XEROX

Network Administration Library

Changes are periodically made to this document. Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

The content of this booklet is based on the Services 10.0 Release.

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Preface

Purpose

The Server Monitor Service booklet describes all that you need to know to set up and maintain your Server Monitor Service. This booklet explains all the service commands and shows how these commands are used to perform service-related tasks. In addition, this booklet lists all the messages that can be generated while running this service and tells you what to do when a message is displayed.

Intended audience

This publication is intended for System Administrators who are responsible for starting up and keeping the Server Monitor Service running efficiently.

Before you read this booklet

There is some general information about services that you will need to be familiar with before you can understand this booklet. Read the *Introduction to Network Administration* booklet. This publication is in the *Network Basic Services* volume.

Before you can use this service

As part of the preparation for setting up the Server Monitor Service, you need to perform the procedures described in the *Server Software Installation* booklet. This booklet is also part of the *Network Basic Services* volume.

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The Server Monitor Service (SMS) allows a user, usually the System Administrator, to conveniently monitor a group of servers from one server. Periodic polling of monitored servers provides automatic availability detection. Simultaneous reporting from monitored servers for registered monitoring servers allows for performance evaluation of and timely attention to critical events.

The SMS attempts to register itself with a monitored server to receive event information from the monitored server. When the SMS successfully registers itself with the monitored server, the SMS is said to be an "event recipient" of the monitored server.

Monitoring servers periodically poll monitored servers to check their availability. The SMS sends a mail message to all designated users whenever a monitored server's availability changes (goes up or down).

The SMS also monitors Internetwork Routing Service (IRS) telephone circuits. When phone lines controlled by the IRS on a monitored server go up or down, the SMS is notified.

The user interacts with the monitoring server to control and acquire event information via an asynchronous-type interface. The interface is through the server terminal, using an asynchronous terminal and the Greeter or a remote server executive. Many users may simultaneously access a single monitoring server. A single user may access multiple monitoring servers.

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This section lists all the Server Monitor Service commands. The commands below are listed in alphabetical order, followed by a brief explanation. To address Server Monitor Service commands, you must be in the Server Monitor Service context.

Add Monitored Server   Adds a monitored server to the SMS configuration file.

Add User Notification   Adds a user to be notified (through the Mail Service) of a particular monitored server's availability.

Backup Server Monitor   Backs up the server monitor's configuration of monitored servers to a specified location. This configuration can be restored by any Server Monitor Service at a later time.

Change Sampling Rate   Changes the rate at which a monitored server is polled.

Expunge Service   Permanently removes a service from a server.

List Monitored Servers   Displays the list of servers being monitored by the Server Monitor Service on the particular server.

List Remote Server's Event Recipients   Lists the names and addresses of monitoring servers to which a monitored server reports events.

List User Notifications   Displays a list of users who are notified of a particular server's events.

Remove Monitored Server   Deletes a server from the Server Monitor Service's configuration file of monitored servers.

Remove User Notification   Deletes a user from the specified monitored server's notification list.

Show Monitored Server Statistics   Displays accumulated information about a specific monitored server or all the monitored servers.

Show Server Monitor Configuration   Displays the list of servers being monitored and the list of users to be notified about each server's availability.

Start   Starts the Server Monitor Service with the local or a remote configuration file.

Note: The Services System Software **Start Service** command also starts the Server Monitor Service; however, it only starts with the local database. To use the **Start Service** command you don't need to be enabled in the Server Monitor Service context, but you do need to be enabled as a System Administrator.

Stop   Stops the Server Monitor Service.

Verify Monitored Server   This command causes the Server Monitor Service to verify that a binding exists between itself, the monitoring server and the monitored server. This verification registers the monitoring server as an event recipient with the monitored server, if the monitoring server is not already registered.

Note: If the monitored server is not configured with IRS or SMS software, the verify will fail.

Perform these tasks to set up the Server Monitor Service service:

* Follow the procedures described in the *Server Software Installation* booklet to install SMS

* Initialize the Server Monitor Service

* Configure the Server Monitor Service database

Initializing the Server Monitor Service

You see these messages when you run the Server Monitor Service for the first time:

```
Running Server Monitor Service.
SMS: This Server Monitor Service does not have a configuration of servers to
monitor.
SMS: This Server Monitor is now started.
Server Monitor Service run.
```

The Server Monitor Service is now started. However, it is not monitoring any servers yet. You must create the configuration file of monitored servers as described in the section "Configuring the Server Monitor Service database." This configuration information is stored in a local file named Server Monitor database. Any changes made to the configuration file are automatically stored in this file.

You can also save a copy of the configuration file on a remote server.

Unlike other services running for the first time, the SMS doesn't prompt for a name. (An SMS name is not registered with the Clearinghouse Service. It's up to you to keep track of which servers the SMS runs on.)

Note: On rare occasion, the SMS is unable to permanently commit a database update to disk, even though the update is cahched in volatile memory. When this happens, you get the message: "Cannot commit update to disk. Update will only be in effect until Server Monitor Service is stopped or started." If the error persists, contact the Network Support Center.

Configuring the Server Monitor Service database

The Server Monitor Service maintains a configuration file of designated servers to monitor. The file contains server names, with each server's polling rate, and a list of the designated users.

A monitored server may be monitored by several different monitoring servers. The recommended number of different server monitors watching the same server is three or less. Be careful not to cause a monitored server to spend more time answering monitor queries for information than performing services.

Procedure

1. Log on and enable in the Server Monitor Service context.

2. Type **Add Monitored Server** and press <RETURN>.

```
SMS!Add Monitored ServerRETURN
    Server Name: FSRETURN
    Sampling rate in minutes (15-32767): 15RETURN
    User's name: Matthew Bennett:South Region:Acme SalesRETURN
    Immediate notification? (Y/N): NRETURN
    Notify another user? (Y/N): NRETURN
Done.
    Add another monitored server? (Y/N): NRETURN
```

3. Type the name of the server to be monitored and press <RETURN>.

4. Type the sampling rate frequency (in minutes) at which the server is to be polled. The example above shows a sampling rate of 15 minutes, which means that every 15 minutes SMS will check the availability of the server named FS. The sampling rate cannot be less than once every 15 minutes.

   Note: If you wish to change the sampling rate later, use the **Change Sampling Rate** command.

5. Type the user's name and press <RETURN>. The user designated in this prompt is sent a mail note when the Server Monitor Service on that particular server detects that the given monitored server's availability has changed. In the above example, a mail note would be sent to user "Matthew Bennett" when the Server Monitor Service detects the change in availability for the server named "FS."

6. Type **N** to the "Immediate notification?" prompt and press <RETURN>.

   Note: Entering "Y" in response to the prompt produces no result.

7. Type **N** to the "Notify another user?" prompt and press
    <RETURN>. If you type **Y**, repeat steps 5 and 6.

    At this point, SMS tries to register itself with the monitored
    server. If this is successful, there's nothing else to do. If
    it's not, use the **Verify Monitored Server** command to
    complete the operation at a later time.

8. Type **N** to the "Add another monitored server?" prompt
    and press <RETURN>. If you are adding another server
    to be monitored, type **Y** to "Add another monitored
    server?." The SMS repeats all prompts for the next server
    to be monitored.

9. Type **Show Server Monitor Configuration** and press
    <RETURN>.

```
SMS!Show Server Monitor ConfigurationRETURN
[FS:Our Domain:OurOrg  (Net 1-510, Processor 2-852-127-214)]*
    Sampling rate (in minutes): 15
    User's name: Matthew Bennett:Our Domain:OurOrg
```

The asterisk (*) shows that the server running SMS is registered
with the monitored server as an event recipient.

Note: If the server you want to monitor is not running IRS or
SMS, event site reporting is not available on that server. In
this case, when you enter **Show Server Monitor
Configuration,** this message is displayed:

"Added but register failed. Server being accessed not
configured with compatible software. Retry later with
Verify Monitored Server Command. Done."

All future attempts to verify the configuration fail because event
site reporting is not running on that server. Use the **List
Monitored Servers** command to verify that the server is being
monitored.

10. Log off from the Server Monitor Service context.

The procedures in this section are used to keep your Server Monitor Service running in accordance with your changing needs. This means maintaining the configuration file of monitored servers, maintaining user notifications, starting and stopping the service, and similar maintenance tasks. Use these tasks on an as-needed basis.

The following are contained in this section:

- Starting and stopping the Server Monitor Service

- Showing monitored server statistics

- Adding, listing and verifying monitored servers

- Listing remote server event recipients

- Backing up and restoring a monitored server configuration

- Removing monitored servers

- Adding users for a monitored server and listing user notifications

- Removing users from a monitored server's list

- Changing a monitored server's sampling rate

- Removing the Server Monitor Service from a server

Starting and stopping the Server Monitor Service

The **Start** command lets you start the SMS when it is stopped with the local or a remote configuration file. The Services System Software **Start Service** command also starts the SMS, but only with the local database.

The **Stop** command lets you stop the Server Monitor Service when it is started.

Note: Even though the Server Monitor Service stops all of its monitoring activities, it remains registered with the monitored servers as an event recipient.

Starting the Server Monitor Service

1. Log on and enable in the SMS context.

2. Type **Start** and press <RETURN>.

```
SMS!Start RETURN
    Restore configuration from backup? (Y/N): Y RETURN
    Backup location: (FS:Our Domain)Log/SMBackup/Config database RETURN
    Confirm? (Y/N): Y RETURN
    Done.
SMS: Backup on remote configuration not local.
SMS: This Server Monitor is now started.
SMS!
```

Note: If the restoration from the backup fails, the message "File not found. Starting server monitor with local configuration" is displayed.

3. Type **Y** to the "Restore configuration from backup?" prompt and press <RETURN>.

4. The "Backup location" default shows the last backup location. Press <RETURN> if this is the location you want restored. Otherwise, type the location name and press <RETURN>.

Note: The File Service name:domain information is enclosed in parentheses. The configuration file is stored in the folder titled "SMBackup," with a colon separating the service name from the domain name. Specifying existing file folder and file drawer names without specifying a file name does not work. You must have full access privileges to this file drawer.

5. If you are satisfied, type **Y** and press <RETURN> to confirm your backup location.

    If you make a mistake while typing in the location name, type **N** and press <RETURN>.

    If you type **N**, repeat steps 1 through 4. The Server Monitor Service starts with the local database in either case.

Stopping the Server Monitor Service

1. Log on and enable in the SMS context.

2. Type **Stop** and press <RETURN>.

```
SMS!StopRETURN
SMS: This Server Monitor is now stopped.
```

Showing monitored server statistics

A monitoring server (a server that is running SMS) periodically interacts with a specified configuration of other servers to determine availability. These servers report the state transitions of IRS phone lines of the SMS. The monitoring server maintains a history of these events. A mail message is sent to designated users when a server goes up or down, and when the IRS phone line on a monitored server goes up or down.

The **Show Monitored Server Statistics** command displays accumulated information about a specific monitored server or all monitored servers. The following statistics are kept:

Monitoring session start time   The time when the Server Monitor Service first started to monitor the given server.

Sampling rate   The frequency, in minutes, at which the Server Monitor Service tries to poll the given server.

Server state   The condition of the given server, whether it is responding or not. The server states are:

unknown	SMS has not initially polled the server yet
responding	Available to network users
not sure yet	Did not respond, but trying again to verify
not responding	Not available to network users

Up time   The length of time the given server has been available.

Down time   The length of time the given server has been unavailable.

Up-Down Count   The number of times the given server has toggled availability, from available to unavailable, and then back to available.

Total up time   The cumulative length of time the given server has been available.

Total down time   The cumulative length of time the given server has been unavailable since the start of the server monitoring session.

Last Response   The last time the Server Monitor Service was able to communicate with the given server. The last time the given server was deemed to be available.

Last Checked   The last time the Server Monitor Service tried to communicate with the given server.

Last Restart   The time the given server was last rebooted.

Showing statistics

1. Log on and enable in the Server Monitor Service context.

2. Type **Show Monitored Server Statistics** and press <RETURN>.

3. Enter **2** to see all monitored servers or **1** to see a specific server. Press <RETURN>. If you enter **1**, you see an additional prompt to enter the server's name. Enter the server's fully-qualified name.

```
SMS > Show Monitored Server StatisticsRETURN
    Choose option:
    1. Specific target server
    2. All monitored servers
    Enter choice number: 1RETURN
    Server name: Tundra:Our Domain:OurOrgRETURN

[Tundra:Our Domain:OurOrg (Net 1-510 Processor 2-852-127-
214)]*
    Monitoring session start time: 2-May-84 19:40:52
    Sampling rate (in minutes): 15
    Server state: responding
    Up time: 13 hours, 14 minutes
    Up-down count: 0
    Total up time: 13 hours, 14 minutes
    Total down time: 0 minutes
    Last response: 2-May-84 19:56:54
    Last checked: 2-May-84 19:56:54
    Last restart: 2-May-84 6:27:42
```

The asterisk (*) shows the binding or connection of the monitored server to the monitoring server, and that SMS is registered as an event recipient.

Server monitor statistics can be listed using the remote server executive. When you use the 6085/8010 remote server executive, you can produce printed versions of the output for archival purposes. Printed versions can also be copied into documents for distribution using electronic mail.

Adding, listing and verifying monitored servers

Use the **Add Monitored Server** command to add additional servers to the configuration watched by the SMS. Then you can use the **List Monitored Servers** command to see the names and addresses of servers being monitored by the SMS. The **Verify Monitored Servers** command confirms or establishes a binding relationship between the monitored server and the monitoring service.

Adding a server

1. Log on and enable in the Server Monitor Service context.

2. Type **Add Monitored Server** and press <RETURN>. Respond to the prompts with the name of the server you want to monitor and press <RETURN>

    Note: When you are monitoring servers in different domains, you must enter the fully-qualified name of the server.

    ```
    SMS!Add Monitored ServerRETURN
        Server name: ParadiseRETURN
        Sampling rate in minutes (15-32767): 15RETURN
        User's name: Matthew BennettRETURN
        Immediate notification? (Y/N): NRETURN
        Notify another user? (Y/N): NRETURN
        Confirm (Y/N):yRETURN
    Done.
        Add another monitored server? (Y/N): NRETURN
    ```

3. Enter the server name, rate, and name of the user to be notified of changes in availability. You can specify more than one user to be notified.

    When the Server Monitor Service detects that a monitored server's availability has changed, a mail message is sent to the user specified in the "User's name" prompt.

    You can continue to add servers until you answer **N** to the Add another monitored server prompt.

    For each new monitored service that you add, the SMS automatically tries to create a binding (connection) between the monitoring server and the monitored service to prepare that service to report events. If the new service you have added does not have event reporting capability, you see the message: "Added but register failed. Server does not have event reporting service, but SMS will monitor it."

    After adding the server to your configuration file, the SMS automatically tries to register with the monitored server as an event recipient. The **Verify Monitored Server** command confirms this for you.

Listing monitored servers

1. Log on and enable in the Server Monitor Service context.

2. Type **List Monitored Servers** and press < RETURN >.

```
SMS:List Monitored Servers RETURN
FS:Our Domain:OurOrg   (Net 1-510,   Processor 2-852-127-214)*
Paradise:Our Domain:OurOrg   (Net 1-510,   Processor 2-852-127-
778)*
```

The asterisk (*) indicates that the server running SMS has been successfully registered with the monitored servers as an event recipient. If there is no asterisk, you may want to use the **Verify Monitored Server** command to register the monitoring server.

Verifying servers

Verifying a monitored server causes SMS to verify that a binding (connection) exists between a monitoring server and a monitored server. This means that the monitoring server will be notified of events as they occur on the monitored server.

The **Verify Monitored Server** command checks the relationship between monitored and monitoring services. If the monitoring server is not registered as an event recipient with the monitored server, this command does the registration if possible. If the monitoring server is registered, you simply get confirmation.

1. Log on and enable in the Server Monitor Service context.

2. Type **Verify Monitored Server** and press < RETURN >.

Note: If the server has no event reporting capability but is one of the servers which SMS monitors, you see the message: "Verify < Specified server > failed. Server does not have event reporting service, but SMS monitors it."

```
SMS > Verify Monitored ServersRETURN
    Choose option:
    1    Specific monitored server
    2    All monitored servers
    Enter choice number: 1RETURN
    Server name: Tundra:Our Domain:OurOrgRETURN

Verified Tundra:Our Domain:OurOrg

SMS > Verify Monitored ServersRETURN
    Choose option:
    1    Specific monitored server
    2    All monitored servers
    Enter choice number: 2RETURN
    SMS!
SMS: Verify all monitored servers - begin ... Command may take a while

SMS: Verified Tundra:Our Domain:OurOrg
SMS: Verified Frostbite:Our Domain:OurOrg
SMS: Verified Skijump:Our Domain:OurOrg
```

Listing remote server event recipients

The **List Remote Server's Event Recipients** command displays the names and addresses of monitoring servers to which a monitored server will report when an event takes place.

Procedure

1. Log on and enable in the SMS context.

2. Type **List Remote Server's Event Recipients** and press <RETURN>.

```
SMS > List Remote Server's Event RecipientRETURN
    Server name: Tundra:Our Domain:OurOrgRETURN


    Frostbite:Our Domain:OurOrg (Net 60, Processor 2-852-128-
    922)*
Total SMS Event Recipients:  1
    Confirm? (Y/N): YRETURN
Done.
```

In this example, there is only one SMS monitoring the server Tundra. In general, three servers would be the maximum number of monitoring servers recommended._

Backing up and restoring a monitored server configuration

The **Backup Server Monitor** command directs the Server Monitor Service to store a copy of the configuration file of monitored servers in a specified location. This configuration file can then be restored at a later time by this server or another Server Monitor Service by using the **Start** command.

Backing up a monitored server configuration

1. Log on and enable in the Server Monitor Service context.

2. Type **Backup Server Monitor** and press < RETURN >.

3. Respond to the prompts, pressing < RETURN > after each response.

Note: The Server Monitor Service cannot create file drawers. Therefore, in order for the Server Monitor Service to store its configuration, the pathname must reference an existing file drawer. You must have full access privileges to this file drawer.

```
SMS!Backup Server MonitorRETURN
    Backup location: (FS:Our
    Domain)Log/SMBackup/Config.databaseRETURN
    Confirm? (Y/N): YRETURN
Done.
```

CAUTION: The File Service name:domain information must be enclosed in parentheses. If the File Service name isn't in parentheses, SMS can't identify it as a File Service. Also, the file drawer name must be separated from folder name(s) with slashes.

If the document titled "Config.database" already exists, the new configuration file replaces the old one. If the document does not exist, it is created.

Note: If a File Service name in the form [FILESERVICE:DOMAIN:ORGANIZATION] is not specified for the backup location and an error message is not displayed, then the Server Monitor database may be stored in the local server's working directory using the file name specified at the "Backup Location:" prompt, and not to a remote file service. To remove this file from the local server's working directory, use the command "Delete Files," available to any enabled Domain Administrator.

The configuration file is stored in the folder titled "SMBackup" (which, like the document, is created if it does not exist). Specifying existing file drawer and file folder names without specifying a file name does not work.

Restoring a monitored server configuration

1. Log on and enable in the Server Monitor Service context.

2. Type **List Monitored Servers** and press < RETURN >.

```
SMS > List Monitored ServersRETURN
FS:Our Domain:OurOrg   (Net 1-510,   Processor 2-852-127-214)*
```

3. Note the location name of the backup you want restored.

4. Type **Stop** and press < RETURN >.

```
SMS!StopRETURN
SMS: This Server Monitor is now stopped.
```

5. Type **Start** and press < RETURN >.

```
SMS!StartRETURN
    Restore configuration from backup? (Y/N): YRETURN
    Backup location: (FS:Our Domain)Log/SMBackup/Config databaseRETURN
    Confirm? (Y/N): YRETURN
    Done.
SMS: Starting Server Monitor from back-up configuration.
SMS: This Server Monitor is now started.
SMS!
```

6. Type **Y** to the "Restore configuration from backup?" prompt and press < RETURN >.

7. The "Backup location" default shows the last backup location. Press < RETURN > if this is the location you want restored. Otherwise, type the location name (from step 3) and press < RETURN >.

   Note: The File Service name:domain information is enclosed in parentheses. The configuration file is stored in the folder titled "SMBackup." Specifying existing file folder and file drawer names without specifying a file name does not work. You must have full access privileges to this file drawer.

8. If you are satisfied, type **Y** and press < RETURN > to confirm your backup location. If you made a mistake while typing in the location name, backspace, correct the name, and press < RETURN >.

   When you type "N" the local configuration is used. If you want a remote configuration, repeat steps 3 through 6.

9. Log off from the Server Monitor Service context.

Removing monitored servers

Use the **Remove Monitored Server** command If you no longer want a particular server to be watched. This command deletes the server from the Server Monitor configuration file. This also causes SMS to unregister itself from being an event recipient of the monitored server.

Procedure

1. Log on and enable in the Server Monitor Service context.

2. Type **Remove Monitored Server** and press <RETURN>. Respond to the prompts to remove the monitored server and press <RETURN>

    Note: If you have already deleted the server from the Clearinghouse, you must specify the server by its address in this operation. In general, you can specify the server address instead of the server name in response to the SMS prompts.

```
SMS!Remove Monitored ServerRETURN
    Server name: FrostbiteRETURN
    Confirm? (Y/N): YRETURN
    Are you sure? (Y/N): YRETURN
Done.
```

3. If you want to verify that the server has been removed from the Server Monitor configuration file, type **List Monitored Servers** and press <RETURN>.

```
SMS!List Monitored ServersRETURN
Frostbite:Our Domain:OurOrg  (Net 1-510,    Processor 2-852-
                                            127-214)
```

Note: A monitored server may be unavailable for unregistration when you remove it. If this happens, the server is removed from the configuration file, but the monitoring server remains registered as an event recipient of the monitored server.

4. Log off from the Server Monitor Service context.

Adding users for a monitored server and listing user notifications

By adding their names through the **Add User Notification** command, additional users can be notified of a monitored server's availability. When a server's availability changes, the list of users is notified through the Mail Service.

Procedure

1. Log on and enable in the Server Monitor Service context.

2. Type **Add User Notification** and press <RETURN>.

3. Respond to the prompts to add other users who should be notified of the availability of the monitored server, and press <RETURN>.

```
SMS!Add User NotificationRETURN
    Server name: FSRETURN
    User's name: Tyler MiskaRETURN
    Immediate notification? (Y/N): NRETURN
    Confirm? (Y/N): YRETURN
Done.
    Notify another user? (Y/N): NRETURN
```

Note: You can type a Clearinghouse group name next to the "User's name" prompt.

4. Type **List User Notifications** and press <RETURN> if you want to see the list of users to be notified.

```
SMS!List User NotificationsRETURN
    Server name: FS:Our Domain:OurOrgRETURN
JackFrost:Our Domain:OurOrg
FrostySnoman:Our Domain:OurOrg
Tyler Miska:Our Domain:OurOrg
```

5. Log off from the Server Monitor Service context.

Removing users from a monitored server's list

If you no longer want the Server Monitor Service to notify a particular user when a monitored server's availability changes, remove the user from the monitored server's list of user notifications. Do this using the **Remove User Notification** command.

Procedure

1. Log on and enable in the Server Monitor Service context.

2. Type **Remove User Notification** and press <RETURN>. Respond to the prompts to remove the user from the monitored server's list and press <RETURN>.

```
SMS!Remove User NotificationRETURN
    Server name: FSRETURN
    User's name: Tyler MiskaRETURN
    Confirm? (Y/N): YRETURN
    Are you sure? (Y/N): YRETURN
Done.
```

3. Type **List User Notifications** and press <RETURN>.

```
SMS!List User NotificationsRETURN
    Server name: FS:Our Domain:OurOrgRETURN
Matthew Bennett:Our Domain:OurOrg
```

This is displayed if no users are notified:

```
SMS!List User NotificationsRETURN
    Server name: Frodo:Our Domain:OurOrgRETURN

No user notification.
```

This situation occurs when a monitored server is initially added with users to notify, and then later all its user notifications are removed. However, the monitored server continues to monitor, even though it does not have any users to notify. This is done when you want to monitor a server but do not need to notify any users.

4. Log off from the Server Monitor Service context.

Changing a monitored server's sampling rate

If you want a monitored server to be polled at a different rate, use the **Change Sampling Rate** command.

Procedure

1. Log on and enable in the Server Monitor Service context.

2. Type **Change Sampling Rate** and press <RETURN>.

3. Type the new sampling rate and press <RETURN>.

```
SMS!Change Sampling RateRETURN
    Server name: FS:Our Domain:OurOrgRETURN
    New Sampling rate in minutes (15-32767): 30RETURN
    Confirm? (Y/N): YRETURN
Done.
```

4. Type **Y** to confirm the desired value.

5. Log off from the Server Monitor Service context.

Removing the Server Monitor Service from a server

If you need to permanently remove the Server Monitor Service from a server, use the **Expunge Service** command. This command returns any server resources (such as disk space) used by the Server Monitor Service.

Your Server Monitor Service may be sharing a server's resources with other services. One of the other services may need more disk space and can get this space if you remove the Server Monitor Service from its current service.

Use the **Expunge Service** command to permanently remove the Server Monitor Service from a server.

The **Expunge Service** command is explained in the booklet *Server Operations and Maintenance.*

Procedure

1. Log on and enable.

2. Type **Stop Service** and press <RETURN>.

3. Type the range of numbers corresponding to all services listed and press <RETURN>.

4. Boot the server while the maintenance panel displays 0001.

5. Type **N** to the "Normal Startup?" prompt and press <RETURN>.

6. Type the number corresponding to the "Interrupt before running services" option and press <RETURN>.

7. Log on and enable (unless the only Clearinghouse resides on this server).

8. Type **Expunge Service** and press <RETURN>.

9. Type the number corresponding to the service you wish to expunge and press <RETURN>. Type **Y** to the confirmation prompt, and press <RETURN>.

10. Boot the server again.

11. Depending on your needs, type **Y** or **N** to the "Normal Startup?" prompt and press <RETURN>.

This section contains any error or informational messages that you might come across during operation of your service. They are listed in alphabetical order. If the probable cause isn't obvious, it is given below the message, next to the heading: *Probable cause*. If the message is such that an action can be taken to resolve the situation, the action is listed next to the heading: *Action*.

When you see an error or informational message that you do not understand or want additional information about, write it down. Then look it up in the following Server Monitor Service message list. If the listing doesn't give you the information you need, contact the Network Support Center.

Access rights indeterminate.

Informative message that indicates a problem in communicating with the monitored server.

Access rights insufficient.

Informative message that indicates a problem in communicating with the monitored server.

Authentication Service is too busy.

Informative message that indicates a problem in communicating with the monitored server.

Bad password in identity.

Informative message that indicates a problem in communicating with the monitored server.

Cannot backup, authentication problem.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: There is a problem with the route to the Clearinghouse.

Action: Check the route to the Clearinghouse from the backup file server.

Cannot backup, Clearinghouse problem.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: There is a problem with the route from the Clearinghouse to the backup file server.

Action: Check the route from the Clearinghouse to the file server.

Cannot backup, insufficient access rights.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The user does not have access rights to the backup file drawer.

Action: Check the list of authorized backup file drawer users.

Cannot backup, no route to the file service.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The route to the file service has been broken.

Action: Check the network connections and IRS links to the backup file service.

Cannot backup, the connection timeout.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The backup has exceeded the time limit for the process.

Action: Try backing up again.

Cannot backup, the file is in use.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: Another process is accessing the backup file.

Action: Wait until the file is available, and try again.

Cannot backup, the file is not found.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The backup file cannot be found using the specified path.

Action: Check the specified backup path and enter it again.

Cannot backup, the file service is not found.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The backup file service cannot be found using the specified path.

Action: Check the specified backup path and enter it again.

Cannot backup, the file service is not responding.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The file server is down.

Action: Check the file server and bring it back up following the procedure described in the *File Service* booklet.

Cannot backup, the pathname is incorrectly specified.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The pathname was not entered properly.

Action: Check the pathname and enter it again.

Cannot backup, the pathname is invalid.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The pathname was not entered properly.

Action: Check the pathname and enter it again.

Cannot backup, the volume is not found.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The backup volume cannot be found using the specified path.

Action: Check the specified backup path and enter it again.

Cannot backup, there is not enough space on the file server.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The specified backup file server does not have enough space to store the backup file.

Action: Delete unnecessary files on the file server, then re-send the backup to the file server.

Cannot backup, unable to connect to the file service.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The route to the file service has been broken.

Action: Check the file service, network connections, and IRS links.

Cannot backup, unable to transfer file.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Probable cause: The link between the SMS server and the backup file server has been broken. The backup file server is down.

Action: Wait until the backup file server comes back up, then try again.

Cannot backup, unexpected error.

This is a backup message. If this message is displayed, SMS cannot store the backup file.

Cannot find "<Name>" in the Clearinghouse.

This is a Clearinghouse error message.

Probable cause: The user input does not exist in the Clearinghouse database.

Action: Enter the fully-qualified (three-part) user name.

Cannot reach Authentication Service.

Informative message that indicates a problem in communicating with the monitored server.

Cannot restore, authentication problem.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: There is a problem with the route from the restore file server to the Clearinghouse.

Action: Check the route from the restore file server to the Clearinghouse.

Cannot restore, Clearinghouse problem.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: There is a problem with the route from the Clearinghouse to the restore file server.

Action: Check the route from the Clearinghouse to the restore file server.

Cannot restore, insufficient access rights.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The user doing the restoration does not have access to the restore file drawer.

Action: Check file drawer access.

Cannot restore, no route to the file service.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The route to the restore file service has been broken.

Action: Check network connections.

Cannot restore, the connection timeout

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The time allotted for the restore operation has been exceeded.

Action: Try the restore operation again.

Cannot restore, the file is in use.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: Another process is using the restore file.

Action: Wait until the other process is finished.

Cannot restore, the file is not found.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The restore file cannot be found through the specified path.

Action: Check the specified path and enter it again.

Cannot restore, the file service is not found.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The restore file service cannot be found through the specified path.

Action: Check the specified path and enter it again.

Cannot restore, the file service is not responding.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The file service that contains the restore file is down.

Action: Check the file service.

Cannot restore, the pathname is incorrectly specified.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The pathname was not entered correctly.

Action: Check the pathname and enter it again.

Cannot restore, the pathname is invalid.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The pathname was not entered correctly.

Action: Check the pathname and enter it again.

Cannot restore, the volume is not found.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The restore volume cannot be found through the specified path.

Action: Check the specified path and enter it again.

Cannot restore, unable to connect to the file service.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The connection to the file service has been broken.

Action: Check the file service and the network connections

Cannot restore, unable to transfer file.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Probable cause: The link between the SMS server and the restore file server has gone down.

Action: Wait till the restore file server comes back up.

Cannot restore, unexpected error.

This is a restore message. If this message is displayed, SMS will start with the last configuration.

Clearinghouse lookup problem on "<Name>".

This is a Clearinghouse error message.

Probable cause: The Clearinghouse Service is having problems mapping the information in the <Name> used to an address.

Action: Verify that the <Name> used is correct.

Command canceled.

Informative message that appears when the user aborts a command.

Credentials invalid.

Informative message that indicates a problem in communicating with the monitored server.

Done.

Informative message that is displayed when a user-initiated action is completed.

Found "<Name>" but cannot get its address.

This is a Clearinghouse error message.

Probable cause: The user input exists in the Clearinghouse database, but it was not possible to get the address mapping.

Action: Enter the net number, processor number of server, or workstation the user is trying to access.

Having authentication problems.

This is a Clearinghouse error message.

Probable cause: The server supporting the authentication service is down.

Action: Verify that the server is registered in the Clearinghouse by typing **Register Server.** Try the operation that caused the error again. If the problem continues, verify that the Clearinghouse is up.

Invalid address.

Informative message that indicates a problem in communicating with the monitored server.

Probable cause: The net address was entered incorrectly.

Action: Check the address and enter it again.

Invalid client entity id.

Informative message that indicates a problem in communicating with the monitored server.

Invalid mail recipient: <User's name>.

Informative message appears when the Server Monitor Service tries to send a notification message to <User's name>, and is unable to do so because <User's name> is invalid.

"<Name>" is in a bad format.

This is a Clearinghouse error message.

Probable cause: The user entered a name in a format which cannot be mapped to an address in the Clearinghouse database.

Action: Re-enter the name using the fully-qualified (three-part) name.

No such client entity.

Informative message that indicates a problem in communicating with the monitored server.

No such event recipient.

Informative message that indicates a problem in communicating with the monitored server.

Not implemented.

Informative message that indicates a problem in communicating with the monitored server.

Other error reason.

Informative message that indicates a problem in communicating with the monitored server.

Procedure is not available.

Informative message that indicates a problem in communicating with the monitored server.

Protocol version mismatch.

Informative message that indicates a problem in communicating with the monitored server.

PV on such drive.

Informative message that indicates a problem in communicating with the monitored server.

Remote host is not a Network Services Server.

Informative message that indicates a problem in communicating with the monitored server.

<Server Name> became available with restart time: <Time>.

This is an asynchronous notification message. The specified server is now up and available with a boot time of <Time>.

<Server Name> became available with same restart time.

This is an asynchronous notification telling the user that the specified server is available again. The server became available with the same restart time as before, indicating that it was not down, but SMS was not able to communicate with it. Possible reasons include a broken internetwork link, a server disconnected from the network, or a server being debugged.

<Server Name> became unavailable some time between <Time1> and <Time2>.

This is an asynchronous notification message. It notifies the user that the specified server became unavailable at the indicated time interval. <Time1> is the time the server last responded to the Server Monitor's poll. <Time2> is the time the Server Monitor Service polled the server again and did not get an answer.

<Server Name> is already being monitored by this Server Monitor.

Informative message that only appears if the **Add Monitored Server** command is used and the specified server is already in the group of servers monitored by the Server Monitor Service.

<Server Name> is available.

Informative mail message that occurs when the specified server is available again.

<Server Name> is being monitored by <User's name>.

Informative message that appears only when the **Add User Notification** command is used in an attempt to add a user who is already being notified.

<Server Name> is not available.

Informative mail message that occurs when the specified server is not available.

The message is sent to interested users along with the current statistics for the given monitored server. The statistics are in the same format as those of the **Show Monitored Server Statistics** command.

<Server Name> is not being monitored by this Server Monitor.

Informative message that appears whenever the specified server is referred to as if it were being monitored, but is not being monitored. The commands which can cause this message are: **Add User Notification, Remove Monitored Server, Remove User Notification, Change Sampling Rate, List User Notifications,** and **Show Monitored Server Statistics.**

<Server Name> is not being monitored by <User's name>.

Informative message that appears if a **Remove User Notification** command makes reference to a user not on the specified server's list of interested users.

Informative message that indicates a problem in communicating with the monitored server.

<Server Name> was unavailable between <Time1> and <Time2>.

This is an asynchronous notification message.

It indicates the time interval in which the specified server became unavailable. <Time1> is the last time the server was polled. <Time2> is the time the server was available again.

Server is already verified.

Informative message that indicates a problem in communicating with the monitored server.

Simple key does not exist.

Informative message that indicates a problem in communicating with the monitored server.

Starting Server Monitor with backup configuration.

Informative message that indicates that the Server Monitor Service will start monitoring a backup configuration of servers. This configuration was stored with the **Backup Server Monitor** command.

Starting Server Monitor with local configuration.

Informative message that indicates to the user that the Server Monitor Service will start monitoring the configuration of servers defined by the previous Server Monitor Service session. This is the configuration the Server Monitor Service was monitoring when the **Stop** command was executed to halt the previous monitoring session.

Strong key does not exist.

Informative message that indicates a problem in communicating with the monitored server.

The Clearinghouse server is down.

This is a Clearinghouse error message.

Probable cause: The server supporting the Clearinghouse Service is down.

Action: Try the command again later when the Clearinghouse is up.

The Clearinghouse server is unavailable.

This is a Clearinghouse error message.

Probable cause: The server supporting the Clearinghouse Service is down.

Action: Try the command later when the Clearinghouse is up.

This Server Monitor does not have a configuration of servers to monitor.

Informative message that appears if the **List Monitored Servers, Show Monitored Server Statistics, Show Server Monitor Configuration,** or **Start** command is invoked when the System Administrator did not enter a configuration of servers to be watched.

<Time> <Server Name>: IRS circuit" <Description>" -- UP.

Informative mail message which appears when a monitored server's IRS phone line changes state (goes up or down).

<Time> <Server Name>: IRS circuit" <Description>" -- DOWN.

Informative mail message which appears when a monitored server's IRS phone line changes state (goes up or down).

Too many client entities.

Informative message that indicates a problem in communicating with the monitored server.

Too many event recipients.

Informative message that indicates a problem in communicating with the monitored server.

Unable to send mail to <User's name>.

Informative mail message.

Probable cause: The monitoring server wanted to send a notification message but was unable to. This can occur when the mail server is down or when the specified user is not registered with the mail service yet.

Unexpected Server Monitor problem. Please try again.

Probable cause: A problem of unknown cause has occurred.

Action: Try again. If the error persists, call the Network Support Center and inform them of the problem.

Unknown error reason.

Informative message that indicates a problem in communicating with the monitored server.

Volume is unknown.

Informative message that indicates a problem in communicating with the monitored server.

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Asynchronous	Transmission of data in which time intervals between transmission are unequal. Transmission is sent a character at a time, and is controlled by start and stop elements at the beginning and end of each character.
Clearinghouse	A service that provides the naming facility for the other services and workstations on the internet. The Clearinghouse maintains a system-wide directory function that allows all the system components to locate needed resources and other registered objects.
Clearinghouse Service	*(CHS)* A lookup directory service that maintains a database of all users, services and servers in a network. The Clearinghouse Service cooperates to provide a single unified database system among other Clearinghouse Services.
Clearinghouse system	The portion of each Clearinghouse Service database intended to be identical to that of all other Clearinghouse Services existing within the same internet. It contains the names of all Clearinghouse Services and the addresses of the servers that house them. This is the minimum information that any two database instances must have in common.
Clearinghouse database	The specialized database held by the Clearinghouse Service, that serves as a global directory for the entire internetwork.
Domain	A logical grouping (usually geographical) of registered objects in the Clearinghouse database. Domains serve as units of name, scope, administrative responsibility, and replicated database configuration. The data maintained for a particular domain includes the list of administrators of that domain, plus the names and relevant information about all objects that are registered in the domain.
Event recipient	A Server Monitored Service that is registered with a monitored server to receive event information about that server.
Mail Service	*(MS)* The Mail Service is directly accessible to all networked workstations, and to any non-networked device that can dial-up the appropriate compatibility service. There are two compatiblity services: 850/860 Gateway and the Interactive Terminal Service. The Clearinghouse provides address information and distribution lists for mail delivery. The Internetwork Routing Service routes messages to other networks.
Mail Service database	The permanent data stored by the Mail Service on the server disk, including mailboxes, their contents, and messages queued for forwarding and delivery.
Mail System	The global system made up of all the Mail Services in an internetwork. The Mail Services cooperate to provide a single, unified mail-transport system.

Mailbox	The repository in which mail resides while awaiting delivery to a client.
Monitored server	A server whose availibility is monitored by the Server Monitor Service.
Monitoring server	A server that is running the Server Monitor Service.
Network	Physical and logical connection of system elements. A network allows information to flow between workstations and servers.
Pathnames	The means for specifying the route to objects that are nested within other objects.
Protocol	The formal set of conventions governing the format of data and controlling information exchange between two communicating devices.
Server	A processor on which one or more services can run.
Server Monitor Service	*(SMS)* Watches a group of servers from one location, monitors their availability, and reports problems to the System Administrator via mail messages.
Service	Software that performs a specific function which runs on a server.

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