Data Collection Manager Command Reference

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C O N T E N T S

bulkstat data set command

bulkstat data (Command)

To configure a bulkstat data set for command type, use the **bulkstat data command** command in global configuration mode. To remove the data set configuration from command type, use the **no** form of this command.

bulkstat data *show-stats* **type command**

no bulkstat data *show-stats*

Syntax Description

show-stats	Name of a data set.
type	Specifies the type of a data set.
command	Creates a command data set.

Command Default This command has no default behavior.

Command Modes Global configuration (config)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines Use the **bulkstat data** command to link a data set to one or more data groups.

Examples The following example shows how to configure bulkstat data set for command type using the **bulkstat data** command:

```
Device# configure terminal
Device(config)# bulkstat data show-snmp type command
```

Related Commands

Command	Description
bulkstat data snmp	Configures a bulkstat data set for snmp.

Command	Description
bulkstat data expression	Configures a bulkstat data set for expression.

add cmd

To add a show command to a command data set, use the **add cmd** command in command data set mode. To remove a show command from the data set, use the **no** form of this command.

add cmd *command-line*

no add cmd *command-line*

Syntax Description

command-line	Specifies **show** commands for which the output should be collected.

Command Default

None

Command Modes

Command bulkstat data set configuration (config-bs-ds-cmd)

Command History

Release	Modification
15.3T	This command was introduced.

Examples

The following example shows how to configure the **add cmd** command to add **show** commands:

```
Device# configuring terminal
Device(config)# bulkstat data show-snmp type command
Device(config-bs-ds-cmd)# add show ip interface brief
```

Related Commands

Command	Description
bulkstat data (Command)	Configures bulkstat data set for command.

bulkstat data set expression

bulkstat data (Expression)

To configure a bulkstat data set of expression MIB output, use the **bulkstat data** command in configuration mode. To remove the data set configuration from an expression MIB output, use the **no** form of this command.

bulkstat data *interface-util* **type expression**

no bulkstat data *interface-util*

Syntax Description

interface-util	Name of a data set. Data sets across different types can have the same name.
type	Specifies the type of a data set.
expression	Specifies an expression data set.

Command Default   None

Command Modes   Global configuration (config)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines   Use the **bulkstat data** command to link a data set to one or more data group.

Examples   The following example shows how to configure bulkstat data set for an expression MIB output using the **bulkstat data** command:

```
Device# configure terminal
Device(config)# bulkstat data interface-util type expression
```

Related Commands

Command	Description
bulkstat data snmp	Configures a bulkstat data set for snmp.

Command	Description
bulkstat data command	Configures a bulkstat data set for command.

expression (bulkstat expression)

To configure an expression MIB output, use the **expression** command in expression data set mode. To remove the configuration from an expression MIB output, use the **no** form of this command.

expression *expression-line*

no expression *expression-line*

Syntax Description	*expression-line*	Expression as defined by expExpression in RFC2982-MIB.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data set expression configuration (config-bs-ds-expr)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines

Use the **expression** command to add an expression object to a data set.

Examples

The following example shows how to configure an expression MIB output using the **expression** command:

```
Device# configure terminal
Device(config)# bulkstat data interface-util type expression
Device(config-bs-ds-expr)# expression $1+$2
```

Related Commands

Command	Description
object (expression)	Configures objects of an expression MIB output.

object (bulkstat expression)

To configure objects of the expression type, use the **object** command under expression data set mode. To remove an object of expression type, use the **no** form of this command.

object *object-number*

no object *object-number*

Syntax Description

| *object-number* | Object in a bulkstat expression. |
| | **Note** If the expression is "$1+$2", then object 1 refers to the object at $1. If an object is specified with a number that is not mentioned in the expression, the configuration succeeds, but the object is not used in the evaluation of the expression type. |

Command Default

This command has no default behavior.

Command Modes

Expression bulkstat data set configuration (config-bs-ds-expr)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines

Use the **object** command if the object is already configured. The execution results in setting the context to the existing object, and hence the command mode switches to the expression object mode.

Examples

The following example shows how to configure an object for an expression using the **object** command:

```
Device# configure terminal
Device(config)# bulkstat data interface-util type expression
Device(config-bs-ds-expr)# object 1
```

Related Commands

Command	Description
bulkstat data (Expression)	Configures bulkstat data set of the type expression.

conditional

To configure conditional evaluation of a data set of expression output, use the **conditional** command in expression data set object mode. To remove conditional evaluation from a data set of expression type, use the **no** form of this command.

conditional object *conditional-object-id* [**wildcard**]

no conditional object

Syntax Description

conditional-object-id	Conditional object name. Object as defined by expObjectConditional in RFC2982-MIB.
wildcard	Use this option to specify wildcarding for the conditional object. Object as defined by expObjectConditionalWildcard in RFC2982-MIB.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data set expression object configuration (config-bs-ds-expr-obj)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure conditional evaluation of a data set of expression output using the **conditional** command:

```
Device# configure terminal
Device(config)# bulkstat data-set-expression
Device(config-bs-ds-expr)# object 1
Device(config-bs-ds-expr-obj)# conditional object ifConnectorPresent wildcard
```

Related Commands

Command	Description
discontinuity	Configures discontinuity behaviors for a bulkstat data set expression evaluation.

Command	Description
id	Configures the object id for an expression object.
sample	Configures the object value that is used in expression output.
wildcard	Computes the expression for all instances of an object.

discontinuity

To configure discontinuity behaviors for an expression output, use the **discontinuity** command in bulkstat expression data set object mode. To remove the discontinuity configuration, use the **no** form of this command.

discontinuity object *oid* [**type**{**date-and-time** | {**timestamp** | **timeticks**}}][**wildcard type** {**date-and-time** | {**timestamp** | **timeticks**}}]

no discontinuity object

Syntax Description

| object | Specifies the discontinuity object id for this object. |
| *oid* | An object descriptor or OID in dotted decimal notation |

Command Default This command has no default behavior.

Command Modes Bulkstat data set expression object configuration (config-bs-ds-expr-obj)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines Use the **discontinuity** command for object whose sample type is defined as delta or changed.

Examples The following example shows how to configure discontinuity behaviors for evaluating data set expression type using the **discontinuity** command:

```
Device# configure terminal
Device(config)# bulkstat data-set expression
Device(config-bs-ds-expr)# object 1
Device(config-bs-ds-expr-obj)# discontinuity object ifDiscontinuityTime.1 type timeticks
```

Related Commands

Command	Description
conditional	Configures conditional evaluation of the expression.
id	Configures the object id for the expression object.
sample	Configures how the object value should be used in expression evaluation.
wildcard	Computes the expression for all instances of the object.

id

To configure the object id for an expression output, use the **id** command in bulkstat data set expression object mode. To remove the id configuration from an expression output, use the **no** form of this command.

> **id** *object id*

> **no id** *object id*

Syntax Description

object id	Name of the object. For eg: 1.3.6.1.2.1.2.2.1.10 or ifInOctets or ifEntry.10, whichever is understood by the SNMP agent. **Note** Object as defined by expObjectID in RFC2982-MIB.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data set expression object configuration (config-bs-ds-expr-obj)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines

You cannot check for validity of an object during the configuration of an object id for an expression object. If the object is not supported, the expression evaluation fails.

Examples

The following example shows how to configure the object id for an expression object with the **id** command:

```
Device# configure terminal
Device(config)# bulkstat data data-name type expression
Device(config-bs-ds-expr)# object 1
Device(config-bs-ds-expr-obj)# id ifInOctets.1
```

id

Related Commands

Command	Description
add cmd	Adds a command in a command type data set.
object (snmp)	Adds an object in an SNMP type data set.
value	Configures the result of a value type data set expression output.
expression	Configures a type of data set expression output.

sample

To configure an object value to be used in evaluating an expression output, use the **sample** command in bulkstat data set expression object mode. To remove the configuration of the object value, use the **no** form of this command.

sample{**absolute** | **changed** | **data**}

no sample

Syntax Description

type	Specified sample type—absolute or changed or delta. Object as defined by expObjectSampleType in RFC2982-MIB.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data set expression object configuration (config-bs-ds-expr-obj)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure object value to be used in evaluating an expression output using the **sample** command:

```
Device# configure terminal
Device(config)# bulkstat data-set expression
Device(config-bs-ds-expr)# object 1
Device(config-bs-ds-expr-obj)# sample delta
```

Related Commands

Command	Description
conditional	Configures conditional evaluation of a data set of expression output.
discontinuity	Configures discontinuity behaviors for a bulkstat data set expression output.
id	Configures the object id for an expression output.

Command	Description
wildcard	Computes the expression for all instances of an object.

wildcard

To configure a wildcard instance for an expression MIB output, use the **wildcard** command in bulkstat data set expression object configuration mode. To remove the wildcard instance from an expression MIB output, use the **no** form of this command.

wildcard

no wildcard

Syntax Description   This command has no keywords or arguments.

Command Default   This command has no default behavior.

Command Modes   Bulkstat data set expression object configuration (config-bs-ds-expr-obj)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples   The following example shows how to configure a wildcard instance using the **wildcard** command:

```
Device# configure terminal
Device(config)# bulkstat data data-name type expression
Device(config-bs-ds-expr)# object 1
Device(config-bs-ds-expr-obj)# wildcard
```

Related Commands

Command	Description
conditional	Configures conditional evaluation of an expression MIB output.
discontinuity	Configures discontinuity behaviors for an expression MIB output.
id	Configures an object id for an expression MIB output.
sample	Configures how an object value be used in expression MIB output evaluation.

wildcard

value

To configure the value type of an expression output, use the **value** command in bulkstat data set expression mode. To remove the value type configuration, use the **no** form of this command.

value type{**counter32** | **counter64** | **integer32** | **ipaddress** | **objectid** | **octetstring** | **timeticks** | **unsigned32**}

no value type

Syntax Description

type	Specifies the value type as defined by expExpressionValueType in RFC2982-MIB.
counter32	Specifies a counter32 value. Counter32 specifies a value that represents a count. The range is from 0 to 4294967295.
counter64	Specifies a counter64 value. Counter64, like counter32, specifies a value that represents a count. However, the counter64 value range is from 0 to 18446744073709551615. This value type is used when a 32-bit counter rollover occurs in less than an hour.
integer32	Specifies an integer32 value. The Integer32 represents 32-bit signed integer values for the Simple Network Management Protocol (SNMP). The range includes both negative and positive numbers.
ipaddress	Specifies a value based on the IP address. The IP address is a string of four octets. The IP address value type is generally an IPv4 address. This value is encoded as four bytes in the network byte order.
objectid	Specifies a value based on the object identifier of an object. Each object type in a MIB is identified by an object identifier value assigned by the administrator. The object identifier identifies the value type that has an assigned object identifier value.
octetstring	Specifies a value based on octetstring. The octetstring specifies octets of binary or textual information. The octet string length ranges from 0 to 65535 octets.

timeticks	Specifies a value based on timeticks. Timeticks represents a non-negative integer value that specifies the elapsed time between two events, in units of hundredth of a second.
	When objects in the MIB are defined using the subset of Abstract Syntax Notation One (ASN.1), the description of the object type identifies this reference period.
unsigned32	Specifies an unsigned integer value. Unsigned32 specifies a value that includes only non-negative integers. The range is from 0 to 4294967295.

Command Default   This command has no default behavior.

Command Modes   Bulkstat data set expression configuration (config-bs-ds-expr)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples   The following example shows how to configure the value type of an expression result using the **value** command:

```
Device# configure terminal
Device(config)# bulkstat data interface-util type expression
Device(config-bs-ds-expr)# value type unsigned32
```

Related Commands

Command	Description
bulkstat data (Expression)	Configures bulkstat data set for expression type.

bulkstat Instance

bulkstat data (SNMP)

To configure a bulkstat data set for Simple Network Management Protocol (SNMP), use the **bulkstat data snmp** command in global configuration mode. To remove the data set configuration from SNMP, use the **no** form of this command.

bulkstat data*name* **type snmp**

no bulkstat data*interface-stats*

Syntax Description

interface-stats	Name of a data set. Data sets across different types can have the same name.
type	Specifies the type of a data set.
snmp	Creates an SNMP data set.

Command Default This command has no default behavior.

Command Modes Global configuration (config)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines Use the **bulkstat data** command to link a data set to one or more data groups.

Examples The following example shows how to configure a bulkstat data set using the **bulkstat data** command:

```
Device# configure terminal
Device(config)# bulkstat data interface-stats type snmp
```

Related Commands

Command	Description
bulkstat data (Command)	Configures a bulkstat data set for a show command output.

Command	Description
bulkstat data (Expression)	Configures a bulkstat data set for an expression MIB output.

wildcard

To configure a wildcard instance, use the **wildcard** command under bulkstat instance configuration mode. To remove a wildcard instance from the instance set configuration, use the **no** form of this command.

> **wildcard interface** {**interface** | *interface-id* | **oid** | *oid*}

> **no wildcard interface** {**interface** | *interface-id* | **oid** | *oid*}

Syntax Description

oid *oid*	Wildcard instance identifier in OID format. Object defined by cdcDGInstanceOid.
interface *interface*	Specifies the list of interface names. Use this option only if the objects being retrieved are indexed by ifIndex. This option is provided for the persistence of ifindex value for an interface.
sub-if	Includes the subinterfaces under the specified main interfaces.

Command Default

This command has no default behavior.

Command Modes

Bulkstat snmp-instance configuration (config-bs-is-snmp)

Command History

Release	Modification
15.3(1)S	This command was introduced.

Examples

The following example shows how to configure a wildcard instance using the **wildcard** command:

```
Device# configure terminalwildcard
Device(config)# interface Ethernet0/0 sub-if
Device(config-bs-is-snmp)#wildcard
```

Related Commands

Command	Description
bulkstat data (command)	Configures a bulkstat data set for a show command output.

Command	Description
bulkstat data (expression)	Configures a bulkstat data set for an expression MIB output.

object (bulkstat snmp)

To add an object to an Simple Network Management Protocol (SNMP) data set, use the **add object** command in bulkstat snmp data set configuration mode. To remove an object from a data set, use the **no** form of this command.

object *oid* **alias** *alias-name*

no object *oid* **alias** *alias-name*

Syntax Description

object*name*	Name of an object. For example: 1.3.6.1.2.1.2.2.1.10 or ifInOctets or ifEntry.10.
	Dotted notation object Identifier (OID) format is understood by an SNMP agent if the object is supported. The display name to be used to represent the object in output. If the specified object is not understood by the agent, then this command is not accepted.
alias *alias-name*	(Optional) Name that is associated with an object. If the SNMP agent only can understand the dotted notation OID, you can specifiy an alias name. This name is used to represent the object in the file containing the collected data.

Command Default   This command has no default behavior.

Command Modes   Bulkstat snmp data set configuration (config-bs-ds-snmp)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines   If the dotted representation being configured is understood by an agent in its textual name, then the nonvolatile generation results in the actual name being nonvolatile generated. If the agent can translate, 1.3.6.1.2.1.2.2.1.10 to ifInOctets, then configuring "add 1.3.6.1.2.1.2.2.1.10" is nonvolatile generation as "add ifInOctets".

Examples The following example shows how to add an object to an SNMP data set using the **object** command:

```
Device# configure terminal
Device(config)# bulkstat data interface-stats type snmp
Device(config-bs-ds-snmp)# object 1.3.6.1.2.1.2.2.1.10 alias ifInOctets
```

Related Commands

Command	Description
bulkstat data (SNMP)	Configures bulkstat data set for SNMP.

repetition

To configure a repetition instance, use the **repetition** command under bulkstat snmp instance configuration mode. To remove the repetition instance from instance set configuration, use the **no** form of this command.

repetition id*max*

no repetition id*max*

Syntax Description		
id	Repetition Start Instance identifier in OID format. Object defined by cdcDGInstanceOid.
max	Number of repetitions to get from the specified start id. Object defined by cdcDGInstanceNumRepitions.

Command Default   This command has no default behavior.

Command Modes   Bulkstat snmp instance configuration (config-bs-is-snmp)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines   You can configure multiple repetitions in the same instance set, however, you must avoid overlapping of instances.

- repetition 1 max 10
- repetition 5 max 10

Examples   The following example shows how to configure an instance using the **repetition** command:

```
Device# conf t
Device(config)# bulkstat instance in-name type snmp
Device(config-bs-is-snmp)# repetition oid 1.1 max 1000
```

Related Commands

Command	Description
exact	Configures an exact instance in instance set.
range	Configures a range instance in an instance set.
wildcard	Configures a wildcard instance in an instance set.

range

To configure a range instance use the **range** command under bulkstat snmp instance configuration mode. To remove the range instance from instance-set configuration, use the **no** form of this command.

range start*id* **end** *id*

no range start*id* **end** *id*

Syntax Description

start *id*	Range Start Instance identifier in OID format. Object defined by cdcDGInstanceOid.
end *id*	Range End Instance identifier in OID format. Object defined by cdcDGInstanceOidEnd.

Command Default   This command has no default behavior.

Command Modes   Bulkstat snmp instance configuration (config-bs-is-snmp)

Command History

Release	Modification
15.3(1)S	This command was introduced.

Usage Guidelines   Multiple of range can be configured in the same instance set. Overlapping of instances should be avoided by the user. System will not check for overlapping instance configuration.

- range is from 1 to 10
- range is from 5 end 15

Examples   the following example shows how to configure a using the **range** command:

```
Device# configure terminal
Device(config)# bulkstat instance in-name type snmp
Device(config-bs-is-snmp)# range start 1 end 10
```

Related Commands

Command	Description
bulkstat data (SNMP)	Configures bulkstat data set for SNMP.
exact	Configures an exact instance in instance set.
wildcard	Configures a wildcard instance in an instance set.

range

bulkstat filter

match (bulkstat filter)

To configure a bulkstat filter set for an object, use the **match** command in bulkstat filter configuration mode. To remove a filter set from an object, use the **no** form of this command.

match *object-name* {**eq** *line* | **start** *line* | **not** {**eq** *line* | **start** *line*}}

no match *object-name*

Syntax Description

object-name	The name of an object for which the filter should be applied. The name should match the name of the object configured in the **bulkstat data** command.
eq	Matches both numeric and string objects.
line	Comma separated value list. **Note** In case of a string, specify the string within quotes.
start	Matches only the string object. Configuring for an object with numeric data type results in nonoperation of the filter.
not	Negates the condition.

Command Default

This command has no default behavior.

Command Modes

Bulkstat filter set configuration (config-bs-filter)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure a bulkstat filter set for an object using the **match** command:

```
Device# configure terminal
Device(config)# bulkstat filter ifType
Device(config-bs-filter)# match ifType eq 131,132,100
```

Related Commands

Command	Description
bulkstat filter	Configures a bulkstat filter set.

bulkstat filter

To configure a bulkstatistics filter set, use the **bulkstat filter** command in global configuration mode. To remove the filter set configuration, use the **no** form of this command.

> **bulkstat filter** *filter-set-name*

> **no bulkstat filter***filter-set-name*

Syntax Description

filter-set-name	Name of a bulkstat filter set.

Command Default   This command has no default behavior.

Command Modes   Global configuration (config)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines   Use the **bulkstat filter** command to link a data set to one or more data group.

Examples   The following example shows how to configure the bulkstat filter set using the **bulkstat filter** command:

```
Device# configure terminal
Device(config)# bulkstat filter vlanfilter
```

Related Commands

Command	Description
match (bulkstat filter)	Configures a bulkstat filter for an object.

bulkstat data-group

collect

To configure collection parameters for a data group, use the **collect** command under bulkstat data group configuration mode. To remove the collection parameters from the data group, use the **no** form of this command.

> **collect type**{**command** | **expression**}{**data** *data-set-name*[**filter** *filter-set-name*]} | **snmp data** *data-set-name* **instance** *instance-set-name*[**filter** *filter-set-name*]

> **no collect**

Syntax Description

type	Specifies the type of data set.
data-set-name	Specifies the name of a data set.
instance-set-name	Specifies the name of an instance set.
filter-set-name	Specifies the name of a filter set.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data group data name configuration (config-bs-dg)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure collection parameters for a data group using the **collect** command:

```
Device# configure terminal
Device(config)# bulkstat data-group data-name
Device(config-bs-dg)# collect type snmp data if-stats instance if-inst
```

Related Commands

Command	Description
context	Configures context for a data group.
discard	Configures to discard raw data for a data group.

Command	Description
interval	Configures the interval parameters for a data group.
process	Configures process related parameters for a data group.

context

To configure context for a data group, use the **context** command under bulkstat data group configuration mode. To remove the context for a data group, use the **no** form of this command.

context *context-name*

Syntax Description		
context-name		Specifies the context name in which to collect data.

Command Default This command has no default behavior.

Command Modes Bulkstat data group configuration(config-bs-dg)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples The following example shows how to configure context for a data group using the **context** command:

```
Device# configure terminal
Device(config)# config-bs-dg
Device(config-bs-dg)# context blue-ctx
```

Related Commands

Command	Description
collect	Configures collection parameters for a data-group.
discard	Configures to discard raw data for a data group.
interval	Configures the interval parameters for a data group.
process	Configures process related parameters for a data group.

discard

To discard the raw data for a data group, use the **discard** command under data group configuration mode. To reset back to default, use the **no** form of this command.

discard

no discard

Syntax Description   This command has no keywords or arguments.

Command Default   This command has no default behavior.

Command Modes   Bulkstat data group configuration (config-bs-dg)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines   Use the **discard** command to discard raw collected data; use the command if processing or thresholding is enabled.

Examples   The following example shows how to configure raw data for a data group using the **discard** command:

```
Device# configure terminal
Device(config)# discard
```

Related Commands

Command	Description
context	Configures context for a data group.
collect	Configures collection parameters for a data-group.
interval	Configures the interval parameters for a data group.
process	Configures process related parameters for a data group.

enable

To enable a profile for collection and transfer, use the **enable** command in bulkstat profile configuration mode. To disable the profile, use the **no** form of this command.

enable

no enable *force*

Syntax Description

force	Disables the profile collection. The polling operation for all data groups are stopped. All state full data information—collection options, process, threshold and collected nontransferred data are purged. All retained files are deleted and transfer operation stopped. If the profile is transferring a file, then it is deleted after the transfer.

Command Default   This command has no default behavior.

Command Modes   Bulkstat profile configuration (config-bs-profile)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines   You can enable or disable a profile through the following:

1   Use the **enable** command in the profile mode.
2   Use a profile action.
3   Use calendar scheduling.
4   Use the EXEC command.

For enabling a profile, do the following:

•   If the profile is enabled using option 2, 3 or 4, it will not be nonvolatile generated using the **enable** command in the profile mode.
•   If multiple enabling is done, one after the other, through any options above, the last one in the sequence is considered as the final. For example, if enabled through option 1, and again enabled through option 4, then the command is nonvolatile generation. Similarly, if enabled through option 4 and again enabled through option 1, then the command is nonvolatile generation.

- If enabled through any options, disabling through any options disables the profile.

Examples The following example shows how to configure a profile using the **enable** command:

```
Device# configure terminal
Device# bulkstat profile profile-name
Device(config-bs-profile)#enable
```

Related Commands

Command	Description
flow	Configures the interval parameters for a profile.
file	Configures the file related parameter for a profile.
flow	Configures the flow exporter configuration for a profile.
interval	Configures the interval parameters for a profile.

interval (data-group)

To configure interval parameters for a data group, use the **interval** command under bulkstat data group configuration mode. To reset a polling interval to the default value, use the **no** form of this command.

interval polling *polling-interval*

no interval polling

Syntax Description

polling interval	Period in seconds. The default value is 600.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data group configuration (config-bs-dg)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure interval parameters for a data group using the **interval** command:

```
Device# configure terminal
Device(config)# bulkstat data-group
Device(config-bs-dg)# interval polling 100
```

Related Commands

Command	Description
collect	Configures collection parameters for a data group.
context	Configures context for a data group.
discard	Configures to discard the raw data for a data group.
process	Configures process related parameters for a data group.

process

To configure process related parameters for a data group, use the **process** command in bulkstat data group configuration mode. To remove process related parameters from a data group, use the **no** form of this command.

process

no process

Syntax Description   This command has no keywords or arguments.

Command Default   This command has no default behavior.

Command Modes   Bulkstat data group configuration (config-bs-dg)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples   The following example shows how to configure process related parameters for a data group using the **process** command:

```
Device# configure terminal
Device# bulkstat data-group dg-name
Device(config-bs-dg)# process
```

Related Commands

Command	Description
context	Configures context for a data group.
collect	Configures collection parameters for a data group.
discard	Configures to discard raw data for a data group.
interval	Configures the interval parameters for a data group.

bulkstat profile

bulkstat profile

To configure a bulkstat profile, use the **profile** command in global configuration mode. To remove the bulkstat profile configuration, use the **no** form of this command.

bulkstat profile *profile-name*

no bulkstat profile

Syntax Description

profile-name	Specifies the name of a bulkstat profile.

Command Default   This command has no default behavior.

Command Modes   Global configuration (config)

Command History

Release	Modification
15.3 (1)T	This command was introduced.

Examples   The following example shows how to specify a profile name using the **bulkstat profile** command:

```
Device# configuring terminal
Device(config)#  bulkstat profile if-stats
```

Related Commands

Command	Description
data-group	Adds a data group to a profile.
file	Configures file related parameters for a profile.
flow	Configures the flow exporter configuration for a profile
interval	Configures the interval parameters for a data group.

data-group

To add a data group to a data profile, use the **data-group** command in bulkstat profile configuration mode. To remove a data group from a profile, use the **no** form of this command.

> **data-group** *data-group-name*

> **no data-group** *data-group-name*

Syntax Description	*data-group-name*	Specifies the name of a data group. The data group should already be configured before being used to add a data group to a profile. Object as defined by cdcDGVFileIndex.

Command Default This command has no default behavior.

Command Modes Bulkstat profile configuration (config-bs-profile)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Usage Guidelines You can add one or more data groups to a profile, but one data group can be linked to one data profile only.

Examples The following example shows how to add a data group to a data profile using the **data-group** command:

```
Device# configure terminal
 Device(config)# bulkstat data profile
 Device(config-bs-profile)# data-group if-dg
```

Related Commands

Command	Description
bulkstat profile	Configures a bulkstat profile.
file	Configures file related parameters for a profile.

Command	Description
flow	Configures the flow exporter configuration for a profile.
interval	Configures the interval parameters for a data group.

interval (bulkstat profile)

To configure interval parameters for a data group, use the **interval** command in bulkstat data group configuration mode. To reset the interval parameters for a data group to the default value, use the **no** form of this command.

> **interval transfer** {**process** | **raw**} {*time-seconds*}

> **no interval transfer** {**process** | **raw**} {*time-seconds*}

Syntax Description

process	Process files are created for the processed data and enqueued for transfer. Period in seconds. The default value is 3600.
raw	Period in seconds. Active file is frozen and enqueued for transfer. Object defined by cdcVFileCollectionPeriod. The default value is 1800.
time-seconds	Period in seconds. Active file is frozen and enqueued for transfer. Object defined by cdcVFileCollectionPeriod. The default value is 1800.

Command Default

This command has no default behavior.

Command Modes

Bulkstat data group configuration (config-bs-dg)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure interval parameters for a data group using the **interval** command:

```
Device# configure terminal
Device(config)# bulkstat data-group data-name
Device#(config-bs-profile)# interval transfer process 4000
Device#(config-bs-profile)# interval transfer raw 100
```

Related Commands

Command	Description
bulkstat profile	Configures a bulkstat profile.
data-group	Adds a data group to a profile.
file	Configures file related parameters for a profile.
flow	Configures the flow exporter configuration for a profile.

file

To configure file related parameters for a profile, use the **file** command in bulkstat profile configuration mode. To reset or remove the file related parameters, use the **no** form of this command.

> **file**{**format schemaAscii** | **retain**{**disk** *url time* | **memory** *time*} | **size** *bytes* | **transfer**{**retry** *number* | **url**{**primary** | **secondary**}*url*}}

> **file**{**format schemaAscii** | **retain** | **size** | **transfer**{**retry** | **url**{**primary** | **secondary**}}}

Syntax Description

format	Configures the file data format
schemaAscii	Specifies that the ASCII format is supported with additional bulk statistics schema tags.
retain	Configures the retention location and interval in local system memory (NVRAM) for bulkstat files.
disk	Configures the retention location as the local system memory.
url	Destination URL address for the bulk statistics file storage. • **disk0:** Transfer to a rotating disk media. • **disk1:** Transfer to a secondary rotating disk media. • **unix:** Transfer to a UNIX file system.
time	Length of time, in seconds. The range is 0 to 86400.
memory *time*	Configures the retention period of a Bulkstat file in seconds. The range is 0 to 1200000.
size	Configures the buffer size.
bytes	Specifies the maximum buffer size in bytes. The default value is 2048.
transfer	Configures the file related parameter for a profile.
retry	Configures the number of times to retry transfer in case of transfer failure to both primary and secondary URLs. Retry takes effect only if retention of file is configured using the **retain** command.
number	Number of times the file transfer is tried. The range is 0 to 100.
url	Configures the primary and secondary

primary	Specifies the URL to be used first for bulk statistics transfer attempts.
secondary	Specifies the URL to be used for bulk statistics transfer attempts if the transfer to the primary URL is not successful.
url	Destination URL address for the bulk statistics file transfer. • **disk0:** Transfer to a rotating disk media. • **disk1:** Transfer to a secondary rotating disk media. • **ftp:** Transfer to a FTP network server. • **http:** Transfer to a web browser. • **null:** Null destination for copies. You can copy a remote file to null to determine its size. • **nvram:** Transfer to NVRAM. This is the default location for the running-configuration file. • **rcp:** Transfer to a remote copy protocol (rcp) network server. • **system:** • **tftp:** Transfer to a TFTP server. • **tmpsys:** Transfer to a temporary file system. • **unix:** Transfer to a UNIX file system.

Command Default

This command has no default behavior.

Command Modes

Bulkstat profile configuration (config-bs-profile)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure file related parameters using the **file** command:

```
Device# configure terminal
Device(config)# bulkstat profile profile-name
Device(config-bs-profile)# file size 2048
Device(config-bs-profile)# file format schema-ascii
Device(config-bs-profile)# file retain usb 2000
Device(config-bs-profile)# file retain memory 1000
Device(config-bs-profile)# file transfer retry 10
```

```
Device(config-bs-profile)# file transfer url primary tftp://10.0.0.1/dcm/cpu-stats
Device(config-bs-profile)# file transfer url secondary tftp://10.0.0.2/dcm/cpu-stats
```

Related Commands

Command	Description
data-group	Adds a data group to a profile.
enable	Enables the profile for collection and transfer.
flow	Enables the profile for collection and transfer.
interval	Configures the flow exporter configuration for a profile.

flow

To configure a flow exporter for a profile, use the **flow** command in profile configuration mode. To remove the configuration of a flow exporter from a profile, use the **no** form of this command.

> **flow exporter** *fnf-exporter-name*

> **no flow exporter** *fnf-exporter-name*

Syntax Description	*fnf-exporter-name*	Name of the exporter used for configuring flow exporter.

Command Default This command has no default behavior.

Command Modes Bulkstat profile configuration (config-bs-profile)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples The following example shows how to configure the flow exporter for a profile using the **flow** command:

```
Device# configure terminal
Device# bulkstat profile profile-name
Device(config-bs-profile)# flow exporter mynetflow
```

Related Commands

Command	Description
data-group	Adds a data group to a profile.
enable	Enables a profile for collection and transfer.
file	Configures file related parameters for a profile.
interval	Configures interval parameters for a profile.

other bulkstat commands

bulkstat resource limit

To configure the resource limit for memory and disk resource, use the **resource limit** command in global configuration mode. To reset the resource limit to a default value, use the **no** form of this command.

bulkstat resource limit memory *memory-usage-percentage*

no bulkstat resource limit memory

Syntax Description

memory	Specifies the disk resource limit in percentage. Bulkstat does not retain files in a disk if the remaining memory is less than specified limit. The limit is 25%.
memory-usage-percentage	Specifies the memory resource limit in percentage. Bulkstat deactivates all profiles if the remaining memory is less than the specified limit. The limit is 40%.

Command Default

This command has no default behavior.

Command Modes

Global configuration (config)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure the resource limit for memory and disk resource

```
Device# configuring terminal
Device(config)# bulkstat resource limit disk 40
Device(config)# bulkstat resource limit memory 40
```

snmp-server enable traps

To enable all Simple Network Management Protocol (SNMP) notification types that are available on your system, use the **snmp-server enable traps**command in global configuration mode. To disable all available SNMP notifications, use the **no**form of this command.

snmp-server enable traps [*notification-type*] [**vrrp**]

no snmp-server enable traps [*notification-type*] [**vrrp**]

Syntax Description

notification-type	(Optional) Type of notification (trap or inform) to enable or disable. If no type is specified, all notifications available on your device are enabled or disabled (if the **no** form is used). The notification type can be one of the following keywords:
	
	alarms --Enables alarm filtering to limit the number of syslog messages generated. Alarms are generated for the severity configured as well as for the higher severity values.
	
	• The *severity*argument is an integer or string value that identifies the severity of an alarm. Integer values are from 1 to 4. String values are critical, major, minor, and informational. The default is 4 (informational). Severity levels are defined as follows:
	
	  ◦ 1--Critical. The condition affects service.
	  ◦ 2--Major. Immediate action is needed.
	  ◦ 3--Minor. Minor warning conditions.
	  ◦ 4--Informational. No action is required. This is the default.

	• **auth-framework** [**sec-violation**]--Enables the SNMP CISCO-AUTH-FRAMEWORK-MIB traps. The optional **sec-violation** keyword enables the SNMP camSecurityViolationNotif notification. 1
	• **config** --Controls configuration notifications, as defined in the CISCO-CONFIG-MAN-MIB (enterprise 1.3.6.1.4.1.9.9.43.2). The notification type is (1) ciscoConfigManEvent.

- **dot1x** --Enables IEEE 802.1X traps. This notification type is defined in the CISCO PAE MIB.

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The following keywords are available under the **dot1x** keyword:

- - **auth-fail-vlan** --Enables the SNMP cpaeAuthFailVlanNotif notification.
    - **no-auth-fail-vlan** --Enables the SNMP cpaeNoAuthFailVlanNotif notification.
    - **guest-vlan** --Enables the SNMP cpaeGuestVlanNotif notification.
    - **no-guest-vlan** --Enables the SNMP cpaeNoGuestVlanNotif notification.

- **ds0-busyout** --Sends notification when the busyout of a DS0 interface changes state (Cisco AS5300 platform only). This notification is defined in the CISCO-POP-MGMT-MIB (enterprise 1.3.6.1.4.1.9.10.19.2), and the notification type is (1) cpmDS0BusyoutNotification.
- **ds1-loopback** --Sends notification when the DS1 interface goes into loopback mode (Cisco AS5300 platform only). This notification type is defined in the CISCO-POP-MGMT-MIB (enterprise 1.3.6.1.4.1.9.10.19.2) as (2) cpmDS1LoopbackNotification.
- **dsp** --Enables SNMP digital signal processing (DSP) traps. This notification type is defined in the CISCO-DSP-MGMT-MIB.
- **dsp oper-state** --Sends a DSP notification made up of both a DSP ID that indicates which DSP is affected and an operational state that indicates whether the DSP has failed or recovered.

- **l2tc** --Enable the SNMP Layer 2 tunnel configuration traps. This notification type is defined in CISCO-L2-TUNNEL-CONFIG-MIB.[1]

---

[1] Supported on the Catalyst 6500 series switches.

- **entity** --Controls Entity MIB modification notifications. This notification type is defined in the ENTITY-MIB (enterprise 1.3.6.1.2.1.47.2) as (1) entConfigChange.

- **entity-diag** *type* -- Enables the SNMP CISCO-ENTITY-DIAG-MIB traps. The valid *type*values are as follows: 1

  - **boot-up-fail**--(Optional) Enables the SNMP ceDiagBootUpFailedNotif traps. 1
  - **hm-test-recover**--(Optional) Enables the SNMP ceDiagHMTestRecoverNotif traps. 1
  - **hm-thresh-reached**--(Optional) Enables the SNMP ceDiagHMThresholdReachedNotif traps. 1
  - **scheduled-fail**--(Optional) Enables the SNMP ceDiagScheduledJobFailedNotif traps. 1

- **flowmon** --Controls flow monitoring notifications.

- **hsrp** --Controls Hot Standby Routing Protocol (HSRP) notifications, as defined in the CISCO-HSRP-MIB (enterprise 1.3.6.1.4.1.9.9.106.2). The notification type is (1) cHsrpStateChange.

- **ipmulticast** --Controls IP multicast notifications.

- **license** --Enables licensing notifications as traps or informs. The notifications are grouped into categories that can be individually controlled by combining the keywords with the **license** keyword, or as a group by using the **license** keyword by itself.

  ◦ **deploy**--Controls notifications generated as a result of install, clear, or revoke license events.
  ◦ **error**--Controls notifications generated as a result of a problem with the license or with the usage of the license.
  ◦ **imagelevel**--Controls notifications related to the image level of the license.
  ◦ **usage**--Controls usage notifications related to the license.

- **modem-health** --Controls modem-health notifications.

- **module-auto-shutdown** [**status**]--Enables the SNMP CISCO-MODULE-AUTO-SHUTDOWN-MIB traps. The optional **status** keyword enables the SNMP Module Auto Shutdown status change traps. 1

- **rsvp** --Controls Resource Reservation Protocol (RSVP) flow change notifications.

- **sys-threshold** --(Optional) Enables the SNMP cltcTunnelSysDropThresholdExceeded notification. This notification type is an enhancement to the CISCO-L2-TUNNEL-CONFIG-MIB. 1

- **tty** --Controls TCP connection notifications.

- **xgcp** --Sends External Media Gateway Control Protocol (XGCP) notifications. This notification is from the XGCP-MIB-V1SMI.my, and the notification is enterprise 1.3.6.1.3.90.2 (1) xgcpUpDownNotification.

Note For additional notification types, see the Related Commands table.

vrrp	(Optional) Specifies the Virtual Router Redundancy Protocol (VRRP).

Command Default   No notifications controlled by this command are sent.

Command Modes   Global configuration (config#)

Command History

Release	Modification
10.3	This command was introduced.
12.0(2)T	The **rsvp** notification type was added in Cisco IOS Release 12.0(2)T.
12.0(3)T	The **hsrp** notification type was added in Cisco IOS Release 12.0(3)T.
12.0(24)S	This command was integrated into Cisco IOS Release 12.0(24)S.
12.2(14)SX	Support for this command was implemented on the Supervisor Engine 720.
12.2(18)S	This command was integrated into Cisco IOS Release 12.2(18)S.
12.2(17d)SXB	Support for this command on the Supervisor Engine 2 was integrated into Cisco IOS Release 12.2(17d)SXB.
12.3(11)T	The **vrrp** notification type was added in Cisco IOS Release 12.3(11)T.
12.4(4)T	Support for the **alarms** notification type and *severity* argument was added in Cisco IOS Release 12.4(4)T.
	Support for the **dsp** and **dsp oper-state** notification types was added in Cisco IOS Release 12.4(4)T.
12.2(28)SB	This command was integrated into Cisco IOS Release 12.2(28)SB.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.4(11)T	The **dot1x** notification type was added in Cisco IOS Release 12.4(11)T.
12.2(33)SRB	This command was integrated into Cisco IOS Release 12.2(33)SRB.

Release	Modification
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
12.4(20)T	The **license**notification type keyword was added.
12.2(33)SXH	The **l2tc** keyword was added and supported on the Catalyst 6500 series switch.
12.2(33)SXI	The following keywords were added and supported on the Catalyst 6500 series switch: • **auth-fail-vlan** • **entity-diag** • **guest-vlan** • **module-auto-shutdown** • **no-auth-fail-vlan** • **no-guest-vlan** • **sys-threshold**
Cisco IOS XE Release 2.6	This command was integrated into Cisco IOS XE Release 2.6.
15.0(1)S	This command was modified. The **flowmon** notification type was added in Cisco IOS Release 15.0(1)S.
Cisco IOS XE 3.1.0SG	This command was modified. Licensing SNMP traps are enabled by default on Catalyst 4500 series switches.

Usage Guidelines   For additional notification types, see the Related Commands table for this command.

SNMP notifications can be sent as traps or inform requests. This command enables both traps and inform requests for the specified notification types. To specify whether the notifications should be sent as traps or informs, use the **snmp-server host** [**traps** | **informs**] command.

To configure the device to send these SNMP notifications, you must enter at least one **snmp-server enable traps**command. If you enter the command with no keywords, all notification types are enabled. If you enter the command with a keyword, only the notification type related to that keyword is enabled. To enable multiple types of notifications, you must issue a separate **snmp-server enable traps** command for each notification type and notification option.

Most notification types are disabled by default but some cannot be controlled with the **snmp-server enable traps** command.

The **snmp-server enable traps**command is used in conjunction with the **snmp-server host**command. Use the **snmp-server host** command to specify which host or hosts receive SNMP notifications. To send notifications, you must configure at least one **snmp-server host** command.

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The following MIBs were enhanced or supported in Cisco IOS Release 12.2(33)SXI and later releases on the Catalyst 6500 series switch:

- CISCO-L2-TUNNEL-CONFIG-MIB-LLDP--Enhancement. The CISCO-L2-TUNNEL-CONFIG-MIB provides SNMP access to the Layer 2 tunneling-related configurations.
- CISCO-PAE-MIB--Enhancement for critical condition and includes traps when the port goes into the Guest Vlan or AuthFail VLAN.
- CISCO-MODULE-AUTO-SHUTDOWN-MIB--Supported. The CISCO-MODULE-AUTO-SHUTDOWN-MIB provides SNMP access to the Catalyst 6500 series switch Module Automatic Shutdown component.
- CISCO-AUTH-FRAMEWORK-MIB--Supported. The CISCO-AUTH-FRAMEWORK-MIB provides SNMP access to the Authentication Manager component.
- CISCO-ENTITY-DIAG-MIB--The CISCO-ENTITY-DIAG-MIB provides SNMP traps for generic online diagnostics (GOLD) notification enhancements.

Examples

The following example shows how to enable the device to send all traps to the host specified by the name myhost.cisco.com, using the community string defined as public:

```
Device(config)# snmp-server enable traps
```

```
Device(config)# snmp-server host myhost.cisco.com public
```

The following example shows how to configure an alarm severity threshold of 3:

```
Device# snmp-server enable traps alarms 3
```

The following example shows how to enable the generation of a DSP operational state notification from from the command-line interface (CLI):

```
Device(config)# snmp-server enable traps dsp oper-state
```

The following example shows how to enable the generation of a DSP operational state notification from a network management device:

```
setany -v2c 1.4.198.75 test cdspEnableOperStateNotification.0 -i 1
cdspEnableOperStateNotification.0=true(1)
```

The following example shows how to send no traps to any host. The Border Gateway Protocol (BGP) traps are enabled for all hosts, but the only traps enabled to be sent to a host are ISDN traps (which are not enabled in this example).

```
Device(config)# snmp-server enable traps bgp
```

```
Device(config)# snmp-server host user1 public isdn
```

The following example shows how to enable the device to send all inform requests to the host at the address myhost.cisco.com, using the community string defined as public:

```
Device(config)# snmp-server enable traps
```

```
Device(config)# snmp-server host myhost.cisco.com informs version 2c public
```

The following example shows how to send HSRP MIB traps to the host myhost.cisco.com using the community string public:

```
Device(config)# snmp-server enable traps hsrp
```

```
Device(config)# snmp-server host myhost.cisco.com traps version 2c public hsrp
```

The following example shows that VRRP will be used as the protocol to enable the traps:

```
Device(config)# snmp-server enable traps vrrp
Device(config)# snmp-server host myhost.cisco.com traps version 2c vrrp
```

The following example shows how to send IEEE 802.1X MIB traps to the host "myhost.example.com" using the community string defined as public:

```
Device(config)# snmp-server enable traps dot1x
Device(config)# snmp-server host myhost.example.com traps public
```

Related Commands

Command	Description
snmp-server enable traps atm pvc	Enables ATM PVC SNMP notifications.
snmp-server enable traps atm pvc extension	Enables extended ATM PVC SNMP notifications.
snmp-server enable traps bgp	Enables BGP server state change SNMP notifications.
snmp-server enable traps calltracker	Enables Call Tracker callSetup and callTerminate SNMP notifications.
snmp-server enable traps envmon	Enables environmental monitor SNMP notifications.
snmp-server enable traps frame-relay	Enables Frame Relay DLCI link status change SNMP notifications.
snmp-server enable traps ipsec	Enables IPsec SNMP notifications.
snmp-server enable traps isakmp	Enables IPsec ISAKMP SNMP notifications.
snmp-server enable traps isdn	Enables ISDN SNMP notifications.
snmp-server enable traps memory	Enables memory pool and buffer pool SNMP notifications.
snmp-server enable traps mpls ldp	Enables MPLS LDP SNMP notifications.
snmp-server enable traps mpls traffic-eng	Enables MPLS TE tunnel state-change SNMP notifications.
snmp-server enable traps mpls vpn	Enables MPLS VPN specific SNMP notifications.
snmp-server enable traps repeater	Enables RFC 1516 hub notifications.
snmp-server enable traps snmp	Enables RFC 1157 SNMP notifications.
snmp-server enable traps syslog	Enables the sending of system logging messages via SNMP.

Command	Description
snmp-server host	Specifies whether you want the SNMP notifications sent as traps or informs, the version of SNMP to use, the security level of the notifications (for SNMPv3), and the destination host (recipient) for the notifications.
snmp-server informs	Specifies inform request options.
snmp-server trap-source	Specifies the interface (and the corresponding IP address) from which an SNMP trap should originate.
snmp trap illegal-address	Issues an SNMP trap when a MAC address violation is detected on an Ethernet hub port of a Cisco 2505, Cisco 2507, or Cisco 2516 router.
vrrp shutdown	Disables a VRRP group.

snmp-server enable (bulkstat)

To enable notifications for bulkstat, use the **snmp-serverenable** command in global configuration mode. To remove notification configurations, use the **no** form of this command.

snmp-server enable

Syntax Description

collection	Sets the cdcVFileCollectionErrorEnable object of all profiles.
transfer	Sets the cdcFileXferConfSuccessEnable and cdcFileXferConfFailureEnable objects of all profiles.

Command Default

This command has no default behavior.

Command Modes

Global configuration (config)

Command History

Release	Modification
15.3(1)T	This command was introduced.

Examples

The following example shows how to configure notifications for bulkstat configuration using the **snmp-server enable** command:

```
Device# configure terminal
Device(config)# snmp-server enable traps bulkstat collection transfer
Device(config)# snmp-server enable traps bulkstat transfer
```

Related Commands

Command	Description
snmp-server enable	Configures the resource limit for memory and disk resource.