Sun
NETSCAPE

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Release Notes

The i-Planet™ 2.0.1 product is an interim release of software to update i-Planet™ 2.0. It significantly increases performance from Release 2.0 by changing the web server.

These sections are included:

- "Getting Support for i-Planet Software" on page 1
- "Documentation with This Release" on page 2
- "Product Requirements" on page 4
- "Upgrading from Previous Versions" on page 5
- "Known Problems in This Release" on page 38
- "Known Documentation Problems in This Release" on page 44

Getting Support for i-Planet Software

If you purchased this product from the Sun-Netscape Alliance (or an authorized Alliance partner):

- and purchased technical support with the product, you should receive a Maintenance Welcome Kit package. If you bought support and did not receive this Kit, please contact Alliance Customer Support at +1 888 786 8111
- and are interested in purchasing technical support, contact your local Alliance sales office or call +1 888 786 8111.

If you purchased this product from Sun Microsystems and require technical support, contact your Sun sales representative or Sun Authorized Reseller. See http://sun.com/service/contacting/index.html for information on contacting Sun and http://internet.central.sun.com/service/support/index.html for information on Sun's support Services.

Documentation with This Release

Documentation with this release, including these *Release Notes*, assumes that you install in the default installation directory, `/opt`. Substitute your installation directory where appropriate.

The i-Planet 2.0.1 documentation includes:

- *Quick Install* card (in printed format)
- *Installation Guide* (located on the CD in `/docs/usenglish/manuals/ps/install.ps`; installed in on the platform server in `/opt/SUNWstnr/platform/public_html/docs/usenglish/manuals/ps/install.ps`; also in printed format)
- *Administration Guide* (installed on the platform server in `/opt/SUNWstnr/platform/public_html/docs/usenglish/manuals/ps/admin.ps`; also in printed format)
- *Release Notes* (this document, in printed format)
- Online help for the remote user and for the system administrator

To access the HTML files, on the i-Planet server, point your browser to the URL file:///opt/SUNWstnr/platform/public_html/docs/usenglish/manuals/html/install/installTOC.fm.html for the *Installation Guide* Table of Contents or to file:///opt/SUNWstnr/platform/public_html/docs/usenglish/manuals/html/admin/remotepassageTOC.fm.html for the *Administration Guide* Table of Contents.

New or Modified Features in this Release

Features new or modified with Release 2.0.1 are noted below:

- **Web Server:** This release uses Netscape Enterprise Server (NES) 4.0 instead of Java Web Server (JWS) 1.1.3 as was used in Release 2.0 There are several changes because of this:
  - **Location of static components:** Files that resided in *BASEDIR*`/SUNWjeev` in 2.0 have moved to *BASEDIR*`/SUNWstnr/platform` in 2.0.1.

- **Location of Web Server/Config files:** The web server itself is now installed in *BASEDIR*/`netscape/server4`, instead of *BASEDIR*/`SUNWjeev`. Web server configuration files are located in BASEDIR/netscape/server4/`https-AUTH_HOST/config`. Web server log files can be found at *BASEDIR*/`netscape/server4/https-AUTH_HOST/logs`.

- **LDAP Authentication:** LDAP Authentication has been added to the list of supported methods in 2.0.1.
- **Performance:** Performance numbers for 2.0.1 have not yet been determined, but it is estimated that there can be two to four times the number of users that were handled in 2.0. NES scales better than JWS. A performance whitepaper is planned.
- **Java:** Both the i-Planet gateway and the i-Planet server now use Java 1.2.1_03.
- **Supported Platforms:** Because neither NES 4.0 nor Java2 support Solaris 2.5.1, i-Planet no longer supports this release. Supported platforms include Solaris 2.6 and 2.7.
- **Certificate Management and Generation for the gateway:** Management is the same on the i-Planet gateway as it was in i-Planet 2.0. It uses the `certadmin` utility.
- **Certificate Management and Generation for the platform server:** Management for the i-Planet platform server when using SSL between the gateway and the platform server, is accomplished through the NES administration console, which replaces the `certadmin` utility on the platform server. In addition, although self-signed certificates continue to be supported, i-Planet no longer generates self-signed certificates for SSL use between the gateway and the platform server.
- **SSL Gateway <—> Server:** i-Planet's startup script only configures itself for SSL between the gateway and the server, by default using port 8888. The administrator must configure the NES web server for SSL, using the Security tab and then the Preferences tab to set NES admin `encryption on/off`. You must also configure SSL for use between the gateway and the platform server with the commands: `iplanet_serv ssl on` and `iplanet_gw ssl on`.
- **Upgrade from 2.0:** No automatic upgrade is supported. You must manually save the configuration. Sun only provides documentation for the process for backing up and restoring user information. You must customize the i-Planet or the NES manually.

Product Requirements

This section describes product requirements, including system requirements, patches, and licensing.

System Requirements

The table blow lists hardware and software requirements for i-Planet 2.0.1:

TABLE 1 System Requirements

Component	Description
Operating environment	i-Planet 2.0.1 software runs in the Solaris™ 2.6 and 2.7 operating environments. The basic firewall application provided and Security Dynamics' ACE software do not run under Solaris 2.7.
System	i-Planet 2.0 software ideally uses two machines: one server to function as a gateway between the Internet and your internal network ("the i-Planet gateway") and one server to function as a platform and applications server ("the i-Planet server"). • Machine type: a dual CPU Ultra 60 with 300 MHz is recommended for both the i-Planet gateway and for the i-Planet server. • Memory: the i-Planet gateway and the i-Planet server should each have a minimum of 128 Mbytes of memory. • Disk space: the i-Planet gateway should have a minimum of 40 Mbytes of free disk space; the i-Planet server should have a minimum of 50 Mbytes of free disk space.
Browser	A browser (Netscape Navigator™ 4.04 or higher, Internet Explorer 4.0 or higher) and an Internet connection are required for a remote client to connect to the i-Planet server, and for the system administrator to use the Administration Console.

Patches

This release includes upgrades that were covered in two earlier i-Planet bug fix patch releases: Patch Nos. 107859-01 and 107859-02.

Patches required from Sun Microsystems before using the Java™ Development Kit (JDK™) in the Solaris 2.6 and 2.7 operating environment include: Patch No. 103566-08 or later (X11/OpenWindows™ patch) and any kernel patches for Solaris 2.6 and later that are required. Refer to the URL `http://www.javasoft.com/products/jdk/1.2/install-solaris-patches.html` or to `http://sunsolve.sun.com` for patch information.

A patch from Netscape Communications Corporation is required if you are using the Netscape™ browser versions 4.04 or 4.05: Patch JDK 1.1AWT. This patch can be downloaded from the Netscape website.

Licensing

Licensing for the i-Planet product is provided with six (including a root user) initial product licenses and subsequently through FLEXlm license manager software.

For information about licensing for third-party software products used with i-Planet software, contact the appropriate third-party vendor. The initial product licenses provided with i-Planet software also apply to GO-Joe software from GraphOn Corporation.

Upgrading from Previous Versions

No automatic upgrade is supported. You must manually save the configuration. Sun only provides documentation for the process for backing up and restoring user information.

Saving and Restoring Configurations

The procedure for saving and restoring user configurations is outlined below:

1. As `root`, copy the i-Planet 2.0 `profile` and `preferences` directories and subdirectories in the directory `SUNWjeev` to another directory:

```
# cp -r BASEDIR/SUNWjeev/profiles SAFEDIR/profiles-2.0
# cp -r BASEDIR/SUNWjeev/preferences SAFEDIR/preferences-2.0
```

2. Remove i-Planet 2.0 by inserting the i-Planet 2.0 CD-ROM in the CD-ROM drive and run the `iplanet_remove` command.
3. Install i-Planet 2.0.1.
4. (Optional) Copy the i-Planet 2.0.1 `profile` and `preferences` directories and subdirectories that were created in the directory `SUNWstnr` when you installed i-Planet 2.0.1 for safe keeping in case you required them later:

```
# cp -r BASEDIR/SUNWstnr/platform/profiles SAFEDIR/
profiles-2.0.1
# cp -r BASEDIR/SUNWstnr/platform/preferences SAFEDIR/
preferences-2.0.1
```

5. Copy the i-Planet 2.0 `profile` and `preferences` directories and subdirectories saved in Step 1 to the directory `SUNWstnr`.

```
# cp -r SAFEDIR/profiles-2.0 BASEDIR/SUNWstnr/platform
# cp -r SAFEDIR/preferences-2.0 BASEDIR/SUNWstnr/platform
```

Removing i-Planet 2.0

If you have i-Planet 2.0 already installed, when you start the installation script for i-Planet 2.0.1, the script detects whether any of the packages are already installed. If there are, the script suggest that you remove them before starting the new installation. The script detects both the gateway and the platform server packages.

Remove i-Planet 2.0 using the `remove` script for that version.

If you have i-Planet 2.0, verify that `/etc/inetd.conf` is still a symbolic link to `/etc/inet/inetd.conf` and that `/etc/services` is still a symbolic link to `/etc/inet/services`. If these symbolic links have been removed, create the links as root:

```
# ln -s /etc/inet/inetd.conf /etc/inetd.conf
# ln -s /etc/inet/services /etc/services
```

Configuring the i-Planet for SSL Between the Gateway and the Server

Once the i-Planet software has been upgraded, you must configure your i-Planet platform server to accept SSL, but only if you want SSL between the gateway and the platform server. There are two major steps to this process:

1. Configuring i-Planet
2. Configuring the Netscape (NES) web server.

There are three major differences between Release 2.0 and 2.0.1 in this area:

1. The i-Planet configuration scripts will not configure the platform web server, NES, for SSL.
2. Certificate administration for the platform server is now done through the NES administration console.
3. Although NES and i-Planet both support self-signed certificates, i-Planet does not provide a mechanism for generating them.

Configuring i-Planet 2.0.1

How this process works depends on whether you are doing it at installation or after the fact.

Configuring at Installation

The steps listed in the Release 2.0 documentation are substantially the same as are used with Release 2.0.1. Where the steps differ for 2.0.1, they are mentioned below:

1. Choose the nondefault installation.
2. The system asks if you want to use SSL between the gateway and the server. Answer Yes.
3. Towards the end of the installation, when asked, enter an SSL passphrase.

Once i-Planet is installed, the install script configures the i-Planet platform server for SSL. The SSL passphrase you entered is stored on the system and is used to start the web server once it has been configured for SSL.

Before exiting, the install script starts the administration server portion of NES. This must be running to move into the next step of configuring the web server.

Configuring after a Non-SSL Installation

1. Type:

   `/etc/init.d/iplanet_serv ssl on [`*`PORT`*`]`

   where PORT is optional and specifies the port on which you want to run SSL (the default is 443). Note that this must match the port number for which you have configured the gateway.

2. The default login in **`admin`** and the default password is **`admin`**.

3. Enter an SSL passphrase.

The web server's administration server must be running to move into the next step of configuring the web server. If you must restart the administration server, type:

`/etc/init.d/iplanet_serv admstart`

Configuring the Web Server

1. Go to the NES administration console by entering the URL **`http://`***i-Planet_server*`:8888`.

2. When the popup window appears, enter the appropriate ID and password.

3. In the window that then appears, click the Manage button in the frame on the right.

   At this point, the system may warn you that the configuration has been manually edited and the resulting changes have not been loaded. If so, dismiss the warning window and click the Apply button in the upper right corner of the screen. If you are asked to undo the changes, choose to undo them and click Apply again. Then choose Load configuration files. A popup window appears indicating that operation was successful. Click OK to dismiss this window.

NOTE If presented with a choice, always choose to load the configuration files. If you somehow save the current setup when none has been loaded (because the system does not load manual edits), you will overwrite the web server configuration, thus requiring that you reinstall the i-Planet platform software. Read all the dialog boxes and be sure to choose to load the configuration files.

---

4. Select the Security tab. The "Create a Trust Database" screen appears.

5. Enter a database password (twice) and click OK to create the database.

   A popup window appears indicating that operation was successful. Click OK to dismiss this window.

6. On the navigation bar on the left side of the screen, select "Request a certificate."

7. Enter your email address in the "CA email address" field.

8. In the Key Pair File Password field, enter the SSL passphrase you entered when you were configuring i-Planet.

9. Enter your name and telephone number and other data requested. In the Common Name field, enter the fully qualified name of the i-Planet server (such as suntoy.eng.sun.com).

10. Click the OK button to generate a certificate signing request (CSR).

    At this point, the right frame contains your CSR. The CSR will also be mailed to the address you entered. You will need this CSR to request a certificate from the Certificate Authority (CA) you choose.

    NES has server CAs for most of the major vendors. You can view the installed server CAs, as well as any server certificates you have installed, by clicking on the Manage Certificates option in the navigation frame.

11. Once you have received the certificate from the CA, click the Install Certificate button in the navigation frame

    The certificate begins with a line that reads:

    -----BEGIN CERTIFICATE----

    continues with the certificate itself, and ends with a line that reads:

    -----END CERTIFICATE-----

    Make sure you include both of these lines with the certificate in the file.

12. In the Key Pair File Password field, enter your SSL passphrase.

13. If you have saved your certificate in a file, enter the file name in the Message in This File: field, or select the Message Text button and enter the text in the text area.

14. Click the OK button to install the certificate.

15. When asked to confirm the addition of this certificate, click on the Add Certificate option.

    Optionally, click Manage Certificates and verify that your certificate has been installed.

16. Dismiss the resulting popup window indicating the success of this operation.

17. Click the OK button to dismiss the warning window.

    For now, ignore the warning about stopping and starting the server.

18. Click the Preferences tab.

19. Click the Encryption On/Off option in the navigation frame on the left.

20. Enter a port number in the Port Number field.

NOTE	THIS WILL BE 443 UNLESS YOU HAVE SPECIFICALLY PICKED ANOTHER PORT NUMBER DURING THE INSTALLATION OF THE SERVER.

21. Click the On button.

22. If a popup window asking for the server password appears, enter anything for the password.

23. Click the OK button to enable encryption on the web server.

24. Ignore the warning about stopping and restarting the server

    The changes to the configuration are saved, but the server will not be restarted. The server need not be restarted here.

25. When you see a message confirming the changes to the configuration files, choose the Save and Apply option.

26. At this point you see a message asking you to restart the web server. Do NOT restart from the administration console. Instead, go to a terminal window and type:

    ```
    /etc/init.d/iplanet_serv start [debug]
    ```

    Include the optional `debug` argument to confirm that the platform server is not running. This allows you to see two messages from NES, one confirming the startup of the administration console and the other confirming startup of the web server.

27. Verify that the port is correct and that it is running on a URL that starts `https://....` You will see an error message if the port number or URL is incorrect.

Remember to configure the gateway as directed in the *i-Planet 2,0 Installation Guide* or in the *i-Planet 2,0 Administration Guide*.

LDAP Authentication

Configuring LDAP

The i-Planet 2.0.1 release adds the ability to authenticate users by querying an LDAP database. In order to perform LDAP authentication the following properties need to be set in the `/etc/opt/SUNWstnr/platform.conf` file:

`ldap.server=`
: (required) value can be of the form `server` or `server:port` if the port is not the default port of 389.

`ldap.baseDN=`
: (required) base Distinguished Name to start the search

`ldap.bindDN=`
: (optional) the admin Distinguished Name. If not set use anonymous bind.

`ldap.bindPassword=`
: (optional) admin's password. If not set use anonymous bind.

`ldap.searchScope=`
: (optional) one of:

  `OBJECT`
  : search only base object itself

  `ONE_LEVEL`
  : search only the immediate children of the base object

  `SUBTREE`
  : (default) search the entire subtree rooted at the base object

`ldap.searchFilter=`
: (optional) any attribute name, default is uid

```
ldap.ssl=
```
(optional) on if SSL on, no value if SSL off

For example, given an LDAP server named stooges running on port 3456 with the schema:

```
o=sun.com
  ou=Engineering
     uid=admin
  cn=i-Planet
     cn=Development
        uid=larry
     cn=QA
        uid=moe
     cn=Documentation
        uid=curly
```

Using anonymous bind and one level search starting at `cn=Development`, `ou=Engineering`, and `o=sun.com`, the properties will be set as:

```
ldap.server= stooges:3456
ldap.baseDN= cn=Development,ou=Engineering,o=sun.com
ldap.bindDN=
ldap.bindPassword=
ldap.searchScope=ONE_LEVEL
ldap.searchFilter=
ldap.ssl=
```

And using admin bind and subtree search from `o=sun.com`, the properties will be set as:

```
ldap.server= stooges:3456
ldap.baseDN= o=sun.com
ldap.bindDN=uid=admin,ou=Engineering,o=sun.com
ldap.bindPassword=xyz123
ldap.searchScope=SUBTREE
ldap.searchFilter=uid
ldap.ssl=
```

Performance

Scaling

The size of system that an enterprise requires depends on both the total number of registered users and the number of active (or simultaneous) users.

Active Users

An active user is a user who has logged into the system or is in the process of logging in or out. As a rule of thumb, the number of active users can be estimated as *10 percen*t of the registered users; this number may vary with each enterprise. For example, if a company has 10000 employees that the system needs to serve, the system would need to be large enough to support 1000 active users.

Registered Users

A registered user is a user who has created preferences on the system and can authenticate using the system.

Disk Space

Disk space usage within i-Planet 2.0 depends on the number of registered users (as opposed to active users). A reasonable estimate of the disk space needed per user is about 2 KB per user (the preferences and authentication data are all that are stored). Preferences are stored in one file per user. For example, for 10,000 registered users, the i-Planet server would require 20 MB of disk space (and 10000 inodes) for preferences storage in addition to the disk space needed for the software itself (50 MB for server software and 40 MB for gateway software).

Memory

For both the gateway and the server, 256 MB of system memory per processor is suggested.

Performance Tuning

Table 2 describes possible changes to the i-Planet Gateway to help it deal with high-load situations. These are only suggestions, with the understanding that performance tuning always contains an element of experimentation.

Table 2 Possible Changes to the i-Planet Gateway

Parameter	Set Using	Default Value	Tuned Value	Comments
`EPROX_MX`*	`iplanet_gw_start`	128	sysmem * 0.8/2	Maximum heap size allocated to the JVM running Encrypting Proxy. System memory should be split equally between the RProxy and the EProxy, allowing adequate space for the operating system to run.
`EPROX_MS`*	`iplanet_gw_start`	32	EPROX_MX/4	Minimum heap size allocated to the JVM running the Encrypting Proxy

Table 2 Possible Changes to the i-Planet Gateway *(Continued)*

Parameter	Set Using	Default Value	Tuned Value	Comments
RPROX_MX*	iplanet_gw_start	128	sysmem * 0.8/2	Maximum heap size allocated the JVM running the Reverse Proxy
RPROX_MS*	iplanet_gw_start	32	RPPOX_MX/4	Minimum heap size allocate the JVM running the Reverse Proxy
rlim_fd_max*	/etc/system	1024	8192	Hard limit of open file descrip-tors
rlim_fd_cur*	/etc/system	64	8192	Soft limit of open file descrip-tors
sq_max_size*	/etc/system	2	0	Controls streams driver queue size. Setting to 0 makes it infinity so the perfor-mance runs will not be hit by lack of buffer space. (Set on clients, too.)

Table 2 Possible Changes to the i-Planet Gateway *(Continued)*

Parameter	Set Using	Default Value	Tuned Value	Comments
`MaximumHandlers`*	`ReverseProxy.config`	1000	2000	The maximum number of "active" threads handling client connections. If no more active connnections are being handled, the number of waiting threads will be reduced to `Minimum-Handlers`.
`AllocationUnits`*	`ReverseProxy.config`	20	100	If more than `Minimum-Handlers` threads are needed, allocate more waiting threads an `AllocationUnit` at that time

Table 2 Possible Changes to the i-Planet Gateway *(Continued)*

Parameter	Set Using	Default Value	Tuned Value	Comments
`MaxSockets`*	`ReverseProxy.config`	2000	3000	Maximum number of intranet sockets that can exist at one time. Probably should not be less than `Maximum-Handlers` and most likely double that.
`tcp_close_wait_interval`*	`ndd /dev/tcp`	240000	60000	(Set on clients, too.)
`tcp_time_wait_interval`*	`ndd /dev/tcp`	240000	60000	(Set on clients, too.)
`tcp_conn_req_max_q`*	`ndd /dev/tcp`	128	1024	
`tcp_conn_req_max_q0`*	`ndd /dev/tcp`	1024	4096	
`tcp_ip-abort_interval`*	`ndd /dev/tcp`	480000	60000	
`tcp_keepalive_interval`*	`ndd /dev/tcp`	7200000	900000	For high traffic web sites lower this value.
`tcp_rexmit_interval_initial`*	`ndd /dev/tcp`	3000	3000	If retransmission is >30–40%, you should increase this value.
`tcp_rexmit_interval_max`*	`ndd /dev/tcp`	240000	10000	
`tcp_rexmit_interval_min`*	`ndd /dev/tcp`	200	3000	

Table 2 Possible Changes to the i-Planet Gateway *(Continued)*

Parameter	Set Using	Default Value	Tuned Value	Comments
`tcp_smallest_anon_port`*	`ndd /dev/tcp`	327268	1024	(Set on clients, too.)
`tcp_slow_start_initial`*	`ndd /dev/tcp`	1	2	Slightly faster transmis-sion of smaller amounts of data
`tcp_xmit_hiwat`	`ndd /dev/tcp`	8192	32768	To increase the trasmit buffer*
`tcp_recv_hiwat`	`ndd /dev/tcp`	8192	32768	To increase the receive buffer*

* Tuned values used during testing for i-Planet 2.0.1.

For the i-Planet server, performance depends on the underlying web server, which in this release is Netscape Enterprise Server 4.0. The information inTable 3 was taken directly from the document NES 4.0 Tuning and Performance Benchmarking, from Netscape Corporation.

Table 3 Possible Changes to the i-Planet Server

Parameter	Scope	Default Value	Tuned Value	Comments
`rlim_fd_max`	`/etc/system`	8192	8192	Process open file descrip-tors limit should account for the expected load (for the associated sockets, files, and pipes, if any).
`rlim_fd_cur`*	`/etc/system`	64	8192	

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
sq_max_size*	/etc/system	2	0	Controls streams driver queue size; setting to) makes it infinity so the perfor-mance runs will not be hit by lack of buffer space. (Set on clients, too.)
tcp_close_wait_interval*	ndd /dev/tcp	240000	60000	(Set on clients, too.)
tcp_time_wait_interval*	ndd /dev/tcp	240000	60000	(Set on clients, too.)
tcp_conn_req_max_q*	ndd /dev/tcp	128	1024	
tcp_conn_req_max_q0*	ndd /dev/tcp	1024	4096	
tcp_ip_abort_interval*	ndd /dev/tcp	480000	60000	
tcp_keepalive_interval*	ndd /dev/tcp	7200000	900000	For high value traffic web sites lower this value.
tcp_rexmit_interval_initial*	ndd /dev/tcp	3000	3000	If retrans-mission is >30–40%, you should increase this value.
tcp_rexmit_interval_max*	ndd /dev/tcp	240000	10000	
tcp_rexmit_interval_min*	ndd /dev/tcp	240000	10000	
tcp_smallest_anon_port*	ndd /dev/tcp	32768	1024	(Set on clients, too.)
tcp_slow_start_initial*	ndd /dev/tcp	1	2	Slightly faster transmis-sion of small amounts of data

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`tcp_xmit_hiwat`*	`ndd /dev/tcp`	8192	32768	To increase the transmit buffer
`tcp_recv_hiwat`*	`ndd /dev/tcp`	8192	32768	To increase the receive buffer
`RqThrottle`* —The maximum number of `BusyThreads` allowed simultaneously	`magnus.conf`	512	1024	`Busy-Threads`—The number of "threads" actively processing requests that arrived on this listen socket. `Waiting-Threads`—The number of "threads" waiting for a new TCP connection for this listen socket. `Active-Threads`—The total number of "threads" (HTTP sessions) that are in any state for this listen socket. This equals `Waiting-Threads + Busy-Threads`.

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`RqThrottleMinPerSocket`—The minimum `WaitingThreads` per listen socket	`magnus.conf`	48		If this number multiplied by the total number of listen sockets is greater than `RqThrottle`, this number is set to `RqThrottle`/ (number-of - listen-sockets) and is at least 1.

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`RqThrottleMaxPerSocket`—The maximum `ActiveThreads` per listen socket.	`magnus.conf`	`RqThrottle1`		The server is throttled if `RqThrottle` is reached or `RqThrottleMaxPerSocket` Is reached. As long as the server is not throttled, the server will try to ensure there is at least `RqThrottleMinPerSocket` waiting on connections unless the total number of session threads created has exceeded it s limit: (max(`RqThrottleMaxPerSocket = RqThrottle + MaxKeepAliverConnections`) * number-of listen-sockets
`RqThrottleMaxAcceptThreads`	`magnus.conf`	1	8 (2/CPU)	When 0, `SingleAccept` is turned on.

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`SingleAccept`	`magnus.conf`	On	Off	When `Single-Accept == On`, then MaxAcceptThreadsPerSocket is set to 1, otherwise there is no limit. Turn it `Off` and set some meaningful value to MaxAcceptThreadsPerSocket so that there is no extra contention maintaining one thread in accept.
`BlockingListenSocket`	`magnus.conf`	Off	On	Makes listen socket blocking, essentially alleviating nonblocking polled IO.
`MaxKeepAliveConnects`—The maximum Threads waiting on `KeepAlive` connections simultaneously.	`magnus.conf`	200	1024	Listen queue size affects server availability

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`KeepAliveTimeOut`	`magnus.conf`	30	100000	Default value of 30 secs may not be adequate for most benchmarks; set to an arbitrarily high value so that you will not have error caused by the server closing.
`ListenQ`	`magnus.conf`	128	1024	Listen queue size affects server availability.
`MaxProcs`—Maximum number of ns-httpd daemons per configurations	`magnus.conf`	1	1	Value must remain a 1 for i-Planet
Concurrency	`magnus.conf`	1	to number of CPUs	Sets the number of global/native threads used by underlying NSPR to create local threads.
`KernelThreads`	`magnus.conf`	`False`	`False`	Creates expensive native threads
`MaxNumberOfCachedFile`	`obj.conf`	256	15000* See below.	Initial accelerated cache size; cannot be more than 32 K nor less than 32

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`MaxNumberOfOpenCachedFiles`	`obj.conf`	512	15000* See below.	Maximum number of entries in accelerated cache; cannot be more than 32 K nor less than 32
`MaxTotalCachedFiles`	`obj.conf`	N/A	N/A	Deprecated in NES 4.0; see Static File Cache tuning below.
`MaxCachedFileSize`	obj.conf	N/A	N/A	Deprecated in NES 4.0; see Static File Cache tuning below.
`PollInterval`	`obj.conf`	N/A	N/A	Deprecated in NES 4.0; see Static File Cache tuning below.
NSAPI Cache	`obj.conf`	maxEntries = 4096 numBuckets = 1024	As per dynamic content requirements	Takes 120 bytes per entry. If the site is heavy shtml, or servlets, or any other NSAPI plug-ins, tune this.
`NativeThread`	obj.conf	`Yes`	`No`	A request handling thread is allocated a native thread; setting this to `No` will conserve thread resources.

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`FileCacheEnable`	`obj.conf`	`true`	`true`	Controls whether the file cache is enabled or not
`MaxAge`	`nsfc.conf`	30	7200 sec (2 hrs)	The maximum age of a valid cache entry, in seconds, that is once a file cached, how long the cached information will continue to be used. An entry older than `MaxAge` is replaced bya new entry for the same file, if the same file referenced through the cache. See also `FlushInterval`.
`FlushInterval`	`nsfc.conf`	N/A	N/A	The interval, in seconds, at which a reaper thread looks for cache entries that are older than `MaxAge` and deletes them.

Table 3 Possible Changes to the i-Planet Server *(Continued)*

Parameter	Scope	Default Value	Tuned Value	Comments
`SmallFileSizeLimit`	`nsfc.conf`	2048	8192	Size in bytes of the largest file that is considered "small." The contents of small files are cached by allocating heap space and reading the file into it.
`MediumFileSpace`	`nsfc.conf`	128 KB	1000000 KB 104857600	Specifies how much heap space will be used for the cache, including heap space used to cache small files.
`jvm.maxHeapSize`*	`jvm12.conf`	131072000 (128 MB)	sysmem * 0.8	Maximum JVM Heap size for web server; servlet performances Larger values for handling greater servlet traffic.
`jvm.minHeapSize`*	`jvm12c.conf`	32768000 (32 MB)	`jvm.Max-HeapSize/4`	Minimum JVM Heap size for web server; servlet performance.

* Tuned values used during testing for i-Planet 2.0.1.

Problems Fixed in This Release

This section contains information on previously known problems that are fixed in this release or fixed in patches to i-Planet 2.0 and incorporated into this release.

Previously Known Problems Fixed in This Release

- **In a nondefault (customized) installation, if you select the same port numbers** for the i-Planet gateway and i-Planet server, turn on SSL between the gateway and the server, and then turn off SSL, the software will not work correctly. The workaround is to change one of the port numbers in the `platform.conf` file on the i-Planet server.
- **If you install using the default port numbers and have SSL turned on** between the i-Planet gateway and the i-Planet server, if you want to use remote administration, you must add the following lines to the `/etc/opt/SUNWstnr/gateway/secureURL.conf` file on the i-Planet gateway:

`https://`*server_name*`:443`
`https://`*server_ip_address*`:443`

- **If you install in a directory other than** `/opt` **(the default installation directory),** you must copy the license configuration file to your installation directory for licensing to work. As root, use the flexible configuration file for iPlanet 2.0.1 by typing the command:

```
# cp /opt/SUNWste/license_tools \
/LIC_CONFIG_FILE.RemotePassage 2.0/your_install_dir/SUNWste\
/license_tools
```

- **If you are using a web proxy host** with SSL between the i-Planet gateway and the i-Planet server, https traffic does not go through the web proxy host.

Fixed in Patch 107859-0 and Incorporated in This Release

4205859 Pluggable API needs to support screen ordering on a per-login-session basis.

4211679 Can't log back in through SecurID after a few bad passcodes.

Fix: For SecurID support: A new SecurID client proxy daemon `doSecurID` runs on the i-Planet server when the server starts. It listens to the requests from the authentication module, and connects to the SecurID server to do authentication. To use the SecurID authentication, you must install ACE/Agent on the i-Planet server, and you must copy the `sdconf.rec` file from your ACE/Server to the `/usr/ace/data` directory of the i-Planet server (check your Security Dynamics Installation Guide for the ACE/Agent).

You must modify the following startup parameters for the doSecurID daemon in the `/etc/opt/SUNWstnr/platform.conf` file:

Parameter	Description
`securid.thread=`	Maximum number of simultaneous authentication sessions permitted; default is 5.
`securid.timeout=`	Session time-out in minutes; default is 5.How many minutes the user has to complete the authentication session. Note that if the next token or new PIN modes are expected, the minimum recommended time-out is 2 minutes.
`securidHelper.port=`	Local port number that `doSecurID` listens on for authentication requests from the platform server; default is 7943.

4221817 Netlet ignores No Proxy for field in Netscape proxy configuration dialog.

4222545 Missing NetFile entry in Viewing Logging Summary page of online help.

4226217 Cannot use radius authentication. For RADIUS support, a new RADIUS client proxy daemon `doRadius` runs on the i-Planet server when the server starts. It listens to requests from the authentication module, and connects to the RADIUS server (specified in `/etc/opt/SUNWstnr/platform.conf`) to do authentication.

This RADIUS client implementation also supports RADIUS-to-SafeWord or RADIUS-to-ACE/Server (Security Dynamics' SecurID) using their respective tokens.

You must modify the following startup parameters for the `doRadius` daemon in the `/etc/opt/SUNWstnr/platform.conf` file:

Parameter	Description
`radius.server_port=`	Port number the RADIUS server listens on; default is 1645.
`radius.timeout=`	Session time-out in minutes; default is 5. How many minutes the user has to complete the authentication session.
`radius.thread=`	Maximum number of simultaneous authentication sessions permitted; default is 5.
`radiusHelper.port=`	Local port number that doRadius listens on for authentication requests from the platform server; default is 7944.
`radius.server1=`	The first RADIUS server (hostname or IP address) to be contacted by doRadius.
`radius.server2=`	The second RADIUS server (hostname or IP address) to be contacted by doRadius, should contacting the first server fail. Need not be filled in if there is only one RADIUS server.
`radius.secret=`	The shared secret assigned to this local system.

4226834 Create domestic version of i-Planet **with 128-bit encryption (netlet).**

4227288 Delete/Next and Delete buttons sometimes not enabled when they should be in NetMail.

4227340 Typo in online help for Setting Authentication Preferences.

4227342 Online help missing a section for NT Domain Name in NetFile Overview.

4227490 Nondefault gateway and server port switched.

4228112 Multiple spaces in online help in NetFile Overview.

4228133 Missing End Session entry under Managing Files in NetFile Overview of online help.

4228137 Webproxy and SSL can't coexist on i-Planet**, resulting in some CA issues.**

Fix: If the gateway sees a certificate that is not signed by a known Certificate Authority (CA), the gateway checks the `/etc/opt/SUNWstnr/gateway/TrustDecider.conf` file on the gateway for trusted hosts. If needed, you can specify domain names, subdomain names, or fully qualified host names that the gateway trusts (unlimited number). If any name in the file matches the server that is sending the certificate, the request will be fulfilled.

4228410 No error warning is displayed when folder is not created in NetFile.

4228436 Cache attachment size value 0 does not work as documented in online help.

4228448 Typo in online help NetMail Disconnected Mode page.

4229562 NetMail alias list can get corrupted with Internet Explorer.

4229854 Each use of `fw.configure` causes some of the rules to be duplicated.

4231153 After Max Session time-out, clicking on a message in NetMail causes error.

4231235 Tip for Making Aliases for Easier Addressing in NetMail online help is incorrect.

4231272 Default value needs to be removed from online help.

4232309 Can't turn logging off.

4232474 Lite tool to install license does not work for nondefault installation.

4232576 Script error occurs when logging out from feedback page.

4232679 NetFile Lite through Internet Explorer displays unclear error when Enter clicked and no password provided on connection attempt.

4232835 Typo in Admin online help.

4232839 Typo in online help.

4233434 Cannot upload file to NFS system in NetFile.

4233706 Dynamic Web pages generate sessions with ":" and cause the NetSurf rewriter to fail.

4234465 i-Planet rproxy needs to handle multiple domains.

Fix: Multiple domains and multiple web proxies are now supported on the gateway. This patch creates a new file, `/opt/SUNWsnrp/config/DomainWebProxyConfig.config`. This file contains the default domain (of the gateway), default subdomain(s), and web proxy information from the i-Planet 2.0 installation. You can edit this config file to (1) specify a different web proxy for each subdomain and (2) specify additional domain names and subdomain names.

An example of this file is:

```
DefaultDomain=.sun.com webproxyname:port number
DefaultSubdomains=eng webproxyname:port number|corp
webproxyname:port number|central
Domain1=.sun2.com
Subdomains1=eng2 webproxyname:port number|corp2 webproxyname:port
number
Domain2=.company.com
Subdomains2=sales webproxyname:port number|marketing
webproxyname:port number
```

In this example:

- The default domain and default subdomain information has been taken from the 2.0.1 installation.
- The default domain is sun.com. The subdomains eng and corp are associated with a specific web proxy; the subdomain central is not associated with a specific web proxy, and will use the web proxy associated with its domain.
- A bar (|) separates the subdomain entries.
- New domain and subdomain information has been added by the user.
- New domain entries must be in the format of `Domain1=`, `Domain2=`, `Domain3=`, and so on.
- Domains may have subdomain information associated with them, in the format of Subdomains1=,
- `Subdomains2=`, `Subdomains3=`, and so on.

If you add additional domains, you must set the `CookieManagement` parameter in the ReverseProxy.config file to true if you want to use NetSurf to access servers that require cookies on the added domain.

4234569 Remote admin doesn't work with SSL between Gateway and Server when using default ports.

4234592 NetFile returns to root directory if nonexistent directory is attached in FTP systems.

4236117 Grid scrolling broken in Internet Explorer 5.

SafeWord support.

Fix: For SafeWord support: A new SafeWord client proxy daemon `doSafeWord` runs on the i-Planet server when the server starts. It listens to the requests from the authentication module, and connects to the remote SafeWord server (specified in `/etc/opt/SUNWstnr/platform.conf`) to do authentication. SafeWord server version 4.4 and version 5.02 are supported. You must modify the following startup parameters for the `doSafeWord` daemon in the `/etc/opt/SUNWstnr/platform.conf` file:

Parameter	Description
`safeword.server=`	The SafeWord server system's hostname or IP address. This entry is required for doSafeWord to start up.
`safeword.thread=`	Maximum number of simultaneous authentication sessions permitted; default is 5, maximum is 60.
`safeword.timeout=`	Session time-out in minutes; default is 5.How many minutes the user has to complete the authentication session.
`safewordHelper.port=`	Local port number that `doSafeWord` listens on for authentication requests from the platform server; default is 7945.
`safeword.server_port=`	SafeWord server's port number; default is 7482.
`safeword.systemname=`	SafeWord System Name; default is *STANDARD*. See Configuration->Environment on the SafeWord Manager to see list of system environments.

`safeword.loglevel=`	The SafeWord logging level, corresponding to:
	`1 = SWEC_LOG_INFO`
	`2 = SWEC_LOG_ERRO`
	`4 = SWEC_LOG_DEBUG`
	`5 = SWEC_LOG_ALL`
	`else = SWEC_LOG_NONE`
	default is `SWEC_LOG_NONE`.

`safeword.logpath=`	Full pathname of the logging file, if `safeword.loglevel` is non-zero; default is `/var/opt/SUNWstnr/logs/safehelper.log`

Fixed in Patch 107859-02 and Incorporated in This Release

4199447 Resizing window causes applet to close.

4201297 Header display of date not correct.

4201727 Gateway hangs and must be restarted.

4212854 Do not take default strings for Mail servers into account.

4220323 NetFile errors out if there is a $ symbol in the password.

4238940 Lower case novell server adds ok, but you cannot connected to it.

4239957 Cannot log outgoing messages with attachments (Cyrus IMAP) server.

4239963 New user's folder dialog too small sometimes.

4242315 URL rewriter generates invalid HTTP for IE4 or IE5. This fixes netsurfing between IE4, IE5, and IIS web server.

4242381 When changing logging parameter, cannot access logging summary. There is a limitation on remote administration; you cannot change any logging parameters.

4243818 Uploaded files to a Novell server with netcon have different names than requested.

4243857 Cannot compress files for NFS and Netware systems.

4244121 Error 502 when trying to download a file without read permission.

4244197 Searching for pattern "." on NT produces extra script as files and directories as files.

4244199 Wild card message not clear or wrong?

4245168 Not closing NetMail window allows another user to access your email.

4245615 .wav files cannot be downloaded with NetFile lite.

4246319 Disassociate windowing functions from file system selection type.

4251744 Wrong IP address is inserted for trusted proxy fix with NAT configurations.

Although this bug description is specific to NAT (Network Address Translation) configurations, it actually applies to any configuration where the i-Planet server cannot resolve the name of the external interface of the gateway. There are two steps to fixing this configuration problem.

1. Before installing the i-Planet server, add the fully qualified name of the external interface of the gateway to the local host file of the server. If this is done after installation of i-Planet software, step 2 must also be done.
2. There are two configuration files, one on the gateway and one on the server, that contain the IP address of the external interface of the gateway. On the gateway, the `/opt/SUNWsnrp/config/HTMLTranslator.config` file contains the gateway IP address in the `Hostip` parameter. This IP address must be the address of the external interface of the gateway. On the server, the `/etc/opt/SUNWstnr/platform.conf` file contains the gateway IP address in the parameter `trustedProxyFullURL`, just after the `https://`. This IP address must be the address of the external interface of the gateway. You must restart both the gateway and server after making these modifications.

4251892 make From: address changeable. The fix for this bug has two parts. (1) The remote end user can set a From address in his or her NetMail preferences. If the user doesn't specify this preference, NetMail constructs a From address consisting of the user name and mail server. (2) The system administrator can turn off the ability of end users to edit this preference. This is done in the Names of Uneditable Preferences field on the page for Default Values for New NetMail Users in the Administration Console. The new parameter's name is `fromaddress`. Refer to the *i-Planet 2.0 Administration Guide*, for more information about uneditable preferences.

4252160 RADIUS authorization does not permit null password.

4252163 RADIUS response to access-challenge does not work correctly.

4253736 href=/home… not rewritten.

4253739 <…/baTol.gif"ALIGN=BOTTOM> not rewritten.

4255645 IE and netscape can't connect to a web server with basic turned on (via netsurf).

4256855 NetFile lite does not handle wrong passwords to NFS systems well.

4257911 Embedded URLs in JavaScript functions/variables not rewritten. The fix for this bug requires you to edit the `HTMLTranslator.config` file (in `/opt/SUNWsnrp/config` on the gateway) to add a new field, `JavaScriptVariableConvert`. This field can contain values that i-Planet software will try to match with JavaScript variables in HTML pages. The way the match is determined is if the JavaScript variable has a suffix that matches a value in the `JavaScriptVariableConvert` field, the value that will be assigned to that variable is translated.

As an example, edit the `HTMLTranslator.config` file on the gateway to add the field, `JavaScriptVariableConvert=location1|location2`.

When you go an intranet web page containing JavaScript, this code:

```
    function myfunc () {
        top.location1=tempVar + "/temp.html";
    }
```

will be converted to:

```
    function myfunc () {
        top.location1=iplanet(tempVar + "/temp.html");
    }
    function iplanet(url) {
        if (url.charAt(0) == '/' {
           return 'https://<gateway>/' + 'http://<webserver>:<port>'
+ url;
        }
        index = url.indexOf('https://<gateway>/');
        if (index == 0) {
            return url;
        }
        index = url.indexOf('://');
        if (index > 0) {
            return 'https://<gateway>/' + url;
        }
        return url;
    }
```

4258438 Pluggable authentication does not work with a no submit login. This bug fix allows pluggable authentication modules which do not require any user input to work with i-Planet software. This module type typically carries the user's credentials in the http request. The user may have been authenticated by some other mechanism and does not need to type in the credentials again. Prior to this fix, the pluggable authentication required at least one interaction with the user. To use the pluggable authentication with no user interaction, follow the instructions in the *i-Planet 2.0 Administration Guide* with the following changes.

When creating your <classfilename>.properties file (called `MyLogin.properties` in the Administration Guide example), it must be an empty file.

Two new methods have been provided in the Login class for getting the servlet http request and response:

```
public HttpServletRequest getHttpServletRequest() {

    return servletRequest;

}

public HttpServletResponse getHttpServletResponse() {

    return servletResponse;

}
```

4258582 `JavaScriptVariable` does not work for variable with capital letter. The fix for this bug requires you to check the variables in the field `JavaScriptVariable` in your `HTMLTranslator.config` file on the gateway. In i-Planet 2.0 software, `Var1`, `Var2`, and the like designations in the `JavaScriptVariable` field in the `HTMLTranslator.config` file had to be in lowercase regardless of the `Var1`, `Var2`, and the like designations in HTML pages.

This patch fixes this situation to require that the variable designations must match the designations in the HTML pages. You must edit the `HTMLTranslator.config` file to make certain that any variable designations contained in the field `JavaScriptVariables` exactly match the capitalization in the associated variable designations in your HTML pages.

4259550 RADIUS server's port specified not taking effect.

4259784 RADIUS module times out before helper does.

4260065 Extra bytes in RADIUS reply-message passed to authd module.

4261913 Gateway should support non-iPlanet cookies.

4262036 Gateway does not handle NAS output correctly (cookies).

4263749 Javascript parser does not handle some javascript statement without ending ";".

4263759 Gateway doesn't translate contents with type 'application/x-javascript'.

Known Problems in This Release

The following sections contain the known problems in this release:

Browser Issues

In NetMail (Java), when a message that has one or more attachments is sent, the Netscape browser may crash on the sender's machine. The mail and attachment are received correctly on the receiver's machine.

Cookies must be enabled by the user's browser or the login sequence will continue to return the user to the login screen. To check on the Netscape browser setting, select Edit, select Preferences, then select Advanced. Occasionally, a user will receive a warning that the preferences are not set to accept cookies, even though the preferences are set to accept cookies.

Netscape browser and Netlet. The Netlet is not able to use the "Automatic Proxy Configuration" in the Advanced Proxies preferences. If your browser is set up to use automatic proxy configuration, make sure that, at a minimum, you have entries for "HTTP Proxy" and "Security Proxy" in the Manual Proxy Configuration preference page before using any Netlet-related functions.

I**n Netscape 4.06** in the Solaris operating environment, Java frames and dialogues may not appear until the mouse is moved.

With Microsoft Windows, the NetMail local installer bookmark saved can bring up the incorrect browser. If you install NetMail locally, check the box to run NetMail at the end of the installation, create a bookmark of the page, and then select the bookmark, the page will run in the "default browser" that Microsoft Windows knows about. This may not be the browser you are currently running. The workaround is to install with the "default browser" that your system knows about.

With Microsoft Windows, the Netscape browser may hang when you close the GO-Joe or pcANYWHERE applications.

With Microsoft Windows, text in "Edit Appointment" in NetCalendar can appear blurred. Refresh the screen to correct this.

Caching in Netscape Navigator versus Internet Explorer. Netscape does not distinguish between dynamic and persistent caching. In cases where no caching is allowed, nothing is written to disk. When the http headers "Pragma:no-cache" and "Expires:*date*" are used, no data is written to disk; pages that were sent and displayed with these headers cannot have the source viewed and you cannot go "back" to them. If you have a current active session, such pages may be reloaded, but otherwise they are not accessible. Netscape stores its cached objects under scrambled names.

Internet Explorer appears to always write objects (for example, pages or images) to disk. The names used are the names of the object in clear text. As long as the browser is active, the objects can be accessed and viewed. To prevent Internet Explorer from writing to disk, you can set the browser preference "view/internet options/advanced/do not save encrypted pages to disk." However, this has a side effect of denying the user permission to open any non-HTML page in the browser. Users who want to open and view files with NetFile or who want to open attachments with NetMail are advised not to enable this setting. In the case where this browser preference is set, the user receives an error message: "Your security settings do not allow this file to be downloaded." When the browser is shut down, the objects disappear; however, as long as the browser is active, even if the i-Planet session has ended, a user who knows where to look could be able to see files that were displayed with NetFile, and anything that was displayed in a browser page, such as email attachments from NetMail Lite.

NetMail in Internet Explorer with aliases. Occasionally, the list of aliases or the alias content may seem incorrect. To fix this, restart the NetMail client.

NetMail and large attachments. If end users set their NetMail preferences through NetMail Session-Preferences-Cache to load attachments on disconnect and the attachments are very large, they may get `uid/port` number errors. These errors mean that the applet is out of memory. The user must print or save the files.

NetMail Lite does not display the list of messages when some email includes very large attachments.

NetMail cannot remove more than one level of folder directories properly.

NetMail Lite properties and NetCalendar preference changes are lost when the user logs off.

NetCalendar does not show appointment reminders.

Changing the default view in NetCalendar from "week" does not work.

NetMail local installer may generate a JavaScript error.

In URLs, extra colons (:) are replaced by `%3A` in the URL because certain browsers do not handle embedded colons.

Small browser windows. Java applications, which are a part of the i-Planet installation (NetFile, NetMail) are launched by the i-Planet Desktop using separate browser windows. These new windows do not contain navigation buttons and, by design, cannot be resized. In certain situations, the End of Session page or the Desktop Login page is presented to the user in one of these small browser windows. When this occurs, the user should return to the i-Planet Desktop browser and click Refresh to present the Login page in that large browser window.

The desktop is not refreshed before an application is started.

Text is cut off and you cannot enlarge the screen on the Netscape Server Error window. You will see the Server Error dialog box saying: "This server has encountered an internal error which prevents it from fulfilling your request. The most likely cause is a misconfiguration. Please ask… for messages in the server's…" You cannot resize the window.

Other Issues

/etc/init.d/iplanet_serv stop **sometimes does not work.** If this happens, use the following procedure:

1. List the `uxwdog` processes that are running with the command:

   `ps -elf | grep uxwdog`

2. Stop the watchdog processes that are running with the command:

   `kill -9` *process_ID*

3. List the processes running http for the NES server with the command:

   `ps -elf | grep ns-httpd`

4. Stop the processes running http for the NES server with the command:

   `kill -9` *process_ID*

If the installation script constructs a CLASSPATH for Netscape Enterprise Server (NES) that is too long, you will be unable to connect to the sever. If this happens you should see `noClassDefFound` errors in the `/opt/SUNWstnr/netscape/server4/`*`http-SERVER`*`/log/errors` file. This normally happens if you install to a nondefault directory and the path to that directory is too long. The workaround is to use a shorter path.

The basic firewall application and Security Dynamics' ACE software do not work under the Solaris 7 operating environment.

In the Open Windows™ environment with the NetFile application, the mouse buttons may not work as expected. Using the right mouse button is a workaround.

Session time-out and session maximum time. After 30 minutes of inactivity or 120 minutes of total session time, a user is required to relogin to the i-Planet server before continuing. The login page will be displayed in the application or in the browser window that is currently being used. If the login page is not visible, the user should return to the main browser window and log in. It may be necessary to restart the browser in some cases. Operations that may span the maximum session time, such as FTP, could result in data loss if the session times out. The system administrator can change the values for both the inactive timer and the maximum session timer in the Administration Console.

SSL certificates and keys for the i-Planet gateway. To back up your certificate files, copy the following files from `/etc/opt/SUNWstnr` to a safe place: `.rppass` (the password file), `rp.CAstore` (the CA root certificate file) and `rp.keystore` (the certificate file). If you ever need to restore a certificate, you can copy these three files back to `/etc/opt/SUNWstnr`.

SSL certificates and keys for the NES certificates. To back up your certificate files see the procedures in the NES documentation.

Installation may appear to hang. If a package seems to be taking more than five minutes to install, check the log file for the installation. The installation script could be waiting for a yes or no answer to an unexpected question on the input line that the user did not see. This could result from an old package that was not removed from a prior installation, or from insufficient disk space in the / partition.

If you place a firewall between the i-Planet gateway and the i-Planet server, you should open the well-defined ports between the gateway and the server, such as 8080 and 443 (for a default installation), and the ports for the services that the Netlet needs to connect to.

If the i-Planet server cannot resolve the name of the i-Planet gateway, you must add the gateway name and IP address to the `/etc/hosts` file.

If you have dual interfaces with the same name on the i-Planet gateway, after installing the i-Planet server you must edit the `platform.conf` file on the server. Modify the `trustedProxyFullURL` parameter to match the external interface IP address of the gateway.

Netlet supports only 20 Netlet rules. The sum of the enabled, predefined rules and the user-defined rules cannot be more than 20. If there are more than 20 rules, the Netlet will not start and an error message will be displayed in the Java console.

GraphOn GO-Joe software is not supported on X86 clients, and does not run under the Solaris 7 operating environment in 64-bit mode. To determine whether you are using the 32-bit mode or the 64-bit mode, use the `dmesg` command.

4190655 `addfile.cgi` times out on large files. The message "document contains no data" appears and the `addfile.cgi` process runs without timing out on the server

4195498 admin - follow suggested relogin path, root becomes user not administrator. The expect Administration Console does not appear**.**

4222355 Search functionality of NetFile HTML does not seem to be working. The search functionality of NetFile HTML fails with the following error: "The document contains not data. Try again later or contact the server's administrator."

4232252 NetMail Open URL utility not working.

4242332 Install has trouble with NIS+ and domain names. The `iplanet_install` script does not work properly in NIS+ env's. In NIS+ a trailing "." is added to the domain name which confuses the script and causes (com.) to be displayed during the domain name question.

4243819 Cannot upload files inside the firewall. The file is reported as successfully loaded, but it cannot be found with any system.

4252265 Gateway buffering of POST request causes time-out in server. In the rproxy source file `HTTPRetriever.java`, the `HTTPRetreiver.sendRequest` method buffers the entire content of a POST request before forwarding it to the web server. For large POST requests, such as those used for uploading a large file in NetFile or attaching a large file to a mail message in NetMail, this causes the web server to time out before the file is uploaded. Therefore, a large file upload over a slow link will fail. Note, the failure is dependent on the time required to upload the file, not the size of the file.

4253042 The rewriter rewrites based on domain and not subdomain.

4254332 NetFile cannot download files of arbitrary size. A file is copied from the file server to the i-Planet server and then it is downloaded to the browser. This means that if the file is big enough that the time required to do the initial copy is longer than the browser request time-out and the download will fail.

4259373 NetMail hangs on startup if using netscape on NT. NetMail will hang after being invoked on netscape on NT if this is the first time it is invoked after starting netscape.

Workaround: There are two workarounds:

- Refresh desktop (or some other browser network action) when NetMail hangs., This seems to solve the problem. You only need to do this the first few times it hangs, then NetMail seems to be OK.
- Turn on browser proxy settings (point browser at a proxy).

4268606 i-Planet platform rewrites default URLs inconsistently. The platform selectively rewrites the URL of the "start page" specified in `/opt/SUNWjeev/profiles/.defaults`.

Workaround: Current workaround is to encode the start page URL in the `.default` file manually, replacing ":" with "%3A" in the default file.

4272933 Netmail attachments cannot be viewed/opened with MSIE 4 or 5 on NT or win9x. Moving the mouse around while Netmail is loading the attachments will download them. Clicking the check mail button is also generally a way to cause it to load attachments.

4275018 "connect" and "disconnect" menu items are not synchronized with the display. This bug does not happen on Netscape Navigator browser of machines (client98, client95, and NT).

4275097 Clicking on NetMail desktop link does not bring NetMail to the foreground in IE. This happens on Internet Explorer with client98, client95, and clientNT. Netscape Navigator on OS client98, client95, and clientNT works fine. It brings the window to the foreground when you logout and log back in.

4278084 Logging parameters - log file location is rewritten by gateway as URL. During remote administration, the gateway rewriter rewrites the log directory path as a URL (because it looks like one). The actual log path entry appears at the end of the URL.

4278223 Cannot use command line utility when SSL is on between gateway and platform server. This problem is fixed with the information in the section "Known Documentation Problems in this Release," in Chapter 4, 'User Administration Command Line Interface,' in the procedure, 'To Set Your Classpath,'…".

4280117 Cannot upload larger files than 9 MB on an NT machine. 22–MB files fail with an error message.

4281389 Resizing an HTML file opened from NetFile produces an error 502 message. For NetMail to work correctly, the browser must be set so that it does not use HTTP 1.1. This is a jdk 1.0 limitation. Set HTTP 1.1 to off and the attachments should work on client98.

4282150 Undeleting Deleted Messages in disconnected mode unsuccessful.

4282254 User with $ in username cannot access their files.

4284581 Unable to bring up the Select File Attachment window after clicking Attach File. The NetMail Launched Message window brought to the foreground, the Security Alert dialog box popped up. The Warning dialog box appeared after clicking the Attach File button on clientNT IE machine.

4284612 I/O error while adding attachment in Java. This happens because the socket times out.

Known Documentation Problems in This Release

The Licensing chapter in the Installation Guide contains incomplete information for the Nodelocked to Host ID field in the Add License window in the License Installation Tool. If you enter your license information by hand, enter the value `none` in this field.

Administration Guide

An Appendix to the Administration Guide, "Integrating Third-Party TCP/IP-Based Clients with i-Planet," is located at the end of these *Release Notes*.

In Chapter 2, "Administration Console," the reserved ports for pcANYWHERE should be 5631, 5632 in Table 2-5 "Reserved Listen Ports for Predefined Netlet Rules" (page 30).

In Chapter 3, "Other Administrative Tasks," section "Tuning the Web Server,"(page 58), the file name in the "Overview" section should be `S42iplanet_serv`, not `s42rp`.

In Chapter 4, "User Administration Command Line Interface," in the procedure, "To Set Your Classpath," (page 66) replace the Step 1 with Step 1 below:

1. As `root`, type the following command to set you CLASSPATH:

```
CLASSPATH=/opt/SUNWstnr/platform/classes/SNUtils.jar:/opt/
SUNWstnr/platform/classes/preference_servlet.jar:/opt/SUNWstnr/
platform/classes/common.jar:/opt/SUNWstnr/lib/useradmin.jar:/
opt/SUNWstnr/platform/classes/servlet.jar/opt/SUNWstnr/lib/
ssl.jar:/opt/SUNWstnr/lib/x509v1.jar
```

The online help still has incorrect information for the CLASSPATH.

In Chapter 4, "User Administration Command Line Interface," after the procedure, "To Set Your Classpath," (page 66), insert the following new section and procedure:

Setting Your LD_LIBRARY_PATH

Use the following procedure to set your LD_LIBRARY_PATH so that you can add users with IMAP.

To Set Your LD_LIBRARY_PATH:

1. As root, type the following to set your LD_LIBRARY_PATH so that you can add users with IMAP:

```
# LD_LIBRARY_PATH=/opt/SUNWstnr/platform/lib/solaris/sparc
```

2. Type the following command to export your LD_LIBRARY_PATH:

```
# export LD_LIBRARY_PATH
```

In Chapter 4, "User Administration Command Line Interface," in the section, "Using UserAdminCL Summary," (page 67), remove "`delete`" from the description for `-older` *N* and `-nologin`. These options can only be used with the `list` action.

In Chapter 4, "User Administration Command Line Interface," in the section, "Deleting i-Planet Users," (page 74), the first sentence should read: "You can remove i-Planet users from the system by user ID or by reading a list of login IDs from a text file."

Online Help

In certain versions of browsers, the online help for NetMail Lite may not display in an easily readable format.

The information in the online help for setting the CLASSPATH is wrong. Use the information under the section above, "Administration Guide" in this release note to set the CLASSPATH.

Setting the NetMail attachment cache to 0 loads no attachments, rather than all attachments, as documented.

In the Administration online help for the NetFile configuration page, the NT domain name item was omitted. If you installed and enabled support for Microsoft Windows machines, the NT domain name is the domain that will be used to authenticate access to Microsoft Windows machines through NetFile.

The online help for NetMail incorrectly states that you can create an alias containing both an address and a real name, which would be contained in double quotes. Aliases can actually only contain addresses (for example, jane.doe@sun.com) or addresses in angle brackets (for example, <jon.doe@sun.com>).

HTML files. The Contents button links to the manual title page rather than to the Table of Contents; to reach the Table of Contents, page down using Next button from the title page. Appendix C in the *Administration Guide* is missing figures for the pcANYWHERE software; refer to the PostScript or printed versions of the manual to see these screen shots.

Appendix D to the Administration Guide: Integrating Third-Party TCP/IP-Based Clients with i-Planet

This appendix describes:

- How to configure third-party client/server applications to allow them to work with i-Planet.
- How to customize the i-Planet Desktop to provide links to user-defined applications.
- Third-party remote-control products must:
- Use only TCP/IP connections.
- Use fixed port numbers to fixed servers that the i-Planet gateway can contact directly.

Netlet and Its Use

Many organizations have client/server applications that can be used only by clients on the intranet. These applications include clients such as Lotus Notes and applets. If the server for the client is behind the company's firewall, then a machine that is disconnected from the LAN cannot use the client application. i-Planet's Netlet enables these applications to connect to intranet servers using an encrypted connection through the i-Planet gateway.

There are two sets of Netlet rules:

- Rules for predefined Netlet applications
- Rules for user-defined Netlet applications

You administer the predefined Netlet application rules and the user-defined rules through the Netlet Administration page of the i-Planet Administration Console that is shown in FIGURE D-1.

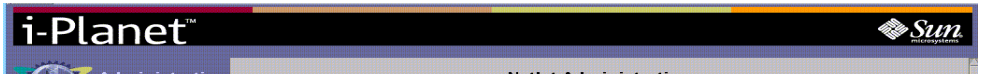

FIGURE D-1 Netlet Administration Page of the i-Planet Administration Console

Rules for Predefined Netlet Applications

Rules for predefined Netlet applications govern using well-known third-party remote-windowing applications. You enable the rule for a predefined Netlet application by checking the box following the name of the predefined application shown in FIGURE D-1.

In the case of pcANYWHERE and GO-Joe, client applets are shipped and integrated with the i-Planet software so that they will be started automatically.

Netlet connections to the predefined applications require that a destination server be specified at the time the connection is established; that is, the predefined rules have no fixed destination server.

i-Planet software uses the ports in TABLE D-1 for the predefined Netlet rules.

TABLE D-1 Ports Reserved for Predefined Netlet Applications

Reserved Ports	Predefined Netlet Application
799	RemotelyPossible
1138	CarbonCopy
1494	Citrix
1547	LapLink
5414	RapidRemote
5631, 5632	pcANYWHERE
8000	loopback*
10491	GO-Joe
30000	Telnet
43188	ReachOut

* `loopback` is an internal Netlet rule that is used for internal functions.

Rules for User-Defined Netlet Applications

Rules for user-defined applications are not associated with a particular application. These rules simply enable the redirection of TCP/IP traffic to the proper destination server and port using an encrypted connection between the client and the i-Planet gateway. You define these rules in section “User Defined Netlet Applications” in FIGURE D-1.

Note – Simply giving a rule for a user-defined application the name of one of the predefined Netlet applications or using one of the reserved ports will not cause the rule to be treated as a predefined application. Alternatively, disabling a rule for a predefined application will not affect any user-defined rules that happen to share the same name or ports. The only way to disable a rule for a user-defined application is to remove it.

For example, if a user-defined rule directs certain traffic to the Telnet port of a specific host (`myTelnet^30001^myServer^23`), this rule will operate independently of the rule for the predefined Netlet application for Telnet. It does not depend on whether or not the predefined Netlet application for Telnet is enabled on the Netlet Administration page of the i-Planet Administration Console that is shown in FIGURE D-1.

Note – Netlet rules cannot contain any port number higher than 64000.

Client Specifications and Examples

Third-party remote control products must:

- Use TCP/IP
- Use fixed ports to fixed servers

The i-Planet gateway must be able to contact these fixed ports and servers without using the optional web proxy.

Configuring Client Software

Clients must be configured to connect through the Netlet, which proxies that connection to the destination server. Since the Netlet resides on the client, the connections must be made to the machine named `localhost`.

Integrating Applet Clients

Java security restrictions require that applets can only make connections to the machine from which they are downloaded. This means that the client applet itself must be downloaded through the Netlet. Creating a Netlet rule to download an applet from the machine `localhost` allows the applet to connect to ports on `localhost`. If Netlet rules exist that accept connections on those ports, the applet will connect to the machines to which those ports are proxied.

Applets following this procedure require no reconfiguration because these applets normally determine the name of the host from which they were served and connect to that machine name. They will attempt to connect to `localhost`, which the Netlet accepts and proxies.

If an applet is configured to connect to a named machine, you have two choices for redirecting the applet to connect to localhost. You can either:

1. Have each user configure the client to use `localhost` as the server

or

2. Have DNS resolve the destination server's host name to 127.0.0.1 for external queries, and to the actual IP address for internal lookups.

The second choice is the recommended solution because it requires no changes to the client configuration, and the client will work correctly from the Internet and the intranet.

Use the following procedure to integrate applet clients.

▼ To Integrate Applet Clients

1. **On the Netlet Administration frame of the Administration Console, create a user-defined Netlet rule to map the applet TCP port over the Netlet.**

   The Netlet rule must be in the form:
   name^client-listen-port^destination-host^destination-host-port, for example:

   ```
   Applet1-destination^5092^appletserver.com^5092
   ```

   Note – The `client-listen-port` is arbitrary, but it must be a port that is not used by your client or any other Netlet rule. Ideally, the `client-listen-port` and the `destination-host-port` should be the same. You should use a value above 2048 for the `client-listen-port` because certain operating systems require the end user to be root with a `client-listen-port` below 2048. TABLE D-1 shows the ports that are reserved for the predefined Netlet rules.

2. **Repeat Step 1 for each port that the applet uses for connections.**

3. **Create a rule to allow the applet to be downloaded through the Netlet.**

```
Applet1-source^8099^appletserver.com^80
```

The destination host and port will be the web server from which the applet is served.

4. **Click the Enter button at the bottom of the Netlet Administration page to save the new Netlet rule or rules.**

5. **As root on the i-Planet server, type the following to stop and restart the web server so that the Netlet rule you just defined will take effect.**

```
# /etc/init.d/iplanet_serv stop
# /etc/init.d/iplanet_serv start
```

6. **(optional) As root on the i-Planet server, edit the i-Planet file** `/etc/opt/SUNWstnr/html_templates/netletApps.html` **to create a link that refers to** `localhost` **in order to download the applet.**

For information on editing the i-Planet file `/etc/opt/SUNWstnr/html_templates/netletApps.html`, see the section, "Modifying the Name and Description of a Link in the Remote File and Windowing Functions Window" on page 58, in this chapter.

You only need to do this if you want a link to appear on the Remote File and Windowing page of the i-Planet Desktop for this application.

The URL to download the applet client should look like the following:

`http://localhost:8099/`*`path-of-html-to-get-applet`*

`localhost` with the port defined in your `loopback` rule (see Step 3 of this procedure) must be used so that the `loopback` mechanism of the Netlet will be used. This ensures, for purposes of Java security, that the source host of the client applet will be the same as the host to which it is connecting, that is, `localhost`.

You can use whatever other mechanism that you have to allow the end user to select an option to request that an applet be downloaded.

7. **Edit the HTML file that starts the client applet to reflect the correct port number and** `localhost` **as the host name. Do not use the client's IP address.**

If the applet has parameters to configure the host to which it connects and the port number, edit this startup HTML file so that it has

- `localhost` as the destination host

- The `client-listen-port` as the port number

from the Netlet application rule that you wrote in Step 1 of this procedure.

If the applet does not have parameters to specify the host or port number or both, it, in all likelihood, will connect back to the host from which it was downloaded. You only have to know that the port number (specified as the second parameter in Step 1 of this procedure) must match the fixed port that applet is programmed to use.

This procedure allows the end user to click on the NetFile option on the i-Planet Desktop to download the Netlet. After the Netlet is downloaded, the end user has to click on the link that you created to download and start the applet.

End users can also just start a new browser window and type the following for the example given above:

`http://localhost:8099/`*`path-of-html-to-get-applet`*

Integrating Non-Applet Clients

Non-applet clients, such Lotus Notes or Microsoft Exchange, must be directed to connect to the client machine on which they are running. You can do this in two ways. You can either:

1. Have each user configure the client to use `localhost` as the server.

or

2. Have DNS resolve the destination server's host name to 127.0.0.1 for external queries and to the actual IP address for internal lookups.

The second choice is the recommended solution because it requires no changes to the client configuration, and client will work correctly from the Internet and the intranet.

Use the following procedure to integrate non-applet clients.

▼ To Integrate Non-Applet Clients

1. **On the Netlet Administration page of the Administration Console, create a user-defined Netlet rule to map the application's TCP port over the Netlet.**

   The Netlet rule must be in the form:
   name^client-listen-port^destination-host^destination-host-port

   ```
   Netlet-1^20000^appletserver^2000
   ```

   Note – The `client-listen-port` is arbitrary, but it must be a port that is not used by your client or any other Netlet rule. Ideally, the `client-listen-port` and the `destination-host-port` should be the same. You should use a value above 2048 for the `client-listen-port` because certain operating systems require the end user to be root with a `client-listen-port` below 2048. TABLE D-1 shows the ports that are reserved for the predefined Netlet rules.

2. **Repeat Step 1 for each port that the application uses for connection.**

3. **Click Enter at the bottom of the Netlet Administration frame to save the new Netlet rule or rules.**

4. **As root on the i-Planet server, type the following to stop and restart the web server so that the Netlet rule you just defined will take effect.**

   ```
   # /etc/init.d/iplanet_serv stop
   # /etc/init.d/iplanet_serv start
   ```

5. **At runtime, the end user must first start the Netlet by clicking the NetFile link on the i-Planet Desktop.**

   The only way that an end user will know that the Netlet is running is to check in the browser's Java Console.

6. **Once the Netlet is running, the end user must start the client software.**

   The destination host must be localhost and the port must be the port specified in Step 1 of this procedure.

Modifying the i-Planet Desktop User Interface

You can modify the i-Planet Desktop to include Netlet-enabled client applications.

Introduction to NetFile/Netlet Pages

NetFile and Netlet pages are controlled by HTML files in the directory `/etc/opt/SUNWstnr/html_templates/`. The files in this directory contain tags that are swapped out to change the information that appears on the i-Planet Desktop and window that appears when the end user clicks the NetFile link on the i-Planet Desktop.

By editing the i-Planet Administration Console and the appropriate HTML pages in the directory `/etc/opt/SUNWstnr/html_templates/`, you can:

- Change the text presented to the end user on the i-Planet Desktop
- Remove the NetFile link
- Add links to predefined applications
- Add links for third-party applications

Modifying the i-Planet Desktop's References to the NetFile/Netlet Window

The default configuration of the i-Planet Desktop contains a link called NetFile, described as "Java Remote Access and Windowing" shown in FIGURE D-2.

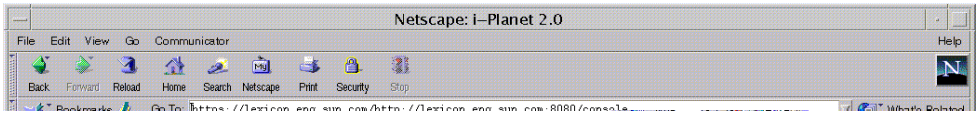

FIGURE D-2 Desktop Front Page Showing the Default Name and Description for the NetFile Link

You can change the name of the link and its description through the Default User Preferences and Parameters page of the Administration Console in the section entitled "Specify the name and description of the link users will see for starting the Netlet."

This link uses the Java Script function `startNetlet` in `userTemplate.html` and opens a new browser window that has no navigation buttons. It contains a frameset with a frame to start the Netlet and a frame that presents the NetFile link.

▼ To Edit the NetFile Link Name and Description

1. **On the Administration Console, click the link Default User Preferences to move to the Default User Preferences and Parameters page shown in FIGURE D-3.**

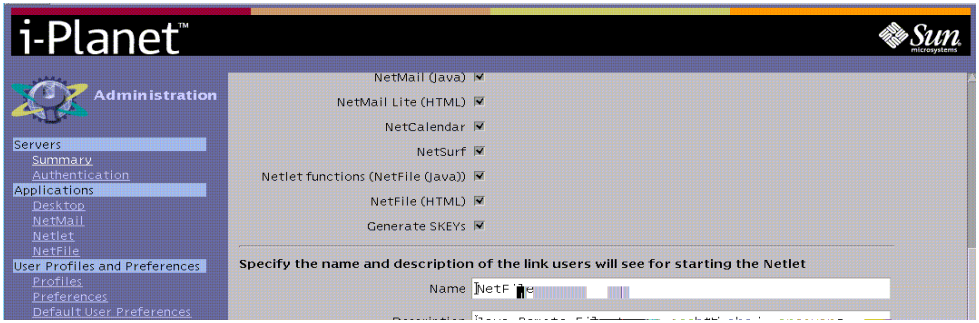

FIGURE D-3 Default User Preferences and Parameters Page—Lower Half

2. **Edit the entries in the section entitled "Specify the name and description of the link users will see for starting the Netlet."**

3. **Click Enter at the bottom of the page to save your edits.**

4. **As root on the i-Planet server, type the following to stop and restart the web server so that your edits will take effect.**

```
# /etc/init.d/iplanet_serv stop
# /etc/init.d/iplanet_serv start
```

The Desktop Front page should now display the new name and description for the link as, for example, shown in FIGURE D-4.

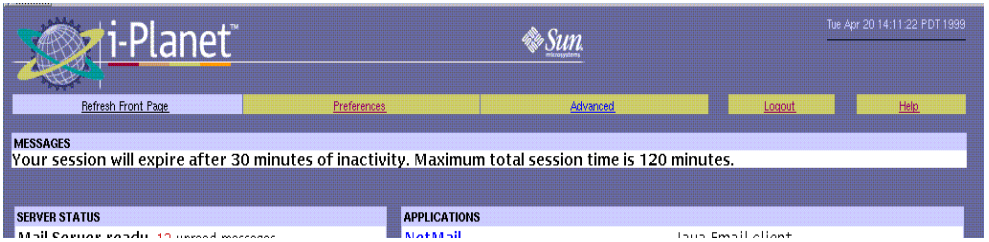

FIGURE D-4 Desktop Front Page Showing New Link Name and Description

If the i-Planet end user clicks the NetFile link on the Desktop page twice, a warning appears that the function is available from the NetFile window shown in FIGURE D-5 (that is, the small window that was launched when you clicked on the NetFile link). You can change the message by editing the file `userTemplate.html`.

FIGURE D-5 Default Remote File and Windowing Functions Window for the NetFile Link

This Remote File and Windowing Functions window and the checks surrounding it prevent the Netlet from being reloaded or restarted while it is running. Reloading the Netlet closes the sockets that it is using and terminates any Netlet-enabled operations in progress.

The Remote File and Windowing Functions window contains the Netlet and links to start browser-based applications that will connect to the Netlet.

Modifying the Name and Description of a Link in the Remote File and Windowing Functions Window

This section describes how to add links and to remove or modify the NetFile link.

Although you cannot include a link for a non-browser-based application here, this window must be open so the Netlet is active before starting the application.

Use the following procedure to modify the Remote File and Windowing Functions window.

▼ To Modify the Name and Description of a Link in the Remote File and Windowing Functions Window

1. **On the i-Planet server, open the file** `/etc/opt/SUNWstnr/html_templates/netletApps.html` **in a text editor**
2. **To change the name of the** `NetFile` **link and the description:**
   a. **Type a new name for NetFile in the line:**

```
<TD ALIGN=TOP><a href="#"onclick="parent.f3.changeLoc()">
NetFile</a> </TD>
```

FIGURE D-6 shows the Remote File and Windowing Function window with a new name for the NetFile link.

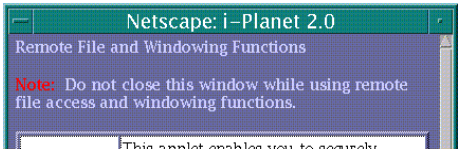

FIGURE D-6 New Name for NetFile Link Name in Remote File and Windowing Function Window

b. Edit the text that describes the NetFile link, for example:

```
<TD><FONT COLOR="#000000">New description for NetFile here. </
FONT>
</TD>
```

3. To remove the NetFile link and its description, remove the lines:

```
<TR BGCOLOR="#FFFFFF">
<TD ALIGN=TOP><a href="#"
onclick="parent.f3.changeLoc()">NetFile</a> </TD>
<TD><FONT COLOR="#000000">This applet enables you to securely
access machines behind your company's firewall. You can explore
the machines and establish connections
to them (for example, telnet and remote control).</FONT>
</TD>
</TR>
```

Adding Links to Predefined Applications and to Third-Party Browser-Based Clients

Any links that you add must be targeted to new browser windows. If they are not, they will reload the frame when pressed, and the i-Planet end user will not be able to click other links in the small window. This would be confusing because the small window does not contain navigation buttons by design. The lack of navigation buttons is to prevent the frame in which the Netlet is running from being reloaded or browsed from.

When called with the `startNetlet` function of the `/etc/opt/SUNWstnr/html_templates/userTemplate.html` file, the frame is passed through the i-Planet Desktop's tag-swapping mechanism, so any HTML template tags that you wish to insert will be translated as they are for other i-Planet Desktop template files.

The window created by `startNetlet` cannot be resized since resizing the window on some clients will cause the Netlet to be restarted. This action will end any Netlet-enabled operations in progress.

The code related to the cookie named `stnrawin` should not be removed. It is necessary for ensuring that one (and only one) instance of this window can be displayed.

Some of the NetFile functions use the Netlet, but Netlet is a separate applet.

The Remote File and Windowing Functions window gives the applets a home window that will not be browsed away from or reloaded by the user. When the user browses away or reloads a page that contains an applet, the applet can be restarted or reinitialized (depending on the browser). To avoid that, the applets are "protected" in their own windows.

The small NetFile window contains two applets: NetFile, and Netlet.

Note – When adding your own link, do not simply copy the HTML code that starts the NetFile applet. It uses JavaScript to communicate with other parts of the frameset. If you do not want to have the NetFile link visible, remove that table row and all the tags within it.

Use the following procedure to add links to predefined applications and to third-party browser-based clients.

▼ To Add a Link to a Predefined Netlet Rule Without Using NetFile

1. **To add links to predefined applications, insert the following lines for each predefined application after the end-of-row tag:**

```
<TR BGCOLOR="#FFFFFF">
<TD ALIGN=TOP><A href="Put the product url here."
TARGET="WinName1"> name-of-link</A>
</TD>
<TD><FONT COLOR="#000000">a description of your applet here. </
FONT>
</TD>
</TR>
```

2. **(Optional) Type in a description for the predefined application whose link you are adding.**

3. **Set the** `href` **tag equal to the URL for the predefined application for which you want to add a link. The URL for each predefined application is as follows:**

   a. **For Telnet, the URL is:**

```
https://i-Planet_gateway_fully_qualified_name:port_number/http:
//i-Planet_fully_qualified_server_name:port_number/servlet/
SRdoNetlet?func=openTelnet&machine=tgt_machine&username=[userNam
e]
```

   b. **For GO-Joe (X Windows), the URL is:**

```
https://i-Planet_gateway_fully_qualified_name:port_number/http:
//i-Planet_fully_qualified_server_name/servlet/SRdoNetlet?func=
openXWin&machine=tgt_machine&username=[userName]
```

   c. **For Citrix (NT applications), the URL is:**

```
https://i-Planet_gateway_fully_qualified_name:port_number/http:
//i-Planet_fully_qualified_server_name/servlet/SRdoNetlet?func=
openNTApps&machine=tgt_machine&username=[userName]
```

d. For all options to control Microsoft Windows remotely, the URL to enable all selected applications at the same time is:

```
https://i-Planet_gateway_fully_qualified_name/http://i-Planet_
fully_qualified_server_name/servlet/SRdoNetlet?func=
openRemoteControl&machine=tgt_machine&username=[userName]
```

Note – For all of the above URLs, you will need to supply a real value for the `tgt_machine`.

▼ To Add a Link for a User-Defined Netlet Rule

- **Insert the following lines after the end-of-table-row tag (`</TR>`) to add a link to the table:**

```
<TR BGCOLOR="#FFFFFF">
<TD ALIGN=TOP><A href="http://localhost:8099/path-to-the-applet/
appletPage.html"
TARGET="WinName1"> name-of-link</A>
</TD>
<TD><FONT COLOR="#000000">a description of your applet here. </
FONT>
</TD>
</TR>
```

FIGURE D-7 shows a sample Remote File and Windowing Functions window with an added link and description of that link.

FIGURE D-7 Added Link in the Remote File and Windowing Functions Window

The HTML code that produces the new link shown in FIGURE D-6 is shown in CODE EXAMPLE D-1:

CODE EXAMPLE D-1 Adding a New Link and Description

```
<TR BGCOLOR="#FFFFFF">
<TD ALIGN=TOP><a href="http://localhost:8099/appletPath/
startApplet.htm"
target="newwin">Some client applet.</a>
</TD>
<TD><FONT COLOR="#000000">This link would download an html page
that could
contain a client applet. </FONT>
</TD>
```

This example assumes that you have created a Netlet rule that directs traffic from the client port 8099 to the web server and the port on which the HTML page resides.