



Red Book for AIX

Release 7.0 and 8.0

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Intuit® Eclipse™ 7.0 and 8.0

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Chapter 1:

Intuit Eclipse Support Introduction

The goal of Intuit Eclipse Support is to provide quality customer service in an effective, efficient manner. Our primary focus is the support of the Eclipse core application, while also attempting to meet other computing needs of our client base.

In keeping up with rapidly changing computing environments, we are constantly re-evaluating and adding to our support staff. Since our primary focus is the Eclipse application, we seek personnel with strong customer service, distribution, inventory management, and accounting skills. We also strive to meet your other computing needs by providing knowledgeable, comprehensive support in the areas of system tuning and optimization, networking services, and desktop configuration, to name a few.

The receptionist will identify the nature of your incoming call and forward you to the appropriate group. We make every attempt to answer your incoming call, but should there be no technician available, we will offer you voice mail and have the technician return your call. If you are reporting a “system down,” where all employees are unable to use the system, we will page a support technician who can respond immediately.

The Support Department is divided into two groups: Systems and Applications.

Systems

The focus of the systems group is system integrity. This focus includes, but is not limited to: hardware configuration (including RS6000s and peripherals), networking (LAN and WAN), printing, faxing, AIX (IBM's Unix operating system), UniVerse, Windows, upgrades, companion products, and system performance.

Applications

Applications support is divided into two areas of expertise: Inventory Management and Accounting, with each group having a team lead.

We have instituted a tiered structure in applications support, for the purpose of expediting, and escalating issues. Tier 1 support will answer your incoming call and initiate a tracker. If we cannot resolve your issue on the initial contact, we will escalate it to the Tier 1 team lead and give you the tracker number.

Teams meet formally on a weekly basis (Friday at lunch) and informally on a daily basis. If your issue requires further escalation, we will forward it to Tier 2 for in-depth research and/or programming intervention.

Intuit Eclipse Phone Numbers

Your monthly maintenance fee provides weekday 8AM to 5PM coverage in your local time zone.

We provide after-hours, published holiday, and weekend emergency and system services for an additional fee. To receive emergency support, call the regular Intuit Eclipse Support number (508-778-9151) and follow the instructions of the after-hours automated attendant.

When leaving a message, provide the following information:

- Your name.
- Your company name
- The phone number where you can be reached.
- A specific example of the problem you are describing. Print screens are always useful.

A support person will return your call.

Use the following telephone numbers and web address to contact Intuit Eclipse:

- Voice: 508-778-9151
- Fax: 508-778-6443
- After Hours Emergency: 508-778-9151
- Web: <http://www.eclipseinc.intuit.com>

Point Person

Ideally, you should filter all of your site issues through one “point person” on your staff. We recommend that you have no more than three point persons: Inventory, GL, and Systems. We often find that several people are calling from the same site to report the same issue; this duplicates the effort but does not solve the problem any faster.

General Support Policies

The topics that follow represent general Intuit Eclipse policies. Please contact the Connecticut Administration Office at (203) 926-2641 with any questions on maintenance contract policies or pricing.

Intuit Eclipse Support Hours and Service

Intuit Eclipse offers extensive support hours and services. Charges for these services keep Intuit Eclipse competitive and allow us to continue providing quality support to our clients.

Support Policy During Normal Business Hours

Your support contract with Intuit Eclipse provides customer support Monday through Friday, from 8:00 AM to 5:00 PM, in your local time zone.

Note: Refer to the Customer Support web site at <http://www.eclipse.intuit.com/support/> for a list of the Eclipse holidays, when after-hours emergency support is available.

Please let us know in advance when you will need extra assistance from Intuit Eclipse Support during normal business hours for activities such as the following:

- Moving, adding, or subtracting hardware to or from a system.
- Performing a complete physical inventory.
- Conducting an audit.

We will do our best to have the necessary technician available to assist you.

After-Hours Emergency Support

After-hours emergency customer support is available 24 hours a day, 7 days a week. We ask that all customers requiring emergency service leave a message. Be sure to leave your name, a brief message describing the problem, and a telephone number where you can be reached. We will strive to return this call in 1/2 hour or less. Because it is necessary to coordinate personnel and appropriate resources for the resolution of your problem, we strive to have those resources available within 2 hours of your initial call.

Intuit Eclipse bills this service at an hourly rate, with a 2-hour minimum.

IBM Hardware Problems

Your IBM hardware is under warranty for the *first year* for on-site service. At the end of the warranty period, Intuit Eclipse offers a Maintenance Agreement for IBM on-site service. We highly recommend the renewal of the Maintenance Agreement, as maintenance problems surface when you least expect it and usually are sources of great stress—stress that is only increased by the requirement to negotiate payment terms for the unsupported maintenance.

If you suspect that you have a hardware problem, call Intuit Eclipse System Support immediately. Do not call IBM. When you call, give us a description of the problem and your hardware model type and serial number. We will contact IBM and arrange an on-site visit, if necessary.

Important: We want the opportunity to work with the IBM representative on site so there is no confusion about the configuration of your system. Please insure that we are called prior to IBM starting any remediation efforts!

Scheduled After-Hours Maintenance/Upgrades

Scheduled after-hours maintenance is performed at a mutually agreed upon time between Intuit Eclipse and the client.

Intuit Eclipse bills scheduled after-hours maintenance at an hourly rate, with a 2-hour minimum.

Custom Programming Services

Custom programming services are available to Intuit Eclipse customers.

Intuit Eclipse bills these services at an hourly rate, plus expenses as necessary, with a 2-hour minimum.

Custom Forms Service

You can select standard forms, requiring no additional programming, from the Intuit Eclipse forms package.

Intuit Eclipse bills any programming services required to customize these forms at an hourly rate, with a 2-hour minimum.

Re-integration of Custom Code Charges

Each and every time you install a new release of Eclipse, you will incur a charge for re-integration of any custom code in your system. Any custom modifications that we have installed in your system are subject to re-integration charges.

Intuit Eclipse bills custom charges on a time and materials basis at the current rate in effect at the time of re-integration.

Note: With a new release, you might find that custom modifications are no longer necessary. Before installing a new release, we recommend that you review your custom modifications and evaluate the enhancements in the new release.

AIX & UniVerse Software Upgrades and Services

On occasion, IBM charges for upgrades and services to the following software:

- AIX operating system software.
- UniVerse database software.

Intuit Eclipse passes IBM's charges on to our customers. Implementation of the upgrades, if done during normal business hours, is covered by your Support contract. After-hours charges might apply to scheduled after-hours upgrades.

Data Corruption

Data corruption repair is a chargeable item, if the corruption is caused by something outside the scope of the Eclipse system. Intuit Eclipse bills this service at an hourly rate, with a 2-hour minimum.

Intuit Eclipse Education Services

Contact Educational Services at 508-778-9151 or log onto the support web site at <http://www.eclipse.intuit.com/support/>. You will need a login ID and password. If you do not have one, call your account manager or the Educational Services Department to obtain one.

The Eclipse University Home page provides all detailed information regarding Internet training, classroom training, and special Web Based Events offerings.

Centralized Training Classes

Intuit Eclipse currently offers classroom training in Mt. Laurel, New Jersey, as well as Boulder, Colorado. To view the current schedule, log onto the support web site at <http://www.eclipse.intuit.com/support/> and click Eclipse University. To have us fax or e-mail a schedule to you, contact the Educational Services Department at 508-778-9151.

Consulting

In addition to training and implementation services, Intuit Eclipse distribution professionals are available for on-site, system audit consultation. This consultation includes measuring the utilization of the Intuit Eclipse System at the client site by conducting a complete client profile and utilization audit to determine how the client is currently doing business and what areas could use improvement. Based on the outcome of this audit, the consultant, along with the client, develop a performance model and improvement plan to refine the use of the Eclipse system in their business.

Intuit Eclipse also offers consultations using Web Conferencing. The consultant uses your Eclipse account during the session, which allows for flexibility in scheduling.

Web Based Training

Intuit Eclipse offers a series of web based training (WBT) classes. These sessions feature personalized training for your employees. Obtain these class offerings from our support web site at <http://www.eclipse.intuit.com/support/>. Click **Eclipse University** to view the Eclipse University home page and then click **Class List/Schedule** for a complete listing of scheduled courses. Most sessions are two hours in duration with a “live” Intuit Eclipse Instructor. For more information, contact the Educational Services Department at 508-778-9151.

Computer Based Training

Intuit Eclipse offers computer based training (CBT) modules in the following key areas:

- Sales order entry.
- Accounts receivable.
- Accounts payable.

These training modules allow users to learn at their own pace.

Note: Intuit Eclipse is currently updating the CBT modules, which will be available for purchase in April of 2006.

Chapter 2: Site Accountability

Your site is responsible for administering the hardware and software components of the Eclipse system with help from Eclipse Support. For us to be able to help, you *must* have a telephone in the location of your hardware. Further, we ask that you keep this manual, all reference and installation CDs, and authorizations readily available.

On-Site System Administrator

Intuit Eclipse Support recommends that you have at least one person who is thoroughly familiar with the site hardware and able to identify all of the hardware components. This person should be stationed at the same location as the system.

System Administration Responsibilities

The system administrator is responsible for performing the following functions:

- Providing the minimum hardware requirements.
- Rebooting the system.
- Using the UPS and PowerChute software.
- Performing system backups for disaster preparedness, which includes:
 - Backing up the operating system (mksysb).
 - Backing up the system data (Eclipse backups).
 - Maintaining the tapes and drives used for the backups.

Additional system administration responsibilities described in this book include the following:

- Network administration.
- Printers and queues.
- VSI-FAX.

Minimum Hardware Requirements

We recommend that the system administrator keep an updated site map, and label all cables, ports, and devices. Contact Intuit Eclipse System Support to familiarize yourself with the system's hardware.

Following are the minimum hardware requirements for running the Eclipse system.

Existing Hardware (RS/6000) Systems

Companies currently using RS/6000 systems are required to upgrade to the appropriate AIX and UniVerse releases when signing with Intuit Eclipse.

Use the following procedure to determine the RS6000's machine type.

► To determine the RS600 machine type:

1. At the command prompt (#), type the following command:

```
# uname -M
```

The system displays the following information:

```
IBM,7029-6E
```

Important: This information, along with the serial number found on a label on the front in close proximity to the tape and CD-Rom drives, is important when seeking IBM maintenance.

Electrical Power Protection

We recommend that each hardware system be equipped with an American Power Conversion UPS and PowerChute software. Buy the model best suited to your needs. These machines are sold based on the amperage that the equipment being plugged into it will require. Consult appropriate technical personnel if you need help in determining that load.

The purpose of an uninterrupted power supply (UPS) device is to allow for normal shutdown procedures during power failures, not to keep your system up for any extended period of time. Intuit Eclipse Support recommends and supports American Power Conversion UPS and their PowerChute software. PowerChute's job is to bring your system down in an orderly fashion in the event of power failure *when you are not on site*. When you are present during a power failure and the power is going to be off for an extended period of time, we recommend that you manually bring the machine down. Contact your Intuit Eclipse sales representative directly with any sizing questions.

We also recommend that you have a dedicated branch circuit for your computer.

Note: Never plug a Laser printer into a UPS.

Diagnostic Modem

In order to effectively assist you in maintaining your system, it is imperative that Intuit Eclipse Support has a *dedicated* modem for its exclusive use. Ecomm, Intuit Eclipse's automated dial up application, checks your system on a daily basis for file system sizes and errors. We also use Ecomm for downloading Intuit Eclipse upgrades and fixes.

Multiple Account License

Intuit Eclipse will charge an additional license fee for multiple accounts or copies of the Eclipse software utilized to operate a business entity, plus all additional applicable support and user fees.

This includes the installation of "play" accounts, as required. Intuit Eclipse will quote this on a case-by-case basis.

Rebooting the Unix System

Intuit Eclipse recommends rebooting your Unix system a minimum of once a month. Once a week is not too often! This process flushes RAM, cleans temporary files, selects lists, and removes any errant processes.

The following procedures explain how to do the following:

- Shut down and reboot your system in a single step.
- Shut down your system without rebooting.
- Reboot a previously shut down system.

▶ To shut down and reboot your system:

1. Ensure that all users log off the system.

Important: Failure to do this will result in corrupted data!

2. At the Unix command prompt (#) on the console, type the following command:

shutdown -Fr

Following the shutdown, the system comes back up. You can now go to a PC and log in to Eclipse.

Important: It is imperative that you log in to Eclipse after a system reboot, as failure to do so will result in scheduled reports not running at the appropriate time.

▶ To shut down your system without rebooting:

Note: This is typically done to accomplish a maintenance task on the hardware.

1. At the Unix command prompt (#) on the console, type the following command:

shutdown -F

Note: Disconnect the power cable to ensure the system is powered off, as some of the newer systems remain in a stand-by mode.

Following the shutdown, the following things occur:

- The console displays the following message: Halt completed.
- OK displays in the LED.
- The green power light is flashing.

It is now safe to unplug the system for any maintenance or to power your system back on.

▶To power on your system:

1. If the console screen is black or shows the screen saver, press **Enter** to display the Main Menu, as shown below:

MAIN MENU

1. Service Processor Setup Menu
2. System Power Control Menu
3. System Information Menu
4. Language Selection Menu
5. Call-In / Call-out Setup Menu
6. Set System Name
99. Exit from Menus

>

2. At the > prompt, type **2** and press **Enter** to display the System Power Control Menu, as shown below:

System Power Control Menu

1. Enable/Disable Unattended Start Mode: Currently Enabled
2. Ring Indicate Power-On Menu
3. Reboot/Restart Policy Setup Menu
4. Power-On System
5. Power-Off System
98. Return to Previous Menu
99. Exit From Menus

>

3. At the > prompt, type **4** and press **Enter** to power on the system.

The system displays the following message:

WARNING: POWERING SYSTEM WILL EXIT MENUS!

Type Y to continue, or any other key to abort.

4. Type **Y**.

The system displays the following message:

System Powering On

Using UPS and PowerChute Software

Personnel in the Intuit Eclipse Unix department install the Uninterrupted Power Supply (UPS) and PowerChute software prior to going live on the system.

Use the instructions in the following procedures to do the following:

- Verify that the UPS is communicating with the server.
- Verify the actual process.

▶To verify that the UPS is communicating with the server:

1. At the AIX command prompt (#), type the following command:

```
# tail /u2/powerchute/powerchute.log
```

2. Press **Enter**.

The system displays the following information:

```
root:/u2/powerchute# tail powerchute.log
300000 02/19/03 22:38:43 Unable to communicate with UPS
100200 02/19/03 22:38:50 Communication established
300000 02/19/03 22:57:03 Unable to communicate with UPS
100200 02/19/03 22:57:08 Communication established
```

Normally the UPS starts communication when the server is rebooted. You are verifying that communication is established in the log. Ensure that the date and time are current!

▶To verify the actual process (./_upsd -n):

1. At the command prompt (#), type the following command:

```
# ps -ef|grep upsd
```

Note: To enter the "|" pipe symbol, press **Shift** and type a backslash.

2. Press **Enter**.

The system displays the following information:

```
root:/# ps -ef|grep upsd
root 23226  1 1 Feb 09  - 25:37 ./_upsd -n
```

Note: You may or may not have an APC UPS unit.

Performing System and Data Backups

The system administrator is responsible for making system and data backups. This person is also responsible for maintaining the tapes and tape drives on which the backups are created.

Backing Up the Operating System

Back up your Operating System (OS) before making any system upgrade.

It is the responsibility of the on-site system administrator to periodically create a backup of the operating system (OS). In AIX, use the **mksysb** function to create a backup before making changes to your system, such as adding or subtracting users or devices, or upgrading the operating system, UniVerse or any collateral product.

Note: We recommend that you accomplish this task once a month at minimum or whenever any changes occur in your system that are operating system related.

Intuit Eclipse Support can provide detailed instructions, or you can schedule assistance with Systems Support. See Backing Up the Operating System Overview.

Backing Up Eclipse Data

Back up your Eclipse data on a daily basis.

We recommend purchasing one tape for each day of the month and archiving a tape at the end of each month. These tapes should be rotated and taken out of service after 30 uses per IBM's recommendation. Archiving a tape once a month and replacing it with a new one will keep your tapes as fresh as required.

Your installer helps the on-site system administrator schedule the data backup using the Intuit Eclipse Phantom screen. It is imperative that you schedule this backup to take place when the chance of interactive users being on the system is minimal. The Phantom sends a message to the system administrator when the backup is complete. The system administrator should check this message daily and report any errors to Intuit Eclipse Support.

See Backing Up the Database Overview.

Cleaning Backup Tape Devices

The on-site system administrator is responsible for cleaning the tape drives. IBM ships a cleaning cartridge with each drive and recommends that you clean your tape drives on a monthly basis. Cleaning the tape drive once a week is not too often!

Chapter 3: Disaster Preparedness

The system administrator is responsible for making system and database backups. This person is also responsible for storing the backup tapes off site. In case of disaster, the system administrator can use the backup tapes to recreate the entire operating system and database.

The system administrator is also responsible for maintaining the tape and tape drives on which the backups are created.

This section includes information on the following subjects:

- Backing Up the Operating System
- Backing Up the Database
- Maintaining Backup Tapes and Tape Drives

Backing Up the Operating System Overview

Use the "smitty **mksysb**" command to create a backup of the operating system before making changes to your system, such as adding users, devices, or OS upgrades. The command creates an installable image of the [root volume group] operating system either in a file or on a bootable tape. You can use this backup to reinstall a system to its original state after it has been corrupted. If you create the backup on tape, the tape is bootable and includes the installation programs needed to install from the backup.

Note: The procedures described in this section are provided for AIX 4.3.x and 5.x. The procedures only apply to IBM RS/6000 machines.

Recommendations

For operating system backups, we make the following recommendations:

- Back up the operating system once a month OR whenever hardware changes occur.
- Keep three tapes in rotation for operating system backups.
- Tape 1 – Keep the most recent backup tape ON SITE.
- Tape 2 – Store the second most recent tape OFF SITE, so you can restore the operating system in the event of a disaster, such as fire or flood.
- Tape 3 – Use the third most recent tape for your next backup. Store the tape off site until the time you are ready to make the backup.
- Replace your tapes once a year.

Restoring Third Party Software Using **mksysb**

Some third party software products have an unreliable history of recovery using the Unix backup tools; Intuit Eclipse Support ensures the reliability of backing up the AIX operating system software only. You are responsible for understanding the procedures necessary to back up and restore all third party products not purchased through Intuit Eclipse.

You should contact your third party software vendors or their software support group and determine the consequences of restoring third party software using **mksysb**. Some products use raw data logical volumes, which are not backed up in normal Unix backup procedures.

Creating a mksysb for AIX 4.3.x and 5.x

After completing the preliminaries, you are ready to create a mksysb tape for your AIX 4.3.x or 5.x system. This can be run from the console or from Eterm while logged in as root.

► To create a mksysb for AIX 4.3.X and 5.X:

1. At the system console, log on to the operating system as the **root** user.
2. At the Unix command prompt (#), enter the following command to begin the mksysb backup:

smit mksysb

The system displays the following information, which depicts the options available on 4.3.x. and 5.x. If the smit screen does not have an orderly appearance, then stop immediately and call Intuit Eclipse Support.

Back Up the System

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[Entry Fields]

WARNING: Execution of the mksysb command will result in the loss of all material previously stored on the selected output medium. This command backs up only rootvg volume group.

* Backup DEVICE or FILE	[/dev/rmt0]	+/
Create MAP files?	yes	+
EXCLUDE files?	no	+
List files as they are backed up?	yes	+
Generate new /image.data file?	yes	+
EXPAND /tmp if needed?	yes	+
Disable software packing of backup?	no	+
Number of BLOCKS to write in a single output	[]	#
(Leave blank to use a system default)		

F1=Help	F2=Refresh	F3=Cancel	F4=List
F5=Reset	F6=Command	F7=Edit	F8=Image
F9=Shell	F10=Exit	Enter=Do	

3. Use the defaults for the above settings, with the following exceptions:
 - **Backup DEVICE or File** – Access the appropriate tape drive as determined above.
 - **Create MAP Files** – Toggle this field to “yes,” unless the intent is to use this tape to load another system. As this process is instructive of disaster recovery the answer should be “yes.”
 - **AIX v5.2 - Verify readability if tape device** – If you do not wish to do a separate verify toggle to yes.
 - **AIX v5.3 - Backup extended attributes** – Not necessary unless you have employed ACL.

A selection may be changed by holding down the **Esc** key and pressing the **4** key (**Esc-4**) to show a list of items. You can also use the **F4** function key to the list.

4. Press **Enter** to begin mkysyb.

Caution: The system overwrites the contents of the current tape.

Press **Enter** again to confirm the mkysyb creation.

5. After creating the mkysyb, verify the tape. The verification consists of reading the information stored on the tape back into the system.

Verifying the mksysb Tape

Verify your mksysb tape before you reboot your system.

▶ To verify the mksysb tape:

1. On the system console, return to the Unix command prompt (#) in one of the following ways:
 - Press **F3** to step back through the previous menus.
 - Hold and press **Ctrl-C**.

2. At the command prompt (#), enter the following command:

```
# smit lsmksysb
```

Note: Use a lower case **l** in the lsmksysb command, not the number 1.

3. Leave the tape in the drive and press **Esc-4** to select the device name in the second field on this screen. The default for this field is **/dev/rmt0**.

If your primary tape drive is another device, press **Esc-4** to select the name in this field.

The verification process begins.

You can let it run to completion or stop it by using **Ctrl-C**. It will take quite a while to stop, so be patient. If you stop the verification it will eventually give you an error message of "failed," which in this case only means that you stopped the verification.

An "OK" in the upper left corner of the screen indicates a successful readback.

4. Press **Esc-3** until you are back at the # prompt to get out of mksysb process.
5. Eject your mksysb tape.

Backing Up the Database Overview

Use the System Backup Maintenance program to back up the Eclipse software and all associated data, including UniVerse, VSI-FAX, and PowerChute to tape. The program backs up all files residing under the /u2 directory. The program creates a complete data backup, not an incremental backup of only changed data.

Schedule the database backup program to run nightly, during a quiet period on the server, when no order entry transactions or data changes are occurring. Your installer will help you set this up.

Recommendations

For database backups, we make the following recommendations:

- Order a one-month supply of backup tapes and rotate the tapes according to a backup schedule. Have one tape for each day of the month for which you are backing up the database.
- Store your backup tapes OFF SITE. In the event of a disaster, such as a fire or flood, you will have a data backup from which to restore the system.
- At the end of each month, archive a tape by removing it from the rotation and storing it in a secure location. Take the oldest tape out of the rotation and attach a label, such as January '03 Archive. Replace the archived tape with a new tape that is rotated into the backup schedule.
- Keep a calendar for the tapes and write the tape number on the day it was recorded. In the event that you need to restore a file from Wednesday two weeks ago, the calendar will tell you which tape from which to do the restore.
- Replace your tapes once a year. Archiving a tape at month end and replacing it with a fresh tape will accomplish this.

Running the System Backup Maintenance Program

Use the System Backup Maintenance program to back up your Eclipse database files.

Schedule the database backup program to run nightly, during a quiet period on the server, when no order entry transactions or data changes are occurring. Your installer will help you set this up.

Note: For the system backup to work, you must set the control maintenance records that assign the backup administrator, the backup check time, and the backup variance percent.

This topic includes the following information:

- Running the system backup maintenance program.
- Successful backup message.
- Unsuccessful backup message.

Running the System Backup Maintenance Program

Your installer will help the system administrator use the following procedure to schedule the database backup program to run nightly. Schedule the backup to run during a quiet period on the server, when no order entry transactions or data changes are occurring.

►To run the system backup maintenance program:

1. From the **System > System Programming > System Maintenance** menu, select **System Backup Maintenance**.

The system displays the Phantom Scheduler screen.

2. Schedule the program to run nightly.

Successful Backup Message

Upon completion of a successful backup, the system sends a message similar to the following example:

The backup started at 11:50pm on 05/24/2002 completed after 3.76 hours.

9785400 blocks were backed up with a variance of 0.36%.

The message states the date and time the backup started, the duration of the backup, and the number of blocks backed up. This incorporates the information provided in the /tmp/backup.chk and /tmp/backup.err files. The variance identifies the change (+/-) in the number of blocks backed up the previous night.

A variance of greater than or less than the percentage entered in the System Backup Variance % control maintenance record generates a message similar to the following example:

The backup started at 03:52pm on 05/25/1999 completed after 0.02 hours.

24520 blocks were backed up with a variance of 16246.67%, which is greater than the allowed variance.

Although exaggerated, this example demonstrates the way the variance control maintenance record displays the variance error if greater than the designated percentage. The variance control record was added as a way to alert administrators to potential drastic changes in the Eclipse file system.

For example, a user runs a report writer report that generates a Hold file of 500 megabytes. This may be a file you do not want to keep on your system, as it is using a significant amount of disk space.

Unsuccessful Backup Message

If the backup program encounters an error during processing, the following message is directed to the user or message group designated in the System Backup Administrator control maintenance record:

The backup did not complete properly. An error report has been placed in your Hold file.

Note: The system places the error report in the Hold file of each designated user.

In addition, the system backup check program run the next morning generates the following message:

No backup has been recorded since 05/23/02.

Setting System Backup Control Maintenance Records

For the system backup program to work, the three following control maintenance records must be set.

System Backup Administrator

Enter the name of the user or message group, such as BACKUP, to receive the system backup messages each morning. Use a message group to send the message to more than one person.

System Backup Check Time

Enter the time when the system backup program confirms whether the backup was successful. The default check time is set to 07:00 a.m., which should allow plenty of time for the backup to finish.

This check is done every day of the week and cannot be changed. If you do not run a backup on Saturday and Sunday, a message is sent to the System Backup Administrator that a backup has not been recorded since the previous Friday. A message is sent for each day of the weekend the backup does not run. If this time is not specified or if the backup is not successful, the Administrator receives an error message.

Time can be entered in several ways, including: 9a for 9:00 a.m. or 9p for 9:00 p.m. Military time does not require an 'a' or a 'p'. When including minutes with either normal or military time, type a colon between the hour and the minutes. For example, type 04:30.

System Backup Variance %

Enter the allowable percent difference in the amount of backed up data between last night's backup and the previous night's backup without generating an error message. We suggest that the variance percent be set to 9 to allow for the normal generation of new data. If the percent difference between the two backups is greater than the specified number, the System Backup Administrator receives an error message.

Verifying Your Backup Tapes

Use the Backup Table of Contents Readback function to verify that a backup of a file was successful. When a file backup is successful, the system updates the file's backup time and date in the tape's table of contents.

After you load the backup tape in the drive, the function reads back the table of contents. You can then check the time and date of the last backup for the file in question.

Intuit Eclipse recommends verifying your backup at least once a week.

▶ To verify a file backup tape on tape:

1. From the **System > System Programming > System Maintenance** menu, select **Backup Table of Contents Readback** to display the CPIO Backup Table of Contents screen.

The system populates the **Backup Device** field with the backup device name specified in the Unix Backup Device Path Name control maintenance record. For example, `/dev/rmt/0` might be the backup device name.

To read from a drive other than the default drive, you must enter that drive name.

2. Mount the backup tape on your tape drive and press **Enter** to begin verifying the tape.

Note: If there is no tape in the drive when you press **Enter**, the following message displays: Cannot find or open the file.

The program reads the tape. File information scrolls onto the screen. If a file is listed, it was backed up.

The following six columns of information display:

- Size of file.
 - Owner of file.
 - Bytes of data in file.
 - Date and time the file was last updated.
 - Directory.
 - File name.
3. If you want to check a particular file, scroll through the displayed screen to locate the name of the file to check.
 4. When you locate the file name, look in the fourth column to find the date and time you made the last backup.

5. When you are finished, enter **Q** following the colon on the screen to quit.

It will take a moment to stop the process. The tape rewinds and must finish before you can exit the screen.

The system displays a message when it completes the process and ejects the tape from the tape drive, which prevents someone from inadvertently writing on top of last night's save.

6. Remove the tape from the tape drive.

Backup Tape Maintenance Overview

Included in your system hardware is a tape drive for making backups of your operating system and the Eclipse database.

In addition to making tape backups of the operating system and the database, the system administrator is also responsible for purchasing new tapes and cleaning the tape drives.

Database Backup Recommendations

For database backups, we make the following recommendations:

- Order a one-month supply of backup tapes and rotate the tapes according to a backup schedule. Have one tape for each day of the month for which you are backing up the database.
- Store your backup tapes OFF SITE. In the event of a disaster, such as a fire or flood, you will have a data backup from which to restore the system.
- At the end of each month, archive a tape by removing it from the rotation and storing it in a secure location. Take the oldest tape out of the rotation and attach a label, such as January '03 Archive. Replace the archived tape with a new tape that is rotated into the backup schedule.
- Keep a calendar for the tapes and write the tape number on the day it was recorded. In the event that you need to restore a file from Wednesday two weeks ago, the calendar will tell you which tape from which to do the restore.
- Replace your tapes once a year.

Operating System Backup Recommendations

For operating system backups, we make the following recommendations:

- Back up the operating system once a month OR whenever hardware changes occur.
- Keep three tapes in rotation for operating system backups.
- Tape 1 – Keep the most recent backup tape ON SITE.
- Tape 2 – Store the second most recent tape OFF SITE, so you can restore the operating system in the event of a disaster, such as fire or flood.
- Tape 3 – Use the third most recent tape for your next backup. Store the tape off site until the time you are ready to make the backup.
- Replace your tapes once a year.

Cleaning Your Tape Drives

Intuit Eclipse Support recommends cleaning your tape drive at least once a month, or more frequently if your system is located in a dusty environment. Cleaning cartridges are shipped with your hardware.

Determining If Your Tape Drive Needs Cleaning

The system has three ways of indicating that a tape drive needs cleaning:

- The amber light on the lightning bolt symbol is flashing.
- The LED on the tape drive displays the message "Clean soon."
- A message similar to the following example displays on the console:

```
Tape drive usage for rmt0 has exceeded the recommended cleaning interval without being cleaned. Use approved cleaning materials to clean the tape drive.
```

If you have installed the Software Error Logging and Dump Service Aids package, `bos.sysmgt.serv_aid`, then run the command below to examine the error entry. Otherwise, move your system error log to a machine that has this package installed, and run the command below.

```
errpt -a -l 34 -i <logfile>
```

Run diagnostics to determine the nature of the problem.

Recommended Media for Backup Tapes

We recommend using the following media for backup tapes for IBM tape drives.

These media are usually available from your local computer supply or office supply store, such as Office Depot or Staples. To buy name brand tapes we suggest using IBM.

Half Inch Cartridge

- Part number: 08L9120 (100Gb native Capacity)
LTO Ultrium Data Cartridge

QIC (Quarter Inch Cartridge)

- Model 7207-012 (1.2Gb Capacity)
3M Magnus 1.2 or compatible

8mm

- Model 7208-011 (5 GB Capacity)
Sony QG112MAA/AUC or compatible
(8mm data cartridge, 112 meters)
- Internal Model 6154 (20/40 GB Capacity)
External Model 7208-341 (20/40 GB Capacity)
Exabyte 170M Media

4mm

- Model 7206-005 (4Gb Capacity)
HP DDS-2 120 Meter or compatible
(4mm data cartridge, 120 meters)
- Internal Model 6159 (12/24Gb Capacity)
HP DDS-3 125 Meter or compatible
(4mm data cartridge, 120 meters)
- Internal Model 6158 (20/40Gb Capacity)
External Model 7206-220 (20/40Gb Capacity)
Sony DDS-4 150 Meter or compatible
(4mm data cartridge, 125 meters)

DVD

We also recommend the following DVD for backups.

- Maxwell DVD-RAM 4.7 GB Single sided Type II DRM47R
Supports all major CD-ROM formats: Mode 1, Mode 2, XA, CDDA, and Audio.

Chapter 4: Network Administration

This chapter contains information about the following subjects:

- Ethernet PC connections
- Troubleshooting a hung TTY port
- Programming an Eclipse MultiTech Support modem

Ethernet PC Connection

After installing and configuring your Network Interface Card (NIC) and have a good physical connection between your computer and the hub, you need to configure the NIC for your operating system. Use one of the following procedures:

- Windows 95, 98, and NT PCs.
- Windows 3.11 PCs.

Ethernet Connection for Windows 95, 98, and NT PCs

Before starting the following procedure, have your original Windows CD-ROM on hand, and any diskettes provided by the manufacturer of your NIC, as your computer might require them during this setup.

Note: The example used in this section is for a Windows 95 PC. Your options might look different if running Windows 98 or NT Workstations.

► To configure your network interface card for Windows 95, 98 and NT:

1. In the lower left corner of the screen, click **Start** and select **Settings > Control Panel** to display the Control Panel window.
2. Double-click the **System** icon to display the System Properties dialog box.
3. Click the **Device Manager** tab to bring it forward.
4. Check whether yellow or red displays on or next to the network interface card (NIC) icon.
 - If you do not have any problems with your NIC icon, click the **Cancel** button at the bottom of the screen to close that window and return to the Control Panel.
 - If your NIC icon displays yellow, the hardware has a conflict. If the icon displays red, the hardware is disabled. Do one of the following:
 - Double-click on the device icon to display the Properties dialog box for the device to see details of the problem.
 - You can also use the Windows Help system to start a hardware troubleshooting program to assist in resolving this problem. Click **Start** and select **Help**.
Windows displays the Help window. Double-click to open the **Troubleshooting** book and look for the **If you have a hardware conflict** topic. The help topic steps you through using the Windows hardware troubleshooting program to help you resolve the problem.
 - Otherwise, contact the vendor from whom you purchased your NIC.
- If your NIC is not on the device list, but you know the type of NIC you have installed, skip ahead to Step 5.

- If your NIC is not on the device list, click on the **Cancel** button to return to the Control Panel. Double-click the **Add New Hardware** icon to start the Add New Hardware Wizard, which you can use to detect new hardware, including the NIC. After detecting and installing the NIC, reboot your PC and repeat steps 1 through 4 to check for problems.
5. In the Control Panel, double-click the **Network** icon to display the Network dialog box.
 6. Click the **Configuration** tab to bring it forward and review the list of installed network components for an item marked **TCP/IP**, as follows:
 - If the TCP/IP entry associated with the NIC is there, continue with Step 7.
 - If a TCP/IP entry is not listed, follow these steps to add it:
 - In the Network window, click the **Add...** button to display the Select Network Component Type window.
 - Click the **Protocol** icon, then click the **Add...** button to display the Select Network Protocol window.
 - In the Manufacturers list on the left, locate and click **Microsoft**.
 - In the Network Protocols list on the right, locate and click **TCP/IP**.
 - Click **OK** to select the Microsoft TCP/IP protocol and return to the Network window. Continue with Step 7.

Note: Windows might prompt you to insert your Windows CD-ROM (or diskettes) as part of the installation. Follow the prompts as they appear on the screen.

7. Double-click the **TCP/IP protocol** associated with the NIC to display the TCP/IP Properties window.

Note: NOT the TCP/IP -> Dial-Up Adapter!

8. Click the **IP Address** tab to bring it forward.
9. Click **Specify an IP address** and complete the following fields:
 - In the **IP Address** field, enter the unique IP address that is assigned to your computer. The IP address format is **nnn.nnn.nnn.nnn**.
 - In the **Subnet Mask** field, enter the Subnet Mask for your company. In most cases it is 255.255.255.0.
10. Click **OK** to close this window and return to the Network window.
11. Click **OK** on the Network window to save your settings.

Note: Windows might prompt you to insert your Windows CD-ROM or diskettes as part of the installation. Follow the prompts as they appear on the screen. You will need to reboot your PC for the changes to take effect.

For instructions on configuring Eterm for an Ethernet network connection, refer to *Configuring Eterm for Windows for an Ethernet Connection*.

Ethernet Configuration for Windows 3.11 PCs

Before starting the following procedure, have your original Windows 3.11 software on hand, and any diskettes provided by the manufacturer of your NIC, as they might be required by your computer during this setup.

Note: Windows 3.1 cannot run an Ethernet environment using TCP/IP protocol.
You must use Windows 3.11.

►To configure your network interface card for Windows 3.11:

1. Install Eterm on your Windows 3.11 PC.
2. From the Program Manager window, open the Main program group and double-click the **File Manager** icon to open the File Manager.
3. Run the TCP32B.EXE self-extraction utility as follows:
 - From the **File** menu, select **Search** to display the Search dialog box.
 - In the **Search For** field, enter **TCP32B.EXE**.
 - Confirm that C:\ displays in the **Start From** field and the **Search All Subdirectories** option is checked.
 - Click **OK**.

File Manager searches all directories on the C: drive for the TCP32B.EXE file. When you install Eterm, the installation program copies this file to C:\ProgramF\Intuit Eclipse\Eterm.

When File Manager finds the program, it displays it in the Search Results window.

 - In the Search Results window, double-click the **TCP32B.EXE** file.

A self-extraction utility runs and copies all the files contained in TCP32B.EXE to their appropriate locations. When the utility finishes, it returns you to the File Manager window.

 - Close File Manager and return to the Main window.
4. Use the Network Setup dialog box and its ancillary dialog boxes to identify and configure your network driver, network adapter, and networking protocol, as follows:
 - From the Main window, double-click the **Network** icon to open the Network program group.
 - Double-click the **Network Setup** icon to display the Network Setup dialog box.
 - Click **Networks...** to display the Networks dialog box and do the following:
 - Select the Install Microsoft Windows Network option.
 - Click **OK** to return to the Networks Setup dialog box.
 - Click **Drivers...** to display the Network Drivers dialog box and do the following:

- Click **Add Adapter...** to open the Add Network Adapter dialog box and do one of the following:

Click **Detect** to make Windows automatically detect your adapter. Windows steps you through the process of finding the adapter and installing the necessary drivers.

Select the appropriate adapter from the list and then click **OK**.

Windows returns you to the Network Drivers dialog box.
 - Click **Add Protocol...** to open the Add Protocol dialog box.

Select the Unlisted or Updated Protocol item in the list and click **OK**. Windows displays the Install Driver dialog box and prompts for the location of the protocol.

Enter the location of the updated driver, or click **Browse** to navigate to the driver location. When you install Eterm on your computer, the installation program copies this file to: C:\ProgramF\Intuit Eclipse\Eterm.

Select the Microsoft TCP/IP-32 3.11b protocol from the list of protocols that Windows displays, and click **OK** to return to the Network Setup dialog box.
 - In the Network Setup dialog box, first select the **Microsoft TCP/IP-32 3.11b** protocol and click **Set as Default**. This moves the protocol to the top of the list of available protocols for the network adapter.
 - Select **Microsoft TCP/IP-32 3.11b** again and click **Setup** to open the Microsoft TCP/IP Configuration dialog box, and then do the following:

Type in the IP Address unique for your PC in the **IP Address** field.

Type in the appropriate subnet for your company in the **Subnet Mask** field. In most cases, this will be **255.255.255.0**.

Click the **OK** button to close the Microsoft TCP/IP Configuration dialog box.
5. Click **Cancel** to close the Network Drivers dialog box and **OK** to close Network Setup dialog box.
- Windows displays the Network Names dialog box prompts you to enter network names for your system.
6. Enter the necessary information in the **User Name**, **Workgroup**, and **Computer Description** fields and then click **OK** to close the dialog box.
- Windows indicates that it has made changes to your system. Click **OK** at the prompt to acknowledge the changes. Windows then prompts you to restart your computer to complete the changes.
- For instructions on configuring Eterm for an Ethernet network connection, refer to **Configuring Eterm for Windows for an Ethernet Connection**.

Troubleshooting a Hung TTY Port for AIX 4.x or 5.x

If your PC loses power and you cannot reestablish the serial connection to the Eclipse system, you may have a hung TTY port.

Note: Information in this document is correct to the best of our knowledge at the time of this writing. Please send feedback by fax to AIXServ Information at (512) 823-4009.

Please use this information with care. IBM will not be responsible for damages of any kind resulting from its use. The use of this information is the sole responsibility of the customer and depends on the customer's ability to evaluate and integrate this information into the customers operational environment.

▶ To clear a hung tty port:

Note: In the following examples, the hung port tty is assumed to be **tty0**.

1. Kill any offending running processes as follows:
2. Enter the following command to determine if the tty is currently handling any processes:

ps -ef|grep tty0

The command returns something like the following:

```
root 12345 10   Aug 29 0 /path/program_name
```

The process ID here is 12345.

- Enter the following command to kill this process:

kill 12345

If the process is getty, use the following command to kill the process:

pdisable tty0

You can re-enable the process with the following command:

penable tty0

- Enter the following command to determine whether the process was successfully killed:

ps -ef|grep tty0

2. If the offending process has been successfully killed but the tty is still unresponsive, enter the following command:

fuser -k /dev/tty0

This command kills any process that can be found running on the port and displays the PID of each process.

3. If the tty is still unusable, detach and re-attach the cable from the hung port.

AIX uses the DCD (Data Carrier Detect) signal to determine the presence of a device attached to the port. Detaching and re-attaching the cable in many cases clears hung processes.

To determine the location of the port for which the tty is configured, use the following command:

lsdev -Cl tty0

The third column of the output of this command indicates the address of the tty. In the following example, s1 indicates that the tty is configured for native serial port 1.

tty0 Available 00-00-s1-00 Asynchronous Terminal

4. If the tty is still unusable, flush the port by using the following command:

/usr/sbin/tty/stty-cxma flush tty0

This command is intended for tty's configured for ports of the 128-port adapter. In some cases you can use this command to flush other tty ports.

5. If the tty is still unusable, on the keyboard of the hung terminal press the **Q** key while holding down the **Ctrl** key (also known as **Ctrl-Q**) to resume any suspended output by sending an Xon character.
6. If the unresponsive tty is on an AIX 4.x system, do the following:

- Enter the following command to get the major and minor numbers of the tty:

ls -l /dev/tty0

The system returns something like the following:

```
crw--w--w  1 root system  44,129 Aug 28 13:12 /dev/tty0
```

The major and minor numbers are 44 and 129 respectively.

- Enter the following command to reset this tty:

/usr/sbin/streset -M 44 -m 129

7. Regardless of the system, if the tty is still unusable, bring the tty down to a DEFINED state and then make it available. A program will sometimes open a tty port, modify some attributes, and, when closing the port, not reset those attributes.

Enter the following command to make the tty unavailable to the system, but leave the information concerning the tty in the database:

rmdev -l tty0

Enter the following command to reactivate the tty and make it available to the system:

mkdev -l tty0

8. If the tty is still unusable, consider moving the device, such as the terminal or modem, to another port and configuring a tty at that location until the system can be rebooted.
9. If a reboot does not clear the port, a hardware problem is indicated.

To check the error report for port hardware problems, enter the following command:

errpt -a | pg

Programming an Eclipse MultiTech Support Modem

You can program an Eclipse MultiTech support modem in one of the following two ways:

- While attached to your PC.
- While dialing in to your RISC.

▶ To program a MultiTech modem while attached to your PC:

1. Physically connect the modem to your PC with a null modem cable.
2. From the Eterm menu bar, click **Configure** and select **Communications** to open the Eterm Configure Communications dialog box.

Note: The Eterm for DOS Configure screen looks a little different, although the fields function the same.

3. Change the values in the following fields:
 - In the **Communications Port** select the COM port to which the modem is attached.
 - In the **Speed** field, select **19200** as the baud rate of the COM port.
4. Click **OK** to save these changes.
5. From the Eterm menu bar, click **Connect** to open an Eterm session using the new communication settings.

Note: For Eterm for DOS, select CONNECT from the main menu.

6. Type **ATL5** and press the **Enter** key.

Your modem should respond by sending information to the screen, similar to the following example:

```
atl5
B1 E1 M1 Q0 R0 V1 X0 &E1 &E4 &E6 &E8 &E10 &E13 &E15 $E0 %C0 #C1 &C1
$MB19200 $SB57600 $BA0 &W0
OK
```

7. Enter **AT&W1Z**. This restores the modem to factory default settings.
After the modem completes the command, it displays **OK** again; wait for this response before proceeding.
8. Enter **ATE1Q2&D2&C4&S0=1\$SB19200\$R1&W**. Wait for the **OK** to appear.
9. Enter **ATL5L6L7** to ensure the codes you typed above have been saved by the modem.
10. Close your Eterm session, disconnect the modem, and try dialing in to it to test the modem.

Note: You might need to reconfigure Eterm again.

If the modem is not working, call Intuit Eclipse Support and ask for the Systems Group.

►To program a MultiTech modem while dialing in to your RISC system:

1. Dial the number of the modem you want to reprogram.

If you do not connect—the modem does not answer and the call just rings—have the power cycled on the remote modem (turn the modem off and then back on) before trying again.

Note: MultiTech modems need to have the “TR” light on to answer a call.

2. Type **%%%at** as soon as you see **CONNECTED** on your screen.

Your screen should look something like the following example:

```
CONNECTED
%%%AT
1 – DATA MODE
2 – COMMAND MODE
>
```

3. At the command prompt (>), type **2** and press **Enter**.

The system displays a password prompt, as shown in the following example:

```
PASSWORD>
```

4. Enter **MODEMSETUP** (all uppercase) for the password.

The modem acknowledges the password by displaying **OK**; you can proceed to the next step. If you type the incorrect password, the modem prompts you for the password again.

5. Enter **AT&W1Z** to restore the modem to factory default settings.

After the modem completes the command, it displays **OK** again; wait for this response before proceeding.

6. Enter **ATE1Q2&D2&C4&S0=1\$SB19200&W**. Wait for the **OK** to appear.

7. Enter **ATL5L6L7** to ensure that the codes you typed above have been saved by the modem.

8. Enter **ATO** to return to the modem menu shown above in step 2.

9. Enter **1** to exit the modem.

10. Enter **+++ath** to disconnect, and then re-dial the number to test the modem.

If the modem is not working, call Intuit Eclipse Support and ask for the Systems Group.

Chapter 5:

Eclipse Terminal Emulator

Each Intuit Eclipse customer receives a CD-ROM containing the Intuit Eclipse terminal emulator software, Eterm for Windows.

Visit our website at <http://www.eclipse.intuit.com/> for the latest Eterm or Dterm for DOS.

Before You Begin

Before installing and configuring Eterm, make certain that your PC is set up correctly for your network. Refer to “Network Administration” for information on setting up network connections.

Installing and Using Eterm for Windows

Eterm for Windows is meant for those PCs running Windows 95, Windows 98, 2000, XP, ME or Windows NT.

To install Eterm for Windows, do the following:

- Run the installation program to install Eterm on your PC.
- Configure Eterm for Windows on the PC so you can connect to your network.

Eterm for Windows contains detailed online help. Click the **Help** button in dialog boxes or select **Contents** from the Help menu.

Installing and Using Eterm for DOS and Dumb Terminals

Eterm for DOS is designed to run under the MS-DOS environment. It is meant for those PCs that either boot from a floppy diskette (dumb terminals) or that run MS-DOS from their hard drive.

To install Eterm for DOS, do the following:

- Make one copy of the Eterm for DOS diskette for each PC that boots from its floppy diskette.
- Modify each boot disk so that it correctly identifies the PC on your network.
- Configure Eterm for DOS on the PC so you can connect to your network.

If you copy the Eterm for DOS files onto those computers running MS-DOS from their hard drives, you will configure Eterm for DOS on the PC so you can connect to your network.

Installing Eterm for Windows

Intuit Eclipse ships the Eterm for Windows installation program on two diskettes. The installation program works for Windows 95, Windows 98, 2000, XP or Windows NT computers.

►To install Eterm for Windows:

1. Close all other programs before installing Eterm for Windows.
2. Insert the first Eterm for Windows diskette into your floppy drive (usually drive A:).
3. From the Windows taskbar, click **Start** to display the **Start** menu.
4. From the **Start** menu, click **Run** to display the Run dialog box.
5. In the **Open** field, type: **A:\SETUP** and then click **OK**.

The installation program begins.

6. Follow the instructions as the program displays the prompts. You can accept the defaults by clicking **Next** to continue.

Consider the following notes regarding the installation program:

- You can create three different shortcuts to start Eterm.
- The Compact installation will only install the Eterm program (ETERM.EXE). The installation program warns you of the components that you are not installing when you select this installation type.
- The Custom installation allows you to select which files you want to install. If you choose not to install the Eterm font files, Eterm can generate the fonts internally, although this causes Eterm to run slower.
- The Update installation examines the Windows Registry and only installs new Eterm components or those Eterm components that have not been installed previously.

Note: Depending on the installation type you select, you might be prompted to remove the first installation diskette and insert the second diskette during the installation processes.

7. Click **Finish** when complete.

You might need to restart your computer to complete the installation process.

If you had an earlier version of Eterm installed on your system in a different folder, you will need to delete or change any Windows shortcuts that point to the old version.

Contact Intuit Eclipse Support for assistance.

Un-Installing Eterm from Windows

The program that un-installs Eterm works for Windows 95, Windows 98, 2000, XP or Windows NT computers.

► To un-install Eterm from Windows:

1. From the Windows taskbar, click **Start** to display the Start menu.
2. From the **Start > Settings** menu, select **Control Panel** to display the Control Panel window.
3. Double-click **Add or Remove Programs** to display the Add or Remove Programs window.
4. Double-click the **Eclipse Terminal Emulator** entry.
The system prompts you for confirmation before removing the Eterm program.
5. Perform the following manual operations:
6. Remove Eterm shortcuts and folders from the desktop.
7. Remove the **Program Files > Eclipse > Eterm** folder.

Note: Do this *after* steps 3 and 4 above.

Configuring Eterm for Windows

The first time you run Eterm, you must enter configuration data. You can change your configuration setup at any time.

This topic includes the following information:

- Starting Eterm.
- Configuring Eterm for an Ethernet connection.
- Configuring Eterm for a Serial connection.

Starting Eterm

Depending on how you installed Eterm for Windows, you can run the program in the following ways:

- Double-click the Eterm shortcut on your desktop.
- From the **Start > Programs > Eclipse** menu, select **Eterm**.
- From the **Start** menu, select **Eterm**.

When run for the first time, Eterm displays the Configure Communications dialog box.

For online instructions on configuring Eterm for Windows, click the **Help** button in the Configure Communications dialog box or select **Contents** from the Help menu.

Configuring Eterm for Windows for an Ethernet Connection

The following procedure provides abbreviated information for configuring communications for Eterm for Windows for an Ethernet connection.

►To configure Eterm for Windows for an Ethernet connection:

1. From the Configure Communications dialog box, choose the **Network - Telnet** network connection from the Communications Port drop-down box.
2. In the **Host** text box, type in either the IP address of the host system, or the host name if using a Hosts file or a Domain Name Server (DNS).

See the on-line instructions for more details on configuring a network connection.

3. Click **OK**.

When connecting to your host using a network interface card (NIC) and network cable, clicking the **Connect** menu takes you to the AIX login prompt. If not, try the following:

- Check that the **Connect** menu is inactive.
- If the **Connect** menu is inactive, your host system may be down.
- If the **Connect** menu is active, click it again.

- Check that you have selected the **Network - Telnet** network connection.
- Check that the entry in the **Host** box is valid.
- Check the integrity of all cable connections between your computer and the host computer.
- If you still encounter problems, please contact your System Administrator, or Intuit Eclipse Support.

Configuring Eterm for Windows for a Serial Connection

The following procedures provide abbreviated information for configuring communications for Eterm for Windows when connecting through one of the following:

- TTY port.
- Modem.

►To configure Eterm to connect through a TTY port:

1. From the **Configure** menu, select **Communications** to display the Configure Communications dialog box.
2. In the **Communications port** field, select the COM port that your PC uses to connect with the host system.
3. In the **Speed** field, set the baud rate equal to that of the host. Intuit Eclipse recommends entering 19200. Contact your system administrator for the appropriate setting to use.
4. For serial connections, leave the **Connect string** field blank.
5. Click **OK**.

When connecting to your host using a serial cable that attaches directly to a concentrator, clicking the **Connect** menu takes you to the AIX login prompt. If not, try the following:

- Check that the **Connect** menu is inactive. If not, click it again.
- Check that you have selected the appropriate COM port.
- Check that all cable connections are correct.
- If you still encounter problems, contact your system administrator or Intuit Eclipse Support.

►To configure Eterm to connect through a modem:

1. From the Configure Communications dialog box, in the **Communications Port** field, choose the COM port that your PC uses to dial out to the host
2. In the **Speed** field, set the baud rate equal to that of the host.
3. Check all boxes *except* **Auto Dial**.

4. In the **Connect String** field, enter the modem commands and the host modem telephone number that you want to use to connect. For example, if the telephone number of the host system is 1-800-555-1234, you might type in ATDT18005551234.

See the online instructions for more details on using the **Connect String** field.

5. Click **OK**.

The modem dials the host system and attempts to connect. If it does not connect with the host system, try the following:

- Check that the **Connect** menu is inactive.
 - If the **Connect** menu is inactive, your host system may be down.
 - If the **Connect** menu is active, click it again.
- Check that you have selected the appropriate **COM** port.
- Check that the entry in the **Connect String** field is valid.
- Clear the **Connect String** field, click **OK**, and attempt connecting again.
 - Type **ATZ** (the cursor will be in the Eterm window) and press **Enter**. The computer responds with **OK** to indicate that the modem is communicating to the program. If not, check the integrity of your modem connection to your computer.
 - Type **ATDT** (the cursor will be in the Eterm window) followed by your host system dial-up phone number, and press **Enter**. The modem dials the host system and attempts to connect.

If you still encounter problems, contact your system administrator or Intuit Eclipse Support.

Minimum Configuration for Eterm for Windows

The minimum configuration required for Eterm for Windows to operate correctly varies depending on how your PC is connected to the host.

When Connecting Through a TCP/IP Network Connection

For Eterm for Windows to operate correctly when connecting through a TCP/IP Ethernet connection, you must have the following options set:

- **Communications Port** – In the **Communications Port** field, choose the **Network - Telnet** network connection.
- **Host** – In the **Host** field, enter either the IP address of the host system or the host name if using a Hosts file or a Domain Name Server (DNS).

When Connecting Through a TTY Port

For Eterm for Windows to operate correctly when connecting through a TTY port, you must have the following options set:

- **Communications Port** – Choose the COM port that your PC uses to connect with the host system.
- **Speed** – Set the baud rate equal to that of the host. Intuit Eclipse recommends 19200. Contact your system administrator for the appropriate setting to use.
- **Connect String** – Leave this field blank.

When Connecting Through a Modem

For Eterm for Windows to operate correctly when connecting through a modem, you must have the following options set:

- **Communications Port** – Choose the COM port that your PC uses to dial out to the host system.
- **Speed** – Set the baud rate equal to that of the host computer.
- **Connect String** – Enter the modem commands and the host modem telephone number that you want to use to connect. For example, if the telephone number of the host system is 1-800-555-1234, you might enter ATDT18005551234.

Configuration Options for Eterm for Windows

From the Eterm menu bar, click **Configure** to display the following configuration options:

Communications

Opens the Configure Communications dialog box, where you can specify how Eterm will communicate with the host system for modem, serial, and network connections. If **Enable Configuration Password** is selected, you must enter the correct password before being able to make changes.

- **Communications Port** – Select the COM port or network connection type that your computer uses to connect to the host system. COM ports and serial devices must be available before Eterm can use them.
- **Speed** – Select the baud rate for the selected communication port. Set the baud rate to equal the host TTY.
- **Host** – Type in the IP address of the host system, or a valid host system name. The text box scrolls left to accommodate additional characters.
- **Connect string** – Enter the modem commands, such as ATDT, that you want to use to connect to the host system with a modem. The text box scrolls left to accommodate additional characters. Letters following the caret (^) character are read as upper case. Use the ^M control sequence in a connect string to indicate a carriage return. Refer to the documentation that came with your modem for valid control characters.
- **Port** – Enter the port number associated with the network proxy. This number is supplied either by your system administrator, or by arrangements with Intuit Eclipse Support.
- **ID** – Type your system login name in this text box, unless your system administrator instructs otherwise. When using a network connection, Eterm looks for this value in the **Port** column of the System > System Files > Terminal Setup screen to determine the information used by Eclipse menus and slave printers.
- **Enable Debug** – Select this option to allow you to click **Debug** from the Eterm menu bar. Clicking **Debug** toggles between the normal Eterm terminal emulation screen and a screen of communication codes. Intuit Eclipse Support personnel use these codes for diagnostics.
- **Enable Receive Buffer Dump** – Select this option to enable the **Received Data** option on the **Edit** menu to create and open a file that contains the information from the Eterm debug buffer, minus the data sent to Eclipse. Using this option provides searchable, more readable buffer data. After selecting this option, enter a file extension, such as txt or doc in the **Rcv Extension** field.

Eterm dumps the buffer data into this file type and launches the default application you have set in Windows for the extension when you use the **Received Data** command on the **Edit** menu.

- **Enable Edit** – Select this option to click **Edit** from the Eterm menu bar. Clicking **Edit** allows you to activate the different selection, copy, and paste commands.
- Select one of the following:
 - **Auto Connect** – Causes Eterm to attempt to connect with the host automatically whenever Eterm is run. Select this option, except when utilizing **Auto Dial**.
 - **Auto Dial** – Causes Eterm to display the Dial dialog box automatically whenever Eterm is run.

See the Eterm online help system for details on this feature.

- **Use Control C for Break** – Select this option to specify a different key sequence for terminating the Eclipse application if it hangs. The normal **Ctrl-Break** key sequence that Eclipse uses does not function properly on NT computers. AIX computers respond to both the **Ctrl-C** and **Ctrl-Break** key sequences, although **Ctrl-Break** is more reliable.

See the Eterm on-line help system for details on this feature.

Fonts

Select one of the following fonts to change the size of the Eterm window:

- Raster 10x18 (for 800x600 or greater displays).
- Raster 7x12 (for 640x480 or greater displays).
- Eclipse (Eterm resizes automatically).
- Eclipse Bold (Eterm resizes automatically).
- Full Screen (use **Alt-Enter** to switch back to the previously selected size).

Colors

Displays the Configure Colors dialog box allowing you to change the colors used for different Intuit Eclipse screen elements.

Mouse Buttons

Opens the Configure Mouse Buttons dialog box, where you can assign key commands to the second and middle mouse buttons.

Sounds

Selects the device to play the Eclipse message tune: Windows sound card, computer speaker, or no sound.

Password

Displays the Password Configuration dialog box, where you can set or change a password to prevent unauthorized users from changing the Eterm communications configuration.

Printing

Opens the Configure Printing dialog box, where you can specify how Eterm processes the printer data stream for Eclipse data and screen prints.

Dialing

Opens the Dialing Configuration dialog box, where you can configure Eterm dialing information. Dialing profiles are intended for those users who use Eterm on portable computers while traveling (where the dialing configuration will change from location to location) or for those users who have computers with access to multiple modem systems, such as an internal modem and access to a corporate modem pool.

See the Eterm online help system for details on this feature.

Helper Applications

Opens the Helper Applications dialog box, where you can specify the applications and commands that Eclipse will send in the **Helper** field of a DDE start message.

Messaging

Opens the Configure Message Directory dialog box, where you can configure the folder that Eterm uses to store information. Eterm scans the specified folder for files. When it finds a file in this folder, it sends a message to the Eclipse system. This feature applies to certain Eclipse add-on products, such as Imaging.

Display Options

Eterm contains some other display features:

- **Highlight** – Causes Eterm to shade the currently active Eclipse input text box. This is particularly useful on monochrome monitors and portable computers.
- **Always on top** – Causes Eterm to always be visible, even when you run other programs. This change is not saved in the ECLIPSE.INI file and must be set each time you run Eterm.
- **Show User Defined Options** – Causes Eterm to display the names of user-defined options associated with the current screen whenever you press the **Alt** key. This is the same as using **Alt-F11** to show user-defined options. This feature is useful when first becoming accustomed to the locations of the different user-defined screens attached to screens in Eclipse. Afterwards, you can turn this feature off.

Window Placement

Select whether you want Eterm to remember its last location on the Windows desktop after you quit. Select from the following options:

- Save current placement.
- Remember last placement.
- Use default placement.

Additional Features for Eterm for Windows

In addition to the configuration menu, Eterm contains menu options for the following additional features.

Connect

Click **Connect** to open a connection with the host system using the current configuration settings.

Dial

Click **Dial** to open the Dial dialog box, where you can select a telephone number from either the global or the local dialing directory.

Disconnect

Click **Disconnect** to close a connection with the host system using the current configuration settings. Always remember to first log off Eclipse before disconnecting from Eterm.

Edit

Use the Eterm editing tools to select and copy text or screen elements to the Windows clipboard or to paste the contents of the Windows clipboard into Eclipse word processing or view function screens.

- **Select** – Click **Select** to begin selecting text or line drawing characters with the mouse from Eclipse screens. First select the text or screen elements, and then click **Copy**.
- **Extended select** – Click **Extended select** to begin selecting text with the mouse from an Eclipse word processing or view function screen. You can select entire screens, including line drawing characters, but not dialog boxes. First select the text or screen elements, and then click **Copy**.
- **Copy** – Click **Copy** to copy the currently selected text or screen elements to the Windows clipboard.
- **Paste** – Click **Paste** to paste the contents of the Windows clipboard into an Eclipse word processing field.

Print

Select **Print** to send a copy of the currently displayed screen to the printer, a file, or a debug file.

Attachments

Use this feature to attach images to Eclipse screens. See the Eterm online help for details on this feature.

Debug

Select the **Debug** menu option to toggle between the normal screen and the debugging screen. Eclipse Support Personnel use this feature to diagnose problems.

Note: Select **Enable Debug** in the Configure Communications dialog box to use the Eterm debugging screen.

Help

Opens a standard Windows help file dialog box, where you can access the Eterm for Windows online help files.

Troubleshooting Eterm for Windows

Review the following troubleshooting issues if problems arise.

Assigned User Defined Screens Box Appears When Pressing Alt Key

From the **Configure > Display Options** menu, select **Show User Defined Options** to set Eterm to display the names of user-defined options associated with the current screen whenever you press the **Alt** key. This is the same as using **Alt-F11** to show user-defined options.

Cannot Hear Intuit Eclipse Tunes

First check whether other applications on your computer can play sounds. If not, the problem might be with your sound system. Check all components of your sound system.

Otherwise, from the **Configure > Sounds** menu, select how your computer plays the Intuit Eclipse message alert tune. Make certain that you select either the **Windows** or **PC** option.

Characters Print Instead of Lines When Printing Screens

From the **Configure** menu, select **Printing** to display the Configure Printing dialog box. From the **Screen Printing** area, select **Image** to draw the screen print on your printer, or **Text** to send line drawing characters that correspond to the screen print. To use the **Text** option, you must have the appropriate line drawing character set installed on your printer.

Intuit Eclipse Imaging Index Cannot Find Images

By default, Eterm uses C:\Program Files\Intuit Eclipse\Eterm as the Eterm messaging directory. If you use shortcuts to start Eterm, check that the path specified in the **Start In** field of the short cut points to the messaging directory used by the Eclipse add-on product. If your short cut points to a different directory, or if the add-on product uses a different directory, you need to change one to match the other.

You install Eterm using its installation program, rather than just copying and replacing the executable. The installation program creates the appropriate shortcuts to Eterm. After installing Eterm, remember to restart your computer. This also forces the Eclipse add-on products to restart and read the correct Windows registry information for the new version of Eterm.

Error Messages When Using Eterm on a Laptop Computer

Some laptop computers produce error messages when the middle mouse button is set to any option other than **Disable**. From the **Configure** menu, select **Mouse Buttons** to display the Configure Mouse Buttons dialog box, and select the **Disable** setting for the middle mouse button.

Eterm Always on Top of Other Applications

From the **Configure** menu, selecting **Display Options** and **Always on top** causes Eterm to always be visible, even when you run other programs. This change is not saved in the INTUIT ECLIPSE.INI file and must be set each time you run Eterm.

Getting Out of Full Screen Mode

Use the **Alt-Enter** key sequence to switch from the full screen scalable font to the previously selected font size or the default.

Line Breaks Appear in Intuit Eclipse Screens

Because the Eclipse and Eclipse Bold fonts are scalable fixed width fonts, occasionally your screen will display breaks between line drawing characters. This does not affect screen prints.

Messaging Will Be Disabled for This Session

Eterm does not support multiple messaging configurations. You can only have messaging enabled for one Eterm session at a time. If you run more than one Eterm session at a time, only the first session will allow messaging; subsequent sessions will have messaging disabled. This applies whether you start more than one Eterm session from the same short cut or from multiple shortcuts to different Eterm executables.

As a result of messaging being disabled in subsequent Eterm sessions, Eclipse add-on products that use the Eterm messaging function will produce undesirable results in subsequent Eterm sessions. For example, Eclipse Imaging will not input/scan or output/display images, and Eclipse Egraph will not display graphs.

Modem Connect String Does Not Process Correctly

Eterm assembles the connect string based on specific conditions for modem commands and telephone numbers. From the **Configure** menu, select **Dialing** to display the Dialing Configuration dialog box. Check the values of the following fields: **Access**, **Dialing Method**, **Dial String**, **Exchanges are Local**, **Exchanges are Toll**, **Local Area Codes**, **Long Distance Access**, **Local Exchanges**, **Set Home**, and **Use Credit Card**.

See the Eterm online help system for details on this feature.

Print Jobs Begin at Top of Page

When using 16-bit Eterm, print jobs begin at the top of the page boundary when using a Windows printer under the **Transparent Printing** option group. From the **Configure** menu, select **Printing** to display the Configure Printing dialog box. Select the **LPT1**, **LPT2** or **LPT3** line printer ports to print where the last print job ended.

When using 32-bit Eterm, these options are inactive.

Print Jobs Begin Where Last Print Job Ended

When using 16-bit Eterm, print jobs begin where the last print job ended when using the **LPT1**, **LPT2** or **LPT3** line printer ports under the **Transparent Printing** option group. From the **Configure** menu, select **Printing** to display the Configure Printing dialog box. Select a Windows printer to print at the top of the page boundary.

When using 32-bit Eterm, these options are inactive.

Printer Problems

It is important that you install the correct version of Eterm, as required by your operating system and your printing requirements. The installation program automatically installs a version of Eterm specific to your operating system. For Windows 3.1.1, this is a 16-bit version; for Windows 95, Windows 98, or Windows NT, this is a 32-bit version. If you experience printer problems, check that you are using the correct version of Eterm for your operating system, and that your printer drivers support transparent printing.

Transparent printing was originally developed under Windows 3.1.1 and subsequently used under Windows 3.1.1, Windows 95, Windows 98, and Windows NT. However, some printer drivers (often those written before the release of Windows 95) do not support transparent printing. Contact your printer manufacturer to verify that your printer drivers support transparent printing.

With the release of Windows 95, transparent printing was improved and a new version subsequently used under Windows 95, Windows 98, or Windows NT. Most printers manufactured after the release of Windows 95 are shipped with printer drivers that support transparent printing under Windows 95, Windows 98, and Windows.

You must run 16-bit Eterm under Windows 3.1.1 and direct your output to a printer with printer drivers that support transparent printing. 32-bit Eterm does not function properly under Windows 3.1.1:

- When running 16-bit Eterm under Windows 95, Windows 98, or Windows NT, you must direct your output to a printer that supports the Windows 3.1.1 version of transparent printing.
- When running 32-bit Eterm under Windows 95, Windows 98, or Windows NT, you must direct your output to a printer that supports the Windows 95, Windows 98, and Windows NT version of transparent printing.

Intuit Eclipse recommends that you use 32-bit Eterm where possible, with a Windows 95, Windows 98, or Windows NT compatible printer.

Problems Connecting to Host When Dialing with a Telephone Credit Card

The dialing process for a telephone credit card differs from the method that Eterm uses by default to process a dial string. This might cause problems connecting with the host. If you experience difficulty connecting with the host modem, try adjusting the Step / Then Wait for delay following the Step / Dial action associated with dialing the destination number.

For example, when dialing a destination number that includes an internal extension (303-555-1212,,1234), the normal delay caused by the commas might be longer or shorter when dialing the number using a telephone credit. Setting a delay interval or increasing the current delay interval that follows the dialing of the destination number solves this problem.

Resetting a Modem

After logging out of a remote site, enter the **+++ath** modem command before clicking **Disconnect** to force a modem reset and prevent hanging the modem. Eterm responds with **OK**.

If it does not, repeat the key sequence. Remember to hold down the **Shift** key while typing **+++** (the characters do not appear on the screen as you type them) and then type **ath** and press the **Enter** key.

Still Running Intuit Eclipse?

If you click **Disconnect** in the Eterm taskbar while you are still logged in to Eclipse or in the process of logging in to Eclipse, Eterm prompts **Still running Eclipse?** and asks for confirmation.

To log off properly, from the **System** menu select **LogOff**. This logs you off Eclipse and disconnects you from the host system.

When to Use Select and Extended Select

The **Select** edit function allows you to select text and screen elements from any Eclipse screen. The **Extended select** function allows you to select text in Eclipse word processing or view function screens (screens or text boxes with scroll bars). Use the **Keyboard** command from the Eterm **Help** menu to determine whether the currently selected screen is a word processing or view function screen.

Saving a Debug Record

You can save the contents of the Debug screen to a file, which you can then send to Intuit Eclipse Support either on a diskette or through electronic mail.

Note: You must have **Enable Debug** in the Configure Communications dialog box selected to display the Debug screen.

1. From the Debug screen, use **Ctrl-Alt-Page Down** to open the Save Debug Record dialog box.

Note: If another application on your computer uses the **Ctrl-Alt-Page Down** key sequence, you will not be able to save the debug record until you disable that application.

2. Enter a file name, such as **TestDebug**.
3. Click **Save**.

Eterm saves the file in the directory specified by the dialog box.

Eterm for DOS Overview

Eterm for DOS is designed to run under the MS-DOS environment. It is meant for those PCs that either boot from a floppy diskette (dumb terminals) or that run MS-DOS from their hard drive. You need to make one copy of the Eterm for DOS diskette for each PC that boots from its floppy diskette and then modify each boot disk so that it correctly identifies the PC on your network.

Afterwards, configure Eterm for DOS on the PC so you can connect to your network. If you copy the Eterm for DOS files onto those computers running MS-DOS from their hard drives, you still need to configure Eterm for DOS on the PC so you can connect to your network.

With Eterm for DOS you can:

- Select, connect, and disconnect from a remote host system.
- Change how the emulator communicates with the remote host.
- Communicate with a host system over serial, modem, or TCP/IP (Transmission Control Protocol/Internet Protocol) network connections.
- Print Eclipse screens.
- Display basic debugging information.

Copying the Eterm for DOS Diskette

Before using Eterm for DOS on your computer, make copies of the original source diskettes from Intuit Eclipse. Keep these diskettes in a safe place. Only make changes to copies of the original diskettes.

►To copy the Eterm for DOS diskette:

1. Before continuing with this procedure, write-protect your Eterm for DOS diskette to ensure that you do not accidentally over-write your source diskette.
2. Use the **diskcopy** command to format your diskettes and copy files in one of the following ways:

- From a PC with MS-DOS installed on the hard drive (C:) and assuming that your diskette drive is A:, at the DOS prompt type:

```
C:\> diskcopy a: a:
```

- From a dumb terminal, at the A: drive prompt type:

```
A:\> diskcopy a: a:
```

3. Follow the instructions as they appear on the screen.

The system prompts you to insert the source diskette (your Eterm for DOS diskette) and your target diskette (a blank diskette) in turn.

Note: Whenever making changes to a diskette, always allow the diskette drive (A:) to come to a complete halt before removing the diskette. Failure to do this can result in corrupted files.

Installing Eterm for DOS with an Ethernet Connection

Before using Eterm for DOS on your computer, you might need to make changes to some files on the diskettes. Make these changes to *copies* of the original Eterm for DOS diskettes only.

This topic includes instructions for the following tasks:

- Installing Eterm on computers connected to a network.
- Using a network connection.

If you are installing Eterm for DOS on computers connected to a network, do the following:

1. Enable NET.BAT in the AUTOEXEC.BAT file on the Eterm for DOS boot diskette.
2. Copy the modified Eterm for DOS boot diskette for every computer that runs Eterm for DOS and that resides on your network.
3. Assign IP and Subnet addresses to each individual copy of the boot diskette (each computer on your network has a unique IP address).

After installing Eterm, you need to configure each computer to run on a TCP/IP network using the assigned IP address of the Host server.

Note: Issue the following commands from a DOS computer. We do not recommend you use a DOS emulation window on a computer running Windows 95 or Windows 98.

► To enable NET.BAT on the boot diskette:

1. Insert the Eterm for DOS diskette into your diskette drive.
2. If you are using a dumb terminal, skip ahead to Step 4.
3. Assuming that your diskette drive is A and your hard disk drive is C, at the DOS prompt (C:\>) type **a:** and press **Enter** to switch to the diskette drive.

C:\> **a:**

4. At the A prompt, type edit **autoexec.bat** and press **Enter** to open the AUTOEXEC.BAT file with the MS-DOS Editor.

A:\> **edit autoexec.bat**

5. Using the **Arrow** keys, locate the following statement within the MS-DOS Editor:

REM call net.bat

6. Using the **Arrow** keys and the **Backspace** key, delete the first three characters (**REM**) of the statement.

The statement now reads as follows:

call net.bat

7. Save AUTOEXEC.BAT and exit the MS-DOS Editor, as follows:

- Hold down the **Alt** key and press the letter **x**.

The DOS Editor asks if you want to save your changes.

- Press **Enter** to accept the default **Yes** to save the AUTOEXEC.BAT file.

Note: Whenever making changes to a diskette, always allow the diskette drive (A) to come to a complete halt before removing the diskette. Failure to this can result in corrupted files.

▶ **To make copies of the NET.BAT-enabled boot diskette:**

1. Use the **DISKCOPY** command to duplicate the NET.BAT enabled boot diskette for each computer that will run Eterm for DOS on your network. See Copying the Eterm for DOS Diskette.

▶ **To assign IP and Subnet addresses on the boot diskette:**

1. Insert the Eterm for DOS diskette into your diskette drive.
2. If you are using a dumb terminal, skip ahead to Step 4.
3. Assuming that your diskette drive is A and your hard disk drive is C, at the DOS prompt (C:\>) type **a:** and press **Enter** to switch to the diskette drive.

C:\> **a:**

4. At the A prompt, type the following command to open the NET.CFG file with the MS-DOS Editor:

A:\> **edit net.cfg**

5. Using the MS-DOS Editor, locate the sample IP address and replace it with the actual IP address of your network:

199.190.150.###

Each computer residing on your network must have a unique IP address. The last three characters (### in the example above) are the unique address of the computer.

Note: You need to change the IP address for each computer on which you are installing Eterm for DOS.

6. Save NET.CONFIG and exit the MS-DOS Editor, as follows:

- Hold down the **Alt** key and press the letter **x**.

The DOS Editor asks if you want to save your changes.

- Press **Enter** to accept the default **Yes** to save the NET.CONFIG file.

7. Write the IP address for the computer on the Eterm for DOS diskette label.

You will use this IP address to configure a TCP/IP network connection with the Host server. See Installing Eterm for DOS with an Ethernet Connection.

8. Reboot your computer with the Eterm for DOS diskette in the floppy drive.

Note: Eterm for DOS running in a DOS emulation windows under the Windows 3.1.1 and Windows 95 and Windows 98 environments cannot utilize a TCP/IP network connection. Use a serial or modem connection instead.

Configuring Eterm for DOS with an Ethernet Connection

The first time you run Eterm, the Eterm for DOS main menu appears and you must enter configuration data. You can change your configuration setup at any time.

Note: From the emulator screen, press **Ctrl-Print Screen** to access the main menu.

The following options are available on the main menu:

- **Quit** – Eterm for DOS.
- **Continue** – Close the main menu and continue using Eterm for DOS.
- **Reconnect** – Close the main menu and attempt to reconnect to the host system using the current configuration settings.
- **Configure** – Open a dialog box to change the current Eterm for DOS configuration.
- **Debug** – Switch to the debugging screen, assuming that Enable Debug is set to ON.

Use the **Arrow** keys to select commands from the Eterm for DOS menu, and then press **Enter** to execute the command. You can also type the highlighted letter of the command to execute it.

► To configure Eterm for DOS:

1. From the Eterm for DOS main menu, select the **CONFIGURE** command, and press **Enter**.

The Configure screen appears.

Note: In the Configure screen, use the **Up Arrow** and **Down Arrow** keys to select fields. Use the **Left Arrow** and **Right Arrow** keys to choose options for the selected field.

2. In the **PORT** field, choose **Network-Telnet**.

The **SPEED** and **CONNECT STRING** fields become inactive.

3. In the **HOST** field, type the IP address of the host system.

You can also type in the host name if you are using a hosts file or a Domain Name Server (DNS). If you do not know the IP address or host name, contact your system administrator.

Note: Do not confuse the Host IP address with the IP address of your computer. Each computer has a unique IP address.

4. In the **PRINTER** field, choose the **LPT** port or **NONE**.

5. To enable or disable **HPCL PRINTING**, choose **ON** or **OFF**, respectively.
 - If **PRINTER** is set to a valid LPT port and **HPCL PRINTING** is set to ON, using the **Shift-Print Screen** key sequence causes Eterm to send line HPCL commands to the printer to draw the screen.
 - If **PRINTER** is set to a valid LPT port and **HPCL PRINTING** is set to OFF, using the **Shift-Print Screen** key sequence causes Eterm to send line-drawing characters to the printer to draw the screen. If your printer does not support the line-drawing character set, you will get less than desirable results.
 - If **PRINTER** is set to NONE, Eterm disables screen printing, regardless of the value of **HPCL PRINTING**.

6. In the **TERM ID** field, type your system login name, unless the system administrator instructs otherwise.

The system looks up this value in the **Port** column of the System > System Files > Terminal Setup screen to determine Eclipse menus and slave printers. If an entry for your system login name does not already exist in Terminal Setup, you must create one. For information about setting up terminals, refer to the Eclipse Help.

7. To enable or disable **HILITE**, choose **ON** or **OFF**, respectively, to control whether Eterm displays the currently active input field in reverse video.
8. Set **ENABLE DEBUG** to **ON** to allow the **DEBUG** option to appear on the main Eterm menu. Selecting **DEBUG** from the main Eterm menu displays the debugging screen, which Intuit Eclipse Support uses for diagnosing problems with Eterm.
9. Set **ENABLE UD** to **ON** to display a list of user-defined screens whenever you press the **Alt** key. This feature is useful for new users becoming accustomed to new user-defined screens. Afterwards, the user might want to disable this feature.
10. Choose **CONTINUE** to accept the changes and dismiss the dialog box.

Caution: On dumb terminals, the configuration information is stored on the boot diskette. Whenever making changes to a diskette, always allow the diskette drive (A) to come to a complete halt before removing the diskette. Failure to this can result in corrupted files.

Eterm for DOS is now configured to run Eclipse on a TCP/IP network.

Using a Network Connection

When you run Eterm for DOS using a network interface card (NIC) and connection, Eterm communicates with the host system using the current network settings. Click **Connect** to open an Eterm session. If Eterm for DOS is unable to connect, it displays one of the following error messages:

- Host Name Invalid
- Network Unavailable
- Connection Refused
- Connection Lost

Use the **Arrow** keys to select an option from the menu, and press **Enter**.

Installing Eterm for DOS with a Serial Connection

If you install Eterm for DOS on serial computers, you need to do the following:

- Make copies of the original source Eterm for DOS diskettes.
Keep these diskettes in a safe place. Only make changes to copies of the original diskettes.
- Configure each computer to use a serial connection to the Host server, either by means of a direct cable connection to the TTY port, or by dialing in to the port using a modem.

Configuring Eterm for DOS for a TTY Port Connection

The first time you run Eterm, the Eterm for DOS main menu appears and you must enter configuration data. You can change your configuration setup at any time.

Note: From the emulator screen, press **Ctrl-Print Screen** to access the main menu.

The following options are available on the main menu:

- **Quit** – Quit Eterm for DOS.
- **Continue** – Close the main menu and continue using Eterm for DOS.
- **Reconnect** – Close the main menu and attempt to reconnect to the host system using the current configuration settings.
- **Configure** – Open a dialog box to change the current Eterm for DOS configuration.
- **Debug** – Switch to the debugging screen, assuming that **Enable Debug** is set to **ON**.

Use the **Arrow** keys to select commands from the Eterm for DOS menu, and then press **Enter** to execute the command. You can also type the highlighted letter of the command to execute it.

►To configure Eterm for DOS for a TTY port connection:

1. From the Eterm for DOS main menu, select the **CONFIGURE** command, and press **Enter**.

The Configure screen appears.

Note: In the Configure screen, use the **Up Arrow** and **Down Arrow** keys to select fields. Use the **Left Arrow** and **Right Arrow** keys to choose options for the selected field.

2. In the **PORT** field, choose the COM port that your PC uses to connect to the host system. The **HOST** field becomes inactive.
3. In the **SPEED** field, set the baud rate to equal that of the host TTY.
We recommend using **19200**. Contact your system administrator for the appropriate setting to use.
4. For serial connections, leave the **CONNECT STRING** field blank.
5. In the **PRINTER** field, choose the **LPT port** or **NONE**.
6. To enable or disable **HPCL PRINTING** choose **ON** or **OFF**, respectively.
 - If **PRINTER** is set to a valid LPT port and **HPCL PRINTING** is set to **ON**, using the **Shift-Print Screen** key sequence causes Eterm to send line HPCL commands to the printer to draw the screen.

- If **PRINTER** is set to a valid LPT port and **HPCL PRINTING** is set to OFF, using the **Shift-Print Screen** key sequence causes Eterm to send line-drawing characters to the printer to draw the screen. If your printer does not support the line-drawing character set, you will get less than desirable results.
- If **PRINTER** is set to NONE, Eterm disables screen printing, regardless of the value of **HPCL PRINTING**.

7. Leave the **TERM ID** field blank.
8. To enable or disable **HILITE**, choose **ON** or **OFF**, respectively, to control whether Eterm displays the currently active input field in reverse video.
9. Set **ENABLE DEBUG** to **ON** to allow the DEBUG option to appear on the main Eterm menu.

Selecting **DEBUG** from the main Eterm menu displays the debugging screen, which Intuit Eclipse Support uses for diagnosing problems with Eterm.

10. Set **ENABLE UD** to **ON** to display a list of user-defined screens whenever you press the **Alt** key.

This feature is useful for new users becoming accustomed to new user-defined screens. Afterwards, the user might want to disable this feature.

11. Choose **CONTINUE** to accept the changes and dismiss the dialog box.

Caution: On dumb terminals, the configuration information is stored on the boot diskette. Whenever making changes to a diskette, always allow the diskette drive (A) to come to a complete halt before removing the diskette. Failure to this can result in corrupted files.

Eterm is now configured to run Intuit Eclipse on a serial connection.

Using a Serial Connection

When you run Eterm for DOS using a serial connection, Eterm communicates with the host system using the current port and speed settings. Click **Connect** to open an Eterm session.

If the serial connection is interrupted or lost, Eterm for DOS will hang. You will need to exit Eterm by using the **Ctrl-Print Screen** key sequence and selecting **Quit**. Check the integrity of the serial connection before restarting Eterm for DOS.

Configuring DOS for Eterm for a Modem Connection

The first time you run Eterm, the Eterm for DOS main menu appears and you must enter configuration data. You can change your configuration setup at any time.

Note: From the emulator screen, press **Ctrl-Print Screen** to access the main menu.

The following options are available on the main menu:

- **Quit** – Quit Eterm for DOS.
- **Continue** – Close the main menu and continue using Eterm for DOS.
- **Reconnect** – Close the main menu and attempt to reconnect to the host system using the current configuration settings.
- **Configure** – Open a dialog box to change the current Eterm for DOS configuration.
- **Debug** – Switch to the debugging screen, assuming that **Enable Debug** is set to **ON**.

Use the **Arrow** keys to select commands from the Eterm for DOS menu, and then press **Enter** to execute the command. You can also type the highlighted letter of the command to execute it.

►To configure Eterm for DOS for a modem connection:

1. From the Eterm for DOS main menu, use the **Arrow** keys to highlight the **CONFIGURE** command, and press **Enter**.

The **Configure** screen appears.

Note: In the **Configure** screen, use the **Up Arrow** and **Down Arrow** keys to select fields. Use the **Left Arrow** and **Right Arrow** keys to choose options for the selected field.

2. In the **PORT** field, choose the **COM** port that your PC uses to connect to the host system. The **HOST** field becomes inactive.

3. In the **SPEED** field, set the baud rate to equal that of the host **TTY**.

We recommend using **19200**. Contact your system administrator for the appropriate setting to use.

4. In the **CONNECT STRING** field, enter the modem commands and the host modem telephone number that you want to use to connect, such as **ATDT18005551234**.

For valid modem commands, see the documentation that accompanied your modem. If the **CONNECT STRING** field contains **^M**, Eterm for DOS performs a carriage return when processing the connect string.

5. In the **PRINTER** field, choose the **LPT port** or **NONE**.

6. To enable or disable **HPCL PRINTING** choose **ON** or **OFF**, respectively.
 - If **PRINTER** is set to a valid LPT port and **HPCL PRINTING** is set to **ON**, using the **Shift-Print Screen** key sequence causes Eterm to send line HPCL commands to the printer to draw the screen.
 - If **PRINTER** is set to a valid LPT port and **HPCL PRINTING** is set to **OFF**, using the **Shift-Print Screen** key sequence causes Eterm to send line-drawing characters to the printer to draw the screen. If your printer does not support the line-drawing character set, you will get less than desirable results.
 - If **PRINTER** is set to **NONE**, Eterm disables screen printing, regardless of the value of **HPCL PRINTING**.

7. Leave the **TERM ID** field blank.

8. To enable or disable **HILITE**, choose **ON** or **OFF**, respectively, to control whether Eterm displays the currently active input field in reverse video.

9. Set **ENABLE DEBUG** to **ON** to allow the **DEBUG** option to appear on the main Eterm menu.

Selecting **DEBUG** from the main Eterm menu displays the debugging screen, which Intuit Eclipse Support uses for diagnosing problems with Eterm.

10. Set **ENABLE UD** to **ON** to display a list of user-defined screens whenever you press the **Alt** key.

This feature is useful for new users becoming accustomed to new user-defined screens. Afterwards, the user might want to disable this feature.

11. Choose **CONTINUE** to accept the changes and dismiss the dialog box.

Caution: On dumb terminals, the configuration information is stored on the boot diskette. Whenever making changes to a diskette, always allow the diskette drive (A) to come to a complete halt before removing the diskette. Failure to this can result in corrupted files.

Eterm is now configured to run Eclipse on a modem connection.

Using a Modem Connection

When you run Eterm for DOS using a modem connection, Eterm sends the contents of the **CONNECT STRING** field to the modem. The field must contain the proper modem commands and host system telephone number.

If the connect string uses **^M**, Eterm for DOS performs a carriage return, effectively causing the connect string to auto-dial. Otherwise, press **Enter** to process the connect string as it appears on the screen. On some host systems, you might need to press **Enter** once or twice to complete the connection.

If your modem allows you to edit the connect string after it has been sent, you may do so while it is displayed on the screen.

If the modem connection is interrupted or lost, Eterm for DOS displays the following message:

"Use the **Arrow** keys to highlight an option from the menu, and press **Enter** to continue."

Minimum Configuration for Eterm for DOS

The minimum configuration required for Eterm for DOS to operate correctly varies depending on how your PC is connected to the host.

When Connecting Through a TCP/IP Network Connection

For Eterm for DOS to operate correctly when connecting through a TCP/IP Ethernet connection, you must have the following options set:

- **Port** – Choose **Network-Telnet**.
- **Host** – Enter the IP address of the host system. You can also enter the host name if you are using a hosts file or a Domain Name Server (DNS).
- **Term ID** – Enter your system login name, unless the system administrator instructs otherwise.

When Connecting Through a TTY Port

For Eterm for DOS to operate correctly when connecting through a TTY port, you must have the following options set:

- **Port** – Choose the COM port that your PC uses to connect to the host system.
- **Speed** – Select the baud rate that is equal to that of the host TTY. We recommend selecting **19200**. Contact your system administrator for the appropriate setting to use.
- **Connect String** – Leave this field blank.
- **Term ID** – Leave this field blank.

When Connecting Through a Modem

For Eterm for DOS to operate correctly when connecting through a modem, you must have the following options set:

- **Port** – Choose the COM port that your PC uses to dial out to the host system.
- **Speed** – Select the baud rate equal to that of the host TTY. We recommend selecting **19200**. Contact your system administrator for the appropriate setting to use.
- **Connect String** – Enter the modem commands and the host modem telephone number that you want to use to connect, such as ATDT18005551234. For valid modem commands, see the documentation that accompanied your modem. If **^M** is used in the **CONNECT STRING** field, Eterm for DOS performs a carriage return when processing the connect string.
- **Term ID** – Leave this field blank.

Configuration Options for Eterm for DOS

From the Eterm menu bar, click **Configure** to display the Configure Communications dialog box, where you specify how Eterm will communicate with the host system for modem, serial, and network connections. If **Enable Configuration Password** has been selected, you must type in the correct password before being able to make changes.

Following are the configuration options:

- **Port** – Select the COM port or network connection type that your computer uses to connect to the host system. COM ports and serial device must be available before Eterm can use them.
- **Speed** – Select the baud rate for the selected communication port. Set the baud rate to equal the host TTY.
- **Connect String** – Type in the modem commands that you want to use to connect to the host system with a modem, such as **ATDT**. The text box scrolls left to accommodate additional characters. Letters following the caret (^) character are read as upper case. Use the **^M** control sequence in a connect string to indicate a carriage return. Refer to the documentation that came with your modem for valid control characters.
- **Host** – Enter the IP address of the host system, or a valid host system name. The text box scrolls left to accommodate additional characters.
- **Printer** – Select the **LPT port** that connects your PC to the printer or **NONE**.
- **HPCL Printing** – Select **ON** or **OFF** to enable or disable the sending of line HPCL commands to the printer to draw screens.
- If **Printer** is set to a valid LPT port and **HPCL Printing** is set to ON, use the **Shift-Print Screen** key sequence to cause Eterm to send line HPCL commands to the printer to draw the screen. If **Printer** is set to NONE, Eterm disables screen printing, regardless of the value of **HPCL Printing**.
- If **Printer** is set to a valid LPT port and **HPCL Printing** is set to OFF, use the **Shift-Print Screen** key sequence to cause Eterm to send line-drawing characters to the printer to draw the screen. If your printer does not support the line-drawing character set, you will get less than desirable results. If **Printer** is set to NONE, Eterm disables screen printing, regardless of the value of **HPCL Printing**.
- **Term ID** – Type your system login name in this text box, unless your system administrator instructs otherwise. When using a network connection, Eterm looks for this value in the **Port** column of the System > System Files > Terminal Setup screen to determine the information used by Eclipse menus and slave printers.
- **Highlight** – Causes Eterm to shade the currently active Eclipse input text box. This is particularly useful on monochrome monitors and portable computers.

- **Enable Debug** – Select this option to allow you to click **Debug** from the Eterm menu bar. Clicking **Debug** toggles between the normal Eterm terminal emulation screen and a screen of communication codes. Intuit Eclipse Support personnel use these codes for diagnostics.
- **Enable UD** – Select this option to display a list of user-defined screens whenever you press the **Alt** key. This feature is useful for new users becoming accustomed to new user-defined screens. Afterwards, the user might want to disable this feature.

Running Eterm for DOS Under Windows

Eterm for DOS also runs in DOS emulation windows under the Windows 3.1.1 and Windows 95 and Windows 98 environments, providing that Eterm for DOS is using serial or modem connections to communicate with the host.

▶ **To run Eterm for DOS in a Windows environment:**

1. At the DOS prompt, type **dterm1** and press **Enter**.

```
C:\> dterm1
```

Troubleshooting Eterm for DOS

Review the following troubleshooting issues if problems arise.

Accessing the Main Eterm for DOS Menu

If Eterm for DOS hangs, try accessing the main menu by using **Ctrl-Prt Scrn**.

Changing Settings and Reconnecting

From the main Eterm for DOS menu, use the **Arrow** keys to select **CONFIGURE** and press **Enter** to display the Configure screen. In the Configure screen, use the **Arrow** keys to move between the fields. After making the necessary changes, select **CONTINUE**, and press **Enter** to save the changes and exit the dialog box.

From the main Eterm for DOS menu, use the **Arrow** keys to select **RECONNECT**, and press **Enter**. You must reconnect for the new changes to take affect.

Disconnecting from the Host System

Always log off Eclipse before disconnecting from the host system. From the **System** menu select **LogOff**.

When the main Eterm for DOS menu appears, use the **Arrow** keys to select **QUIT** from the menu, and press **Enter**.

Modem and network connections will receive a connection lost message.

Printing Intuit Eclipse Screens

To print a screen from Eclipse, press **Shift-Prt Scrn**. This assumes that a printer is attached to the same LPT port specified in the Configure screen.

If you are running Eterm for DOS in a DOS emulation window under the Windows 3.1.1, Windows 95, or Windows 98 environment, you must disable the usage of the Print Screen shortcut key by the Windows environment. See your Windows documentation for instructions.

If you are running Eterm for DOS in a DOS emulation window under the Windows 3.1.1, Windows 95, or Windows 98 environment, and you are printing to a network printer, you must configure the network printer to print from the specified LPT port. See your Windows documentation for instructions.

Reconnecting with the Host System

If you lose connection with the host system, Eterm for DOS displays a **Connection Lost** menu. To reconnect, use the **Arrow** keys to select **RECONNECT** from the displayed menu, and press **Enter**.

If you have made changes to the Configure Communications screen, the system uses the new settings when reconnecting.

Chapter 6: Solar Eclipse

Each Intuit Eclipse customer receives a CD-ROM containing the Solar Eclipse client software. You can also download the software from our website at <http://www.eclipse.intuit.com/>.

Before You Begin

Before installing Solar Eclipse on a PC, make certain that your PC is set up correctly for your network. Refer to Network Administration for information on setting up network connections.

Also make certain that the release engineering team has installed the Solar class files on your system and that the PC can see the Solar class files.

Installing Solar Eclipse

Solar Eclipse is meant for PCs running Windows 95, Windows 98, 2000, XP, ME or Windows NT.

To install Solar Eclipse, run the installation program from a CD-ROM or the executable you download from the Eclipse Support website.

Verifying Solar Class Files

Before installing Solar Eclipse client software on a PC, verify the following two things:

- The Solar class files exist and are in the correct location.
The release engineering team puts the classes on your system.
- The PC on which you plan to install the Solar client software can see the Solar class files.

▶To verify that Solar class files exist:

1. Log in to AIX as **root**.
2. Enter the following command to go to the javalib directory:
cd/javalib
3. Enter the following command to verify the displayed path, which should be /javalib:
pwd
4. Enter the following command to display the javalib files and directories:

ls

The following list displays:

```
3rd_Party_licenses.txt
Com
ClassArchive.zip
client_updates
```

Note: If this list does not display, contact Eclipse.

▶To verify that the PC can see the Solar class files:

1. On the PC, click the **Start** menu and then select **Run** to display the Run window.
2. In the **Run** box, enter **\\servername\javalib**.

The list of javalib files and directories displays.

Note: If the system prompts you for a password, the PC needs to be joined to the appropriate Windows domain. Contact your system administrator or Eclipse.

Installing the Solar Eclipse Client Software

Intuit Eclipse ships the Solar Eclipse Client installation program on a CD-ROM. The installation program works for Windows 95, Windows 98, 2000, XP or Windows NT computers.

►To install the Solar Eclipse client software:

1. Close all other programs.
2. Insert the install disk into the CD-ROM drive or download the executable from the Eclipse Support web site.
3. Double-click the Solar Eclipse icon and follow the on-screen instructions.
4. Complete the Server Information window, as follows:

Field	Description
Terminal ID	The ID of the terminal on which you are installing Solar Eclipse. Note: The system uses the terminal ID in printer and OE setup, just as it does in Eterm.
Server Name	Name of the Eclipse server. This can be an IP address or network name. Note: This is the same information you would enter in the Host prompt on the Eterm Communications screen.
Server Port	The port the terminal uses to connect to the Eclipse host system. Note: You can find the port number in the entry on the Phantom Status screen for the SOCKET.PH.SERVER program. It will nearly always be 22222.
Class Path	The network path to where the Solar classes reside. The standard class path is \\eclipseservername\javalib, where eclipseservername is the network name or IP address of the Eclipse server. Note: The release engineering team puts the classes on your system. Your installer can tell you where your classes reside.

5. Complete the on-screen instructions for the remaining windows.

Note: Accept the defaults, unless instructed otherwise by your company's IT department.

Chapter 7: Pinouts

This chapter contains information on the following subjects:

- Adapters for devices local to the Eclipse server.
- Service processor firmware.

Adapters for Devices Local to the Eclipse Server

The following pinouts are for the connectors required for attaching PCs, printers, and modems locally to 16 port concentrators attached to the IBM RS/6000 using 128 port controllers.

Connector Usage Notes

These connectors assume the installation of 4 pair, category 3 or above wiring from each device to the Host location. If new wiring is required, we recommend the installation of 4 pair, category 5.

If you are attaching serial devices remotely, contact Eclipse Networking Services for assistance.

If you have a device not listed in this document, or any questions regarding wiring or these adapters, contact your Eclipse Installer or Eclipse Support.

RJ45 to DB-9F (PC Port)

CPU (Concentrator) RJ45	PC 9 Pin Port DB-9F
1 - Blue	4
2 - Orange	8
4 - Red	2
5 - Green	3
6 - Yellow	5
7 - Brown	7
8 - White	1 6

RJ45 to DB-25F (PC Port)

CPU (Concentrator) RJ45	PC 9 Pin Port DB-25F
1 - Blue	20
2 - Orange	5
3 - Black	1
4 - Red	3
5 - Green	2
6 - Yellow	7
7 - Brown	4
8 - White	8 6

RJ45 to DB-25M (Serial Printer)

CPU (Concentrator) RJ45	Serial Printer (Dot Matrix and HP5Si) DB-25M
1 - Blue	20
2 - Orange	5
7 - Brown	4
3 - Black	1
4 - Red	3
5 - Green	2
6 - Yellow	7
8 - White	6 8

RJ45 to DB-25M (Modem)

CPU (Concentrator) RJ45	Mode DB-25F
1 - Blue	8
2 - Orange	4
3 - Black	1
4 - Red	2
5 - Green	3
6 - Yellow	7
7 - Brown	5
8 - White	20

Service Processor Firmware

When severe system problems cause a computer to completely stop responding, use your service processor firmware to power on the system. Service processors operate independently of the processors in the computer.

►To power on the system:

1. If the console screen is black or shows the screen saver, press **Enter** to display the Main Menu, as shown below:

MAIN MENU

1. Service Processor Setup Menu
2. System Power Control Menu
3. System Information Menu
4. Language Selection Menu
5. Call-In / Call-out Setup Menu
6. Set System Name
99. Exit from Menus

>

2. At the > prompt, type **2** and press **Enter**.

The System Power Control Menu displays, as shown below:

System Power Control Menu

1. Enable/Disable Unattended Start Mode: Currently Enabled
2. Ring Indicate Power-On Menu
3. Reboot/Restart Policy Setup Menu
4. Power-On System
5. Power-Off System
98. Return to Previous Menu
99. Exit From Menus

>

3. At the > prompt, type **4** and press **Enter** to power on the system.

The system displays the following message:

WARNING: POWERING SYSTEM WILL EXIT MENUS!

Enter Y to continue, any other key to abort.

4. Type **Y** and press **Enter**.

The system displays the following message:

System Powering On

Chapter 8: Printers and Queues

Printer characteristics define the types of printers your system uses. Printer characteristics are pre-defined. Your installer and system administrator can make necessary additions or adjustments for your system.

Define printer escape sequences within Eterm, logged into Eclipse, on the System > System Files > Printer Setup > Printer Characteristics screen shown below.

```

Printer Characteristics
Printer Type: HPLJ.4000-1          # of Paper Paths : 1
Description : 1
0

CPI--LPI--Escape Sequence
10.00 6.00 !<@U!(sOp10h10v0s0b3T!&11e6D
12.00 6.00 !<@U!(sOp12h10v0s0b3T!&11e6D
16.67 8.00 !<@U!(sOp16.67h8.5v0s0b3T!&11e8D
20.00 8.00 !<@U!(sOp20.00h8.5v0s0b3T!&k6H!&11e8D

** Begin each escape sequence with an !. End it with a capital letter. **

Delete Printer Commands Copy Search

```

The General Sequences default to the number you enter in the **# of Paper Paths** field. This number determines which Select Paths appear on the Printer Commands screen, when you use the **Printer Commands** hot key.

For example, entering **2** in the **# of Paper Paths** field, causes “Select Path # 1” and Select Path # 2” to appear on the Printer Commands screen when using the **Printer Commands** hot key. If the example used here, you entered a **1**, so only “Select Path # 1” appears on the screen when using the **Printer Commands** hot key.

```

Printer Commands
Command--Escape Sequence--Additional Information
Select Path # 1  !&11H
Begin Reset     !E!&k2G
End Reset
Portrait        !&100
Landscape       !&110
1 of 11
**Begin escape sequence with !. End with a capital letter.**

```

For more information, refer to the online help topics.

Printer Characteristics/Control Panel Overview

This topic includes printer characteristics and control panel overview information for the following printer series:

- HP 5Si/5MX, 4000 and 5000 Series
- HP LaserJet 8000 Series
- Okidata 320 Printer
- HP LaserJet 5Si Mopier
- Okidata ML320/ML321 Turbo
- Okidata ML520/ML521

HP 5Si/5MX, 4000 and 5000 Series

Escape Sequence

CPI	LPI	Escape Sequence
10.00	6.00	!(8U!(s0p10.00h12.00v0s0b3T!&11e6D
12.00	8.00	!(8U!(s0p12.00h10.0v0s0b3T!&11e8D
16.67	8.00	!(8U!(s0p16.67h8.5v0s0b0T!&11e8D
20.00	8.00	!(8U!(s0p16.67h0s0b0T!&k6H!&11e8D

General Sequences

Select Path # 1	!&11H
Select Path # 2	!&14H
Select Path # 3	!&15H
Begin Reset	!E!&k2G
End Reset	
Portrait	!&10O
Landscape	!&11O
Underline On	!&k1200H
Underline Off	!&k1440H
Bold On	!&16D
Bold Off	!&18D
Duplex Printing On	!&11S
Duplex Printing Off	!&10S

HP LaserJet 8000 Series

Note: The HP 8000 series printer characteristics described below might be different for your HP 8000 printer, depending on the EXACT model that you are using. Contact Eclipse Support for assistance.

Escape Sequence

CPI	LPI	Escape Sequence
10.00	6.00	!(8U!(s0p10.00h12.00v0s0b3T!&11e6D
12.00	8.00	!(8U!(s0p12.00h10.0v0s0b3T!&11e8D
16.67	8.00	!(8U!(s0p16.67h8.5v0s0b0T!&11e8D
20.00	8.00	!(8U!(s0p16.67h0s0b0T!&k6H!&11e8D

General Sequences

Select Path # 1	!&14H
Select Path # 2	!&11H
Select Path # 3	!&15H
Begin Reset	!E!&k2G
End Reset	
Portrait	!&10O
Landscape	!&11O
Underline On	!&k1200H
Underline Off	!&k1440H
Bold On	!&16D
Bold Off	!&18D
Duplex Printing On	!&11S
Duplex Printing Off	!&10S

Okidata 320 Printer

Printer Setup

Font	Print Mode	Utility
Font	DRAFT Mode	HSD
Font	Pitch	10 CPI
Font	Style	Normal
Font	Size	Single
General Control	Emulation Mode	IBM PPR
General Control	Graphics	Bi-directional
General Control	Max Receiver Buffer	Full
General Control	Paper Out Override	No
General Control	Print Registration	0

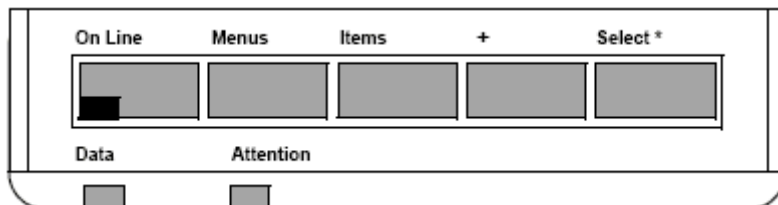
Font	Print Mode	Utility
General Control	Operator Panel Functions	Full Operation
General Control	Reset Inhibit	No
General Control	Print Suppress Effective	Yes
General Control	CPU Compensation	Standard
Vertical Control	Line Spacing	6 LPI
Vertical Control	Form Tear-Off	Off
Vertical Control	Skip Over Perforation	No
Vertical Control	Auto LF	No
Vertical Control	Auto CR	No
Vertical Control	Auto Feed XT	Invalid
Vertical Control	Page Length	11"
Vertical Control	Cut Sheet Page Length	11"
Symbol Sets	Character Set	Set I
Symbol Sets	Language Set	American
Symbol Sets	Zero Character	Slashed

HP LaserJet 5Si Mopier

The following information regarding the HP LaserJet 5Si Mopier was obtained from the Hewlett Packard web site (www.hp.com).

Using the Control Panel

The HP LaserJet 5Si Mopier control panel consists of a liquid crystal control panel display and a group of control panel keys. The following figure illustrates the control panel keys.



Control Panel Keys

The control panel arranges the various Mopier options into a simple menu structure, detailed in the following sections. Each menu contains several items.

On Line	Switches the state of communication between computer and Mopier ON (on line) or OFF (off line). Switching from online to off line stops printing as soon as possible.
Menus	Provides a menu system for obtaining status information or for changing the Mopier configuration.
Items	Cycles through the items on the currently selected menu. Menu items vary depending on the options installed and configuration of other menu choices.
+	Steps through the item choices on the currently selected menu.

On Line	Switches the state of communication between computer and Mopier ON (on line) or OFF (off line). Switching from online to off line stops printing as soon as possible.
Select*	Selects a desired menu item choice.

Control Panel Display

The control panel displays messages in one or two lines of the character display.

- Ready indicates that the Mopier is ready to accept data.
- Status messages tell you what the HP LaserJet 5Si Mopier is doing at a given time.
- Attendance messages tell you to perform some action, such as adding more paper or clearing a paper jam.
- Error messages communicate data and print errors. The HP LaserJet 5Si Mopier stops printing for ten seconds, displays a message, and then automatically attempts to return to the online state.
- Service messages communicate an HP LaserJet 5Si Mopier failure. Some errors can be cleared by pressing the Select* key or by cycling the power (turning the power off and then back on). Other errors stop all Mopier operations and require intervention from service personnel.

Settings and Defaults

The HP LaserJet 5Si Mopier makes printing decisions based on temporary settings or permanent defaults. Settings that you send from software applications override the HP LaserJet 5Si Mopier defaults. For example, the HP LaserJet 5Si Mopier's control panel default is portrait for print orientation. You can request landscape orientation from your software and that will override this default. Temporary settings remains in effect until the print job is finished.

Printing a Configuration Page

1. Press the Menu control panel key repeatedly until you see the "Test Menu" option.

Note: In Menu mode, if no keys are pressed for approximately 30 seconds, the system automatically returns to the top level and displays READY (or an existing error or service message).

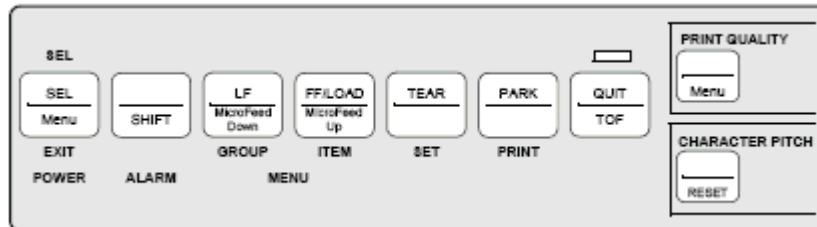
2. Press the Items control panel key until you see the "PCL Config Page" item.
3. Press the Select* key to select your choice.
A menu page will print.
4. Press either the Menus or On Line control panel keys to exit.

Okidata ML320/ML321 Turbo

The following information regarding the Okidata ML320/ML321 Turbo was obtained from the Okidata web site (www.okidata.com).

Using the Control Panel

Use the front panel buttons, as illustrated below, to operate various printer functions.



Following are descriptions of the panel buttons:

SEL	Select/deselect the printer. Press SEL while pressing SHIFT to enter Menu mode.
SHIFT	Press and hold down while pressing another control panel key to engage the alternate function of the key (primary functions are noted above the line on the key; alternate functions on the bottom of the key). For example, press SEL and SHIFT to enter Menu mode.
LF	Move the paper up one line. Press and hold for repetitive line feeds. Holding down LF while powering up the printer activates the Font Test.
FF/LOAD	Load/eject a single sheet of paper. Press and hold for continuous form paper or to feed the next page.
TEAR	Move continuous-form paper up for tear-off or back down for printing.
PARK	Retracts continuous-form paper from the path.
QUIET	Turns Quiet Mode on or off. Holding down QUIET while powering up the printer activates the Rolling ASCII Test.
PRINT QUALITY	Selects the print quality and font.
CHARACTER PITCH	Selects the character pitch. Press CHARACTER PITCH while pressing SHIFT key to reset the printer clear the buffer.

Using Menu Mode

Press and hold down the SHIFT control panel key while pressing the SEL key to enter Menu mode.

In Menu mode, the control panel buttons, as shown below, take on the functions as labeled immediately below the button. Use these functions to change the printer parameter defaults. Any changes you make in Menu mode are saved when you exit Menu mode, and remain even if you turn the printer off.

Remember that Settings apply to Items in Groups that are found on different Menus.

EXIT	Press SEL while pressing SHIFT to exit Menu mode.
GROUP	Prints the next Group in the Menu. Press GROUP while pressing SHIFT to print the previous Group.
ITEM	Prints the next Item in the Group. Press ITEM while pressing SHIFT to print the previous Item in the Item in the Group.
SET	Prints the next Setting for an Item. Press SET while pressing SHIFT to print the previous Setting for an Item.
PRINT	Prints a copy of all the Menu settings. Press PRINT while pressing SHIFT to print the current settings for selected Group.
Menu Light	Glows when the printer is in Menu mode.

Okidata ML520/ML521

The following information regarding the Okidata ML520/ML521 Turbo was obtained from the Okidata web site (www.okidata.com).

Using Menu Mode

Press and hold down the SHIFT control panel key while pressing the SEL key to enter Menu mode.

In Menu mode, the control panel buttons, as illustrated below, take on the functions as labeled immediately below the button. Use these functions to change the printer parameter defaults. Any changes you make in Menu mode are saved when you exit Menu mode, and remain even if you turn the printer off.

Remember that Settings apply to Items in Groups that are found on different Menus.

EXIT	Press to reset paper out alarm. Press SEL while pressing SHIFT to exit Menu mode. Press SEL while pressing LF on power up to reset Menu to factory defaults.
GROUP	Prints the next Group in the Menu. Press GROUP while pressing SHIFT to print the previous Group.
ITEM	Prints the next Item in the Group. Press ITEM while pressing SHIFT to print the previous Item in the Item in the Group.
SET	Prints the next Setting for an Item. Press SET while pressing SHIFT to print the previous Setting for an Item.
PRINT	Prints a copy of all the Menu settings. Press PRINT while pressing SHIFT to print the current settings for selected Group.
Menu Light	Glows when the printer is in Menu mode.
PRINT QUALITY	Press PRINT QUALITY while pressing SHIFT to print out a listing of all Menu settings, regardless of emulation or options engaged.

Setting Up Ethernet Printers in Release 7

Setting up an Ethernet network printer requires you to make changes at the Eclipse application level and the AIX-Unix level.

To prevent duplication of network printers, review the currently defined printer IDs before setting up the new printer.

The following procedures describe how to:

- Identify the currently defined network printers.
- Define a printer and assign loadable forms.
- Add the printer to printer locations.
- Assign forms to the printer trays.
- Add the IP address of the printer to the `/etc/hosts` file.
- Create a print queue.
- Set up the printer in UniVerse.
- Create the printer driver.

▶ To identify the currently defined network printers:

1. From the **System > Printers** menu, select **Spooler Management** to display the Spooler Management screen.
2. Select **Spooler Status** to display the Spooler Status screen, which displays the status of all printers and their associated print jobs.

Note: Take note of the currently assigned LP numbers, to prevent duplication when you enter a number for the new network printer you are setting up.

▶ To define a printer and assign loadable forms:

1. From the **System > System Files > Printer Setup** menu, select **Assign Printer/Fax** to display the Assign Printer/Fax screen.
2. In the **Printer #** field, press **F10** and select **New**. Then enter a new printer number, such as LP6.
3. In the **Name** field, enter the name of the printer, up to nine characters long.

This name appears anytime the system prompts for a printer, and it should be a name that is easily associated with the printer, such as OfficeLsr.

4. In the **Printer Make & Model** field, press **F10** and select from the displayed list the printer type that most resembles your printer.

Most HP LaserJet printers use a printer type prefixed with HPLJ, while most dot matrix printers use either the PRINTRONIX or GENERIC printer type. Zebra label printers use ZEBRA or GENERIC.

5. In the **Printer/Fax** field, press **F10** and select **Printer**.
6. In the **Description** field, enter a description of the printer.
7. In the **Macro Enabled (Y/N)** field, indicate whether to enable macro logic for this printer.
8. Assign forms to the printer, as follows:
 - Use the **Loadable Forms** hot key to display the Loadable Forms screen, which lists the forms loaded for your printer. This screen is empty for new printers.
 - For each form to assign, position the cursor on a blank line, press **F10** to display the defined forms, and select one. For example, select PLAIN for reports.
 - Press **Esc** to save your changes.
- Note:** To cancel your changes at any point, press **F12**.
9. Continue pressing **Esc** until you return to the **System Files** menu.

▶ **To add the printer to printer locations:**

1. From the **System > System Files** menu, select **Printer Location Maintenance** to display the Printer Location Maintenance screen.
2. In the **Printer Location** column, select the printer location to which you want to add the new printer.
3. Press **Tab** to position the cursor in the first free **Pr#** column and enter the printer LP number. For example, for printer LP6 type **6**.
4. Repeat steps 2-3, as needed.
5. Press **Esc** until you return to the System menu.

▶ **To assign forms to the printer trays:**

1. Change the printer location to which your terminal is assigned to the location to which you added the new printer as follows:
 - From the **System** menu, select **Change Location**.
 - At the prompt, select the printer location to which you assigned the new printer.
2. From the **System > Printers** menu, select **Forms Loaded** to display the Forms Loaded screen.
3. Use the Arrow keys to select the printer that you just added and press **F10** to display a list of valid forms available for that printer.
4. Select the appropriate form to load on the printer and press **Enter**. If there is only one form loaded, it is automatically displayed when you press **F10**.

5. Depending on the printer characteristics, the printer may have more than one tray. Load forms for all available trays.
6. Press **Esc** until you to return to the **System** menu.

▶ **To add the IP address of the printer to the /etc/hosts file:**

1. Display the AIX system prompt (#) in one of the following ways:
 - Log out of Eclipse and log in to AIX-Unix as root.
The system displays the Welcome to AIX login banner.
 - From the **System** menu, select **TCL** to shell out to the system prompt (#).

Note: Skip the following steps when setting up printers on port 2, 3, or 4 of any print server device.
2. At the system prompt (#), type **smit hosts** and press **Enter** to display the Hosts Table.
3. Check that you are not installing a device with a duplicate IP address, as follows:
 - Select **List All Hosts** and press **Enter** to display the IP numbers of the hosts.
 - Press **F3** to return to the previous menu.
4. Add the printer, as follows:
 - Select **Add a Host** and press **Enter** to display the Add a Host Name screen.
 - In the **Internet Address** field, enter the IP address for the network printer.
An IP address is a group of four numbers separated by periods, with each number being from 1 to 254. For example, 199.90.150.101.
 - In the **Host Name** field, enter **lp#** (where # is the number of the printer).
 - Leave the **Alias** field blank.
 - In the **Comment** field, enter **lp#** (where # is the number of the printer) or the name of printer.
 - Press **Enter** to submit your changes and return to the previous menu.
5. Confirm that the printer was added, as follows:
 - Select **List All Hosts** and press **Enter**.
 - Press **0** while holding down the **Esc** key (**Esc+0**) to return to the system prompt.

▶ **To create a print queue:**

1. At the system prompt (#), type **smit queue** and press **Enter** to display the Print Spooling screen.
2. Select **Add a Print Queue** and press **Enter** to display the Add a Print Queue screen.
3. Select **remote** and press **Enter** to display the Add a Remote Print Queue screen.

4. Select **Standard Processing** and press **Enter**.
5. In the **Name of Queue to add** field, type **lp#** (where # is the number of the printer).
6. In the **Hostname of remote server** field, type **lp#** (where # is the number of the printer).

In the **Name of Queue on remote server** field, select the name, depending on the device:

- **pcl1** – Extended Systems Devices on port 1.
 - **pcl2** – Extended Systems Devices on port 2.
 - **lp#** – Jet Direct Card (where # is the number of the printer).
 - **pclnf1** – Dot Matrix printer not form feeding.
8. In the **Description of printer on remote server** field, enter **lp#**.
 9. In the **Backend TIME OUT period (minutes)** field, enter **999**.
Putting 999 in this field insures that you have 999 minutes before your printer times out and goes into a DOWN status as indicated by the command: lpstat.
 10. Press **Enter** to submit your changes and return to the previous menu.
 11. Press **0** while holding down the **Esc** key (**Esc+0**) to return to the system prompt.

▶ **To set up the printer in UniVerse:**

1. At the system prompt (#), enter the following command to display the UniVerse System Administration screen:
su - uv
Note: If the system displays the UniVerse prompt (>) prompt, type **login** to display the UniVerse System Administration screen.
2. Select **Spooler Management > Device Management > Maintain Devices** to display the Maintain Devices screen.
3. In the **Printer Name** field, enter **lp#** (where # is the number of the printer).
4. In the **Unix Pathname** field, enter **/dev/null**.
5. In the **Driver** field, enter **lp#.dvr** (where # is the number of the printer).
Select **Yes** when prompted that the driver does not exist.
6. In the **Lock file 1** field, enter **lock.lp#** (where # is the number of the printer).
7. Answer appropriately when prompted “Do you wish to go back and change any of your answers?”
8. Select **Yes** when prompted “Do you wish to save your changes?”
9. Select **Yes** when prompted “Do you want to Reread the Spooler Configuration files?”
10. Press **Enter** to close when prompted “Spooler Configuration files have been reread.”
11. Press **Esc** twice to log out of Maintain Devices and return to the UniVerse prompt (>).
12. At the UniVerse prompt (>), type **q**, and press **Enter** to return to the system prompt (#).

►To create the printer driver:

1. At the system prompt (#), enter the following command:

```
cd /usr/spool/uv
```

2. Enter the following command to confirm you are in the /usr/spool/uv directory:

```
pwd
```

3. Enter the following command to display the VI editor:

```
vi lp#.dvr (where # is the number of the printer)
```

4. Enter the following command to enter the VI editor input mode:

```
i
```

Note: The **i** will not be visible.

5. Type the name of the queue you created earlier using the following command:

```
lp -dlp# (where # is the number of the printer)
```

Note: Do not press **Enter**.

6. Press **Esc** to enter the VI editor command mode.

7. Press **Shift-Z-Z** (hold down the **Shift** key while pressing **Z** twice) to save the file, exit the VI editor, and return to the system prompt (#).

8. Enter the following command to verify that the driver was written properly.

```
cat lp#.dvr
```

The system should display what you just typed in step 5 above.

If you do not see `lp -dlp#` (with no extra spaces or lines), enter the following command to remove the driver:

```
rm lp#.dvr
```

and then re-create the driver.

9. Enter the following command to write the driver's permissions:

```
chmod 777 lp#.dvr
```

10. Enter the following command to confirm the permissions are `-rwxrwxrwx`.

```
ls -l lp#.dvr
```

Refer to the appropriate instructions for configuring your print server:

- Configuring an Extended Systems (ESI) Device
- Configuring an HP JetDirect Device

Setting Up Ethernet Printers in Release 8

Setting up an Ethernet network printer requires you to make changes at the Eclipse application level and the AIX-Unix level.

To prevent duplication of network printers, review the currently defined printer IDs before setting up the new printer.

The following procedures describe how to:

- Identify the currently defined network printers.
- Define a printer and assign loadable forms.
- Add the printer to printer locations.
- Assign forms to the printer trays.
- Add the IP address of the printer to the `/etc/hosts` file.
- Create a print queue.
- Set up the printer in UniVerse.
- Create the printer driver.

▶ To identify the currently defined network printers:

1. From the **System > Printers** menu, select **Spooler Management** to display the Spooler Management screen.
2. Select **Spooler Status** to display the Spooler Status screen, which displays the status of all printers and their associated print jobs.

Note: Take note of the currently assigned LP numbers, to prevent duplication when you enter a number for the new network printer you are setting up.

▶ To define a printer and assign loadable forms:

1. From the **System > System Files > Printer Setup** menu, select **Assign Printer/Fax** to display the Assign Printer/Fax screen.
2. In the **Printer/Fax #** field, press **F10** and select **New**. At the prompt, enter a new printer ID up to five characters long, such as LP6.

Note: The **Printer/Fax #** must match the **LP #** selected in the UniVerse Spooler configuration file for the printer being defined.

3. In the **Name** field, enter the name of the printer, up to nine characters long.

This name appears anytime the system prompts for a printer, and it should be a name that is easily associated with the printer, such as OfficeLsr.

4. In the **Printer Type** field, press **F10** and select from the displayed list the printer type that most resembles your printer.

Most HP LaserJet printers use a printer type prefixed with HPLJ, while most dot matrix printers use either the PRINTRONIX or GENERIC printer type. Zebra label printers use ZEBRA or GENERIC.

5. Leave the **Printer/Fax** field set to the default **Printer**.
6. In the **Description** field, enter a description of the printer.
7. In the **Macro Enabled (Y/N)** field, indicate whether to enable macro logic for this printer.
8. Assign loadable forms to the printer, as follows:
 - Use the **Loadable Forms** hot key to display the Loadable Forms screen, which lists the forms loaded for your printer. This screen is empty for new printers.
 - For each form to assign, position the cursor on a blank line, press **F10** to display the defined forms, and select one. For example, select PLAIN for reports.
 - Press **Esc** to save your changes.

Note: To cancel your changes at any point, press **F12**.
9. Press **Esc** until you return to the **System** menu.

► **To add the printer to printer locations:**

1. From the **System > System Files > Printer Setup** menu, select **Printer Location Maintenance** to display the Printer Location Maintenance screen.
2. In the **Printer Location** field, type **new** if you are creating a new printer location or press **F10** and select the printer location to which you want to add the new printer.
3. In the **Ship Ticket Branch** field, do one of the following:
 - Enter a branch if you want the terminals logged on to the displayed printer location to always print ship tickets at that branch.
 - Leave this field blank so the system will use the normal branch selection logic to determine where a ship ticket will be printed.
4. In the **Physical Branch** field, enter the branch where this printer location resides.
5. In the **Printer #** column, position the cursor on a blank line, press **F10**, and select the printer you want to add.
6. Press **Esc** to save your changes.
7. Repeat steps 2-6, as needed.
8. Press **Esc** until you return to the **System** menu.

▶To assign forms to the printer trays:

1. Change the printer location to which your terminal is assigned to the location to which you added the new printer as follows:
 - From the **System** menu, select **Change Location**.
 - At the prompt, select the printer location to which you assigned the new printer.
2. From the **System > Printers** menu, select **Forms Loaded** to display the Forms Loaded screen.
3. Use the Arrow keys to select the printer that you just added and press **F10** to display a list of valid forms available for that printer.
4. Select the appropriate form to load on the printer and press **Enter**. If there is only one form loaded, it is automatically displayed when you press **F10**.
5. Depending on the printer characteristics, the printer may have more than one tray. Load forms for all available trays.
6. Press **Esc** until you to return to the **System** menu.

▶To add the IP address of the printer to the /etc/hosts file:

1. Display the AIX system prompt (#) in one of the following ways:
 - Log out of Eclipse and log in to AIX-Unix as root.
The system displays the Welcome to AIX login banner.
 - From the **System** menu, select **TCL** to shell out to the system prompt (#).

Note: Skip the following steps when setting up printers on port 2, 3, or 4 of any print server device.
2. At the system prompt (#), enter **smit hosts** to display the Hosts Table.
3. Check that you are not installing a device with a duplicate IP address, as follows:
 - Select **List All Hosts** and press **Enter** to display the IP numbers of the hosts.
 - Press **F3** to return to the previous menu.
4. Add the printer, as follows:
 - Select **Add a Host** and press **Enter** to display the Add a Host Name screen.
 - In the **Internet Address** field, enter the IP address for the network printer.
An IP address is a group of four numbers separated by periods, with each number being from 1 to 254. For example, 199.90.150.101.
 - In the **Host Name** field, enter **lp#** (where # is the number of the printer).
 - Leave the **Alias** field blank.
 - In the **Comment** field, enter **lp#** (where # is the number of the printer) or the name of the printer.

- Press **Enter** to submit your changes and return to the previous menu.
5. Confirm that the printer was added, as follows:
 - Select **List All Hosts** and press **Enter**.
 - Press **0** while holding down the **Esc** key (**Esc+0**) to return to the system prompt.

▶ **To create a print queue:**

1. At the system prompt (**#**), enter **smit queue** to display the Print Spooling screen.
2. Select **Add a Print Queue** and press **Enter** to display the Add a Print Queue screen.
3. Select **remote** and press **Enter** to display the Add a Remote Print Queue screen.
4. Select **Standard Processing** and press **Enter**.
5. In the **Name of Queue to add** field, type **lp#** (where **#** is the number of the printer).
6. In the **Hostname of remote server** field, type **lp#** (where **#** is the number of the printer).
7. In the **Name of Queue on remote server** field, select the name, depending on the device:
 - **pcl1** – Extended Systems Devices on port 1.
 - **pcl2** – Extended Systems Devices on port 2.
 - **lp#** – Jet Direct Card (where **#** is the number of the printer).
 - **pclnf1** – Dot Matrix printer not form feeding.
8. In the **Description of printer on remote server** field, enter **lp#**.
9. In the **Backend TIME OUT period (minutes)** field, enter **999**.
 Putting 999 in this field insures that you have 999 minutes before your printer times out and goes into a DOWN status as indicated by the command: **lpstat**.
10. Press **Enter** to submit your changes and return to the previous menu.
11. Press **0** while holding down the **Esc** key (**Esc+0**) to return to the system prompt.

▶ **To set up the printer in UniVerse:**

1. At the system prompt (**#**), enter the following command to display the UniVerse System Administration screen:
su - uv
Note: If the system displays the UniVerse prompt (**>**), type **login** to display the UniVerse System Administration screen.
2. Select **Spooler Management > Device Management > Maintain Devices** to display the Maintain Devices screen.
3. In the **Printer Name** field, enter **lp#** (where **#** is the number of the printer).
4. In the **Unix Pathname** field, enter **/dev/null**.

5. In the **Driver** field, enter **lp#.dvr** (where # is the number of the printer).
Select **Yes** when prompted that the driver does not exist.
6. In the **Lock file 1** field, enter **lock.lp#** (where # is the number of the printer).
7. Answer appropriately when prompted “Do you wish to go back and change any of your answers?”
8. Select **Yes** when prompted “Do you wish to save your changes?”
9. Select **Yes** when prompted “Do you want to Reread the Spooler Configuration files?”
10. Press **Enter** to close when prompted “Spooler Configuration files have been reread.”
11. Press **Esc** twice to log out of Maintain Devices and return to the UniVerse prompt (>).
12. At the UniVerse prompt (>), type **q**, and press **Enter** to return to the system prompt (#).

▶ **To create the printer driver:**

1. At the system prompt (#), enter the following command:
cd /usr/spool/uv
2. Enter the following command to confirm you are in the /usr/spool/uv directory.
pwd
3. Enter the following command to display the VI editor:
vi lp#.dvr (where # is the number of the printer)
4. Enter the following command to enter the VI editor input mode:
i
Note: The **i** will not be visible.
5. Type the name of the queue you created earlier using the following command:
lp -dlp# (where # is the number of the printer)
Note: Do not press **Enter**.
6. Press **Esc** to enter the VI editor command mode.
7. Press **Shift-Z-Z** (hold down the **Shift** key while pressing **Z** twice) to save the file, exit the VI editor, and return to the system prompt (#).

8. At the system prompt (#), enter the following command to verify that the driver was written properly.

cat lp#.dvr

The system should display what you just typed in step 5 above.

If you do not see **lp -dlp#** (with no extra spaces or lines), enter the following command:

rm lp#.dvr

and then re-create the driver.

9. Enter the following command to write the driver's permissions:

chmod 777 lp#.dvr

10. Enter the following command to confirm the permissions are `-rwxrwxrwx`.

ls -l lp#.dvr

Refer to the appropriate instructions for configuring your print server:

- Configuring an Extended Systems (ESI) Device
- Configuring an HP JetDirect Device

Configuring Extended Systems (ESI) Devices

Intuit Eclipse supports the ESI Pocket Print Server and ESI Card.

The following procedures describe how to:

- Configure an ESI device from Windows.
- Configure an ESI Device from AIX-Unix.
- Change ESI Print Server Configuration Settings.
- Restore the ESI Pocket Print Server to Factory Defaults.

Configuring an ESI Device from Windows Using ExtendView for TCP/IP

The following information about using Extended Systems ExtendView for TCP/IP (version 2.11 or higher) was obtained from the Extended Systems web site (<http://www.troypgroup.com//wireless/support/xtndfw.asp>). You will need to download EXTENDVIEW 2000 under Utilities, run the wizard, and select the default view option.

Using factory default settings, the printer server first attempts to determine its IP address using DHCP, RARP, BOOTP, or Gleaning. If the print server does not resolve its IP address within two minutes of power up, it defaults to 198.102.102.154. This address should only be used temporarily.

Note: The easiest method for assigning an IP address using a Windows computer (once the print server has defaulted to its temporary IP address) uses ExtendView. ESI provides this software with the device.

For more detailed explanations of settings, please refer to the documentation issued with the ESI device, or use the online help system available with the ExtendView application.

▶ To assign an IP address on your print server using ExtendView for TCP/IP:

1. Start the ExtendView utility and double-click the device you are trying to configure.

Locate the hardware address of the ESI device, as follows:

- Use the hardware serial number of the device. It starts with 00:40:68 and is followed by 6 more digits. External devices have this address printed near the serial number on the back of the card. Internal devices display this number on your Windows printers configuration page.

Note: Extended Systems does not consistently print the hardware addresses on ESI devices. However, the serial number for the device is actually the hex value of the hardware address. For example, if you open the Windows Calculator program, select **Scientific** from the **View** menu, type in the serial number, and click **Hex**, the hardware address appears.

- Match the hardware address of the ESI device with the information in the **H/W Address** field.
2. At the ExtendView prompt, enter an IP address for the device.
 3. Enter the IP address for the print server and click **OK**. The IP address must follow the format nnn.nnn.nnn.nnn, where nnn is a number between 0 and 255.

Configuring an ESI Device from AIX-Unix

Use the following procedure to configure an ESI device from AIX-Unix.

►To configure an ESI Device from AIX-Unix:

1. Verify that there is a good physical connection between the ESI device and the hub.
2. Depending on the device you are using, do one of the following:
 - If you are using a Pocket Print Server (an external ESI device):
 - Attach the device to the printer and the network.
 - Power on the printer.
 - Do *not* power on the device.
 - If you are using an MIO Card (an internal ESI device):
 - Install the device on the printer.
 - Do *not* power on the printer.

3. Locate the hardware address of the ESI device.

The address starts with 00:40:68 and is followed by 6 more digits. External devices have this address printed near the serial number on the back of the card. Internal devices display this number on your Printers Configuration page.

4. Log in to AIX-Unix as root, if you have not already done so.
5. At the system prompt (#), enter the following command:

```
arp -s ether XXX.XXX.XXX.XXX 00:40:68:##:##:## temp
```

Replace xxx.xxx.xxx.xxx with the unique IP address for this printer and replace ##:##:## with the Hardware Address of the ESI device.

For example:

```
arp -s ether 199.199.199.199 00:40:68:0A:1B:4F temp
```

6. Power on the ESI device (if external) or printer (if internal).

Note: If the ESI device has not resolved its IP address after two minutes, it defaults to using 199.102.102.254 as its IP address. You must reset the device and repeat Step 6.

7. At the system prompt (#), enter the following command:

ping XXX.XXX.XXX.XXX (where XXX.XXX.XXX.XXX is the printer IP address)

- If you get a response, the printer is on the network. Press **Ctrl-Break** to stop the ping command and skip to step 8.
- If you do not get a response, press **Ctrl-Break** and return to the system prompt (#).

Check the physical connection between the ESI device, the network hub, and the printer, then repeat step 7.

- If the ESI device is still not responding, check to see if there is a green light on the back of the ESI device.

If the light is green, most likely the ESI device needs to be reset. If this is the case, repeat this process beginning at step 5. If this fails a second time, complete the steps for "Restoring the ESI Pocket Print Server to Factory Defaults" and then repeat these steps again beginning at step 5 to configure your ESI device.

If the light is red, the ESI device is not sensing a proper network connection. Check the physical connections between the ESI device, printer and network hub (replacing cables or connections as necessary), then repeat step 7.

- If the ESI device is still not responding, call Intuit Eclipse Support.

8. Telnet into the ESI device, following the instructions below, or follow the instructions for using the ExtendView for TCP/IP instructions from the device manufacturer.
9. At the system prompt (#), enter the following command:

telnet lp# (where # is the number of your laser printer)

- When prompted, enter your password.
- Enter your password again to confirm it.
- Select **Specify Printer Server IP Address** from the Main menu and set the permanent IP address.
- Select **Specify Subnet Mask for Your Network** and set the permanent subnet mask.
- Select **Enable/Disable Connection Timeout Checking** and set to **Disable**.
- Select **Configure Port** and select **PCL** for a LaserJet printer (the default is for a Dot Matrix printer).
- Select **Show Network/Printer Information** and confirm all information is correct.
- Press **Enter** at the Main menu and press **Y** to confirm that you want to save your changes.

The device is ready.

Changing Settings for the ESI Print Server

Use this procedure to review the configuration settings for the ESI print server.

► **To change configuration settings for the ESI print server of the currently selected device:**

1. From the **Print Server** pull-down menu, select **Configuration**.

ExtendView displays the Print Server Configuration dialog box.

The following table displays the minimum configuration settings.

Setting	Description
Permanent Subnet Mask	Enter the permanent subnet mask appropriate for your network. The subnet mask must follow the format nnn.nnn.nnn.nnn, where nnn is a number between 0 and 255. The default subnet mask is 0.0.0.0. The print server interprets a subnet mask of 0.0.0.0 or 255.255.255.255 as no subnet mask specified.
Default Gateway	If your local area network (LAN) is not attached to other networks, set this field to 0.0.0.0; this is most common in smaller-sized companies. If your LAN is attached to other networks, specify the address of your default gateway for users from that network to print to this device. This gateway address must follow the format nnn.nnn.nnn.nnn, where nnn is a number between 0 and 255. Note: You cannot configure a print server that is located in a different network, even if your LAN is connected with that network. This software will have to be installed on that network and the device configured from there.
Port Number	Select the port number you want to configure.
Timeout Checking	Use timeout checking to sever network TCP/IP connections that are idle for more than five minutes (or the time entered, if configurable on your printer server). Under most conditions, this option should remain enabled. The valid timeout range is between 10 to 3600 seconds (the default is 300). We recommend entering 3600 seconds.
Language Switching	Set to PCL for HPLaserJet Printers, and leave at Default for dot matrix printers.
Password	This password protects the print server configuration through Telnet or HTTP sessions. Valid passwords are from 5 to 24 characters long. Note: This should be "Password" in lowercase.

2. Change the settings, as needed.

Note: When changing settings, remember that **OK** and **Cancel** affect the entire dialog box. Do not choose **OK** until you have entered all changes on all tabs. **Cancel** aborts all changes on all tabs.

Restoring the ESI Pocket Print Server to Factory Defaults

In most cases, the best way to restore the Pocket Print Server to factory defaults is by using Telnet. However, if you are unable to connect to the device because of a configuration error, use the following method, which does not require a network connection.

▶ **To restore the ESI Pocket Print Server to factory defaults without a network connection:**

1. Disconnect the Pocket Print Server from the network connection and from the printer.
2. Cycle the power on the unit. When it powers up, the red LED will rapidly blink for five seconds.
3. Cycle the power on the Pocket Print Server four more times while it is rapidly blinking red.
4. Reconnect the network cable and power up the Pocket Print Server.

The light rapidly blinks green—indicating that it has restored itself to factory defaults—as it searches for a RARP or BOOTP server to find its IP address.

Configuring HP JetDirect Devices

Note: Some of the information contained in this section was obtained from Hewlett-Packard's web site (www.hp.com).

This topic includes information about configuring TCP/IP parameters for HP JetDirect devices in the following ways:

- Through the printer control panels.
- Using HP JetAdmin Windows Software.

Printer Self-Test

The printer or HP JetDirect device self-test will show all the TCP/IP parameters.

Ping/Telnet

A properly configured HP JetDirect device with appropriate firmware should be able to respond to a ping and to accept a Telnet connection. If not, there may be a connection issue; print a self-test page to determine the IP status.

Configuring TCP/IP Parameters Through the Printer's Control Panel

This section includes general configuration information and procedures for configuring TCP/IP parameters through the printer control panel for the following printers:

- HP LaserJet 5SI/5SI MX, 4000, 5000, or 8000 Series printers.
- HP LaserJet 4, 4 Plus, 4V, 4Si, 5 Series, and HP Color LaserJet printers.

Do not set TCP/IP parameters unless the TCP/IP protocol is enabled. Using the control panel of the printer, manually configure the following TCP/IP parameters:

Parameter	Description
BootP= (Yes/No)	Uses the BOOTP file, which automatically downloads configuration data over the network. The default setting is Yes to use the BOOTP file for configuration. Change this to No to use the front panel configuration.
IP Address (4 bytes)	Example: If the IP address is 192.0.0.192 then IP byte 1 = 192, IP byte 2 = 0, IP byte 3 = 0, and IP byte 4 = 192.
Subnet Mask (4 bytes)	Example: If the Subnet Mask address is 255.255.255.0, then IP byte 1 = 255, IP byte 2 = 255, IP byte 3 = 255, and IP byte 4 = 0.
Syslog Server IP address (4 bytes)	Example: If the Syslog IP address is 192.30.40.192 then IP byte 1 = 192, IP byte 2 = 30, IP byte 3 = 40, and IP byte 4 = 192. If there is no Syslog server then each byte is 0.
Default Gateway (4 bytes)	Example: If the Gateway IP address is 192.0.0.192 then IP byte 1 = 192, IP byte 2 = 0, IP byte 3 = 0, and IP byte 4 = 192.

Parameter	Description
TCP Connection Timeout (in seconds)	We recommend setting this to the maximum setting of 999 .

► **To configure TCP/IP parameters on HP LaserJet 5SI/5SI MX, 4000, 5000, or 8000 Series printers:**

Note: Unlike the HP LaserJet 4Si / 4Si MX printers, the HP LaserJet 5Si / 5Si MX printer does not have a minus (-) key or an **Enter** key. The 5Si, 4000, 5000, and 8000 printers have a **Select** button instead of an **Enter** button.

1. Press **Menu** until **HP MIO 1**, **HP MIO 2**, **EIO 1**, or **EIO 2** appears. Select the menu based on where the card is installed.
2. Press **Item**. CFG NETWORK = NO appears.
3. Press the + key. CFG NETWORK = YES appears.
4. Press **Select**.
5. Press **Item** until CFG TCP/IP = NO appears.
6. Press the + key. CFG TCP/IP = YES appears.
7. Press **Select**.
8. Press **Item**. BOOTP = YES * appears.
9. Press the + key. BOOTP = NO appears.
10. Press **Select**.
11. Press **Item**. IP BYTE 1 = * appears (where * is some value).
12. Press the + key until the desired value of the first byte of the IP address appears. By pressing and holding the + key, the value will scroll rapidly. The LaserJet 4000 printer has a minus key to decrease the value.
13. Press **Select** * to save the value.
14. Press **Item** to continue. Repeat steps 11 - 13 to configure the remaining bytes of the IP address.
15. Repeat steps 11 - 13 to configure the Subnet Mask bytes (SM BYTE 1=), syslog server IP address (LG BYTE 1=), default gateway (GW BYTE 1=), and timeout (TIMEOUT=).
16. Press **Online** or **GO**.
17. Print a self test page to verify the IP settings.

► **To configure TCP/IP parameters on HP LaserJet 4, 4 Plus, 4V, 4Si, 5 Series, and HP Color LaserJet printers:**

1. Press **Menu** repeatedly until one of the following messages displays on the control panel:

HP LaserJet Printer Type	Control Panel Message
HP LaserJet 4 and 4M printers	AUX IO Menu
HP LaserJet 4 Plus, 4M Plus, 4V, 4MV, 5/5N/5M and Color LaserJet printers	MIO Menu
HP LaserJet 4Si/4Si MX	MIO Menu 1 or MIO Menu 2

2. Press **Item**, CFG NETWORK=NO* will appear.
3. Press the + key once, CFG NETWORK=YES* will appear.
4. Press **Enter**.
5. Press **Item** until CFG TCP/IP=NO* appears.
6. Press the + key. CFG TCP/IP=YES* will appear.
7. Press **Enter**.
8. Press **Item** until BOOTP=YES* appears.
9. Press the + key. BOOTP = NO will appear.
10. Press **Enter**.
11. Press **Item**. IP BYTE 1 = * appears (where * is some value).
12. Press the + key until the value of the first byte of the IP address appears on the control panel display. By pressing Shift and the + key, the value will decrease.
13. Press **Enter**.
14. Press **Item** to continue. Repeat steps 11 - 13 to configure the remaining bytes of the IP address.
15. Repeat steps 11 - 13 to configure the subnet mask bytes (SM BYTE 1=), syslog server IP address (LG BYTE 1=), default gateway (GW BYTE 1=), and timeout (TIMEOUT=).
16. Press the **Online** button.
17. Print a self-test page to verify the IP settings.

Configuring TCP/IP Parameters Using HP JetAdmin Windows Software

The following procedure includes general configuration instructions.

▶ **To configure TCP/IP parameters using HP JetAdmin Windows software:**

Note: The following information is provided as a general overview.

1. Run HP JetAdmin.
2. Be sure **TCP/IP** is set as the default protocol in HP JetAdmin. Select **Options > Preferences > Default Protocol** and choose **TCP/IP**.
3. Press **F5** on the keyboard to refresh HP JetAdmin.
4. Choose **Device**, then **New**.
5. Select the HP JetDirect LAN hardware address from the list in Network Browser.
6. Choose **Configure**.
7. Fill in a description if desired. The **Name** field cannot be filled in, as it is used for IPX/SPX.
8. Choose **Next** and set the TCP/IP parameters as needed.
9. Choose **Next**, then **Finish**.
10. Close the Network Browser and exit HP JetAdmin.

Setting Up Slave Printers

Assigning a slave printer to a terminal tells the system to send print jobs from that terminal to the Windows default printer. The slave printer is connected to the terminal, and is considered the terminal's default printer. When you assign a slave printer to a terminal, select the terminal from the Terminal Setup screen and assign the printer to that terminal.

You can also set up a receipt slave printer for a selected user or group terminal.

Note: A report run from the phantom cannot print directly on a terminal's slave printer. To print to the slave printer, send the generated report to the Hold file and then print it from the print queue. To print the report directly, change the terminal's default printer to be a non-slave printer.

The following procedures describe how to:

- Set up a slave printer in Eclipse.
- Configure Eterm communications for a DOS computer.
- Configure Eterm communications for a Windows computer.

▶ To set up a slave printer in Eclipse:

1. Physically attach the printer to your computer.
2. Log in to the Eclipse system.
3. From the **System > System Files** menu, select **Terminal Setup** to display the Terminal Setup screen.
4. In the **ID** column, select the printer tty (if Serial) or ID (if Ethernet) and use the **Slave Printer** hot key to display the Slave Printer Assignment screen.
5. In the **Slave Printer** field, press **F10**, select the printer type to use, and press **Enter**.
Most dot matrix printers use GENERIC or PRINTRONIX printer types, while most laser printers use HPLJ printer types.
6. In the **Form Loaded** field, add or change the form loaded on your printer, as necessary.
ANY is the most common form loaded on a slave printer and means that everything you print from Eclipse prints to your slave printer.
7. Press **Esc** to save your settings and exit the Slave Printer Assignment screen.

▶ To configure Eterm communications for a computer running Eterm for DOS:

1. Press **Ctrl + Print Screen** to open the Eterm for DOS Configuration screen.
2. For serial connections, using tty's, do the following:
 - In the **Printer** field, change the setting to **LPT1**.
 - In the **HPCL Printing** field, change the setting to one of the following:

- ON, if your slave is a laser printer.
 - OFF, if your slave is a dot matrix printer.
 - Select **Continue** and press **Enter** to save your changes.
 - Select **Reconnect** and press **Enter**.
3. For Ethernet Connections using IP addressing, do the following:
- In the **Term ID** field, enter your ID as it appears on the Terminal Setup screen in Eclipse.

Note: It is important to type your ID exactly as it appears on the Terminal Setup screen, including capitalization where appropriate.

- Select **Continue** and press **Enter** to save your changes.
- Select **Reconnect** and press **Enter**.

You do not need to fill in the **Term ID** field if you are connecting serially.

Note: If you cannot print, see Troubleshooting Individual Printers.

▶ **To configure Eterm communications for an Ethernet computer running Eterm for Windows:**

1. From the Eterm menu bar, select **Configure > Communications** to open the Eterm for Windows Configure Communications screen.
2. In the **Term ID** field, enter your Eclipse user ID.

The value of the **User ID** field should match what you set in the **ID** column of the **System > System Files > Terminal Setup** screen.

Note: It is important to type your user ID exactly as it appears on the Terminal Setup screen, including capitalization where appropriate.

3. Click **OK** to save your changes.
4. From the **System > System Files** menu, select **New User**.

This is necessary for the changes to take effect.

5. Log back into Eclipse to check your changes.

Note: If you cannot print, see Troubleshooting Individual Printers.

Setting Up Serial Printers

Use the following instructions to set up a serial printer.

These instructions assume you have the number of an available tty and the number of the LP that the end user wants to create. The following examples use tty25 and LP4. Insert your own tty and LP numbers as you step through these instructions for your system.

The following procedures describe how to:

- Set up a serial printer in AIX.
- Set up a serial printer in UniVerse.
- Configure a serial printer.

▶ To set up a serial printer in AIX:

1. Login to AIX-Unix as root.
The system displays the login banner and the system prompt (#).
2. Type **pdisable tty25** and press **Enter**.
This disables the tty, preventing another person from using it.
3. Type **smit chgtty** and press **Enter** to display the SMIT CHGTTY screen.
4. Using the **Arrow** keys, select the appropriate tty, such as tty25, and press **Enter**.
5. In the **Enable Login** field, hold the **Esc** key and press the number **4 (Esc+4)** to display a valid list of options, select **Disable**, and press **Enter**.
The Change tty screen displays.
6. In the **Baud Rate** field, hold the **Esc** key and press the number **4 (Esc+4)** to display the valid list of options for that field, select **9600** (standard), and press **Enter**.
The Change tty screen displays again.
7. Press **Enter** to complete these changes.
OK displays in the upper left corner of the screen to indicate the changes are complete.
8. Press **0** while holding down the **Esc** key (**Esc+0+**) to return to the system prompt (#).

▶ To set up a serial printer in UniVerse:

1. At the system prompt (#), type **su - uv** and press **Enter** to access UniVerse.
Note: If the system displays the UniVerse prompt (>), type **login** to display the UniVerse System Administration screen.
2. Select **Spooler Management/Device Management/Maintain Devices** to display the Maintain Devices screen.
3. In the **Printer Name** field, enter the name of the printer. For example, enter **LP4**.

4. In the **Pathname** field, type **/dev/tty#** (where # is the tty number). For example, enter **tty25**.
5. Press **Enter** to accept the defaults for the remaining fields until you are prompted to go back and make changes.
6. Select **Yes** when prompted “Do you wish to save your changes?”
7. Select **Yes** when prompted “Do you want to Reread the Spooler Configuration files?”
8. Press **Enter** to close when prompted “Spooler Configuration files have been reread.”
9. Press **Esc** to return to the UniVerse prompt (>).
10. Type **q** and press **Enter** to return to the system prompt (#).

► **To configure a serial printer:**

1. Physically connect the printer to the appropriate tty port, if it is not already connected.
For information about the type of adapter to connect to the printer, see *Adapters for Devices Local to the Eclipse Server and Printer Characteristics/Control Panel Overview*.
2. Configure the printer from the Control Panel to utilize the Serial I/F option.

The following table displays the standard configuration for an Okidata printer. Other types of printers may have slightly different settings.

Serial I/F Option	Setting
Parity	None
Serial Data (7 or 8 bits)	8
Protocol	X-On/X-Off
Diagnostic Test	No
Busy Line	SSD+ (or SSD-)
Baud Rate	9600
DSR Signal	Invalid
DTR Signal	Ready on Select
Busy Time	200 ms

3. Test the printer to confirm you are communicating at a Unix level, as follows:
4. At the system prompt (#), enter the following command:
 - # **cat /etc/motd > /dev/tty#** (where # is the tty number)
 - If your cursor is not returned to the system prompt (#), press the **Ctrl** and **C** keys. If this does not return you to the system prompt, press the **Ctrl** and **Break** keys.
This indicates that you have a physical connection problem, or a configuration problem. See *Troubleshooting Individual Printers* and then check the printer

configuration in Unix and UniVerse. Also check that you have set the correct Serial I/F settings internally in the printer.

- If the printer is still not printing after troubleshooting the tty, check your adapter and cable to ensure that they are working properly. An easy way to do this is to move them to another serial printer that is working correctly, and see if the other printer stops printing.
- If the printer still does not print, start at the beginning of this document and check your setup.

Troubleshooting Individual Printers

This topic includes information about troubleshooting the following types of printers:

- Serial printers.
- Ethernet printers.
- Slave printers.

Serial Printers

Use the following procedure to troubleshoot serial printers.

►To troubleshoot a serial printer:

1. Get a status on the problem printer in one of the following ways:
 - In Unix, log on as the root user. At the command prompt (#), type **usa -p lp#** (where # is the printer number) and press **Enter**.
 - In Eclipse, from the **System > Printers > Spooler Management** menu, select **Spooler Status** to display the Spooler Status screen.
2. If the printer shows there is a job sending, suspend printing to the printer, power the printer off and on, and then restart the printing in one of the following ways:
 - In Unix, do the following:
 - At the command prompt (#), enter the following command to stop printing to the printer:
usa -b -p lp#
 - Power the problem printer off/on.
 - Enter the following command to start printing:
usa -c -p lp#
 - Repeat step 1. If printer still does not print, continue on to step 3.
 - In Eclipse, do the following:
 - From the **System > Printers** menu select **Spooler Management** to display the Spooler Management screen.
 - Select **Halt Printing to a Printer**, highlight the problem printer, and press **Enter**.
 - Power the problem printer off/on.
 - On the Spooler Management screen, select **Resume Printing to a Printer**, highlight the problem printer, and press **Enter**.
 - Send a test job, such as a short report or tracker, to the printer.

- If the printer still does not print, continue troubleshooting with step 3.
3. If nothing printed, try to print a page using the tty#:
 - Shell out to the system prompt (#) in Unix, or log in as the root user.
 - Enter **su - uv** to access UniVerse.
 - If you are at a > prompt, type **login**.
The UniVerse System Administration menu displays.
 - Enter **S** to display the Spooler menu.
 - Enter **D** to display the Device menu.
 - Find the printer and confirm which tty device it is using.
 - Press **Esc** until the system prompt (#) displays.
If you end up at the > sign, type **q** to quit.
 - Enter the following command to send the Welcome to AIX screen to the printer:
cat /etc/motd > /dev/tty# (where # is the number of the tty)
 4. Check your results, as follows:
 - If the system prompt (#) displays, the system believes it is printing.
Go into Eclipse and confirm you can print from there as well. If you cannot print from Eclipse, the problem is within the setup of the printer in the Eclipse layer.
 - If nothing printed in Unix you have a physical problem. Check your cabling, adapter, and the printer's internal configuration (see recommended serial printer configuration).
 - If the printer prints garbage there is usually a baud rate (speed) mismatch. Check your printer's configuration and its setup in Unix and UniVerse to be sure all baud rates are set to 9600 bps.
 - If you hang and do not return to the system prompt (#), press the **Ctrl+Break** keys to return to the system prompt. There is a problem with the way the printer was set up in Unix or UniVerse, or the tty the printer is using is hung. Refer to your serial printer setup documentation, or the instructions on how to clear a hung tty.
 5. When all else fails, call Intuit Eclipse Systems Group for support.

Ethernet Printers

Use the following procedure to troubleshoot an Ethernet printer. Troubleshooting is all done from the Unix system prompt (#).

►To troubleshoot an Ethernet printer:

1. At the system prompt (#), enter the following command to determine if the problem printer is on the network.

ping lp# (where # is the number of the printer)

 - If you get a response similar to the response below, the printer is on the network. Press the **Ctrl+Break** keys, to stop the command and return to the # sign. Then skip to step 4.


```
PING lp3: (90.0.0.21): 56 data bytes
64 bytes from 90.0.0.21: icmp_seq=0 ttl=255 time=18 ms
64 bytes from 90.0.0.21: icmp_seq=1 ttl=255 time=17 ms
```
 - If you get a response similar to the one below, the printer is not on the network. Press the **Ctrl Break** keys, to stop the command and return to the # sign. Then proceed with step 2.


```
PING lp3: (90.0.0.21): 56 data bytes
```
2. Check all of the physical connections to the printer (cables, pocket print server or card) and make sure they are secure.
3. Check the light on your pocket print server or card.
 - If the light is red, power off/on the pocket print server. If you have an internal card, power off/on the printer.
 - If the light is green (good connection), repeat step 1 until the printer is on the network and then continue with step 4.
4. Type **lpstat -plp#** and press **Enter**, to get a status on the problem printer.
 - If the printer shows there is an active job, stop printing to the printer, as follows, and then continue with step 5:
 - Type **enq -DPlp#** and press **Enter**, to bring the printer down.
 - Type **lpstat -plp#** and press **Enter**, to confirm the printer status is now down.
 - Power the problem printer off/on.
 - Type **enq -UPlp#** and press **Enter** to bring the printer up to a ready mode.
 - If there is no active job on the problem printer or nothing printed, continue with step 5.

5. Enter the following command to send the Welcome to AIX screen to the printer:

lp -dlp# /etc/motd

6. Check your results, as follows:

- If the system prompt (#) displays, the system believes it is printing.
Go into Eclipse and confirm you can print from there as well. If you cannot print from Eclipse, the problem is within the setup of the printer in the Eclipse layer.
- If nothing printed, you have a physical problem. Check your cabling, adapter, and the printer's internal configuration (see recommended printer configuration).
- If you hang and do not return to the system prompt (#), press the **Ctrl+Break** keys to return to the system prompt. There is a problem with the way the printer was set up in Unix or UniVerse, or the tty the printer is using is hung. Refer to your serial printer setup documentation, or the instructions on how to clear a hung tty.

7. When all else fails, call Intuit Eclipse Systems Group for support.

Slave Printers

Use the following procedure to troubleshoot a slave printer from a DOS computer.

▶To troubleshoot a slave printer from a DOS computer:

1. Power on your computer.
2. When the screen displays Loading MS DOS, press **F5** to bypass your CONFIG.SYS and AUTOEXEC.BAT files and display the DOS prompt (C:\>).
3. At the DOS prompt (C:\>), enter the following command to send a directory list of the current disk drive to the printer.
dir > prn
4. If the printer does not print out the directory, check the form feed light.
 - If the form feed light is on, press the **Form Feed** button and then the **Online** button to get the directory to print.
 - If the form feed light is not on, see “If You Still Cannot Print” to troubleshoot the problem.

Troubleshooting Tip from Customer Newsletter

If you are using an AIX RS6000 and have Ethernet/network printers that are going down regularly, it is likely that you have not set the printer timeout period. This timeout factor keeps the printer online for a specified period of time while a physical problem with the printer is corrected. The recommended setting is 999, which gives you 999 minutes before the printer will go down in the event of a paper jam or other such physical problem.

To set the printer timeout period, execute the following commands:

```
smit queue <cr>
```

```
Select: Programming Tools
```

```
Select: Queues and Queue Devices
```

```
Select: Queue Devices
```

```
Select: Change / Show Characteristics of a Queue Device
```

The fast path is: `smit pq_chquedev`

Change the field BACKEND PROGRAM pathname to read: `/usr/lib/lpd/rembak -T999`

The line will read — in most cases: `"/usr/lib/lpd/rembak"`. It will be necessary to arrow to the end of the line and add a space and then `-T999`. Be sure to use an uppercase T.

If you do not feel comfortable making this change then feel free to call us in Systems Support for assistance.

The correct time to set this is when you are setting the print queue up — when executing the `smit queue` command. The path to this screen is:

```
Smit queue
```

```
Add a Print Queue
```

```
Select the option: remote
```

```
Select the option: Standard processing
```

```
Note the option: Backend TIME OUT period (minutes)
```

Putting a 999 in this field when setting up the printer will insure that you have 999 minutes before your printer times out and goes into a DOWN status as indicated by the command: `lpstat`

Printer Commands

Use the following commands with Ethernet and Serial printers.

ENQ Commands for Network/Ethernet Printers Only

The **enq** command is a general-purpose utility for enqueueing requests to a shared resource, typically a printer device. Use the **enq** command to enqueue requests, cancel requests, alter the priority of a request, and display the status of queues and devices.

In the following commands, replace # with the number that corresponds to the appropriate printer or job number.

Command	Description
enq -Dlp#	Brings a printer down.
enq -Xlp#	Cancels all jobs at the specified printer.
enq -Ulp#	Bringing up a “downed” printer queue in AIX.
enq -x#	Cancels the indicated job number. Example: enq -x509

USA Commands for Serial and Ethernet Printers

In the following commands, replace # with the number that corresponds to the appropriate printer or job number.

Command	Description
usa	Displays the spooler status.
usa -p lp#	Displays the spooler status only for the specified printer, such as LP4.
usa -A	Displays all active print jobs.
usa -b -p lp#	Stops printing current job for the specified printer.
usa -c -p lp#	Restarts current job for the specified printer.
usa -j	Lists all queued jobs.
usa +o -p lp#	Resets a specified printer. Note: This command only works if the system has requested this action.
usm -k #	Kills the specified job.

Chapter 9: VSI-FAX Gold

Use the VSI-FAX Gold software to connect to modems and transmit documents and messages as faxes. VSI-FAX Gold is a Unix-based fax server which interfaces directly to the Eclipse menu and to networked Windows PCs set up as clients. It is security driven by branch, by user, and by document. You can append documents, such as credit applications, to the cover sheet and create company logos on the cover sheet. Whether you can fax forms, such as invoices, purchase orders, and statements, depends on your form print programs.

Four major components comprise the Eclipse Fax System:

- **Assigning Fax Devices** – Before you can send faxes from the Eclipse system, you must assign one or more fax delivery systems, which we call fax devices.
- **Fax Memo** – Use the Fax Memo program to send faxes. Use this program to set up the fax cover sheet, identify the fax recipients, and append documents to the fax.
- **Outgoing Fax Status Queue** – Use the Outgoing Fax Status Queue to manage faxes sent from your company. Use this functionality to make sure that all faxes are sent. You can also watch for instances where a fax is not sent due to wrong numbers, busy phone lines, or any other problems which arise while sending faxes.
- **Incoming Fax Status Queue** – Use the Incoming Fax Status Queue to manage images that have been faxed into the Eclipse Fax System. Use these images to create logos, signatures, append documents, and forms.

For more information, see the *Fax System Overview* in the online help.

Installing VSI-FAX Gold

This section details the VSI-FAX Gold installation. Intuit Eclipse may have configured your Eclipse server prior to shipping. Please contact Eclipse System Support with any questions or concerns you might have.

Note: The installation instructions below use a MultiTech modem. Consult your modem documentation if you are using a different modem and experience modem problems.

►To install VSI-FAX:

1. Shell out of Eclipse to the Unix prompt, as follows:
 - From the **System** menu, select **TCL**.
 - At the **;** prompt, type **sh** and press **Enter**.
; **sh**
 - At the **\$** prompt, type **su** and press **Enter**.
\$ **su**
 - At the **#** prompt, type in your root password and press **Enter**.
2. Connect the MultiTech modem (MTI932ZDX) to a serial port on the host system using a standard modem cable.

Note: The serial port you choose must have full modem control. The S1, S2, or S3 ports on the back of the RISC or a concentrator port controlled by a 128 port controller will work; a concentrator port controlled by a 64 port adapter **WILL NOT WORK!** Also, there are no special modem strings that need to be programmed; factory modem settings are appropriate.

3. Connect the modem to a phone line using the “line” jack on the back of the modem.
4. Turn on the modem.
5. Identify the Unix tty associated with the port to which the modem is connected.
6. Enter the following command to locate the PID of any processes associated with this tty:

```
# ps -ft ttyx (where x is the tty number)
```

The system returns something similar to the following:

```
UID PID PPID C STIME TTY TIME CMD  
root 3994 1 0 Mar 12 2 0:00 sleep
```

7. Enter the following command to disable the tty:

```
# pdisable ttyx (where x is the port number)
```


8. Enter the following command to remove any locks on the tt:

```
# rm /etc/locks/LCK_ttyx (where x is the port number)
```

9. Enter the following command to kill the processes listed as a result of step 6. You can concatenate multiple PIDs on the same command line.

```
# kill x y z (where x y z are the PIDs of the processes to kill)
```

The system indicates that the process has been terminated.

10. Type **smit** to start the smit program, and select **Devices > TTY > Change/Show Characteristics of a TTY**. Use the **Arrow** keys to highlight the TTY with which you are working and press **Enter**.

The system displays the Change/Show Characteristics of a TTY screen for the TTY you selected, as shown in Figure 65.

Figure 65: Change/Show Characteristics of a TTY Screen

11. On the Change/Show Characteristics of a TTY screen, use the **Arrow** keys to navigate through the screen and to select and edit the following items:

Item	Description
Enable LOGIN	Use the Tab key to select (or type in) Disable to disable login on the TTY.
BAUD rate	Enter 19200 for the baud rate.
PARITY	Enter none to set the TTY to No Parity.
BITS per character	Enter 8 for 8 bits.
Number of STOP BITS	Enter 1 for 1 stop bit.
FLOW CONTROL to be used	Enter xon for XON/XOFF flow control.
Force Carrier	Use the Tab key to select (or type in) Enable to enable forced carrier.
Receive Event Delay Time	If using a RAN port, type 300 to increase the delay time.

12. Hold down **Esc** while pressing **0** to exit smit.

13. From the Unix prompt (**#**), issue the following commands to initialize the port (where x is the port number):

```
# chmod 666 /dev/ttyx
```

```
# chown root /dev/ttyx
```

```
# chgrp System /dev/ttyx
```

14. Issue the following commands so the system recognizes the fax modem (where port is the serial port the modem is on (that is, /dev/ttyx where x is the port number), and comment is the ten-digit telephone number to which the modem is connected—if known):

```
# vfxadmin device -d -a -v port -n "comment" modem1
```

```
# vfxadmin class -d -a modem1 fax1
```

This command sets up default class **fax1** and adds device **modem1** to it. Note that **fax1** is the value you will insert in the **Printer/Fax #** field on the **System > System Files > Printer Setup > Assign Printer/Fax** screen.

For every geographic location (branch) that has its own VSI-FAX modem, set up a default class. For example, use classes **fax2** and **fax3** for the additional locations. Within each class you can set up several modem devices, such as **modem1**, **modem2**, and **modem3**.

15. Start the fax server:

```
# vfxsched start
```

16. Check the fax server status:

```
# vfxstat -t
```

If this fails, check that the TCP/IP network daemons are running. Either start TCP/IP from **smit** or call Eclipse Systems Support for assistance.

17. Verify the fax server runs correctly. To do so, add the fax device to Eclipse, then send a fax to yourself (select **Fax Memo** on the **System** menu).

Testing the VSI-FAX Installation

Once you have installed VSI-FAX, test that it has been installed correctly.

▶ **To test that VSI-FAX has been installed correctly:**

1. Shell out of Eclipse to the Unix prompt, as follows:
 - From the **Systems** menu, select **TCL**.
 - At the **;** prompt, type **sh** and press **Enter**.
; **sh**
 - At the **\$** prompt, type **su** and press **Enter**.
\$ su
 - At the **#** prompt, type in your root password and press **Enter**.
root's Password:
_____
2. At the Unix (**#**) prompt, type **fixfax** and press **Enter** to set various VSI-FAX parameters and start up VSI-FAX.
fixfax
3. When prompted to cycle the power on the VSI-FAX modem, do so, and press **Enter** to finish.
4. Return to Eclipse, as follows:
 - At the **#** prompt, type **exit** and press **Enter**.
exit
 - At the **\$** prompt, type **exit** and press **Enter**.
\$ exit
 - At the **;** prompt, press the **Esc** key to return to Eclipse.

Installing the VSI-WIN Client

The VSI-WIN Client installation software is provided on a CD-ROM. If you have some users with network connectivity, but no CD-ROM drive, you can install VSI-WIN over the network. You can also copy the installation files to diskettes and install VSI-WIN from the diskettes.

The following procedures explain how to install VSI-WIN from the following sources:

- CD-ROM
- Network
- Diskettes

▶To install VSI_WIN from a CD-ROM:

1. Close down all running programs.
2. Insert the VSI-FAX CD-ROM.
3. Bring up Windows Explorer (right-click on **Start**, then select **Explore**).
4. Start vsigold.exe, as follows:
 - In Explorer left pane, locate and expand the **CD Drive** (click the +) to show the subfolders.
 - Expand the **Windows** subfolder (click the +).
 - Click to open the **English** subfolder.
 - In the right pane, double-click **vsigold.exe**.
5. Click **Next** to advance past the Welcome screen, and then choose the type of installation you want:
 - **VSI-WIN** – Installs the VSI-WIN program. This is the only program that is required.
 - **Complete** – Installs the VSI-WIN program and the VSI-COVER program which you can use to create custom cover sheets for the VSI-WIN client.
6. Click **Next** to accept the default installation directory, unless you really need to install it somewhere else.
7. Continue the installation by filling in the input fields. Press **Tab** to move between the input fields. Some notes on the input fields:
 - **Resolution** – We recommend using **Fine** resolution.
 - **Hostname** – Enter the IP Address of the Eclipse server where the VSI-FAX server is installed.
 - **Login Name** – Login Name can be the same as your Eclipse login name. If you use a different login name, be certain to commit it to memory!

- **Password** – The password can be the same as your Eclipse password. If you use a different password, be certain to commit it to memory! The system prompts you to enter the password a second time for confirmation.
8. Select the time zone.
 9. If you get an error indicating that a license is not available, then the client licenses you have purchased have already been assigned to other users.

You must either remove another user's license or buy more licenses. See the *VSI-WIN User Administration* document.

10. If desired, copy the VSI-WIN **Send Icon** to the desktop.

▶ **To install VSI-WIN from the network:**

1. Copy the **&CD-ROM\windows\english\vsigold.exe** file from the CD-ROM to somewhere on the PC's hard drive, and then share the file out.
2. From the networked PC without the CD-ROM drive, find the PC that has the vsigold.exe file on the network, and copy the vsigold.exe file to this PC's hard drive.
3. Execute the vsigold.exe file and complete the installation as described in steps 3 through 7 in the previous procedure.

▶ **To install VSI-WIN from a floppy diskette:**

1. On a PC with a CD-ROM, do the following:
 - Insert the VSI-FAX CD-ROM.
 - Open Windows Explorer (right-click on **Start**, then select **Explore**).
 - Start **vsigold.exe**, as follows:
 - In Explorer left pane, locate and expand the **CD Drive** (click the +) to show the subfolders.
 - Expand the **Windows** subfolder (click the +).
 - Click to open the **English** subfolder.
 - In the right pane, double-click **vsigold.exe**.
 - Open Windows Explorer and in the left pane, find and open the \tmp folder.
 - Copy each of the following files displayed in the right pane to a separate floppy diskette:
 - disk1
 - disk2
 - disk6
2. On the PC without the CD-ROM drive, insert the disk that contains the disk1 file and run **setup.exe** from it.
3. Proceed with the installation from step 3 of the CD-ROM instructions above.

Registering VSI-WIN Client Users

In order to send faxes from the VSI-WIN client, every VSI-WIN client user must be registered on the VSI-FAX server with a unique login name and password. The VSIFAX login name and password can be the same as the user's Eclipse login name, but does not have to be.

VSI-WIN client users are automatically registered when the VSI-WIN client is installed on the user's PC. A license will automatically be used if one is available.

If all the client licenses have been used, then you must either remove a license from another user or purchase more licenses. See the *VSI-WIN User Administration* document for further information.

▶ To register or update VSI-WIN client users from an existing VSI-WIN client:

1. On an existing VSI-WIN client PC, select **Start > VSI-FAX > Register VSI-WIN Users**.
2. Enter or change user information and select **Register** or **Update** as appropriate.

▶ To register or license VSI-WIN client users from the VSI-FAX administrator login:

1. Log in to the Eclipse server as either **root** or **vsifax**.
2. Enter the following command:
vfxadmin user _L _n "Full Name" login-name (where Full Name is your full name).

VSI-FAX Administrator Server Commands

Use the following additional server commands, as needed.

- **vfxadmin license -l**
Determines the number of VSI-WIN client licenses purchased.
Client licenses are listed under the “License 2” section as “num users = #.”
- **vfxadmin license _pfxclient**
Updates the number of client licenses after purchasing additional licenses:
Follow the on-screen instructions to enter new license and key information.
- **vfxadmin user -l | more**
Lists all VSI-WIN client users.
- **vfxadmin user -l | grep yes | more**
Lists VSI-WIN client users that are assigned a license.
- **vfxadmin user -t lic=no login-name**
Removes license from VSI-WIN client user (user remains registered):
Where login-name is the client user’s login name.
- **vfxadmin user -x login-name**
Removes VSI-WIN client user (user is completely removed):
Where login-name is the client user’s login name.
- **vfxadmin user -L login-name**
Adds license to VSI-WIN user:
Where login-name is the client user’s login name.
- **vfxadmin user -n "Full Name" login-name**
Changes client user's full name.
Where Full Name is the client user’s full name and where login-name is the client user’s login name.

Setting Up the Fax System

After VSI-FAX is installed on your system, you need to set authorization keys and control maintenance records, assign fax devices, and create fax logos. You can also set up documents to append to faxes.

Authorization Keys

The following authorization keys apply to the fax system.

- FAX.ALLOWED
- FAX.APPEND.DOC
- FAX.PRIORITY
- FAX.RESET
- FAX.STATUS

Control Maintenance Records

The following control maintenance records affect the fax system:

- Branch Fax Cover Sheet
- Default Fax Start Time
- Department Fax Code Maintenance

Configuring a Fax Device in Eclipse

For information on assigning a fax device, do one of the following:

- In Release 7, see the "Assign Printer/Fax" section in the Fax System document. You can also display the System > Printers > Assign Printer/Fax screen and then press **F11** to access help topics.
- In Release 8, see the "Assigning Fax Devices" topic in the online help. Press **F11** on the System > System Files > Printer Setup > Assign Printer/Fax screen to display the topic. You can also open the help system, display the index, and enter the keyword **fax** to view the fax-related index entries.

Creating a Logo for a VSI-FAX Document

For information about creating a logo for a fax device, do one of the following:

- In Release 7, see the "Incoming Fax Status Queue" section in the Fax System document. You can also select a document on the System > Printers > Incoming Fax Status Queue screen, use the **Make Logo** hot key, and then press **F11** to access help topics.
- In Release 8, see the "Creating Fax Logos" topic in the online help. Select a document on the System > Printers > Incoming Fax Status Queue screen, use the **Make Logo** hot key, and then press **F11** to display the help topic. You can also open the help system, display the index, and enter the keyword **fax** to view the fax-related index entries.

Creating an Append Document for VSI-FAX

For information about creating append documents for outgoing faxes, do one of the following:

- In Release 7, see the "Incoming Fax Status Queue" section in the Fax System document. You can also select a document on the System > Printers > Incoming Fax Status Queue screen, use the **Make Doc** hot key, and then press **F11** to access help topics.
- In Release 8, see the "Creating Append Documents" topic in the online help. Select a document on the System > Printers > Incoming Fax Status Queue screen, use the **Make Doc** hot key, and then press **F11** to display the help topic. You can also open the help system, display the index, and enter the keyword **fax** to view fax-related index entries.

Chapter 10: Online Glossaries

Eclipse Support notes a number of web pages that contain good online glossaries of computing, internet, and networking terms. We hope you will find these URLs helpful in expanding your understanding of frequently used technological acronyms, protocols, words, and phrases.

Some definitions in the following glossaries might provide cross-references to other terms and definitions, online tutorials, links to other web pages, illustrations, and historical context and editorial commentary.

You can also search the World Wide Web for other network glossaries.

Please note that as the World Wide Web is constantly changing, some of the URLs given below may change, move to a new location, or become out-of-date.

Basic Glossaries

The following web pages usually provide an alphabetical list of terms and their definitions. The most basic web pages require you to scroll through a long list of terms and definitions. Others allow you to click on a letter of the alphabet to jump to that section.

- **<http://www.cablexpress.com/tech/net1.html>**
A glossary of network terms, maintained by Cable Express.
- **<http://www.cis.ohio-state.edu/htbin/rfc/rfc1983.html>**
Ohio State University's no-frills Internet User's Glossary.
- **<http://www.matisse.net/files/glossary.html>**
A glossary of terms maintained by Matisse Enzer.

Advanced Glossaries

The following web pages allow you to jump to sections of the glossary and select a term from an alphabetical list to display the definition.

- **<http://www.alaska.net/~research/index.htm>**
A series of links provided by the Network Design and Research Center of Fairbanks, Alaska. Clicking on a term can take you to almost anywhere for a definition, a link, a related article, a white paper, or a tutorial.
- **<http://www.ascend.com/1672.html>**
Glossary of Terms maintained by Ascend Communications, Inc. as part of their online resource library. They also discuss basic networking topics.

- **<http://www.cisco.com/univercd/cc/td/doc/cisintwk/ita/itaintro.htm>**
Cisco Systems provides an online glossary, which you can also download as a PDF file.
- **http://www.rirr.cnuce.cnr.it/Glossario/butterfly_glossary.html**
The Butterfly glossary of terms is maintained by CNUCE-CNR, Pisa (Italy).
- **<http://www0.delphi.com/navnet/glossary/>**
A glossary of terms developed by Walt Howe and Delphi Internet Services Corporation.

Search Engines

The following web pages contain online encyclopedias and search engines dedicated to computer technology. Generally, just type the term you want defined in the text box and then click a search button to view the definition. Some definitions include links to tutorials and other resources.

- **<http://foldoc.doc.ic.ac.uk/foldoc/index.html>**
The Free Online Dictionary Of Computing (FOLDOC) is a searchable glossary of technology terms, with many cross-references.
- **<http://whatis.com/>**
Whatis.com provides many routes for looking up specific terms, including alphabetical and by category, such as New Technology, Cyberculture, and Using the Internet.
- **<http://www.onelook.com/>**
Entry point into over 500 special interest dictionaries.
- **<http://www.pcwebopedia.com/>**
The PC Webopedia is dedicated to computer technologies and includes sections for Top 15 Terms, Term of the Day, and Recently Added Terms.

Chapter 11: Command Reference

AIX System Commands

The following tables describe common commands that the system administrator can use at the AIX operating system, UniVerse database, and Eclipse application levels.

AIX Command Prompts

The following table describes how to display the common prompts for the AIX operating system, UniVerse database, and Eclipse application.

Symbol	Prompt
\$ or #	AIX command prompt. To display this prompt, do one of the following: <ul style="list-style-type: none"> Log in to AIX as root. From the System menu in Eclipse, select TCL to display the ; prompt. Then enter sh to shell from Eclipse to AIX.
>	UniVerse command prompt. To display this prompt, at the AIX command prompt (#), enter su - uv to go to UniVerse. Then press Esc to display the > prompt.
;	Eclipse TCL prompt. To display this prompt, from the System menu in Eclipse, select TCL .

AIX Process Management Commands

The following table describes common AIX process management commands.

Command	Description and Example
ps -ef grep <i>string</i>	Displays any processes containing the designated string. Example: root:# ps -ef grep jjames root 31442 21234 0 10:29:27 pts/32 0:00 grep jjames jjames 36954 20938 0 09:31:08 pts/28 0:00 uv
ps -ef pg	Displays all processes running on the system. Example: root:# ps -ef pg UID PID PPID C STIME TTY TIME CMD root 1 0 Jan 06 - 3:17 /etc/init root 2358 1 0 Jan 06 - 0:00 /usr/ccs/bin/shlap root 2624 3408 0 Jan 06 - 0:04 /usr/sbin/inetd root 2938 1 0 Jan 06 - 285:25 /usr/sbin/syncd 20 root 3408 1 0 Jan 06 - 0:00 /usr/sbin/srcmstr root 4436 1 0 Jan 06 - 0:00 /usr/lib/errdemon root 4730 4906 0 Jan 06 - 2:54 /u2/vsifax3/lbin/vnetcmd root 4906 1 0 Jan 06 - 0:43 /u2/vsifax3/lbin/vrsched

Command	Description and Example
who -uH	Displays logged on users, their devices, PID's, IP addresses. Example: <pre>Name Line Time Activity PID Hostname root tty0 Jan 13 15:58 old 11614 repstein pts/0 Feb 05 07:11 1:22 26330 (192.0.0.0) jortiz pts/2 Feb 03 16:53 17:31 34790 (192.0.0.17) eknight pts/3 Feb 05 05:57 . 42988 (ga-warehouse) jlindqui pts/4 Feb 05 06:18 0:01 35020 (192.0.0.24) bmadison pts/5 Feb 05 06:25 0:57 40006 (192.0.0.49) qestriby pts/6 Feb 05 06:46 2:33 24826 (192.0.0.21) jliu pts/7 Feb 05 07:04 . 31906 (receiving) bwright pts/8 Feb 05 10:09 0:20 28494 (192.0.0.13)</pre>
who wc -l	Displays the number of logged on AIX users. Example: <pre>root:~# who wc -l 22</pre>
ps -ef grep uv grep -v root wc -l	Displays the numbers of universe licenses being used. Example: <pre>root:~# ps -ef grep uv grep -v root wc -l 21</pre>
uvlctool report_lic	Displays uv licenses in use/available. Example: <pre>root:~# uvlctool report_lic Server Edition mode of licensing is in effect. No. Pid, Package Device name IP address Device sub-key 1 25302 2 26956 3 22388 4 32060 5 42068 19 28068 20 24748 21 23304 21 license seats are in use. 27 license seats are available</pre>
fuser -k /dev/ttyN	Kills the process running on <i>ttyN</i> . Example: <pre>rs6k:root:~# fuser -k /dev/tty2 /dev/tty2: 11614</pre>
kill -4 pid	Kills process <i>pid</i> . Example: <pre>rs6k:root:~# kill -4 12345</pre>
ps -ef grep uv grep -v root cut -c 9-15 xargs -I kill -4 {}	Kills all non-root uv processes.

Command	Description and Example
usa	Displays all UniVerse print queues. Example: Printer: LP1 Q: on P: on Form: <EmptyForm> no entries. Printer: lp3 Q: on P: on Form: <EmptyForm> no entries. Printer: LP4 Q: on P: on Form: <EmptyForm>
usa -p LPn	Displays LPn UniVerse print queue.
lpstat	Displays all AIX print queues.
lpstat -plpn	Displays all AIX print queues.
rmdev -l ttyn	Puts ttyn in a defined state. Example: root:# rmdev -l tty8 tty8 Defined
mkdev -l ttyn	Reconfigures ttyn, makes available. Example: root:# mkdev -l tty8 tty8 Available
stty -a </dev/tty	Displays characteristics of ttyn.
lsdev -Cc dev_class -Cc tape -Cc disk -Cc concentrator -Cc adapter -Cc tty	Displays devices and their current state. Displays tape drives. Displays disk drives. Displays all concentrators. Displays all adapters. Displays all ttys.
lscfg pg	Displays current system configuration. Example: INSTALLED RESOURCE LIST The following resources are installed on the machine. +/- = Added or deleted from Resource List. * = Diagnostic support not available. Model Architecture: chrp Implementation: Multiple Processor, PCI bus + sys0 00-00 System Object + sysplanar0 00-00 System Planar + mem0 00-00 Memory + proc0 00-00 Processor + L2cache0 00-00 L2 Cache * pmc0 00-00 Power Management Controller + proc2 00-02 Processor * pci0 00-fff7f09000 PCI Bus * isa0 10-80 ISA Bus + fda0 01-D1 Standard I/O Diskette Adapter

Command	Description and Example
lspv	Displays all available physical volumes their assigned volume group. Example: root:/# lspv hdisk0 0002906f76154417 rootvg hdisk1 0002906fd8f48aba rootvg hdisk2 0002906fd902a2c7 datavg hdisk3 0002906fd902ad28 datavg hdisk4 0002906fd902ae58 datavg hdisk5 0002906fd902af7d datavg hdisk6 0002906fd902b0a4 datavg hdisk7 0002906fd902b1cf datavg
lsvg	Displays all volume groups. Example: root:/# lsvg rootvg datavg
lsvg <i>vgname</i>	Displays detail of <i>vgname</i> . Example: root:/# lsvg rootvg VOLUME GROUP: rootvg VG IDENTIFIER: 0002906fd88b85bd VG STATE: active PP SIZE: 16 megabyte(s) VG PERMISSION: read/write TOTAL PPs 1084 (17344 megabytes) MAX LVs: 256 FREE PPs: 842 (13472 megabytes) LVs: 9 USED PPs: 242 (3872 megabytes) OPEN LVs: 8 QUORUM: 1 TOTAL PVs: 2 VG DESCRIPTORS: 3 STALE PVs: 0 STALE PPs: 0 ACTIVE PVs: 2 AUTO ON: yes MAX PPs per PV: 1016 MAX PVs: 32
bootinfo -r	Displays amount of real memory. Divide the displayed number by 1024 to express the memory in gigabytes. Example: root:/# bootinfo -r 1048576 (divided by 1024 = 1024 MB or 1GB)
lsps -a	Displays where the page space resides, size, active or not etc. Example: root:/# lsps -a Page Space PhysVol Volume Grp Size %Used Active Auto Type hd6 hdisk0 rootvg 1024MB 4 yes yes lv
lsps -s	Displays percent of page space currently used. Example: root:/# lsps -s Total Paging Space Percent Used 1024MB 4%
tail /u2/powerchute/powerchute.log	Displays the last 10 lines of the PowerChute log file. (100200 04/01/01 10:39:02 Communication established)

System Management Commands

The following table describes common AIX system management commands.

Command	Description and Example
pwd	Displays your current directory path. Example: root:/# pwd root:/u2/eclipse#
who -b	Displays the last reboot date. Example: root:/# who -b system boot Jan 06 20:09
shutdown -Fr	Reboots the system.
shutdown -F	Halts the system.
oslevel	Displays the AIX version. Example: root:/# oslevel 4.3.3.0
ps au pg	Displays all users cpu and memory usage Example: USER PID %CPU %MEM SZ RSS TTY STAT STIME TIME CMND root 516 16.2 0.0 8 7332 -A Feb 01 5516:26 kproc root 774 15.1 0.0 8 7332 -A Feb 01 5144:03 kproc root 1290 15.0 0.0 8 7332 -A Feb 01 5123:37 kproc root 1032 14.8 0.0 8 7332 -A Feb 01 5055:35 kproc mbarr 106126 1.2 0.0 6848 6120 -A 04:00:04 30:38 phantom SOE.PH.O root 5254 1.0 0.0 164 36 -A Feb 01 350:56 /usr/sbin/syncd mbarr 68544 1.0 0.0 4164 3468 -A 21:57:02 38:32 phantom SYSTEM.A pyaracs 108322 0.5 0.0 10888 9344 pts/108 A 09:06:14 6:38 uv
ps au sort -k3rn pg	Sorts the list by top cpu percentage (the 3rd column is cpu%) Example: kohalb 29428 0.3 0.0 7336 6580 pts/32 A 13:59:52 0:09 uv rinjes 84494 0.3 0.0 7476 5964 pts/11 A 06:03:35 3:04 uv bredav 75838 0.2 0.0 8672 7884 pts/78 A 13:04:36 0:21 uv hamshe 53772 0.2 0.0 7312 6528 pts/47 A 12:17:51 0:24 uv kitjud 24226 0.2 0.0 8172 7364 pts/35 A 11:53:18 0:42 uv
ps au sort -k5rn pg	Sorts the list by top memory usage. The 4th column is the memory usage. Example: parjim 72820 0.0 0.0 11056 9896 pts/31 A 06:48:37 0:23 uv kohbon 52618 0.1 0.0 10164 8960 pts/30 A 06:46:44 1:23 uv fultom 48022 0.1 0.0 9820 8156 pts/77 A 08:07:49 0:31 uv dealar 44408 0.0 0.0 9524 8640 pts/44 A 07:11:45 0:19 uv belpet 67996 0.0 0.0 9480 8320 pts/63 A 07:57:34 0:12 uv

Command	Description and Example
df -k	Displays file system statistics (file system names may vary). Example: root:~# df -k Filesystem 1024-blocks Free %Used Iused %Iused Mounted on /dev/hd4 49152 35056 29% 1267 6% / /dev/hd2 311296 51412 84% 10949 15% /usr /dev/hd9var 212992 201976 6% 294 1% /var /dev/hd3 212992 205792 4% 74 1% /tmp /dev/hd1 16384 15808 4% 44 2% /home /dev/lv00 5451776 1806472 67% 32762 3% /u2
echo \$TERM	Displays your console terminal emulation. For 3153, should be wyse50. For 3151, should be ibm3151.
export TERM=wyse50	Sets terminal emulation (brings you back to the # sign).
touch /etc/nologin	Prevents users from logging into the system (brings you back to the # sign).
vmstat 2 7	Issue a vmstat every 2 seconds for a total of 7 times. kthr memory page faults cpu ----- r b avm fre re pi po fr sr cy in sy cs us sy id wa 0 1 205811 375 0 0 0 92 240 0 268 374 247 22 27 32 20 0 2 205811 122 0 0 0 13 36 0 620 19000 745 42 11 3 44 1 2 205811 125 0 0 0 139 265 0 484 19921 841 16 10 26 48 1 2 205858 120 0 1 0 230 373 0 588 21732 1031 11 14 22 53 0 3 205905 123 0 4 0 294 476 0 649 20922 1127 14 15 8 63 3 2 208769 330 0 6 0 1698 3753 0 603 39660 1234 30 30 9 31 2 3 206121 2233 0 4 0 0 0 0 708 30541 1077 55 15 2 28 page heading: the pi and po columns < 5 cpu heading: the us and sy columns combined equally system cpu usage percentage. id is idle cpu percentage. wa is waiting on disk i/o.

Command	Description and Example
iostat 2 7	<p>Issue the iostat every 2 seconds for a total of 7 times.</p> <p>" Disk history since boot not available."</p> <pre>tty: in tout avg-cpu: % user % sys % idle % iowait 123.0 4772.8 32.9 20.4 1.4 45.3</pre> <p>Disks: % tm_act Kbps tps Kb_read Kb_wrtn</p> <pre>hdisk1 13.6 69.5 17.4 0 148 hdisk0 14.6 71.4 17.8 4 148 hdisk2 24.4 113.1 26.3 192 49 hdisk3 17.8 85.0 19.7 108 73 hdisk4 27.7 119.7 26.3 120 135 hdisk5 25.4 105.6 25.8 136 89 hdisk6 23.9 91.1 24.4 172 22 hdisk7 26.8 89.2 23.9 144 46 hdisk8 34.3 157.7 31.9 100 236 hdisk9 29.1 154.9 29.1 100 230 hdisk10 79.8 316.9 70.4 232 443 hdisk11 74.6 288.7 71.8 200 415 hdisk12 31.0 98.6 25.8 164 46 hdisk13 21.1 117.4 21.1 120 130 cd0 0.0 0.0 0.0 0 0</pre> <p>tty: %user + %sys > 80 consistently = cpu bound</p> <p>%iowait: percentage the cpu was waiting on outstanding i/o request</p>

UniVerse Commands

The following table describes common UniVerse database commands.

Command	Description and Example
su - uv	<p>From the root (#) prompt, takes you to uniVerse. Press Esc to get to > prompt.</p>
>.L RELLEVEL	<p>Displays the uniVerse release you are running.</p> <p>Example:</p> <pre>>.L RELLEVEL RELLEVEL 001 X-type - The RELEASE LEVEL of this account 002 9.6.2.5 003 ADMIN 004 005 9.6.2.5</pre>

Command	Description and Example
>CONFIG	Displays licensing information. Example: >CONFIG Configuration data for license number 4nnnnn: User limit = 48 Expiry date= 1/1/2500 -UCI package is installed. User limit = 48. Expiry date = 1/1/2500 -UVADM package is installed. User limit = 48. Expiry date = 1/1/2500

Eclipse TCL

The following table describes a common Eclipse application command.

Command	Description
;kill.ph	Prompts to kill all running phantoms.

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