is flagged to be sent).

|| Connecting to Non-GroupWise Messaging Systems

- ◆ [Chapter 7, "GroupWise Internet Agent," on page 41](#)
- ◆ [Chapter 8, "GroupWise Gateways," on page 43](#)

7 GroupWise Internet Agent

The preferred way to connect to non-GroupWise messaging systems is through the Internet.

GroupWise provides connectivity to the Internet through the GroupWise Internet Agent. The Internet Agent uses standard Internet protocols and formats. This means that messages can be sent to or received from any Internet-connected e-mail system that can handle MIME or RFC-822 formatted messages sent using the SMTP protocol.

The Internet Agent also supports POP3 and IMAP4, which means that POP3/IMAP4 clients can be used to access GroupWise mailboxes. In addition, the Internet Agent supports LDAP, which means that it can act as an LDAP server by providing LDAP queries of the GroupWise directory.

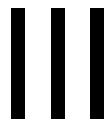
For information about installing the Internet Agent, see “[Installing the GroupWise Internet Agent](#)” in the *GroupWise 8 Installation Guide*.

For information about configuring and administering the Internet Agent, see “[Internet Agent](#)” in the *GroupWise 8 Administration Guide*.

8 GroupWise Gateways

GroupWise provides gateways to enable you to connect directly to a variety of messaging systems, message transport protocols, and communication standards. For example, GroupWise provides gateways for the Microsoft Exchange and Lotus Notes messaging systems as well as the X.400 message transport protocol.

For GroupWise gateway documentation, see the [GroupWise Gateway Documentation Web site \(http://www.novell.com/documentation/gwgateways\)](http://www.novell.com/documentation/gwgateways).



Merging GroupWise Systems

- ♦ [Chapter 9, “Why Merge GroupWise Systems?”](#) on page 47
- ♦ [Chapter 10, “Planning the Merge,”](#) on page 49
- ♦ [Chapter 11, “Preparing for the Merge,”](#) on page 63
- ♦ [Chapter 12, “Merging the GroupWise Systems,”](#) on page 65

9 Why Merge GroupWise Systems?

If you are consolidating organizations or combining departments, you might want to merge two or more GroupWise 5.x, 6.x, 7, or 8 systems rather than connect them (see [“Connecting to Other GroupWise Systems”](#) on page 9).

WARNING: When merging systems, do not merge a domain from one system into another system if the merged domain is a newer version than the primary domain of its new system. For example, do not merge a GroupWise 8 domain into a GroupWise system whose primary domain is version 7. The primary domain in a GroupWise system must always be at or above the version level of all secondary domains in the system.

You can achieve the same GroupWise functionality for your users by merging systems or by connecting them. Therefore, the question of whether to merge GroupWise systems is mostly a matter of administration:

- ◆ If you want your entire GroupWise system configured so it can be administered by one administrator from any location without needing to change system connections and manage external objects, you should merge your systems.
- ◆ If you want your entire GroupWise system configured so it can be administered by any administrator from any location, and changing system connections and managing external objects are not issues, you do not need to merge the systems.
- ◆ If you want independent administrators for each GroupWise system, whether the systems are connected or not, you should not merge the systems.

If you want to merge a GroupWise 5.x, 6.x, 7, or 8 system into your GroupWise 8 system, continue with [Chapter 10, “Planning the Merge,”](#) on page 49.

If you do not want to merge the systems, but they are not connected and you would like to have them connected, see [“Connecting to Other GroupWise Systems”](#) on page 9.

10 Planning the Merge

Section 10.7, “Merge Planning Worksheet,” on page 56 lists all the information you need as you merge a GroupWise 5.x, 6.x, 7, or 8 system into your GroupWise 8 system.

- ♦ Section 10.1, “Understanding the Merge Process,” on page 49
- ♦ Section 10.2, “Planning Administrator Rights,” on page 51
- ♦ Section 10.3, “Determining Which GroupWise Objects Are No Longer In Use,” on page 51
- ♦ Section 10.4, “Planning the Location of the Domain Database Backup Directories,” on page 52
- ♦ Section 10.5, “Planning GroupWise System Connections,” on page 52
- ♦ Section 10.6, “Planning to Merge Additional GroupWise Systems,” on page 55
- ♦ Section 10.7, “Merge Planning Worksheet,” on page 56

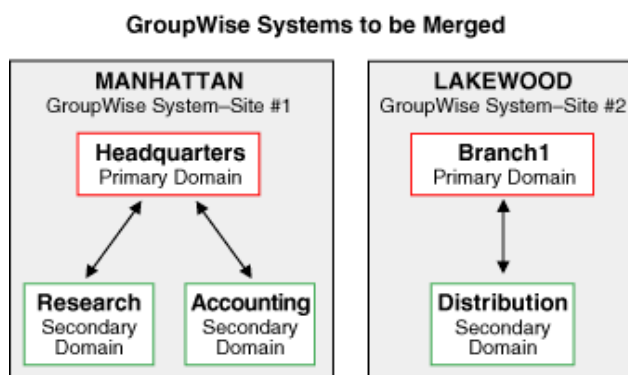
When you have completed the following planning tasks and filled out the worksheet, you are ready to continue with Chapter 11, “Preparing for the Merge,” on page 63.

10.1 Understanding the Merge Process

A merge is performed between the primary domains of two GroupWise systems. Merging one system (the primary domain and all of its subordinate objects) with another consolidates the two systems, resulting in only one primary domain and one or more new secondary domains and their subordinate objects.

To avoid confusion, we will hereafter refer to the system whose primary domain you’ll retain as Site #1 and the other system as Site #2.

Figure 10-1 GroupWise Systems to be Merged



In the above illustration, we have two GroupWise systems that are not connected. We have designated the Manhattan GroupWise system as Site #1 and the Lakewood GroupWise system as Site #2. The Lakewood system will be merged into the Manhattan system.

If you have three or more systems to be merged, you must merge the systems one after the other. We will not use references to a Site #3, a Site #4, and so on. Instead, after the first and second systems have been merged, the third system will become Site #2 as you go through the merge planning, preparation, and step sections again. Therefore, each system will take its turn at being Site #2 while the first system being merged to will continue to be Site #1.

The merge process permanently affects a database. Before merging, you create backups of all `wpdomain.db` files for the primary and secondary domains that will be affected by the merge. This allows you to recover from any mistakes. For more information, see [Section 10.4, “Planning the Location of the Domain Database Backup Directories,”](#) on page 52.

During the merge, you must shut down any GroupWise Message Transfer Agents (MTAs) that can write to the domain databases. Even though you shut down the MTAs during the merge, users can continue to use GroupWise because the Post Office Agents (POAs) do not need to be shut down. The following GroupWise agent functions are not available until the MTAs are running again:

- ◆ Transferring e-mail messages between post offices
- ◆ Logging statistics
- ◆ Updating domain database files
- ◆ Replicating database information
- ◆ Synchronizing GroupWise with Novell eDirectory
- ◆ Repairing domain databases

Print a copy of the [Merge Planning Worksheet](#).

WORKSHEET

Under [Item 23: GroupWise MTAs for Sites #1 and #2](#), list the GroupWise MTAs for both sites that you need to shut down during the merge.

The items in the worksheet are listed in the order you enter them when running the GroupWise merge utility. This planning section does not follow the same order as the worksheet, but all worksheet items are covered.

If Site #2 has a primary domain and some secondary domains, you first release all of the secondary domains in Site #2 to become primary domains in their own GroupWise systems. Then you merge each Site #2 primary domain one at a time with the primary domain of Site #1. In other words, you run the merge process once for each domain in Site #2. For more information, see [Section 12.5, “Releasing Site #2 Secondary Domains,”](#) on page 68.

One link (of any type) must exist between a domain in Site #1 and the domain being merged in Site #2. The merge utility automatically creates indirect links between the Site #1 secondary domains and the Site #2 domain being merged. You have the option to accept these indirect links and configure them later (if necessary), or you can create direct links between all domains in Site #1 and the domain being merged from Site #2 before beginning the merge. All links must be completed and correct before you run the MTAs after merging the systems. For more information, see [“Linking the Domains”](#) on page 54.

WORKSHEET

Under [Item 16: Site #1 Name](#), enter the name of the GroupWise system to designate as Site #1.

Under [Item 7: Site #2 Name](#), enter the name of the GroupWise system to designate as Site #2. If you are merging three or more GroupWise systems, you will select a different system as Site #2 each time you reuse this planning section and rerun the merge process.

Under [Item 14: Site #1 Primary Domain](#), enter the exact name of your Site #1 primary domain. Under [Item 5: Site #2 Primary Domain](#), enter the exact name of your Site #2 primary domain.

Under [Item 18: Site #1 Secondary Domains](#), enter the exact names of your Site #1 secondary domains.

Under [Item 10: Site #2 Secondary Domains](#), enter the exact names of your Site #2 secondary domains.

Under [Item 17: Site #1 Time Zone](#), enter the time zone for Site #1.

Under [Item 9: Site #2 Time Zone](#), enter the time zone for Site #2.

10.2 Planning Administrator Rights

To perform the merge process, the Site #1 administrator must have exclusive access to the Site #2 databases. This access can be to either the Site #2 domain databases if the two GroupWise systems are connected, or to copies of the Site #2 domain databases if the systems are not connected. Exclusive access is created when the GroupWise MTAs are shut down and the administrator has admin-equivalent rights to the two systems.

See "[GroupWise Administrator Rights](#)" in "[Security Administration](#)" in the *GroupWise 8 Administration Guide* for information on setting up administrator rights.

WORKSHEET

If the administrator performing the merge has the necessary rights, under [Item 2: Does Administrator Performing the Merge Have Admin-Equivalent Rights to Both Systems?](#), select *Yes* or *No*. If the administrator does not currently have the required rights, make sure that the required rights are obtained before starting the merge.

10.3 Determining Which GroupWise Objects Are No Longer In Use

You can save merging time and end up with a less cluttered GroupWise system if you determine which GroupWise objects in Site #2 are no longer used and remove them. You can also use this opportunity to delete any eDirectory user objects that are no longer used.

WORKSHEET

Under [Item 3: GroupWise Objects to Delete](#), list each eDirectory user, GroupWise user account, resource, and distribution list that you want to delete.

10.4 Planning the Location of the Domain Database Backup Directories

Because the domain database is critical to the performance of GroupWise, you should always create a backup copy of the domain databases you will be manipulating. This ensures that an original version of each database is available should you make a mistake, or if any problems should arise during the merge process. You can always return to the former configurations while you correct any problems encountered.

WORKSHEET

Under [Item 15: Paths to Site #1 wpdomain.dbs](#), enter paths to the Site #1 `wpdomain.db` files.

Under [Item 6: Paths to Site #2 wpdomain.dbs](#), enter paths to the Site #2 `wpdomain.db` files.

Under [Item 24: Paths to Site #1 Backup Directories](#), enter the path to the backup directory you will create to hold the backup copy of the Site #1 domain database.

Under [Item 25: Paths to Site #2 Backup Directories](#), enter the path to each backup directory you will create to hold the backup copy of a Site #2 domain database. Every domain database has the same name, so plan to either temporarily rename the database copies or to create separate directories for them.

10.5 Planning GroupWise System Connections

The merge cannot occur unless Site #1 is able to make a direct connection to the Site #2 domain being merged. You should have direct system connections established between Site #1 and Site #2 so that you can open the databases. If you are able to connect to Site #2 and have appropriate rights, you can create external domains, release secondary domains, and merge domains in the GroupWise View.

If you cannot open the domain databases to be merged (you do not have the necessary rights and/or the systems cannot be connected), you need to use copies of each Site #2 domain database for making the direct connections.

So that the database copies will accurately mirror the live databases, you and the other GroupWise administrator involved with the merge should avoid making any administrative changes in GroupWise after you have made the copies of the Site #2 databases. GroupWise clients can function in the two systems while you run the merge against the copy.

If you are the Site #1 administrator, you create directories for the Site #2 database copies (both the original Site #2 primary domain and the newly-released Site #2 domain databases). During the merge process, you target each of these directories to merge that domain to the Site #1 system. When the merge process is completed, you copy the merged database copies over the live databases.

If you want to merge systems that are connected through a GroupWise gateway, you should treat the systems as if they are not connected. This is because the merge requires use of external domains.

WORKSHEET

If the GroupWise systems you are merging are already connected, select Yes under [Item 4: Systems Connected?](#); otherwise, select No.

If you selected No for worksheet item 4 and the systems cannot be connected, enter the path to each temporary directory you must create to hold the copies of the Site #2 wpdomain.db files under [Item 21: Paths to Site #2 Temporary Holding Directories](#).

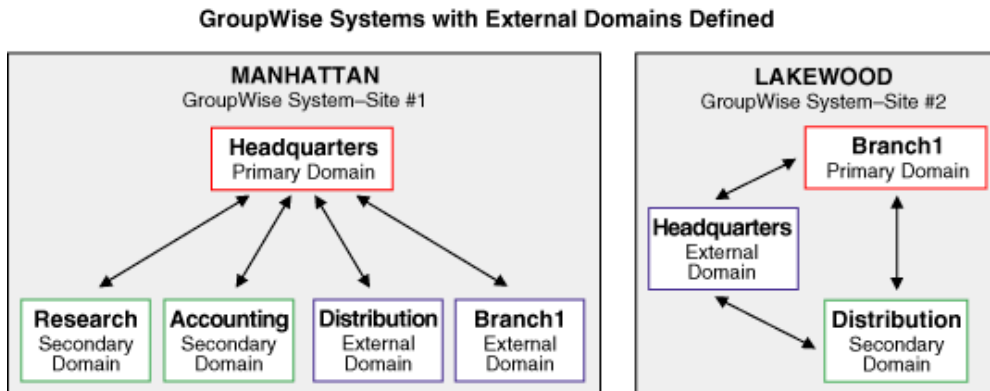
If you selected No for worksheet item 4 and the temporary directories you create for the Site #2 domain copies are on another tree, select Yes under [Item 22: Temporary Directories for Site #2 on Another Tree?](#); otherwise, select No. If you select Yes, you will need to be logged in to the other tree during the merge.

10.5.1 External Domains

If the GroupWise systems you are merging are not already connected through external domains, you need to create external domains to connect the systems. An external domain, which you must create manually, provides a reference in your GroupWise system from which you can add a link to another GroupWise system.

You need external domains in each system with names that are identical to the domain names of the site with which the merge is planned. You also need a link between the two systems.

Figure 10-2 GroupWise Systems with External Domains Defined



In the above illustration, we have created external domains in each system to represent where we need direct connections for performing the merge.

You must have rights to Site #2 (that is, you must be able to authenticate to its servers) so that you can establish a system connection using the GroupWise View. If you are able to connect to Site #2, you can create external domains in that system. For more information, see [Section 10.2, “Planning Administrator Rights,”](#) on page 51.

Creating a Site #2 external domain in Site #1 does not add an object to your eDirectory tree; however, you can see the external domain object in the GroupWise View. A reference to the external domain is added to your own system’s databases so that it can use the defined link to route messages to users represented in the external domain.

WORKSHEET

Under [Item 13: Site #1 External Domain Names](#), enter the exact name of each Site #1 domain you want to create as an external domain in Site #2. Refer to worksheet items 14 and 18 for the Site #1 domain names.

Under [Item 19: Descriptions for Site #1 External Domains](#), enter descriptions for the Site #1 external domains.

Under [Item 8: Site #2 External Domain Names](#), enter the exact name of each Site #2 domain you must create as an external domain in Site #1. Refer to worksheet items 5 and 10 for the Site #2 domain names.

Under [Item 11: Descriptions for Site #2 External Domains](#), enter descriptions for the Site #2 external domains.

10.5.2 Linking the Domains

It is important that the inbound links for the external domains you create in Site #2 and Site #1 are established and correct for both systems. These links are used to transfer messages, including administrative messages, from one GroupWise system to another.

Each domain object in eDirectory includes a link configuration attribute that is used to control access to link information. If you have appropriate eDirectory rights, you can view the domain links with the Link Configuration tool available in ConsoleOne.

You can create links (of any type) between the domain being merged from Site #2 and the secondary domains in Site #1 before running the merge. However, this is not necessary to perform the merge. Instead, you can allow the merge utility to automatically create the indirect links between the secondary domains of Site #1 and the domain being merged from Site #2, and you can later optimize your system by reconfiguring the indirect links created by the merge utility.

WORKSHEET

If you want the merge utility to automatically create indirect links between the Site #2 domain being merged and the secondary domains in Site #1, select *Yes* under [Item 12: Allow Indirect Links to Site #1 Secondary Domains?](#); otherwise, select *No* so that you can configure the links before performing the merge.

If you selected *Yes* for worksheet item 12, edit your domains list under [Item 13: Site #1 External Domain Names](#) to indicate which Site #1 domain will be linked to the Site #2 domain being merged.

See [“Managing the Links between Domains and Post Offices”](#) in [“Domains”](#) in the [GroupWise 8 Administration Guide](#) for information on setting up direct links between domains.

WORKSHEET

Under [Item 20: Link Configuration Fields](#), enter the information needed for the following link configuration fields for each direct link you will create:

Description: Indicate which domains are being directly linked.

Link Type: Select *Direct* as the type of link between the domains.

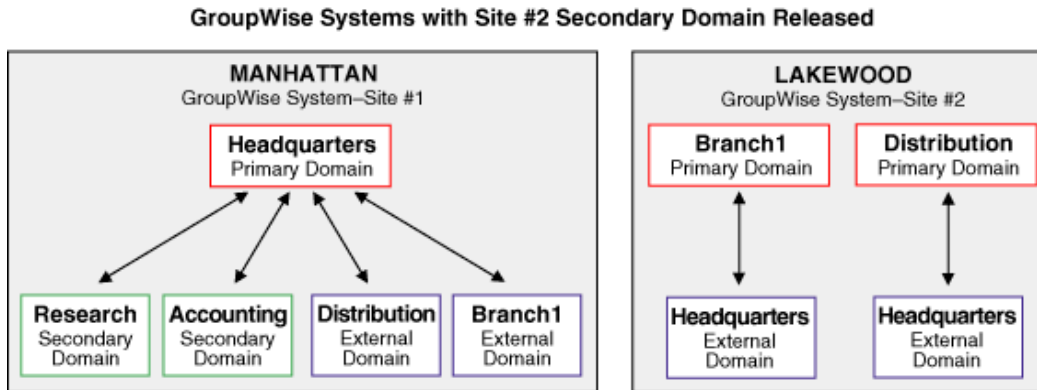
Settings - Protocol: Select *UNC* as the protocol for communication between the domains.

Settings - Path or UNC Path: Enter the UNC path to the domain being merged.

10.5.3 Releasing the Secondary Domains in Site #2

You will release GroupWise secondary domain databases in Site #2 before you merge them into Site #1. A released domain database is one that you disassociate from a primary domain. In effect, each released domain (which shows as an external domain for Site #1) is its own, independent system.

Figure 10-3 GroupWise Systems with Site #2 Secondary Domain Released



In the above illustration, the secondary domain in the Lakewood system has been released to become its own primary domain. Each primary domain in the Lakewood system maintains a direct connection with the Headquarters domain in Site #1 through the Headquarters external domain created earlier for the Lakewood system.

Releasing a secondary domain requires the system to use drive mappings or UNC paths to locate the domains to be released. If you have established a system connection to Site #2 through your network, you can release a Site #2 secondary domain in the GroupWise View. When you release a secondary domain, it becomes an external Site #2 domain and is considered a primary-level domain in its own single-domain system. The released (that is, external) domain can then be merged into Site #1 to become a secondary domain there.

If the systems are not connected (worksheet item 4), the Site #2 GroupWise administrator must have network access to the temporary holding directories where you copied the `wpdomain.db` files for the Site #2 primary and secondary domains. You need to establish a system connection to the temporary directory where you copied the Site #2 primary domain database before you can release a Site #2 secondary domain.

10.6 Planning to Merge Additional GroupWise Systems

If you have three or more systems to be merged, you must merge the systems one after the other. We will not use references to Site #3, Site #4, and so on. Instead, after the first and second systems have been merged, the third system will become Site #2 as you go through the merge planning, preparation, and step sections again. Therefore, each system will take its turn at being Site #2 while the first system being merged to will continue to be Site #1.

WORKSHEET

If you are merging three or more GroupWise systems, select **Yes** and continue in this section under [Item 1: Merging Three or More GroupWise Systems?](#); otherwise, select **No** and you are finished with your planning.

If you have three or more GroupWise systems to be merged, you can merge them in one session or at different times. In either case, you will be merging them one after the other with each additional system taking a turn at being Site #2. You need a separate worksheet for each additional system being merged.

Whether you merge the systems in one session or at different times, you can probably copy information specific to Site #1 to each additional worksheet, because most of that information should not be changed by a merge.

The merge process can be very lengthy when three or more systems are merged, especially if each system being merged has a number of secondary domains. For example, when you merge several systems, you select one as Site #1. This first system retains its primary domain, while the primary and secondary domains of the other systems all become secondary domains in Site #1. Also, all secondary domains in the other systems each need to be released before they can be merged. Because the merge process itself involves moving only one domain at a time, you could be running the release and merge programs many times—once for each primary and secondary domain in the second system, then the third system, and so on.

10.6.1 Merging in One Session

If you plan to merge all of your GroupWise systems in one session, you should fill out all of the worksheets before running the merge utility. Therefore, as you fill out the worksheets for each system, keep in mind the changes in structure for Site #1 that will occur after each system is merged with it.

Print another copy of the [Merge Planning Worksheet](#) for each additional GroupWise system to be merged.

WORKSHEET

Do the following on each additional worksheet:

Under [Item 16: Site #1 Name](#), enter the name of the GroupWise system to designate as Site #1.

Under [Item 7: Site #2 Name](#), enter the name of the GroupWise system to designate as Site #2. If you are merging three or more GroupWise systems, you will select a different system as Site #2 each time you reuse this planning section and rerun the merge process.

Under [Item 23: GroupWise MTAs for Sites #1 and #2](#), list the GroupWise MTAs that you need to shut down during the merge. Because you should be including all domains in the previously combined systems, your list should be longer for each subsequent worksheet.

10.6.2 Merging at Different Times

You might not want to merge several systems in one session. The amount of time required depends on how many secondary domains exist in each additional system. This is because you must release and merge each secondary domain one at a time.

If you plan to merge your GroupWise systems at different times, you can fill in each additional worksheet when you are ready to plan the merge for its system using this section.

10.7 Merge Planning Worksheet

The GroupWise Merge Domain Advisor helps you merge GroupWise systems. You need to prepare for the merge by planning the location and structure of your domain databases.

Table 10-1 Merge Planning Worksheet

Item	Example	Explanation
1) Merging Three or More GroupWise Systems? ♦ Yes ♦ No	No	If you will be merging three or more GroupWise systems, whether in one session or at different times, select <i>Yes</i> ; otherwise, select <i>No</i> . For more information, see Section 10.1, "Understanding the Merge Process," on page 49.
2) Does Administrator Performing the Merge Have Admin-Equivalent Rights to Both Systems? ♦ Yes ♦ No	Yes	If the administrator does not have the necessary rights to perform the merge, select <i>No</i> ; otherwise, select <i>Yes</i> . The merge utility depends on the rights of the person logged in for access to the applicable databases. For more information, see Section 10.2, "Planning Administrator Rights," on page 51.
3) GroupWise Objects to Delete:	None	List any eDirectory user objects, GroupWise user accounts, resources, or distribution lists that are no longer in use. Enter "none" if you have nothing to delete. For more information, see Section 10.3, "Determining Which GroupWise Objects Are No Longer In Use," on page 51.
4) Systems Connected? ♦ Yes ♦ No	No	If the GroupWise systems you are merging are not connected, select <i>No</i> ; otherwise, select <i>Yes</i> . For more information, see Section 10.5, "Planning GroupWise System Connections," on page 52.
5) Site #2 Primary Domain:	Branch1	List the name of the primary domain for Site #2. For more information, see Section 10.1, "Understanding the Merge Process," on page 49.
6) Paths to Site #2 wdomain.db Files:	\\gw\sys\branch1 \\gw\sys\distrib	To merge a domain from Site #2, you must supply the path to the wdomain.db file for the domain being merged. If there are multiple domains in Site #2, list the paths for each wdomain.db file. For more information, see Section 10.4, "Planning the Location of the Domain Database Backup Directories," on page 52.

Item	Example	Explanation
7) Site #2 Name:	Lakewood	<p>Identify the GroupWise system you want to merge into Site #1. The primary domain of this system will become a secondary domain in Site #1. Each secondary domain in Site #2 will be released so it can be merged as a primary domain.</p> <p>For more information, see Section 10.1, "Understanding the Merge Process," on page 49.</p>
8) Site #2 External Domain Names:	Headquarters	<p>There must be at least one direct link between a domain in Site #1 and each domain being merged from Site #2. Specify the exact name of the external domains you will create in Site #2. Each external domain you create in Site #2 must correspond to a domain of the same name in Site #1.</p> <p>If you selected <i>Yes</i> for worksheet item 12, you only need to create one external domain in Site #2 because indirect links are automatically created between the other domains in Site #1 and the domain being merged from Site #2.</p> <p>If you selected <i>No</i> for worksheet item 12, you need to create direct links from all primary and secondary domains in Site #1 to Site #2, and from all primary and secondary domains in Site #2 to Site #1.</p> <p>For more information, see "External Domains" on page 53.</p>
9) Site #2 Time Zone:	Central	<p>Enter the local time zone for Site #2.</p> <p>For more information, see Section 10.1, "Understanding the Merge Process," on page 49.</p>
10) Site #2 Secondary Domains:	Distribution	<p>List the names of all secondary domains in Site #2. One at a time, each secondary domain in Site #2 will be released to become an independent primary domain on its own to be merged into Site #1.</p> <p>For more information, see Section 10.1, "Understanding the Merge Process," on page 49.</p>
11) Descriptions for Site #2 External Domains:	Headquarters - primary	<p>Enter an informative description for each Site #2 external domain.</p> <p>For more information, see "External Domains" on page 53.</p>

Item	Example	Explanation
12) Allow Indirect Links to Site #1 Secondary Domains? ♦ Yes ♦ No	Yes	Select <i>Yes</i> and the merge utility automatically creates indirect links between the secondary domains in Site #1 and the domain being merged from Site #2. You can configure links later, if necessary. Select <i>No</i> if you want to configure all of your links before performing the merge. For more information, see “Linking the Domains” on page 54.
13) Site #1 External Domain Names:	Branch1 Distribution	You must have an external domain in Site #1 for each primary and secondary domain in Site #2. Specify the exact name of each external domain you will create in Site #1 that corresponds to a domain of the same name in Site #2. For more information, see “External Domains” on page 53.
14) Site #1 Primary Domain:	Headquarters	List the name of the primary domain for Site #1. For more information, see Section 10.1, “Understanding the Merge Process,” on page 49.
15) Paths to Site #1 Files: wpdomain.db	\\gw\sys\headq	If you selected <i>Yes</i> for worksheet item 12, you will make a direct link only to the primary domain of Site #1. List the path to its wpdomain.db file. If you selected <i>No</i> for worksheet item 12, you will need to make direct links to all Site #1 secondary domains. List each of the paths to their wpdomain.db files. For more information, see Section 10.4, “Planning the Location of the Domain Database Backup Directories,” on page 52.
16) Site #1 Name:	Manhattan	Identify the GroupWise system you want to be Site #1. This system will retain its primary domain status. For more information, see Section 10.1, “Understanding the Merge Process,” on page 49.
17) Site #1 Time Zone:	Eastern	Enter the local time zone for Site #1. For more information, see Section 10.1, “Understanding the Merge Process,” on page 49.

Item	Example	Explanation
18) Site #1 Secondary Domains:	None	<p>If you selected <i>No</i> for worksheet item 12, you will be creating direct links between the secondary domains in Site #1 and the domains being merged from Site #2. List the Site #1 secondary domains.</p> <p>If you selected <i>Yes</i> for worksheet item 12, enter "none" because indirect links are automatically made by the merge utility to secondary domains in Site #1.</p> <p>For more information, see Section 10.1, "Understanding the Merge Process," on page 49.</p>
19) Descriptions for Site #1 External Domains:	Branch1 - primary Distribution - secondary	<p>Enter an informative description for each Site #1 external domain.</p> <p>For more information, see "External Domains" on page 53.</p>
20) Link Configuration Fields:	Headquarters Direct ♦ Description: UNC ♦ Link Type: ♦ Settings - Protocol: \\gw\sys\headq ♦ Settings: Path or UNC Path: (This example is only for a Headquarters link. You will need to list this information for each link.)	<p>Fill in the fields once for each link being set up.</p> <p>For more information, see "Linking the Domains" on page 54.</p>
21) Paths to Site #2 Temporary Holding Directories:	\\gw\sys\hold\branch1 \\gw\sys\hold\distrib	<p>If the systems you are merging cannot be connected, and you are the administrator for Site #1, specify the paths for each temporary holding directory you will create to hold the domain databases of Site #2. Name the directories so that you can keep track of which domain the database file belongs to.</p> <p>For more information, see Section 10.5, "Planning GroupWise System Connections," on page 52.</p>
22) Are Temporary Holding Directories for Site #2 on Another Tree?	No	<p>If your temporary holding directories are located on a tree different than the one Site #1 is on, select <i>Yes</i>; otherwise, select <i>No</i>.</p> <p>If you select <i>Yes</i>, you will need to be logged in to the other tree during the merge.</p> <p>For more information, see Section 10.5, "Planning GroupWise System Connections," on page 52.</p>

Item	Example	Explanation
23) GroupWise MTAs for Sites #1 and #2:	MTA.Headquarters.Manhattan MTA.Research.Manhattan MTA.Accounting.Manhattan MTA.Branch1.Lakewood MTA.Distribution.Lakewood	<p>The MTAs must be shut down during the merge to prevent changes from being made to the domain databases. The POAs can be left running so that users can use GroupWise during the merge. Enter the applicable MTAs for both systems.</p> <p>For more information, see Section 10.1, "Understanding the Merge Process," on page 49.</p>
24) Paths to Site #1 Backup Directories:	\\gw\sys\bak\research \\gw\sys\bak\headq \\gw\sys\bak\account	<p>To protect against losing information in case of error, you need a backup of each Site #1 domain database. You should place each <code>wpdomain.db</code> file in a separate backup directory. Enter the paths for each directory.</p> <p>For more information, see Section 10.4, "Planning the Location of the Domain Database Backup Directories," on page 52.</p>
25) Paths to Site #2 Backup Directories:	\\gw\sys\bak\distrib \\gw\sys\bak\branch1	<p>To protect against losing information in case of error, you need a backup of each Site #2 domain database. You should place each <code>wpdomain.db</code> file in a separate backup directory. Enter the paths for each directory.</p> <p>For more information, see Section 10.4, "Planning the Location of the Domain Database Backup Directories," on page 52.</p>

11 Preparing for the Merge

Before you merge two GroupWise systems, you need to prepare the GroupWise systems. [Section 10.7, “Merge Planning Worksheet,” on page 56](#) contains information you need to prepare for the merge.

Do the following tasks to prepare the GroupWise domains for merging.

- ♦ [Section 11.1, “Setting Up Administrator Rights,” on page 63](#)
- ♦ [Section 11.2, “Deleting Unused GroupWise Objects,” on page 63](#)
- ♦ [Section 11.3, “Verifying That UNC Paths Are Correct,” on page 63](#)
- ♦ [Section 11.4, “Resolving Pending Operations,” on page 64](#)

11.1 Setting Up Administrator Rights

Make sure the administrator performing the move is an admin-equivalent in Novell eDirectory ([worksheet item 2](#)).

Make sure the administrator also has access to the GroupWise systems being merged.

See “[GroupWise Administrator Rights](#)” in “[Security Administration](#)” the *GroupWise 8 Administration Guide* for information on setting up administrator rights.

11.2 Deleting Unused GroupWise Objects

Use ConsoleOne and the GroupWise View to delete any eDirectory User objects, GroupWise user accounts, and GroupWise distributions lists that are no longer in use ([worksheet item 3](#)).

11.3 Verifying That UNC Paths Are Correct

Merging GroupWise systems requires the use of correct UNC paths. The merge brings over all UNC paths defined for Site #2.

Even if you have already defined UNC paths, verify that they are accurate. See the following worksheet items for the paths you will be using:

- ♦ [Item 6: Paths to Site #2 wpsdomain.db Files](#)
- ♦ [Item 15: Paths to Site #1 wpsdomain.db Files](#)
- ♦ [Item 21: Paths to Site #2 Temporary Holding Directories](#)
- ♦ [Item 24: Paths to Site #1 Backup Directories](#)
- ♦ [Item 25: Paths to Site #2 Backup Directories](#)

11.4 Resolving Pending Operations

When you release secondary domains in Site #2, you are asked to resolve any pending operations. You can speed up the release operations by doing this now.

- 1 In ConsoleOne, make sure you are connected to the GroupWise system for Site #2, then click *Tools > GroupWise System Operations > Pending Operations*.
- 2 Note any pending operations and resolve them.

12 Merging the GroupWise Systems

The information in this section helps you to merge Site #2 into Site #1. The [Merge Planning Worksheet](#) contains all the information the merge process prompts you for. (If you have several worksheets because you are merging three or more systems, you will only use one worksheet each time you follow the steps in this section.) Some tasks apply only to systems that cannot be directly connected. If you selected *Yes* for [worksheet item 1](#), be sure you are using the worksheet for the GroupWise system being merged.

Do the following tasks to merge Site #2 into Site #1.

- [Section 12.1, "Creating External Domains for Both Systems,"](#) on page 65
- [Section 12.2, "Configuring Links Between Site #2 Domains and Site #1 Secondary Domains,"](#) on page 67
- [Section 12.3, "Checking Links to External Domains for Both Systems,"](#) on page 67
- [Section 12.4, "Creating Temporary Holding Directories,"](#) on page 68
- [Section 12.5, "Releasing Site #2 Secondary Domains,"](#) on page 68
- [Section 12.6, "Sending Site #2 Databases to the Site #1 Administrator,"](#) on page 69
- [Section 12.7, "Receiving Site #2 Databases at Site #1,"](#) on page 70
- [Section 12.8, "Merging a Site #2 Domain into Site #1,"](#) on page 70
- [Section 12.9, "Merging the Next GroupWise System,"](#) on page 71
- [Section 12.10, "Sending the Merged Site #2 Databases to Site #2,"](#) on page 71
- [Section 12.11, "Restarting the GroupWise Agents,"](#) on page 71
- [Section 12.12, "Testing the Merged System,"](#) on page 71

12.1 Creating External Domains for Both Systems

This section applies only if the systems you are merging are not already connected through external domains ([worksheet item 4](#)).

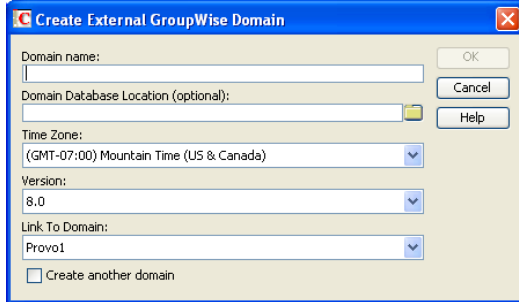
Both the Site #1 and Site #2 administrators must create an external domain to represent the domain structure in the corresponding system. In other words, if you are the Site #1 administrator, you will create Site #2 external domains in your system to represent the domains in Site #2. If you are the Site #2 administrator, you will create Site #1 external domains in your system to represent the domains in Site #1.

Refer to the appropriate section for instructions:

- [Section 12.1.1, "Creating Site #1 External Domains in Site #2,"](#) on page 66
- [Section 12.1.2, "Creating Site #2 External Domains in Site #1,"](#) on page 66

12.1.1 Creating Site #1 External Domains in Site #2

- 1 In ConsoleOne, make sure you are connected to the Site #2 GroupWise system ([worksheet item 7](#)).
- 2 Right-click *GroupWise System* in the GroupWise View, then click *New > External Domain* to display the Create External GroupWise Domain dialog box.



- 3 Fill in the fields:

Domain Name: Enter the name of the Site #1 domain you are connecting to ([worksheet item 8](#)). This creates the external domain on Site #2. Names are not case sensitive.

Domain Database Location: Select the path to the Site #1 domain database (`wpdomain.db`) you will link to. ConsoleOne interprets a mapped location as a UNC path ([worksheet item 6](#)).

Time Zone: Select the time zone where the Site #1 domain is physically located ([worksheet item 9](#)).

Version: Select the database version for the Site #1 domain. The version is determined by the domain's MTA version.

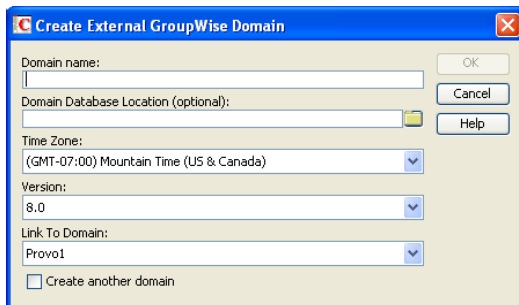
Link to Domain: Select the domain in Site #2 you want the external domain to link to. ConsoleOne creates a direct link to this domain ([worksheet item 5](#) and [worksheet item 10](#)).

- 4 Click *Create* to create the external domain and add it to the GroupWise View.
- 5 Repeat [Step 2](#) through [Step 4](#) for every Site #1 external domain you need to create ([worksheet item 12](#) and [worksheet item 13](#)).

12.1.2 Creating Site #2 External Domains in Site #1

You must also create a Site #2 external domain in Site #1.

- 1 In ConsoleOne, make sure you are connected to the Site #1 GroupWise system ([worksheet item 14](#) and [worksheet item 15](#)).
- 2 Right-click *GroupWise System* in the GroupWise View, then click *New > External Domain* to display the Create External GroupWise Domain dialog box.



3 Fill in the fields:

Domain Name: Enter the name of the Site #2 domain you are connecting to ([worksheet item 5](#) and [worksheet item 10](#)). Names are not case sensitive.

Domain Database Location: Select the path to the Site #2 domain database (`wpdomain.db`) you are connecting to. ConsoleOne interprets a mapped location as a UNC path ([worksheet item 15](#)).

Time Zone: Select the time zone where the external domain is physically located ([worksheet item 17](#)).

Version: Select the database version for the Site #2 domain. The version is determined by the domain's MTA version.

Link to Domain: Select the domain in your system you want the external domain linked to. The MTA for the Site #1 domain you specify will route messages to and from the external domain ([worksheet item 14](#) and [worksheet item 18](#)).

4 Click *Create* to create the external domain and add it to the GroupWise View.

5 Repeat [Step 2](#) through [Step 4](#) for every Site #2 external domain you need to create ([worksheet item 5](#) and [worksheet item 10](#)).

12.2 Configuring Links Between Site #2 Domains and Site #1 Secondary Domains

If you selected *No* under [worksheet item 12](#), configure the links between each Site #2 domain and all of the secondary domains in Site #1 ([worksheet item 13](#)).

See “[Managing the Links between Domains and Post Offices](#)” in “[Domains](#)” in the *GroupWise 8 Administration Guide* for information on setting up direct links between domains.

12.3 Checking Links to External Domains for Both Systems

The merge cannot be performed if there are broken or missing links. Therefore, you should check the links in Site #1 and check the links in Site #2.

Refer to the appropriate section for instructions:

- ♦ “[Checking Links to Site #1 External Domains in Site #2](#)” on page 67
- ♦ “[Checking Links to Site #2 External Domains in Site #1](#)” on page 68

12.3.1 Checking Links to Site #1 External Domains in Site #2

You use the Link Configuration tool to verify that each Site #1 primary domain or a Site #1 secondary domain has an inbound link from the Site #2 external domain.

- 1 In ConsoleOne, make sure you are connected to the Site #2 GroupWise system.
- 2 Click *Tools > GroupWise Utilities > Link Configuration* to launch the Link Configuration tool.
- 3 In the domain list, select the external domain ([worksheet item 13](#)) whose inbound links you want to check.
- 4 Check the Inbound Links window (displayed by default for an external domain) to make sure that a direct link icon labeled with a Site #2 secondary or primary domain name is displayed there ([worksheet item 8](#)).

An inbound link to the Site #1 external domain from a Site #2 domain is required for the merge to proceed.

- 5 If the link is incorrectly configured, double-click the Site #2 domain name to display the Edit Domain Link dialog box.
- 6 Edit the fields as necessary ([worksheet item 20](#)), then click *OK* to save your changes.

12.3.2 Checking Links to Site #2 External Domains in Site #1

You use the Link Configuration tool to verify that each Site #2 external domain has an inbound link from either the Site #1 primary domain or a Site #1 secondary domain.

- 1 In ConsoleOne, make sure you are connected to the Site #2 GroupWise system.
- 2 Click *Tools > GroupWise Utilities > Link Configuration* to launch the Link Configuration tool.
- 3 In the domain list, select the external domain ([worksheet item 8](#)) whose inbound links you want to check.
- 4 Check the Inbound Links window (displayed by default for an external domain) to make sure that a direct link icon labeled with a Site #1 secondary or primary domain name is displayed there ([worksheet item 14](#) and [worksheet item 18](#)).
- 5 If the link is incorrectly configured, double-click the Site #1 domain name to display the Edit Domain Link dialog box.
- 6 Edit the fields as necessary ([worksheet item 20](#)), then click *OK* to save the changes.

12.4 Creating Temporary Holding Directories

This section applies only if the systems you are merging cannot be directly connected and you must use temporary database copies ([worksheet item 4](#)).

You need to create temporary holding directories where you can place copies of the Site #2 `wpdomain.db` files for the primary and secondary domains ([worksheet item 8](#)).

- 1 For Site #2, create separate directories for the primary domain and each secondary domain.
You create these directories in Site #2 to accommodate releasing the secondary domains. Each `wpdomain.db` file must have its own temporary directory ([worksheet item 21](#)). Name the temporary directory so that you can keep track of which domain the database belongs to. One suggested strategy is to create a temporary directory and then create subdirectories in it that match the names of the primary and secondary domains.
- 2 Make a copy of each `wpdomain.db` file in its appropriate holding directory.
- 3 Make a copy of the `gwdom.dc` file from the `domain` subdirectory of your software distribution directory in each holding directory.

12.5 Releasing Site #2 Secondary Domains

- 1 In ConsoleOne, make sure you are connected to Site #2's primary domain ([worksheet item 5](#)).
- 2 In the GroupWise View, right-click the secondary domain you want to release ([worksheet item 8](#)), click *GroupWise Utilities > System Maintenance* to display the GroupWise System Maintenance dialog box.
- 3 Select *Release Secondary*, then click *Run* to launch the Release Domain Advisor.
- 4 In the Release Domain dialog box, click *Next*.

- 5 If the Rights Warning dialog box is displayed, make sure you have sufficient rights (see [Section 11.1, “Setting Up Administrator Rights,” on page 63](#)), then click *Next*.
- 6 Take care of any pending operations, then click *Next*.
- 7 In the Path to Domain dialog box, select the domain directory (if it is not already displayed), then click *Next*.
- 8 In the System Name dialog box, specify a name for the new GroupWise system that will be created for the released domain, then click *Next*.
- 9 In the Update eDirectory Objects dialog box, select *Yes* if you have access to the eDirectory tree in which the domain is located, then click *Next*.

or

If you don't have access to the domain's eDirectory tree, select *No*, then click *Next*. After you release the domain, you will need to send the released domain's database to someone who has access to the domain's eDirectory tree. He or she can then use the Graft GroupWise Objects utility to update the domain's objects in the eDirectory tree (see [“Graft GroupWise Objects”](#) in [“GroupWise Utilities”](#) in [“System”](#) in the *GroupWise 8 Administration Guide*).

- 10 If you have not already done so, shut down the primary domain's MTA and the MTA that services the domain you are releasing, then click *Next*.
- 11 In the Ready to Release dialog box, click *Release* to start the release process.

When the process is finished, the Domain Successfully Released dialog box is displayed.

- 12 Click *Done* to return to the GroupWise System Maintenance dialog box, then click *Close*.
The secondary domain has now been released to become its own GroupWise system. It is displayed as an external domain in Site #2.
- 13 Restart the MTAs in case you need to take care of any pending operations for the next domain you release.
- 14 Repeat [Step 2](#) through [Step 13](#) for every Site #2 secondary domain you want to release ([worksheet item 5](#) and [worksheet item 10](#)).

When you have released all of the Site #2 secondary domains, you are ready to proceed with merging the domains into Site #1. For more information, see [Section 12.8, “Merging a Site #2 Domain into Site #1,” on page 70](#).

However, if the systems you are merging cannot be directly connected, you must first do the tasks under [Section 12.6, “Sending Site #2 Databases to the Site #1 Administrator,” on page 69](#) and [Section 12.7, “Receiving Site #2 Databases at Site #1,” on page 70](#).

12.6 Sending Site #2 Databases to the Site #1 Administrator

This section applies only if the systems you are merging cannot be directly connected and you must use temporary database copies ([worksheet item 4](#)).

Because your systems cannot be directly connected, you must send the Site #2 databases (including released secondary domains) to Site #1.

- 1 Create temporary holding directories on portable media, such as a disk, removable drive, or tape, to match the names of the temporary holding directories you created in Site #2 ([worksheet item 21](#)).
- 2 If you are not the administrator for Site #1, make a record of the directory name for each database, indicating whether that database is a primary or secondary domain ([worksheet item 6](#)).

- 3 Copy the databases and `gwdom.dc` files into their temporary holding directories.
- 4 Send the portable media to the Site #1 administrator.

12.7 Receiving Site #2 Databases at Site #1

This section applies only if the systems you are merging cannot be directly connected and you must use temporary database copies ([worksheet item 4](#)).

- 1 If you created temporary holding directories to accommodate the Site #2 system databases, copy the files from the media to your server ([worksheet item 21](#)).
You will use these directories as the location for the merge of the Site #2 domains to Site #1.
- 2 Keep the portable media from Site #2 as an archival copy.
- 3 When you have copied all of the databases and `gwdom.dc` files to temporary directories, proceed with merging the domains into Site #1. For more information, see [Section 12.8, "Merging a Site #2 Domain into Site #1,"](#) on page 70.

12.8 Merging a Site #2 Domain into Site #1

- 1 In ConsoleOne, make sure you are connected to Site #1.
- 2 In the GroupWise View, right-click the Site #2 external domain that you want to merge into Site #1, then click *System Maintenance* ([worksheet item 5](#) and [worksheet item 10](#)).
- 3 Verify that *Merge External Domain* is selected, then click *Run* to start the Merge Domain Advisor.
- 4 In the Merge Domain into System dialog box, click *Next*.
- 5 If the Rights Warning dialog box is displayed, make sure you have sufficient rights (see [Section 11.1, "Setting Up Administrator Rights,"](#) on page 63), then click *Next*.
- 6 In the Path to Domain dialog box, specify the path to the directory containing the domain's database ([worksheet item 21](#)), then click *Next*.
- 7 In the Merge External Systems dialog box, click *Yes* to indicate that you want the Site #2 domain to include information about its defined external systems, then click *Next*.

This refers to systems, not domains. These are created for external synchronization.

This information includes the definition and links for Site #1.

- 8 In the Update eDirectory Objects dialog box, select *Yes* if you have access to the eDirectory tree in which the domain is located, then click *Next*.

or

If you don't have access to the domain's eDirectory tree, select *No*, then click *Next*. After you merge the domain, you need to send the merged domain's database to someone who has access to the domain's eDirectory tree. He or she can then use the Graft GroupWise Objects utility to update the domain's objects in the eDirectory tree (see "[Graft GroupWise Objects](#)" in "[GroupWise Utilities](#)" in "[System](#)" in the *GroupWise 8 Administration Guide*).

- 9 If you have not already done so, shut down the primary domain's MTA and the MTA that services the domain you are merging, then click *Next*.
- 10 In the Ready to Merge Domain dialog box, click *Merge* to begin the merging process.
When the process has completed, the Domain Successfully Merged dialog box is displayed.
- 11 Click *Done* to exit the Merge GroupWise Domains Advisor.

The merged Site #2 domain now appears as a secondary domain in Site #1.

- 12 Repeat [Step 2](#) through [Step 11](#) to merge any other external domains (that is, the secondary domains that you have released from Site #2) ([worksheet item 5](#) and [worksheet item 10](#)).

12.9 Merging the Next GroupWise System

If you selected *Yes* for [worksheet item 1](#), use the worksheet you completed for the next GroupWise system to be merged and begin with [Section 12.1, “Creating External Domains for Both Systems,”](#) on [page 65](#).

12.10 Sending the Merged Site #2 Databases to Site #2

This section applies only if the systems you are merging cannot be directly connected and you must use temporary database copies ([worksheet item 4](#)).

The merged Site #2 domains must be sent to Site #2 so that the post office databases can be rebuilt ([worksheet item 5](#) and [worksheet item 10](#)).

- 1 From Site #1, copy the merged Site #2 databases to the Site #2 domain directory.

12.11 Restarting the GroupWise Agents

Restart any MTAs and POAs that you shut down to complete the merge processes.

12.12 Testing the Merged System

You should test your merged Site #1 system to make sure it is operating correctly.

- 1 Search the Address Book for users who were in the old Site #2 to see if they are now being displayed for the newly-merged Site #1. Also search the Address Book for users who were in Site #1 before the merge to see if they are still being displayed.
- 2 Send a test message from the primary domain to the new secondary domains (merged from Site #2) to ensure that message routing is working correctly.
- 3 Check the `mrgemail.log` file in the primary domain directory to see if there were any e-mail address conflicts as a result of the merge.

For assistance with resolving e-mail address conflicts, see [“Managing User E-Mail Addresses”](#) in [“Users”](#) in the [GroupWise 8 Administration Guide](#).

- 4 Check the appropriateness of the current configuration of the newly merged Site #1 that have now taken on the configuration of the GroupWise system into which they were merged:

Configurations to review include:

- ◆ POA scheduled events
- ◆ Trusted applications
- ◆ LDAP servers
- ◆ Internet addressing and default Internet Agents
- ◆ Distribution lists
- ◆ Client options

- ◆ Proxy rights
- ◆ Shared folders
- ◆ Shared address books

After you are satisfied with the operation of the merged system, you can merge the next system by starting with [Chapter 10, “Planning the Merge,” on page 49](#). If you have already completed the planning worksheet for the next system to be merged, continue from [Section 12.1, “Creating External Domains for Both Systems,” on page 65](#).

A Documentation Updates

This section lists updates to the *GroupWise 8 Multi-System Administration Guide* that have been made since the initial release of GroupWise 8. The information helps you to keep current on documentation updates and, in some cases, software updates (such as a Support Pack release).

The information is grouped according to the date when the *GroupWise 8 Multi-System Administration Guide* was republished. Within each dated section, the updates are listed by the names of the main table of contents sections.

The *GroupWise 8 Multi-System Administration Guide* has been updated on the following dates:

- ♦ [Section A.1, "August 31 2009 \(GroupWise 8 SP1\)," on page 73](#)

A.1 August 31 2009 (GroupWise 8 SP1)

Location	Change
Connecting to Other GroupWise Systems	
Chapter 2, "Using External System Links," on page 15	Removed the incorrect information indicating that external system links enabled automatic Address Book synchronization.
Merging GroupWise Systems	
Section 12.12, "Testing the Merged System," on page 71	Explained the new <code>mrgeemail.log</code> file that helps resolve e-mail address conflicts that can result from a merge; listed aspects of GroupWise system configuration that are affected by the merge process.
