Performance Data Collection

Feature Summary

The Performance Data Collection feature allows a system controller to collect and store SNMP MIB data from its managed router and dial shelves. The system controller then serves as a central point for network management data collection.

The system controller collects the raw data from the managed shelves periodically, saves the data, and provides a single access point for a central network management application. The data can then be uploaded to a network management station using FTP or TFTP.

Performance Data Storage

Performance data is stored on a disk local to the system controller. The files are located at disk0:/performance/shelf-*shelfid/pollgroupname.unixtimestamp*. A new file is created each time the system controller collects data from a shelf.

Benefits

The Performance Data Collection feature provides the following benefits:

- Remote network management stations can get performance data from one place, as a single file transferred via FTP or TFTP. This benefit reduces network traffic and resources in the management station because the station does not have to poll each individual shelf.
- The bulk transfer method of collecting data generates less traffic on the network than collecting the same amount of information using SNMP requests. The bulk transfer method also impacts the managed shelves less than SNMP polling.

List of Terms

shelf—An access server or router managed by the system controller.

system controller—A Cisco IOS-based device that aids in the monitoring and management of a number of access servers and routers.

Prerequisites

In order to use this feature, you must first configure the following features:

- Shelf Discovery and Autoconfiguration. Refer to the "Shelf Discovery and Autoconfiguration" feature documentation for these tasks.
- FTP Server. Refer to the "FTP Server" feature documentation for these tasks.
- SNMP Manager. Refer to the "SNMP Manager" feature documentation for these tasks.

In addition, the system clock should be set to the current time before the data collection starts. Refer to the "Performing Basic System Management" chapter in the Cisco IOS Release 11.3 *Configuration Fundamentals Configuration Guide*. Network Time Protocol (NTP) is the recommended method for obtaining the time.

Configuration Tasks

To configure performance data collection on the system controller, perform the following tasks beginning in global configuration mode:

Task		Command
Step 1	Specify the name of the performance data set. This step will put the router in poll-group configuration mode.	**syscon poll-group** *name*
Step 2	Specify the MIB variables to collect. Repeat this command for each MIB variable.	**oid** *object-id*
Step 3	Set the data collection method.	**transfer-mode** {**bulk** | **poll**}
Step 4	(Optional) Specify the shelf types for the data collection. Repeat this step for each shelf type. The default is all shelf types.	**shelf-type** *sysObjectID*
Step 5	(Optional) Set the data collection interval, in minutes. The default is 10 minutes.	**poll-interval** *minutes*
Step 6	(Optional) Specify the maximum number of stored data sets. The default is 10.	**samples** *number*
Step 7	Enable performance data collection.	**enable**
Step 8	Exit poll-group configuration mode. This step ends the configuration of the performance data set.	**exit**
Step 9	(Optional) Repeat steps 1 through 8 for each additional poll group.	
Step 10	Return to EXEC mode.	**end**
Step 11	Verify that performance data is correctly configured.	**more system:running-config** **show syscon perfdata**
Step 12	Save the configuration.	**copy system:running-config nvram:startup-config**

Configure the system controller to collect all the MIB variables that your network management station uses. Thus, the network management station can obtain all the information from the system controller without ever polling a managed shelf.

Configuration Examples

The following partial sample configuration file configures performance data collection on a system controller:

```
! Enable the FTP server on the system controller and specify the top-level directory
! for FTP operations.
!
ftp-server enable
ftp-server topdir disk0:/performance
!
! Configure the device to act as a system controller and specify the passwords.
!
syscon password semtest
syscon community private
!
! Configure and enable the different poll groups.
!
syscon poll-group popmgmt
 oid cpmDS0Usage.1.*
 oid cpmActiveCallSummary.1.*
 oid cpmCallHistorySummary.3.*
 transfer-mode bulk
 poll-interval 25
 samples 5
 enable
syscon poll-group cmlineinfo
 oid cmLineInfo.1.*
 oid cmLineInfo.2.*
 oid cmLineInfo.3.*
 oid cmLineInfo.4.*
 transfer-mode bulk
 poll-interval 20
 samples 5
 enable
syscon poll-group cpmds0usage
 oid cpmDS0Usage.2.0
 oid cpmDS0Usage.3.0
 oid cpmDS0Usage.4.0
 oid cpmDS0Usage.5.0
 oid cpmDS0Usage.6.0
 oid cpmDS0Usage.7.0
 transfer-mode poll
 poll-interval 15
 samples 10
 enable
syscon poll-group callfailure
 oid cpmCallFailure.1.0
 oid cpmCallFailure.2.0
 oid cpmCallFailure.3.0
 oid cpmCallFailure.4.0
 oid cpmCallFailure.5.0
 oid cpmCallFailure.6.0
 oid cpmCallHistorySummary.1.0
 oid cpmCallHistorySummary.2.0
 transfer-mode poll
 poll-interval 20
 samples 10
 enable
syscon poll-group cmsysteminfo
 oid cmSystemInfo.1.0
 oid cmSystemInfo.2.0
 oid cmSystemInfo.3.0
 oid cmSystemInfo.4.0
```

```
 oid cmSystemInfo.5.0
 oid cmSystemInfo.6.0
 oid cmSystemInfo.7.0
 oid cmSystemInfo.8.0
 oid cmSystemInfo.9.0
 oid cmSystemInfo.10.0
 transfer-mode poll
 poll-interval 25
 shelf-type 108
 samples 12
 enable
syscon poll-group iftable
 oid ifEntry.3.*
 oid ifEntry.4.*
 oid ifEntry.5.*
 oid ifEntry.8.*
 transfer-mode poll
 poll-interval 20
 samples 10
 enable
```

The following **show syscon perfdata** output indicates that the system controller is collecting data from shelf 0:

```
SysCont# show syscon perfdata

Performance Data Collection:

          Poll        Last     Total     Get    GetBulk  Bulk Xfer
Shelf#    Group       File    Requests Requests Requests Requests  Errors
    0  popmgmt      891873300       5        0        0        5       0
       cmlineinfo   891873600       5        0        0        5       0
       cpmds0usage  891873000       1        1        0        0       0
       callfailure  891873600       1        1        0        0       0
       cmsysteminfo 891873300       1        1        0        0       0
       iftable      891873647     651        1      650        0       0
```

Use the **dir** command to view the data sets. Note that the file extension corresponds to the "Last File" time in the **show syscon perfdata** command.

```
SysCont# dir disk0:/performance/shelf-0
Directory of disk0:/performance/shelf-0/

128  -rw-         238   Apr 06 1998 14:29:59  cpmds0usage.891873000
192  -rw-         402   Apr 06 1998 14:34:59  cmsysteminfo.891873300
194  -rw-         385   Apr 06 1998 14:39:59  callfailure.891873600
196  -rw-      119967   Apr 06 1998 14:40:59  iftable.891873647

219791360 bytes total (218087424 bytes free)
```

You can watch the details of the data collection using the **debug syscon perfdata** command:

```
SysCont# debug syscon perfdata

PERF: Start 'cmlineinfo' timer, next cycle in 5 mins, 31 secs
PERF: Timer event: 'popmgmt', 15 minutes
PERF: Bulk file create: 'popmgmt', shelf 0, pc 60ACBB10
PERF: SNMP resp: Type 4, 'popmgmt', shelf 0, error_st 0
PERF: FTP transfer: 'popmgmt', shelf 0, pc 60ACBB10
PERF: SNMP resp: Type 5, 'popmgmt', shelf 0, error_st 0
PERF: Deleted disk0:/performance/shelf-0/popmgmt.891809700
PERF: Timer event: 'cpmds0usage', 15 minutes
PERF: Polling 'cpmds0usage', shelf 0, pc 60ADE004
PERF: SNMP resp: Type 6, 'cpmds0usage', shelf 0, error_st 0
```

```
PERF: Logged polled data to disk0:/performance/shelf-0/cpmds0usage.891873900
PERF: Timer event: 'iftable', 12 minutes
PERF: Bulk file create: 'iftable', shelf 0, pc 60BE16AC
PERF: SNMP resp: Type 4, 'iftable', shelf 0, error_st 0
PERF: FTP transfer: 'iftable', shelf 0, pc 60BE16AC
PERF: SNMP resp: Type 5, 'iftable', shelf 0, error_st 0
PERF: Deleted disk0:/performance/shelf-0/iftable.891883559
```

Command Reference

This section documents new or modified commands. All other commands used with this feature are documented in the Cisco IOS Release 11.3 command references.

- **enable (poll-group configuration)**
- **oid**
- **poll-interval**
- **samples**
- **shelf-type**
- **show syscon perfdata**
- **syscon poll-group**
- **transfer-mode**

enable (poll-group configuration)

To start data collection for a performance data set, use the **enable** poll-group configuration command. The **no** form of this command disables data collection.

enable
no enable

Syntax Description

This command has no arguments or keywords.

Default

The system controller does not collect data.

Command Mode

Poll-group configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

Use this command to enable data collection for a specific poll-group. This command is required for performance data collection. You must also set the transfer mode with the **transfer-mode** command in order to collect data.

The **no** form of this command disables data collection, but it does not delete the poll-group configuration. To reenable data collection, reconfigure the **enable** poll-group configuration command. You do not need to reenter the other poll-group configuration commands.

Example

The following example configures and enables data collection for the cmlineinfo poll group:

```
SysCont# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SysCont(config)# syscon poll-group cmlineinfo
SysCont(config-poll-gr)# oid cmLineInfo.1.*
SysCont(config-poll-gr)# oid cmLineInfo.2.*
SysCont(config-poll-gr)# oid cmLineInfo.3.*
SysCont(config-poll-gr)# oid cmLineInfo.4.*
SysCont(config-poll-gr)# transfer-mode bulk
SysCont(config-poll-gr)# enable
SysCont(config-poll-gr)# exit
SysCont(config)# exit
SysCont#
Jan 23 17:47:05: %SYS-5-CONFIG_I: Configured from console by console
```

Related Commands

oid
poll-interval
samples
shelf-type

show syscon perfdata
syscon poll-group
transfer-mode

oid

To specify MIB variables for the system controller to collect, use the **oid** poll-group configuration command. The **no** form of this command disables collection of the specified MIB variable.

oid *object-id*
no oid [*object-id*]

Syntax Description

object-id	Object ID of the data to collect.

Default

Only the sysUptime MIB variable is collected.

Command Mode

Poll-group configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

Use this command to specify which MIB variables to collect for a specific data collection set. Enter this command once for each MIB variable you wish to collect. In order for the system controller to collect data, you must specify at least one object ID.

For descriptions of supported MIBs and how to use MIBs, see Cisco's MIB website on CCO at http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml.

The **no** form of this command disables data collection for the specified MIB variable. If you do not specify an object ID, data collection is disabled for every variable except sysUptime.

Use the following guidelines when specifying object IDs:

- Scalar MIB objects are specified with a ".n.0" instance. For example, **oid lsystem.57.0** or **oid 1.3.6.1.4.1.9.2.1.57.0** specifies avgBusy1.
- Columns and tables are specified with ".n.*" object IDs. For example, **oid ifEntry.2.*** specifies the ifDescr column of the ifTable, and **oid interfaces.2.*** specifies the ifTable.

Note Columns are retrievable only in poll transfer mode.

- Tables for bulk transfer must be specified using the object ID with the table-defining "SEQUENCE OF ...." SYNTAX statement.

Example

The following example configures the system controller to collect the rows specified by cmLineInfo.1.*, cmLineInfo.2.*, cmLineInfo.3.*, and cmLineInfo.4.* using the bulk transfer mode:

```
SysCont# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SysCont(config)# syscon poll-group cmlineinfo
SysCont(config-poll-gr)# oid cmLineInfo.1.*
SysCont(config-poll-gr)# oid cmLineInfo.2.*
SysCont(config-poll-gr)# oid cmLineInfo.3.*
SysCont(config-poll-gr)# oid cmLineInfo.4.*
SysCont(config-poll-gr)# transfer-mode bulk
SysCont(config-poll-gr)# enable
SysCont(config-poll-gr)# exit
SysCont(config)# exit
SysCont#
Jan 23 17:47:05: %SYS-5-CONFIG_I: Configured from console by console
```

Related Commands

enable (poll-group configuration)
poll-interval
samples
shelf-type
show syscon perfdata
syscon poll-group
transfer-mode

poll-interval

To change the interval for data collection by system controller, use the **poll-interval** poll-group configuration command. The **no** form of this command returns the data collection interval to the default value.

poll-interval *minutes*
no poll-interval

Syntax Description

minutes	Data collection interval, in minutes. The range is from 1 to 10080. The default is 10.

Default

10 minutes

Command Mode

Poll-group configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

Use this command to specify how often the system controller collects data for a particular performance data set from its managed shelves.

When the poll group is enabled or the first shelf in a poll group is discovered, the system controller acts as if the data collection started at midnight. The system controller will then collect data at the next scheduled data collection time. The data collection for a poll group is synchronized; the system controller collects data from all managed shelves for a poll group at the same time.

Example

The following example configures the system controller to collect data every 20 minutes. The system controller will store a maximum of five data sets for this poll group. Thus, data will be stored for 100 minutes after it is collected.

```
SysCont# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SysCont(config)# syscon poll-group cmlineinfo
SysCont(config-poll-gr)# oid cmLineInfo.1.*
SysCont(config-poll-gr)# oid cmLineInfo.2.*
SysCont(config-poll-gr)# oid cmLineInfo.3.*
SysCont(config-poll-gr)# oid cmLineInfo.4.*
SysCont(config-poll-gr)# transfer-mode bulk
SysCont(config-poll-gr)# poll-interval 20
SysCont(config-poll-gr)# samples 5
SysCont(config-poll-gr)# enable
SysCont(config-poll-gr)# exit
SysCont(config)# exit
SysCont#
Jan 23 17:47:05: %SYS-5-CONFIG_I: Configured from console by console
```

Related Commands

enable (poll-group configuration)
oid
samples
shelf-type
show syscon perfdata
syscon poll-group
transfer-mode

samples

To specify the maximum number of performance data sets to store on the disk for a poll group, use the **samples** poll-group configuration command. The **no** form of this command returns the value to the default.

samples *number*
no samples

Syntax Description

number	Maximum number of performance data log files to store on the system controller disk for a particular poll group. The value ranges from 2 to 1000. The default is 10.

Default

A maximum of 10 performance data sets are stored.

Command Mode

Poll-group configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

Use this command to limit the number of performance data log files residing on the system controller disk for that poll-group. Once the limit is reached, the oldest file will be deleted after a new file is successfully written.

Use this command and the **poll-interval** command to determine how long it will take for a file to be deleted and how much disk space the files will require. If you set the sample number too low, files will be deleted soon after they are created, leaving you with little time to transfer the files to a network management station. If you set the sample number too high, the files may fill the disk.

Example

The following example configures the system controller to store a maximum of five data sets for this poll group. The system controller will collect data every 20 minutes. Thus, data will be stored for 100 minutes after it is collected.

```
SysCont# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SysCont(config)# syscon poll-group cmlineinfo
SysCont(config-poll-gr)# oid cmLineInfo.1.*
SysCont(config-poll-gr)# oid cmLineInfo.2.*
SysCont(config-poll-gr)# oid cmLineInfo.3.*
SysCont(config-poll-gr)# oid cmLineInfo.4.*
SysCont(config-poll-gr)# transfer-mode bulk
SysCont(config-poll-gr)# poll-interval 20
SysCont(config-poll-gr)# samples 5
SysCont(config-poll-gr)# enable
SysCont(config-poll-gr)# exit
SysCont(config)# exit
```

Related Commands

enable (poll-group configuration)
oid
poll-interval
shelf-type
show syscon perfdata
syscon poll-group
transfer-mode

shelf-type

To specify which shelf types the system controller collects data from, use the **shelf-type** poll-group configuration command. The **no** form of this command removes the command from the configuration.

shelf-type *sysObjectID*
no shelf-type *sysObjectID*

Syntax Description

sysObjectID	CISCO-PRODUCTS-MIB sysObjectID. This argument can have the following values: • 108—Cisco 7206 • 109—Cisco AS5200 • 125—Cisco 7204 • 162—Cisco AS5300 • 188—Cisco AS5800 Although you can enter other values for this argument, the system controller will only collect data from devices that can be managed by the system controller.

Default

The system controller collects data from all discovered shelves.

Command Mode

Poll-group configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

If this command is not configured, the system controller will collect data from all known shelves. However, if you configure this command with a particular shelf type, the system controller will only collect data from the specified shelves. To collect data from multiple shelf types, enter this command once for each shelf type.

The **no** form of this command removes the corresponding command from the configuration. If no other **shelf-type** commands remain, the system controller will collect data from all known shelves. If one or more **shelf-type** commands remain in the configuration, the system controller will collect data only from the remaining configured shelf types.

In order to turn off data collection for one shelf when you are currently collecting data from all shelves, enter the **shelf-type** command for each of the remaining shelves.

Example

The following example collects data from Cisco 7204 routers using the bulk transfer method:

```
SysCont# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SysCont(config)# syscon poll-group cmlineinfo
SysCont(config-poll-gr)# oid cmLineInfo.1.*
SysCont(config-poll-gr)# oid cmLineInfo.2.*
SysCont(config-poll-gr)# oid cmLineInfo.3.*
SysCont(config-poll-gr)# oid cmLineInfo.4.*
SysCont(config-poll-gr)# transfer-mode bulk
SysCont(config-poll-gr)# shelf-type 125
SysCont(config-poll-gr)# enable
SysCont(config-poll-gr)# exit
SysCont(config)# exit
SysCont#
Jan 23 17:47:05: %SYS-5-CONFIG_I: Configured from console by console
```

Related Commands

enable (poll-group configuration)
oid
poll-interval
samples
show syscon perfdata
syscon poll-group
transfer-mode

show syscon perfdata

To display information about performance data collection, use the **show syscon perfdata** EXEC command.

show syscon perfdata

Syntax Description

This command has no arguments or keywords.

Command Mode

EXEC

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

The output from this command also appears in the **show syscon discover full** command output.

Sample Display

The following is sample output from the **show syscon perfdata** command:

```
SysCont# show syscon perfdata

Performance Data Collection:

          Poll        Last     Total     Get    GetBulk  Bulk Xfer
Shelf#    Group       File    Requests Requests Requests Requests   Errors
    2  chassis      886010845     151        0        0      151       0
       popmgmt      886011146    5180      148     5032        0       0
```

Table 1 describes the fields shown in this display.

Table 1 Show Syscon Perfdata Field Descriptions

Field	Description
Shelf#	Shelf ID.
Poll Group	Poll group.
Last File	UNIX timestamp for last performance data collection file.
Total Requests	Total number of sets of requested information.
Get Requests	Number of get requests sent by the system controller.
GetBulk Requests	Number of getbulk requests sent by the system controller.
Bulk Xfer Requests	Number of bulk transfer requests sent by the system controller.
Errors	Number of errors in transferring information.

Related Commands

enable (poll-group configuration)
oid
poll-interval

samples
shelf-type
syscon poll-group
transfer-mode

syscon poll-group

To specify a performance data set for the system controller to collect, use the **syscon poll-group** global configuration command. The **no** form of this command stops data collection and removes the poll group from the configuration.

syscon poll-group *name*
no syscon poll-group *name*

Syntax Description

name	Name of this performance data set.

Default

The system controller collects no performance data.

Command Mode

Global configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

Use this command on the system controller to configure performance data collection. The system controller periodically collects the specified MIB variables from managed shelves and stores the data on a disk local to the system controller. A new file will be created each time the system controller collects data from a shelf.

This command puts the router into poll-group configuration mode. You can enter any of the following commands:

- **enable (poll-group configuration)**
- **oid**
- **poll-interval**
- **samples**
- **shelf-type**
- **transfer-mode**

You must specify the desired Object IDs and the transfer mode. If you do not specify the **shelf-type** command, the system controller collects data from all discovered shelves. The default data collection interval is 10 minutes. The default maximum number of samples is 10. To begin the data collection process, configure the **enable** command.

Example

The following example configures the poll group cmlineinfo:

```
SysCont# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
SysCont(config)# syscon poll-group cmlineinfo
SysCont(config-poll-gr)# oid cmLineInfo.1.*
```

```
SysCont(config-poll-gr)# oid cmLineInfo.2.*
SysCont(config-poll-gr)# oid cmLineInfo.3.*
SysCont(config-poll-gr)# oid cmLineInfo.4.*
SysCont(config-poll-gr)# transfer-mode bulk
SysCont(config-poll-gr)# enable
SysCont(config-poll-gr)# exit
SysCont(config)# exit
SysCont#
Jan 23 17:47:05: %SYS-5-CONFIG_I: Configured from console by console
```

Related Commands

enable (poll-group configuration)
oid
poll-interval
samples
shelf-type
show syscon perfdata
transfer-mode

transfer-mode

To specify the transfer method for collecting performance data from shelves, use the **transfer-mode** poll-group configuration command.

transfer-mode {**bulk** | **poll**}

Syntax Description

bulk	Bulk transfer (FTP).
poll	SNMP polling.

Default

The system controller does not collect data.

Command Mode

Poll-group configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 11.3 AA.

Use this command to specify which method the system controller uses to collect data from managed shelves. You must specify a transfer mode in order to collect performance data.

If you are collecting a large amount of data, use the bulk transfer method to avoid sending large numbers of SNMP packets. The bulk transfer method has less of an impact on the managed shelves and creates less network traffic than the poll transfer method.

The two methods generate different data formats. You may want to use the same transfer method for all your poll groups so that all the data is in the same format. Refer to the "Examples" section for examples of the two formats.

Bulk file formats have the following characteristics:

- Tables are always written in lexical order.
- MIB objects with a SYNTAX of OCTET STRING are stored as octet strings, not as ASCII characters.

Refer to the CISCO-BULK-FILE-MIB for more information on the format of the bulk files.

Examples

The following example configures the system controller to use the SNMP polling to collect the data:

```
syscon poll-group busyPerpoll
 oid lsystem.56.0
 oid lsystem.57.0
 oid lsystem.58.0
 oid interfaces.2.*
 transfer-mode poll
 enable
```

The following is a sample data collection file from the configuration:

```
sysUpTime.0
lsystem.56.0
lsystem.57.0
lsystem.58.0
interfaces.2

sysUpTime.0 1164196 lsystem.56.0 0 lsystem.57.0 0 lsystem.58.0 1 ifEntry.1.1 1
ifEntry.1.2 2 ifEntry.1.3 3 ifEntry.1.4 4 ifEntry.1.5 5 ifEntry.1.6 6 ifEntry.1.7 7
ifEntry.1.8 8 ifEntry.1.9 9 ifEntry.1.10 10 ifEntry.2.1 FastEthernet0/0 ifEntry.2.2
Ethernet2/0 ifEntry.2.3 Ethernet2/1 ifEntry.2.4 Ethernet2/2 ifEntry.2.5 Ethernet2/3
ifEntry.2.6 Loopback1 ifEntry.2.7 Tunnel8 ifEntry.2.8 Tunnel10 ifEntry.2.9 Dialer1
ifEntry.2.10 Lex30 ifEntry.3.1 6 ifEntry.3.2 6 ifEntry.3.3 6 ifEntry.3.4 6 ifEntry.3.5 6
ifEntry.3.6 24 ifEntry.3.7 1 ifEntry.3.8 1 ifEntry.3.9 22 ifEntry.3.10 6 ifEntry.4.1 1500
ifEntry.4.2 1500 ifEntry.4.3 1500 ifEntry.4.4 1500 ifEntry.4.5 1500 ifEntry.4.6 1514
ifEntry.4.7 1514 ifEntry.4.8 1514 ifEntry.4.9 1500 ifEntry.4.10 1500 ifEntry.5.1
100000000 ifEntry.5.2 10000000 ifEntry.5.3 10000000 ifEntry.5.4 10000000 ifEntry.5.5
10000000 ifEntry.5.6 4294967295 ifEntry.5.7 9000 ifEntry.5.8 9000 ifEntry.5.9 56000
ifEntry.5.10 10000000 ifEntry.6.1 ifEntry.6.1 ifEntry.6.2 ifE!
 ntry.6.2 ifEntry.6.3 ifEntry.6.3 ifEntry.6.4 ifEntry.6.4 ifEntry.6.5 ifEntry.6.5
ifEntry.6.6  ifEntry.6.7  ifEntry.6.8  ifEntry.6.9  ifEntry.6.10  ifEntry.7.1 2
ifEntry.7.2 1 ifEntry.7.3 2 ifEntry.7.4 2 ifEntry.7.5 2 ifEntry.7.6 1 ifEntry.7.7 1
ifEntry.7.8 1 ifEntry.7.9 1 ifEntry.7.10 1 ifEntry.8.1 2 ifEntry.8.2 1 ifEntry.8.3 2
ifEntry.8.4 2 ifEntry.8.5 2 ifEntry.8.6 1 ifEntry.8.7 2 ifEntry.8.8 2 ifEntry.8.9 5
ifEntry.8.10 2 ifEntry.9.1 817 ifEntry.9.2 817 ifEntry.9.3 817 ifEntry.9.4 817
ifEntry.9.5 817 ifEntry.9.6 0 ifEntry.9.7 0 ifEntry.9.8 0 ifEntry.9.9 0 ifEntry.9.10 758
ifEntry.10.1 0 ifEntry.10.2 575553 ifEntry.10.3 0 ifEntry.10.4 0 ifEntry.10.5 0
ifEntry.10.6 0 ifEntry.10.7 0 ifEntry.10.8 0 ifEntry.10.9 0 ifEntry.10.10 0 ifEntry.11.1
0 ifEntry.11.2 5729 ifEntry.11.3 0 ifEntry.11.4 0 ifEntry.11.5 0 ifEntry.11.6 0
ifEntry.11.7 0 ifEntry.11.8 0 ifEntry.11.9 0 ifEntry.11.10 0 ifEntry.12.1 0 ifEntry.12.2
555 ifEntry.12.3 0 ifEntry.12.4 0 ifEntry.12.5 0 ifEntry.12.6 0 ifEn!
 try.12.7 0 ifEntry.12.8 0 ifEntry.12.9 0 ifEntry.12.10 0 ifEntry.13.1

0 ifEntry.13.2 0 ifEntry.13.3 0 ifEntry.13.4 0 ifEntry.13.5 0 ifEntry.13.6 0 ifEntry.13.7
0 ifEntry.13.8 0 ifEntry.13.9 0 ifEntry.13.10 0 ifEntry.14.1 0 ifEntry.14.2 0
ifEntry.14.3 0 ifEntry.14.4 0 ifEntry.14.5 0 ifEntry.14.6 0 ifEntry.14.7 0 ifEntry.14.8
0 ifEntry.14.9 0 ifEntry.14.10 0 ifEntry.15.1 0 ifEntry.15.2 118 ifEntry.15.3 0
ifEntry.15.4 0 ifEntry.15.5 0 ifEntry.15.6 0 ifEntry.15.7 0 ifEntry.15.8 0 ifEntry.15.9
0 ifEntry.15.10 0 ifEntry.16.1 0 ifEntry.16.2 861338 ifEntry.16.3 0 ifEntry.16.4 0
ifEntry.16.5 0 ifEntry.16.6 0 ifEntry.16.7 0 ifEntry.16.8 0 ifEntry.16.9 0 ifEntry.16.10
0 ifEntry.17.1 0 ifEntry.17.2 7903 ifEntry.17.3 0 ifEntry.17.4 0 ifEntry.17.5 0
ifEntry.17.6 0 ifEntry.17.7 0 ifEntry.17.8 0 ifEntry.17.9 0 ifEntry.17.10 0 ifEntry.18.1
0 ifEntry.18.2 229 ifEntry.18.3 0 ifEntry.18.4 0 ifEntry.18.5 0 ifEntry.18.6 0
ifEntry.18.7 0 ifEntry.18.8 0 ifEntry.18.9 0 ifEntry.18.10 0 ifEntry.19.1 0 ifEntry.19.2
0 ifEntry.19.3 0 ifEntry.19.4 0 ifEntry.19.5 0 ifEntry.1!
 9.6 0 ifEntry.19.7 0 ifEntry.19.8 0 ifEntry.19.9 0 ifEntry.19.10 0 ifEntry.20.1 0
ifEntry.20.2 0 ifEntry.20.3 0 ifEntry.20.4 0 ifEntry.20.5 0 ifEntry.20.6 0 ifEntry.20.7
0 ifEntry.20.8 0 ifEntry.20.9 0 ifEntry.20.10 0 ifEntry.21.1 0 ifEntry.21.2 0
ifEntry.21.3 0 ifEntry.21.4 0 ifEntry.21.5 0 ifEntry.21.6 0 ifEntry.21.7 0 ifEntry.21.8
0 ifEntry.21.9 0 ifEntry.21.10 0 ifEntry.22.1 ccitt.0 ifEntry.22.2 ccitt.0 ifEntry.22.3
ccitt.0 ifEntry.22.4 ccitt.0 ifEntry.22.5 ccitt.0 ifEntry.22.6 ccitt.0 ifEntry.22.7
ccitt.0 ifEntry.22.8 ccitt.0 ifEntry.22.9 ccitt.0 ifEntry.22.10 ccitt.0
```

The following example configures the system controller to use the bulk transfer method to collect the same data:

```
syscon poll-group busyPerpoll
 oid lsystem.56.0
 oid lsystem.57.0
 oid lsystem.58.0
 oid interfaces.2.*
 transfer-mode bulk
 enable
```

The following is a sample data collection file from the configuration:

```
object 2.1.1.3.0 1188306
object 4.1.9.2.1.56.0 2
object 4.1.9.2.1.57.0 0
object 4.1.9.2.1.58.0 0
prefix 1.3.6.1.2.1.2.2.1
table 22 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
row 1 1 466173744574686572 6E6574302F30 6 1500 100000000 00602F861100 2 2 817 0 0 0 0 0 0
0 0 0 0 0 0 0.0
row 2 2 45746865726E6574322F30 6 1500 10000000 00602F861138 1 1 817 589642 5873 559 0 0
118 882201 8083 233 0 0 0 0.0
row 3 3 45746865726E6574322F31 6 1500 10000000 00602F861139 2 2 817 0 0 0 0 0 0 0 0 0 0
0 0 0.0
row 4 4 45746865726E6574322F32 6 1500 10000000 00602F86113A 2 2 817 0 0 0 0 0 0 0 0 0 0
0 0 0.0
row 5 5 45746865726E6574322F33 6 1500 10000000 00602F86113B 2 2 817 0 0 0 0 0 0 0 0 0 0
0 0 0.0
row 6 6 4C6F6F706261636B31 24 1514 -1  1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0.0
row 7 7 54756E6E656C38 1 1514 9000  1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0.0
row 8 8 54756E6E656C3130 1 1514 9000  1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0.0
row 9 9 4469616C657231 22 1500 56000  1 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0.0
row 10 10 4C65783330 6 1500 10000000  1 2 758 0 0 0 0 0 0 0 0 0 0 0 0 0.0
```

Related Commands

enable (poll-group configuration)
oid
poll-interval
samples
shelf-type
show syscon perfdata
syscon poll-group

Debug Command

The **debug syscon perfdata** command has been added for this feature.

debug syscon perfdata

Use the **debug syscon perfdata** EXEC command to display messages related to performance data collection. The **no** form of this command disables debugging output.

[**no**] **debug syscon perfdata**

Usage Guidelines

This command is primarily useful to your technical support representative.

Sample Display

The following is sample **debug syscon perfdata** output. In this example, the CallFail poll group is configured and applied to shelf 1111. The system determines when the next polling cycle should occur and polls the shelf at the appropriate time. The data is stored in the file CallFail.891645120, and an older file is deleted.

```
SysCont# debug syscon perfdata

PERF: Applying 'CallFail' to shelf 1111
PERF: Setting up objects for SNMP polling: 'CallFail', shelf 1111
PERF: year hours mins secs msecs = 1998 15 11 1 5
PERF: Start 'CallFail' timer, next cycle in 0 mins, 59 secs
PERF: Timer event:  CallFail, 4 minutes
PERF: Polling 'CallFail', shelf 1111, pc 60AEFDF0
PERF: SNMP resp: Type 6, 'CallFail', shelf 1111, error_st 0
PERF: Logged polled data to disk0:/performance/shelf-1111/CallFail.891645120
PERF: Deleted disk0:/performance/shelf-1111/CallFail.891637469
```

What to Do Next

After the system controller has collected the data, you must copy data from the system controller's disk (via FTP or TFTP) to the network management station. Use the **poll-interval** and **samples** commands to determine how long the data is stored on the disk before it is erased.