

6000 Managed Application Server (MAS)

Administrator's Guide - Release 5.6

by Mitel Networks Corporation

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by Mitel Networks Corporation

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Table of Contents

1. Introduction	
1.1. About This Guide	1
1.1.1. Who This Guide is Written For	1
1.1.2. About Our Test Company: The Pagan Vegan	1
1.2. Welcome to your 6000 MAS	1
1.2.1. About the 6000 MAS	1
1.2.2. The AMC	2
1.3. About ServiceLink	3
1.3.1. ServiceLink Architecture	3
1.3.2. 24x7 Monitoring and Alerts	3
1.3.3. Virus Protection	4
1.3.4. Guaranteed E-mail	4
1.3.5. DNS Services	4
1.3.6. IPSEC VPN Service	5
1.3.7. Software Blades	5
1.4. What's New	6
1.4.1. Features	6
1.5. Software Licensing Terms and Conditions	6
2. The Server Console	
2.1. Using the Server Console	7
2.1.1. Using the Text-based Browser	7
2.1.2. Accessing the Linux Root Prompt	8
2.2. On-going Administration Using the Server Manager	8
3. Configuration	
3.1. Set Date and Time	10
3.2. Configuring Your Desktop Operating System	10
3.2.1. Automatic DHCP Service	12
3.2.2. Manual Entry For Computers Not Using DHCP Service	12
3.2.3. MS Windows Workgroup Configuration	13
3.3. Workgroup	13
3.3.1. 6000 MAS as Domain Controller	14
3.4. Remote Access	16
3.4.1. Remote Access Using ssh	17
3.4.2. Remote Access Using SSL	18
3.5. Directory	18
3.5.1. Configuring Your Company's Directory on Clients	18
3.6. Printers	23
3.7. Hostnames and addresses	24
3.7.1. Creating New Hostnames	26
3.7.2. Reserving IP Addresses Through DHCP	26
3.8. Virtual Domains	27
3.9. E-mail	27
3.9.1. Configuring Your E-mail Application	30
3.10. Configuring Your Web Browser	33
3.11. Choosing Your Web Browser Language	34
3.12. Backup or Restore	35
3.12.1. Backup To Desktop	35
3.12.2. Restore From Desktop	35
3.12.3. Verify Desktop Backup File	36
3.12.4. Configure Tape Backup	36
3.12.5. Restore From Tape	36
3.13. Review Configuration	37
4. Collaboration	

4.1. User Accounts	38
4.1.1. Disabling User Accounts	38
4.1.2. Changing User Passwords	39
4.2. Groups	39
4.3. Quota Management	39
4.4. Pseudonyms	40
5. Information Bays (i-bays)	
5.1. i-bay Directories	43
5.2. Accessing i-bays	43
5.3. Creating an i-bay	44
5.4. Modifying an i-bay	46
5.5. An i-bay Used as a Customer Site: The Miles Gabriel Art Exposition	46
5.6. An i-bay Used as a Shared Network Drive	47
5.7. An i-bay Used as an Intranet: The Pagan Vegan "Vegemite"	49
5.8. An i-bay Used to Expedite Processes: Samson's Farms	50
5.9. An i-bay Used as Your Customer Download Site	52
6. Webmail	
6.1. Enabling Webmail On Your System	54
6.2. Starting Webmail	54
6.3. Logging In	55
6.4. Viewing The Inbox	55
6.5. Logging Out of Webmail	55
6.6. Composing Messages	56
6.7. Reading Messages	57
6.8. Deleting Messages	58
6.9. Using the Address Book	59
6.10. Changing Webmail Options	60
7. Server Administration	
7.1. Administration of Your Server Via Windows File Sharing	62
7.2. Create Starter Web Site	62
7.3. User File Storage on the 6000 MAS	62
7.3.1. Windows	62
7.3.2. Macintosh	64
7.4. Reinstallation Disk	66
7.5. Reboot or Shutdown	66
8. Technical Support	
A. Introduction to the Ethernet Local Area Network (LAN)	
B. Additional Software	

Chapter 1. Introduction

1.1. About This Guide

This Administrator's Guide walks you step-by-step through the straightforward process of configuring your 6000 Managed Application Server (MAS) and its Windows or Macintosh clients. The Appendices at the end of the guide provide background information on subjects related to networking and the Internet and are intended to supplement chapters in the main section of the guide.

1.1.1. Who This Guide is Written For

This guide is for administrators of the 6000 MAS. For more information, contact your Mitel Networks authorized reseller.

1.1.2. About Our Test Company: The Pagan Vegan

In this guide, we use examples of a catering and event-planning company, The Pagan Vegan or TPV, that configures, administers and makes use of the 6000 MAS. As far as we know, no company of this name exists.

1.2. Welcome to your 6000 MAS

Congratulations on choosing the 6000 MAS as your network and communications server!

Companies all over the world are using the Internet to communicate more effectively and efficiently to a broader audience. The 6000 MAS is founded upon state of the art technologies - such as the Linux operating system - which have been mainstays in the infrastructure of larger organizations for several years. Mitel Networks Corporation has customized these technologies to make them straightforward to use, while still giving you local control over your Internet services. The result is a cost-effective Internet infrastructure that will reliably serve your organization as it grows and as its use of the Internet evolves.

1.2.1. About the 6000 MAS

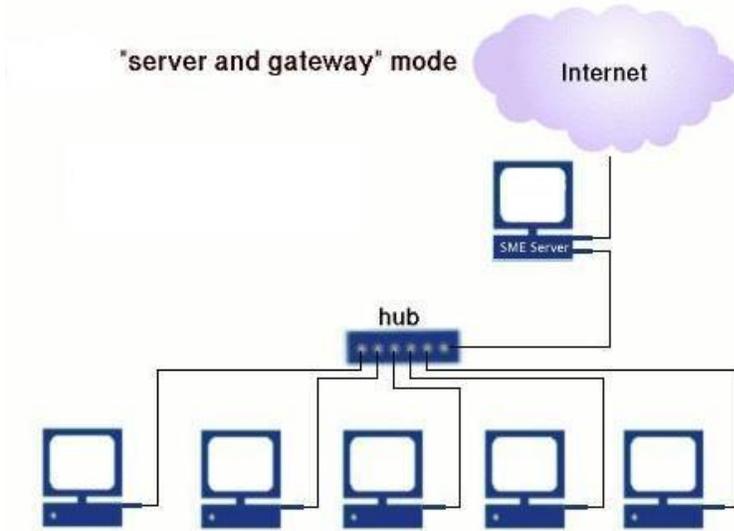
The 6000 MAS is a managed Internet security and productivity solution for single-site and branch-based enterprises. It combines award-winning software, Mitel Networks SME Server with ServiceLink, with a suite of managed services delivered from the Mitel Networks Applications Management Center (AMC). The 6000 MAS manages your connection to the Internet by routing Internet data packets to and from the network (which allows all the computers on the network to share a single Internet connection) and by providing security for the network, minimizing the risk of intrusions.

When one of the computers on the local network contacts the Internet, or is contacted by an outside machine on the Internet, the 6000 MAS not only routes that connection, but seamlessly interposes itself into the communication. This prevents a direct connection from being established between an external computer on the Internet and a computer on the local network, thereby significantly reducing the risk of intrusion onto the network.

The server also provides services that allow users to communicate better internally and with the rest of the world using the Internet.

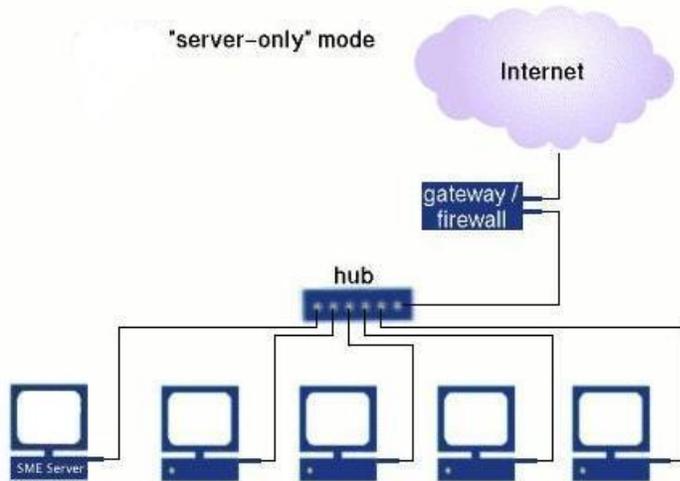
Throughout this guide, *SME Server* refers to the server software component installed at the end-user's site. *6000 MAS* refers to the total solution - the server software as well as applications and subscription services delivered from the AMC.

The word *gateway* is used to mean the computer that acts as the interface between the local, internal network and the external world - typically the 6000 MAS itself.



If you prefer, you can also run your 6000 MAS in "server-only" mode. In "server-only" mode, your server provides your network with services, but not the routing and security functions associated with the role of "gateway". Server-only mode is typically used for networks already behind a firewall. In that configuration, the firewall fulfills the role of gateway, providing routing and network security.

Once installed, your 6000 MAS can be configured and managed remotely. Routine administration is handled from your desktop using a web-based interface, so only on rare occasions will you require direct access to the server computer. Once installation is complete, most customers put the server in an out-of-the-way place like a utility closet. If you wish, you can disconnect the keyboard and monitor. (Note that some computers may not operate correctly without an attached keyboard.)



1.2.2. The AMC

Mitel Networks has developed a suite of integrated network services - *ServiceLink* - that extend and enhance the functionality of the 6000 MAS. ServiceLink maximizes the security, performance and reliability of the server through real-time interaction with the *Mitel Networks Applications Management Center (AMC)*. Note that until the server is registered for ServiceLink, the links to ServiceLink pages in the Server Manager will take you to panels that are not active.

Note

If your server is behind an additional firewall, that firewall will need to be configured to allow *outbound* SSH packets on TCP port 22 in order for the server to communication with the AMC.

1.3. About ServiceLink

ServiceLink is a set of network services built into the 6000 MAS.

The services available include:

- 24x7 Monitoring and Alerts
- Virus Protection
- Guaranteed E-mail
- DNS Services
- IPSEC VPN Service

These services are centrally managed by the Mitel Networks Applications Management Center (AMC) [<https://mitel-amc.com/>].

An additional feature of the 6000 MAS is the ability to quickly and easily download software "blades" from the AMC. Blades can consist of updates to the server software, or entire applications that add new functionality to your network.

Note

Each time a server is registered with the AMC, contact information must be entered so that Mitel Networks can send notifications of software updates. However, it is good practice to periodically check the "Blades" panel of the Server Manager for new update blades.

The following sections give more detail.

1.3.1. ServiceLink Architecture

As soon as your 6000 MAS is registered for ServiceLink services, it begins to communicate with the AMC on a regular basis. It performs a "synchronization" once an hour, during which it will report its status to the AMC and may also receive updated information from the AMC.

The information sent by a newly registered 6000 MAS consists of a few vital support statistics collected from the server configuration database. When ServiceLink services are enabled, additional information may be sent to the AMC for use in reports accessible to the reseller who registered the server. All information is transmitted through a secure, encrypted channel using the *ssh* protocol. (See <http://www.openssh.com/> for more information about *ssh*.)

1.3.2. 24x7 Monitoring and Alerts

This service provides round-the-clock monitoring of your server and Internet connection. By default, each server will synchronize with the AMC once each hour (the interval can be customized). Your reseller can configure the AMC to send a designated technical contact an alert via e-mail if the server fails to check in. This ensures that your reseller is notified in the event of an outage.

In addition, the AMC can provide monthly reports summarizing all ServiceLink activity. These reports include such details as network performance, e-mail delivery problems and viruses detected. This information can help you assess the reliability and quality of your Internet connection. It can also assist in analyzing the security of your network.

1.3.3. Virus Protection

Viruses and worms which propagate via e-mail are becoming increasingly common. The most popular way of detecting these viruses is to use virus-scanning software. However, in order to be effective, virus-scanning software must be updated regularly with information on existing viruses in. One of the most common reasons for failure in virus software is that the user has not downloaded and installed the latest virus pattern files. The virus protection service provided by the 6000 MAS eliminates this problem.

This service provides automatic setup and configuration of virus-scanning services on the 6000 MAS. When the virus scanning service is enabled, the virus-scanning software will be enabled on the server and the latest virus pattern files will be downloaded from the AMC on an ongoing basis. The service is entirely automated.

Warning

The number of users for whom virus protection is provided is limited by your 6000 MAS subscription. You will not be able to configure the server for more than the supported number of users. If you do attempt to add additional users beyond the number included in your subscription, you will receive a warning message. The service can, however, be upgraded to support a higher number of users. Contact your Mitel Networks authorized reseller for more information on upgrades.

Any e-mail delivered to the 6000 MAS will be examined against the latest virus patterns. If a virus is discovered within a message (body or attachment, the message is quarantined in a special area. The administrator can then examine the message and determine what to do with it.

You also have the option of scanning all files found in user directories or information bays on a nightly basis. When an infected file is found, an e-mail message is sent to the administrator of the system.

1.3.4. Guaranteed E-mail

One of the risks of running a mail server on the Internet is that network difficulties may result in undelivered e-mail. When this occurs, people who attempt to send e-mail to you will receive a message indicating that delivery failed, and they will not be able to contact you until network connectivity is restored. The Guaranteed E-mail service is Mitel Networks Corporation's answer to this problem.

If for any reason a subscribed 6000 MAS is unable to receive e-mail, the AMC will automatically step in and collect mail on behalf of that server. Mail received by the AMC is securely cached until connectivity is restored, at which point the server will initiate a sync connection to the AMC. The AMC will then automatically download the queued mail to your 6000 MAS. The entire transaction is transparent to end-users.

In addition to storing the e-mail and forwarding it at the earliest opportunity, the AMC provides notification and reporting. This allows you to identify potential server or network outages.

1.3.5. DNS Services

Most businesses using the 6000 MAS will want to register a domain name reflecting their business, and will need a DNS host to make this domain name accessible to the world.

The ServiceLink DNS Service automates this process, allowing you to publish domain name records for your server via the AMC.

Note

The Security Plus and E-mail Plus subscription packages include support for *two* domains, one set as the primary domain and another as a virtual domain. These domains must be in .com, .org or .net. Other top-level domains and support for more than two domains are possible for an additional charge.

Each 6000 MAS is also entitled to a name within the e-smith.net domain, e.g. "mycompany.e-smith.net". This is provided as a convenience for customers who do not have - or do not intend to register - another domain. Regardless

of whether you have registered a domain, you will always have the option of using your service domain as a way to access your server from the Internet, e.g. "www.mycompany.e-smith.net".

The service domain feature can be found on the *DNS Services* panel of the Server Manager. If the service domain you request is not available, you will be notified through the interface and will be invited to choose a different domain. Changes you make will be uploaded to the AMC during the server's next synchronization.

1.3.6. IPSEC VPN Service

You can securely link together 6000 MAS servers in different physical locations to make one seamless Virtual Private Network (VPN). Information sent via this network is encrypted to prevent eavesdropping by others on the Internet.

The 6000 MAS uses the industry standard IPSEC protocol to encrypt network traffic between sites. This system uses an encryption technique called "public key cryptography". This requires each server to know the "public key" for other servers on the network. It then uses that public key to encrypt data intended for that server. A "private key" on the receiving server is used to decrypt the data.

One of the traditional difficulties in setting up a VPN is securely exchanging the keys required to set up the VPN, as each server must have the keys for all the other participating servers. With the 6000 MAS this process of configuration is automated by the AMC.

When you create a VPN, you designate one 6000 MAS as the "primary", together with one or more "secondary" servers. The primary server is the one whose user accounts will be accessible via the VPN, while secondary servers will act as gateways for the users on their local networks.

1.3.7. Software Blades

Blades allow you to easily install software modules via the Server Manager. Once your 6000 MAS has been registered, your server will be regularly updated with a list of available blades, which can then be installed by clicking on the desired items in the Server Manager.

Note

Blades are developed and made available by Mitel Networks Corporation, Mitel Networks Authorized Resellers or by third-party developers.

The following is a list of blades currently available for downloading. Note that your ability to "see" and download these blades depends upon the specific terms of your 6000 MAS subscription.

- *Web Access Control*

The Web Access Control Service allows you to filter the web sites available to users by blocking selected categories of sites. Potentially objectionable sites are grouped into categories, such as pornography, gambling, or hacking sites. This "blacklist" of blocked web sites is updated regularly by the AMC. The service can block entire domains or specific URLs. Certain IP addresses (for example, the system administrator's workstation) can be excluded from the filtering rules.

- *Groupware Blade*

This browser-based application allows calendar sharing and collaboration, including the ability to schedule meetings between users, and maintain and share contact lists and to-do lists. This application does not integrate with Microsoft Exchange Server but will provide similar functionality for an office that cannot afford the cost and complexity of Exchange.

- *Instant Messaging Blade*

The Instant Messaging (IM) Blade allows instantaneous electronic conversations through the 6000 MAS as a more secure alternative to publicly available services such as MSN, AIM and Yahoo. Conference rooms (group chat) and a user directory are also provided. The IM service works across a ServiceLink IPSEC VPN, allowing your organization to have its own secure IM infrastructure. As well, the solution allows IM users on the server to communicate with IM users on certain other services, including MSN and Yahoo.

- *IP Phone Support Blade*

This blade configures the 6000 MAS to support Mitel Networks IP telephones, in conjunction with a Mitel Networks Integrated Communications Platform.

- *Fax Server Blade*

This application allows users to send faxes, with the use of an external fax modem.

- *System Information Blade*

This feature allows system administrators to view information about the 6000 MAS such as disk usage, CPU usage, etc.

- *Free/Busy Scheduling Blade*

The Free/Busy Scheduling blade integrates with Outlook 2000 (also known as Outlook 9.0) and Outlook 98 to provide two services: users may publish their busy times to the 6000 MAS, and users may see another user's busy times from within Outlook.

1.4. What's New

1.4.1. Features

The 6000 MAS release 5.6 provides many small enhancements, and in particular the following new features:

- *Upgrade to Linux 2.4 kernel* - The base SME software has been upgraded to the Linux 2.4 kernel. This upgrade enhances the reliability of the server and provides support for a broader range of server hardware.
- *Enhanced firewalling* - With the upgrade to the Linux 2.4 kernel, the previous ipchains-based firewall rules have been converted to iptables. This results in an even tighter firewall, using stateful packet inspection.
- *Changes to ordering process* - The 6000 MAS is a subscription-based product that is managed via the AMC. With this release, changes have been made to the subscription ordering and activation process in order to simplify delivery of the product.

1.5. Software Licensing Terms and Conditions

The 6000 MAS is licensed for an individual server under the terms of the End User License Agreement found on the CD. Acceptance of this agreement and identification of the end-user accepting is required during the software installation.

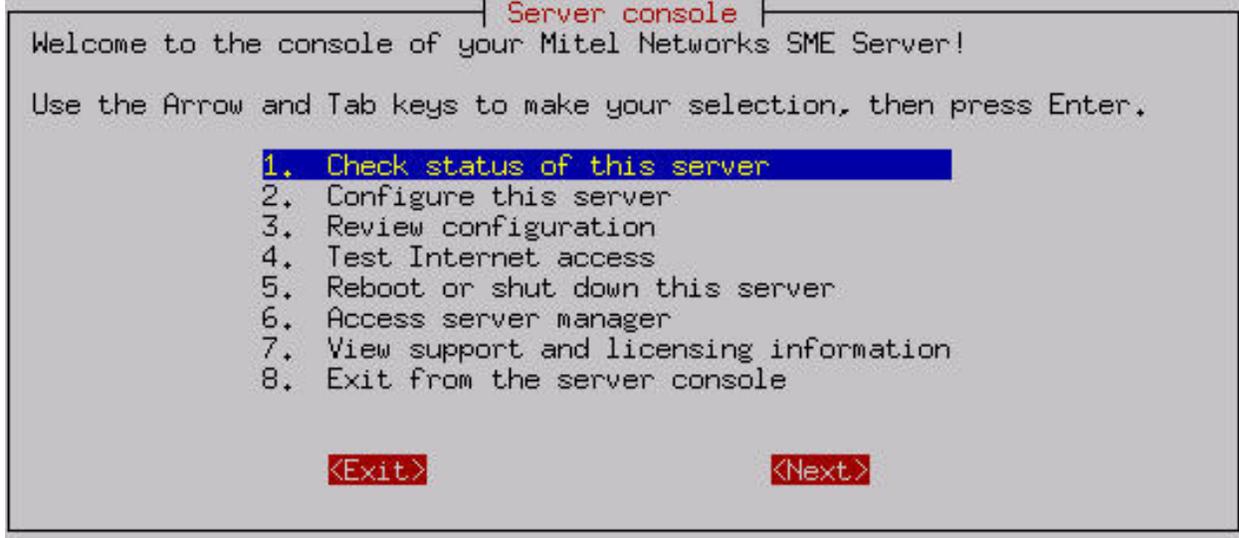
If you have acquired the 6000 MAS by means other than purchasing a Mitel Networks commercial offering through an authorized reseller, it is unsupported. For further information and available options, please contact an authorized reseller. To locate an authorized reseller near you, please visit <http://www.mitel.com/>.

Chapter 2. The Server Console

2.1. Using the Server Console

Basic configuration of the 6000 MAS is performed using the server console. The server console can be accessed using a keyboard and monitor directly connected to the server, or remotely using the ssh protocol. Please contact your reseller for details.

If the server console mode has been set to "auto", the opening screen of the server console will appear:



```
Server console
Welcome to the console of your Mitel Networks SME Server!

Use the Arrow and Tab keys to make your selection, then press Enter.

1. Check status of this server
2. Configure this server
3. Review configuration
4. Test Internet access
5. Reboot or shut down this server
6. Access server manager
7. View support and licensing information
8. Exit from the server console

<Exit> <Next>
```

If the server console mode is set to "login", you will see a login prompt. You must then log in using the user name "admin" and the system password.

The server console provides you with basic, direct access to your server. From the server console you can get the following information and perform the following tasks:

Option 1: Provides you with uptime information about your 6000 MAS.

Option 2: Allows you to view and modify the configuration information entered during the original installation (ethernet cards, IP address information, DHCP, DNS, domain names, etc.).

Option 3: Provides you with a summary of the configuration parameters entered into your server.

Option 4: Allows you to test your Internet access by sending a small test packet of information to a server on the Internet (located at Mitel Networks Corporation).

Option 5: Allows you to smoothly reboot or shut down your server.

Option 6: Provides access to the web-based Server Manager using a text-based browser. This is the same interface to which you can connect from another system using a normal web browser. This option merely allows you to perform these functions directly from the server console.

Option 7: Displays the licensing terms governing the distribution and use of 6000 MAS software and information on how to contact Mitel Networks for support.

2.1.1. Using the Text-based Browser

For Option 6, *Access Server Manager with text-mode browser*, the server uses a text-based browser called *lynx* to al-

low you to access the web-based Server Manager from the server console. Navigation is primarily with the arrow keys - up and down to move through the page, right arrow to follow a link, left arrow to go back. Lynx has a wide range of other commands which you can learn about through the online help available at <http://www.lynx.brower.org/> [<http://www.lynx.brower.org/>]. Note that for security reasons some regular features of lynx are *disabled* when you are browsing from the server console (such as the ability to specify an external URL). Type 'q' (for 'quit') to exit the text-based browser.

2.1.2. Accessing the Linux Root Prompt

If you are an expert user and would like to do advanced modifications to the configuration of your server, you can access the Linux operating system underlying the 6000 MAS software by logging in as the user "root". If your server is displaying the server console and not a login prompt, you can press Alt-F2 to switch to another screen with a login prompt. To switch back, press Alt-F1. You should always ensure that you log out from the root account when you are finished and before you switch back to the server console.

Warning

Please be aware that making changes and customizations to your server from the Linux command prompt may invalidate your support agreement. Please contact your Mitel Networks Authorized Reseller before making any such customizations.

The password for the "root" user is whatever password is currently set for the administrator of the server. Note that this is the *same* password as that used by the "admin" user account.

Be aware that this ability to switch between the server console and a login prompt is only available when you have physical access to the server. If you connect in remotely as the "admin" user and see the server console, you will *not* be able to switch to a login prompt in that window. (You can, however, open up another remote connection to your server and login as the "root" user.) Note that remote administrative access is *disabled* by default and must be specifically enabled through the *Remote Access* panel of the Server Manager.

2.2. On-going Administration Using the Server Manager

The Server Manager is a simple web-based control panel that allows you to administer your network. Using the Server Manager, you perform such tasks as adding or deleting e-mail addresses, setting the system date and time, and creating a starter web page. The Server Manager is accessed through a web browser by visiting the URL <http://www.yourdomain.xxx/server-manager> or more simply <http://www/server-manager>. We recommend you bookmark this address so that you can return to it when desired.

Note

For security reasons, you are only able to access the Server Manager through a web browser *on the local network*. Remote access is only possible using remote access tools such as ssh and PPTP.



When you arrive at the correct URL, you'll be asked to enter your user name (which is always "admin") and the password you created during the installation process. Enter that information and click "OK" to be taken to the Server Manager. It will look like the screen shown above.

Chapter 3. Configuration

3.1. Set Date and Time

Accessing the *Date and Time* panel within the Server Manager allows you to set the system date and time either manually or using a network time server. Pull-down menus for month and time zone ensure accurate entry. The Server Manager will reset the time automatically during daylight savings time. There are worldwide time zones with multiple selections for countries with multiple time zones. (including standard time zones, states/provinces and even cities). This ensures that regional variations in time zones and daylight savings time are accurately reflected.

Date and time configuration

This is where you configure the date and time of this Mitel Networks SME Server. You may use an existing network time server or manually set the date and time for your time zone.

Set Date and Time

Warning: If you have configured a network time server [below](#), do NOT manually set the time or date here. Doing so will break the network time synchronization.

Current setting: **Fri 10 May 2002 04:12:14 PM EDT**

New month/day/year:	May	10	2002
New hour/min/sec:	4	12	14
AM/PM and time zone:	PM	Canada/Eastern	
<input type="button" value="Save Date/Time Settings"/>			

Network Time Server

The Mitel Networks SME Server can periodically synchronize the system clock to a network time protocol (NTP) server. To enable this service, indicate so in the checkbox and enter the hostname or IP address of the NTP server below.

Enable NTP Service

NTP Server:

Instead of setting the time manually, you can use a *network time server*. A time server is a device on the Internet that keeps accurate time and is able to communicate the time to other computers over the Internet using the *Network Time Protocol (NTP)*. Many organizations around the world provide Internet time servers for free.

Warning

After you start using a network time server, you should *NOT* set the time or date manually. If you do so, the network time synchronization will no longer function.

This screen in the Server Manager allows you to configure your server to connect regularly to a time server and synchronize the clock on the server with the time provided by the time server. To do this, simply check the box for "enable NTP Service", add the domain name or IP address of the time server in the space provided and click "Save NTP Settings". Using a time server is optional but doing so can greatly increase the accuracy of your system.

For more information about using a network time server, visit <http://www.ntp.org/>. You can also find a list of publicly available time servers at <http://www.eecis.udel.edu/~mills/ntp/servers.htm> [<http://www.eecis.udel.edu/~mills/ntp/servers.htm>]. You should always use a *secondary* time server (also called a *stratum 2* server) to lighten the load on the primary time servers.

3.2. Configuring Your Desktop Operating System

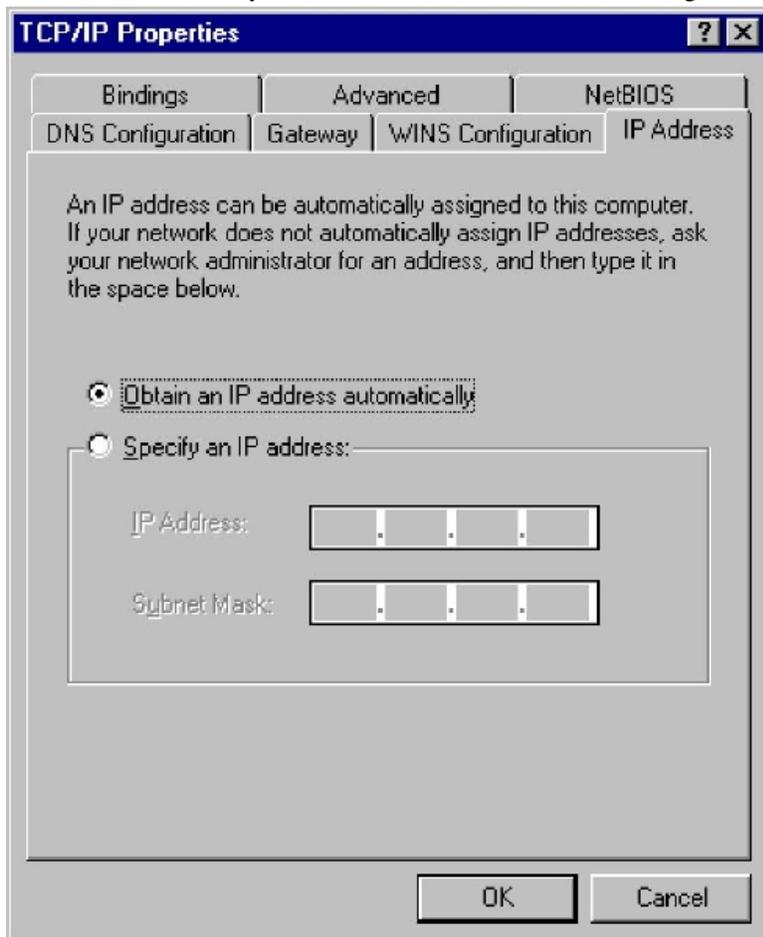
The dialog box where you configure your desktop differs from operating system to operating system and version to version. As an example, in Microsoft Windows 95 or 98, client configuration occurs in the "Properties" dialog box associated with the TCP/IP protocol for your ethernet adapter. To get there, go to the "Control Panel" and select "Network". If a TCP/IP protocol is not yet associated with your ethernet adapter, you may need to add one before you can configure its properties with the following information.

Item	Description	What to enter
enable TCP/IP protocol	All your computers must communicate on the network using the TCP/IP protocol.	In Windows you add a TCP/IP protocol. In Apple, open TCP/IP Control Panel.
disable non-TCP/IP protocols	Unless an application relies on a non-TCP/IP protocol, disable all other protocols.	Turn "off" other networking protocols (e.g. NetBeui, etc.)
enable DHCP service	See section below	In Windows, enable "Obtain an IP address service automatically". In Apple, select "DHCP server".

Note

We *strongly* recommend that you configure all clients machines using DHCP rather than manually using static IP addresses. Should you ever need to change network settings or troubleshoot your network later, you will find it much easier to work in an environment where addresses are automatically assigned.

On a Windows 95/98 system, the window will look like the image below:



3.2.1. Automatic DHCP Service

Your server provides a DHCP server that assigns each of the computers on your network an IP address, subnet mask, gateway IP address and DNS IP address(es).

Note

In some rare cases, you may want to use a static IP address for a particular client machine. The typical approach is to manually enter this IP address into the network properties of the specific machine. The negative side of this approach is that you cannot easily change or alter network settings without having to go in and modify the information on the client machine. However, it *is* possible to provide this static IP address directly through DHCP rather than manually configuring the client computer. To do so, you will first need to determine the Ethernet address of the client computer (usually through the network properties). Next you will go to the Hostnames and addresses web panel of the Server Manager and enter the information there.

Only One DHCP Server

It is imperative that no other DHCP server is on your network. If a former DHCP server configured your computers, you should remove that DHCP server from your network. Leave DHCP enabled, and reboot each computer. New IP addresses, netmasks, gateway IP addresses and DNS addresses will be assigned automatically by the 6000 Managed Application Server (MAS) DHCP server.

3.2.2. Manual Entry For Computers Not Using DHCP Service

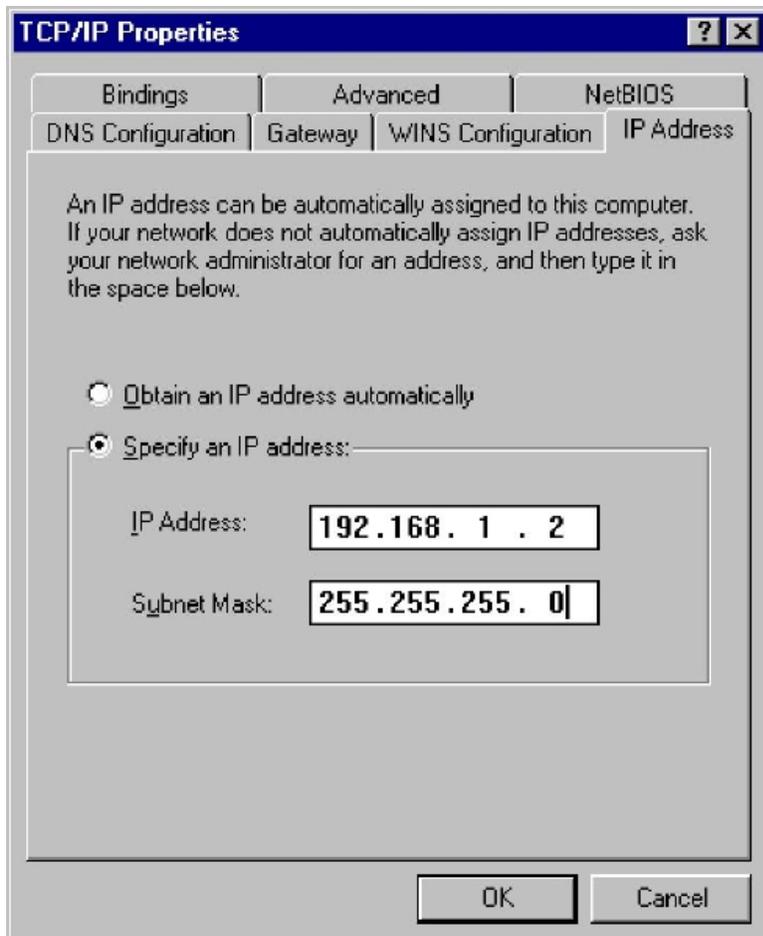
As noted above, we strongly recommend that you perform all your client configuration using DHCP. It is even possible to assign a static IP address through the Hostnames and addresses web panel of the Server Manager that will be distributed through your DHCP server.

However, if your computers do not support DHCP, you must manually enter the following information into your TCP/IP properties:

Item	Description	What to enter
IP address	Manually enter this information (see paragraph below).	You must assign a different, unique IP address to computers not accepting DHCP (see note below).
subnet mask (or netmask)	Manually enter this number.	The default subnet mask (or netmask) is "255.255.255.0".
gateway IP address	Enter the IP address for the server or, in the case of server-only mode, enter the IP address for your network's gateway (e.g. the firewall or network router).	If you are running in server and gateway mode, your server is your local network's gateway. Enter its IP address here: the default is "192.168.1.1". If you are running in server-only mode, enter the IP address for the device interfacing with your external network.
IP addresses of your domain name servers	Manually enter this information.	Normally you would just add the IP address for your server - the default used in the server console is "192.168.1.1". If you have a firewall other than your server that restricts internal queries to Internet DNS servers, you may need to enter additional DNS servers here.

It is critical that every computer on your network has a unique IP address and that you don't assign two computers

the same address. In enabling DHCP service in the server console, you designated a range of IP addresses for DHCP assignment. You also allocated a block of IP addresses for manual assignment. If you accepted the defaults pre-configured into the server console, IP addresses 192.168.1.2 through 192.168.1.64 will have been set aside for manual entry. To avoid duplication, use only those IP addresses when manually assigning IP addresses to your computers.



After configuring the TCP/IP parameters, you may need to reboot your desktop computer to implement the configuration changes. (For example, most Windows systems need to be rebooted after the TCP/IP configuration has been changed.) Once the settings take effect, your computer will be connected to the server and to the Internet.

3.2.3. MS Windows Workgroup Configuration

If you are using a Microsoft operating system, you must ensure that your workgroup is the same as the workgroup name of your server. (The default workgroup name is your domain name. In a subsequent chapter, we'll explain how this can be changed using the web-based Server Manager.) If you are using the default name, go to the Control Panel, select "Network" and then select "Identification". In the field for "Workgroup", type your domain name.

3.3. Workgroup

If you are using a computer on a local network and you wish to access the server via Windows file sharing, it is important that you are logged onto the same workgroup as your 6000 MAS. This screen allows you to enter the name of the Windows workgroup the server should appear in. If you wish you can change the workgroup name to correspond with an existing workgroup. Macintosh users need only enter a Server Name or accept the defaults.

The Server Name is the name by which the server will be known on the Windows clients, and should be left at its

default unless there are very good reasons to change it. In order that you may later connect multiple locations using IPSEC VPNs, we suggest that you ensure a different name is used for each server.

Change workgroup settings

Enter the name of the **Windows workgroup** that this Mitel Networks server should appear in.

Windows workgroup

Enter the name that this Mitel Networks server should use for Windows and Macintosh file sharing.

Server Name

Should this Mitel Networks server act as the workgroup and domain controller on your Windows network? You should leave this set to the default, or no if another server is already performing this role on your network.

Workgroup and Domain Controller ▾

Should this Mitel Networks server support roaming profiles? You should leave this set to the default of no unless you have experience administering server-based Windows roaming profiles and know that this feature is required.

Roaming profiles ▾

3.3.1.1. 6000 MAS as Domain Controller

On the 6000 MAS panel shown in the preceding section, you can specify whether the server should be the domain master for your Windows workgroup. Most sites should choose "Yes" unless you are adding a server to an existing network which already has a domain master.

Note

Once you join the domain, you do not need to create local accounts on each Windows NT/2000 box. When you first log in after joining the domain you will need to manually select the Domain of the 6000 MAS rather than the default (which is to log in locally on the NT machine). You can also join when you install the client's system.

If you *do* configure your system to be the domain master, a special Windows share called NETLOGON is created with a DOS batch file called `netlogon.bat`. This batch file is executed by Windows clients that have been configured to "Logon to domain". The `netlogon.bat` file we provide by default does very little, but advanced users can, if they wish, modify this script to set environment variables for their clients or provide automatic drive mappings.

As the NETLOGON share is only writable by the "admin" user, you modify the `netlogon.bat` script by logging on to a Windows system as "admin", connecting to the share and then modifying the script using a Windows text editor. Be aware that the NETLOGON share will not be visible in Network Neighborhood or other similar tools. As the "admin" user, you will need to connect to the share or map a drive to it, by using the specific path:

```
\\servername\NETLOGON\
```

The sample file contains a few examples of setting the system time for each machine and also for mapping a common drive for all Windows client.

The sections below define the steps that must be executed on various Windows versions to join domains.

3.3.1.1.1. Windows 9x

To join a Windows 9x machine to the domain, follow these steps:

1. Navigate to the Network section of the Control Panel (Start->Settings->Control Panel->Network).
2. Select the Configuration tab.
3. Highlight "Client for Microsoft Networks", and then click "Properties".
4. Check "Log onto Windows NT Domain", and enter the domain name in the text field.
5. Click all the "OK" buttons and reboot.

3.3.1.2. Windows NT 4

To join a Windows NT 4 machine to the domain, follow these steps:

1. Navigate to the Network section of the Control Panel (Start->Settings->Control Panel->Network).
2. Select the Identification tab.
3. Click "Change" and then enter the computer name and the domain name. Click "Create a Computer Account in this Domain", enter "admin" as the user name and then enter its password.
4. Click "OK".
5. After a short pause (0-10 seconds), you should be greeted by a "Welcome to DOMAIN" message and asked to reboot.
6. Log in on a domain account.

3.3.1.3. Windows 2000

To join a Windows 2000 machine to the domain, follow these steps:

1. Navigate to the Network section of the Control Panel (Start->Settings->Control Panel->Network and Dial-up Connections).
2. Click "Network Identification".
3. Click "Properties", enter your computer name and domain name, and then click "OK".
4. You will be prompted for a user account with rights to join a machine to the domain. Use "admin" as the user name, and enter the password.
5. After a short pause (10-30 seconds), you should be greeted by a "Welcome to DOMAIN" message and asked to reboot.
6. Log in on a domain account.

3.3.1.4. Windows XP Professional Edition

To join a Windows XP machine to the domain, follow these steps:

1. Navigate to the Network section of the Control Panel (Start->Settings->Control Panel).

2. Click "Network and Internet Connections".
3. Click "Network Connections".
4. Select "Advanced" -> "Network Identification".
5. On the Computer Name tab, click "Change".
6. Select "Domain" and then enter your domain name.
7. Enter "admin" and the password.

3.4. Remote Access

If you're an advanced user, the 6000 MAS provides several ways to access the underlying operating system, either from a computer on your internal network or from a computer outside your site on the Internet. Additionally, you have the ability to access your computer network securely from a remote computer. All of these operations are configured from the screen shown below in the Server Manager.

Change remote access settings

For each of the options below, the private setting allows anyone from your local network to access your Mitel Networks server. The public setting allows access from anywhere on the Internet. The no access setting disables access. To understand the security implications of changing these options from the default settings, you should read the user's guide section on remote access.

You can control **secure shell** access to your Mitel Networks server. The public setting should only be enabled by experienced administrators for remote problem diagnosis and resolution. We recommend leaving this parameter set to **no access** unless you have a specific reason to do otherwise.

Secure shell access Public ▾

Allow administrative command line access over secure shell Yes ▾

Allow secure shell access using standard passwords Yes ▾

You can allow PPTP access to your Mitel Networks server. You should leave this feature disabled by setting the value to number 0 unless you require PPTP access.

Number of PPTP clients

You can also control **FTP** write access for the admin and user accounts on this server. (Write access is never permitted via anonymous FTP or via the information bay accounts.) We strongly recommend leaving this parameter set to private unless you have a specific reason to do otherwise.

FTP user account access Private ▾

Note: this policy limits access to the FTP server and overrides other settings, including those for individual information bays.

FTP access limits Disable FTP Entirely ▾

You can also control telnet access to your Mitel Networks server. WARNING: telnet is inherently insecure and should only be used in circumstances where no practical alternative exists. You should leave this option set to no access and use the [secure shell](#) if remote access is required.

Telnet access No Access ▾

It is possible to allow hosts on remote networks to access the SME server manager by entering those networks here. Use a subnet mask of 255.255.255.255 to limit the access to the specified host.

Click [here](#) to add a new entry.

There are no entries yet

Each of these remote access methods is described below.

3.4.1. Remote Access Using ssh

If you need to connect directly to your server and login from a remote system belonging to you, we *strongly* encourage you to use ssh instead of telnet. In addition to UNIX and Linux systems, ssh client software is now also available for Windows and Macintosh systems. (See the section below.)

*If you do not have any reason to allow remote access, we suggest you set this to **No access**.*

ssh (secure shell)

ssh (secure shell) provides a secure, encrypted way to login to a remote machine across a network or to copy files from a local machine to a server. Many people do not realize that many programs such as telnet and ftp transmit your password in plain, unencrypted text across your network or the Internet. *ssh* and its companion program *scp* provide a secure way to login or copy files. The ssh protocol was originally invented by SSH Communications Security which sells commercial ssh servers, clients, and other related products. The protocol itself has two versions - SSH1 and SSH2 - both of which are supported by most clients and servers today. For more information about SSH Communications Security and its commercial products, visit <http://www.ssh.com/>.

OpenSSH, included with the 6000 MAS, is a version of the ssh tools and protocol. The server provides the ssh client programs as well as an ssh server daemon and supports both the SSH1 and SSH2 protocols. For more information about OpenSSH, visit <http://www.openssh.com/> [<http://www.openssh.com/>].

Once ssh is enabled, you should be able to connect to your server simply by launching the ssh client on your remote system and ensuring that it is pointed to the external domain name or IP address for your server. In the default configuration, you should next be prompted for your user name. After you enter *admin* and your administrative password, you will be in the server console. From here you can change the server configuration, access the Server Manager through a text browser or perform other server console tasks.

If you do enable ssh access, you have two additional configuration options:

- *Allow administrative command line access over ssh* - This allows someone to connect to your server and login as "root" with the administrative password. The user would then have full access to the underlying operating system. This can be useful if someone is providing remote support for your system, but in most cases we recommend setting this to *No*.
- *Allow ssh using standard passwords* - If you choose *Yes* (the default), users will be able to connect to the server using a standard user name and password. This may be a concern from a security point of view, in that someone wishing to break into your system could connect to your ssh server and repeatedly enter user names and passwords in an attempt to find a valid combination. A more secure way to allow ssh access is called *RSA Authentication* and involves the copying of an ssh key from the client to the server.

Note

By default, only two user names can be used to login remotely to the server: *admin* (to access the server console) and *root* (to use the Linux shell). Regular users are *not* permitted to login to the server itself.

3.4.1.1. ssh clients for Windows and Macintosh systems

A number of different free software programs provide ssh clients for use in a Windows or Macintosh environment. Several are extensions of existing telnet programs that include ssh functionality. Two different lists of known clients can be found online at <http://www.openssh.com/windows.html> [<http://www.openssh.com/windows.html>] and <http://www.freessh.org/>.

A commercial ssh client is available from SSH Communications Security at: <http://www.ssh.com/products/ssh/download.html> [<http://www.ssh.com/products/ssh/download.html>]. Note that the

client is free for evaluation, academic and certain non-commercial uses.

3.4.2. Remote Access Using SSL

It is also possible to specify individual remote hosts or entire subnets from which access is permitted. At the bottom of this Remote Access screen, entries can be added to a table that lists those subnets that have been given access. Simply provide the network IP address and the appropriate subnet mask to grant this additional access.

You can now connect to the server manager using the regular URL of *https://www.mydomain.xxx/server-manager*. You will be prompted for the admin user name and password.

3.5. Directory

Your 6000 MAS provides an easy mechanism for creating a company directory. Each time you create or delete an e-mail account, your directory is automatically updated.

Change LDAP directory settings

The LDAP server provides a network-available listing of the user accounts and groups on your Mitel Networks server, and can be accessed using an LDAP client such as the Address Book feature in Netscape Communicator. Configure your LDAP client with the local IP address of your Mitel Networks server, port number 389, and the server root parameter shown below.

Server root

You can control access to your LDAP directory: the private setting allows access only from your local network, and the public setting allows access from anywhere on the Internet.

LDAP directory access

These fields are the LDAP defaults for your organization. Whenever you create a new user account, you will be prompted to enter all of these fields (they can be different for each user) but the values you set here will show up as defaults. This is a convenience to make it faster to create user accounts.

Default department

Default company

Default Street address

Default City

Default Phone Number

You can either leave existing user accounts as they are, using the above defaults only for new users, or you can apply the above defaults to all existing users as well.

Existing users

In this section of the Server Manager, you specify the default directory information for new accounts - the user's department, company, street address, city and phone number. Each time you create an e-mail account, the fields will contain the information entered here as the default. If you wish, you can modify the default information for each user.

At any time, you can change the default information and choose whether to apply this new information to all new users or to all existing users as well. The field to do this is located near the bottom of the screen. Choosing "update with new defaults" is a convenient one-click method of revising your directory when, for example, your company has moved to a new address.

3.5.1. Configuring Your Company's Directory on Clients

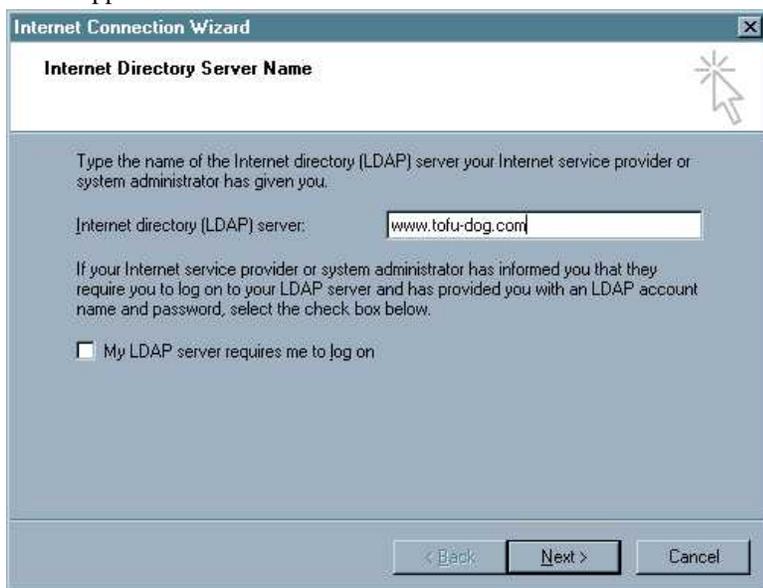
The 6000 MAS directory can be accessed using any client program that supports LDAP (Lightweight Directory Access Protocol). This includes Outlook Express, Netscape Communicator and Eudora.

To configure the company directory, enter the following information:

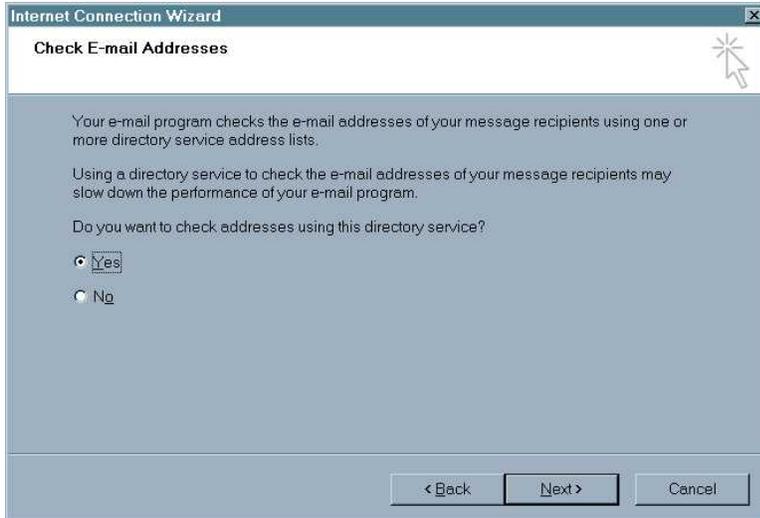
- The name you wish to give your company directory - any name will do.
- The name of the LDAP server. This is the same as the name of your 6000 MAS web server, in the form `www.yourdomain.xxx`.
- Server Root information. This can be found on the "Directory" screen in your Server Manager. The usual form, assuming your domain is `yourdomain.xxx`, is `dc=yourdomain,dc=xxx`. (No spaces should be entered between the "dc=" statements.)
- Port Number, which is always 389.

3.5.1.1. Configuring Outlook Express

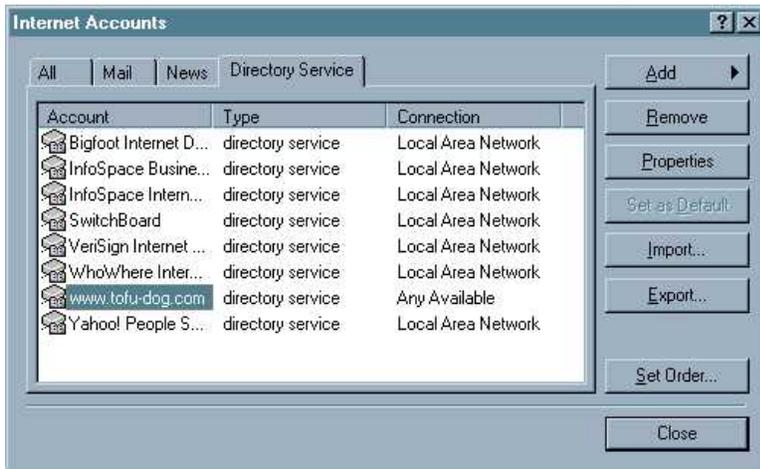
On the Outlook menu, select "Tools" and then "Accounts". Select "Add", then "Directory Service...". The following screen appears:



Enter the full URL of your 6000 MAS web server and then click "Next". The following screen appears:



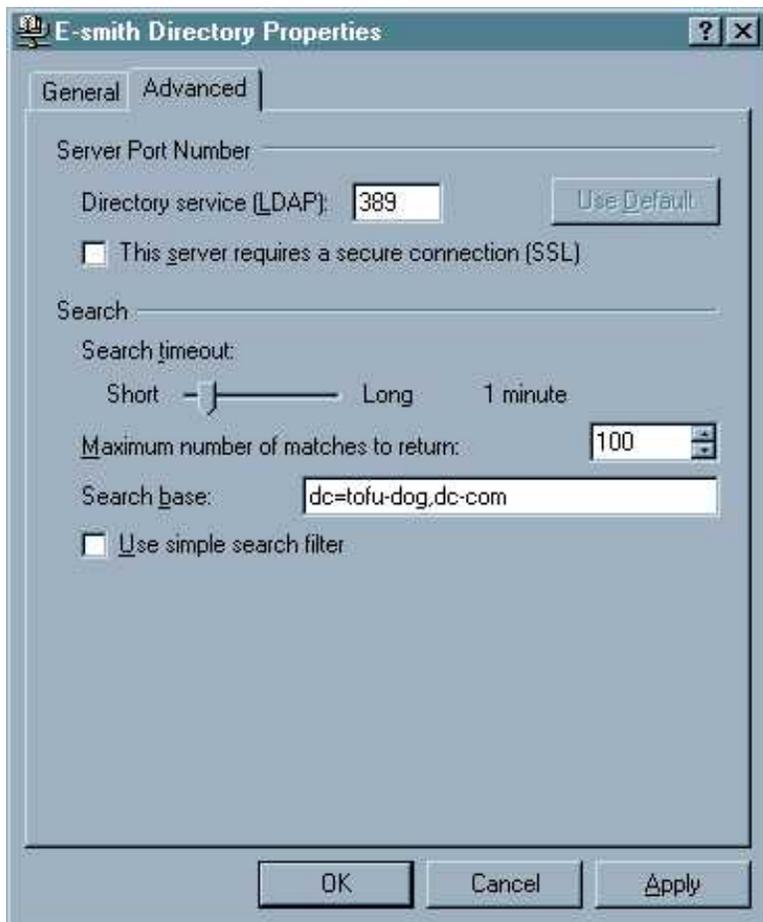
Select "Yes", then "Next", and then "Finish". After closing this screen, the following screen appears:



Select "Properties" to display the next screen:



In the General tab, type your desired directory name in the first field, then select the "Advanced" tab. You will see the screen below:



In the "Search base" field, enter the domain name, broken down per the tofu-dog.com example: *dc=tofu.dog,dc=com*.

3.5.1.2. Configuring Netscape

In the "Communicator" menu, select "Address Book". Then, in the "File" menu, select "New Directory". You will see a dialog box similar to the one shown below:

Name

Description: Catering Dept. Directory

LDAP Server: www.e-smith.tofu-dog.com

Server Root: dc=tofudog,dc=com

Port Number: 389

Maximum Number of Hits: 100

Secure

Login with name and password

Save Password

OK Cancel

Once the address book has been created, Netscape can display a list of all e-mail accounts if you type an asterisk into the search field and press "Enter".

Click "OK" to commit the changes. The LDAP configuration is now complete.

3.6. Printers

Your 6000 MAS enables all users on your network to easily share a printer. The printer can be either locally attached to a parallel or USB port on your server or can be a network printer. All the server needs is some basic information: the printer name (which can be anything you want, as long as it starts with a lower-case letter and consists only of lower-case letters and numbers, with no spaces), a brief description (for example, "the printer down the hall") and the location of the printer - whether it is on the network or directly connected to your server through a parallel or USB port.

Add or remove printers

Create a new printer

Please choose a unique name for the printer and enter a brief description. The printer name should contain only lower-case letters and numbers, and should start with a lower-case letter. For example "hplaser", "epsonlp", and "canonbj" are valid choices, but "HP Laser Jet", "Canon BubbleJet", and "HP JetDirect Printer" are not.

Printer name

Brief description

Location

If you choose "Network printer", you will see an additional screen that will ask for the hostname or IP address and the network printer name. Enter that information where requested. For the network printer name, you can use the default setting, `raw`, unless you have some reason to do otherwise. (`raw` is the name used by most network printers for their main print queues.)

Note

For maximum flexibility in making changes later, we suggest that you enter the hostname for a network printer here and enter the IP address of the printer through the Hostnames and addresses panel of the Server Manager. This allows you to have one central location listing IP addresses and allowing you to make changes. Note that many modern network printers can be configured automatically. To do so, enter their hostname, IP address and Ethernet address in the Hostnames and addresses panel.

Note also that the server printing system does not perform any filtering and passes the print requests *directly* from the client computers to the printer in the "raw" or "pass-through" machines. For this reason, the 6000 MAS does not have a list of "supported printers". Most printers are supported as long as the appropriate driver is installed in the operating system on your *client* computers.

However, be aware that some newer printers have only a Windows driver and rely heavily on that operating system to perform their print functions. These printers cannot be used on the 6000 MAS. If you are concerned about whether your printer will work with your server, please consult your Mitel Networks authorized reseller.

As a final item, you should be aware that in order to use the printers available through your server a user must be logged in to their client system with a user name and password that is valid on the server. For instance, if a user is logged in as `tturtle` on their Windows desktop and that user account does *not* exist on the server, the user will *not* be able to print to the printers managed by the server. Either the user will have to logout and log back in as a valid user or the `tturtle` account will need to be created on the server.

3.7. Hostnames and addresses

When your 6000 MAS was installed, a name was assigned to the server. That name and several other "standard" names are automatically configured in your system's *host table* during the installation process. This host table is consulted as part of the name resolution process. The "Hostnames and address" web panel allows you to modify this table and specify different host "names" for each domain on your system, as well as to control how those names resolve both for systems on your local network and also for systems on the larger Internet.

For instance, when someone tries to connect to "www.mycompany.xxx", they will be taken to wherever "www" has been set to point to. As seen in the image below, this screen in the Server Manager allows you to view these default settings, and also to modify the configuration.

Using the Hostnames Panel with ServiceLink

Throughout the screens linked to from the Hostnames panel, you will find the text "Publish globally?" with a checkbox next to it. 6000 MAS subscribers have the option of publishing these records through the ServiceLink DNS Configuration and Hosting service. If you select this option, the hostname and IP address information that you enter will be uploaded to the AMC and published through the global DNS system.

Hostnames and addresses

[Click here](#) to create a new hostname.

Current list of hostnames for tofu-dog.com.

Hostname	Visibility *	Location	Local IP	Global IP	Ethernet address		
ftp.tofu-dog.com	Local	Self				Modify...	Remove...
mail.tofu-dog.com	Local	Self				Modify...	Remove...
ottawa1.tofu-dog.com	Local	Self					
proxy.tofu-dog.com	Local	Self				Modify...	Remove...
wpad.tofu-dog.com	Local	Self				Modify...	Remove...
www.tofu-dog.com	Local	Self				Modify...	Remove...

Suppose, for example, your company's web site was hosted at some other location, such as on your ISP's web servers. If you wanted "www.mycompany.xxx" to point to your ISP's server, you would modify the entry here by clicking the "Modify..." link next to "www". The image below shows the screen in which you would perform the task:

Hostnames and addresses

Create/modify hostname

The hostname must contain only letters, numbers, and hyphens, and must start with a letter or number.

Hostname

Domain

Host type

If you select "publish globally" this hostname will automatically be made available throughout the Internet.

Publish globally

You would first change the location to "Remote" and then enter the IP address of your ISP's server in the field marked "Global IP".

3.7.1. Creating New Hostnames

Creating new hostnames simply involves selecting one of the links at the top of the Hostnames and addresses panel and filling out the appropriate fields. As mentioned previously, if you are a 6000 MAS subscriber you can check "Publish globally?" and your changes will be propagated to the global DNS system automatically.

Note that if your system is configured with any virtual domains, you will have the choice of the domain in which you want to create the hostname. This allows you, for instance, to have "www.tofu-dog.com" pointing to one IP address and "www.mycompany.xxx" pointing to a completely separate IP address.

Note

Beyond your primary domain and any virtual domains you may have configured, 6000 MAS subscribers also have the option of adding hostnames in the special `e-smith.net` domain.

The hostnames you can create on this panel fall into three categories:

Additional names for your server: For instance, you might want to set up "intranet.mycompany.xxx" to point to your server. All you do here is enter the hostname and, if appropriate, choose the domain for the hostname.

Remote hosts: As mentioned in the example earlier, you might want to point a hostname such as "www" to a remote system. While "www" is created by default, you can create other names such as "home", "research", or any other appropriate name. In the form, you simply enter the hostname, choose the domain, and enter the remote IP address.

Local hosts: This screen is a bit more complicated because you have more options. At a basic level, you can create a hostname in a domain that points to another computer on your local network. To do this, just type in the hostname and enter the IP address in the "Local IP" field. For instance, you might want "research" to point to a computer system inside your network.

Where this gets complicated is when you want "research.mycompany.xxx" to be accessible both *inside* and *outside* your local network. The challenge is that your local IP addresses are only accessible *inside* your network. For that reason, the target computer system will need to have two network interface cards - one connected to the internal network and one connected to the external network. You would then enter both IP addresses in this screen in the "Local IP" and "Global IP" fields. Note that this will only work if you are a 6000 MAS subscriber as the server alone does not update public DNS information.

Note

The "Ethernet address" field when creating a hostname pointing to a local host is only used for reserving IP addresses through DHCP as mentioned in the next section.

3.7.2. Reserving IP Addresses Through DHCP

Another task you can perform through this panel is to reserve an IP address for a given system based on its Ethernet address. For instance, you might have another intranet web server within your company that requires a consistent IP address. One method of assigning that address is to manually configure the client machine with a static IP address. The drawback is that if you later want to change the network settings for that machine, you must manually configure that machine. Additionally, you have to keep track of the fact that you have assigned a specific IP address to that machine.

Rather than configuring the machine manually, you can *reserve* an IP address from the DHCP server for that specific machine. This has the same result as manually configuring a static IP address, but offers two benefits. First, you have one location to keep track of all assigned static address. Second, through the DHCP server you will provide network settings. If you wish to change those settings, the change can be done from your server. All DHCP clients will then receive those updated changes when they renew their DHCP-provided addresses.

To reserve an IP address, you must first determine the Ethernet address of your client system. Windows NT/2000 users can type the command `ipconfig /all`. Windows 95/98 users can run the command `winiipcfg`. Linux/

UNIX users can type `ifconfig`.

Once you have determined the client's Ethernet address, click the link to create a new hostname for a *local* host. Add the hostname of the target system, the Ethernet address along with the desired IP address into the web panel. From this point on specified IP address will only be provided to a client system with the matching Ethernet address.

3.8. Virtual Domains

When you are supporting multiple domains on a single server, each domain being served is referred to as a *virtual domain*. (The strict definition of virtual domain is when a single IP address is shared between multiple domains.) When you create a virtual domain using this section of the Server Manager, your 6000 MAS will be able to receive e-mail for that domain and will be able to host a web site for that domain.

To create a virtual domain, fill in the domain name and a description of the site. You then tell the server where to find the content for that domain - it can be the same as your primary web site, or you can create a new set of web pages and store them in one of your i-bays. Clicking the arrow in the "Content" field will show you a list of your current i-bays and allow you to make a selection. This feature allows you to host multiple web sites from a single server.

Be aware that you can point the virtual domain to either the *primary* web site or to one of the *i-bays*. You cannot point a virtual domain to a subdirectory that you simply create inside of the primary web site file area. You need to use an i-bay instead.

Note

When you are entering the name for the virtual domain, you should supply the *fully-qualified domain name*. This is the full name of the domain, including any extensions like ".com", but *without* any prefixes like "www" or "ftp". For instance, you can create a virtual domain by entering "tofu-bird.com", but *not* by entering "tofu-bird" or "www.tofu-bird.com".

Once you have created a virtual domain, your server will be automatically configured to answer to web requests for `www.domainname.xxx` and will accept e-mail for your virtual domain as well.

Important

In order for users on the Internet to connect to your 6000 MAS using the virtual domain, the appropriate DNS entries must point to the IP address of your server. If your 6000 MAS subscription includes DNS Services, this can be done automatically. Please contact your Mitel Networks authorized reseller for assistance.

3.9. E-mail

The E-mail Retrieval panel of the Server Manager allows you to specify the protocol used to retrieve e-mail from your ISP and to configure other settings related to the retrieval of e-mail.

E-mail retrieval

The e-mail retrieval mode can be set to standard (for dedicated Internet connections), ETRN (recommended for dialup connections), or multi-drop (for dialup connections if ETRN is not supported by your Internet provider).

E-mail retrieval mode

Standard ▾

Your Mitel Networks server includes a complete, full-featured e-mail server. However, if for some reason you wish to delegate e-mail processing to another system, specify the IP address of the delegate system here. For normal operation, leave this field blank.

Delegate mail server

For ETRN or multi-drop, specify the hostname or IP address of your secondary mail server. (If using the standard e-mail setup, this field can be left blank.)

Secondary mail server

For ETRN or multi-drop, you can control how frequently this Mitel Networks server contacts your secondary e-mail server to fetch e-mail. More frequent connections mean that you receive your e-mail more quickly, but also cause Internet requests to be sent more often, possibly increasing your phone and Internet charges.

During office hours (8:00 AM to 6:00 PM) on weekdays

Every 5 minutes ▾

Outside office hours (8:00 AM to 6:00 PM) on weekdays

Every 30 minutes ▾

During the weekend

not at all ▾

POP user account (for multi-drop)

POP user password (for multi-drop)

Select sort method (for multi-drop)

Specify below ▾

Select sort header (for multi-drop)

Save

Your choice of e-mail retrieval mode will depend on the arrangements you made with your Internet service provider:

- *If you have a dedicated connection*, set E-mail retrieval mode to "Standard".
- *If you arranged "ETRN" support with your ISP*, choose that setting and then scroll down to the field that asks for the IP address or hostname of your ISP's secondary mail server. This secondary mail server will provide temporary e-mail storage when your server is not connected to the Internet.
- *If you arranged "multi-drop" mail service from your ISP*, choose "multi-drop" and then scroll down to the field that asks for the IP address or hostname of your ISP's secondary mail server. This secondary mail server will receive all e-mail for your domain and store it in a single POP mailbox. Further down the screen, you will need to specify the user account and password assigned by your ISP for this POP mailbox. Your server will periodically fetch this mail and distribute it to individual POP mailboxes on the server. (Note that due to problems receiving mail for mailing lists, we *strongly* encourage people to *NOT* use multi-drop e-mail.)

If you want to forward e-mail to another mail server for processing, enter the mail server IP address in the box marked *Delegate mail server*. A common use for this is if your server is receiving inbound e-mail from the Internet, but you would like to pass that mail to a different mail server on your internal network.

If you have a dialup connection, the server allows you to control how frequently it fetches e-mail from your ISP. This is particularly useful in situations where you incur phone or Internet charges each time your system contacts your ISP. The default settings are every 15 minutes during standard office hours and every hour outside normal of-

five hours on weekdays or on weekends. The fields allow you to customize those settings.

Finally, if you have "multidrop" mail service you need to select the sort method used by the server to decide which user each message should be delivered to. Your server has a default method for this (it examines various headers such as "To" and "Resent-To") which works in most circumstances but is not suitable for certain purposes such as mailing list messages. Some ISPs add a header to each e-mail message which can help your server determine the correct recipient. If your ISP does not add a header to multidrop e-mail, select the "Default" sort method and ignore the "select sort header" field. If your ISP does add a header to multidrop e-mail, then select "Specify below" and enter the header tag provided by your ISP. Because you *will* experience problems with mailing-lists when using multidrop e-mail, we strongly recommend that you work with your ISP to have a special header added to each message. The "Default" sort method should be only used as a last resort.

The Other E-Mail Settings panel presents you with additional options for controlling how your system handles e-mail.

Change other e-mail settings

Administrative notices generated by the Mitel Networks server are normally e-mailed to the **admin** account. If you would like them to be e-mailed elsewhere, please enter the e-mail address below. Otherwise, leave this field blank.

Forwarding address for administrative notices

Whenever the Mitel Networks server receives a message to an unknown user, it can be returned to the sender with an error message (recommended practice) or sent to your system administrator (as an administrative notice).

E-mail to unknown users

The Mitel Networks server can deliver outgoing messages directly to their destination (recommended in most cases) or can deliver them via your Internet provider's SMTP server (recommended if you have an unreliable Internet connection or are using a residential Internet service). If using your Internet provider's SMTP server, specify its hostname or IP address below. Otherwise leave this field blank.

Internet provider's SMTP server

You can control access to your POP and IMAP servers. The private setting allows access only from your local network(s), and the public setting allows access from anywhere on the Internet.

POP and IMAP server access

You can enable or disable webmail on this system. Webmail allows users to access their mail through a regular web browser by pointing the browser to ottawa1.tofu-dog.com/webmail, and logging in to their account.

Enable/Disable Webmail

- *Forwarding address for administrative notices:* The default address for administrative notices (i.e. undeliverable mail, backup notifications and other status/error messages) is "admin". If you want those messages to be sent elsewhere, enter the address here.

Note

Be aware that all messages sent to `postmaster`, `root` or `mailer-daemon` at your domain are sent to either `admin` or the address that you enter in this field.

- *E-mail to unknown users:* This field allows you to choose whether incoming messages to unknown or non-existent users are bounced back to the sender or forwarded to the system administrator. Some users prefer the latter setting because it allows them to catch and reroute e-mail that was incorrectly addressed.

Note

If you choose to have messages forwarded to the system administrator, they will be sent to "admin" or to the e-mail address specified in the forwarding address field mentioned above.

- *Internet provider's SMTP server:* Normally the server will send outgoing messages directly to their intended destination. If, however, you have an unreliable connection or are using a residential Internet service, it may be advisable to route e-mail via your provider's SMTP server. In that case, you should enter the SMTP server's host-name or IP address here.

If you have a temporary dial-up connection to the Internet, you may find that you *need* to use your ISP's mail server in order to deliver mail to some locations. In order to crack down on the huge volume of unsolicited commercial e-mail ("spam"), many Internet sites are refusing direct SMTP connections from IP addresses that are known to be temporary dial-up accounts. For this reason, you may need to use your ISP's mail server since it will have a permanent connection to the Internet.

- *POP and IMAP server access:* The options are "Private" and "Public". The former allows access only from your local network. The latter allows access from anywhere on the Internet. Think about this carefully. On the positive side, choosing "Public" access allows any of your users to retrieve their e-mail via POP/IMAP from anywhere on the Internet. The negative side is that when you do this, you are reducing your level of security, as you will now have two more services (POP and IMAP) that are listening for connections across the Internet. Both protocols also involve transmitting your password across the Internet in plain, unencrypted text, opening up the possibility that someone could intercept the packets and learn your username and password. Allowing such access can be a great convenience to your users, but if security is a concern you should consider using encrypted webmail instead.

IMPORTANT

Even with POP and IMAP configured for public access, users outside your local network are not able to *send* e-mail using your server as their SMTP host. Allowing this would open your server to abuse by spammers as a mail relay. Users who are traveling should use PPTP to connect to your internal network; or use webmail to read their mail. Webmail provides your users with secure access to read and send mail via your server.

- *Enable/Disable Webmail:* With this option you can enable or disable the webmail component of your server. More information can be found in the Webmail chapter.

3.9.1. Configuring Your E-mail Application

Each user's e-mail application requires information about that user's account, where to send outgoing e-mail and pick up incoming e-mail. This information is usually entered in the "preferences" or "options" section. Most e-mail applications require you to enter the following information:

User's e-mail address: The user's e-mail address is the user account as created in the Server Manager plus the @domain name. Typically it will be in the form of *username@yourdomain.xxx* (e.g. *afripp@tofu-dog.com*).

E-mail server or outgoing e-mail SMTP server: This is the name of the e-mail server from the server. Normally you should just enter **mail** here. If you prefer, you should also be able to use the full domain name of *mail.yourdomain.xxx* (e.g. *mail.tofu-dog.com*).

E-mail account name or user name: this is the name before the @ in the e-mail address. For example, the username for "afripp@tofu-dog.com" is "afripp".

If you choose POP3 e-mail service:

Enable POP3 protocol: Typically, to enable the POP3 protocol for incoming e-mail, you click on the POP3 checkbox or select POP3 from a pull-down menu in the section of your e-mail application dedicated to the incoming e-mail server.

Disable IMAP protocol: To disable the IMAP protocol for outgoing mail (not all e-mail applications have IMAP protocol) click the IMAP checkbox "off".

Delete read e-mail from server: We recommend you configure your e-mail application so e-mail that has been read is not left on the server. To do this, click off the checkbox marked "leave mail on server" or click on the checkbox marked "delete mail from server".

If you select IMAP e-mail:

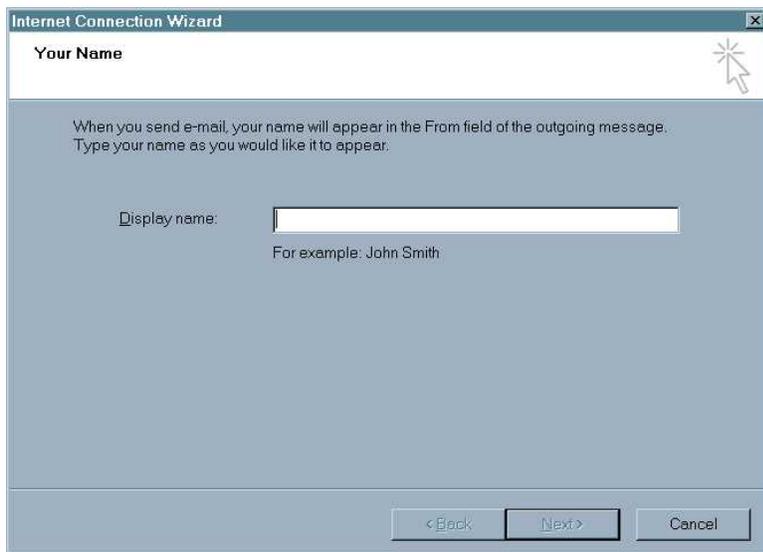
Enable IMAP protocol: Typically, to enable the IMAP protocol for incoming e-mail (note that not all e-mail applications offer IMAP support) you click on the IMAP checkbox or select IMAP from a pull down menu in the section of your e-mail application dedicated to the incoming e-mail server.

Disable POP3 protocol: To disable the POP3 protocol for outgoing mail, click the POP3 checkbox "off".

3.9.1.1. Configuring Outlook Express

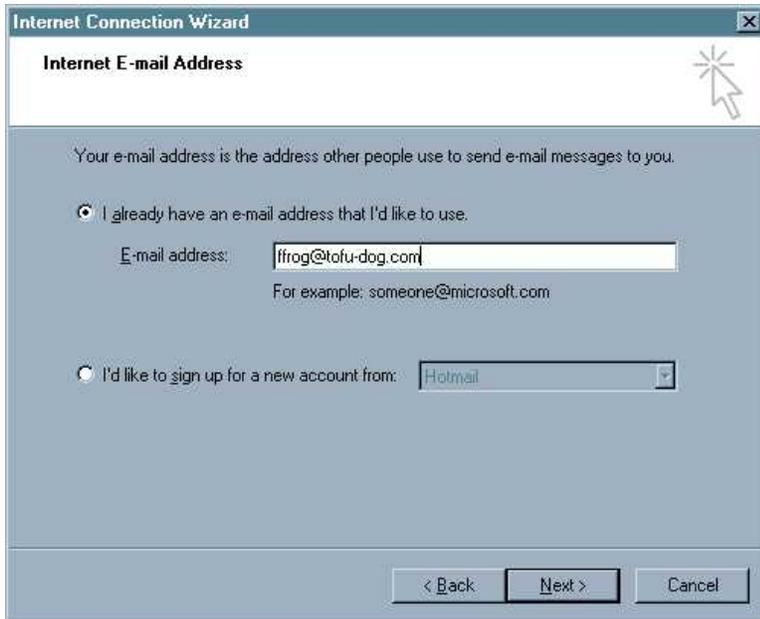
This section provides a step-by-step overview of configuring the Outlook Express e-mail client to access the 6000 MAS e-mail server. The process is similar for Outlook and other e-mail clients.

When the e-mail client is opened for the first time, the following screen is displayed. Enter the full name of the user and click "Next".

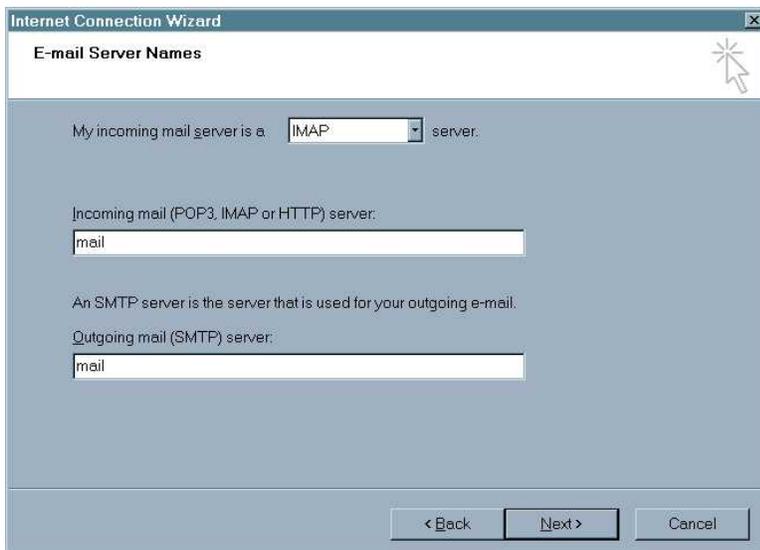


The next screen is where the user's e-mail address is entered. E-mail addresses are in the same format as the user's logon ID. The system also supports aliases of the form "*firstname.lastname*" and "*firstname_lastname*".

Enter the e-mail address (checking the domain name spelling) of the user and click "Next". You will see the screen below:



In the next screen, select "IMAP" as the server type, and enter "mail" as the server name in both fields. Click "Next". You will see the screen below:

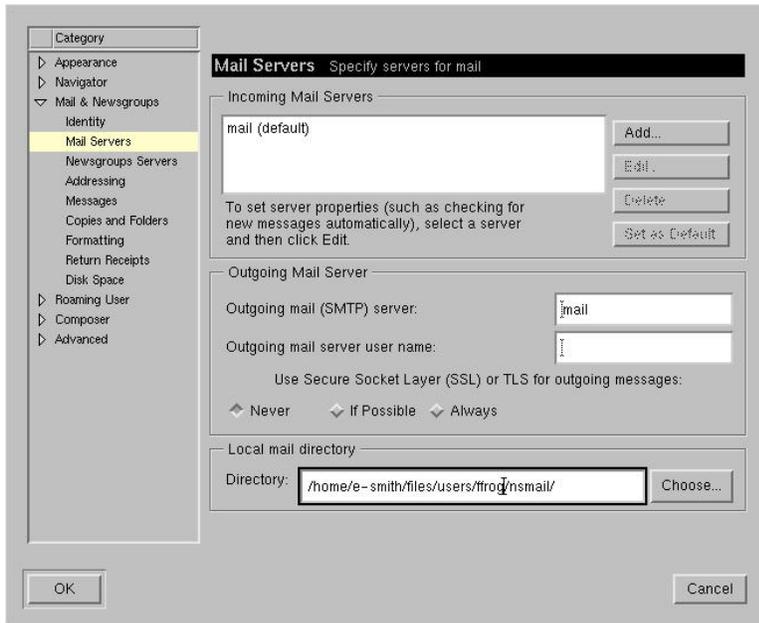


In the next screen, enter the password (the same as the network password) and go to the final screen. Click "Finish".

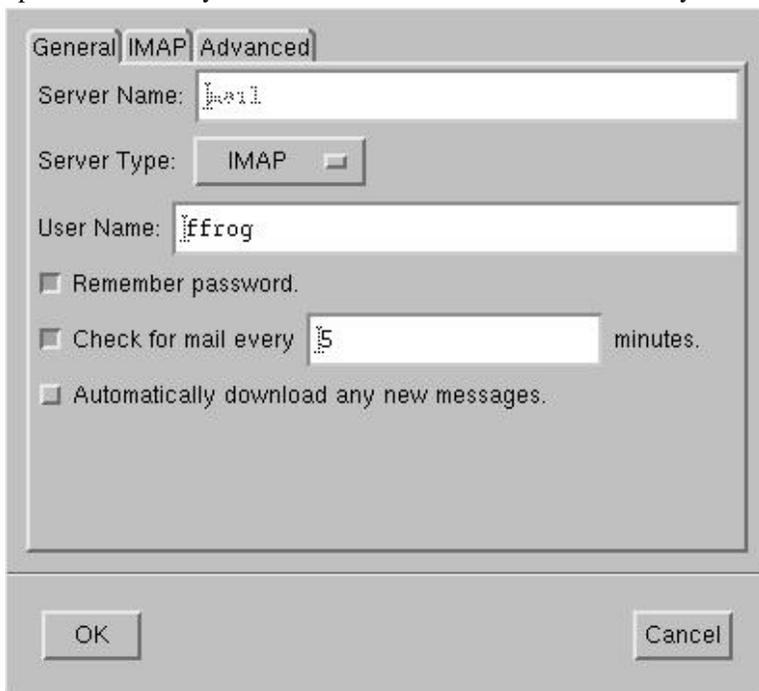
The program will ask if you want to synchronize folders. Click "Yes", and then "OK" to exit.

3.9.1.2. Configuring Netscape

The images below show you the sequence in Netscape. First you choose *Preferences* from the *Edit* menu and click on *Mail Servers*, as shown in the following image:



If you have not configured a mail server yet, you will need to press the *Add...* button and enter information about your server. Otherwise, you will select the default mail server listed and click on the *Edit...* button. This will bring up a screen where you enter the user name and choose whether you are using IMAP or POP3:



Netscape should now be ready to send and receive e-mail.

3.10. Configuring Your Web Browser

Most browsers are configured using a dialog box called "preferences", "network preferences" or "options". Some browsers need to be configured to access the Internet either directly or via a proxy server. When required, most desktop applications, your web browser included, should be configured as though they were directly accessing the Internet. Although the server uses a security feature known as IP masquerading, thereby creating an indirect connec-

tion to the Internet, this is a transparent operation to most of your desktop applications. Hence, you should ensure that the "Direct connection to the Internet" check box is clicked "on" in your web browser.

Your 6000 MAS includes a proxy server that caches all web pages that your users request. As a result, users may perceive that network performance is much faster when browsing the web. You *do not need to do anything* to configure your client web browsers to use the caching proxy server. It is automatically enabled and is transparent to your users.

3.11. Choosing Your Web Browser Language

The Server Manager supports any language that uses the Roman alphabet and reads left to right. However, the user interfaces are currently available only in English and Canadian French. Contact your authorized reseller for more information regarding translations into other languages.

Your browser language setting will determine which language the Server Manager will display. For example, if the browser language is set to "en" or "en_US", the Server Manager panels will be displayed in English. If the browser language is set to "fr-ca", the Server Manager panels will be displayed in Canadian French. Choosing any other language for which the translations have not been installed will result in defaulting to English ("en").

Example: How to configure your Netscape browser to display the Server Manager in French.

1. Open your browser. Click "Edit/Preferences/Navigator/Languages".
2. Choose "Add" to add a new language.
3. Select "French/Canada [fr-ca]" and then click "OK".
4. To make French the first choice language, select it and then use "Move Up" until it is at the top of the choices.
5. Connect to <https://www.yourdomain.xxx/server-manager> . It should now display in Canadian French.

Note

You *must* choose "French/Canada [fr-ca]". Choosing "French [fr]" will still result in the pages being displayed in US English.

Note

It is possible to install in Canadian French and have the console displayed in French, but have two operators displaying web pages in their chosen languages - English and Canadian French.

Example: How to configure your Internet Explorer browser to display the Server Manager in French.

1. Open your browser. Click "Tools/Internet Options". Choose the "General" tab, and click "Languages".
2. Choose "Add" to add a new language.
3. Select "French/Canada [fr-ca]" and then click "OK".
4. To make French the default language, select it and then use "Move Up" until it is at the top of the choices.
5. Connect to <https://www.yourdomain.xxx/server-manager> and it should now display in Canadian French.

Note

You *must* choose "French/Canada [fr-ca]". Choosing "French [fr]" will still result in the pages being dis-

played in US English.

Note

It is possible to install in Canadian French and have the console displayed in French, but have two operators displaying web pages in their chosen languages - English and Canadian French.

3.12. Backup or Restore

You can easily back up the contents of your 6000 MAS to a local desktop or to a tape drive. Both are controlled through the web panel shown below.

Backup or restore server data

The Mitel Networks SME Server provides two ways to back up and restore your server: using your local desktop or a tape drive.

The first method creates a copy of your server configuration and user data files, and downloads it to your local desktop via your web browser. Currently your configuration and data files total approximately **356kb**. The backup file will be somewhat less than this, depending on how compressible the data are. The "Verify desktop backup file" option can be used to check the integrity of a desktop backup file.

The tape backup method uses a software package called *flexbackup* to back up your entire hard disk to tape every night. This requires a supported tape drive and a tape that is not write-protected. The backup is performed automatically at the selected time every night (with a reminder automatically e-mailed to the administrator during the day). Currently your hard disk contains **489Mb** of data.

Both restore methods allow you to restore your configuration and user data files. **Ideally, the restore should be performed on a freshly installed Mitel Networks SME Server.**

Backup configuration and status

Tape backups are **disabled**

Select an action: 

You have four actions you can perform, each of which is described in the following sections.

3.12.1. Backup To Desktop

The first type of backup allows you to save a snapshot of your server configuration onto your desktop computer. This will save all user accounts, user directories, i-bay contents and web content, as well as the configuration parameters entered using the server console and the Server Manager. The web panel shows you the size of the backup file so that you can verify whether sufficient space exists on your desktop machine.

When you choose *Backup to desktop*, a browser window will appear that will allow you to name the file and select the location on your desktop where the file will be saved.

Warning

The *Backup to Disk* process saves all of your data to a single, large compressed file and is therefore limited by the maximum file size of the *client* operating system. For example, if you are backing up data to a Windows client that uses the FAT file system (the default for many versions of Windows), you are limited to a maximum file size of 2 GB. Other file systems may have a larger limit. If the *Backup to Disk* process creates a compressed file larger than this limit, it will not be able to be properly restored. Use the *Verify Desktop Backup File* option in the action drop-down list to ensure the backup was successful.

3.12.2. Restore From Desktop

If you ever need to restore the original configuration and files to your server, simply select *Restore from desktop* and a browser window will prompt you to select the backup file from your desktop. Restoration of the information is automatic.

Warning

Ideally you should use *Restore from desktop* on a freshly installed server. Therefore, if you are planning to do a restore, you should first re-install the 6000 MAS software and *then* perform the "Restore from desktop" command.

3.12.3. Verify Desktop Backup File

This option allows you to verify that the backup to disk was completed successfully. From the drop-down list under Backup Configuration and Status, select "Verify desktop backup file".

3.12.4. Configure Tape Backup

The second type of backup involves configuring your system to perform a daily full system backup to a tape drive. If you wish to activate this option, check the box next to *Enable Tape Backup* and then specify the time at which you wish the backup to occur and the time at which reminder notices should be sent.

Enable/Disable Nightly Tape Backup

Select whether you wish to enable nightly backups. Then indicate the desired times for the backup and the load tape reminder.

The tape backup requires a supported tape drive. A warning message will be sent to the administrator at the designated reminder time if the tape drive is empty.

Enable tape backup

Tape backup time of day (hour/min) AM/PM:

Load tape reminder time of day (hour/min) AM/PM:

Be aware that you must use a supported tape drive and that a tape must be inserted in the drive for the backup to work.

Note

Reminder e-mail messages for tape backups are automatically sent to the e-mail address that is configured to receive administrative notices. This is normally the user *admin*, but you can change this by going to the "Other e-mail settings" panel in the Server Manager.

3.12.5. Restore From Tape

If you are performing regular backups, you can restore user data and configuration settings by using the *Restore From Tape* option. The system will then read the files from tape and overwrite any currently existing files. *You must reboot your system* after the restore for the changes to take effect. Note that in order to restore data from tape, you must have first checked *Enable Tape Backup* and scheduled nightly backups. If you have not done this, you will not be able to restore from tape using the Server Manager.

Warning

Note that this restore procedure *only* restores user data and configuration information. It does *not* restore system files. If you experienced a serious system crash, you should *first* re-install the 6000 MAS software

and then perform a restore from tape.

3.13. Review Configuration

This section of the Server Manager summarizes how your server is configured. This is the data that you entered during the installation process and possibly changed later through the server console or the Server Manager. As you can see from the screen below, this is essentially a report that you can print out for your records. You do not have the ability to make changes from this screen.

Review configuration

This report summarizes the networking, server, and domain parameters on this Mitel Networks server relevant to configuring the client computers on your network. You may wish to print this page and use it as a reference.

Networking parameters	
Server Mode	servergateway
Local IP address / subnet mask	192.168.202.1/255.255.255.0
External IP address / subnet mask	192.168.16.222/255.255.255.0
Gateway	192.168.16.1
Additional local networks	No additional local networks defined
DHCP server	disabled
Server names	
DNS server	192.168.202.1
Web server	www.tofu-dog.com
Proxy server	proxy.tofu-dog.com:3128
FTP server	ftp.tofu-dog.com
SMTP, POP, and IMAP mail servers	mail.tofu-dog.com
Domain information	
Primary domain	tofu-dog.com
Virtual domains	No virtual domains defined
Primary web site	http://www.tofu-dog.com/
Mitel Networks SME Server manager	http://ottawa1/server-manager/
Mitel Networks SME Server user password panel	http://ottawa1/user-password/
E-mail addresses	useraccount@tofu-dog.com firstname.lastname@tofu-dog.com firstname_lastname@tofu-dog.com

Chapter 4. Collaboration

4.1. User Accounts

User accounts should be set up for each person in your organization. A user account includes separate, password-protected e-mail and file storage areas.

If this is the first time you are setting up user accounts for your organization, you will need to establish your naming convention. Let's assume you've decided that the account name should consist of first initial and last name. So, if you have an employee named Fred Frog, Fred's user account would be "ffrog". Assuming your domain name is tofu-dog.com, Fred's e-mail address would be "ffrog@tofu-dog.com". Fred's file directory on the server would also be named "ffrog". There are some basic rules built into the server as to what constitutes a valid account name. The account name must contain only lower-case letters and numbers and should start with a lower-case letter (not a number).

User account names are limited to twelve characters to maintain consistency with various versions of Windows. Longer names can be created for e-mail through the Pseudonyms panel. Note that pseudonyms of first-"name.lastname" and "firstname_lastname" are automatically created for each account.

User accounts

[Click here](#) to create a user account.

You can modify, lock or remove any account or reset the account's password by clicking on the corresponding command next to the account.

If the account is marked as locked, that means that the user's password needs to be reset. Please note that newly created accounts are automatically locked until the password is changed.

Account	User name				
ffrog	Fred Frog	Modify...	Reset password...	Lock account...	Remove...
ssalmon	Sally Salmon	Modify...	Reset password...	Account is locked	Remove...

In the *User Accounts* section of the Server Manager, you will see a list of your current accounts. If you haven't already created any accounts, select "Click here" and fill in the requested information - the account name (the part of the e-mail address that comes before "@"), the person's name, address, department, company and phone number. As a convenience, the defaults that you entered in the *Directory* section of the Server Manager appear each time you create a new account. You can, if necessary, modify the information for each user as you create the account.

From the list of user accounts, you can easily modify or remove a user account (by clicking on "modify" or "remove" next to the user name) or set the user's password. *User accounts are locked out and cannot be used until you set the initial password for each account.* As a reminder of this, user accounts appear in red until the password is changed. (In the example shown here, the administrator has not yet changed the password for user "Sally Salmon").

Note

If you want someone to have an e-mail address at your company, but want the messages forwarded to another external e-mail address, you can create the user account but set the e-mail delivery option in the user account to *Forward to address below* and enter the external address. If you leave the user account locked out, the user will not be able to access services on your server, but the e-mail *will* be delivered to the external e-mail address.

4.1.1. Disabling User Accounts

There may be times when you do not wish to delete a user account but instead merely want to disable it. For instance, when an employee leaves the company, you may want to immediately remove their access to the server, but still keep their files or e-mail address active until the information can be examined. To disable any user account on your server, click the "Lock Account" link on the *User Accounts* web panel. *As soon as you click the link*, the account will be locked out. The user will no longer be able to retrieve e-mail or connect to any files or other resources

on the server.

When an account is disabled, e-mail *will* still be received for that user name, but the user will be unable to retrieve the e-mail. As noted above, if a user account is set to forward e-mail to an external e-mail address, the e-mail *will* be forwarded to that external address. To prevent this, you will need to modify the properties for that user account.

To re-enable the user account, you need to reset the password using the link on the User Accounts web panel.

4.1.2. Changing User Passwords

Once users have an active account, they can set their own passwords by accessing the `user-password` URL. They do this by pointing their web browsers at `www.yourdomain.xxx/user-password` (where "www.yourdomain.xxx" is the web server name you entered into the server console). The staff at The Pagan Vegan would visit the URL `www.tofu-dog.com/user-password`.

To make the change, a user would enter his or her account name (the characters before "@"), the old password and the new password (to ensure accuracy, the screen asks for the new password twice). Note that changing the password for a user in the Server Manager overrides any previous password entered by your user. Therefore, when a user forgets his password, simply reset it in the Server Manager.

Note

There is no way for the administrator to recover a forgotten password for a user. Instead, set a *new* password for the user.

Windows NT/2K/XP users can set their passwords from the Windows client, *if* your 6000 MAS is configured to be the domain controller for your domain. (This is configured on the Workgroup panel in the Server Manager). To set a user password, press `Ctrl/Alt/Delete`, then click `Change Password...` Enter the old and new passwords.

4.2. Groups

This screen allows you to create, remove or change user groups, which are lists of people with a shared interest - for example, they work in the same department or are collaborating on a project. The user group function serves two purposes: it permits e-mail to be sent conveniently to a group of users, and it allows the system administrator to associate groups of users with a single information bay (or i-bay; for more information, see I-bays).

Creating a new group is a simple three-step process. Enter the group name (as with account names, these should begin with a lower-case letter and consist only of lower-case letters and numbers), followed by a brief description. Finally, check the boxes next to the names of users who should be associated with that group.

Warning

When you create a group, you are required to assign *at least one* user to that group. If you fail to do so, the group will not be created and you will receive an error message.

After you add (or remove) a user account from a group, the user must log out and log back in for those changes to take effect. Until the user does so, he or she will still have their old group membership information. For instance, say that you create a new group "sales" and assign user "ffrog" (Fred Frog) to that group. You then create a new i-bay called "salesinfo" that only the "sales" group can access. Fred Frog is still logged into a Windows PC and now tries to connect to the new i-bay through Windows Explorer. He will receive a permission-denied error. He must log out of Windows (there is no need to shut down or reboot) and login again. Now he should be able to go through Windows Explorer and access the "salesinfo" i-bay without any problem.

4.3. Quota Management

By default, there is no size limit on the files a user may store on the server or the amount of e-mail he or she may receive. If you wish to limit the disk space a particular user account can use, you may do so on the "*Quota manage-*

ment" panel in the Server Manager. As shown in the image below, you will see a list of user accounts, the actual disk space they are using and the quotas, if any, set for that user account.

Manage user account quotas

You can set filesystem quotas for users on your system by clicking the "Modify" button next to the user you wish to update.

If the user exceeds the "Limit with grace period", warnings will be generated. If this limit is exceeded for longer than a week or if the "Absolute limit" is reached, the user will be unable to store any more files or receive any more e-mail.

A setting of '0' for either limit disables that limit for the corresponding user.

The disk space for each user includes the user's home directory, e-mail, and any files in information bays which are owned by the user.

Current Quota Usage and Settings

Account	User name	Limit with grace period (mb)	Absolute limit (mb)	Current usage (mb)	
ffrog	Fred Frog	0	0	0.03	Modify...
ssalmon	Sally Salmon	0	0	0.03	Modify...

Warning

Note that the quotas apply to *all* files that a user stores on the server. This includes not just their home directory, but also all files that they may put into any of the i-bays.

There are two quotas that can be applied to each user account:

- *Limit with grace period* - when a user's disk usage exceeds this limit, an e-mail warning message will be sent to the user account each night until the disk usage is brought back under the limit.
- *Absolute limit* - when a user's disk usage hits this limit, the user will no longer be able to save files to the server or receive e-mail.

Note that if the user account exceeds the "Limit with grace period" for seven consecutive days, the account will be treated as if it exceeded the absolute limit and will no longer be able to save files or receive e-mail.

Important

E-mail for the user account is *not* lost! It is held in the delivery queue and will be delivered to the user when their disk usage drops back below their absolute limit (or the "limit with grace period" if they were locked out due to seven days above that limit).

By selecting "Modify..." you are able to set a quota (in Megabytes) for a particular user account. Note that you do not have to set *both* limits for a user account and can choose to set only one of the limits.

If you later wish to *disable* the quota for a given user account, all you need to do is set the limit to "0".

4.4. Pseudonyms

Any user who has an account on your 6000 MAS will be able to receive e-mail sent to that user ID. For instance, if you have a user named Fred Frog with the user account "ffrog", his primary e-mail address will be "ffrog@mycompany.xxx".

Likewise, when you create a group account, that group account name functions as an e-mail *alias*, so that messages addressed to the group ID (coming from internal or external) will be sent to all members of the group. If, for example, you create a group called "sales", messages to "sales@mycompany.xxx" will be distributed automatically to all members of that group. As you add and remove members to the group, your server automatically updates the e-mail alias.

In addition to user and group accounts, however, your server also automatically creates several *pseudonyms* . For instance, for *each* user account, the server creates two separate pseudonyms using the first and last names of the user. These two pseudonyms are in the form of "firstname.lastname" and "firstname_lastname".

Additionally, your server creates a special pseudonym called "everyone" that includes all user accounts on the system. Two other pseudonyms, "postmaster" and "mailer-daemon" are created pointing to the "admin" user.

If you wish to modify or remove any of these pseudonyms, or create new ones, you can use the web panel found under the *Collaboration* section, as shown below.

Note

The special pseudonyms of "everyone", "postmaster" and "mailer-daemon" will only be visible after you have either added a user account to the system or have added a custom pseudonym. Until that time, these three pseudonyms are there, but will not be visible on the Pseudonyms web panel.

Create, remove or modify pseudonyms

The Mitel Networks Server automatically creates an e-mail alias for each group. If you want to define an e-mail alias for a list of users, simply create a group and the list will automatically be maintained by the server.

Pseudonyms allow you to create other names for existing users or groups. For example, you may wish to create a pseudonym "webmaster" for your "webdevelopers" group or a pseudonym "joe" for the user "joseph".

The server automatically creates pseudonyms of the form firstname.lastname and firstname_lastname for every user on the system and a pseudonym "everyone" which contains all users on the system.

You can modify or remove a pseudonym by clicking on the corresponding command next to the pseudonym.

[Click here to create a pseudonym.](#)

Current List of Pseudonyms

Pseudonym	User or group		
everyone	Everyone(local network only)		
mailer-daemon	Administrator		
postmaster	Administrator		
fred.frog	ffrog	Modify	Remove
fred_frog	ffrog	Modify	Remove
sally.salmon	ssalmon	Modify	Remove
sally_salmon	ssalmon	Modify	Remove

As noted on the screen below, there are some restrictions on the text content of the names. Pseudonyms can be linked to existing user or group accounts. In the example shown, a pseudonym for *webmaster* is being set to point to *ffrog*.

Create, remove or modify pseudonyms

Create a pseudonym

The pseudonym should contain only lower-case letters, numbers, period, hyphen and underscore and should start with a lower-case letter or number. For example "sales", "john.holland", "123" and "email-administrator" are all valid pseudonyms, but "John Smith" and "Henry Miller" are not.

Pseudonym name

Select account or group

Chapter 5. Information Bays (i-bays)

Information bays, or i-bays, are a unique feature built into your 6000 MAS. I-bays are a powerful, simple, flexible mechanism for creating distinct information-sharing sites. The network administrator can define several characteristics for each new i-bay they create:

- *write access*: the administrator can control access to the i-bay by associating the i-bay with a group. All groups previously created in the groups section of the Server Manager will appear in the drop-down menu under "group" in this section. In addition, two default groups will always appear - "administrator" and "everyone" (meaning all users, whether on the local network or on the Internet).
- *user access via file-sharing or FTP*: The administrator can also control who has the ability to save a file into or modify the contents of the files in the i-bay (write access) and who has the ability to view the contents of the i-bay (read access). The administrator can specify whether the entire group can write to the i-bay or whether the administrator alone has the power to save files to the i-bay. Similarly, the administrator can control whether group members only can read the contents of the i-bay or whether the contents can be read by anyone.
- *password protection*: the administrator can specify whether a password is required to access an i-bay from the Internet and what that password will be.

Note

If you select *Password Required*, users who connect to the i-bay via FTP or HTTP will be prompted to supply that particular i-bay's username and password. The *user* name is always the name of the i-bay and the *password* is whatever the administrator assigns to that i-bay - not the individual user's password. Note that, as with user accounts, i-bay accounts are locked out by default. *If* a password is required, users will not be able to access the i-bay until the administrator sets the password.

I-bays are simple to create and manage. The "Information bays" section of the Server Manager shows all current i-bays, the name of each i-bay and a description of its contents. In this section, you can delete an i-bay (which will delete all contents of the i-bay directory) and, if the i-bay requires a password, you can set it here. As with your user account directory, any i-bay that requires a password will appear in red until that password has been changed from "default" (the i-bay for Samson's Farms in the following image is an example of this).

A note about i-bay names

When you create an i-bay, the name may be up to 12 characters long¹ and may contain only lower-case letters, numbers, periods and underscores. The i-bay name should also start with a lower-case letter. For example, `johnson`, `sales` and `client3.prj8` are all valid names, while `3associates`, `John Smith` and `Bus-Partner` are not. Finally, an i-bay cannot use the same name as an existing user or group account. It must be unique. Note that there are five special names, *common*, *icons*, *files*, *primary* and *public*, which are in use by the system and cannot be used for an i-bay name.

¹This 12-character restriction ensures that the i-bay can be shared correctly to all Windows machines.

Create, remove, or change information bays

[Click here](#) to create a new information bay.

You can remove any information bay or reset its password by clicking on the corresponding command next to the information bay. If the information bay shows up in red, that means that the password has not yet been changed from the default, and should be changed soon.

Current List of Information Bays

Name	Description			
intranet	Pagan Vegan Intranet	Modify...	Reset password...	Remove...
menus	samples of menus invitations etc	Modify...	Reset password...	Remove...
mgabriel	Art Exposition by Miles Gabriel	Modify...	Reset password...	Remove...
<i>samfarms</i>	<i>Samson's Farms</i>	Modify...	Reset password...	Remove...
sharedfiles	Pagan Vegan shared files	Modify...	Reset password...	Remove...

5.1. i-bay Directories

Each i-bay has three directories - `html`, `files` and `cgi-bin`. Each directory is briefly outlined below:

- *cgi-bin*: This directory is set aside to hold "CGI scripts" used for that i-bay's web pages. CGI scripts are tools used in advanced web site creation and are not discussed here.
- *files*: This directory holds files that can be accessed either locally only or publicly. It can be used for such things as a company download site, a company-wide file sharing server, or a document sharing site for a specific customer. When someone connects to the i-bay using FTP, they will see the files in this directory.
- *html*: When an i-bay is accessed using a web browser (via http), the user will enter the `html` directory and the web browser will automatically open the index file (usually `index.html` or `index.htm`) in that i-bay. In other words, it will display the web page associated with that i-bay. This means you can have different web sites running on your server, each associated with a specific i-bay. This can be very powerful and useful, as you will see in the upcoming examples.

Generally, you can think of the `html` directory as the place to put all files, images and documents that you would like to be accessible through the *web*. The `files` directory is for all files that you want people to access through FTP or regular file sharing. Note that you can have as many subdirectories as you wish underneath either `html` or `files` but you cannot create additional directories at the top level of the i-bay.

Note

If an i-bay is set for *no public access via web or anonymous ftp*, users connecting to the i-bay through Windows or Macintosh file sharing will see only the contents of the `files` directory. However, if the i-bay settings are later changed to *allow public access through web or anonymous ftp*, users will then see the top-level directory of the i-bay with the three subdirectories of `html`, `files` and `cgi-bin`. The items they were accustomed to seeing before will now be found in the `files` directory.

5.2. Accessing i-bays

You can access the contents of an i-bay using a web browser, Windows file sharing / AppleTalk, or FTP.

- *accessing an i-bay using a web browser (via http)*: To view an i-bay using a browser, enter "www.yourdomain.xxx/i-bayname". For example, the URL for Samson's Farms i-bay is "www.tofu-dog.com/samfarms". Assuming you are entitled to access this i-bay, you will see the index.html page in the html directory in the Samson's Farms i-bay. If a password is required to see the contents of the i-bay, a password dialog box will appear before the contents of the i-bay are served to the web browser. Use the *i-bay name* as the login ID.
- *accessing an i-bay via Windows file sharing and AppleTalk*: To access the i-bay using Windows file sharing or AppleTalk, simply navigate to the server over your network browser (in Windows, this would be via "Network Neighborhood") and select the i-bay you want to enter from those appearing. You can only access an i-bay in this way if you are on the local network.
- *accessing an i-bay via the FTP server*: To access the i-bay using FTP, you use your FTP client to connect to your server and use the *i-bay name* as the login id. If the i-bay requires a password, you will need to enter the *i-bay password* as well. If you are using a command-line or graphical FTP client, you will usually be prompted for the login username and password. If you are using a web browser, you will need to enter a FTP URL. This will be in one of the following forms, depending on whether or not a password is required:

```
ftp://ibayname@ftp.domainname  
ftp://ibayname:password@ftp.domainname
```

Warning

Be aware that FTP transmits all passwords in the clear *without encryption* and can therefore be a security risk. If you are concerned about security, we suggest you consider the `scp` "secure copy" command associated with `ssh` as an alternative to FTP.

Note that users accessing the i-bay via FTP in this manner are not able to *upload* files to the i-bay. They can only *download* files from the i-bay to their client.

It is possible to upload files using FTP, but to do so you must login to the server with a valid user name, *not* the i-bay name. That user account must be a member of the group that has been given write permission for the i-bay (configured on the i-bay screen). You would then change to the i-bay directory (using the `ftp` command "**cd ../i-bays/i-bayname**"). You will now be able to upload files from your FTP client to the appropriate directories.

In the next few sections, we will take a look at some examples of i-bays that have been created by our hypothetical catering and event-planning company, The Pagan Vegan, to demonstrate their capabilities.

5.3. Creating an i-bay

No matter how you are going to use an i-bay, the process of creating an i-bay starts by clicking on the "Click here" link at the top of the Information Bays panel in the Server Manager. You will be presented with the form shown in the image below.

Information bays

Create or modify an i-bay

The information bay name should contain only lower-case letters, numbers, periods, hyphens and underscores, and should start with a lower-case letter. For example "johnson", "intra", and "cust3.prj12" are all valid names, but "3associates", "John Smith" and "Bus!Partner" are not.

Information bay name	<input type="text"/>
Description	<input type="text"/>
Group	<input type="text" value="Admin"/>
User access via file sharing or user ftp	<input type="text" value="Write = Admin, Read = Group"/>
Public access via web or anonymous ftp	<input type="text" value="Entire Internet (no password required)"/>
Execution of dynamic content (CGI, PHP, SSI):	<input type="text" value="disabled"/>
<input type="button" value="Save"/>	

You now need to fill out the form providing the information and making the choices described below. Note that the ftp access described below can be overridden by the *FTP access limits* setting on the *Remote Access* panel of the Server Manager. If you choose to "Disable public FTP access" there, ftp access for individual i-bays will *not* be allowed, even though you *will* appear to be able to enable it from the i-bay configuration screen.

- *Information bay name:* This is the short name of the i-bay (subject to the 12-character length restriction mentioned earlier). The i-bay name will be what users will enter in the URL after the hostname to access the i-bay from the web. For instance, if public access is enabled, an i-bay named 'intranet' can be accessed by the Pagan Vegan staff at 'http:// www.tofu-dog.com/intranet/'.
- *Brief description:* This text will appear in various administrative screens and can be a useful reminder of the i-bay content.
- *Group:* Ownership of the i-bay content is assigned to an existing group. The group ownership plays a role in the next setting for user access.
- *User access:* You need to decide who will be able to add and modify content in the i-bay and who will be able to read the content.
- *Public access:* Here you set what type of public access you wish to have for the i-bay. If the i-bay is just to be used by a small group of users, you can leave public access set to the default of *None*. If you want others to be able to access the i-bay via web or anonymous ftp, you can choose to allow access to just the local network or the wider Internet. You also can choose whether or not you wish to require a password.

Note

If you choose one of the modes of *Public access via web or anonymous ftp* that requires a password, public access will not be available until you set the i-bay password from the main information bay panel in the Server Manager. Once you do so, users can access the i-bay through their web browser or ftp by using the *i-bay name* and *i-bay password*, rather than their own user name and password.

- *Execution of CGI scripts:* If you want to use CGI scripts to add functionality to your web site, you can execute those scripts from the `cgi-bin` directory of your i-bay. However, for security reasons you must first choose *enabled* here to allow such scripts to be executed.

After filling out the form, click the *Create* button and the Server Manager will create your i-bay. If you wish to change these settings at any later point, you can click *Modify...* next to the i-bay name in the information bays panel

of the Server Manager.

5.4. Modifying an i-bay

At any point in time you can modify the attributes of an i-bay (except for its name) by clicking on the "Modify..." link next to the i-bay name on the "Information bays" panel of the Server Manager. For instance, you can easily change the description, group ownership, and access methods.

There are, however, a few items to be aware of when modifying i-bays:

- If an i-bay is set for *no public access via web or anonymous ftp*, users connecting to the i-bay through Windows or Macintosh file sharing will see only the contents of the `files` directory. However, if the i-bay settings are later changed to *allow public access through web or anonymous ftp*, users connecting through file sharing will then see the top-level directory of the i-bay with the three subdirectories of `html`, `files` and `cgi-bin`. The items they were accustomed to seeing before will now be found in the `files` directory. This may disrupt Windows shortcuts and configuration settings. (The good news is that simply changing the public access setting back to "None" will return i-bay file sharing access to its previous configuration.)
- After an i-bay is modified, all Macintosh users will be disconnected from the i-bay and will need to reconnect. All Macintosh users will receive an alert stating that they will be disconnected in 5 minutes.

Outside of those concerns, you can modify the i-bay as often as you wish. If you wish to change the actual *name* of the i-bay, you will need to remove the i-bay and create it again. (Note that this will delete the *contents* of the i-bay, so make sure you have backed up the i-bay data before you remove it.)

5.5. An i-bay Used as a Customer Site: The Miles Gabriel Art Exposition

"The Pagan Vegan" (TPV) has found that customers like having access to a customized web page which summarizes all of the information pertaining to their particular event. The company finds it reduces the risk of miscommunication and improves its image and reputation. The ".html" files in the i-bay's `html` directory are based on a template that TPV uses for each customer. Creating each web site is a straightforward, fill-in-the-blanks process.

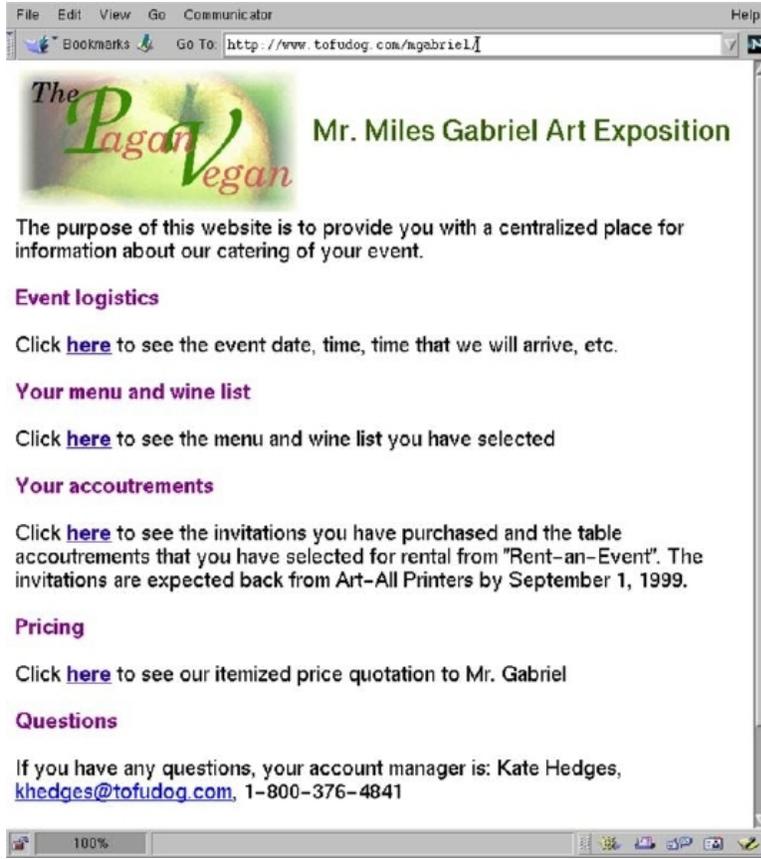
Information bays

Create or modify an i-bay

The information bay name should contain only lower-case letters, numbers, periods, hyphens and underscores, and should start with a lower-case letter. For example "johnson", "intra", and "cust3.prj12" are all valid names, but "3associates", "John Smith" and "Bus!Partner" are not.

Information bay name	<input type="text" value="mgabriel"/>
Description	<input type="text" value="Art Exposition by Miles"/>
Group	<input type="text" value="Everyone"/>
User access via file sharing or user ftp	<input type="text" value="Write = admin, Read = group"/>
Public access via web or anonymous ftp	<input type="text" value="Local network (password required)"/>
Execution of dynamic content (CGI, PHP, SSI):	<input type="text" value="disabled"/>
	<input type="button" value="Save"/>

TPV has chosen a naming convention for i-bays that customers can easily remember - first initial, last name. Because it contains important customer information, only the site administrator can save files into this i-bay. To prevent others from accessing the customer's i-bay, a password is required to enter the site. (TPV created individual passwords and securely provided them to their customers.)



Miles Gabriel has contacted The Pagan Vegan to cater an art exposition. The Pagan Vegan has created an i-bay specifically for Mr. Gabriel's account called "mgabriel". Mr. Gabriel accesses the site with the URL www.tofu-dog.com/mgabriel. As you can see, Mr. Gabriel has access to a summary of his event information. He can check at any time to ensure the arrangements are correct. For example, at midnight tonight he can access his i-bay to show his spouse the design used for his invitations!

5.6. An i-bay Used as a Shared Network Drive

Having a shared network drive can be very helpful as a way of storing and sharing documents company-wide. TPV uses an i-bay for a company-wide network drive to hold documents to which all employees should have access. All employees can read and write files to this directory.

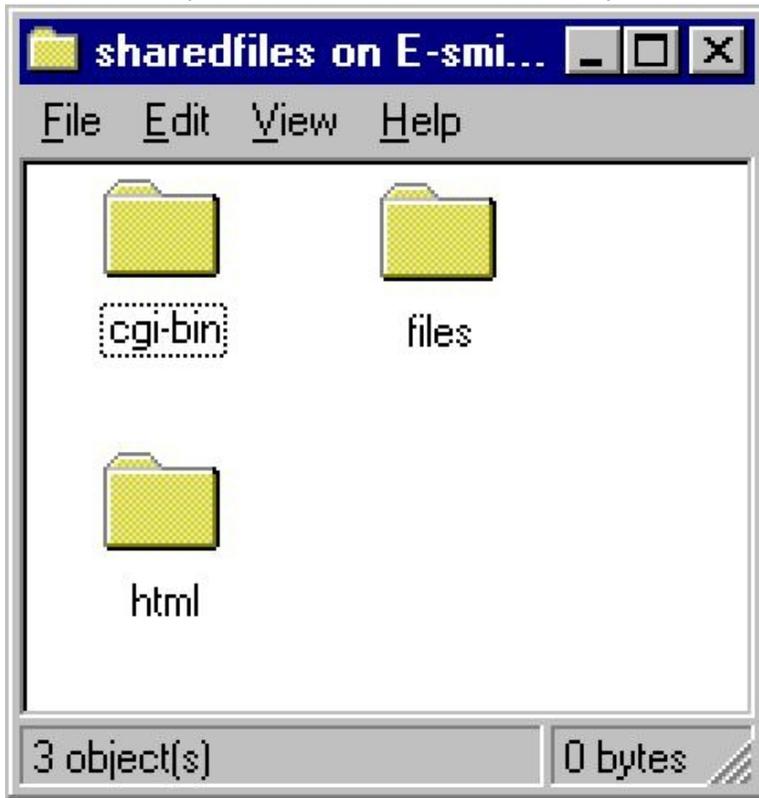
The i-bay is accessed via Windows file sharing, AppleTalk or FTP. To access using file sharing, simply access the server over the network (via Network Neighborhood) and open the appropriate i-bay. You will see the files located in the `files` directory and can then open them or copy them to your system.

Note

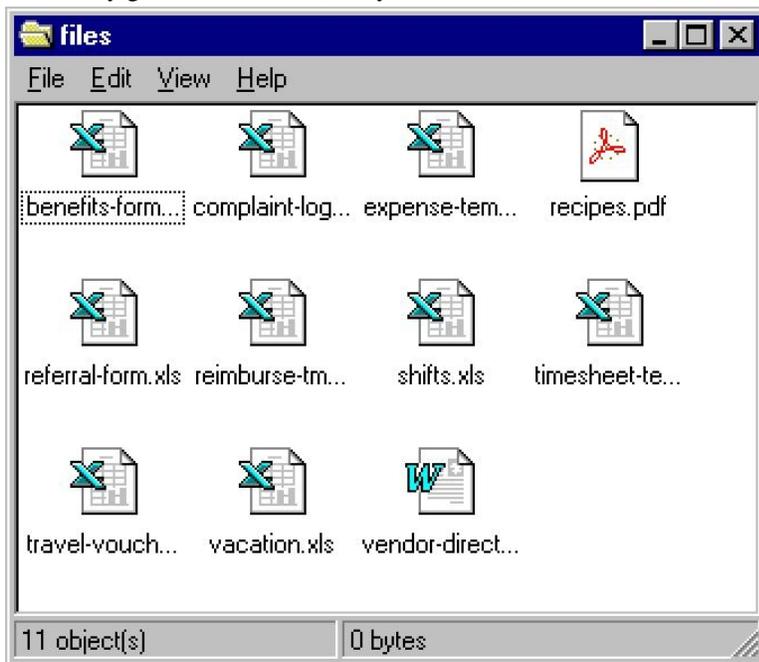
This is only true if the i-bay has been set to allow public access via web or anonymous ftp. If an i-bay is set for *no public access via web or anonymous ftp*, users connecting to the i-bay through Windows or Macintosh file sharing will simply see the *contents* of the `files` directory. However, if the i-bay settings are later changed to *allow* public access through web or anonymous ftp, users will then see the top-level directory of the i-bay with the three subdirectories of `html`, `files` and `cgi-bin`. The items they were used to seeing before will now be found in the `files` directory.

As an example, when the staff of The Pagan Vegan goes into their Network Neighborhood (or "My Network Places"), they double-click on their server's icon.

They will then see a list of i-bays accessible through Windows file sharing. When they click on one of them called "sharedfiles", they see the three folders inside of the i-bay:



When they go inside of files, they will then see the list of documents provided there:



As you can see in this example, The Pagan Vegan has several files in this directory for company use. Providing a centralized location for company documents (such as expense report templates) ensures that everyone always has ac-

cess to these documents and uses the most up-to-date version.

5.7. An i-bay Used as an Intranet: The Pagan Vegan "Vegemite"

The Pagan Vegan has created an i-bay for its company newsletter / intranet. The company has found this to be a good way for employees to express themselves and share information.

Information bays

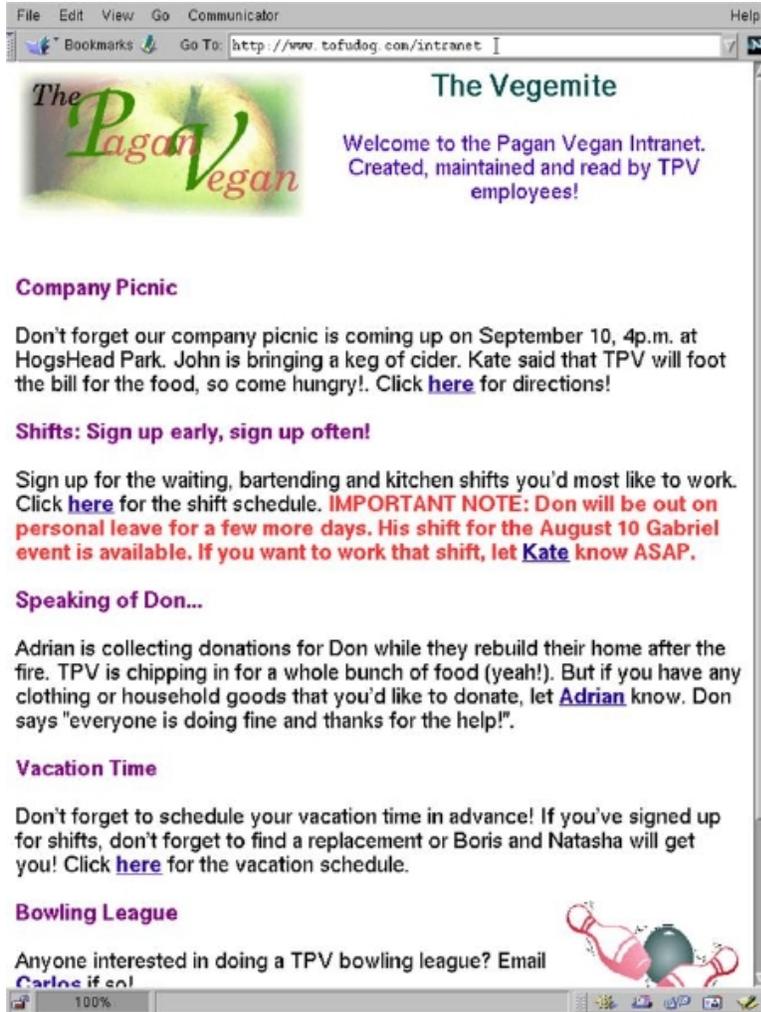
Create or modify an i-bay

The information bay name should contain only lower-case letters, numbers, periods, hyphens and underscores, and should start with a lower-case letter. For example "johnson", "intra", and "cust3.prj12" are all valid names, but "3associates", "John Smith" and "Bus!Partner" are not.

Information bay name	<input type="text" value="intranet"/>
Description	<input type="text" value="Pagan Vegan intranet"/>
Group	<input type="text" value="Employees Only"/>
User access via file sharing or user ftp	<input type="text" value="Write = admin, Read = group"/>
Public access via web or anonymous ftp	<input type="text" value="Local network (no password required)"/>
Execution of dynamic content (CGI, PHP, SSI):	<input type="text" value="disabled"/>
	<input type="button" value="Save"/>

In keeping with TPV's culture, the newsletter is very casual. The company has a high degree of trust in its employees, and, as a result, employees are given full access to the contents of the intranet so anyone on staff can revise it. A more typical company might want the intranet to be created by a particular staff member and "checked in" by the administrator (write access "administrator only").

The intranet is, of course, viewable only from the internal network. No password is required. To access the intranet, TPV employees use their web browsers to access the URL *www.tofu-dog.com/intranet*.



This particular newsletter was created using a desktop office application called StarOffice (similar to Microsoft Office). The files were created as typical word processing documents, saved into ".html" format and then transferred into the html directory of the "intranet" i-bay using Windows file sharing. Starting with just a blank document, it took only about an hour to create the main page and the other pages that make up this newsletter.

5.8. An i-bay Used to Expedite Processes: Samson's Farms

Samson's Organic Farms delivers fresh produce to The Pagan Vegan every week. Samson's and TPV use an i-bay to improve the ordering and delivery process. TPV has created an i-bay for Samson's called "samfarms". It is accessible to the external Internet but password-protected so that only staff at TPV and Samson's Farms can read it. Anyone on TPV's local network can write to it.

Information bays

Create or modify an i-bay

The information bay name should contain only lower-case letters, numbers, periods, hyphens and underscores, and should start with a lower-case letter. For example "johnson", "intra", and "cust3.pj12" are all valid names, but "3associates", "John Smith" and "Bus!Partner" are not.

Information bay name	<input type="text" value="samfarms"/>
Description	<input type="text" value="Samson's Farms"/>
Group	<input type="text" value="Employees Only"/>
User access via file sharing or user ftp	<input type="text" value="Write = admin, Read = group"/>
Public access via web or anonymous ftp	<input type="text" value="Entire Internet (password required outside local network)"/>
Execution of dynamic content (CGI, PHP, SSI):	<input type="text" value="disabled"/>
	<input type="button" value="Save"/>

Here's how the process works:

- Each week, Mr. Samson updates his online order sheet to include only produce that will be ripe and ready for the next delivery date. He saves it in ".html" format and e-mails it to The Pagan Vegan's administrator.
- Upon receiving the e-mail, TPV's administrator saves the file directly into the html directory of the "samfarms" i-bay.
- The chef accesses the samfarms i-bay, reviews what produce will be available, and plans menus.
- The chef's assistant then reviews the menus, checks against existing inventory and determines what should be ordered. The assistant enters TPV's order directly onto the order sheet in the samfarms i-bay using an HTML editor.
- The day before delivery, the chef reviews his assistant's order (as shown in the image below) using a web browser and makes any last minute adjustments.

File Edit View Go Communicator Help

Bookmarks Go To: <http://www.toofudog.com/sanfarms>

Samson's Organic Farms

On-line order sheet for: **The Pagan Vegan**

Last Delivery: August 11

Samson's will fill and deliver this order on: August 18

Order entry done by (customer name): Joe

Date order entered: August 17

Vegetables		Fruit	
artichokes	8 /dozen	apples (Mac)	/peck
beans	10 /lb	black berries	4 /flat
beets	/lb	blue berries	6 /lb
broccoli	10 /lb	crab apples	2 /peck
carrots	20 /lb	grapes (black)	/lb
cauliflower	6 /lb	nectarines	2 /peck
celery	20 /lb	oranges (navel)	/peck
corn	6 /dozen	peaches	/peck
eggplant	6 /lb	pears (bosc)	2 /peck
endive	4 /lb	raspberries	4 /flat
fennel	4 /lb		
garlic	4 /lb	Herbs	by the bunch
leeks	/lb	basil (purple)	20

- On the day of delivery, Samson's shipping staff accesses the i-bay over the Internet, prints out TPV's order from the samfarms i-bay, and fills it.

5.9. An i-bay Used as Your Customer Download Site

When customers hire The Pagan Vegan to plan events, they need to review a great deal of information - menu options, catalogues from various vendors for event stationary, table-setting rentals, etc. Often customers want several days to review it all. TPV has only a limited number of catalogues for loan, so it decided to provide customers with access to this information online. To accomplish this, TPV created a download i-bay, called "menus", where customers can download the catalogue files themselves and view the contents on their desktop machines.

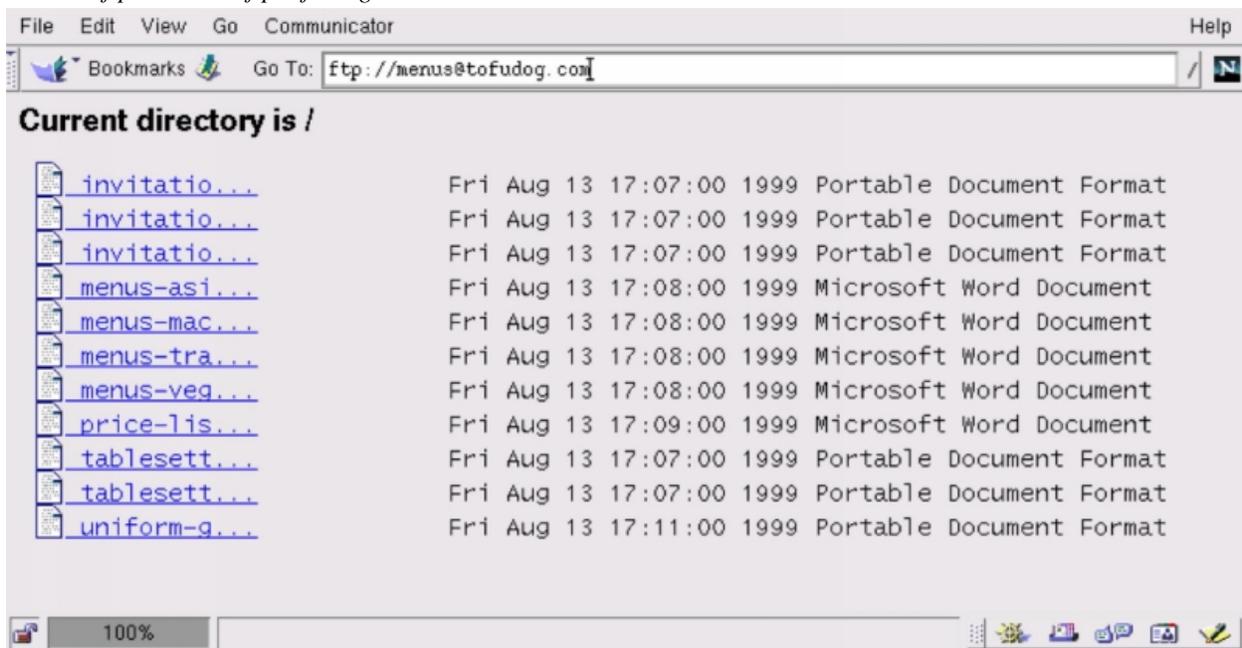
Information bays

Create or modify an i-bay

The information bay name should contain only lower-case letters, numbers, periods, hyphens and underscores, and should start with a lower-case letter. For example "johnson", "intra", and "cust3.prj12" are all valid names, but "3associates", "John Smith" and "BusiPartner" are not.

Information bay name	<input type="text" value="menus"/>
Description	<input type="text" value="samples of menus etc"/>
Group	<input type="text" value="Everyone"/>
User access via file sharing or user ftp	<input type="text" value="Write = admin, Read = group"/>
Public access via web or anonymous ftp	<input type="text" value="Entire Internet (no password required)"/>
Execution of dynamic content (CGI, PHP, SSI):	<input type="text" value="disabled"/>
	<input type="button" value="Save"/>

TPV set the i-bay for Administrator-only write access, viewable over the entire Internet, with no password required. A customer accesses the site using the FTP client in their web browser to login as the i-bay user name by entering the URL *ftp://menus@ftp.tofu-dog.com*. This is what the customer sees:



When the cursor is placed over a file name, the full name of the file appears. To download a particular file, the customer simply clicks on the file name. A browser window allows the customer to select a destination directory for the file on his or her local hard drive.

Chapter 6. Webmail

You can configure your 6000 MAS so that users can access their e-mail from the local network or anywhere in the world via the Internet using any standard web browser (provided it supports Javascript and tables, which almost all browsers do).

For added security, the server supports the use of *Secure Socket Layer (SSL)* connections. When your users connect using SSL, all communication between their browser and your 6000 MAS web server is securely encrypted to prevent eavesdropping.

If you intend to enable webmail, you should consider whether your users will use webmail exclusively or will use webmail part of the time (for example, when traveling) and a different e-mail client the rest of the time. If they plan to use webmail as well as another client, they should make sure that the other client uses the IMAP protocol. If they use POP3, their e-mail messages will be pulled down from the server into their local e-mail client and will therefore not be visible when the user logs into webmail. If IMAP is enabled on the local client, the messages will remain on the server and will be visible both from the local client and via webmail.

6.1. Enabling Webmail On Your System

To enable the use of webmail, perform the following steps:

1. Connect to the Server Manager and login as the admin user.
2. Click on Other e-mail settings and scroll down to the section where you have the option to *Enable/Disable Webmail*. You now have two options:
 - *Enabled (secure HTTPS access only)* - Allows users to connect *only* through a secure SSL connection. This is *strongly* recommended because a regular HTTP connection transmits your mail account password across the network (or Internet) in plain, unencrypted text.
 - *Enabled (HTTP or HTTPS)* - Allows your users to connect through a secure or an insecure web connection.

After you perform these steps, your users should be able to connect and use webmail.

6.2. Starting Webmail

To use webmail, a user first needs a valid user account and password on your server. Next, the user opens up a web browser and points it to your server using an address resembling the following URL:

```
https://www.tofu-dog.com/webmail/
```

The *https* in the URL indicates this connection uses SSL encryption and provides a secure communication session.

Note

The exact address used in the URL will depend on how you have configured your server. In the example above, *www.tofu-dog.com* points to the server located at The Pagan Vegan and *https* indicates that they are using secure communication using SSL encryption. If you choose to provide insecure access, which we do *not* recommend, the URL would begin with *http* instead of *https*.

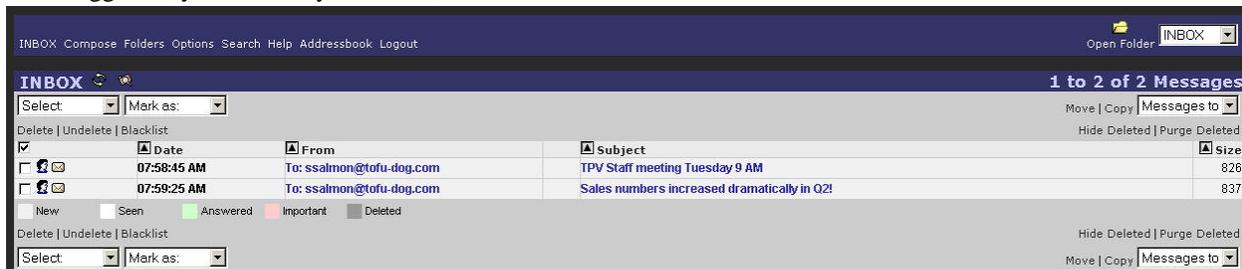
Note that if your server is behind another firewall, that firewall will need to allow traffic through on TCP port 443 in order for SSL connections to take place.

6.3. Logging In

Once connected, a user will see a login screen similar to that shown in the screen below. From this screen you can read the help menu (by clicking *New User Introduction* at the top of the page) or login with your normal network user ID and password. Note that the webmail application supports a wide variety of languages.

6.4. Viewing The Inbox

Once logged in, you will see your inbox, as shown in screen below.



Let's take a quick tour of the Inbox window.

On the top left side is a navigation menu allowing you to jump directly to your inbox, compose new messages, create folders, modify preferences, search, access help, modify contacts or logout of the webmail system.

In the top right corner is a pop-up menu that shows the list of your available mail folders. In your first webmail session, the only folder choice will be *INBOX*. As soon as you send an e-mail message, a folder called *sent-mail* will be created and available in the menu. You can also create additional mail folders at any time.

Immediately below this is a status message indicating the number of new and total messages in that folder.

In the main part of the window are the actual messages. Each message has an icon denoting its status at the far left, the date/time of the message, who it is from, the subject and the size. Messages may be sorted by clicking on the column heading. You can read a message simply by clicking on the subject or sender of a specific message. The envelope/arrow icon that you can see in the status area of the second message in the image above indicates that this message is new.

We will describe the various functions in greater detail later in this chapter, but this should be enough to get you started.

6.5. Logging Out of Webmail

Before we discuss the features of webmail, it is important to emphasize that you must *always* click "Logout" when you are finished using webmail. If you do *not* do so, anyone else who uses your web browser on your computer (until you exit your web browser or logout of/shutdown your computer) will be able to read your messages and send messages from your account. After a successful logout, you will see the webmail login screen with a message at the top of the screen indicating that your logout was successful.

6.6. Composing Messages

To compose a new message, click "Compose" in the menu on the left. You should see a screen similar to that below.

Message Composition - Wed 22 May 2002 08:03:53 AM EDT

Send Message Save Draft Cancel Message ?

From: (Default Identity) or: ?

To: ffrog@tofu-dog.com ?

Cc: ssalmon ?

Bcc: ?

Subject: Do we have the budget to send me to LinuxWorld? ?

Options: Expand Names Spell Check Special Characters Attachments ?

Save a copy in "sent-mail" Request a Return Receipt

I think it would be an excellent opportunity for me to network.

Please let me know.

Thanks,

Fred

Send Message Save Draft Cancel Message ?

Attachments

Attachment: Browse... Attach ?

At the top of the compose screen, your available options are to cancel, save a draft or send the message.

If you choose to save a draft, your message will be saved in a folder called *drafts*. You may later retrieve this message by using the popup menu in the upper right corner to switch to the *drafts* folder.

Directly below the subject line are another four options allowing the user to expand names, run spell check on the body of the message, access special characters, or jump to the attachments area of the screen.

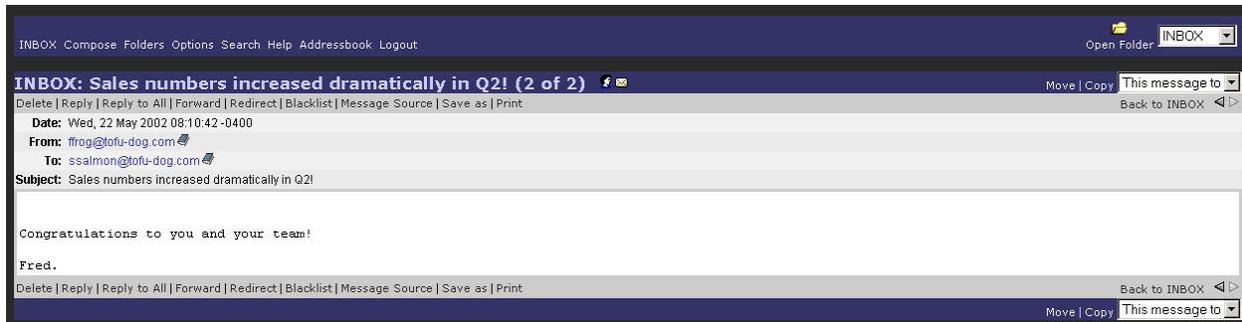
Below that are the familiar e-mail fields for you to fill out.

Note that when adding attachments to your e-mail, be sure to click "Attach" after you have browsed and found the attachment.

At the bottom of the page, the menu of commands is repeated for your convenience.

6.7. Reading Messages

To read a message, click the "From" or "Subject" fields of the message. You should see a screen similar to the one below.



You now have several options. You can:

- *Delete* the message.
- *Reply* only to the sender.
- *Reply to all* of the original recipients.
- *Forward* the message to someone else.
- *Redirect* the message to another person (similar to "Forward" but without providing you the opportunity to comment). 2
- *Blacklist* sets up filters to automatically delete or file e-mail messages.
- *Save As* saves the message to a text file.
- *Print* the message.

By clicking "Reply", you will be able to enter a reply window such as that shown below. Notice that the original message text is "quoted" with a ">" character in front of it. At this point, you can type more text or edit existing text, add or delete recipients, spell-check the message and do anything else that you could do in a normal compose window. Again, you can choose to cancel the message, save a draft or send the message.

²In fact, the redirect command will send the message on to a third-party without indicating that you were the one forwarding it. So if "ffrog" sent a message to the "sales" group (of which you are a member) and you then redirected it to another user, that user would see the message coming from "ffrog" and going to "sales", but *your* name would not appear anywhere in the visible headers. Compare that to a "forward" command where the recipient knows you are the person forwarding the message.

Reply: Re: Sales numbers increased dramatically in Q2! - Wed 22 May 2002 08:11:50 AM EDT

Send Message Save Draft Cancel Message ?

From: (Default Identity) or: ?

To: ffrog@tofu-dog.com ?

Cc: ?

Bcc: ?

Subject: Re: Sales numbers increased dramatically in Q2! ?

Options: Expand Names Spell Check Special Characters Attachments ?

Save a copy in "sent-mail" Request a Return Receipt

Quoting ffrog@tofu-dog.com:

>

>

> Congratulations to you and your team!

>

> Fred.

>

Thank you, Sally. This truly was a team effort!

Send Message Save Draft Cancel Message ?

Attachments

Attachment: Browse... Attach ?

6.8. Deleting Messages

You can delete a message while reading it, as mentioned previously, or you can delete a message - or a group of messages - from the Inbox view.

INBOX Compose Folders Options Search Help Addressbook Logout Open Folder: INBOX

INBOX 1 to 3 of 3 Messages

Select: [v] Mark as: [v] Move | Copy | Messages to [v]

Delete | Undelete | Blacklist Hide Deleted | Purge Deleted

<input checked="" type="checkbox"/>	Date	From	Subject	Size
<input type="checkbox"/>	08:10:42 AM	ffrog@tofu-dog.com	Sales numbers increased dramatically in Q2!	870
<input type="checkbox"/>	08:14:24 AM	ffrog@tofu-dog.com	Please attend a 2:00 PM staff meeting	816
<input type="checkbox"/>	08:15:11 AM	To: ssalmon@tofu-dog.com	Vacation notice: out of office June 14, 2002	829

New Seen Answered Important Deleted

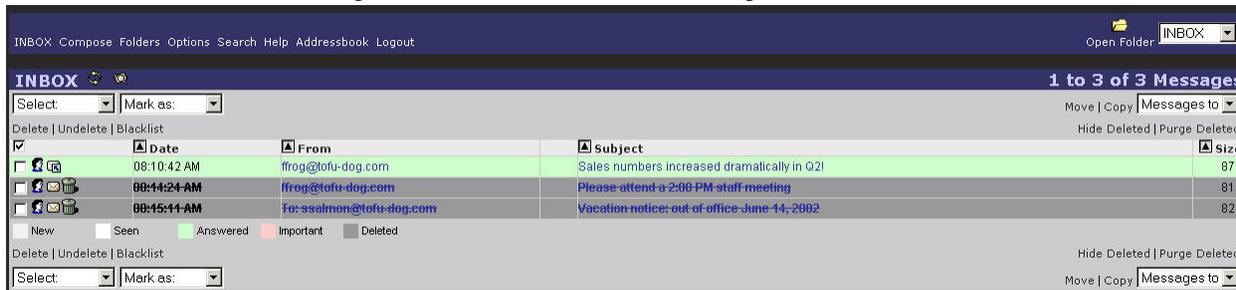
Delete | Undelete | Blacklist Hide Deleted | Purge Deleted

Select: [v] Mark as: [v] Move | Copy | Messages to [v]

To do so, check the box next to each message you wish to delete. After that, click the "Delete" link directly above or

below the list of messages on the left side. You will now see a trash icon next to the checkbox and a line through the messages.

As an example, in the image above, our user (ffrog) wants to delete the second and third messages. He can click on the checkbox next to each message and then click "Delete". This will produce a screen such as that below.

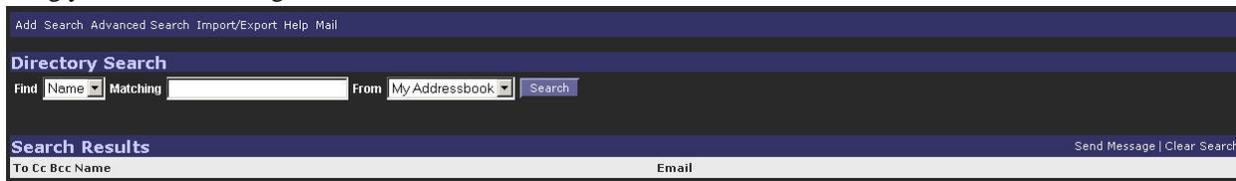


If you do not want to see the deleted messages, you have two choices. If you click on the "Hide Deleted" text button on the right side, the messages will be hidden from view, but will still be there and could be recovered with the "undelete" button. If you choose *Purge Deleted*, the messages will be permanently deleted.

6.9. Using the Address Book

The 6000 MAS webmail application provides address book functionality to allow you to keep track of personal contact e-mail addresses and other contact information. You can view and edit this address book by selecting the appropriate link from the top menu bar on the main webmail screen. You can then add new entries to the address book, or search the address book for existing entries.

To search for an existing contact, choose the Search option or the Advanced Search option. The Search option will bring you to the following screen:



From this screen, the user chooses to search by contact name or e-mail address, enters a matching string to search for, and chooses to search by either My Address book or the local LDAP 3 repository (i.e. the company directory). Selecting Search will populate the area below with the list of matching address book entries. Note that subsequent searches will add to the list rather than replace the contents of the list. To clear the list, select "Clear List".

To view all entries in the address book, leave the Matching field blank and click "Search". This will bring you to a screen such as the following:



The Advanced Search option allows you to search against any field for which information is stored in the address book.

Once contacts have been found and appear in the search list, the user can click the selection boxes to the left of the

³The search is called an *LDAP search* because the directory is queried using the *Lightweight Directory Access Protocol (LDAP)*, one of the most common protocols used on the Internet for searching directories.

entries to initiate an e-mail to the chosen contacts. Select the "To", "CC", or "BCC" boxes for each desired address, and then click "Send Message" to launch the Compose window with the addresses filled in.

To add a new entry, click "Add" from the top menu bar. You will be presented with the screen below, and you can then enter information for the desired fields. Click "Save" to add the information to your Address Book.

The screenshot shows a webmail interface with a dark blue header containing navigation links: Add, Search, Advanced Search, Import/Export, Help, Mail. Below the header is a form titled "Add a new contact" with "Save" and "Reset" buttons. The form contains the following fields:

- Name
- Email
- Title
- Company
- Home Phone
- Work Phone
- Cell Phone
- Fax
- Home Address
- Work Address
- Notes

At the bottom right of the form area, there are "Save" and "Reset" buttons.

To update contact information, click the contact's name (in the Name column) from the search results list. You will then be able to edit the contact's information by selecting "Edit", or delete the contact completely by selecting "Delete".

6.10. Changing Webmail Options

By clicking the *Options* link on the navigation menu, you can modify preferences for your webmail session, as shown in the screen below.

The screenshot shows the "Options" page in a webmail interface. The header includes navigation links: INBOX, Compose, Folders, Options, Search, Help, Addressbook, Logout. The "Options" page is organized into three main columns:

- Your Information**
 - Personal Information**: Change the name, address, and signature that people see when they read and reply to your email.
 - Server Information**: Change your mail server and folder information.
 - Language**: Set the language that menu items, explanations, and help are in.
 - Time Zone**: Set the current time zone.
- Mail Management**
 - Filters**: Create filtering rules to organize your incoming mail, sort it into folders, and delete spam.
 - Message Viewing**: Set preferences for filtering messages for unwanted content.
 - Deleting and Moving Messages**: Set preferences for what happens when you move and delete messages.
 - Maintenance Operations**: Customize maintenance operations run upon login to IMP.
- Other Options**
 - Display Options**: Change display options such as how many messages you see on each page and how messages are sorted.
 - Message Composition**: Customize how you send mail and where drafts are saved.
 - Login Tasks**: Customize tasks to run upon login to IMP.
 - New Mail**: Control when new mail will be checked for, and whether or not to notify you when it arrives.
 - Addressbooks**: Select addressbook sources for adding and searching for addresses.

There are many categories of preferences that may be tailored for your specific needs:

- *Personal Information* - Change the name, address, and signature that people see when they read your e-mail.
- *Server Information* - Change your mail server and folder information.
- *Language* - Set the language for menu items, explanations, and help.
- *Time Zone* - Set the current time zone.

- *Filters* - Create filtering rules to organize your incoming mail, sort it into folders, and delete spam.
- *Message Viewing* - Set preferences for filtering messages for unwanted content.
- *Deleting and Moving Messages* - Set preferences for what happens when you move and delete messages.
- *Maintenance Operations* - Customize maintenance operations run when you log in to the webmail application.
- *Display Options* - Change display options such as how many messages you see on each page and how messages are sorted.
- *Message Composition* - Customize how you send mail and where drafts are saved.
- *Login Tasks* - Customize tasks to run when logging in to webmail.
- *New Mail* - Control when new mail will be checked for, and whether or not to notify you when it arrives.
- *Address books* - Select address book sources for adding and searching for addresses.

Chapter 7. Server Administration

7.1. Administration of Your Server Via Windows File Sharing

To access administrative areas of your server using Windows file sharing, you must be logged into your network as "admin" with the server system password. This applies particularly to the *Primary* share (where the main web site is stored) and any i-bays that are writable only by the user *admin*.

7.2. Create Starter Web Site

If you already have a customized web site, you should not use this section, since it will overwrite your `index.htm` file.

If you do not have a customized web site and wish to create your starter home page, fill out the appropriate fields. This will create a basic home page that you can visit by entering your domain name for your site, `http://www.yourdomain.xxx`, in your web browser. On your local network, you can use "`http://www/`" (or just "`www`") to view your starter web site.

At any point in the future, you can replace or revise your starter web page by replacing or revising the files in the `html` directory on your server. The `html` directory for your web site can be accessed using Windows file sharing. Ensure you are logged onto your network using the `admin` name and password and then use file sharing to go to the server. Select the "`primary`" share and then select the "`html`" directory.

7.3. User File Storage on the 6000 MAS

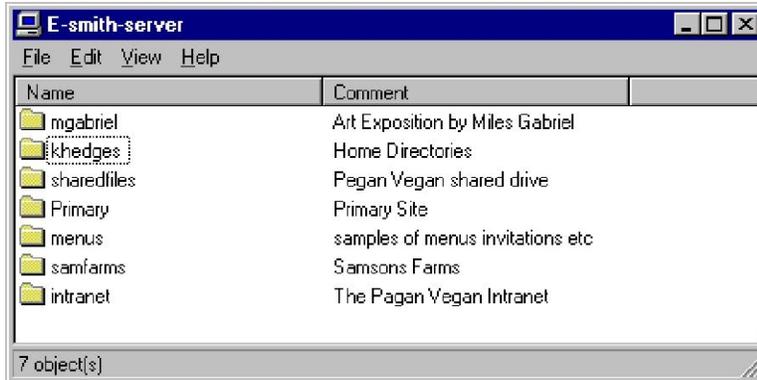
When you create a user account on your server, the 6000 MAS creates both an e-mail account and a file directory for that user. This directory is reserved for files that the user would like to store on the server hard drive. It can only be accessed by the user. To access the directory, the user would navigate to the server via Windows file sharing or AppleTalk.

7.3.1. Windows

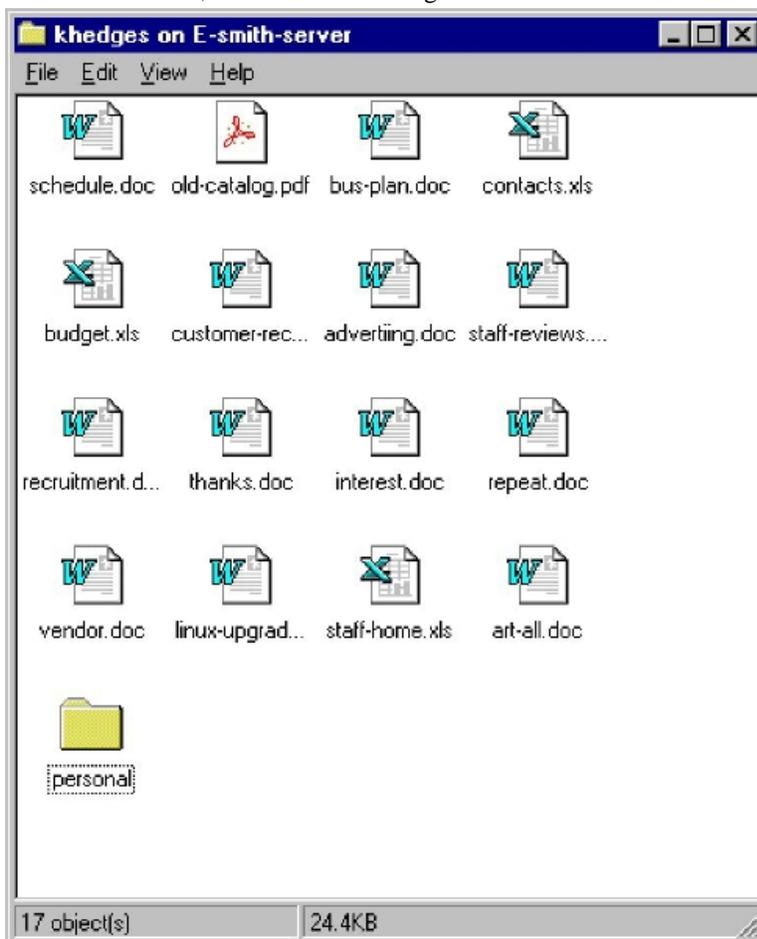
Using Windows, a user would open "Network Neighborhood" (or "My Network Places") and then click on the Network directory to see all machines accessible to you on your network. If the 6000 MAS isn't viewable, you may not be logged onto your network under the correct name/password (see the section below on this) or your client machine may not belong to the same workgroup as the 6000 MAS.



When you click on the server, you will see all i-bays and directories available to you. You will also see the Primary directory (which houses the company web page information). In the example below, Kate Hedges is logged onto her local network as `khedges` (her account name) with her correct password. When she enters the server, she can see all the i-bays (`mgabriel`, `samfarms`, `sharedfiles`, `menus` and `intranet`), as well as her own user directory.



By clicking on her own user directory, "khedges", she can see all of the work and personal files she has chosen to store on the server, as shown in the image below.



Note that for users who are on a Windows network, the user must be logged onto the network with the name and password associated with the server user account.

To do so, open the "Start" menu.

1. Select "Shut down".

2. Select "Close all programs and log in as a new user".
3. Enter the username (in our example, above, it would be "khedges").
4. Enter the current password for that user on the server.

If you change the password on your server, you must also change the password for "admin" on your PC. To do this follow these steps:

1. Use the File Manager to search for the file "admin.pwl".
2. Delete this file and log into Windows networking as above.

7.3.2. Macintosh

To use file sharing from a Macintosh computer, you must be set up to use AppleTalk over Ethernet, and to communicate using IP over Ethernet.

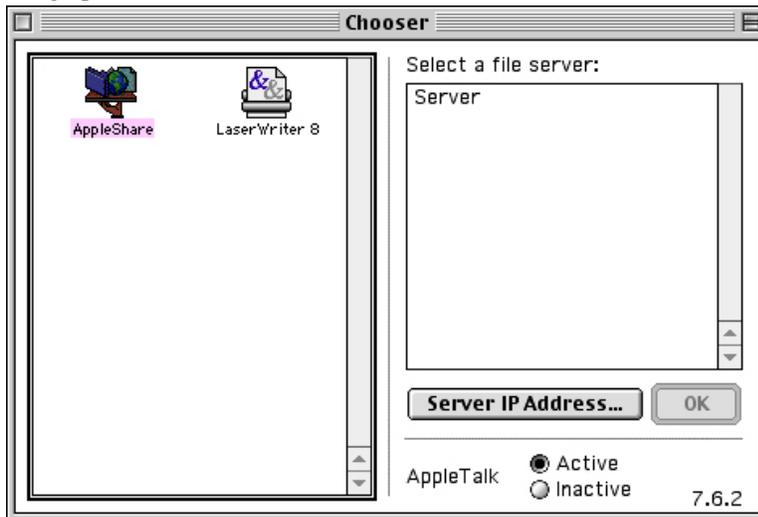
The first step is to choose your Ethernet adapter (usually "Built-in Ethernet" or just "Ethernet") from the AppleTalk Control Panel. If everything is plugged in correctly, the panel should quickly say that no zones were found. If this takes a while, the network cable or network card may not be working properly, and you should see an Apple technician.

To use AppleShare over IP it is best that your Mac's network settings are configured via DHCP. To enable it on your Mac, choose "DHCP Server" in the TCP/IP control panel. If the control panel asks for a Client ID, type in any unique title, such as "Design G4" or "Reception".

Note

AppleShare will work without TCP/IP, but will be slower than AppleShare over IP.

The next step is to choose a server to connect to over AppleShare. Click on the Chooser icon in your Apple Menu to bring up a list of file servers to connect to.

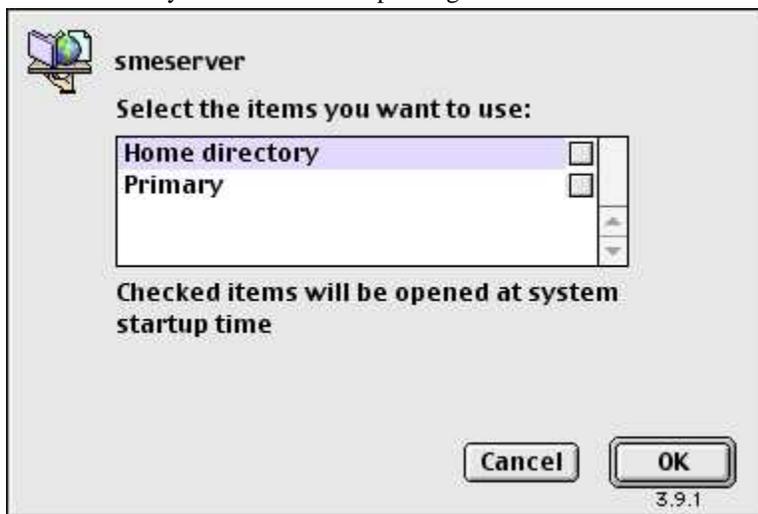


Click the AppleShare icon in the Chooser window. Then, double-click on the server to log in. Use your server user

name and password to connect.



Next, a list of all the volumes available for you to connect to will be displayed. Note that some will be displayed whether or not you have sufficient privileges to use them. Your screen should now look like the following image:



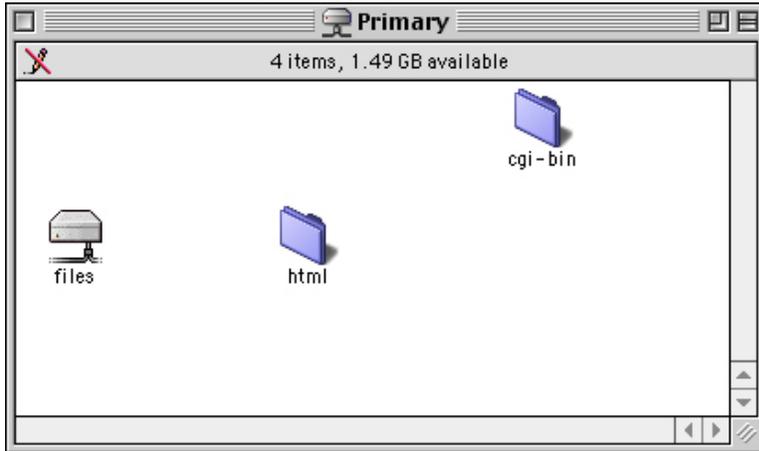
The "Primary" volume is your default area set up by your server for sharing files and the company web site, while "Home Directory" points to the specific user's (i.e. in our example, Tracy) home directory, viewable only by that user. While other i-bays may appear, you may not be able to use them unless you have permission.

The highlighted volumes are those you want to connect to. You should only select the checkboxes beside the volume name if you want your Mac to connect to the volume automatically every time you boot your Mac. If you want to save passwords in a key chain (Mac OS 9.0 or above), you should read the tutorial available from the help menu on your Mac.

Your desktop should now have icons for each successful volume. Notice the wire at the bottom of each icon, denoting a network volume.



Clicking on one of these icons should show you a window similar to the one below. While you cannot add files or folders to this window, you may do so in the `files`, `html` or `cgi-bin` folders (permissions allowing).



Note

Some programs may not work correctly when run from a mounted volume, or when opening files on a mounted volume. Programs such as MYOB (multi-user accounting software) and Quark Xpress rely on certain Macintosh-specific features when accessing files. Test your applications before relying on their ability to open files on a mounted volume, or copy the files to the local hard drive before working on them.

7.4. Reinstallation Disk

Using this section of the Server Manager, you can create a reinstallation diskette which will aid in the recovery process if you encounter a system failure and are required to reinstall the software. The reinstallation diskette will record system and network configuration data for your current system so that you will not need to re-enter that information when you reinstall.

Warning

Each time you alter your system configuration, you *MUST* make a new reinstallation disk (or overwrite your old one). Otherwise, your existing reinstallation disk will not contain your updated configuration data - which means that after reinstalling the software, you will not automatically see your most recent data.

Note

Be aware that when you are performing this task, the diskette must be in the *server* diskette drive, *NOT* the diskette drive of your local desktop computer.

Note that this reinstallation disk serves a *different* purpose than the "emergency boot disk" you created as part of the original software installation process. The emergency boot disk allows you to boot your server if you are unable to boot from the hard disk for some reason. The emergency boot diskette does not change your software or make any other adjustments to your system.

The reinstallation disk, on the other hand, will boot your system directly into the *software installation process* and will completely reinstall the 6000 MAS software. It will, however, save you the steps of entering all the network configuration data and allow you to simply move through the configuration screens using the "Keep" option.

7.5. Reboot or Shutdown

If you need to shut down or reboot your server, using this screen will ensure that the shutdown sequence occurs

gracefully, preserving all configuration and information on your server. There is a similar function in the server console as well. Note that this screen initiates the shutdown or reboot *immediately* after you click the "Perform" button.

Chapter 8. Technical Support

If you are a 6000 MAS subscriber and are having technical difficulty, please contact your Mitel Networks authorized reseller for support. If you are having difficulty configuring another vendor's hardware or software, we recommend you refer to the manual or contact the vendor for that product.

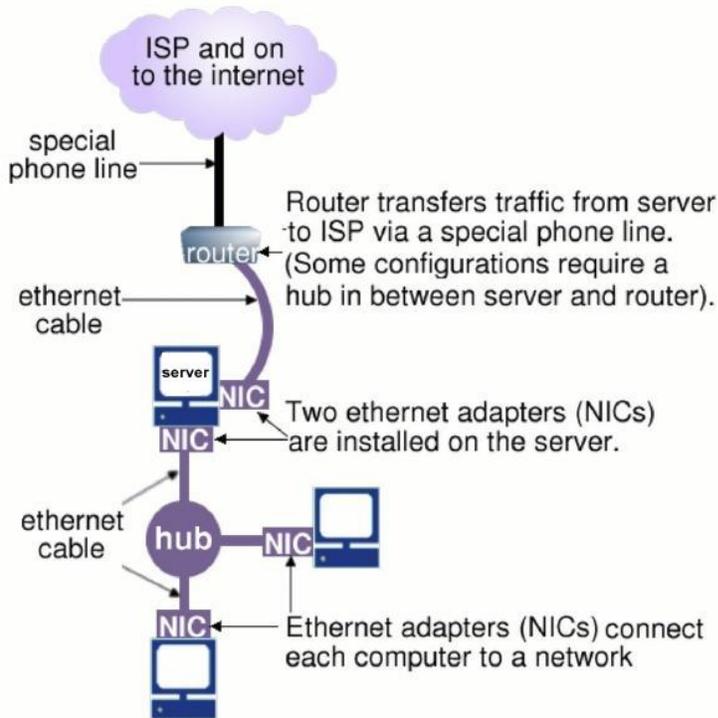
Appendix A. Introduction to the Ethernet Local Area Network (LAN)

A local area network (LAN) is the system of wires and other hardware that connects the computers within your office and allows them to communicate with one another. An ethernet LAN is the most common type. Ethernet refers both to a kind of connection and to a protocol for how Internet data packets travel around your network.

The *hub*, a common component of an ethernet, serves as a point of interface between computers on the network. Each computer on your network is connected to the hub using an ethernet network cable. Different hubs operate at different speeds: slower hubs, operating at 10 MB/sec, are suitable for small networks; faster hubs, operating at 100 MB/sec, are suitable for larger networks. Switching 10/100 MB hubs can operate at either speed, and provide a good way to upgrade your network gradually.

An *ethernet adapter*, also called an ethernet card or network interface card (NIC), connects each computer to the ethernet LAN. A server with a dedicated Internet connection requires two ethernet adapters; one connects it to your LAN and the other connects it to the external network that leads to your ISP. If your server connects to your ISP using a modem or ISDN adapter, it only requires one ethernet adapter.

A *router* ensures that Internet data packets (e.g. e-mail, web page information, etc.) reach the appropriate computers on your network. Routing is one of the functions performed by the server in server and gateway mode.



Appendix B. Additional Software

While Mitel Networks Corporation does not provide direct technical support for the following additional software, its availability on the server may be of benefit to advanced users.

Warning

Use of this software is at your own risk and should not be attempted unless you know what you are doing! Mitel Networks Corporation does NOT provide support for this software.

MySQL

MySQL is an open source database management system. It provides a fully functional relational database similar to that provided by many commercial database vendors. We use it as the back-end for the webmail application. More information about MySQL can be obtained at <http://www.mysql.com/>.

PHP

PHP is a web scripting language that has become popular because it allows developers to easily create dynamically generated web pages. Additionally, it includes commands that allow for easy interaction with databases, particularly MySQL. The PHP language resembles C or perl and is actually embedded in the actual HTML pages on the web server. If you are familiar with Microsoft's Active Server Pages, PHP works in a similar manner. PHP is installed on the server because it is needed for the webmail application. To learn how to use PHP in your own web pages, please read the PHP FAQ at <http://www.php.net/FAQ.php> [<http://www.php.net/FAQ.php>] and the manual at <http://www.php.net/manual/> [<http://www.php.net/manual/>].

Procmal

procmal is an open source mail processing tool that can run on the server to preprocess incoming mail messages by, for example, filtering them into folders. More information about procmal can be found at: <http://www.procmal.org/>.

Taper

taper is a open source tape backup program provided for those who wish an alternative to the *flexbackup* program used by default in the Server Manager. More information about taper can be found at: <http://www.e-survey.net.au/taper/>.