



Infor XA Link Manager User Guide for Infor Development Framework

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About this guide

This guide describes the functionality of Link Manager for Infor Development Framework (IDF) that you use to configure and adjust Power-Link, Net-Link, or System-Link installations in a host system.

Before you begin

Complete the following training if you do not have equivalent knowledge:

- System i education for the basic operation concepts of the System i
- Education on how to use a Windows application

Organization

This table shows the chapters of the guide:

Section	Description
Chapter 1 “Introducing Link Manager”	Describes the environments, machines, and processes that are part of the Power-Link, Net-Link, or System-Link installations in a host system and describes how Link Manager administers each of these parts
Chapter 2 “Managing Environments and Processes”	Describes how to use Link Manager to configure and adjust the Power-Link, Net-Link, or System-Link installations in your host system for optimal performance
Chapter 3 “Applying Updates”	Describes techniques for deploying updates to users of the Power-Link, Net-Link, and System-Link installations in your host system

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at www.infor.com/inforxtreme.

If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

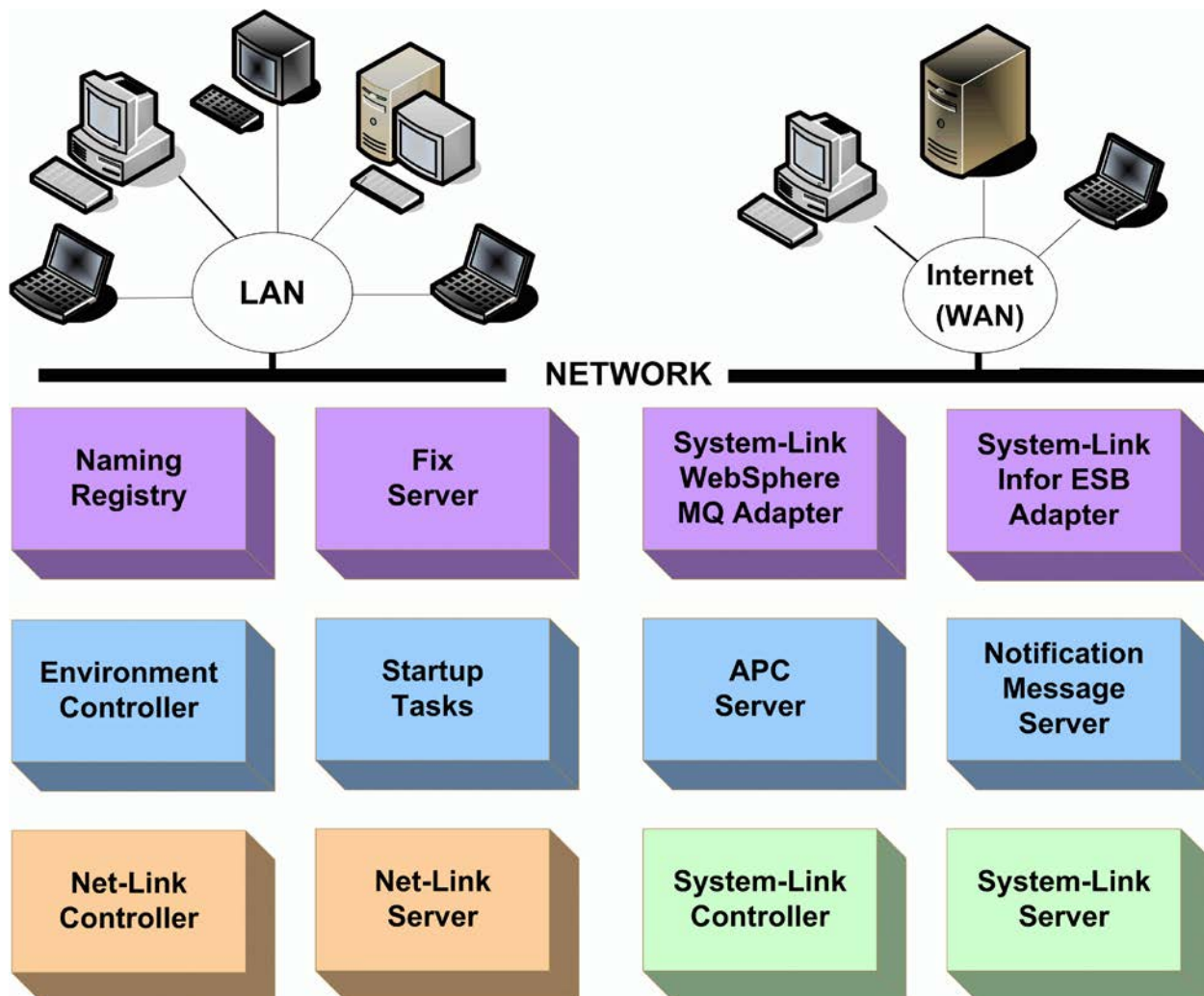
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Chapter 1 Introducing Link Manager

1

Link Manager is a central administrative tool for managing environments for Infor ERP products that use the Infor Development Framework (IDF). Link Manager provides enhanced visibility and control of the server machines, the processes running on those machines, and the Infor ERP product environments supported by the machines and processes. From the Link Manager console, you can:

- Download fixes to your users seamlessly, with little to no user action required, and schedule the fixes take effect when all users are ready.
- Deliver updates to remote users in their location, making more efficient use of network bandwidth.
- Run advanced diagnostic features to help your IT professionals address typical issues quickly.
- Easily collect log files for unexpected results and send those files quickly to Infor ERP product support to reduce turnaround time.
- Keep servers more insulated from your network, which lessens the impact to users when normal difficulties occur.



Managing the requirements of the machines, processes, and environments is a recurring task. As system utilization goes up or down, the distribution of processes across machines needs to be re-evaluated and readjusted to keep the system working optimally. With Link Manager, these evaluations and adjustments are performed regularly and automatically at thresholds you choose. Link Manager functions also allow you to make temporary or one-time changes to the machines, processes, or environments easily and directly.

To help you track usage on the host system, Link Manager tracks and displays current and historical usage data. If you need to alert users about an existing or upcoming situation, such as a pending update, Link Manager provides the ability to send notifications to users on the host system. You can notify all users, a group of users, or an individual user, as the situation requires.

The diagnostic functions in Link Manager help you respond to unexpected situations by capturing and displaying logs and by running diagnostic tests on the host system. The logs and the diagnostic results are also useful tools for communicating with Infor Xtreme Support when you need additional assistance.

Important terms and concepts

The set of servers and processes required to support an Infor ERP product environment can be spread across more than one machine. A machine can support several different environments, as can certain types of servers. Link Manager provides visibility to and control of this system of interconnected machines, environments, processes, and tasks, as described in this section.

Host system

The host system consists of the host machine, all associated auxiliary machines, and all processes and environments loaded onto those machines. The host system can consist of a System i and any combination of System i and Intel servers. Link Manager allows you to work with the host system that contains the environment you are currently using.

Host machine

The host machine is the System i where the Naming Registry process is located. This machine is the foundation for all of the machines and processes that support a set of Infor ERP product environments. If the host system does not include any auxiliary machines, the host machine performs as a server for all of the Infor ERP product processes. With Link Manager, you work with the host system that is anchored on the host machine.

Auxiliary machine

An auxiliary machine can host one or more processes that are not required to remain on the host machine System i. Auxiliary machines can add capacity to the host system by offloading processing from the host machine. See the descriptions of the different process types for information on which processes can be located on auxiliary machines. Auxiliary machines can also provide support for users in remote sites.

An auxiliary machine can only serve one host system. Link Manager recognizes a new auxiliary machine in the host system when the Auxiliary Machine programs have been installed and started on a machine.

The type of machines you can install as auxiliary machines is either one with an Intel processor or a dedicated Linux System i. When you set up the auxiliary machine, you specify whether the auxiliary machine will be dedicated to selected processes or available for Link Manager to use when automatically balancing the processing load in the host system. You also choose whether to install the auxiliary machine as a stand-alone machine or as a Windows service.

Environments

The Environments object in Link Manager contains two types of environments. The Global Environment provides core functions within the host system. A host system has only one Global Environment. Infor ERP product environments contain installed applications and data used for a specific purpose by a company. A host system can have multiple Infor ERP product environments. You set up these environments on the host machine iSeries, then the controller and server processes belonging to that Infor ERP product environment can be distributed to an auxiliary machine.

Global Environment

The Global Environment contains those processes that manage and facilitate functions used across all of the Infor ERP product environments in the host system. The host system contains one Global Environment which is created when Link Manager is installed. Primarily, the Global Environment gives you a quick view of the current status of the environment, number of current users, the identifier of the last PTF update applied to the environment, the date it was applied, and the status of the update if it was staged. (For additional information on staging a PTF update, see “Managing services” on page 16.) The Global Environment also contains options you use to specify how long you want to save information about sessions in this environment.

Infor ERP Product Environments

An Infor ERP product environment contains the functions for the set of applications installed when the environment was created and the data entered into or processed through those functions. A host system can have multiple Infor ERP product environments, with the processes belonging to those environments distributed across the host machine and any auxiliary machines in the host system. Each Infor ERP product environment can have a different configuration of processes, depending on the Infor ERP product applications installed and the data maintained in each environment.

For more information on environments, see “Understanding environments” on page 23.

Processes

Processes are instances of software services that provide environment functions, such as enabling access through the Internet. With Link Manager, you can view and work with all of the processes defined for an environment and the machines on which the processes are located. Certain types of processes can be offloaded from the host machine to an auxiliary machine to optimize processing capability within the host system. You specify whether a process runs on a specific machine or whether Link Manager automatically distributes the process to a machine. You can also specify the amount of memory allocated to the process and the maximum number of simultaneous environment log-in sessions supported by the process.

For more information on processes, see “Understanding environment processes” on page 41.

Tasks

Tasks represent the event queue of actions performed by Link Manager on the host machine. The system creates records each time Link Manager:

- Starts or stops a process.
- Starts, stops, restarts, or synchronizes an environment. When an environment is started, stopped, or restarted, the system creates records in the Tasks object for each process for that environment that was started, stopped, or restarted. The system creates “start UJOB” and “stop UJOB” task records whenever the Environment Controller process for an environment is started or stopped. Additionally, when an environment is synchronized, the system creates task records for that environment action.
- Stops, restarts, or synchronizes a machine.
- Applies an update to an environment.

Tasks are also the means by which the host machine interacts with auxiliary machines in the host system. Each time Link Manager performs an action on a machine, the system records the time the task was submitted, the user submitting the task, and the time the task started and ended as well as the machine and environment on which the task was performed. The status of each task indicates whether the action is completed, cancelled, or ended due to an error condition.

Additional host system elements

In addition to the machines, processes, and tasks in the host system, Link Manager gives you information about user-level activities on the host system.

User Profiles

User profiles list all users who are authorized to any of the environments in the host system. From the list of user profiles, you can quickly see whether a user is active, the user ID and name of the user, the security group profile to which the user is assigned, and whether the user ID is currently enabled on the host system. For an individual user, you can also see which environments the user is authorized to access, information about the user’s workstation, the type of Infor ERP product client application the user runs, and the start and stop times for the user’s latest environment logins.

Workstations

Workstations are the devices users use to transmit information to and receive information from the host system. The list of workstations includes the IP address of the device from which a user is logged in, which can be important for Infor Xtreme Support in identifying and diagnosing a problem with a particular workstation.

When a user logs in to an Infor ERP product environment, the host system automatically adds the workstation from which the user is working. Link Manager retains a list of workstations from which users are currently logged in or have been logged in within the Days to retain logs value set for the

environment. By default, Link Manager keeps information on workstations that have been logged in to an Infor ERP product environment within the past 30 days. If a workstation has not been used to log in for more than the number of days in the Days to retain logs value, Link Manager drops that workstation from the list.

User Logins

User logins identify the users who are currently logged in to an Infor ERP product environment through Power-Link, Net-Link, System-Link, or Link Manager. The list of user logins gives you a fast way to know which users currently are logged in to the host system.

Installed applications

Installed applications show a list of applications for a selected XA environment currently on the System i host machine. You can use the Installed Applications object to install the Host Presentation Server (HPS) process for selected environments. See “Installing the Host Presentation Server Process” on page 36.

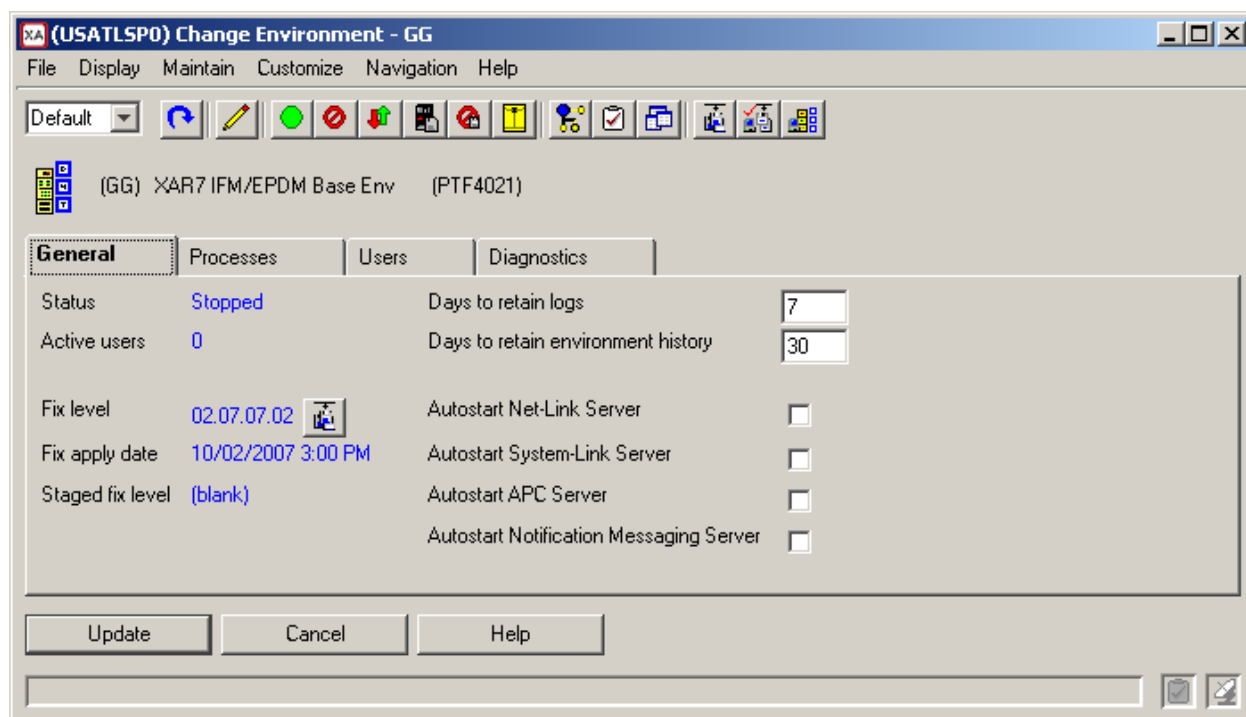
Fix Levels

Fix levels show the PTF updates that have been downloaded and installed on the host system. The Infor Xtreme Support portal delivers fix levels for a release of the product through downloadable PTFs. The Infor ERP product builds a new fix level file for a release when a new group of APAR fixes, product enhancements, and incident resolutions is ready for distribution. A cumulative PTF for a release can have multiple versions of the downloadable fix level file. If you subscribe to Infor Xtreme Support, you receive automatic e-mail updates whenever a PTF has a new fix level available.

The list of fix levels shows which PTF updates have been downloaded, the name of the downloaded files containing updates, and the date on which each update file was built. For an environment, you can see information about the particular fix level that was last applied to that environment.

Link Manager features

The functions in Link Manager provide you with tools to manage the host system’s server machines, the Infor XA product processes running on those machines, and the Infor ERP product environments supported by the machines and processes.



Configuring the host system

Link Manager provides functions for tailoring the configuration of the host system to optimize processing capacity. Depending on your requirements, you can:

- Optimize processing capacity through the automatic assignment of processes to the machines in the host system.
- Optimize environments to start only those processes that are usually or frequently used. Other processes can be started and stopped as needed, using processing capacity only as needed.
- Simplify the download of updates to users' PCs.
- Decrease download time for remote users by implementing fix servers.

The flexibility of these Link Manager functions allows you to set up the machines, environments, and processes in the host system to maximize efficiency for your company's needs.

Automatic assignment of processes

To balance processing capacity across the machines in the host system, Link Manager can assign processes to the host machine and to any auxiliary machines in the host system on a round-robin basis. Link Manager observes the rules for the type of machine to which a process can be assigned. For example, only certain processes can be assigned to an auxiliary machine.

Link Manager allows you to specify whether a process is automatically assigned or manually assigned to a specific machine. This option allows you to control the assignment of processes to

machines to the degree you require. For example, if your host system consists of only one System i machine, you do not need to assign each process to that machine. Leaving the machine assignment for each process set to the automatic option is sufficient. However, if you have installed an auxiliary machine for the specific purpose of offloading the processes that support Net-Link for one of your Infor ERP product environments, you would want to assign those processes to that auxiliary machine. With Link Manager, you can control the assignment of none, some, or all processes for the environments in the host system. As you add or remove auxiliary machines from the host system, you can change whether processes are automatically assigned or assigned to a specific machine as required.

Managing services

Link Manager automatically starts the processes on the host system, based on the hierarchy of requirements among the processes installed and on any tasks you set up to start processes. The Processes object provides a constant view of the status of the processes on the host system, showing which processes have been started or stopped.

As needed, you can start or stop processes manually using options in Link Manager. For example, in your host system, you might run your System-Link and Net-Link processes on an auxiliary machine and your Environment Controller process on the host machine. If you want to reboot the auxiliary machine, you can use Link Manager to stop the System-Link and Net-Link processes on the auxiliary machine, which allows your Power-Link users to continue working while you reboot. If you had to stop the environment in order to stop the System-Link and Net-Link processes, you would also be stopping the environment processes that might otherwise have continued to run on the host machine. To help you advise your users when processes are being stopped or started, you can send messages to all users, to a selected group of users, or to individual users through the Client Messages function.

If your host system includes auxiliary machines, Link Manager assigns processes to those machines to balance the processing load across the host system. Link Manager uses a round-robin algorithm to determine which machines have capacity. Only those processes that are eligible can be moved to auxiliary machines. The Naming Registry process in the Global Environment must remain on the host machine. All other processes in the Global Environment, and all processes for a regular environment, can be run on an auxiliary machine.

While Link Manager maintains the balance of processes assigned to the machines in the host system, at times you might need to override manually the assignment of processes to a machine. For example, if you are replacing one of the server machines used as an auxiliary machine, you would need to move the processes Link Manager has assigned to that machine before removing the machine from the host system.

As you add auxiliary machines to your host system, you can add additional instances of some processes to spread the processing load more evenly. For example, your host system supports three Infor ERP product environments, one of which is a Power-Link environment and two of which are Net-Link environments. While you can have only one Net-Link Controller process in an environment, you can have multiple Net-Link Server processes. To give more flexibility to your host system in balancing processing loads, you might create three instances of the Net-Link Server process. One Net-Link Server process could stay on the host machine or auxiliary machine where

the Net-Link Controller process is located. You could then move the second and third Net-Link Server processes to other auxiliary machines in the host system.

Applying updates

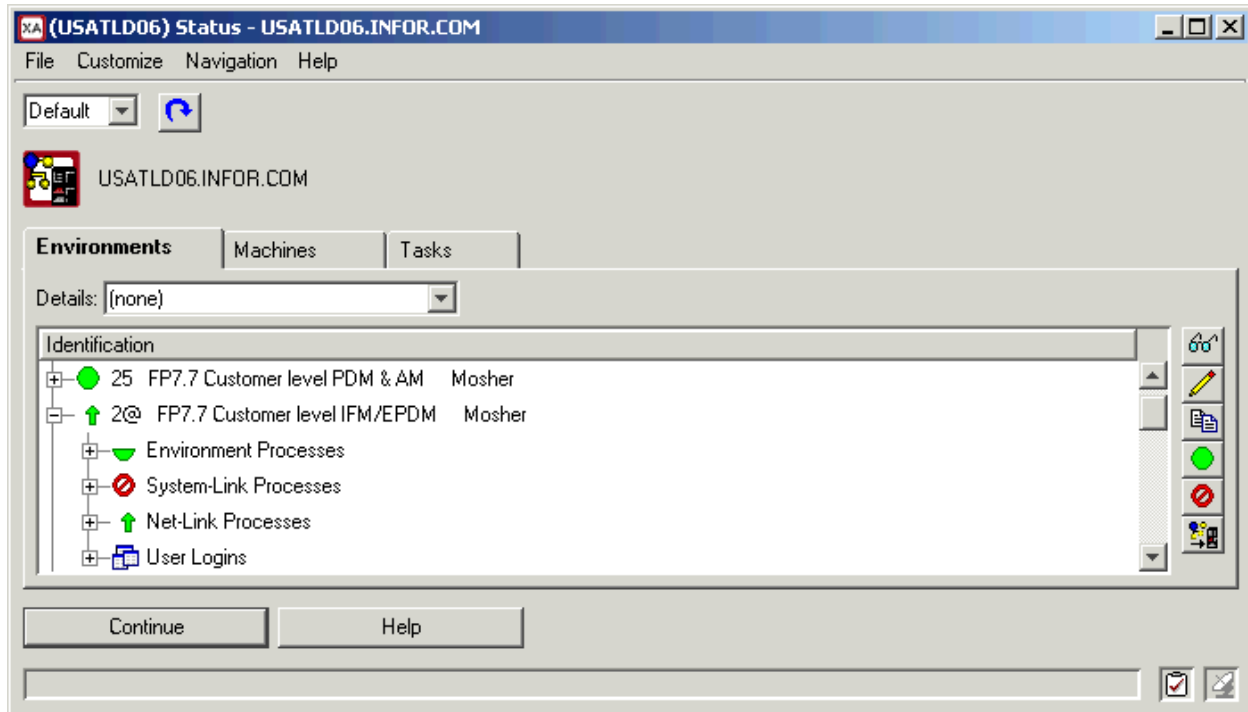
Link Manager not only helps you manage the processing of the host system at all times, it also provides tools to help you manage updates to the environments on the host system. The information in the Fix Levels object shows you all available PTF downloadable files. You can view the details of each fix in a fix level file and view the list of environments to which the fix level file has been applied.

This information helps you plan and perform updates to the environments on your host system. Link Manager allows you to handle updates one of two ways. For updates that you need to apply urgently, you can perform an immediate update. For updates that are less urgent, you can perform a staged update. The staged update allows you to make an update available to your users for a period of time, along with notification to your users of the deadline for applying the update and notification back to you when each user has applied the update.

For users who are located remotely, you can set up Fix Servers on auxiliary machines to handle downloaded fix level files. This arrangement lets your remote users download fixes from a local machine instead of tying up time and bandwidth by downloading the fixes individually from a machine in one central location.

Monitoring activity

With Link Manager, you have constantly updated information about activity on the host system. The Status object provides a single entry point for viewing this information. For example, the following Status card file shows the status of two environments in the host system. Environment 25 is started, as indicated by the green circle icon, and environment 2@ is starting, with the Environment Processes process started, the System-Link Processes stopped, and the Net-Link Processes starting. Additional cards provide a quick way to see the status of the machines in the host system and the tasks that Link Manager has been performing.



At any time, you can see the status of all environments, machines, and tasks on the host system. For a selected environment or machine, you can also see the status of the processes running for that environment or on that machine. You can quickly navigate to information about users currently logged in to an environment through Power-Link, Net-Link, System-Link, or Link Manager and see information about the workstations from which users log in and the duration of their sessions.

Link Manager retains information about actions performed on the host system, such as starting or stopping environments. Link Manager also retains information about users who have been logged in to the host system. You can view information on user sessions:

- By environment
- By workstation
- By user
- Across environments, workstations, and users

You determine the number of days for which Link Manager retains this information by the value you set in the Days to retain logs attribute for each environment.

Link Manager provides the Client Messages object for communicating with users in either the Global Environment or in an Infor ERP product environment. For example, if you have made a staged update available for an environment and want the users of that environment to download the client portion of the update by a certain date, you can send a message to those users in conjunction with setting up the staged update. The message can be sent to all users in the environment or to a single user and specify whether users see the message once or each time they log in to the environment. The status for a message lets you monitor whether and when the users to whom you sent the message read it.

Running diagnostics

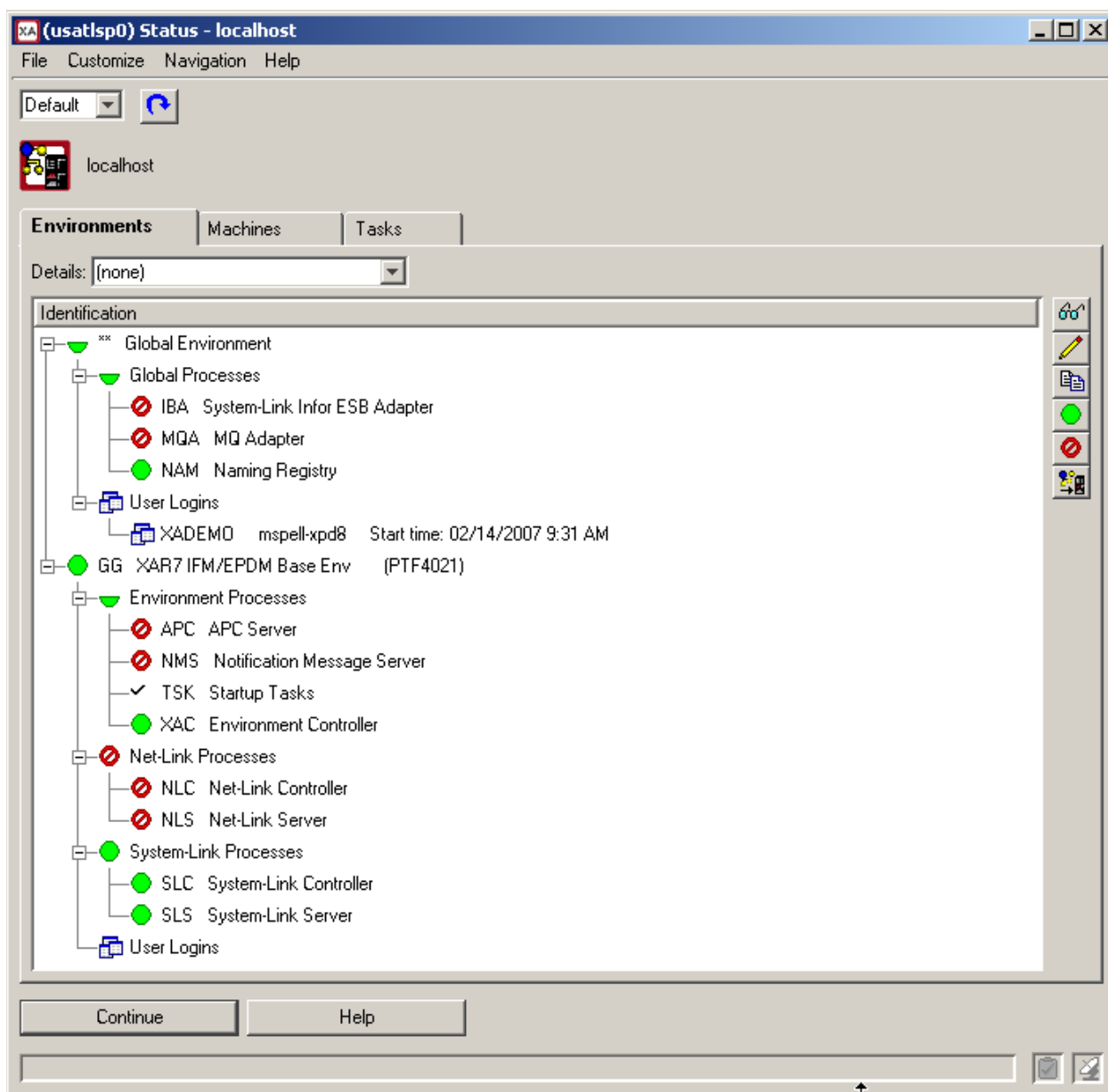
Link Manager's diagnostic tools give you multiple ways to capture and communicate information for handling unexpected situations on the host system.

Reviewing log files is often the first step in diagnosing problems. Link Manager allows you to view and save the log files, so you can inspect and compare logs from different times or different environments to pinpoint problems on the host system. Link Manager provides options for specifying if and how you want log files to be captured for individual workstations. For each environment in the host system, Link Manager provides an option for specifying the number of days to retain log files generated for that environment.

Chapter 2 Managing Environments and Processes

2

Link Manager gives you visibility to and control of the processes in the host system. The number and type of processes in the host system depend on the Infor ERP products installed and the number of machines available.



Both the Global Environment and all Infor ERP product environments installed on the host system provide services through processes. With Link Manager, you can manage and adjust the processes for these environments to optimize the function of the host system.

Through Link Manager, you can see information about environment sessions, such as which users are logged in to the environment and from which workstations. You can also see the status of the processes in each environment. Link Manager provides options that allow you to specify the optional processes you want to start automatically when the environment starts. Additional options allow you to start and stop environments and processes manually for those situations when you need to control the function of an environment or process yourself.

Link Manager also provides options within each process that allow you to specify the amount of host system capacity you want to allocate for this process. You can specify the machine on which the

process is located, the minimum and maximum amounts of memory allocated for the process, and the maximum number of sessions allowed for the environment.

Understanding environments

Link Manager gives you visibility to all of the environments in the host system and a continually updated status of each environment, all from the Status object. From the information in the Status object, you can drill down into any of the environments to see detailed information about the processes and the users which are currently active in that environment. This one-stop access gives you a quick way to check the performance of all environments and verify that the load balancing performed by Link Manager is keeping the environments running at an optimal level.

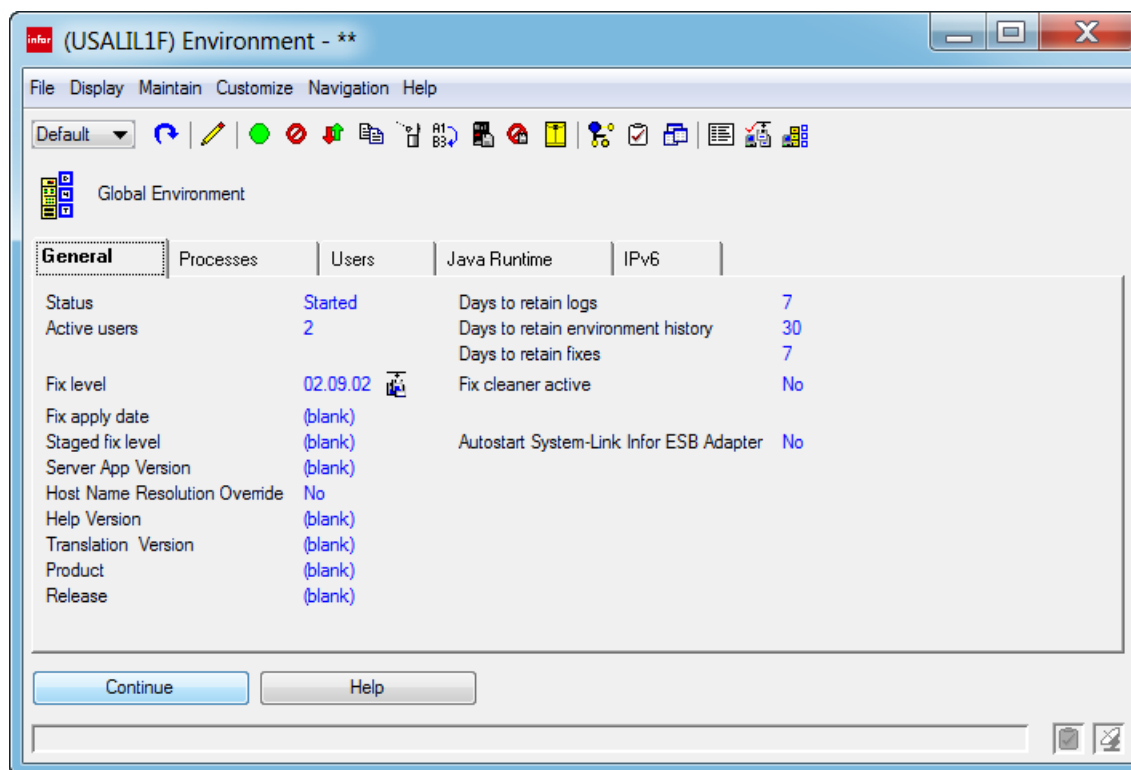
Types of environments

Link Manager supports two types of environments, the Global Environment and the Infor ERP product environments installed on the host system. A host system contains only one Global Environment but can contain multiple Infor ERP product environments. The number of Infor ERP product environments depends on your business needs and the capacity of your host system.

Global environment

The Global Environment contains those processes that provide functions used across all of the Infor ERP product environments in the host system. These processes include two required jobs that run on the System i host machine: Naming Registry and Host Manager. The Naming Registry job runs as MPXREGSRV in the QUSRWRK subsystem. This job is an internal web server and also serves as a communications hub allowing the environments on the host system to communicate with their processes. It is represented in Link Manager as the Naming Registry process. The Host Manager job runs as MPXMGRSRV in the QUSRWRK subsystem. This job ensures that environment processes are running correctly and handles requests that affect those processes, such as starting, stopping, applying updates, etc. It is not represented in Link Manager as a process.

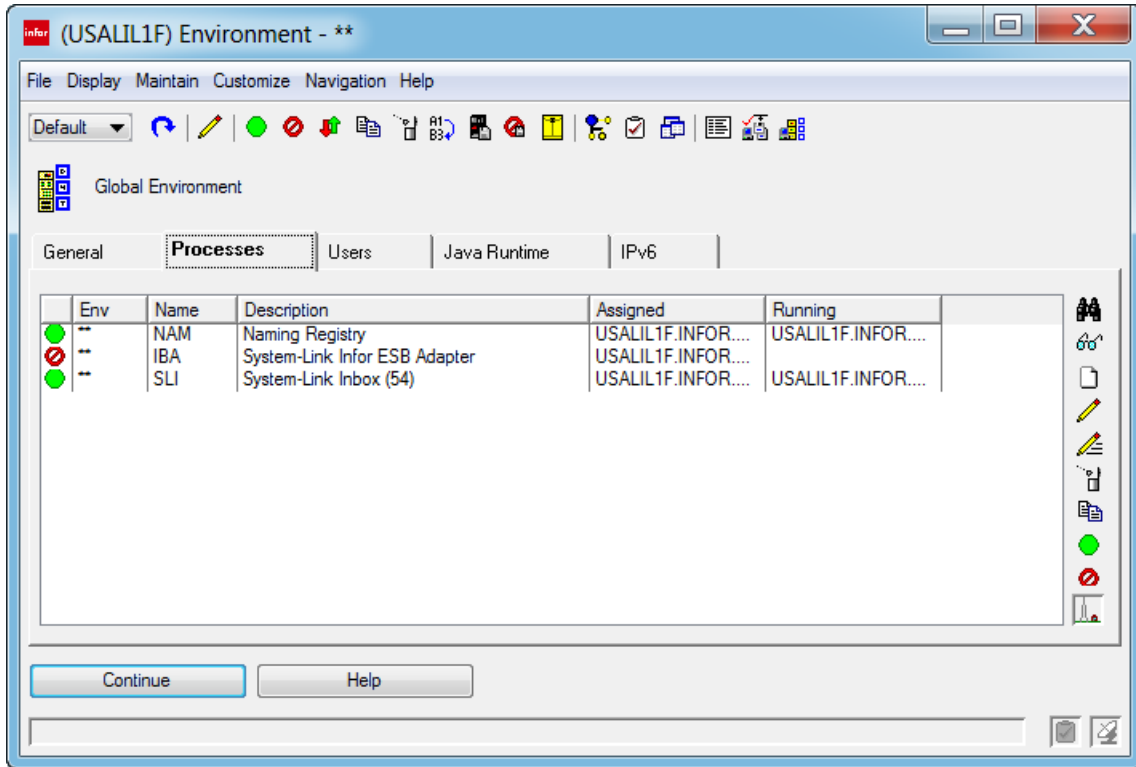
The host system contains one Global Environment which is created when Link Manager is installed. Detailed information for the Global Environment shows you the current status of the environment, number of current users, the identifier of the last PTF update applied to the environment, the date it was applied, and the status of the update if it was staged. For additional information on staging a PTF update, see “Staged updates” on page 75.



The Global Environment also contains two options for specifying how long you want to save information about sessions in this environment. The **Days to retain logs** option lets you indicate the number of days to save log files generated by the processes belonging to the Global Environment. The **Days to retain environment history** option lets you indicate the number of days to save information about tasks that were run for this environment and users who logged in to the environment. All of this retained information can be helpful for resolving problems. However, the need to have information available if a problem arises must be balanced with the amount of system storage you want to allocate to holding the log and history files.

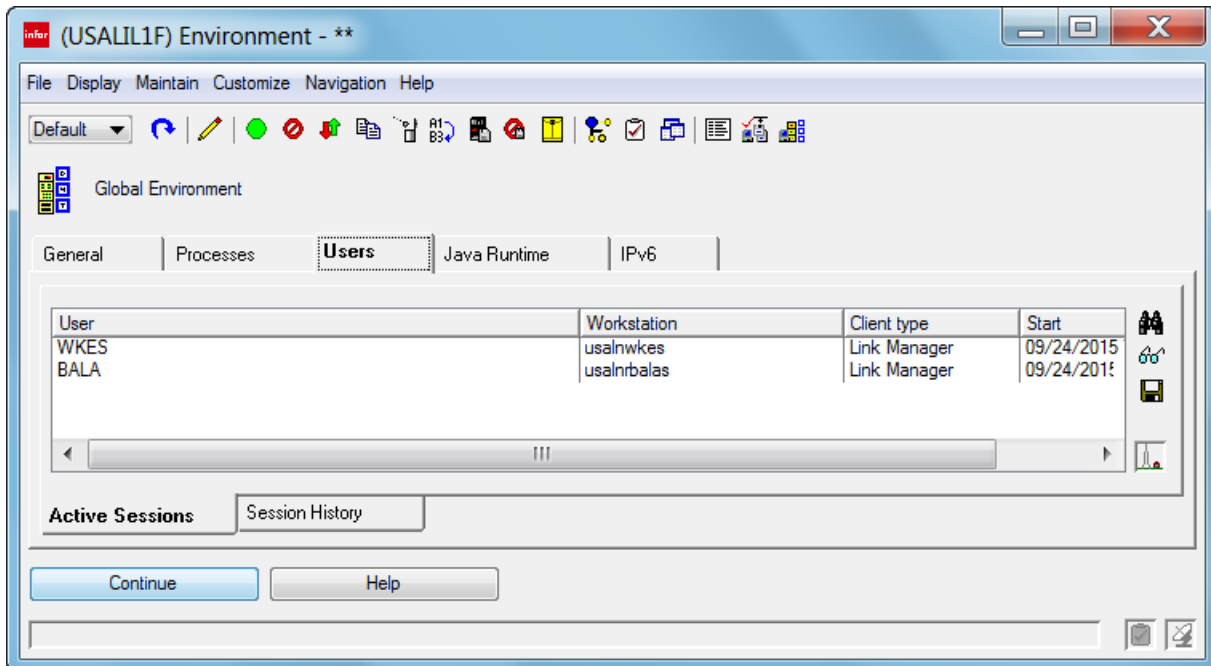
In addition, you can view the processes belonging to the Global Environment in the detailed environment information. The Global Environment process list can have up to four types of processes. The Naming Registry process, described above, is always present. The Fix Server, System-Link WebSphere MQ Adapter, and System-Link Infor ESB Adapter processes are present under particular conditions. For more information, see “Process types, instances, and ownership” on page 42.

From the Processes card in the detailed information for the Global Environment, you can work with processes belonging to that environment. The buttons on the side of the Processes card provide functions for viewing or changing information for any of the Global Environment processes, stopping a process, or starting a process. You can also create, delete, or copy a Fix Server process, which is the only process belonging to the Global Environment for which you can perform those actions.

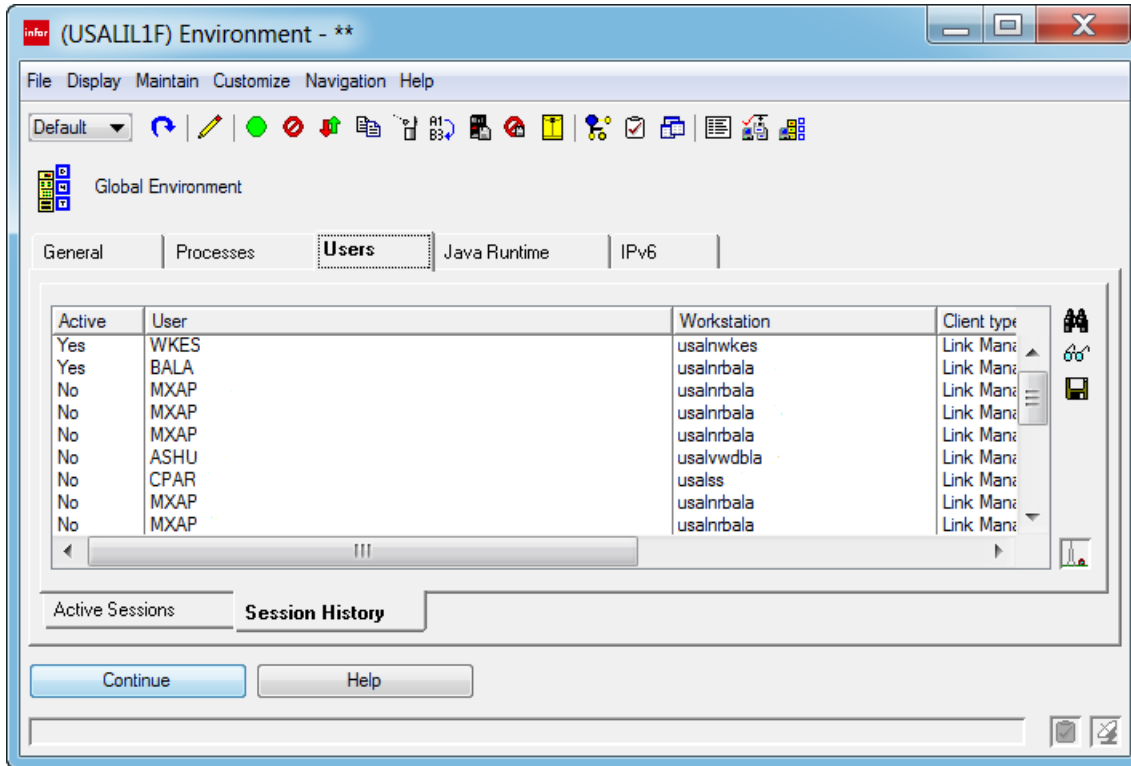


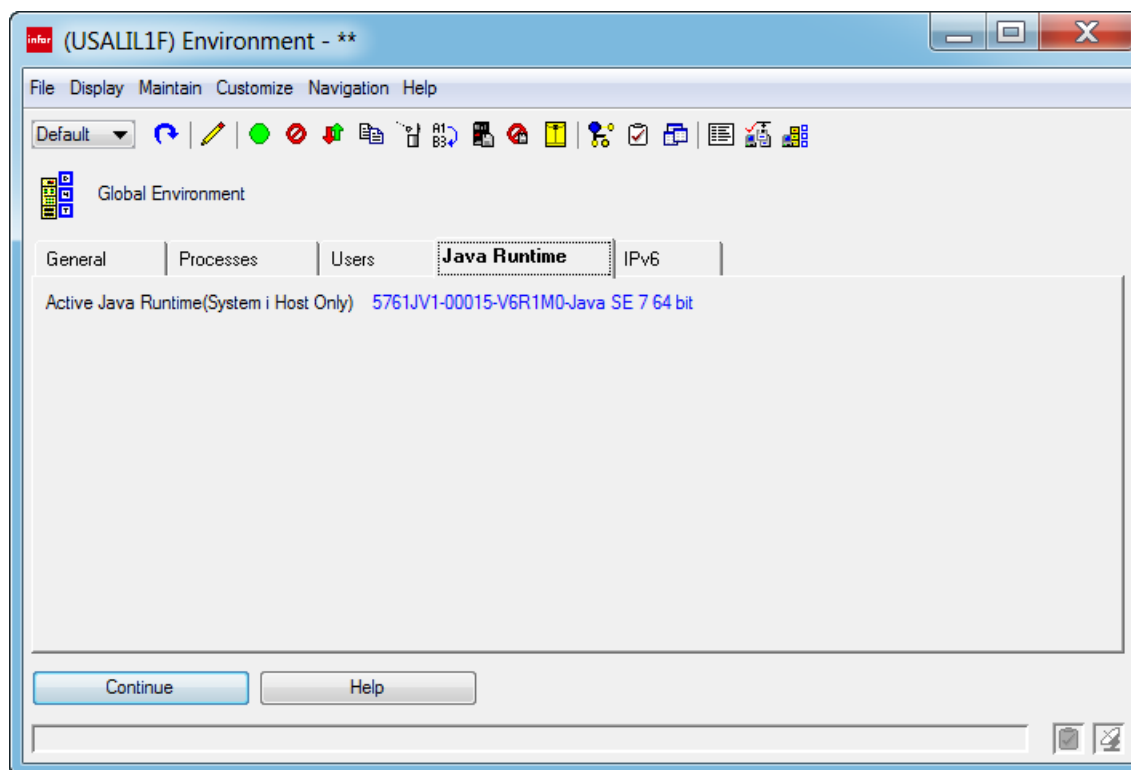
The Users card shows information about users who have logged in to the Global Environment. Any user logged in to Link Manager is automatically logged in to the Global Environment.

The **Active Sessions** tab shows information about users currently logged in to the Global Environment.



The **Session History** tab shows information about users who have logged in to the Global Environment during the range of time for which the environment keeps records of user activity. The range of time is the value entered in the **Days to retain environment history** option on the General card. For example, if the Days to retain environment history value is set to the default value of 30 days, the **Session History** tab contains a record for each user login to the Global Environment in the past 30 days.





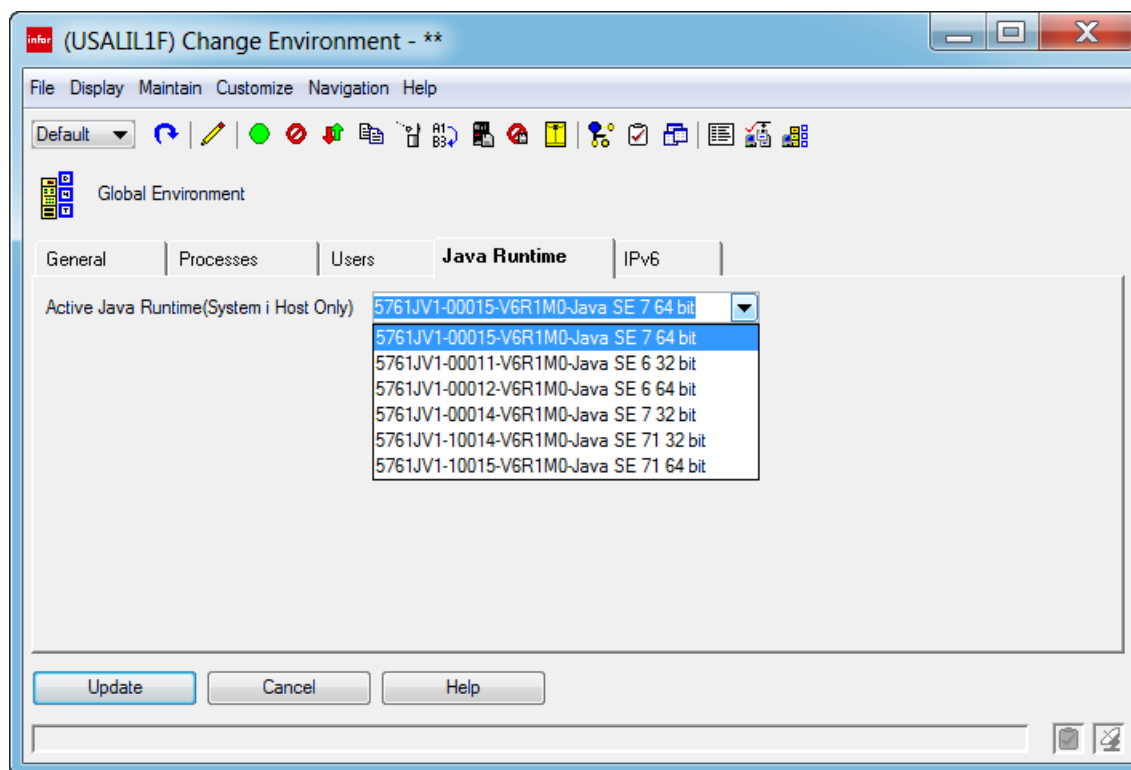
The Java Runtime card shows which Java Runtime is actively running on the System i Host environment. The Java Runtime card and the Java Runtime property are used only for processes set to run on System i Host. This property does not have any effect on processes running on Auxiliary Machines.

When on the Change Environment screen, you can select a Java Runtime execution (JRE) version for all XA Java clients and server processes to execute. These Java versions are supported for selection:

- Java Developer Kit 1.4 (Classic)
- Java 1.6 (32 bit)
- Java 1.6 (64 bit)
- Java 1.7 (32 bit)
- Java 1.7 (64 bit)

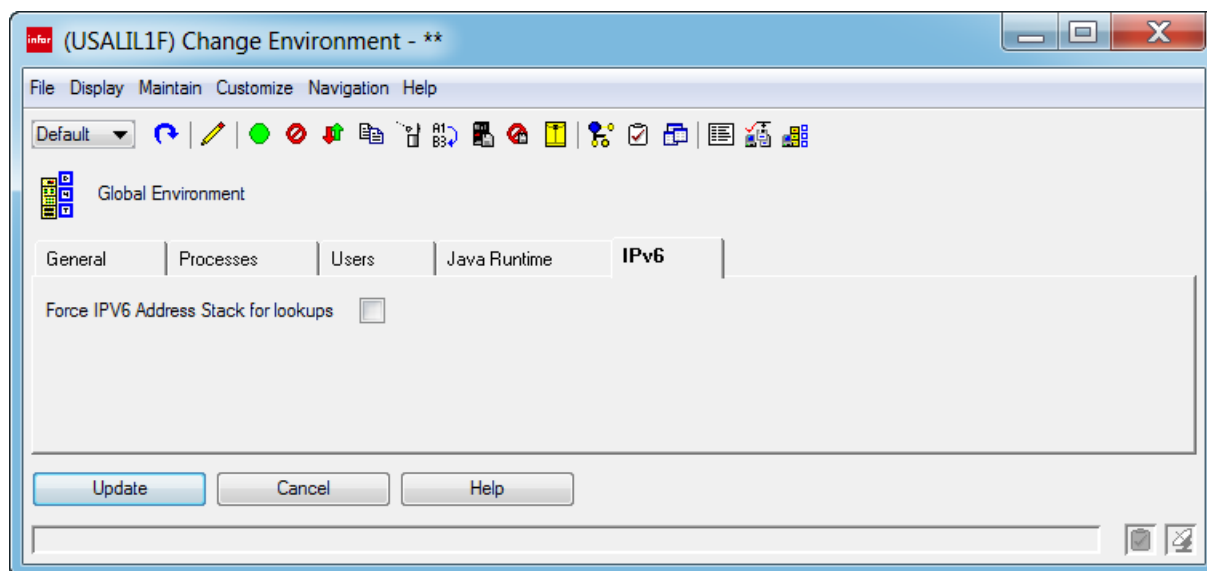
We recommend that you allow Link Manager to determine the highest valid JRE for your system.

Note: If changes are made to the JRE, you must restart the Global Environment.



The IPv6 card shows whether IPv6 Address Stack forces lookups or not. In the Change Environment window, you can select the Force IPv6 Address Stack for lookups check box to force lookups. In the Environment window, a Yes displays where the check box is located. The default action is No, which means IPv6 address stack does not force lookups.

Note: When you change the **Force IPV6 Address Stack for lookups** option, you must restart the Global Environment. Restarting Global Environment ensures that the processes are switched and that MPXMGRSRV and MPXREGSRV use the correct option for address lookup. IPv6 is used only for processes set to run on System i Host. The **Force IPV6 Address Stack for lookups** option does not have any effect on processes running on Auxiliary Machines.



The Global Environment is represented on the System i host machine as two jobs in the QUSRWRK subsystem: MPXREGSRV and MPXMGRSRV. These two jobs must be started before any of the processes in the host system can run. If you log in to Link Manager before the Global Environment has been started, you will be prompted to start the Global Environment, which starts the MPXREGSRV and MPXMGRSRV jobs. Once started, these jobs remain running in the QUSRWRK subsystem at all times. Alternatively, you can start the MPXREGSRV and MPXMGRSRV jobs by starting the MAPICS Java Servers (PSVJUP) UJOB for any Infor ERP product environment in the host system. This action also starts the Global Environment.

Infor ERP Product environments

While a host system has only one Global Environment, it can have one or more Infor ERP product environments, with the processes belonging to the Infor ERP product environments distributed across the host machine and any auxiliary machines in the host system. Each Infor ERP product environment can have a different configuration of processes, depending on the Infor ERP product applications installed and the data maintained in each environment.

To add a new Infor ERP product environment to Link Manager, you must first create the environment on the System i host machine, then use the **Import Environment** option in Link Manager. You must restart the System i host machine in Link Manager to make the new environment available in the Environments object. To delete an environment, you use options on the Environment Support menu (AMZMXC), which is available from the Main Menu (AMZM00) running on the System i host machine.

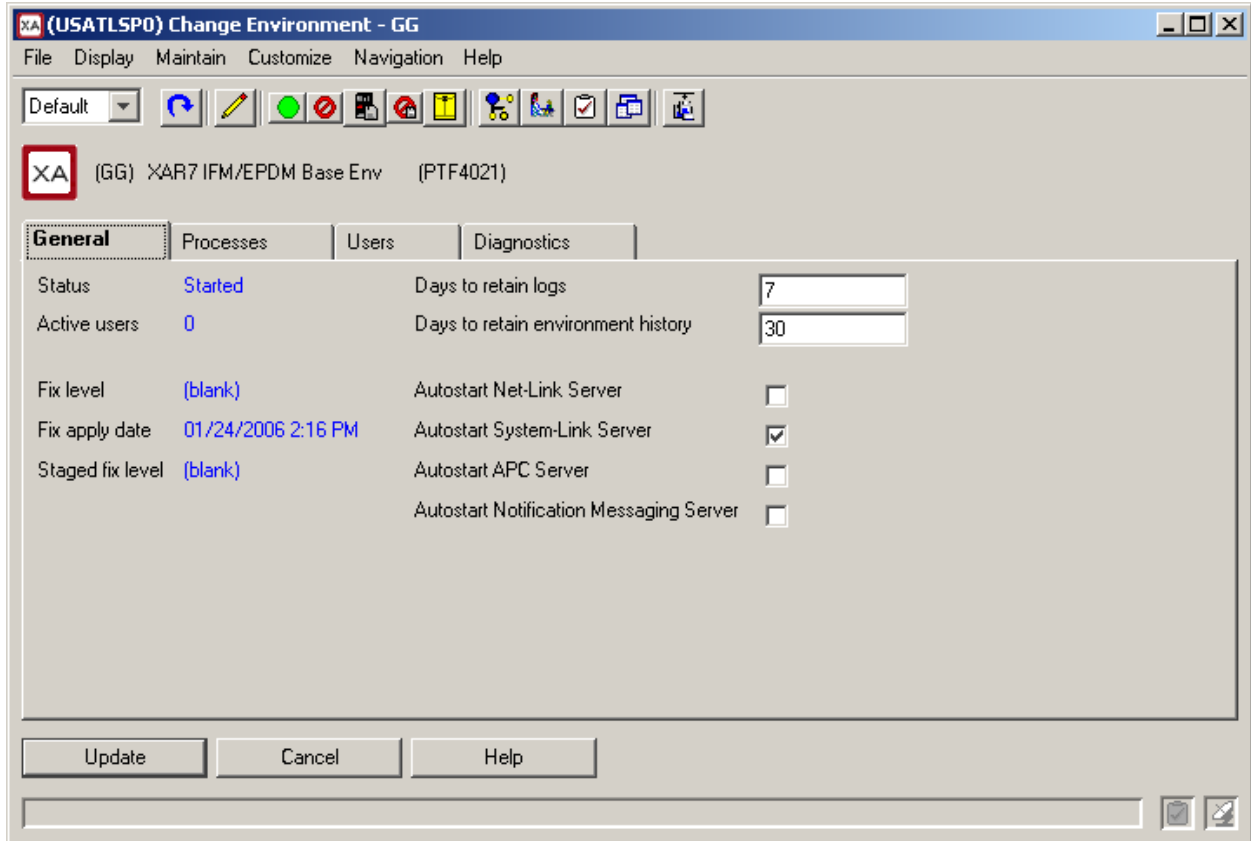
Infor ERP product environments can be created from an existing product environment, see “Copying an environment” on page 35 for more information.

ID	Description	Users	Fix level
**	Global Environment	2	02.07.07.41.00
22	XAR7 IFM/EPDM NUGGETS PUT ENV	0	02.07.07.41.00
A0	INTEGRATOR CLASS TEAM0	0	02.07.07.40.00
A1	INTEGRATOR TEAM 1	0	02.07.07.40.00
A3	INTERGRATOR CLASS TEAM2	0	02.07.07.40.00
A4	INTEGRATOR CLASS TEAM4	0	02.07.07.40.00
A5	INTEGRATOR CLASS TEAM5	0	02.07.07.40.00
A6	INTEGRATOR CLASS TEAM6	0	02.07.07.40.00
A7	INTEGRATOR CLASS TEAM7	0	02.07.07.40.00
A8	INTEGRATOR CLASS TEAM8	0	02.07.07.40.00
AA	MPower Conference 2005	0	02.07.07.40.00
GG	XAR7 IFM/EPDM Base Env (PTF4021)	0	02.07.06.40.08

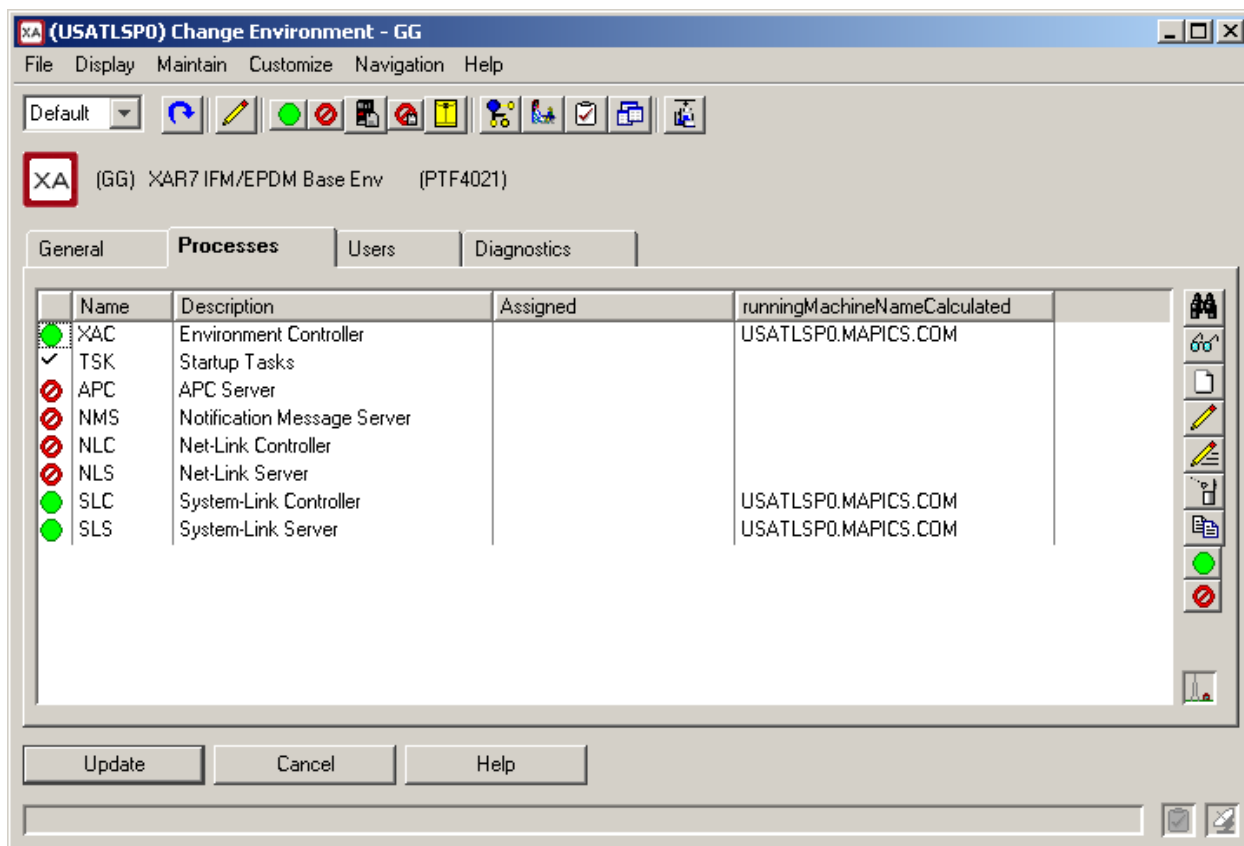
Infor ERP product environments must be created on the System i host machine. After an Infor ERP product environment has been created, you must import the environment into Link Manager and restart the System i host machine to make the imported product environment available in the Environments object in Link Manager.

When an Infor ERP product environment has been made available in the Environments object, you can maintain options specifying how long you want to save information about sessions in this environment. On the General card, the **Days to retain logs** option lets you indicate the number of days to save log files generated by the processes belonging to the Infor ERP product environment. The **Days to retain environment history** option lets you indicate the number of days to save information about tasks that were run for this environment and users who logged in to the environment. As with the Global Environment, this retained information can be helpful for resolving problems but the amount saved must be balanced with the amount of system storage you want to allocate to holding the log and history files for the environment.

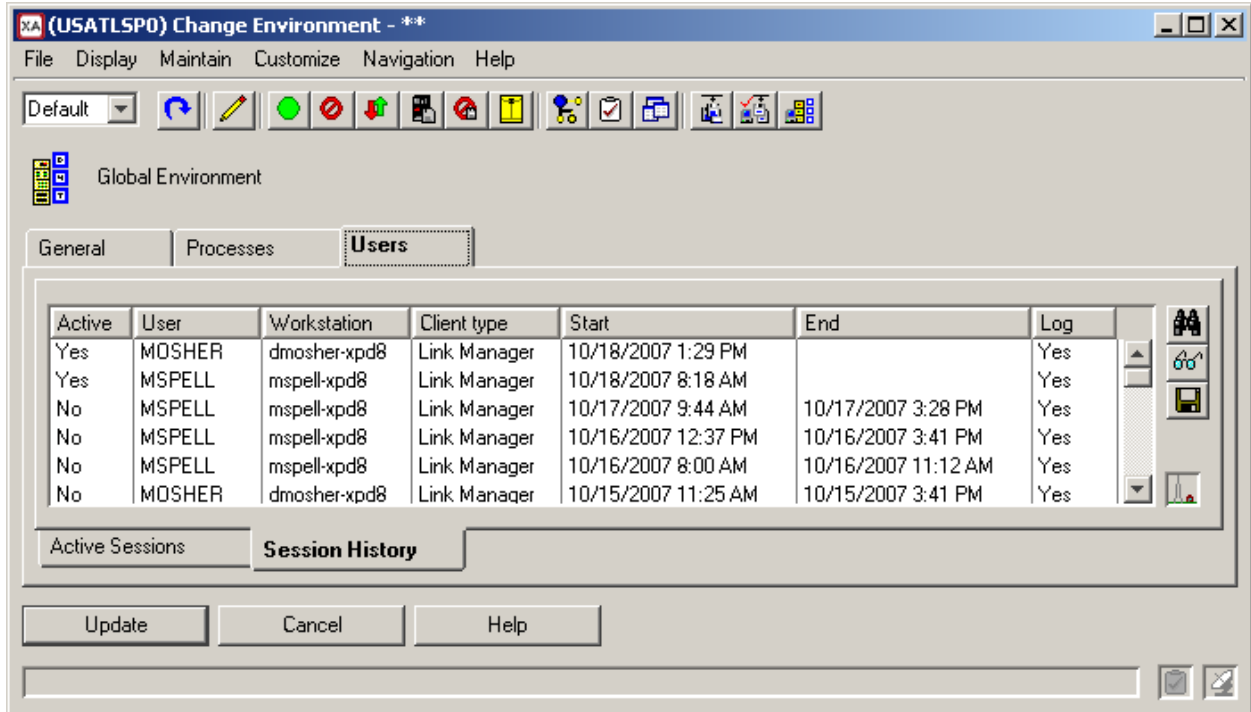
Additional options on the General card allow you to choose whether to start any of the environment's optional processes automatically. Depending on what Infor ERP products are installed for the environment, you can automatically start the Net-Link Server, System-Link Server, APC Server, or Notification Message Server processes. These options give you the ability to start the processes that run frequently used Infor ERP products automatically when the environment starts. For Infor ERP products that are not as frequently used, you can save processing power by not starting those processes automatically. For example, if you know that you will have users traveling and working remotely through Net-Link, you can select the **Autostart Net-Link Server** option for the Infor ERP product environment being used. When your users are not traveling and are normally working through Power-Link, you can turn off the **Autostart Net-Link Server** option.



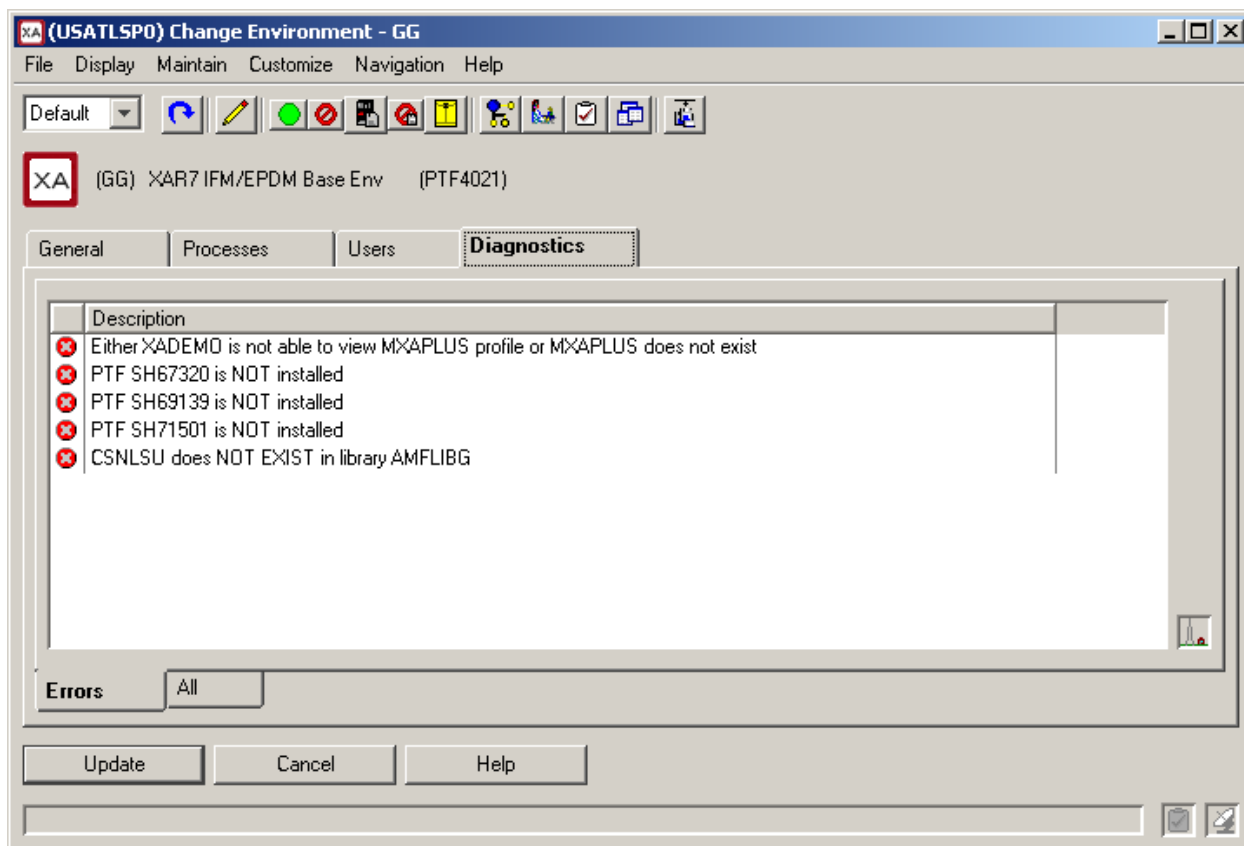
The Processes card in the detailed information for an Infor ERP product environment allows you to work with processes belonging to that environment. The buttons on the side of the Processes card provide functions for viewing or changing information for any of the environment processes, stopping a process, or starting a process. You can also create, delete, or copy a Net-Link Server or a System-Link Server process, which are the only processes in an Infor ERP product environment for which you can perform those actions.



The **Session History** tab shows information about users who have logged in to the Infor ERP product environment during the range of time for which the environment keeps records of user activity. The range of time is the value entered in the **Days to retain environment history** option on the General card. For example, if the Days to retain environment history value is set to the default value of 30 days, the **Session History** tab contains a record for each user login to the Infor ERP product environment in the past 30 days.



The Diagnostics card shows system diagnostic messages for the environment. The messages can help determine if the environment has been set up correctly and contains information useful when working with Infor Xtreme Support to identify and resolve problems. The **Errors** tab contains messages from diagnostic checks that failed for the environment. The **All** tab contains messages from both successful and failed diagnostic checks.



Link Manager provides you with tools for viewing the status of each Infor ERP product environment in the host system. From Link Manager, you can see which users are currently authorized to an environment, the tasks pending for the environment in the event queue on the host machine, the users currently logged in to the environment, and information about the PTF level updates applied to the environment.

Link Manager also provides tools for managing the Infor ERP product environments currently in the host system. For those Infor ERP product environments that have been imported into Link Manager, you can use Link Manager to start or stop an environment, apply PTF level updates, and package a model of the environment for troubleshooting purposes.

Managing environments

Link Manager provides a single place to manage all environment aspects for both the server and client, which includes copying, renaming, and deleting environments.

You must be authorized to maintain the business environments before you can copy, rename, or delete environments. This authorization is setup via the Cross Application Systems (CAS). In CAS, you must have these authorities to run the tasks:

- *ALLOBJ

- *SECADM

Copying an environment

You can use the **Copy** option to copy a set of libraries and data from an existing environment into a new environment.

Note: You need to be authorized to maintain the business environment in CAS and have access to both Maintain JAVA Server controls and Copy Environment tasks.

To copy an environment:

- 1 From the Environments list window, select the environment for copying.
- 2 Select **Maintain > Copy**.
- 3 Specify this information:

New Environment ID

Specify the ID for the new environment. The second character has to be unique from those used by the current environments. For example, you have existing environments XX, AA, and BB. You are copying AA. You can name the new environment AC, A2, AY, etc., but not AB or AX.

Description

Specify a purpose that provides other explanatory information for the environment.

- 4 Click **Continue**. If you selected the **Auto advance** option, the next environment you selected appears on the Copy dialog. If you decide not to copy this environment, use the **Bypass** button to skip to the next environment in your selection or use the **Cancel** button to return to the Environments list window.
- 5 When copied has been made and the environment has been successfully started, users can log into the environment.

Renaming an environment

You can use the **Rename** option to rename an existing environment.

Note: You need to be authorized to maintain the business environment in CAS and have access to both Maintain JAVA Server controls and Rename Environment tasks.

To rename an environment:

- 1 From the Environments list window, select the environment for renaming.
- 2 Select **Maintain > Rename**.
- 3 Specify this information:

New Environment ID

Specify the ID for the environment. The second character has to be unique from those used by the current environments. For example, you have existing environments XX, AA, and BB. You are copying AA. You can name the new environment AC, A2, AY, etc., but not AB or AX.

Description

Specify a purpose that provides other explanatory information for the environment.

Delete/recreate IDF journal

Select the check box to delete and recreate the IDF journal.

- 6 Click **Continue**. If you selected the **Auto advance** option, the next environment appears on the Rename dialog. If you decide not to rename this environment, use the **Bypass** button to skip to the next environment in your selection or use the **Cancel** button to return to the Environments list window.
- 7 When the rename has been applied and the environment has been successfully started, users can log into the environment.

Deleting an environment

You can use the **Delete** option to delete an environment from your system.

If the environment you select for deletion is part of an environment structure where several data bases share a single program library, then the program libraries are not deleted. For example, if you have the AB and AC environments on your system, and you select the AC environment for deletion, the program library AMALIBA is not deleted from your system because it is still part of the AB environment.

Note: You need to be authorized to maintain the business environment in CAS and have access to both Maintain JAVA Server controls and Delete Environment tasks.

To delete an environment:

- 1 From the Environments list window, select the environment for deleting.
- 2 Select **Maintain > Delete**.
- 3 On the Delete Environments dialog, click **Continue**. If you selected the **Auto advance** option, the next environment appears on the Rename dialog. If you decide not to rename this environment, use the **Bypass** button to skip to the next environment in your selection or use the **Cancel** button to return to the Environments list window.

Installing the Host Presentation Server Process

For System i host machines, the Host Presentation Server (HPS) process must be installed for the selected environment.

To install the process:

- 1 In Environments, select the environment in which to install the HPS.
- 2 Select **Display > Installed Applications**.
- 3 Select the Host Presentation Server application.
- 4 Select **Maintain > Change**.
- 5 On the Changed Installed Applications card file, select the **Installed** attribute on the General card to install the Host Presentation Server for the environment.
- 6 Click **Update**.

After the Host Presentation Server has been installed, the process is visible in Link Manager and the IDF Level 1 application icons are visible in Power-Link.

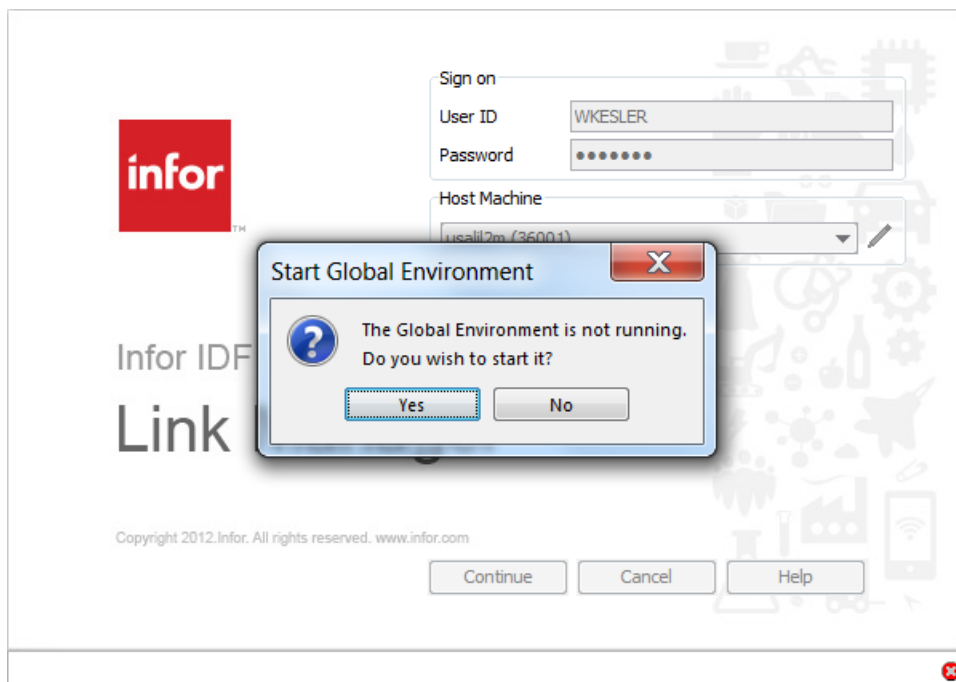
Starting environments

Link Manager gives you convenient, centralized control for starting the environments in the host system. From the Link Manager log on dialog, you can start the Global Environment. From both the Status and the Environments objects, you can start any of the Infor ERP product environments in the host system.

Starting the Global environment

Before any other environments in the host system can be started, the Global Environment must be started on the System i host system. The Global Environment represents two jobs that run in the QUSRWRK subsystem, MPXREGSRV and MPXMGRSRV. These two jobs must be active and have entered a JVAW status in order for the Link Manager processes to be started.

In most cases, if the Global Environment is not started, Link Manager prompts you to start the Global Environment automatically during the log on process. Depending on the processing capacity of the host system, starting the Global Environment might take a short while.

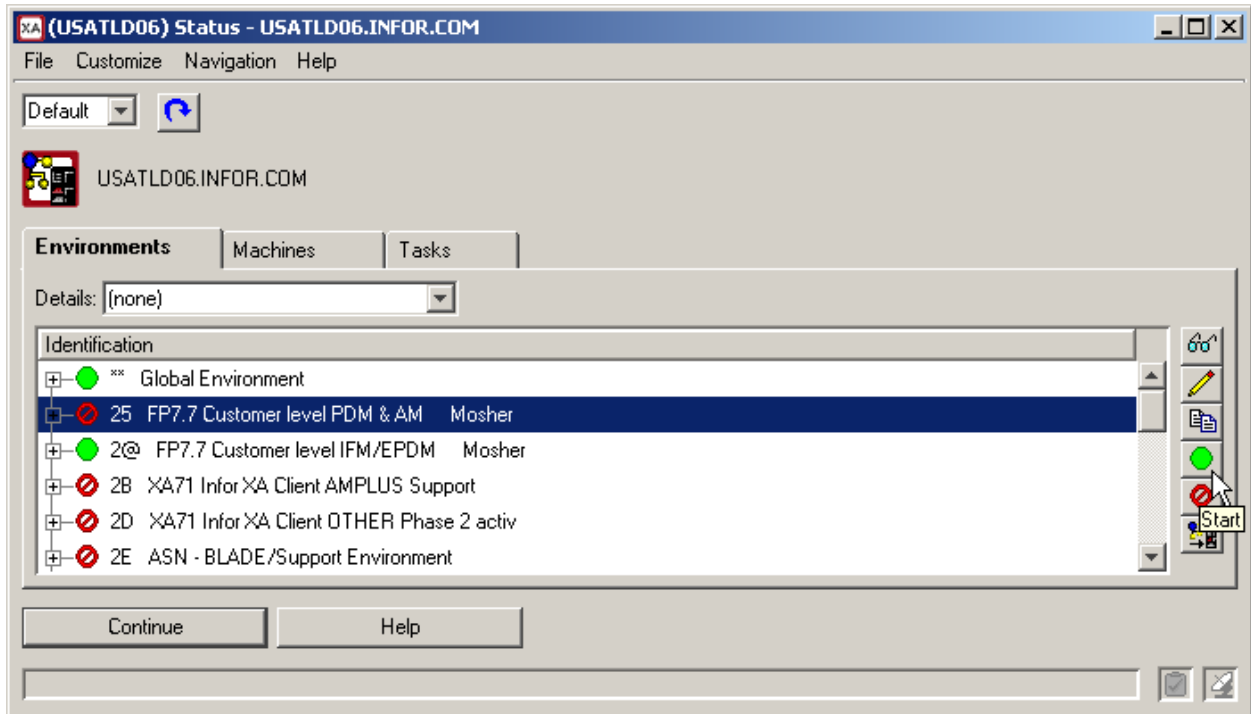


If you have a situation that requires you to start the Global Environment outside of Link Manager, you can do so by starting the IDF Java Servers (PSVJUPxy) UJOB on the System i host machine for any Infor ERP product environment in the host system. Starting the PSVJUPxy UJOB starts the MPXREGSRV and MPXMGRSRV jobs, which is equivalent to starting the Global Environment through Link Manager.

Note: In the job name PSVJUPxy of the IDF Java Servers, xy represents the two-character Infor ERP product environment. Link Manager requires a two-character identifier for all environments in the host system. If the environment is known within the Infor ERP product by a two-character identifier, Link Manager uses that identifier for the environment. If not, you assign a two-character identifier to the environment when you import it into Link Manager, either during the installation of the Infor Development Framework or by importing an individual environment.

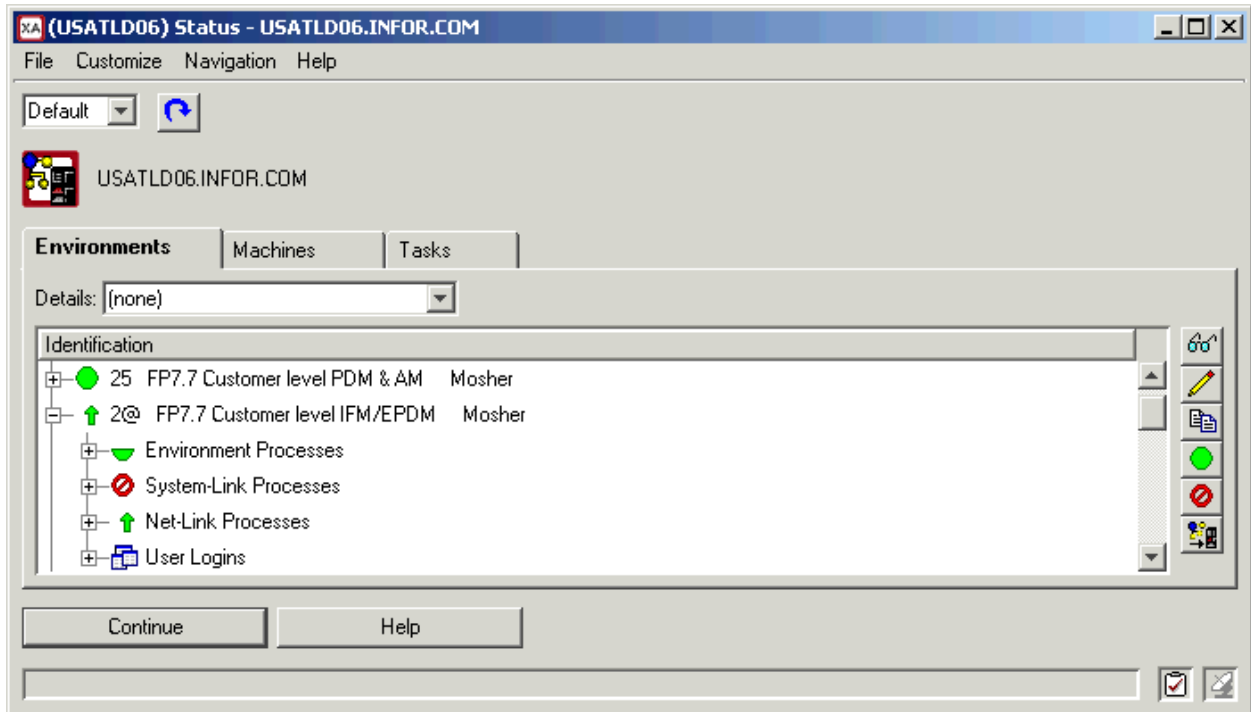
Starting Infor XA product environments

When the Global Environment has been started, you can use Link Manager for a quick, one-click way to start any of the Infor ERP product environments in the host system. An environment must be started before users can log on to that environment. While you might have automated processes set up on the host system to start those environments that your users regularly need, you might have other environments that you start on a less regular basis. For example, if you have an Infor ERP product environment that your users need occasionally for testing purposes, you could start that environment quickly from Link Manager whenever your users requested it. From the Status object, on the Environments card, you would select the stopped environment that your users need to use, and then click the **Start** button the right side of the card.

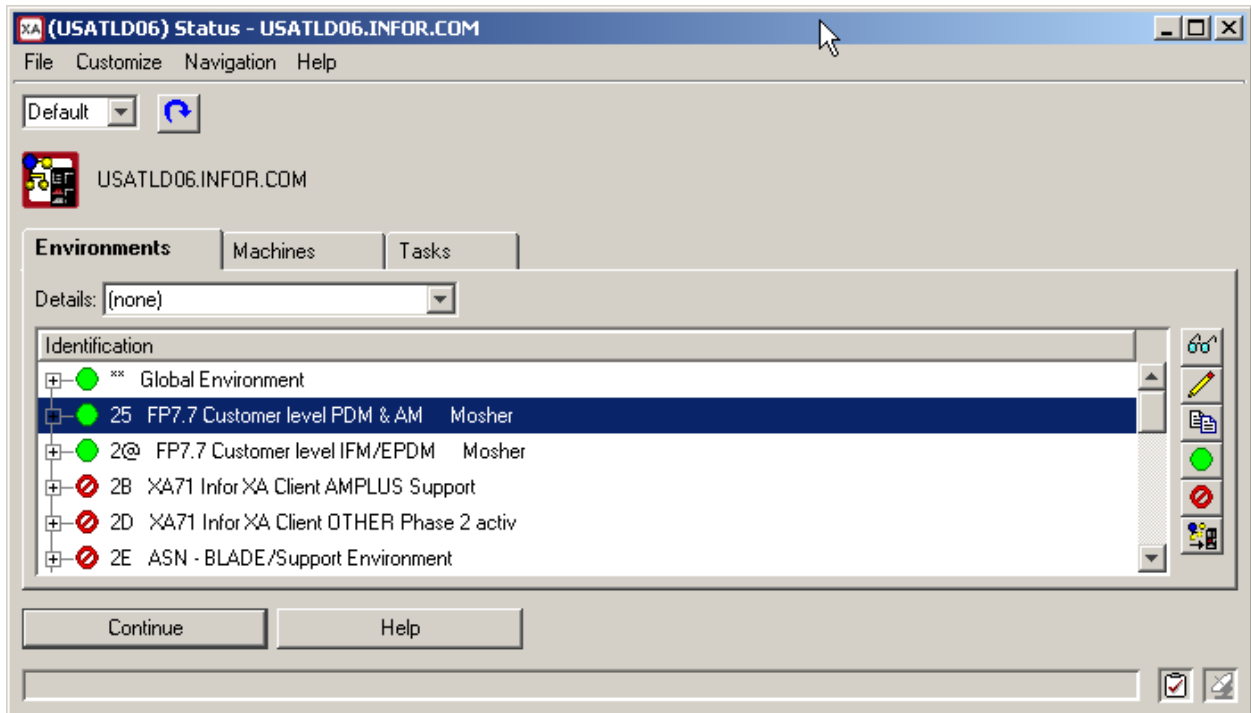


While the environment is starting, the icon next to the environment ID changes from the red circle icon to a green arrow pointing upward. When you expand the environment information by clicking the plus sign next to the environment ID, you can see the start-up status of the types of processes for that environment. Starting an environment also starts the required processes for that environment. In the following example, the Environment Processes are partially started and the Net-Link Processes are starting. To see the start-up status for specific processes, you can expand the information for each type of process.

Link Manager refreshes the information on the Environments card as the environment startup progresses. You can click the **Refresh** button, located next to the card file list selection, whenever you want to see updated status information for the environment startup.



When the environment is started and ready for users to log in, the status icon next to the environment ID changes to a green circle.



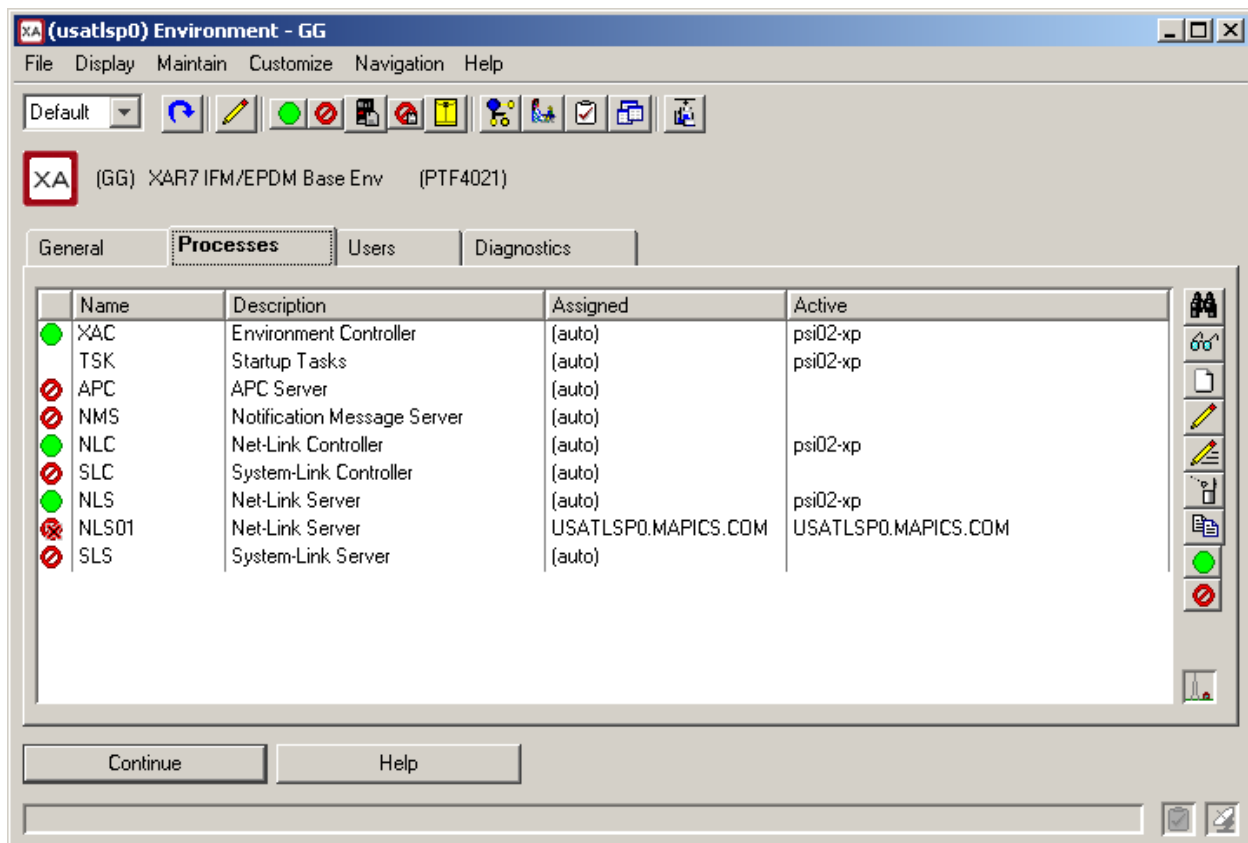
At this point, you could send a message through the Client Messages object to alert the users who need the environment that the environment is now available.

Understanding environment processes

The set of processes required to support the Global Environments and one or more Infor ERP product environments can be spread across all of the machines in the host system. A machine can support several different environments, as can certain types of servers. Link Manager provides visibility and quick access to this system of interconnected machines, environments, and processes.

With the Processes object in Link Manager, you can view and work with all of the processes defined for an environment and the machines on which the processes are located. The environments set up on the host machine, the processes required to operate these environments, and the host and auxiliary machines on which the processes run comprise the host system.

From a selected environment in the host system, Link Manager shows you the processes installed for use with that environment and the machines on which the processes are located.



In this example, environment GG has one of each of the possible types of processes, but only the Environment Controller, Net-Link Controller, and Net-Link Server have been started and are running, as indicated by the green circle icons shown next to these processes. The other processes are stopped, as indicated by the red circle icons.

Process types, instances, and ownership

The host system can contain various types of processes, depending on which Infor ERP products are installed, and whether the processes have none, one, or multiple instances. Each type of process belongs to either the Global Environment or to an Infor ERP product environment.

Process types are categories of software server instances. Not all process types are used for an environment; which processes are used depends on which Infor ERP products are installed. Determining the optimal arrangement of process types on the machines available in the host system is an automatic function of Link Manager.

A **process instance** is the actual job running on the host machine or the auxiliary machine. Some types of processes can have only one instance per host system. Other process types can have one instance per environment on the host system. Still other process types can have multiple instances per environment. The detailed descriptions below for each type of process indicates how many instances of that process can be running on the host system.

The **ownership** of a process type indicates under which type of environment the process runs. Some process types run under the Global Environment. Other process types only apply to Infor ERP environments.

The specific collection of processes in a host system depends on the number of environments, the Infor ERP products installed in those environments, the number process instances defined for each environment, and the number of machines available in the host system.

Types of Global environment processes

The Global environment can contain the following types of processes. The processes in this environment will vary depending on the Infor ERP products installed and the setup of the host system.

Naming Registry (NAM)

The Naming Registry (NAM) process acts as a central hub for all of the Infor ERP product environments in the host system. Through the Naming Registry process, Link Manager distributes code through an internal web server. The Naming Registry process is also the entry point, through the web server, for the Net-Link and System-Link products.

The host system contains one Naming Registry process. The Naming Registry process must be located on the host machine and must be running before any other processes in the host system can be started. However, after other processes have started, the Naming Registry process can be stopped and restarted without having to restart any environment processes. When an Infor ERP product environment starts, Link Manager registers that environment with the Naming Registry process.

Fix Server (FIX)

The Fix Server (FIX) process is the means by which Link Manager distributes Infor ERP product code to remote sites. Link Manager tracks the level of Infor ERP product code installed for each Infor ERP product environment in the host system and the level of Infor ERP product code the users in the host system are running on their workstations. The Fix Server process comes into use when users at a remote site need to download an updated version of Infor ERP product code. A Fix Server process, located on an auxiliary machine at the remote site, is the location for a one-time download of the updated code from the primary site. After the updated code has been downloaded to the Fix Server process on the auxiliary machine, users at the remote site can download the updated code efficiently from their local Fix Server process instead of from the primary site.

By default, the Global Environment has one Fix Server process. You add additional Fix Server processes by copying this original Fix Server process. The Fix Server processes should be located on auxiliary machines. For more information on using Fix Servers, see “Using Fix Servers for remote updates” on page 80.

System-Link Infor ESB Adapter (IBA)

The System-Link Infor ESB Adapter (IBA) process allows an Infor ERP product, through System-Link, to connect to other products that use the Infor Enterprise Service Bus. Information from the Infor ERP product is transformed into XML in System-Link, then sent to and received from other products through the Infor Enterprise Service Bus.

The host system can have only one System-Link Infor ESB Adapter. This process can be located on an auxiliary machine.

System-Link WebSphere MQ Adapter (MQA)

The System-Link WebSphere MQ Adapter (MQA) process provides the set of functions that allows external programs to connect to System-Link through IBM WebSphere MQ. This process applies only if System-Link is licensed and installed for an Infor ERP product environment in the host system and if IBM WebSphere MQ Series is installed in the host system.

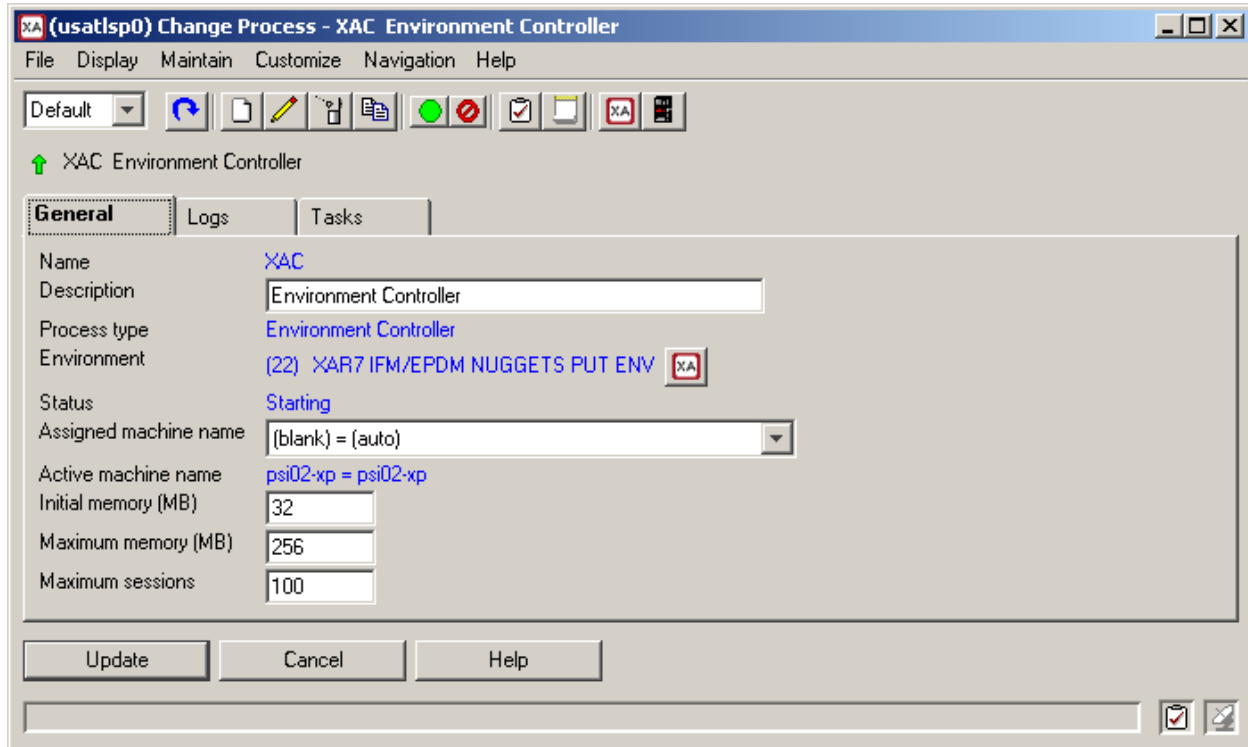
The host system can have only one System-Link WebSphere MQ Adapter. This process can be located on an auxiliary machine.

Types of Infor XA product environment processes

An Infor ERP product environment can contain the following types of processes. The number and types of processes in an Infor ERP product environment will vary depending on the Infor ERP products installed and the setup of the host system.

Environment Controller (XAC)

The Environment Controller (XAC) process controls access to the environments in the host system. An environment has one Environment Controller process and this process can be located on an auxiliary machine.



The Environment Controller is the initial process for an environment; all of the other Infor ERP product environment-level processes are dependent on the Environment Controller. The Environment Controller must be running before any of the other environment-level processes (Startup Tasks, APC Server, Notification Message Server, Net-Link Controller, Net-Link Server, System-Link Controller, System-Link Server) can be started. Similarly, when the Environment Controller is stopped, all of the dependent processes are also stopped.

If an environment has a Startup Tasks process, the Environment Controller cannot allow any other environment processes to run until the Startup Tasks process has run and completed successfully. Starting the Environment Controller automatically causes the Startup Tasks process to run. While the Startup Tasks process is running, the Environment Controller process shows a status of Pending. When the Startup Tasks process has completed successfully, the status for the Environment Controller changes to Running. At this point, the Environment Controller can allow other environment processes to start.

Startup Tasks (TSK)

The Startup Tasks (TSK) process is the only process among the processes belonging to Infor ERP product environments that starts, runs, and completes before any dependent processes can be

started. For example, a task can be set up to make updates to the environment that are required by code fixes that have been delivered to the host machine.

Each Infor ERP product environment can have one instance of this process. It can be located on an auxiliary machine.

APC Server (APC)

The APC Server (APC) process contains the set of functions that must be active in order to use the Advanced Product Configurator (APC) application. This process is used if APC is licensed and installed for an environment.

An Infor ERP product environment can have one instance of this process. It can be located on an auxiliary machine.

Notification Message Server (NMS)

The Notification Message Server (NMS) process provides the functions that are required to use the Subscriptions and Notifications functions in Enterprise Integrator. (These functions are also known as Publish and Subscribe.) For an extendable object created in Integrator that uses a maintenance method other than direct SQL, you can set up subscriptions to notify users of certain events (Create, Update, and Delete) identified as a subscription for the object. The Notification Message Server handles the notifications when a subscribed event occurs; for example, issuing an e-mail message, sending a text message to a mobile phone, issuing a host program call, or issuing a System-Link request. This process is available if Enterprise Integrator is licensed and installed in the environment.

An Infor ERP product environment can have one instance of this process. It can be located on an auxiliary machine.

Net-Link Controller (NLC)

If Net-Link, the web browser client interface for Infor ERP products, is licensed and installed for an environment, the host system includes a Net-Link Controller (NLC) process. This process receives requests for Net-Link and directs the requests to the appropriate servers.

An Infor ERP product environment can have one instance of this process. It can be located on an auxiliary machine.

Net-Link Server (NLS)

The Net-Link Server (NLS) process contains the core functions required for Net-Link to operate. By default, when Net-Link is licensed and installed, the host system includes one Net-Link Server process. However, you can create additional instances of this process to distribute the Net-Link processing more widely on the host system. Net-Link Server processes can be located on auxiliary machines.

System-Link Controller (SLC)

The System-Link Controller (SLC) process is similar to the Net-Link Controller process. The host system includes this process if System-Link, the XML-based client interface for Infor ERP products, is licensed and installed for an environment. This process receives requests for System-Link and directs the requests to the appropriate servers.

An Infor ERP product environment can have one instance of this process. It can be located on an auxiliary machine.

System-Link Server (SLS)

The System-Link Server (SLS) process is similar to the Net-Link Server process. This process contains the core functions required for System-Link to operate. By default, when System-Link is licensed and installed, the host system includes one System-Link Server process. If you need to distribute the System-Link processing more widely on the host system, you can create additional instances of the System-Link Server process. System-Link Server processes can be located on auxiliary machines.

Summary of process types

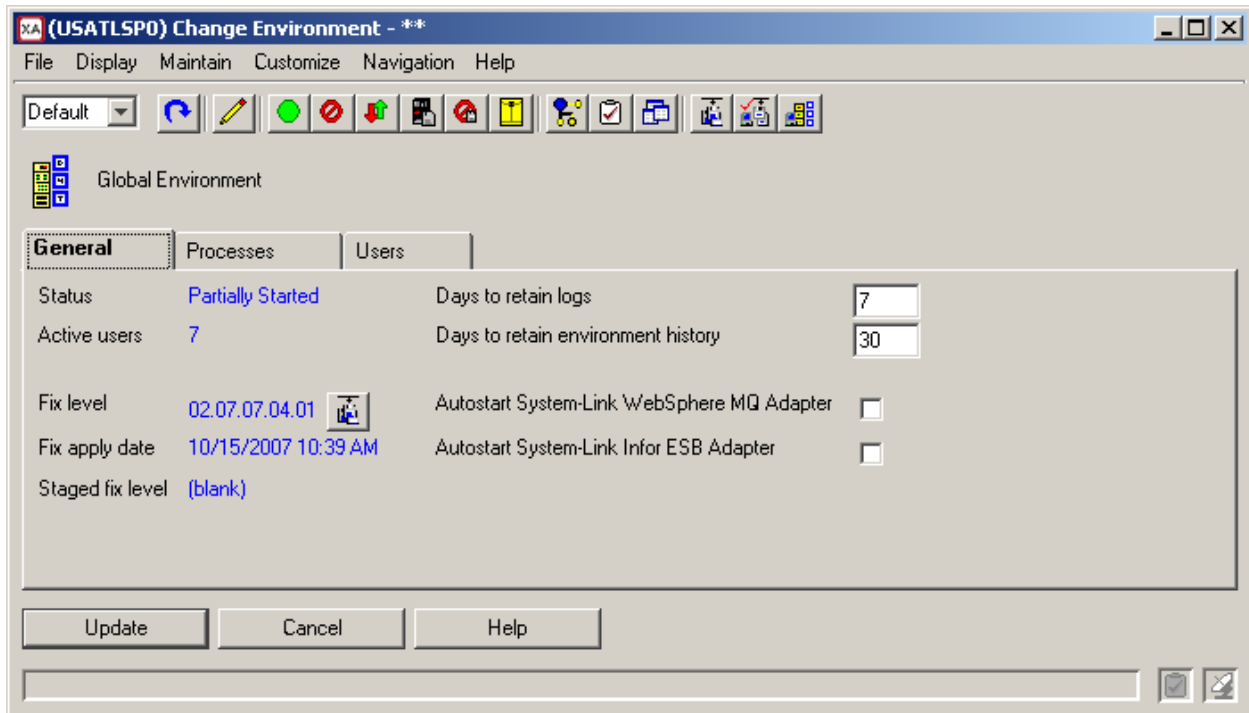
The following table shows a summary of the different types of processes that can be used in the host system, the machines to which those processes can be assigned, and the number of instances allowed for the process.

Type of process	Type of environment	Allowed on machine	Number of instances
Naming Registry (NAM)	Global environment	Host machine only	1
Fix Server (FIX)	Global environment	Auxiliary machine	Multiple
System-Link Infor ESB Adapter (IBA)	Global environment	Auxiliary machine	1
System-Link WebSphere MQ Adapter (MQA)	Global environment	Auxiliary machine	1
Environment Controller (XAC)	XA environment	Auxiliary machine	1
Startup Tasks (TSK)	XA environment	Auxiliary machine	1
APC Server (APC)	XA environment	Auxiliary machine	1
Notification Message Server (NMS)	XA environment	Auxiliary machine	1
Net-Link Controller (NLC)	XA environment	Auxiliary machine	1

Type of process	Type of environment	Allowed on machine	Number of instances
Net-Link Server (NLS)	XA environment	Auxiliary machine	Multiple
System-Link Controller (SLC)	XA environment	Auxiliary machine	1
System-Link Server (SLS)	XA environment	Auxiliary machine	Multiple

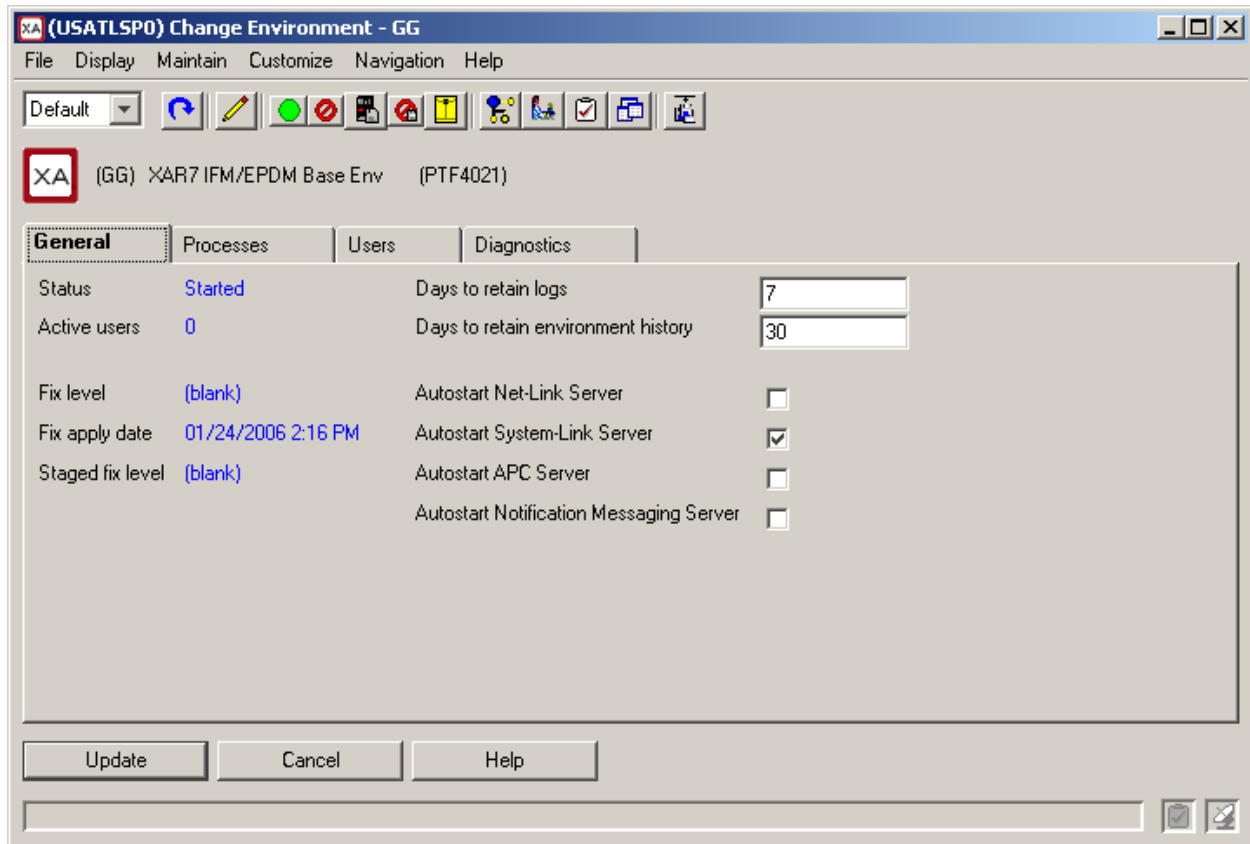
Starting and stopping processes

In most cases, the processes belonging to an environment start automatically when the environment starts. For the Global Environment, the Naming Registry process must start before any of the other processes can start. The Fix Server process starts automatically if it is present. For the System-Link WebSphere MQ Adapter and System-Link Infor ESB Adapter processes, the corresponding autostart options in the Global Environment determine whether or not these processes start automatically when the Global Environment starts.

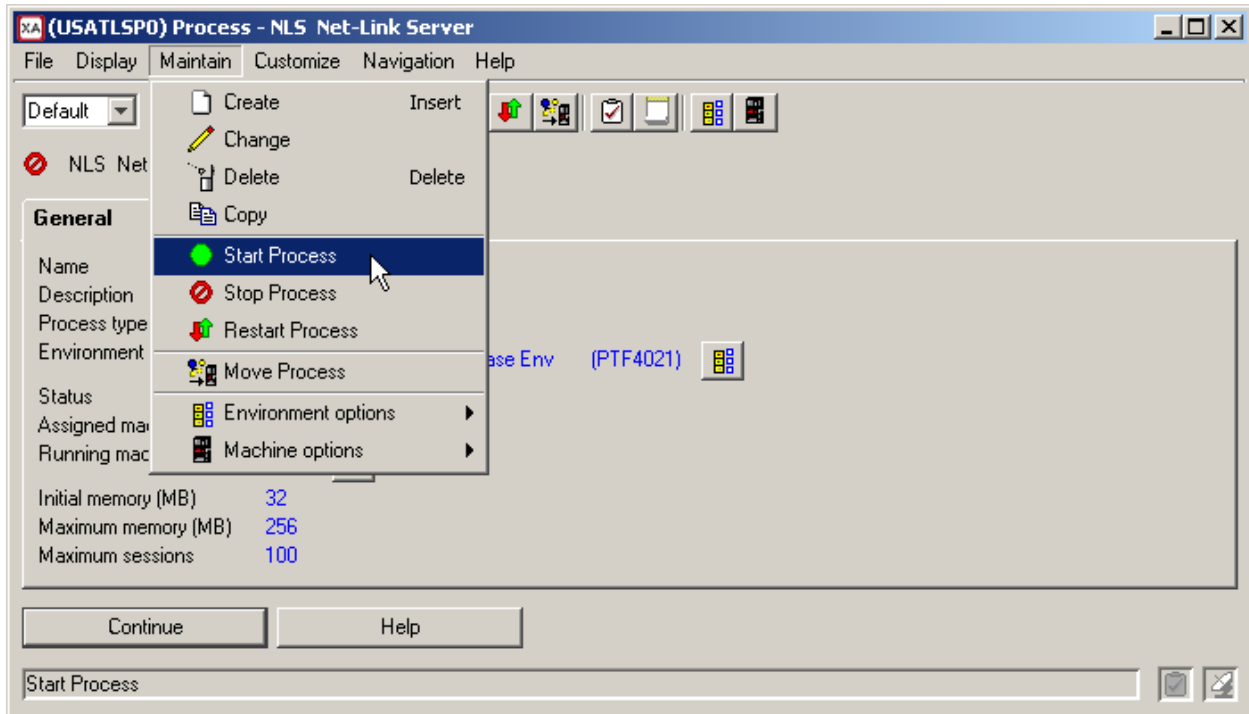


In an Infor ERP product environment, the Environment Controller and Startup Tasks processes start automatically when the environment is started. For the Notification Message Server, APC Server, Net-Link Server, and System-Link Server processes, Link Manager provides options at the environment level that allow you to choose whether or not these processes start automatically when the environment starts. These options allow you to have these processes running and available automatically when they are required, but also allow you to turn off the automatic startup when they

are not required. This level of control lets you keep the host system running efficiently by not starting and running these processes automatically if they are not needed.



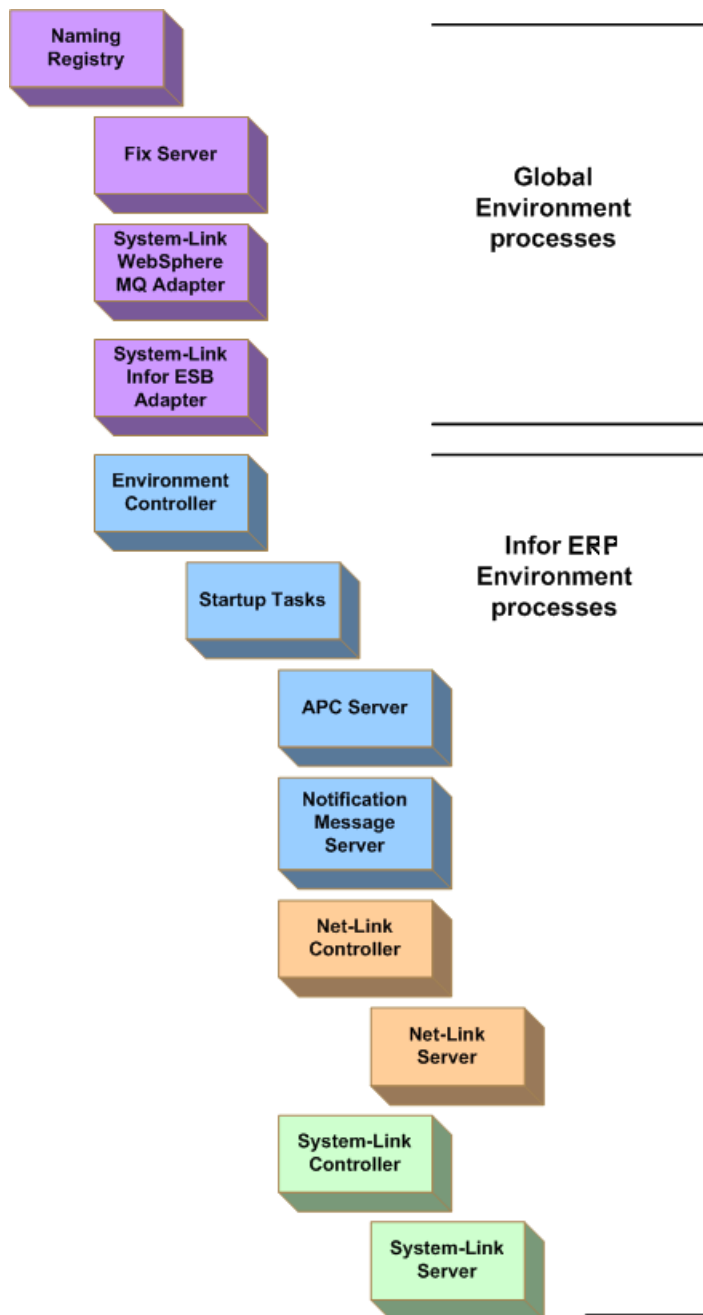
For those rarer cases where you need to start processes manually, Link Manager provides options to perform that task. For example, if you have some users who normally log in to an Infor ERP product environment through Power-Link, but who will be traveling and using Net-Link to access the environment, you can use Link Manager to start the Net-Link Server process to make Net-Link available while your users need the remote access capability of Net-Link. Note that starting the Net-Link Server process automatically starts the Net-Link Controller process.



Hierarchy of processes

Within the host system, a hierarchy of dependencies controls when each type of process can be started.

The diagram shows a single instance of all possible types of processes that can be installed within a host system. Note that some processes, such as Fix Server, Net-Link Server, and System-Link Server, can have multiple instances.



The hierarchy indicates the sequence in which processes start. A lower-level process cannot start until the process immediately higher in the hierarchy has been started. For example, no other process can start until the Naming Registry has been started. After the Naming Registry has started, the Fix Server, System-Link WebSphere MQ Adapter, System-Link Infor ESB Adapter, and Environment Controller processes can be started. The Environment Controller process must be started before the Startup Tasks process can start. Note that the Startup Tasks process is the only process that must start and end before any lower-level processes in the hierarchy can be started. After the Startup Tasks process has started and finished, the APC Server, Notification Message Server, Net-Link Controller, and System-Link Controller processes can be started. The Net-Link

Controller process must be started before the Net-Link Server process can start. Similarly, the System-Link Controller process must be started before the System-Link Server process can start.

The hierarchy works in reverse when stopping processes. If a higher-level process is to be stopped, the dependent processes lower in the hierarchy must be stopped. For example, if you stop the Environment Controller process, a warning message shows you a list of all of the lower-level processes (APC Server, Notification Message Server, Net-Link Controller, Net-Link Server, System-Link Controller, and System-Link Server) that will also be stopped.

Starting processes automatically

While the processes available in an environment depend on which products are installed for that environment, Link Manager starts the required processes in the Global Environment and an Infor ERP product environment automatically. For those processes that you might use intermittently, Link Manager provides options on the General card in the detailed environment information that allow you to specify whether those processes are also started automatically.

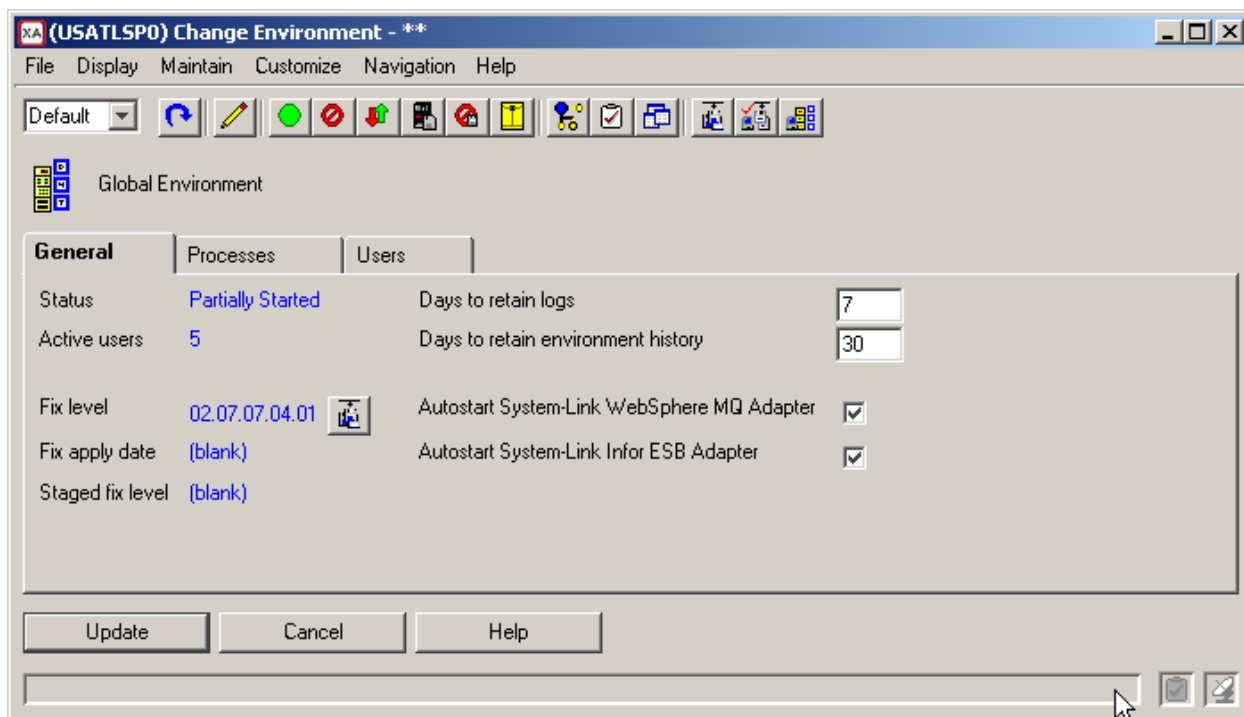
Starting Global Environment processes

By default, Link Manager starts these Global Environment processes after the Global Environment has been started:

- Naming Registry
- Fix Server(s)
- System-Link WebSphere MQ Adapter (if autostart option is selected)
- System-Link Infor ESB Adapter (if autostart option is selected).

The Naming Registry process is always present and is always started. The original Fix Server process and any additional copies of the Fix Server process you have added are always started.

Link Manager provides options in the Global Environment that allow you to specify whether the System-Link WebSphere MQ Adapter and System-Link Infor ESB Adapter start automatically when the Global Environment starts. The System-Link WebSphere MQ Adapter process starts automatically if the **Autostart System-Link WebSphere MQ Adapter** option is selected and set to **Yes**. The System-Link Infor ESB Adapter process starts automatically if the **Autostart System-Link Infor ESB Adapter** option is selected and set to **Yes**.



Options	Requires
Autostart System-Link WebSphere MQ Server	IBM WebSphere MQ Series installed in the host system.
Autostart System-Link Infor ESB Server	No requirements; present in Link Manager by default.

The autostart options give you the flexibility to start the System-Link WebSphere MQ Server and System-Link Infor ESB Server processes automatically when the Global Environment starts but still turn off the automatic start if necessary.

Starting Infor ERP product environment processes

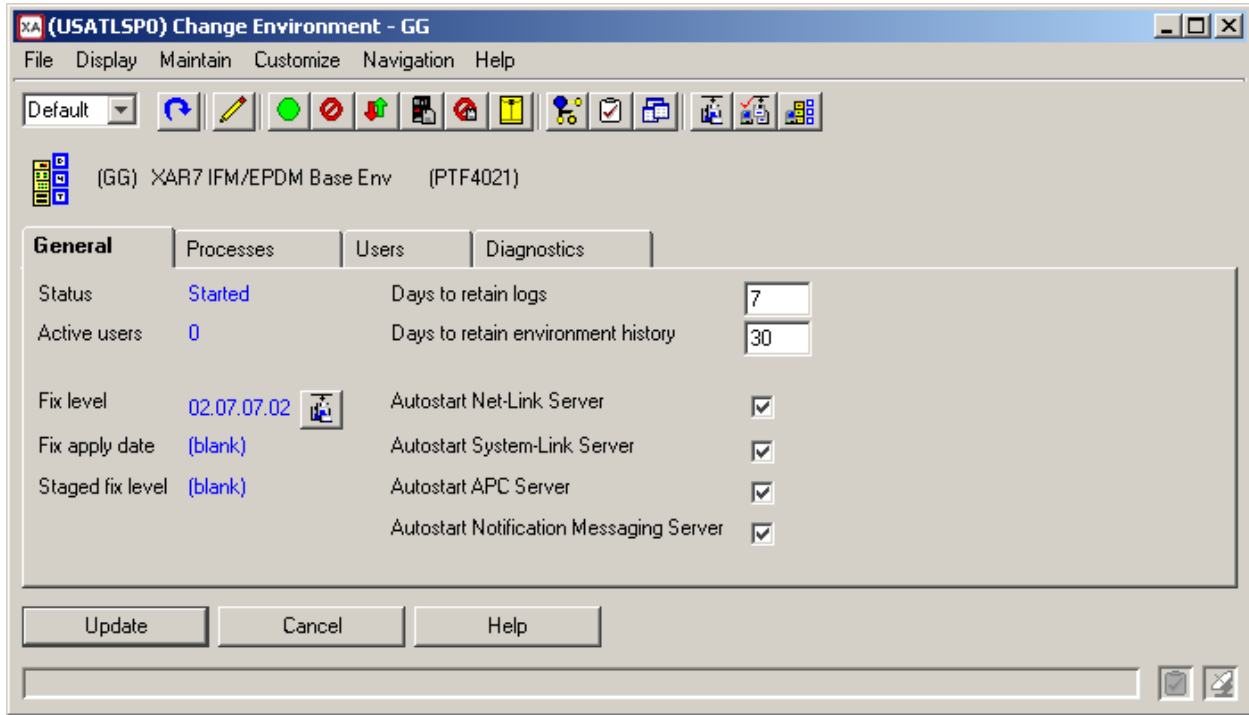
For an Infor ERP product environment, the following processes are started when the environment is started:

- Environment Controller
- Startup Tasks

The Environment Controller process is always present and is started before any of the other Infor ERP product environment processes can start. The Startup Tasks process is always present, but is started only if it has tasks assigned. When the Startup Tasks process starts, it must complete successfully before any of the other environment processes can start.

For the Net-Link Server, System-Link Server, APC Server, and Notification Message Server processes, Link Manager provides options at the environment level that allow you to choose whether or not these processes start automatically when the environment starts. These processes, and the

autostart options, are available if the corresponding products are licensed and installed for the environment.



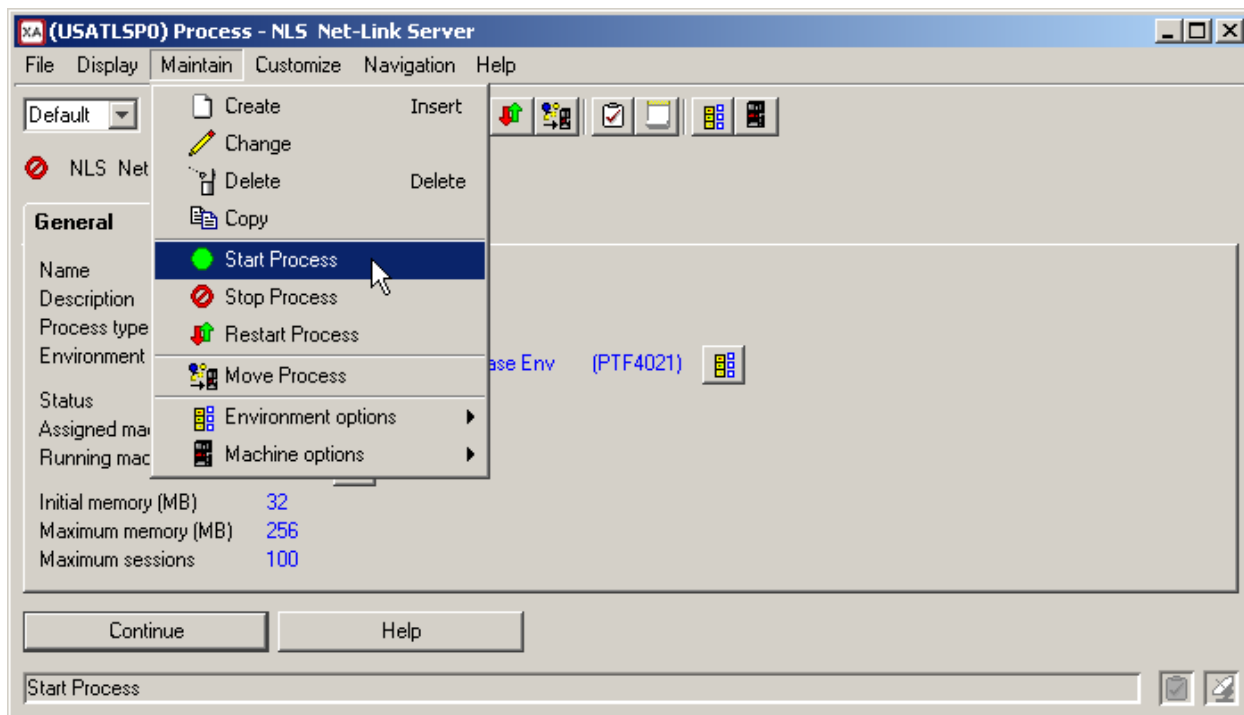
Option	Requires
Autostart Net-Link Server	Net-Link licensed and installed for the environment
Autostart System-Link Server	System-Link licensed and installed for the environment
Autostart APC Server	Advanced Product Configurator (APC) licensed and installed for the environment
Autostart Notification Message Server	Enterprise Integrator licensed and installed for the environment

These autostart options allow you to have these processes running and available automatically when they are required, but also allow you to turn off the automatic startup when they are not required. This level of control lets you keep the host system running efficiently by not starting and running these processes when they are not needed.

Starting a process manually

In most situations, starting the Global Environment or starting an Infor ERP product environment starts all of the necessary processes for that environment. However, for those situations where you need to start processes manually, Link Manager provides options that allow you to select and start a process directly

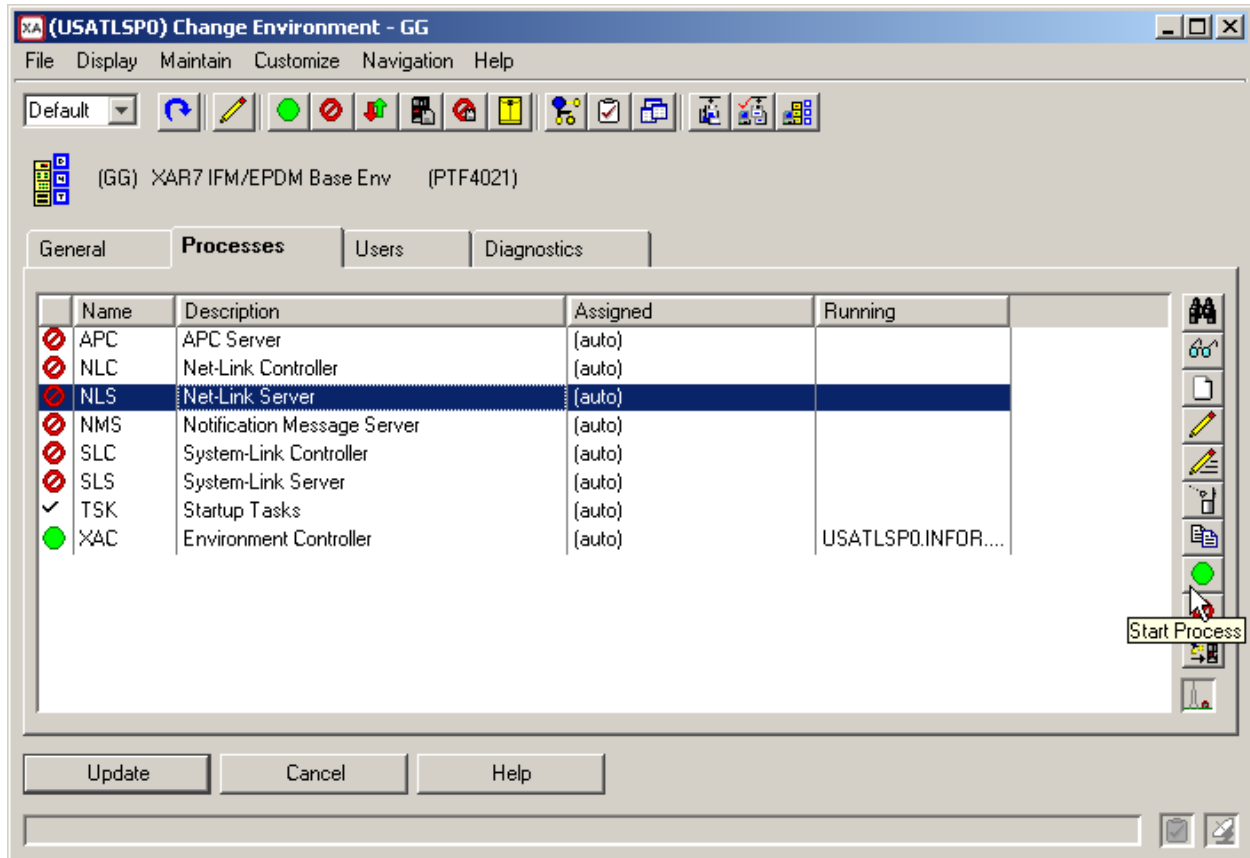
from the Link Manager console. For example, from the detailed information for the Net-Link Server process in an Infor ERP product environment, you can use the **Start Process** option to start the process manually if the **Autostart Net-Link Server** option for that environment is set to **No**.



Before a process can be started, the following criteria must be met:

- The process must be stopped.
- Any higher-level processes must be started. See “Hierarchy of processes” on page 49.

For example, if your users generally use Power-Link to work in an Infor ERP product environment, you might not start the Net-Link Server process automatically when the environment starts. However, if you have a group of users who are traveling to a customer site and need access to that environment, you would want to turn on the Net-Link Server process to make the web-based Net-Link available for those users working remotely. You can start a process from the Processes card in the detailed information for an environment by selecting the process and clicking the **Start Process** button on the right side of the card. If you are working with the processes located on a particular machine, the Processes card in the detailed information for that machine provides the same type of **Start Process** option for starting a process.

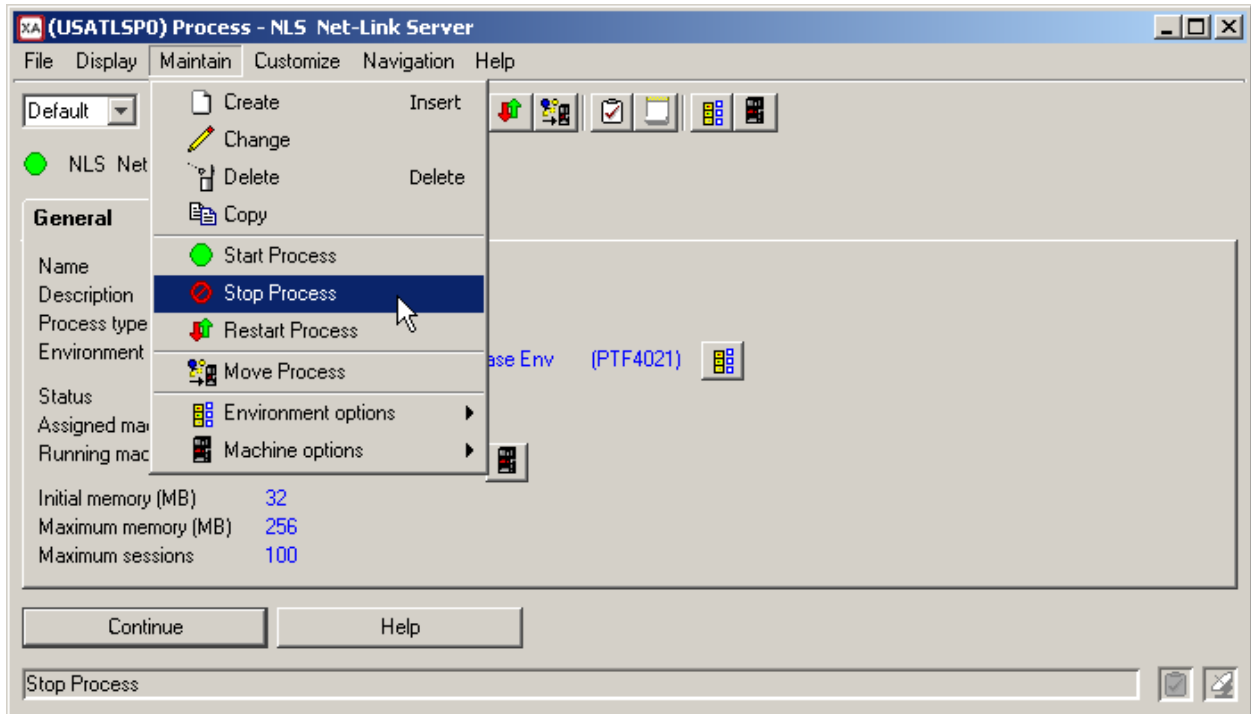


Starting the Net-Link Server process for an environment starts both the Net-Link Server and the Net-Link Controller processes as a unit. Starting both of these processes allows your users to use Net-Link to connect to the Infor ERP product environment.

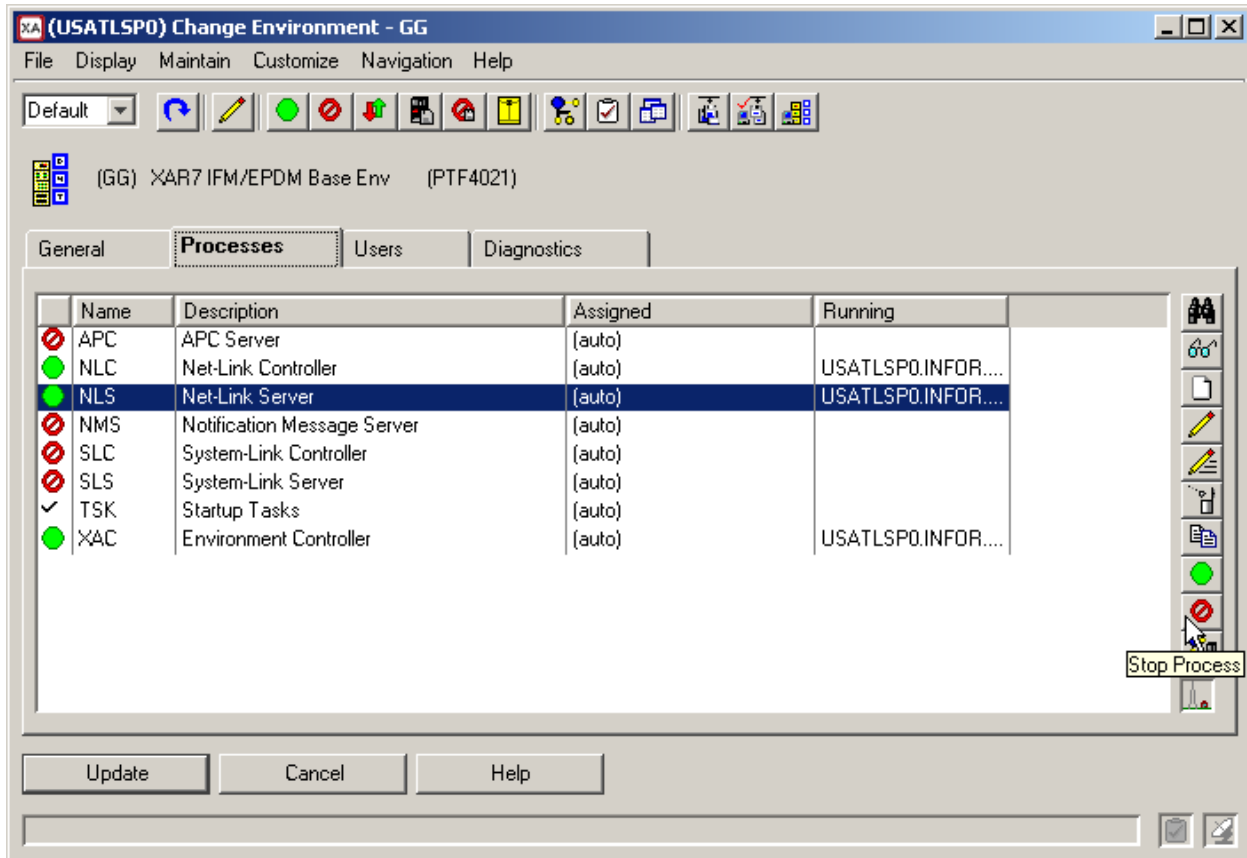
Starting a process only starts that process for the environment to which the process belongs. For example, you might have two Infor ERP product environments, XA1 and XA2, with Net-Link processes stopped in both environments. If you start the Net-Link Controller process in environment XA1, the Net-Link Server processes in environment XA1 also will be started. However, neither the Net-Link Controller process nor the Net-Link Server processes in environment XA2 will be started by this action.

Stopping processes

Just as starting an environment generally starts all of the processes required for that environment, stopping an environment generally stops all of the processes running for that environment. However, for those processes that can be started manually, Link Manager provides options for manual stops. For example, if you started the Net-Link Server process so that some of your users could use Net-Link while traveling, you could stop the Net-Link Server process when those users were no longer logging in through Net-Link.



Link Manager provides options that allow you to select and stop a process directly from the Link Manager console.



A process can be stopped if it is started. Stopping a process first stops any lower-level processes that are started for an environment. See “Hierarchy of processes” on page 49 for more information on the position of each process in relation to the other processes for an environment. For example, if your users currently are all using Power-Link and not Net-Link to access an Infor ERP product environment, you could stop the Net-Link processes for that environment. To stop Net-Link, you would stop the Net-Link Controller process. Stopping the Net-Link Controller process automatically stops all of the related Net-Link Server processes for that environment.

Stopping a process only stops the process for the environment to which the process belongs. After a process has been stopped, any processes higher in the hierarchy can also be stopped. For example, if you have stopped the Notification Message Server and APC Server processes for an Infor ERP product environment, you can then stop the Environment Controller process. Remember that the Startup Tasks process starts and stops automatically when the environment is started; that process would not be running while the other environment processes were running and would not need to be stopped.

As with starting a process, stopping a process manually is likely to be an action you perform only rarely. Most of the time, Link Manager automatically stops the related processes when an environment or machine is stopped.

Understanding auxiliary machines

Auxiliary machines provide supplementary processing power for the host system. They can be used for scaling the host system by adding processing power during periods of peak demand and by being removed from the host system when the demand is lower. They provide an excellent solution for handling users in remote locations who are downloading updates.


An auxiliary machine can be any workstation that supports the required level of Java (1.4.2). The Link Manager installation process includes directions for installing auxiliary machine software on a workstation and links for downloading the appropriate auxiliary machine software for different operating systems.

After the auxiliary machine software has been installed on a workstation, Link Manager automatically recognizes that workstation as an auxiliary machine in the host system. The host system can have multiple auxiliary machines. The number of auxiliary machines required to provide optimal processing in your host system depends on the number of environments supported by the host system, the amount of data handled in the environments, the number of users in the host system, and other factors related to the setup of your System i host system and workstations used as auxiliary machines.

When auxiliary machines are part of the host system, Link Manager assigns processes automatically to available machines, using a round-robin method of assigning processes to best balance the processing load across the host machine and the auxiliary machines. In assigning processes to machines, Link Manager follows the rules for which processes can be assigned to an auxiliary machine and which processes must remain on the host machine. For information on which processes can be located on an auxiliary machine, see “Summary of process types” on page 46.

Adding an auxiliary machine to the host system

To define a workstation as an auxiliary machine in the host system, the Auxiliary Machine software must be installed on that machine. This installation is available as part of the install process for Link Manager.



Install the Auxiliary machines

A number of the XA server processes are not required to run on the host machine System i. Setting up an auxiliary machine allows you to offload these processes to another machine (a Windows or Linux server) to optimize utilization of the host machine System i for the processes required to run on that machine. For example, if you plan to run System-Link or Net-Link, it is recommended that you offload those processes to an auxiliary machine. Also, an auxiliary machine can be used for deploying fix servers. You can read more about auxiliary machines and fix servers in the Link Manager online help text.

To install the auxiliary machine software, download the installation software from one of the following links.

- [XA Auxiliary Machine for Windows](#)
- [XA Auxiliary Machine for Linux](#)
- [Other platforms](#)

Installation

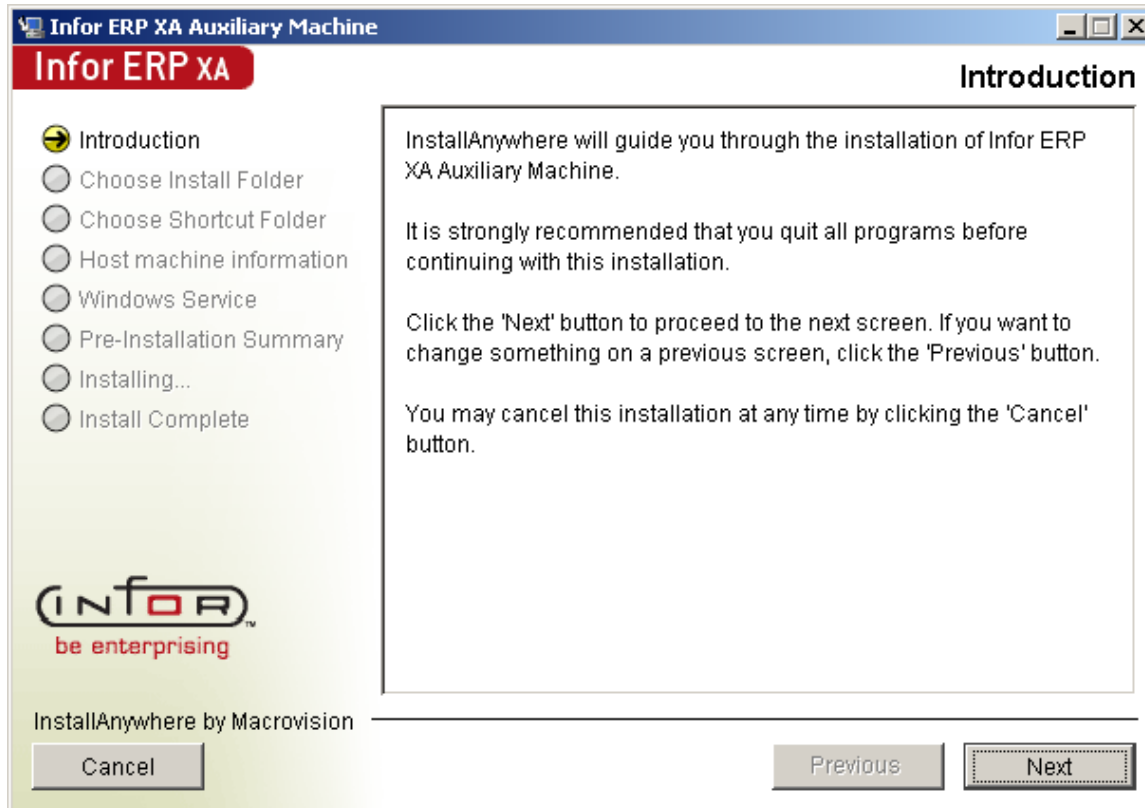
After downloading the XA Auxiliary Machine software, start the installation for an XA Auxiliary Machine. The installation process consists of a series standard installation dialogs that either request standard installation information, such as the install folder and shortcut folder you want to use, or show information about the status of the installation. During the installation process, after the dialog for specifying the destination for shortcuts, the Host machine information dialog appears.

During the installation process, after the dialog for specifying the destination for shortcuts, the Host machine information dialog appears. This dialog requests information about the host machine for which you want to use the auxiliary machine. You will need to provide the following information:

- the name of the System i which serves as the host machine
- the secondary TCP port (which defaults to 36001 and is the port for the internal web server).

If you are running on Windows operating system, an additional dialog during the installation process asks if you want to install the auxiliary machine as a Windows service. If you decide to install the auxiliary machine as a Windows service, the service will be started at completion of the installation.

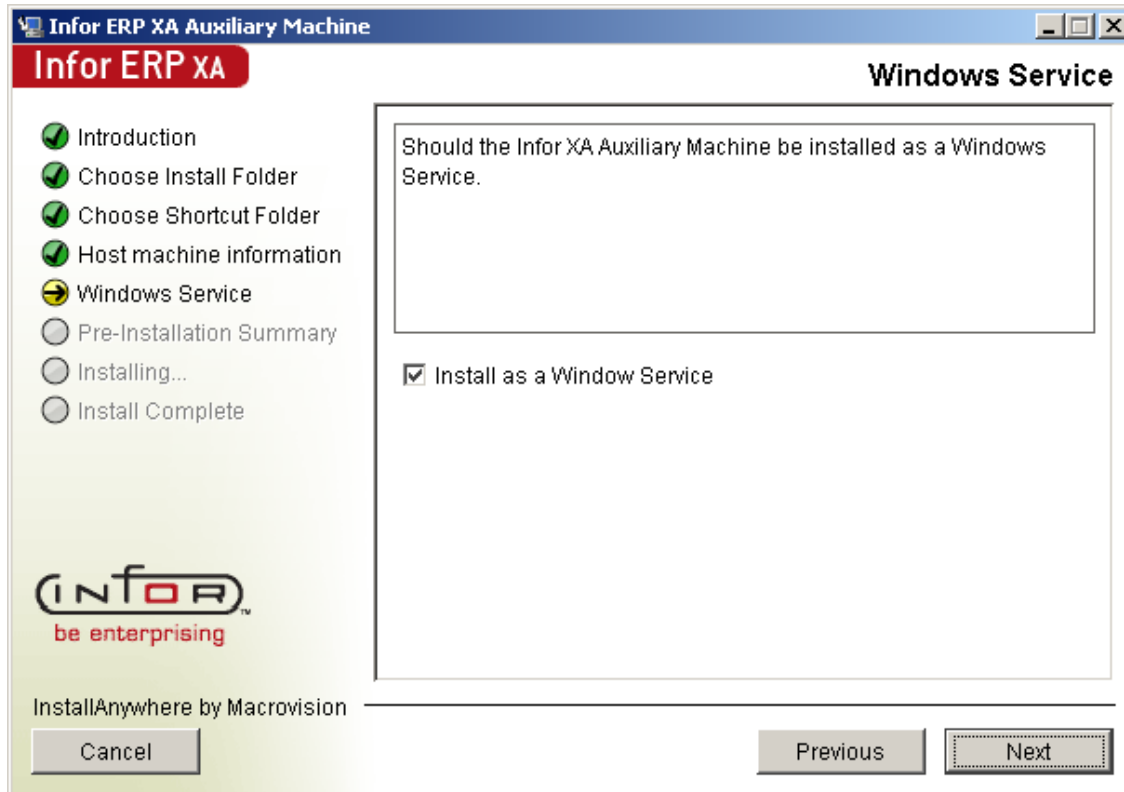
You initiate the installation of the auxiliary machine software by selecting the appropriate link for the type of operating system installed on the machine you want to add as an auxiliary machine. Information on the installation dialogs guides you through the auxiliary machine installation process.



As you progress through the auxiliary machine installation, you make the appropriate selections on the installation dialogs for the installation folder, the shortcut folder, the host machine for which you are creating the auxiliary machine, and whether you want to create the auxiliary machine as a Windows service. At the end of your selections, the installation process shows you your choices and allows you to make any necessary changes.

Installing an auxiliary machine as a Windows service

One of the options offered during the installation of the auxiliary machine software is the ability to install the auxiliary machine as a Windows service. This option is available if the workstation being used as an auxiliary machine has an operating system of Windows XP or later.



Installing an auxiliary machine as a Windows service causes the auxiliary machine to run as a Windows service. In this situation, the auxiliary machine is always available to run Infor ERP product environment processes even when no users are logged in to an environment. Otherwise, you must be logged in to the Windows workstation in order to start the auxiliary machine process.

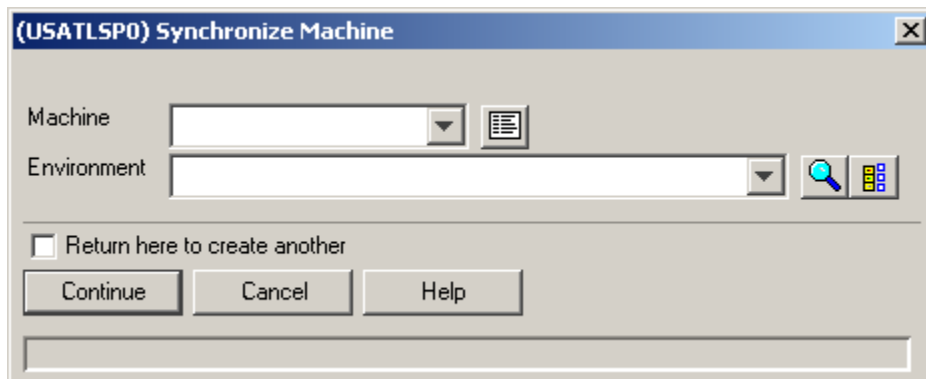
Registering the auxiliary machine with Link Manager

To register the auxiliary machine with Link Manager, the auxiliary machine must be started once when the Link Manager host jobs (MPXREGSRV and MPXMGRSRV) are running. This initial start of the auxiliary machine identifies the auxiliary machine to Link Manager and creates an entry in the Machines object. If the Link Manager client software is running during the initial start of the auxiliary machine, the Machines list window must be refreshed in order to see the new auxiliary machine in the list. If the Link Manager client software is not running during the initial start, the Machines list automatically includes the new auxiliary machine the next time the Link Manager client is run.

Completing the auxiliary machine installation

In order to complete the installation of the auxiliary machine software, you must synchronize the level of Infor ERP product application code on the auxiliary machine with the level of application code currently installed for each environment on the host machine. This synchronization ensures that the correct application code for an environment is available on any of the auxiliary machines to which Link Manager assigns processes belonging to that environment. On the Maintain menu of the

Machines object, Link Manager provides the **Synchronize Machine** option, which allows you to choose the machine and environment with which the Infor ERP product application code on the auxiliary machine is to be synchronized.



If the machine with which you are synchronizing the auxiliary machine has more than one environment, you need to repeat the synchronization for each environment on that machine.

Assigning processes to an auxiliary machine

When an auxiliary machine is added to the host system, Link Manager automatically assigns processes to this machine as part of balancing the processing load throughout the host system. Link Manager only assigns eligible processes to an auxiliary machine. For information on which processes can be moved to an auxiliary machine, see “Types of Global environment processes” on page 42 and “Types of Infor XA product environment processes” on page 43.

While Link Manager usually assigns processes automatically in round-robin sequence to the next available machine, in certain situations you might want to assign a process to a machine manually. For example, depending on the performance characteristics, such as amount of memory and processing power, you might want to run the Net-Link processes on one specific auxiliary machine and the System-Link processes on another auxiliary machine.

When a process starts, by either automatic start from the startup of an environment or manual start from the **Start Process** option in the Processes object, Link Manager assigns that process to a machine based on load balancing, unless the process is specifically assigned to a particular machine. Once the process is running, Link Manager does not dynamically move processes among machines.

To assign a process to an auxiliary machine, you must change the **Assigned machine name** attribute for the process. Link Manager provides a list of the eligible machines in the host system, both the host machine and all auxiliary machines, to choose as the assigned machine for the process. Most processes can be assigned to an auxiliary machine.

With Link Manager providing both automatic assignment of processes to machines and manual assignment of processes to machines when needed, you have the flexibility of allowing the load balancing on the host system to be automatic most of the time while knowing that you can take control of the distribution of processes whenever necessary.

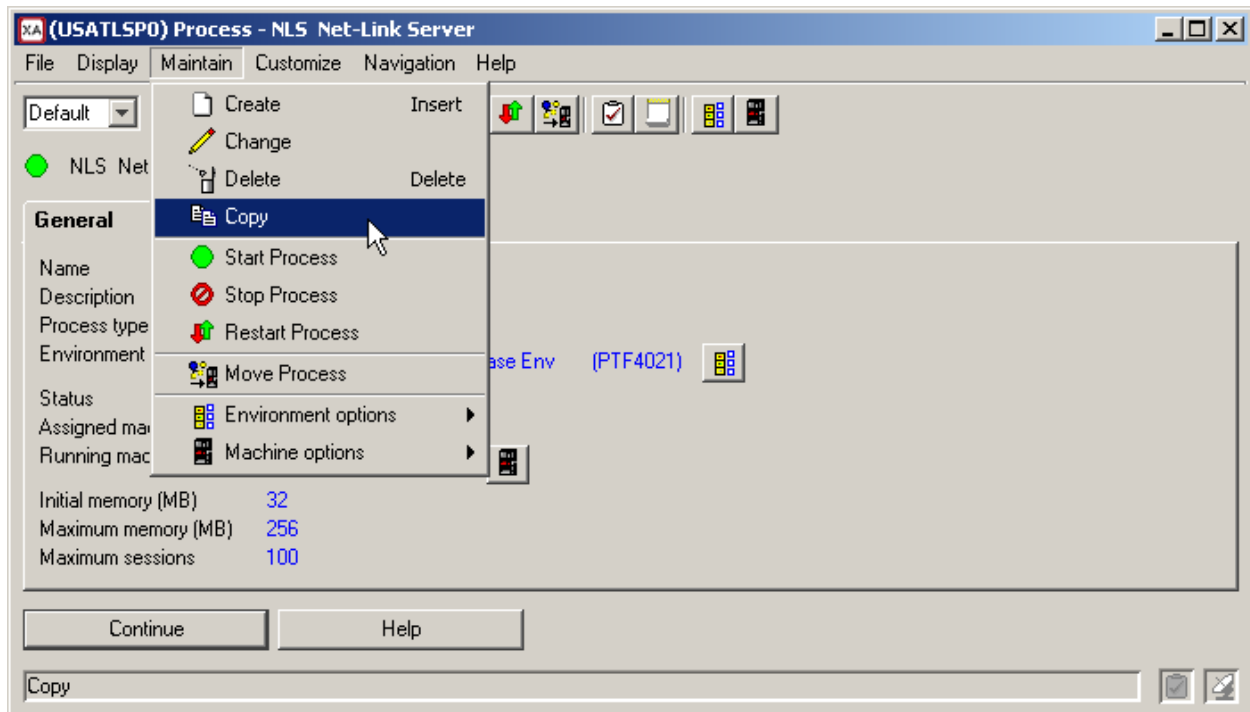
Adding processes

In addition to adding auxiliary machines to the host system to improve processing, Link Manager provides options for adding instances of the following processes:

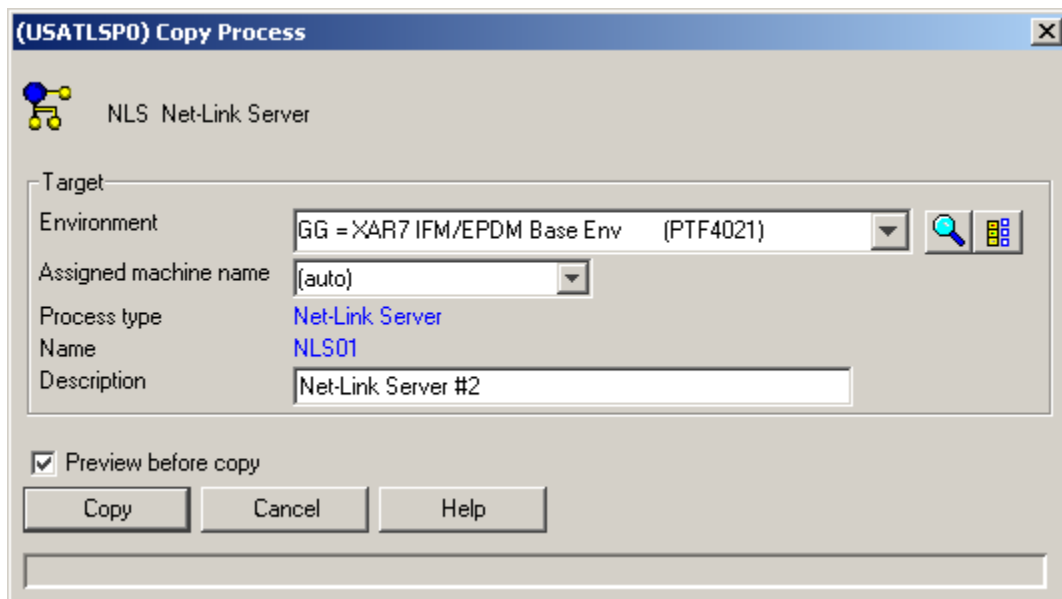
- Fix Server (for the Global Environment)
- Net-Link Server (for an Infor ERP product environment)
- System-Link Server (for an Infor ERP product environment).

Creating additional instances of these processes can be beneficial for specific purposes. For example, Net-Link might be installed in an Infor ERP product environment and initially is used by a small number of users. However, if the number of users logging in to the environment through Net-Link grows so large that the Net-Link Server begins to consume an excessive amount of the CPU on the machine where it is assigned, you can balance the processing load by creating another instance of the Net-Link Server for that environment and assigning that process to another auxiliary machine. Similarly, if System-Link is installed in an Infor ERP product environment initially with one instance of the System-Link Server process, and the number of transactions being handled by that process begins to consume an excessive amount of CPU, creating another instance of the System-Link Server process and assigning it to another auxiliary machine can rebalance the load processing within the host system.

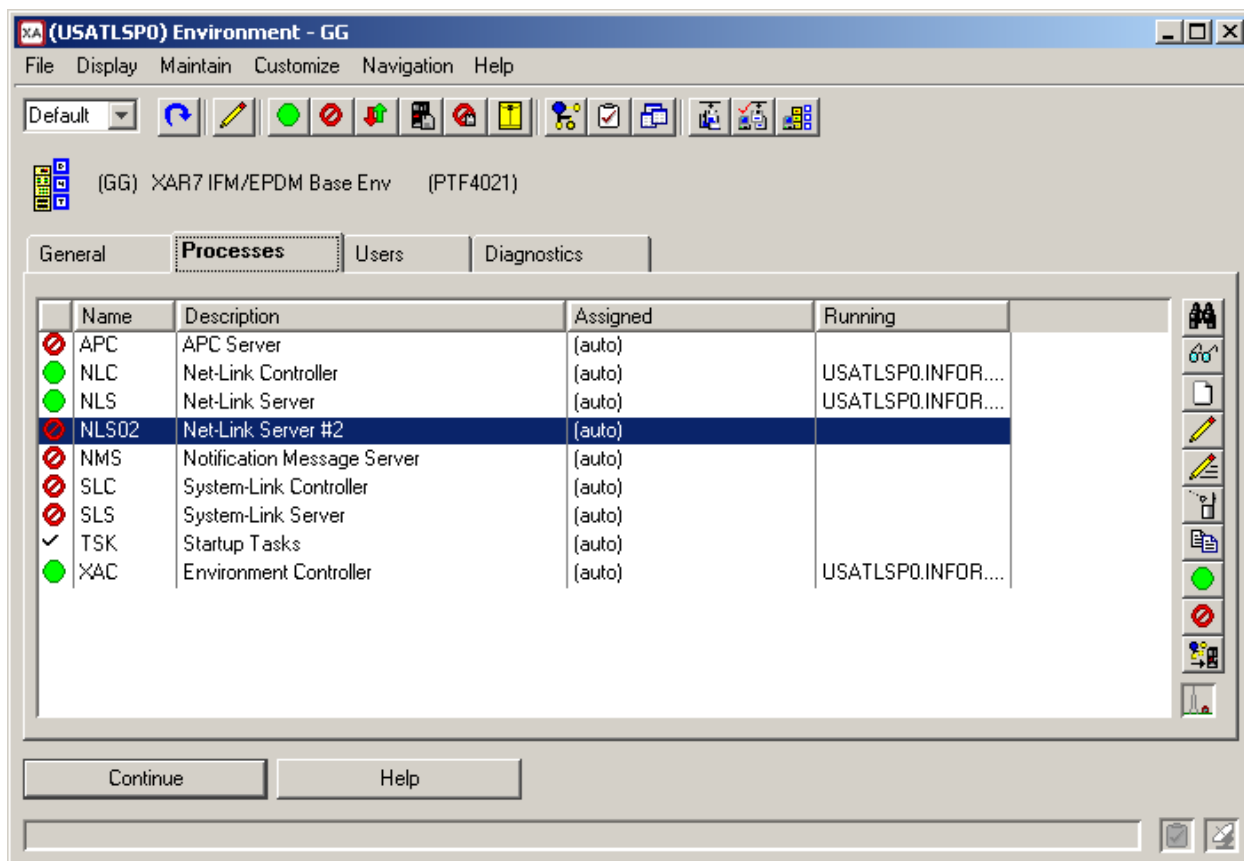
To create a new instance of a process, you select the existing process that you want to create. For example, if you have an increase of users logging in to an Infor ERP product environment through Net-Link, you might want to create another Net-Link Server to offload some of the users from the current Net-Link Server process. You create the new process by copying the existing Net-Link Server.



For the copied process, you can specify the environment to which the process will belong, the machine on which the process will run, and the description for the process. If you select the **Preview before copy** option, you can also specify the initial memory, maximum memory, and maximum sessions for the new process. You can change any of this information after the process has been copied except for the environment. The environment you enter on the Copy Process dialog cannot be changed after you click the **Copy** button.



The new process appears in the list of processes for either the environment or the machine with which you are working. For example, if you copied the Net-Link Server process to create an additional Net-Link Server process for an Infor ERP product environment, the second Net-Link Server process appears on the Processes card in the detailed information for the environment.



Initially, Link Manager locates the new process on the machine you specified when you copied the process. If you chose (auto) for the assigned machine name, Link Manager moves the new process to the machine with the most open processing capacity. Be aware that as Link Manager rebalances the processing load in the host system, the new process could be moved to another machine. The running machine name in the detailed information for the process tells you on which machine the process is currently running.

While Link Manager automatically balances the processing load in the host system, this balancing involves only the existing processes and the existing auxiliary machines. Link Manager cannot automatically add capacity to the host system, through additional auxiliary machines, nor can Link Manager automatically add instances of processes. Monitoring the overall processing load on the host system and intervening when additional auxiliary machines or additional instances of processes are needed remains a manual process.

Adding Fix Server processes

If you have users in remote locations, you will probably want to have multiple Fix Server processes. Instead of providing updates through one centrally located Fix Server process, you can create an additional Fix Server process for each remote location. These additional Fix Server processes should be located on auxiliary machines in the remote locations to allow users in those remote locations to download updates locally. This arrangement reduces the amount of bandwidth required

to transmit updates by allowing you to transfer the updates once from your central location to the Fix Server at the remote location instead of transmitting updates to every remote user individually.

For more information on using Fix Servers for remote users, see “Using Fix Servers for remote updates” on page 80.

Link Manager provides an enhanced view of the client updates available for the host system. With Link Manager, you can:

- View detailed information for available updates
- Manage updates for environments
- Set up Fix Servers to update remote users

Link Manager provides these functions to assist you in determining which client updates to download and apply to the environments in your host system. While you can apply downloaded updates using Link Manager, you must determine which updates to apply and download those updates from the Infor Xtreme Support website. Link Manager does not automatically download updates for the host system.

Note: For analyzing server updates, see the Product Updates functions available in the Environments application in Power-Link.

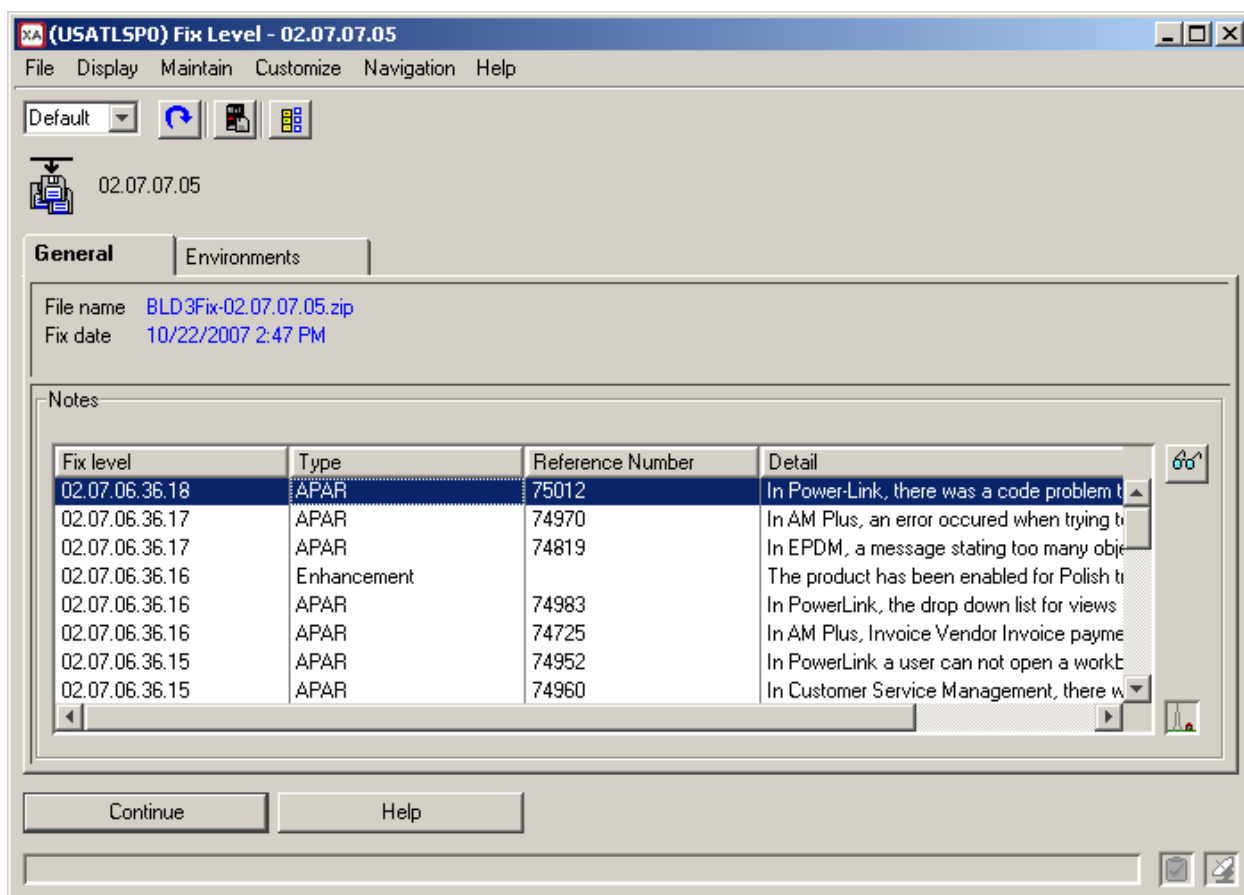
Viewing update details

An Infor ERP product can provide fix level updates for a release of the product through a Program Temporary Fix (PTF) file. The PTF can be downloaded to the host system from the Infor Xtreme Support web site. The Infor ERP product can provide a new fix level file in the PTF when a new group of APAR fixes and product enhancements is available. The Fix Level object in Link Manager shows the identifier of each fix level update, the name of the file in which the fix level was downloaded, and the date on which the fix level was created.

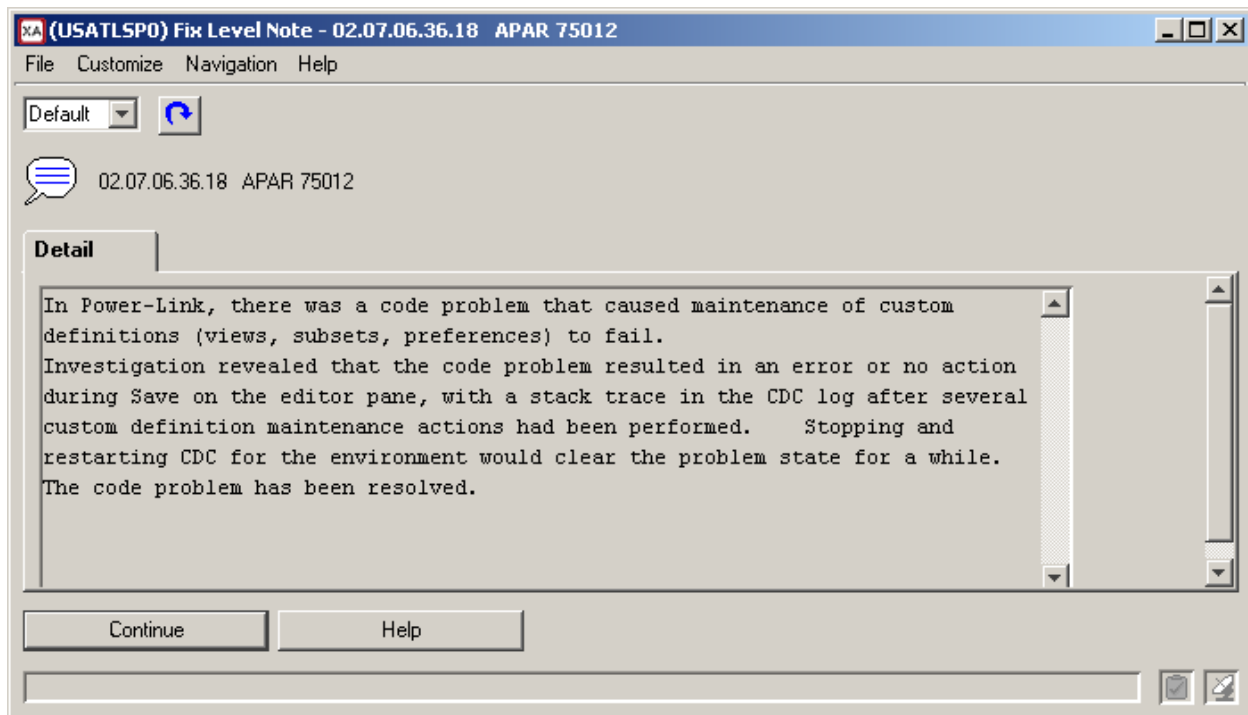
Fix level	File name	Fix date
02.07.07.05	BLD3Fix-02.07.07.05.zip	10/22/2007 2:47 PM
02.07.07.04.01	BLD3Fix-02.07.07.04.01.zip	10/12/2007 8:25 AM
02.07.07.04	BLD3Fix-02.07.07.04.zip	10/01/2007 4:59 PM
02.07.07.02	BLD3Fix-02.07.07.02.zip	09/19/2007 3:47 PM
02.07.07		05/30/2007 10:31 AM
02.07.06.40.69.03	PCM6Fix-02.07.06.40.69.03.zip	08/13/2007 8:40 AM

The Fix Levels object shows all client updates that have been downloaded from Infor Xtreme Support. An individual fix level can contain any of the following types of updates to the Infor ERP product:

Type of update	Used for
APAR (Authorized Program Analysis Report)	Resolution for problems reported to and fixed by XA Support. Identified by number assigned by XA Support when the reported problem is verified.
Product enhancements	New functions added to XA applications.

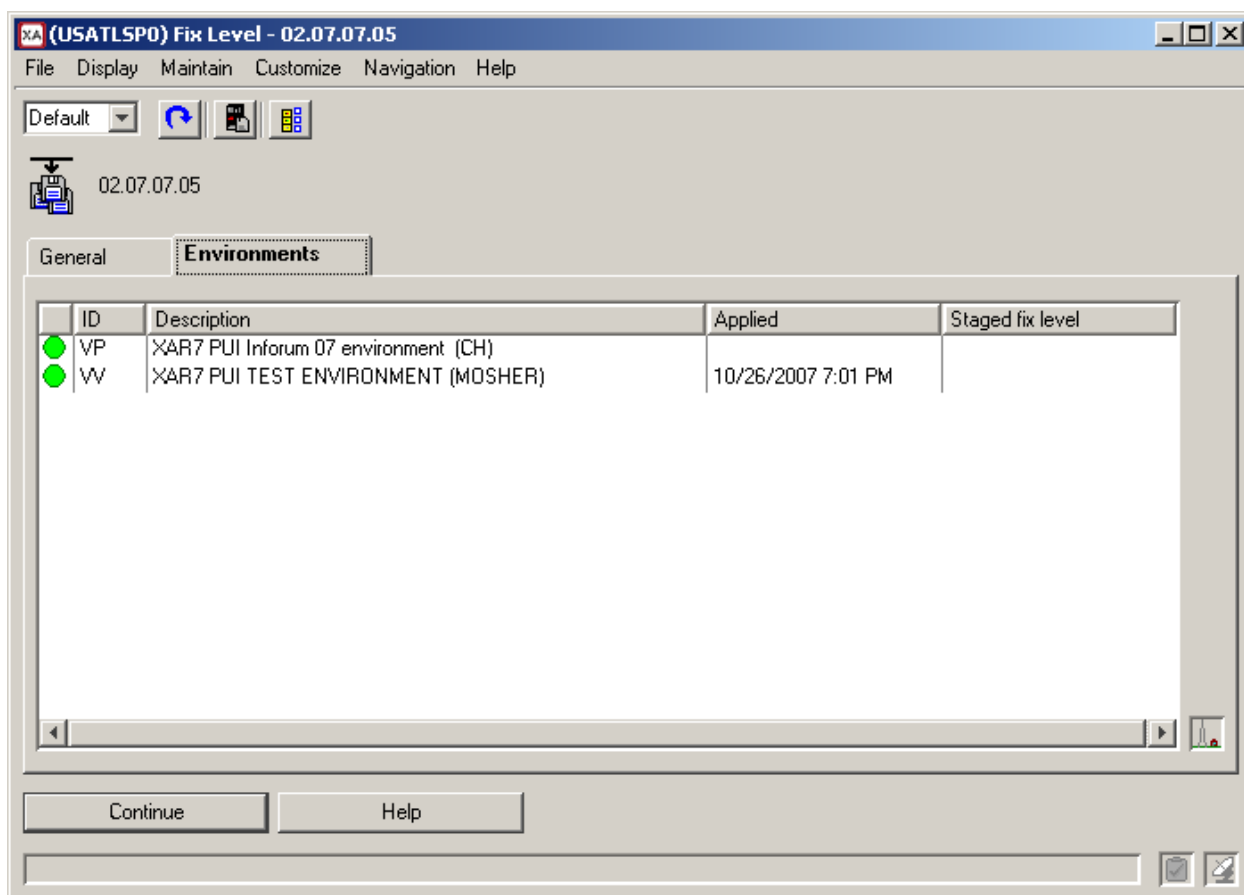


For more specific information on what is contained in each update, the Fix Levels object also includes a detailed description of the APAR fix or a product enhancement. This information helps you determine the type of functional changes or fixes to expect when you apply the fix level update to an environment. The information can also be helpful in determining which environments in the host system require the update.

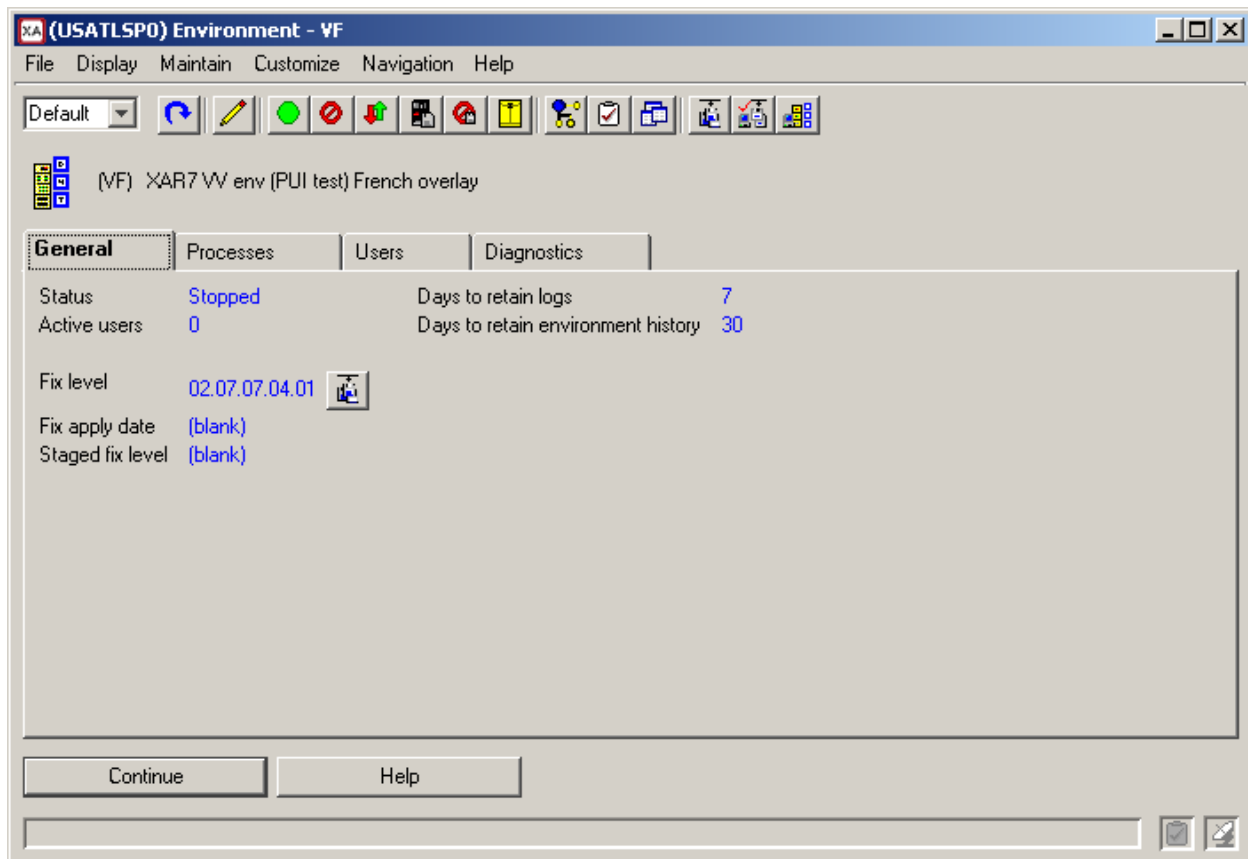


Viewing environments that use a fix level

In some cases, you might be more concerned about the updates required for a particular environment than about updates provided in a particular fix level. For example, you might be working with Infor Global Support to diagnose a problem with an environment and need to report whether an update has been applied to that specific environment. Link Manager automatically tracks that information and provides you with a list of all environments in the host system that received the updates in the fix level. In the following example, fix level 02.07.07.05 has been applied to environments VP and VV. This fix level has not been applied to any of the other environments in the host system.



The General card for a selected environment shows you the latest fix level applied to that environment. The example below shows that environment VF was last updated with fix level 02.07.07.04.01, which is not the most current fix level. The most current fix level, according to the list in the Fix Levels example shown on page 68, is 02.07.07.05.



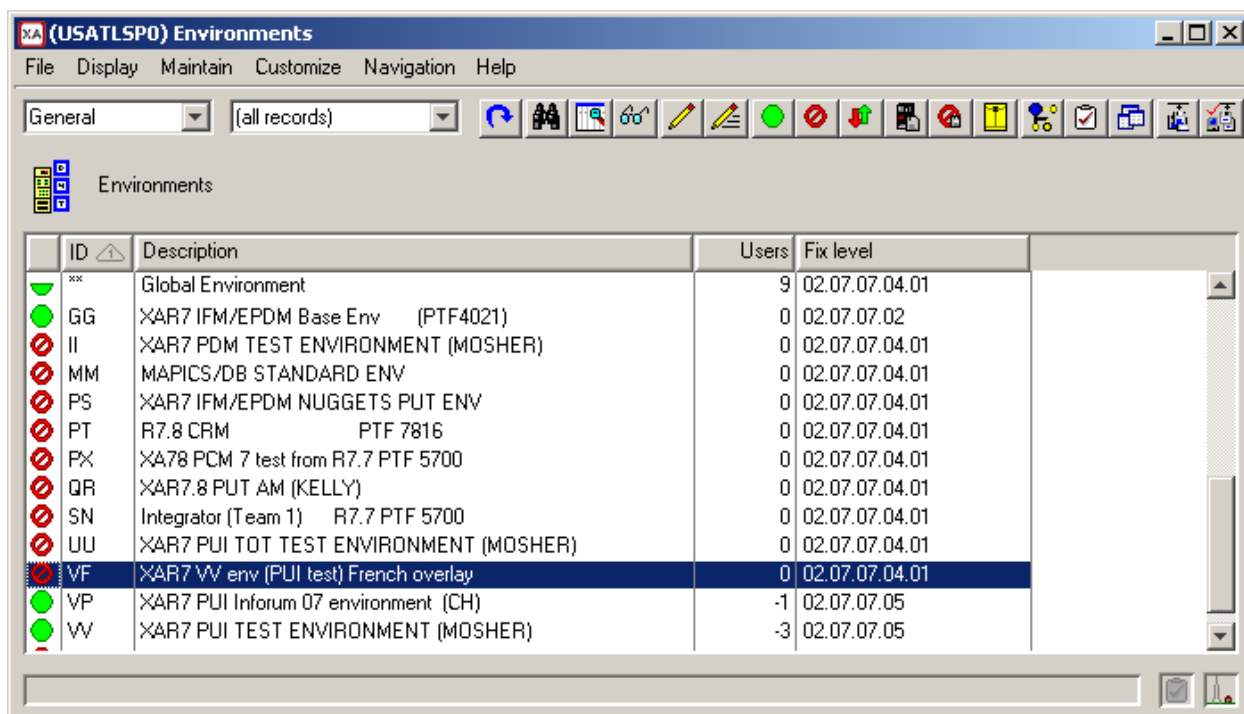
The Environments object provides a quick way to see the current fix level of all environments in the host system.

The list of environments can help you plan how to apply updates in fix levels. For example, if one environment in your host system has been under continuously heavy usage, the list of updates that have not been applied to that environment could be growing large. Monitoring the list of fix levels, and checking to see to which environments those fix levels have been applied, can help you determine when the benefits of applying the fixes and enhancements contained in the available fix levels justifies the inconvenience of having to stop the environment long enough to apply the fix levels.

Updating environments

Each environment in the host system can be at a different fix level. Factors such as usage of the environment, varying needs for the types of fixes included in each fix level, and the locations of users working with an environment can influence when updates are applied to individual environments. With Link Manager, you can target your application of updates to the environment or environments where needed without disrupting any of the other environments in the host system.

The Environments list provides a quick way to see the current fix level for each environment in the host system. For example, in the following list of environments, only environments VP and VV have the latest fix level of 02.07.07.05 applied. The VF environment has the previous fix level of 02.07.07.04.01.



ID	Description	Users	Fix level
**	Global Environment	9	02.07.07.04.01
GG	XAR7 IFM/EPDM Base Env (PTF4021)	0	02.07.07.02
II	XAR7 PDM TEST ENVIRONMENT (MOSHER)	0	02.07.07.04.01
MM	MAPICS/DB STANDARD ENV	0	02.07.07.04.01
PS	XAR7 IFM/EPDM NUGGETS PUT ENV	0	02.07.07.04.01
PT	R7.8 CRM PTF 7816	0	02.07.07.04.01
PX	XAR78 PCM 7 test from R7.7 PTF 5700	0	02.07.07.04.01
QR	XAR7.8 PUT AM (KELLY)	0	02.07.07.04.01
SN	Integrator (Team 1) R7.7 PTF 5700	0	02.07.07.04.01
UU	XAR7 PUI TOT TEST ENVIRONMENT (MOSHER)	0	02.07.07.04.01
VF	XAR7 W/ env (PUI test) French overlay	0	02.07.07.04.01
VP	XAR7 PUI Inforum 07 environment (CH)	-1	02.07.07.05
VV	XAR7 PUI TEST ENVIRONMENT (MOSHER)	-3	02.07.07.05

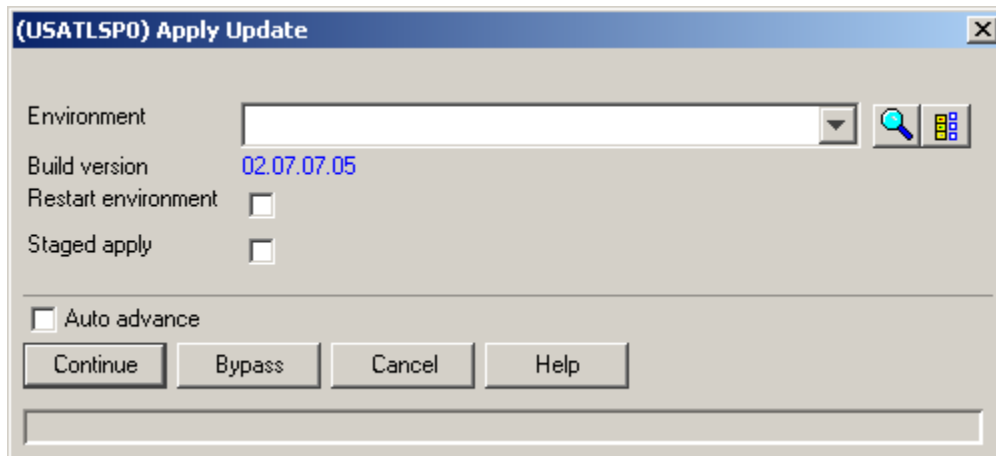
Link Manager also provides you with options for implementing updates to the host system environments. For fix levels that contain fixes or enhancements that are needed right away, you can apply the fix level for immediate update. For fix levels that contain fixes or enhancements that can be implemented more gradually, you can use a staged update to implement the update over a period of time you specify. Which method you use for implementing an update depends on the amount of disruption to users in an environment versus the urgency of the need for the update in that environment.

In determining which type of update to use for applying a fix level, consider the following scenarios:

- If your users all have the capability to download the update quickly, then an immediate update is a quick way to apply an update.
- If your users all do not have the capability for quick downloads, then a staged update is the better way to apply the update. Users can download the fix level at a time when their network load is lightest. A staged update often works well in situations where you are using Fix Servers to deliver updates to users in remote locations.
- If you need a fix level to be applied quickly, the immediate update is the better method only if all of your users have quick download capability.
- If you want the download to be done with minimal impact to your users, use a staged update. Be aware that this type of update requires more action from you.

Regardless of which type of update you use, you must first have downloaded the fix level from Infor Xtreme Support portal. In addition, you must have Java server and CAS authorization for the environment you need to update.

You can apply an update either from a selected environment or from a selected fix level. From either object, the **Apply Update** option offers the same choices for applying the update.



Immediate updates

When an environment requires an immediate update, the **Apply Update** option in Link Manager provides a quick way to process the required update.

To apply an immediate update, follow these steps.

- 7 Identify the environment requiring an update. The list of environments in the Environments object shows you the current fix level applied to each environment.
- 8 Identify the fix level to be applied. The list of fix levels in the Fix Levels object shows you the fix levels currently downloaded to the host system. The list shows fix levels in sequence by most recent date. If the fix level you need is not shown in the list, go to Infor Xtreme Support portal and download the appropriate fix level to the System i host machine.
- 9 Notify your users that the environment will be updated. You can use the Client Messages object to send notification to the affected users.
- 10 Run the **Apply Update** option for the selected environment and fix level. Do not select the **Staged apply** option. The next time each user logs in to the environment through Power-Link, the update automatically downloads to the user's workstation. If you select the **Restart environment** option, the system automatically restarts after the update has been applied. If you do not select this option, you must restart the environment manually after the update has been applied.
- 11 Monitor the progress of the update from the Tasks object. If any errors occur during the update, resolve the problem and apply the update again.

-
- 12 If you did not select the **Restart environment** option when applying the update, restart the environment when the update has completed successfully. If you did select this option, the environment restarts automatically. The environment is now available for your users to log in again.

Staged updates

A staged update is useful when you have users working in a remote location or when an immediate download of the update is inconvenient for local users. Staging the update allows users to download an update any time during a specified amount of time. This method of updating an environment allows users to download the update when convenient, rather than forcing all users to download the update the next time they log in to the environment.

To apply a staged update, follow these steps.

- 1 Identify the environment requiring an update. The list of environments in the Environments object shows you the current fix level applied to each environment.
- 2 Identify the fix level to be applied. The list of fix levels in the Fix Levels object shows you the fix levels currently downloaded to the host system. The list shows fix levels in sequence by most recent date. If the fix level you need is not shown in the list, go to Infor Xtreme Support portal and download the appropriate fix level to the System i host machine.
- 3 Initiate the staged update by selecting the **Apply Update** option for the environment. Select the **Staged apply** option. The **Restart environment** option is not available when you select the **Staged apply** option.
- 4 Notify your users of the update to be applied to the environment and indicate the amount of time users have to download the update. You can use the Client Messages object to send notification to the affected users.
- 5 Monitor the status of the download of the update by your users. The Staging Status card in the detailed information for the environment shows you the status of the download for each workstation logged in to the environment. When all users have downloaded the update, the Status for all of the workstations will indicate Ready.
- 6 Apply the update to the environment. Do not select the **Staged apply** option. Select the **Restart environment** option to have the system automatically restart after the update has been applied. If you do not select this option, you must restart the environment manually after the update has been applied.
- 7 Monitor the progress of the update from the Tasks object. If any errors occur during the update, resolve the problem and apply the update again.
- 8 If you did not select the **Restart environment** option when applying the update, restart the environment when the update has completed successfully. If you did select this option, the environment restarts automatically. The environment is now available for your users to log in again.

If necessary, you can stop a staged update using the Cancel Staged Apply from the Environments object. This option stops downloads of the fix level to the users' workstations. At this point, the

update has not been applied to the environment, so users who might have already downloaded the fix level do not see any changes. After you cancel a staged update, you can run the **Apply Update** option for the same fix level and environment as either an immediate update or a staged update.

Using Client Messages with updates

The Client Messages object provides a key function for implementing immediate or staged updates. Messages you send can alert users when an update to an environment will begin and when the update has been completed. These messages help users plan their work so that the update causes as little interruption as possible.

You can target a message as narrowly or as broadly as you need by environment and user. For example, if you needed to perform hardware maintenance on the System i host machine, you would need to alert all users in all environments. Because the host machine must be running in order for any Infor ERP product environment to run, stopping the host machine means that no Infor ERP product environment in the host system can be running. In this case, you could send one client message to all environments and all users in those environments to indicate when the host machine would be stopped.

In most situations, the messages would be targeted more narrowly to a specific environment and the user or user group you select from the User Profiles list. When creating or changing a message for an environment, you select the environment to which the message applies, then select the user profile of the user or group of users to whom you want to send the message. If you need to send a client message to more than one user, but the list of user profiles does not include a user group containing the users you need to send the message to, you have two options:

- You can create a user profile that contains the group of users to whom you need to send the client message. To create a user group profile, use option 4, Work with user profiles, on the Security Maintenance menu (AMZMXA), which is available from the IDF Main menu (AMZM00). After you create the new user group profile, the profile should be available to select from the User Profiles object in Link Manager. This option is useful if you expect to send messages to the same group of users in the future.
- You can copy a message with the same content and send it to different environments and different users. In this case, you create the client message for the first environment and user. Then, you can copy this message and select the next environment and user to which you want to send the message. This option is useful if you have a relatively small number of environments or users to which you want to send the same message.

When you create a client message, you specify the frequency with which the message appears for the users who are the recipients of the message. If the message is not urgent, you can set the frequency for it to appear once. This setting gives the users the opportunity to read the message the first time they log in after you send the message. If the message is more critical, you can set the frequency for it to appear every time the users log in to the environment. This setting displays the message every time the message recipients log in until you remove the message.

(USATLSP0) Create Client Message

Environment: VF = XAR7 VV env (PUI test) French overlay

User ID: (all users)

Message: Warning: System outage is scheduled for this weekend

Frequency: Once

Return here to create another

Preview before create

Create Cancel Help

In addition to the message text you enter on the Create Client Message dialog, you can enter more detailed information on the General card.

(USATLSP0) Create Client Message - XAR7 VV env (PUI test) French overlay , (all users), Warning: System o...

File Display Maintain Customize Navigation Help

Default

XAR7 VV env (PUI test) French overlay , (all users), Warning: System outage is scheduled for this weekend

General Status

Environment: VF = XAR7 VV env (PUI test) French overlay

User ID: (all users)

Message: Warning: System outage is scheduled for this weekend

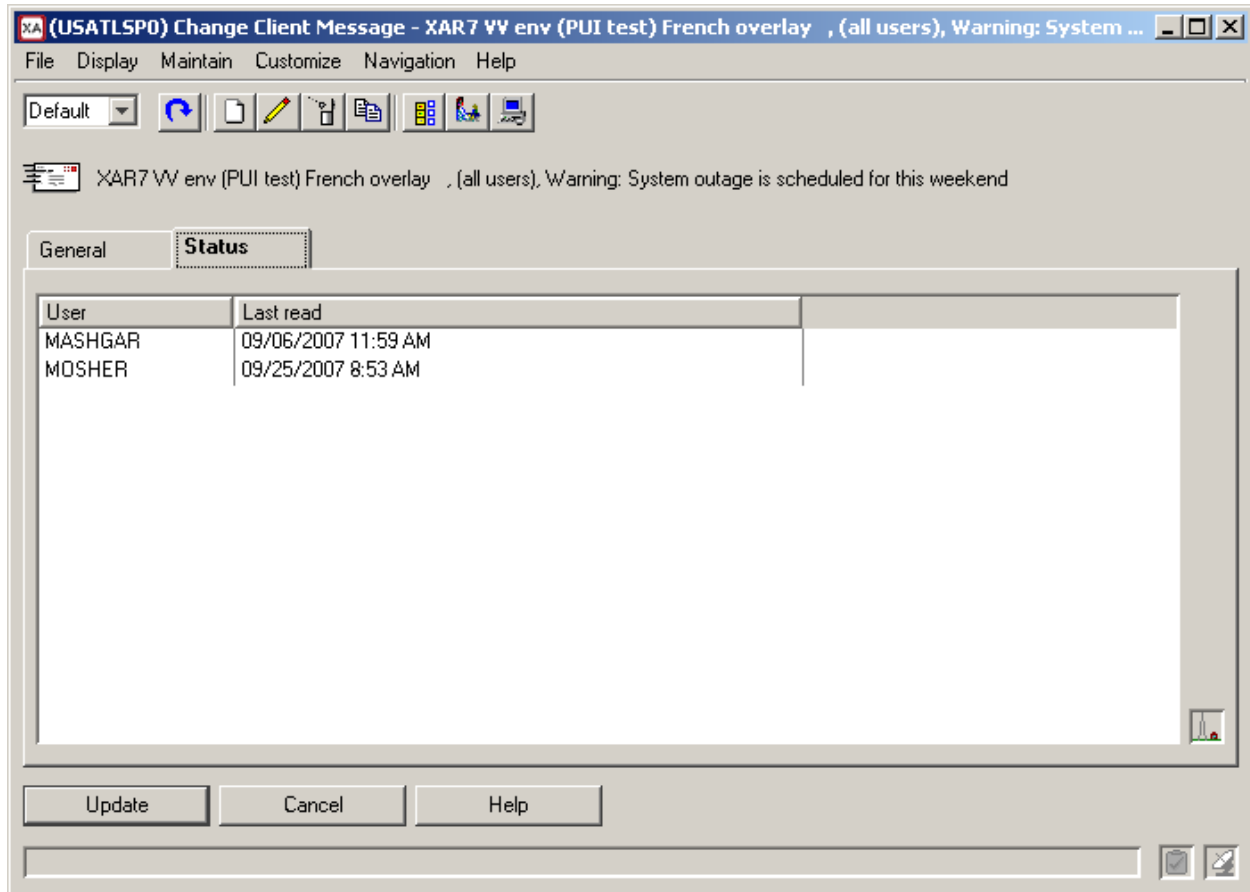
Frequency: Once

Submitted by: MASHGAR

The system will be unavailable from Friday September 28th at 8:00PM until Sunday September 30th at 2:00PM for scheduled maintenance.

Create Cancel Help

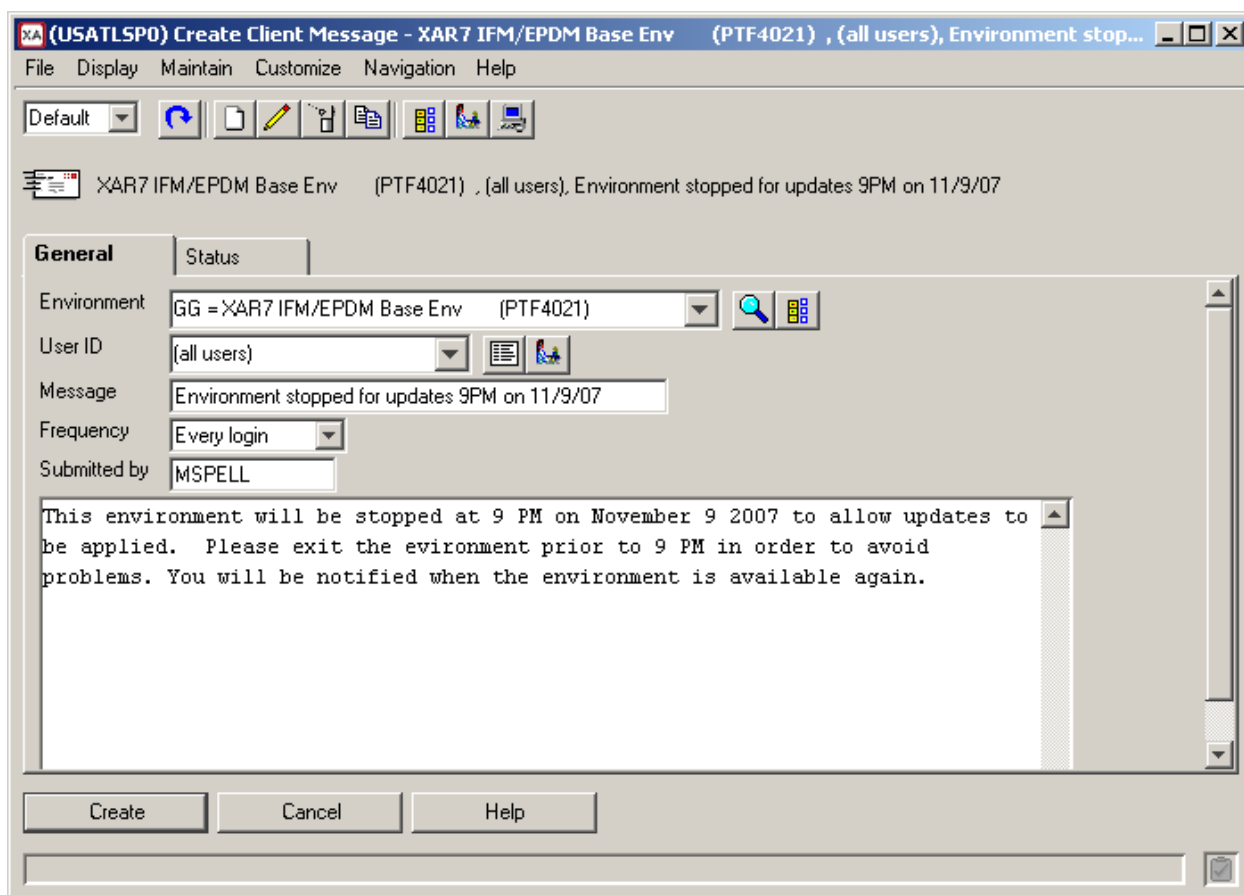
The Status card shows you which of the users have read the message. When a message has been shown at least once to a user, the user and the date the message was last shown appear on this card.



Messages remain in the Client Messages object until you delete them. If you create a message with a frequency set to Every login, remember to delete the message when it is no longer needed. Otherwise, users will continue to see the message.

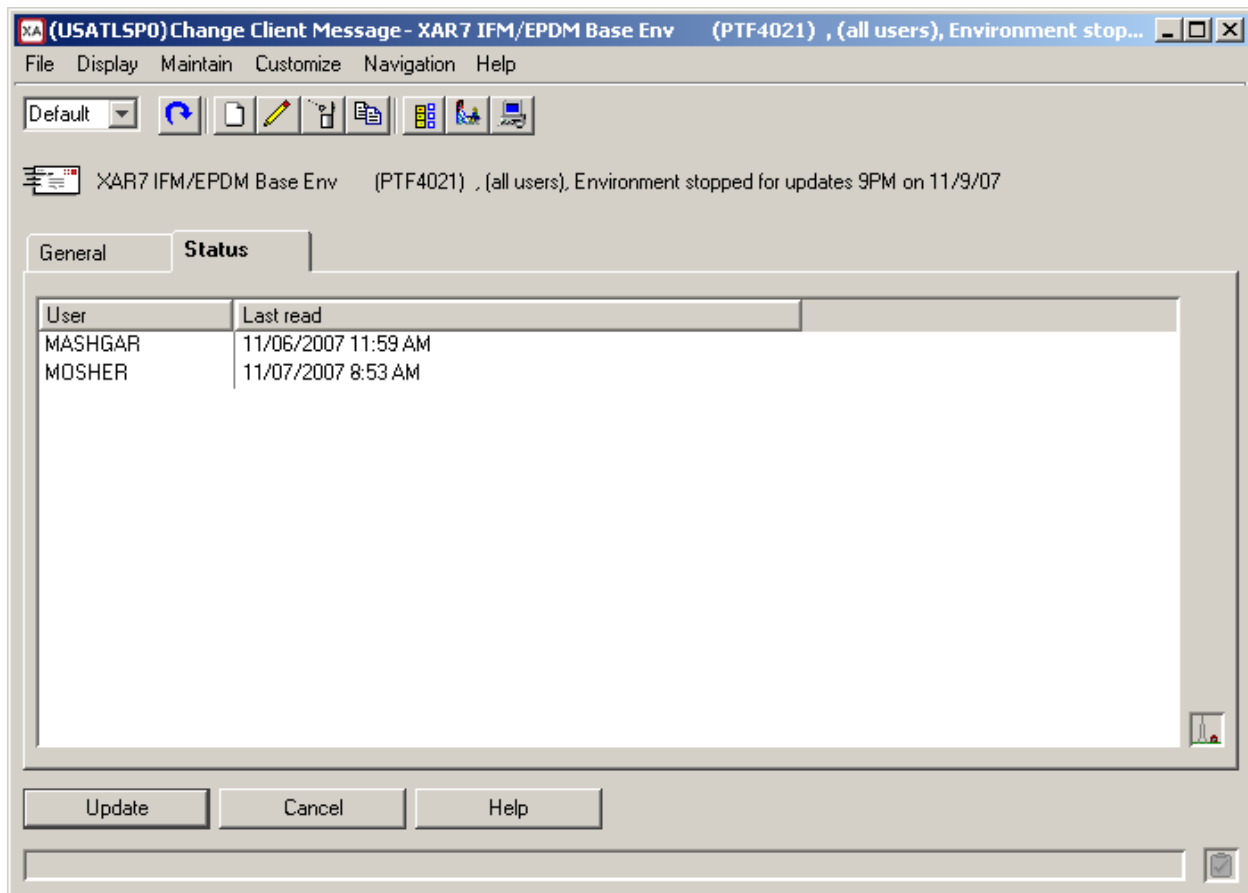
Client messages for immediate updates

When you are applying an immediate update to an environment, you should plan to send at least two client messages to the users in that environment. The first message should alert users in that environment of the date and time when the update will take place.



In the example, the alert warns users in environment GG = XAR7 IFM/EPDM Base Env (PTF4021) of the date and time the environment will be stopped for updating. The message is set to appear each time a user who received the message logs in to the environment. Sending this message several days ahead of the update gives users a reminder each time they log into the environment prior to that update.

Each time a user reads the client message and clicks the **Close** button on the message dialog, Link Manager logs an entry on the Status card in the Client Message card file. You can view the logs on the Status card to see how many of the users receiving the message read it. This information can help you determine whether to proceed with the update at the planned date and time or whether another message needs to be sent as a “final warning” prior to performing the update.



After you have completed the update to the environment, sending another client message alerts users that the environment is now available for them to use. Because users would not be using the updated environment at this time, you would need to send a client message to the environment to which you directed users of the updated environment. For example, if you directed users of environment GG to work in environment VV until updates were complete, you would send a message to users of environment VV when environment GG is available again.

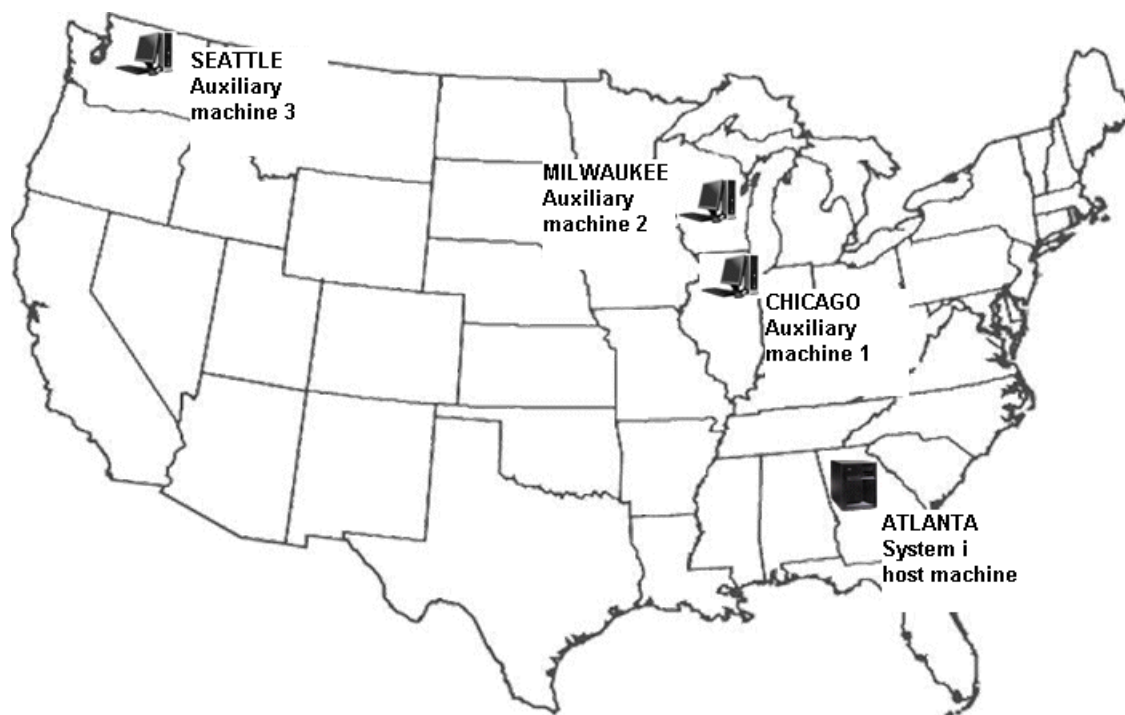
Using Fix Servers for remote updates

If your host system supports users in one location, applying updates occurs locally. Users can download fixes from the host machine quickly. However, if your host system also supports users in remote locations, applying updates can become time-consuming if all of the remote users individually have to download updates from the host machine. Depending on the number and size of the updates being downloaded, the amount of bandwidth consumed by this activity could be considerable.

Link Manager provides a convenient solution for delivering updates to remote users through the Fix Server process. A Fix Server process allows you to distribute Infor ERP product updates to a remote site by setting up the Fix Server on an auxiliary machine located at the remote site. The remote Infor

ERP product users can then download the updates locally from the Fix Server process defined for the auxiliary machine at their remote site. The bandwidth usage to deliver the updates occurs once, when the updates are loaded to the Fix Server process on the remote auxiliary machine. The Infor ERP product users download the fixes locally, with no impact to bandwidth connection to the host machine.

For example, if a company based in Atlanta has remote sites in Chicago with 50 users, in Milwaukee with 20 users, and in Seattle with 30 users, having all 100 remote users download code from Atlanta would be inefficient. With Link Manager, Fix Server processes can be set up on an auxiliary machine in Chicago, on another auxiliary machine in Milwaukee, and on a third auxiliary machine in Seattle. The updated Infor ERP product code is downloaded once to the Fix Server process in Chicago, once to Milwaukee, and once to Seattle, and then the 100 users can download the updated code efficiently from their local Fix Server processes rather than from the remote site in Atlanta.



A Fix Server process contains a synchronization routine that continuously compares the level of Infor ERP product application code on the auxiliary machine where the process is located with the level of Infor ERP product code on the host machine. If the application code on the auxiliary machine where the Fix Server process is located does not have updates that have been applied to code on the host machine, the Fix Server downloads the updates. This download synchronizes the Infor ERP product code on the Fix Server with the level of Infor ERP product code on the host machine.

When an Infor ERP product user logs in to Power-Link, the Power-Link logon process automatically searches for the fastest connection for linking the user's workstation to a Fix Server, if a Fix Server process exists, or to the host machine. During the logon process, the Power-Link client programs automatically receive the updates from the Fix Server or the host machine, depending on which connection is fastest for that user.

For example, if a company based in Atlanta has a remote site in California with 100 users, having all 100 users download code from the host machine in Atlanta would be inefficient. With Link Manager,

a Fix Server process can be set up on an auxiliary machine in California. The Fix Server process synchronizes to the host machine by downloading the Infor ERP product code updates once to the auxiliary machine in California, then the 100 users can download the updated code efficiently from the local Fix Server process in California rather than from the remote host machine in Atlanta.

To use a Fix Server to deliver updates to a remote site, an auxiliary machine must be set up by installing the auxiliary machine software on an eligible workstation at the site. For information on installing an auxiliary machine, see “Understanding auxiliary machines” on page 58 and the instructions for installing auxiliary machines in the online Administrator Installation guide for Link Manager. During installation of the auxiliary machine software, the **Auto offload** option must be set to **No**.

When the auxiliary machine has been installed at the remote site and has been registered with Link Manager, you can set up a Fix Server on that auxiliary machine. The first step is to create a new Fix Server process in the Global Environment. When you create the new Fix Server process, you set the **Assigned machine name** to the name of the auxiliary machine at the remote site.

(USATLSP0) Create Process

Environment: ** = Global Environment

Assigned machine name: (auto)

Process type: Fix Server

Name: FIX03

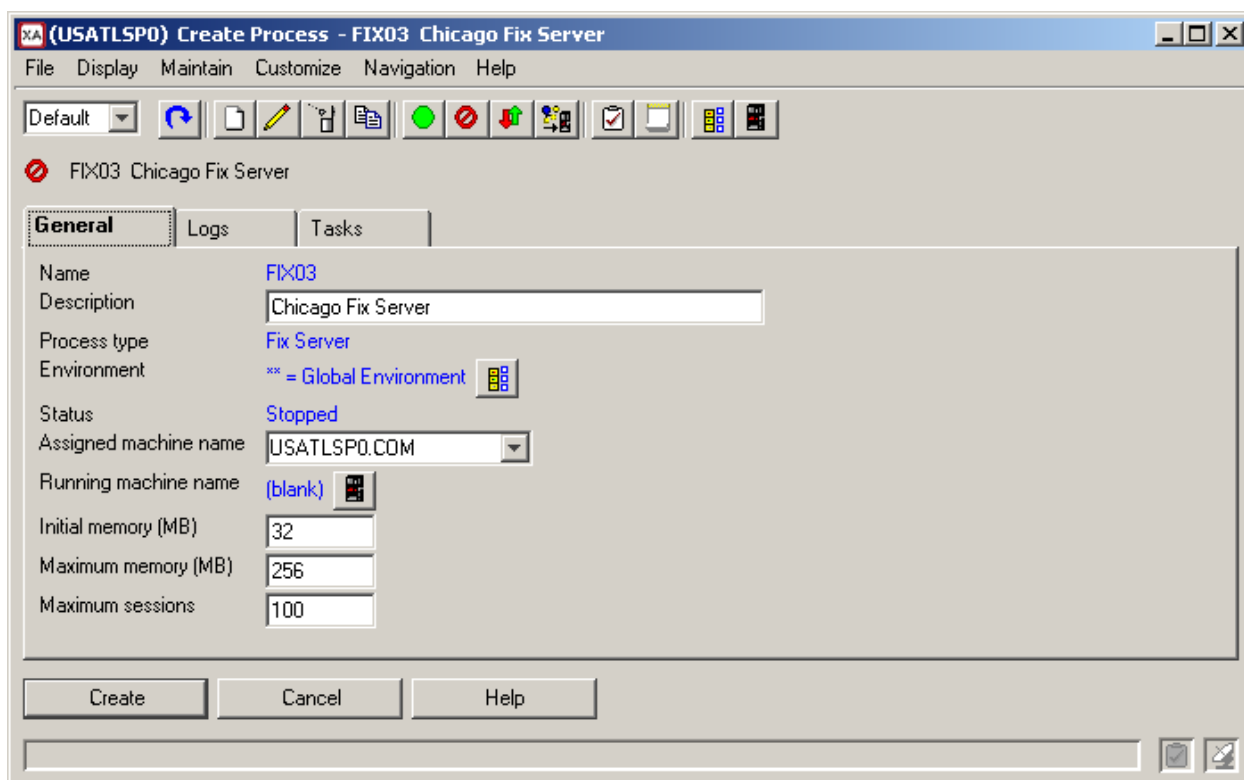
Description: Chicago Fix Server

Return here to create another

Preview before create

Create Cancel Help

In the detailed information for the new Fix Server process, you can specify the initial memory, maximum memory, and maximum sessions to the values you want to use for delivering updates at the remote site.



The Fix Server process automatically begins the synchronization with the Infor ERP product code on the host machine and downloads updates required to maintain a level of product code equivalent to the Infor ERP product code on the host machine.

The final step is the delivery of code updates to Infor ERP product users. When Infor ERP product users log on to Power-Link, they connect to an auxiliary machine containing a Fix Server process or to the host machine, based on which connection is the fastest and most efficient. In the case of the remote users, the most efficient connection is to the Fix Server located on their local auxiliary machine. Right-clicking the speed indicator, at the bottom of the Link Manager or Power-Link logon dialog, shows the best connection for that user and the speed of the connection to each machine in the host system in megabits per second (mbps).