No one needs to tell you how important your company’s integrated messaging and collaboration system is to the users on the network you manage. You can judge the importance of this system for yourself by the speed with which users complain when the system goes down. When your company’s e-mail services—which are the cornerstone of your company’s integrated messaging and collaboration system—are unavailable, users probably start calling you within minutes.

In fact, when a company’s e-mail goes down for as few as “15 minutes, everybody [in the company] knows about it,” Howard Tayler, a product manager for Novell, states. Everybody knows about it because everybody uses e-mail as the primary means of communicating and collaborating with coworkers.

In contrast, Tayler says, “if the telephone system goes down for an hour and a half, nobody notices.” This statement may not be true in all cases, but think about how frequently—or infrequently—the average user reaches for his or her telephone. Users who once relied on telephone services now rely on e-mail services.

The services that comprise the top three messaging and collaboration systems (Novell GroupWise, Lotus Notes and Domino, and Microsoft Exchange) are—or will soon be—remarkably similar to one another. For example, the e-mail services in all three of these integrated messaging and collaboration systems—also called groupware systems—enable users to create, send, reply to, delete, and forward e-mail messages. These systems also include calendar and document management services that have similar features.

“We all have pretty much the same offering,” Tayler says, referring to the services and features included in GroupWise, Notes and Domino, and Exchange. In fact, these competing systems offer extensive services and features because Novell, Lotus, and Microsoft have been providing this software for quite some time. Consequently, Novell and its competitors have had time to enhance their products to provide many of the services and features that customers have requested.

Given the similarities between the top three integrated messaging and collaboration systems, how do you determine which system is best for your company? The answer to this question lies in the importance of this system to you and the users on your company’s network.

“Today, e-mail is mission critical,” Tayler reiterates. As a result, the software you choose to provide messaging and collaboration services should meet the following criteria:

- Availability
- Security
- Scalability

As you may expect, GroupWise 6, the latest version of Novell’s integrated messaging and collaboration system, meets these three criteria. Adding to an already impressive list of GroupWise features, GroupWise 6 includes new features that make it more available, more secure, and more scalable than previous versions of GroupWise.

TAKE GROUPWISE 6 FOR GRANTED

When someone says that a particular system is available, he or she could be talking about one of two kinds of availability: A system that supports clustering technology is called available—or highly available—because clustering ensures that the system is always up. On the other hand, a system that runs on a variety of network operating systems is available in the sense that you can access that system from many kinds of networks.

GroupWise 6 meets both definitions of available. Because GroupWise 6 supports NetWare Cluster Services 1.01 for NetWare 5.0, 5.1, and 6 (soon to be released), GroupWise 6 is highly available. In addition, GroupWise 6 runs on several operating systems and is therefore available across several kinds of networks. In other words, GroupWise 6 is an integrated messaging and collaboration system you can take for granted.

Rooted in Cross-Platform Support

As you may already know, the previous release of GroupWise—the GroupWise 5.5 Enhancement Pack—introduced support for Windows 2000 and NT. GroupWise 6 increases this support by enabling all GroupWise agents, including the GroupWise Internet agent, to run as Windows 2000 or NT services.

By supporting agents on Windows 2000 and NT, GroupWise 6 remains true to its cross-platform roots. As you probably know, early versions of GroupWise—which was initially...
called WordPerfect Office—supported Windows, Macintosh, and several types of UNIX. WordPerfect Office “was the first, I mean the first cross-platform integrated collaboration environment,” Taylor explains.

This cross-platform support also qualifies GroupWise 6 as Net services software, which is Novell’s term for software that runs on all leading operating systems. By Novell’s definition, Net services software also provides services across all types of networks, blurring the distinctions between these networks—including intranets, extranets, and the Internet. GroupWise 6 further solidifies its place in the category of Net services software by including intranets, extranets, and the Internet. GroupWise 6 further solidifies its place in the category of Net services software by including intranets, extranets, and the Internet. GroupWise 6 also provides services across all types of networks, blurring the distinctions between these networks—including intranets, extranets, and the Internet. GroupWise 6 further solidifies its place in the category of Net services software by including intranets, extranets, and the Internet. 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GroupWise 6 also provides services across all types of networks, blurring the distinctions between these networks—including intranets, extranets, and the Internet.

Look Ma! No Wires

GroupWise Wireless 1.1 is available in the United States and works with devices that support Wireless Application Protocol (WAP). These wireless devices—such as Internet-capable cellular telephones and personal digital assistants (PDAs)—must also include a microbrowser that supports Handheld Device Markup Language (HDML). For a list of cellular telephones that support GroupWise Wireless services, visit www.novell.com/products/wireless/supported_phones.html.) In addition, Novell recently released the beta version of GroupWise Wireless 1.2, which supports Web Clipping and Simple HTML. (Web Clipping is the language used by Palm devices, and Simple HTML is the language used by Windows CE devices. To download the beta version of GroupWise Wireless 1.2, visit http://support.novell.com/beta/public.)

Using GroupWise Wireless 1.1 and a supported wireless device, you can access a number of GroupWise services and features from any location that your wireless service provider supports. For example, you can access GroupWise e-mail and many of the e-mail features that are available through the GroupWise Universal Mailbox, including the Compose, Read, Forward, Reply, and Delete features.

In addition, you can access GroupWise calendaring, task management, address book, and document management services. (For a list of services that are available with GroupWise Wireless 1.1, visit www.novell.com/products/wireless/details.html.) In other words, GroupWise Wireless 1.1 blurs the distinction between your company’s LAN, the Internet, and your wireless service provider’s wireless network.

Unfortunately, you can’t always be connected to your company’s GroupWise servers through a wireless device. For example, you can’t be connected if you are using your wireless device from a location that your wireless service provider does not support. Nor can you be connected to your company’s GroupWise servers if you happen to be on a plane that is preparing for takeoff.

Even if you aren’t connected to a wireless network, you can use your wireless device to compose e-mail messages, to set tasks, and to schedule meetings. In addition, GroupWise Wireless 1.1 integrates with several third-party products that enable you to synchronize the information on your wireless device with the information on your company’s GroupWise servers when you are able to connect to these servers. For example, you can use Intellisync 4.0 to synchronize the e-mail, calendar, and task management information running on your Palm device with GroupWise 6. (Intellisync is synchronization software from Pumatech. For more information about Intellisync and other third-party products that integrate with GroupWise, see the related article on p. 45.)

Sometimes More Is Better

With the GroupWise 5.5 Enhancement Pack, Novell introduced GroupWise support for NetWare Cluster Services 1.01 for NetWare 6. GroupWise 6 extends that support to NetWare Cluster Services 1.01 for NetWare 5.1. (At the time this article was written, NetWare 6 and NetWare Cluster Services 1.01 for NetWare 6 were not yet released. When NetWare Cluster Services 1.01 for NetWare 6 is released, GroupWise 6 will also support this version of NetWare Cluster Services.)

Among other things, NetWare Cluster Services 1.01 provides failover and failback for important network services, including GroupWise 6 services. NetWare Cluster Services 1.01 supports up to 32 nodes—or servers—running NetWare Cluster Services 1.01. If one server in a cluster fails, NetWare Cluster Services agents redirect (failover) the services running on that server to another server—or group of servers—in the cluster. These agents also restore (failback) those services when the failed server comes back online. In addition, NetWare Cluster Services agents provide load balancing, so services from a failed server are evenly distributed among surviving servers. (For more information about NetWare Cluster Services 1.01, visit
In GroupWise 6, Novell has optimized message transfer agents (MTAs) and post office agents (POAs) to provide enhanced failover and failback capabilities. Specifically, these agents can now detect whether or not they are running in a clustered environment. When these agents are running in a cluster, they pass this information to workstations that are running GroupWise client software and are connected to the server.

If the GroupWise client software loses its connection to the GroupWise agents, this client software waits for NetWare Cluster Services agents to reconnect it to GroupWise agents running on another cluster node. (Typically, NetWare Cluster Services agents take only a second or two to reconnect the client software. If this client software is not informed that GroupWise agents are running on a cluster, the client software abends immediately after losing contact with GroupWise agents.) This ability to wait for reconnection is built into GroupWise client software and needs no configuration.

In combination, GroupWise 6 agent and client software support for NetWare Cluster Services 1.01 provide nearly disaster-proof access to the integrated messaging and collaboration services on which users depend.

A BACKUP PLAN

As you know only too well, disaster doesn’t always strike in the form of server failure. Sometimes disaster strikes in the form of users who inadvertently (or not) delete items that contain vital, irreplaceable information. For example, a user working at a police station may inadvertently delete an e-mail message containing a tip about a crime. (GroupWise 6 offers a new option for deleting messages. For information about such new features, see “You Asked for It” on p. 16.)

With previous versions of GroupWise, if a user deletes and purges a message before his or her post office is backed up, the message is gone for good. Even if the user’s post office was backed up before the user purged a message, recovering this message can be a complicated and time-consuming process. To recover the message using a previous version of GroupWise, you must first restore the entire post office from the backup, preferably offline “since you don’t want to reset everyone to the state of the backup just to recover one user’s message,” Tayler explains.

You must then “jump through some complicated and nonintuitive hoops” to connect to that backed-up post office from the user’s GroupWise client. You then need to find the message and pull it into the user’s archive. From the archive, you then need to pull the message into the user’s Universal Mailbox. This message will then be devoid of the status information—such as if the message is opened or unopened—that normally accompanies GroupWise messages.

With GroupWise 6, you must still restore the entire post office to recover this message. However, GroupWise 6 includes a new restore feature that makes the process of recovering messages from a backed-up post office much less complicated. To use this feature, you use ConsoleOne to create a Restore Area on a server that is running a GroupWise Target Service Agent (GW TSA.NLM). (As with the GroupWise 5.5 Enhancement Pack, you manage GroupWise 6 via ConsoleOne rather than the NetWare Administrator [NW ADMIN] utility.) You then restore the backup of the post office to the Restore Area.

To ensure that items won’t be purged from the GroupWise system before those items are backed up, GroupWise 6 includes Smart Purge. This new feature integrates with the GroupWise Purge service to detect items that users want to
purge from the GroupWise system. Smart Purge then uses the GroupWise POA to find out whether or not those items were captured by the most recent backup.

If a particular item has already been backed up, it is purged from the GroupWise system. If the item hasn't been backed up, on the other hand, Smart Purge schedules that item to be purged after the next backup. (Smart Purge relies on the GWTSA to perform its task. Therefore, GWTSA.NLM and Smart Purge must be running on the same server.)

SECURITY BLANKET FOR MESSAGES

GroupWise 6 also includes several enhancements that make it more compliant with Secure/Multipurpose Internet Mail Extensions (S/MIME) versions 2 and 3 than previous versions of GroupWise are. S/MIME is a specification for using digital signatures for authentication and encryption to send and receive S/MIME messages. A digital certificate is a collection of information that includes the identity of the certificate’s owner—in this case the e-mail user, the name of the CA that issued the certificate, the public key and private key associated with that certificate, and the digital signature of the CA.) When GroupWise receives a signed message, it uses HTTP or Lightweight Directory Access Protocol (LDAP) to access the CRL of the CA that issued the certificate used to sign the message. If the sender’s certificate appears on this CRL—that is, if this incoming message was signed using a revoked certificate—GroupWise pops up a Security Warning message to notify the recipient of this condition.

Danger! Danger! Warning! Warning!

With GroupWise 6, Security Warning messages have a new look and include more information than the Security Warning messages displayed by previous versions of GroupWise. If previous versions of GroupWise detect a security problem, they display a Security Warning message that informs the recipient of this—and only this—problem. As Kenny Fung, a software engineer for Novell, explains, “The way I display messages in previous versions [of GroupWise] is to pop up a message when GroupWise detects a problem and skip detecting [additional problems].”

For example, suppose an incoming message has two security problems: First, the message was signed using a revoked certificate. Second, the message was sent from an e-mail address that does not match the e-mail address on that certificate. Previous versions of GroupWise display a warning message for only one of these problems—the first problem detected. In GroupWise 6, however, GroupWise goes beyond the first security problem and continues to detect potential security problems. GroupWise 6 then displays a Security Warning message that includes both problems, each of which is highlighted in red. (See Figure 1 on p. 8.)

GroupWise 6 Security Warning messages also include an enhanced set of options, which enable users to do everything from view the certification path of a certificate to disable the GroupWise feature that checks the CRL for revoked certificates. (See Figure 1 on p. 8.) The certification path view includes the entire certificate hierarchy, from the name of the sender to the name of the CA—or trusted root—that signed the certificate. GroupWise 6 also enables users to view the entire certification path of messages.
signed by unknown CAs—CAs that are not included in the list of trusted roots that GroupWise 6 stores on users’ workstations. When a user receives such a message, GroupWise 6 displays a Security Warning message and then prompts the user to select a trust option for this CA. The user can choose to always trust certificates signed by this CA, the user can require GroupWise to prompt him or her to accept or reject messages signed by this CA, or the user can choose never to accept messages signed by this CA. (See Figure 2 on p. 12.)

When a user selects one of these options, GroupWise 6 stores that selection on the user’s workstation. GroupWise 6 then checks incoming signed messages against this selection. In addition, GroupWise 6 enables users to select separate certificates for signing and encrypting messages. With GroupWise 5.5 and the GroupWise 5.5 Enhancement Pack (the first versions of GroupWise to support S/MIME), users must use the same key pair (public and private) of a certificate to digitally sign and decrypt messages.

A s you probably already know, sending and receiving applications exchange the senders’ and recipients’ keys. For encryption, a sending application uses the recipient’s public key to encrypt the sender’s message. The receiving application then uses the recipient’s private key to decrypt the message for the recipient. For digital signatures, the sending application uses the sender’s private key to digitally sign a message, and the receiving application uses the sender’s public key to verify the digital signature.

If you use the same certificate to sign and encrypt messages, you can neither sign nor encrypt messages if that certificate is revoked for any reason. (Certificates can be revoked for a number of reasons. For example, certificates can be revoked if the keys associated with those certificates are broken or if the certificates expire.) If, on the other hand, you use separate certificates to sign and encrypt messages and one certificate is revoked, you can still use the other certificate. In this case, you may have to do without authentication or encryption until you get a new certificate, but you won’t have to do without both.

**Securing Messages**

As you know, interoperability is the goal of all proposed and accepted standards, including S/MIME. The goal of S/MIME is to create interoperability between applications that enable users to sign and encrypt MIME data. Because GroupWise 6 complies more closely with S/MIME than previous versions of GroupWise do, GroupWise 6 supports a greater number of Cryptographic Service Providers (CSPs) than previous versions of GroupWise support. CSPs provide the cryptographic layer for applications that support S/MIME.

With GroupWise 6, Novell adds support for any Microsoft-compatible CSP. For example, GroupWise 6 supports the CSPs that ship with Windows 2000, including N criplus GemSa FE CA RD CSP 1.0 and Schlumberger CSP, which provide smart card-enabled cryptographic services. To use these CSPs, you must purchase and install smart card readers on users’ workstations. Users then insert these smart cards to access cryptographic services.

Of course, you can also use the CSPs that previous versions of GroupWise support—Entrust 5.0 and 4.0, Microsoft Base Cryptographic Provider 1.0, and Microsoft Enhanced Cryptographic Provider 1.0.

In addition to a CSP, you need a CA to create and sign—or mint—the digital certificates that S/MIME uses. You can use third-party CAs—such as Entrust and VeriSign—to mint these certificates for you—for a fee. You can also use Novell Certificate Server 2.0 to mint these certificates in-house for free. Novell Certificate Server 2.0 uses NDS eDirectory and Novell International Cryptographic Infrastructure (NICI) to help you create, issue, and manage digital certificates. (For more information about Novell Certificate Server 2.0, visit www.novell.com/products/certserver/productinfo.html or see “Novell Certificate Server 2.0: Is Your Network Certifiably Secure?” Novell Connection, Jan. 2000, pp. 6–20. You can download this article from www.ncmag.com/past.)

**UPWARD MOBILITY**

Whatever the size of the company you work for, if that company plans on growing, you need to think about the scalability of the integrated messaging and collaboration system you select. After all, you don’t want to be forced to implement a new product because the old product can no longer provide services for the growing number of users on your company’s network.

GroupWise has a history of scaling to support large user environments. For example, four years ago, 2ndC become interested in creating products for integrated messaging and collaboration systems that could support more than 350 users. Jesper Berghstedt, 2ndC Denmark president and CEO, says that at that time, he could find only one such product: GroupWise. (2ndC is a Novell partner specializing in creating software that works with GroupWise. For more information, visit www.2ndc.com.)

GroupWise 6 includes several new features that make GroupWise more scalable than ever. For example, GroupWise 6 includes the following new features:

- Offline Connection mode
- Multithreaded GroupWise Check (GW Check)
- Enhanced Move User function
### You Asked for It

Although GroupWise is one of the most mature integrated messaging and collaboration products available, it is still—and always will be—a product in progress. GroupWise has evolved and will continue to evolve in response to changing technologies and customers’ requests and suggestions. The following are a few of the enhancements that are available with GroupWise 6, some of which you—as a GroupWise administrator—may have asked for:

- **NDS Integration.** As a result of tighter integration with NDS eDirectory, GroupWise 6 uses the same rigorous security measures to control GroupWise access that NDS eDirectory uses for network access.
- **Network News Transfer Protocol (NNTP) GroupWise Accounts.** GroupWise 6 client software supports NNTP, a protocol for managing Usenet newsgroup postings. Users can now set up newsgroups in GroupWise by selecting Account Options from the GroupWise Accounts menu.
- When a user creates a new account, GroupWise adds an NNTP folder for that account to the user’s GroupWise Universal Mailbox. Users can then connect to the Usenet newsgroup represented by that GroupWise account through this NNTP folder.
- **Print Calendar Enhancements.** With GroupWise 6, you have several options for printing calendars that were not available in previous versions of GroupWise. These include the following:
  - You can print calendars to a file in HTML format. This feature provides an additional format for printing GroupWise calendars. You can use this format to manually post calendars on the web.
  - You can now print calendars from archive.
  - Providing that you have a color printer, you can now preview and print colored rich text format (RTF) text in calendars.
  - You can now change the order of the Multi-User Setup checklist. When you print multiuser calendars, this feature enables you to change the order in which columns of data from users’ calendars appear.
  - You can now print calendars with shading that indicates your availability. (To create shaded calendars, use the GroupWise Show Appointment As feature.)
- **GroupWise Remote.** GroupWise 6 also includes several enhancements to GroupWise Remote. For example, GroupWise 6 Remote has an improved ability to resolve e-mail addresses. This enhancement has several benefits, such as improving GroupWise performance.
  - GroupWise 6 Remote also works with GroupWise Notify to notify users of newly downloaded messages. In addition, GroupWise 6 Remote enables users to archive items in their Universal Mailboxes and to change their GroupWise passwords.
  - **Time Zone.** Previous versions of GroupWise use the time zone in which the GroupWise post office agent (POA) is running to create and display appointments, messages, and tasks. As a result, users working in time zones that are different from the time zone in which the POA is running send and receive messages that are stamped with the POA’s local time rather than the users’ local time. GroupWise 6, on the other hand, uses the Windows time zone setting of each user’s workstation to create and display items.
  - **Delete and Empty.** In previous versions of GroupWise, a user purges deleted messages from his or her Universal Mailbox by deleting the messages and the copy to the user’s workstation) for each user at each new location. Second, a copy of each user’s Universal Mailbox resides on each workstation from which that user has accessed his or her mailbox using Offline Connection mode. (At the present, you must delete these copies at user workstations. However, future versions of GroupWise may offer a centralized method of deleting these copies.)

### Everything, Including the Client Sync

**Offline Connection mode** is a feature that uses GroupWise Remote technology to cache a user’s Universal Mailbox on the hard drive of his or her workstation. That is, using Offline Connection mode, a user can work from his or her local hard drive without having to maintain a constant connection to the GroupWise server on which that user’s post office is running. Users can select Offline Connection mode as one of three options: Online (formerly called Master Mailbox), Offline Connection, and Remote. When a user selects Offline Connection mode, the user’s POA creates a copy of his or her Universal Mailbox and pushes that copy down to the user’s workstation—an operation called priming the cache.

The POA synchronizes this cache in the background at regular intervals or when the user receives or sends a message. Users are likely to select Offline Connection mode on their own accord because local access increases GroupWise performance. However, you can also select—and enforce—Offline Connection mode, which you may want to do as the number of users per post office begins to climb.

With Offline Connection mode, Taylor estimates that a GroupWise 5.5 Enhancement Pack POA can support up to 1,500 users, with most of these users concurrently connected. With Offline Connection mode, Taylor estimates that “a GroupWise 6 POA can probably support over 3,000 users.”

Offline Connection mode increases the performance of GroupWise 6 by decreasing server requests by up to 90 percent. In previous versions of GroupWise and in Online mode, each time a user so much as scrolls through his or her Address Book, GroupWise client software generates requests to the server. With GroupWise 6 Offline Connection mode, many of these requests are processed locally. As a result, Offline Connection mode enables a GroupWise post office to support more users than it can using Online mode.

Of course, every silver lining comes with a cloud—however small that cloud may be. If users regularly move from workstation to workstation, using Offline Connection mode for all of the users on your company’s network may not be the best option.

Such unmoored users present two potential problems: First, the POA must prime a new cache (create a new copy of the user’s Universal Mailbox and push that copy to the user’s workstation) for each user at each new location. Second, a copy of each user’s Universal Mailbox resides on each workstation from which that user has accessed his or her mailbox using Offline Connection mode. (At the present, you must delete these copies at user workstations. However, future versions of GroupWise may offer a centralized method of deleting these copies.)

Aside from the problem of users who move from workstation to workstation,
enforcing Offline Connection mode is an easy way to increase the performance of GroupWise 6 and the number of users a GroupWise 6 POA can handle. “Offline Connection mode is pretty sweet and transparent to the user,” Tayler concludes.

High Thread Count

GroupWise 6 also sports an improved GWCheck. Included in GroupWise 5.5 and above, GWCheck is a POA process that systematically scans the GroupWise database looking for damaged or missing records. If possible, GWCheck then repairs or restores damaged and missing records.

In GroupWise 5.5 and the GroupWise 5.5 Enhancement Pack, GWCheck is a single-threaded process. That is, this process checks the GroupWise database sequentially, record by record, using a single thread. As you can imagine, this process can be time-consuming, especially on large post offices.

In GroupWise 6, GWCheck is a multithreaded process, which means GWCheck can work on several records at once. Naturally, this improvement translates to increased performance. According to definitive benchmark tests, Tayler estimates that the new multithreaded GWCheck represents a two-fold increase in the efficiency of the GWCheck process. “Recent estimates indicate that [the multithreaded GWCheck] can run as quickly on 3,000-user post offices as single-threaded GWCheck runs on 1,500-user post offices,” Tayler explains.

You can view the status of GWCheck threads using Web Console, the GroupWise management tool that Novell introduced with the GroupWise 5.5 Enhancement Pack. In GroupWise 6, Web Console is enhanced to enable you to view process threads. (For information on how to use this enhanced Web Console to modify some POA settings, see “You Asked For It” on page 16.)

Move It!

In addition, GroupWise 6 enables you to move users from one post office to another in an estimated one-third of the time it takes with previous versions of GroupWise. In previous versions, the Move User process uses a store-and-forward method of data delivery—called the message file (MF) method—that uses MTA s for inter-post office communications.

For example, after the POA for a user’s current post office— the source POA — and the POA for the post office where you want to move that user—the target POA — have been notified of the intended move, the source POA creates a list of all of the items in the user’s current Universal Mailbox. The source POA then uses the MTA to transfer this list to the target POA. The target POA uses this list to request the items it contains— one-by-one using the MTA — from the source POA.

Using the MF method, GroupWise completes most of these moves in a...
matter of minutes or hours, depending on the number of users you are moving and the size of those users' Universal Mailbox. As some of you may know, however, if you are moving a large number of users simultaneously and those users have a large mailbox, GroupWise could take 12 hours or more to accomplish this move.

If the Move User process isn't completed after 12 hours, the target POA checks the items it has against the items on the list compiled by the source POA. If this check reveals missing items, the target POA requests those missing items. This process can go on for up to seven days.

In GroupWise 6, the Move User process is called the live move process: The source and target POAs establish a client-server TCP/IP connection, over which the two POAs communicate directly. Because this method doesn't involve handling MF files, it can complete user moves “much more quickly” than the MF method can, Taylor explains.

The live move process also uses Globally Unique IDs (GUIDs) to ensure that users' Shared Folders and Shared Address Books move with them. The GUID is a 128-bit identifier that, as its name suggests, is unique for every user. This number exists everywhere a reference to the user exists, including NDS eDirectory.

In addition, the GUID enables GroupWise 6 to successfully move both the items in the Universal Mailbox and their status (such as opened or unopened). The GUID also ensures that replies to messages sent from a previous mailbox reach the user at his or her new mailbox.

As you may expect, to use the live move process, you must configure both the source and destination POA with an IP address and a port defined for client-server processing. In other words, both the source and destination POA must be updated to GroupWise 6. If either the source or the target POA is running an older version of GroupWise and, therefore, cannot be configured with an IP address and client-server port, you can use the MF method to move a user.

Gettin' Chunky With It

Although the live move process does not need MTAs to move the contents of a user's mailbox from one post office to another, GroupWise 6 uses MTAs for inter-post office communications. These MTAs use a TCP/IP-based protocol called Message Transfer Protocol (MTP) to communicate over WAN links within a domain.

In previous versions of GroupWise, the MTP transfers communications between MTAs in data streams. If any of the data in one of these streams becomes corrupted, GroupWise must retransmit the entire data stream. When WAN links are experiencing interference, this retransmission process can hamper GroupWise performance.

Novell updated the MTP in GroupWise 6 to transfer data in chunks rather than in streams. If a bit of data in one of these chunks becomes corrupted, only that chunk needs to be retransmitted. In other words, the ability to handle data chunks rather than data streams can make MTA communications over WAN lines faster and more stable.

Setting Limits

As the number of users on your company's network increases, the amount of disk space your company uses for GroupWise mailboxes also increases. In fact, the amount of disk space users' Universal Mailboxes occupy may increase whether or not the number of users on your company's network is growing.

For example, the number of spam messages a particular user receives is likely to increase in proportion to the number of times the user exposes his or her e-mail address while working on the Internet. If this user doesn't systematically delete and purge these messages, spam messages can quickly accumulate, increasing the amount of disk space this user's Universal Mailbox occupies.

Regardless of why users' Universal Mailboxes are consuming an increasing amount of disk space, at some point, the amount of disk space these mailboxes use is bound to affect the performance of your company's GroupWise system. To prevent this problem, GroupWise 6 enables you to limit the amount of disk space users' mailboxes are allowed to use. With GroupWise 6, you can limit the size of Universal Mailboxes for domains, post offices, or users. For example, for a particularly large post office, you can limit the size of Universal Mailboxes to 50 MB.

To use this feature, you select Client Options and then Environment in ConsoleOne. You then enter the size to which you want to limit users' Universal Mailboxes. You also enter a percentage of that limit. (See Figure 3 on p. 14.)

The POA then provides GroupWise 6 client software with these data.

GroupWise 6 client software regularly compares the size of a user's Universal Mailbox with the data this software receives from the POA. When a user's mailbox size reaches the percentage that you entered, that user's GroupWise 6 client software displays a message, warning the user that his or her mailbox will soon exceed its size limit.

If this user ignores the message and reaches this limit, this software prevents that user from creating new messages until the user has freed up space in his or her mailbox (by deleting items from that mailbox). GroupWise 6 client software also launches a pop-up wizard that helps the user delete items to make space for new items.

In addition, GroupWise 6 enables you to limit the size of outbound user messages. As with size limitations for Universal Mailboxes, you can limit message size for domains, post offices, or individual users. To use this feature, select Client Options in ConsoleOne, select Environment, and then enter a size limit for messages.

After a user enters a message size limit, the POA informs GroupWise client software of this limit. GroupWise client software then monitors outbound messages. If a user's message exceeds the size limit, GroupWise 6 client software displays a message, informing the user that his or her message is too large and cannot be sent.

CONCLUSION

In a recent survey of Novell Connection subscribers, 23 percent of the companies that use GroupWise reported having more than 1,000 users. Obviously, GroupWise 6 improvements in scalability will benefit these large and growing companies. Even if your company has fewer than a thousand users on its network, however, you can benefit from the increased performance that underlies this scalability.

Regardless of its size, your company can also benefit from the new security and availability features in GroupWise 6. In short, if your company is planning on implementing a new integrated messaging and collaboration system or if your company is planning to upgrade its current GroupWise system, it probably has everything to gain by choosing GroupWise 6.

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