



Using MML Commands

Introduction

This chapter provides general reference information to help you understand how to operate the Cisco Billing and Measurements Server (BAMS) using Man-Machine Language (MML) commands. See [Chapter 4, “Using MML Commands”](#) for the information about the tag IDs that you use in conjunction with MML commands to modify BAMS tables.



Note

MML commands are differentiated from the surrounding text by being set in a Courier typeface. This makes them appear as they would on a computer screen. User input is shown in a bold font, and system responses are shown in a plain font. Text strings that you enter with MML commands are enclosed in quotes. Integers are shown without quotes.

Command Notation

The command notation follows the Backus-Naur conventions.

Command Syntax

The command syntax follows the Bellcore TL1 conventions.

Starting and Stopping BAMS

The following sections describe the system-level MML commands that you use to start and stop BAMS.

Starting the System

To start the system from the MML system prompt, use the **sta-softw** (start software) command.

Example:

```
sta-softw  
or  
start_system (from UNIX)
```

Stopping the System or OOS

To stop the system or bring it out-of-service (OOS), use the **stp-softw** (stop software) command.

Example:

```
stp-softw::confirm
or
stop_system (from UNIX)
```

Starting an MML Session

To start an MML session, and to get information about MML commands, perform the following steps:

Step 1 Log in to BAMS using your user ID and password.

When MML is started, the system prompt changes to `mml : sys>`.

The system is now ready to accept command-line instructions.



Note

This is an alternate method for starting the command-line interface: In the BAMS bin directory, type **mml** in lowercase letters at the UNIX system prompt. Certain environment variables must be defined before MML can run. To define these variables, run **. sym_defs** in the profile of authorized users. The UNIX prompts and scripts follow the conventions for the UNIX Korn shell.

Step 2 Type **help**.

The system displays a list of available MML commands. One screen of information is presented. Press **Enter** to display additional information.

These MML commands are discussed in more detail in the following sections.

Help—Help Command

Purpose	Displays a list of available commands or help on a specified command.
Format	help [: <i>commandname</i>]
Description	The Help function provides syntax and other general command information. At the node level, the Help function provides command information for the current node. At the system level, the Help function provides command information for the system as a whole, as well as for each node.

Example

```

mml:sys>help
Billing and Measurements Server - BAMS-00 2002-08-22 15:28:46

Available commands (in alphabetical order):
<command name>:?: Displays a list of possible tagIDs
<command name>:<tagID>:?: Displays a list of possible field
                           names
clr-alm:<tagID>:msgnumber="<nnn>"[,msgtext="<message_text>"]
                           Generates a clear message
dialog:<file name>: Redirects output to a file
get-nodenames:: Lists node names from all nodes
h::<number>[,<number>]] Displays commands in the history
                           buffer
help[:<command name>] Displays a list of available com-
                           mands or help on a specified command
prov-add:<tagID>:<field name1>=["<value1>"]<range1-range2>[, ...
                           <field nameN>
                           <valueN>]<range1-range2>]
                           Adds a new record to the ACRF format
                           file
prov-cpy:<tagid>|all]:srcnode=<1..8> | <nodename>,srcver=active |
                           default | new | <dirname>
                           Copies a table or tables from one
                           node to the current node
prov-diff:: Compares active parameters between
                           units
prov-dlt:<tagID>:<field name1>=["<value1>"]<range1-range2>[, ...<field
                           nameN>=["<valueN>"]<range1-range2>]
                           Deletes a record from the ACRF for-
                           mat file
prov-dply::[srcver=<dirname>] Copies a provisioning session to the
                           active parameters
prov-ed:<tagID>:<field name1>=["<value1>"]<range1-range2>[, ... <field
                           nameN>=["<valueN>"]<range1-range2>]
                           Modifies one or more records that
                           have already been inserted
prov-exp:<tagID>|all]:dirname=<mml subdirectory>
                           Exports a list of parameters for a
                           specific table or all tables
prov-rtrv:<tagID>: Displays the contents of a record in
                           ACRF format file
prov-sta::srcver=<dirname>,dstver=<dirname>[,confirm]
                           Starts a provisioning session.
                           <dirname>=active | default | new |
                           dirname
prov-stp::[force] Stops the current provisioning ses-
                           sion
prov-sync:: Copies active parameters from the
                           current unit to the remote unit
quit Quit the session
r::[n] Executes a previously entered com-
                           mand
rtrv-arms Displays the active alarms
rtrv-configs Displays available configurations
rtrv-file::<file name> Displays the contents of a Unix text
                           file
rtrv-ne Displays attributes of the Network
                           Element
rtrv-session Displays the current session
rtrv-softw:<process name>|all Displays the status of system mod-
                           ules
rtrv-syslog::[cont] Displays syslog continuously
set-alm:taskname:msgnumber="<nnn>"[,level=<n>]
                           Generates an alarm message level n
                           can be 0 | 1 | 2
set-node:<node #>|<node_name>|sys: Sets node number
sta-softw Starts the system application
stp-softw::confirm Stops the system application
mml:7:node07>help

```

Example

```

mml:7:node07>help
Billing and Measurements Server - BAMS-00 2002-08-22 12:07:35

Available commands (in alphabetical order):
<command name>:?: Displays a list of possible tagIDs
<command name>:<tagID>?: Displays a list of possible field names
chgno::[seqno1=<#>],[seqno2=<#>] Changes polling sequence numbers
clr-alm:<tagID>:msgnumber="<nnn>"[,msgtext="<message_text>"]
                                Generates a clear message
dialog:<file name>: Redirects output to a file
get-nodenames:: Lists node names from all nodes
h::[<number>[,<number>]] Displays commands in the history buffer
help[:<command name>] Displays a list of available commands
                        or help on a specified command
prov-add:<tagID>:<field name1>=["<value1>"]<range1-range2>[, ...
                                <field nameN>=["<valueN>"]<range1-range2>]
                                Adds a new record to the ACRF format
                                file
prov-cpy:[<tagid>|all]:srcnode=<1..8> | <nodename>,srcver=active |
                                default | new | <dirname>
                                Copies a table or tables from one node
                                to the current node
prov-diff:: Compares active parameters between
                                units
prov-dlt:<tagID>:<field name1>=["<value1>"]<range1-range2>[, ...<field
                                nameN>=["<valueN>"]<range1-range2>]
                                Deletes a record from the ACRF format
                                file
prov-dply::[srcver=<dirname>] Copies a provisioning session to the
                                active parameters
prov-ed:<tagID>:<field name1>=["<value1>"]<range1-range2>[, ...
                                <field nameN>=["<valueN>"]<range1-range2>]
                                Modifies one or more records that have
                                already been inserted
prov-exp:[<tagID>|all]:dirname=<mml subdirectory>
                                Exports a list of parameters for a
                                specific table or all tables
prov-rtrv:<tagID>: Displays the contents of a record in
                                ACRF format file
prov-sta::srcver=<dirname>,dstver=<dirname>[,confirm]
                                Starts a provisioning session.
                                <dirname>=active | default | new |
                                dirname
prov-stp::[force] Stops the current provisioning session
prov-sync:: Copies active parameters from the
                                current unit to the remote unit
quit Quit the session
r::[n] Executes a previously entered command
rtrv-arms Displays the active alarms
rtrv-configs Displays available configurations
rtrv-file::<file name> Displays the contents of a Unix text
                                file
rtrv-ne Displays attributes of the Network
                                Element
rtrv-session Displays the current session
rtrv-softw:<process name>|all Displays the status of system modules
rtrv-syslog::[cont] Displays syslog continuously
set-alm:taskname:msgnumber="<nnn>"[,level=<n>]
                                Generates an alarm message level n can
                                be 0 | 1 | 2
set-node:<node #>|<node_name>|sys: Sets node number
set-nodename::name=<node name> Sets the nodename of a node
sw-ovr Forces a manual rotation

```

**Note**

Variables such as tag ID, field name, and so on, are shown in brackets.

**Note**

Strings must be enclosed in quotes, for example “*string*”. Anything enclosed in brackets, for example [*:command name*] is an option. Colons are used to separate major command components, for example the command name from the tag ID, and the tag ID from the field name. Fields are separated by commas. When modifying field name values, do not enter spaces before or after the equal sign (=) or commas.

command name:?:—Help on Tag IDs

Purpose Displays a list of tag IDs that can be used with the specified MML command.

Format *command name:?:*

Description The value of *command name* is any valid MML command.
Type **help** to display a list of available commands.

Example `mml:sys>prov-add:?:`

```
Billing and Measurements Server - BAMS-00 2002-08-22 11:33:04
B   COMPLD
ALM-PARMS
MSC-PARMS
MSC-THRES
;
```

**Note**

In the example above, the specified command displays three valid tag IDs at the system level prompt. When a node is set, 15 tag IDs are displayed, as shown in the example below:

`mml:1:boston>prov-add:?:`

```
Billing and Measurements Server - BAMS-00 2002-08-22 11:26:35
B   COMPLD
ZONE-INFO
TRUNKGRP
ALM-PARMS
BIN1110
COUNTRY
MAPTYPE
NODEPARMS
NPANXX
P01FILTER
POLL
RATING-TYPE
RATE-EXC
SIGPATH
```

```

SKIPCDB
SKIPCDE
SWITCHINFO
TCA-TBL
TOLLFREE
TKGPREFIX
;

```

command name:tagID:?—Help on Field Names

Purpose	Obtains a list of field names for a specified command.
Format	<i>command name:tagID:?</i>
Description	The value of <i>command name</i> is any valid MML command. The value of <i>tag ID</i> is any valid tag ID. Type command name:? to obtain a listing of valid tag IDs.

Example

```

mml:sys>prov-add:MSC-THRES:?
Billing and Measurements Server - BAMS-00 2002-08-22 11:35:09
B  COMPLD
interval=10
put=80
plt=60
uut=95
mil=80
mal=85
crl=90
;

```



Note

In the example above, the specified command and tag ID display the field names for the MSC-THRES table. See the [“Tag IDs and Field Names” section on page 5-1](#) for a description of the fields in each BAMS table.

MML Session Logs

The /opt/CiscoBAMS/data/logs directory contains daily MML session logs.

The log contains the time stamp of all user activity on BAMS and can be used for audits and troubleshooting.

MML Commands

To use the Man-Machine Language (MML) commands, define your user profile by typing **.sym_defs** in the /opt/CiscoBAMS/bin directory. Next, type **mml** to start the MML program. The UNIX system prompt changes to **mml:sys>** and allows you to enter MML commands, which are listed in the following sections.

chgno—Change Number

Purpose	Changes the polling sequence numbers
Format	<code>chgno::[seqno1=#],[seqno2=#]</code>
Description	The value of <i>seqno1</i> is the value of the first polling sequence number. The value of <i>seqno2</i> is the value of the second polling sequence number.



Note This command can be executed only at the node level.

Example

```
mml:3>chgno::seqno1=1,seqno2=1
Billing and Measurements Server - BAMS-00 2002-01-08 14:11:09
B   COMPLD
;
```

clr-alm—Clear Alarm

Purpose Clears a previously set alarm that was written to the alarm history file. These alarms are generally set for test purposes, for example, to test the alarm trapping. This command sends an alarm trap clear to the SNMP agent. (For details about setting alarms, see the [“set-alm—Set Alarm” section on page 4-23](#).)

Format `clr-alm:taskname:msgnumber="nnn"[,msgtext="message_text"]`

Description The value of *taskname* is any valid BAMS task name.
The value of *msgnumber* can be any three-digit number. This number corresponds to the number of the message to be cleared. For ACC227 and POL402 alarms, you need to specify the full *msgtext* value to clear the alarm, because the message text for these alarms can vary. For ACC227, the *msgtext* includes the timestamp.

Example

```
mml:3>clr-alm:MSC:msgnumber="030"
mml:3>clr-alm:POL:msgnumber="402",msgtext="Cannot connect to unit
bams0-a "
mml:3>clr-alm:ACC:msgnumber="227",msgtext="TTL CALL ROUTING III, TG1, 0
is equal to 0 @ 20021102220000 UTC"
Billing and Measurements Server - BAMS-00 2002-01-08 14:11:09
B   COMPLD
;
```

**Note**

For more information on the field names, refer to the [“Updating the Poll Table” section on page 5-16](#).

dialog—Dialog

Purpose	Redirects output to a log file.
Format	dialog: <i>filename</i> :
Description	The value of <i>filename</i> is a UNIX filename. This command is used to create a special log file that is stored in the /opt/CiscoBAMS/files/mml directory in the format <i>filename.dlog</i> when you quit MML. This log is different from the MML daily session log files stored in the /opt/CiscoBAMS/data/log/mml directory, which are prefixed with “mml.”
Example	<pre>mml:sys>dialog:test: Billing and Measurements Server - BAMS-00 2002-01-08 09:37:30 B COMPLD ;</pre>

get-nodenames—Get Node Names

Purpose	Lists all node names.
Format	get-nodenames:
Description	Displays a list of all defined node names. The system default values for the node names are node01, node02, ... node08.
Example	<pre>mml:sys>get-nodenames: Billing and Measurements Server - BAMS-00 2002-01-15 17:47:37 node 1: "newyork" node 2: "sanfrancisco" node 3: "baltimore" node 4: "richmond" node 5: "washingtondc" node 6: "" node 7: "miami" node 8: ""</pre>

h—History

Purpose	Displays commands in the history buffer.
Format	h: [<i>number</i> [, <i>number</i>]]

Description The value of *number* is a numeric value. **h::** is equivalent to **h::1,15**, which displays the last 15 commands in the history buffer. The first number option represents the *nth* command in the history list. The second number represents the number of commands in the list (a maximum of 15).

Example

```
mml:sys>h::1
Billing and Measurements Server - BAMS-00 2002-01-08 09:40:38
B  COMPLD
1    h::1
;
```

prov-add—Provision Add

Purpose Adds a new record to the table specified by the tag ID.

Format **prov-add:tagID:field name1=["]value1["], ... field nameN=["]valueN["][range1 - range2]**

Description

The value of *tagID* is any valid tag ID.

The value of *field name1* is a first field name.

The value of *value1* is a first value.

The value of *field nameN* is an *Nth* field name.

The value of *valueN* is an *Nth* value.

The value of *range1* is a first value of a desired field range.

The value of *range2* is a second value of a desired field range.

Example

```
mml:2>prov-add:sigpath:sigpath=0x50-0x60,bearchan=0x50-0x60,
trunkgrp=0-16,trunknum=1
Billing and Measurements Server - BAMS-00 2002-01-08 11:06:53
B  COMPLD
   "SIGPATH"
;
```

prov-cpy—Provision Copy

Purpose Copies a table or tables from one node to the current node.

Format **prov-cpy:[<tagid>|all]:srcnode=<1..8> | <nodename>,srcver=active | default | new | <dirname>**

Description

The value of *tagID* is any valid tag ID.

The value of *srcnode* is a node identifier (1 through 8).

The value of *nodename* must be a valid UNIX filename because this name is used to create a directory link in the /data directory.

The value of *srcver* is one of the following:

- **Active**—Use this value to copy the table from the source node's active configuration.
- **Default**—Use this value to copy the table from the source node's default configuration. This could be used if the **prov-sta** command does not use the *srcver=default* setting. In this case, use **prov-cpy** to copy the default table for one table only.
- **New**—Use this value to empty the table. This could be used if the **prov-sta** command does not use *srcver=new*. In this case, use **prov-cpy** to copy an empty table into the current session.

The value of *dirname* specifies that the table is copied from the source node's MML directory. This is the same as the **prov-sta** command's *dstver* argument.

Example

```

mml:sys>set-node:2:
Billing and Measurements Server - BAMS-00 2002-08-26 18:19:04
B  COMPLD
;
mml:2:node02>prov-sta::srcver=active,dstver=test,confirm
Billing and Measurements Server - BAMS-00 2002-08-26 18:19:21
B  COMPLD
;
mml:2:node02>prov-cpy:nodeparms:srcnode=1,srcver=active
Billing and Measurements Server - BAMS-00 2002-08-26 18:20:11
B  COMPLD
Do you want to copy control file(s) from /opt/CiscoBAMS/files/s01 to
the current provisioning directory /opt/CiscoBAMS/files/s02/mml/test ?
(y/n)
B  COMPLD
;
mml:2:node02>prov-rtrv:nodeparms:
Billing and Measurements Server - BAMS-00 2002-08-26 18:20:22
B  RTRV

"NODEPARMS:activate=1,statoutput=1,bafoutput=1,asciibafoutput=1,asciio
tput=2,lookupinfo=1,bafinfo=1,dynamicaccumes=0,sup-zero-counts=0,interv
al-minutes=5,nailed-cfg=1,p01output=0,p01prefix="p01_",enable-h323=0,ex
tasciiooutput=0,nicsoutput=0,bin1110output=0"
;
mml:2:node02>prov-dply::
Billing and Measurements Server - BAMS-00 2002-08-26 18:23:06
B  COMPLD

/* The measurements interval (interval-minutes) has been modified in
the NODEPARMS table. */
/* This node will be dynamically restarted for the local unit if it
is currently running. */ ;

```

prov-diff—Provision Compare

Purpose	Compares active parameters between BAMS units.
Format	prov-diff::
Description	No variables need to be specified.
Example	<pre> mml:sys>prov-diff:: Billing and Measurements Server - BAMS-00 2003-01-21 17:38:28 B COMPLD /* Table ALM-PARMS matches for both BAMS units */ /* Table MSC-PARMS matches for both BAMS units */ /* Table MSC-THRES matches for both BAMS units */ ; mml:sys>set-node:1: Billing and Measurements Server - BAMS-00 2003-01-21 09:45:20 B COMPLD ; mml:1:node01>prov-diff:: Billing and Measurements Server - BAMS-00 2003-01-21 09:45:24 B COMPLD /* Table ZONE-INFO matches for both BAMS units */ /* Table TRUNKGRP matches for both BAMS units */ /* Table ALM-PARMS matches for both BAMS units */ /* Table BIN1110 matches for both BAMS units */ /* Table COUNTRY matches for both BAMS units */ /* Table MAPTYPE matches for both BAMS units */ /* Table NODEPARMS matches for both BAMS units */ /* Table NPANXX matches for both BAMS units */ /* Table POLFILTER matches for both BAMS units */ /* Table POLL matches for both BAMS units */ /* Table RATING-TYPE matches for both BAMS units */ /* Table RATE-EXC matches for both BAMS units */ /* Table SIGPATH matches for both BAMS units */ /* Table SKIPCDB matches for both BAMS units */ /* Table SKIPCDE matches for both BAMS units */ /* Table SWITCHINFO matches for both BAMS units */ /* Table TCA-TBL matches for both BAMS units */ /* Table TOLLFREE matches for both BAMS units */ /* Table TKGPREFIX matches for both BAMS units */ ; </pre>



Note

If two (or more) tables are not identical across units, you will receive a message similar to the following:

```
/* Table <table name> DOES NOT MATCH across BAMS units. Examine this table on both BAMS
units. Execute prov-sync from correct unit. */
```

After you determine which BAMS unit has the correctly configured table, execute the prov-sync command for the appropriate node of the correctly configured BAMS unit. For more information, see [“prov-sync—Provision Synchronize” section on page 4-17](#).

prov-dlt—Provision Delete

Purpose	Deletes a record from the table specified by the tag ID.
Format	prov-dlt: <i>tagID</i> : <i>field name1</i> =[<i>value1</i>], ... <i>field nameN</i> =[<i>valueN</i>][<i>range1-range2</i>]
Description	The value of <i>tagID</i> is any valid tag ID. The value of <i>field name1</i> is a first field name. The value of <i>value1</i> is a first value. The value of <i>fieldnameN</i> is an <i>N</i>th field name. The value of <i>valueN</i> is an <i>N</i>th value. The value of <i>range1</i> is a first value of a desired field range. The value of <i>range2</i> is a second value of a desired field range.
Example	<pre>mml:2>prov-dlt:sigpath:sigpath=0x50-0x60,bearchan=0x50-0x60, trunkgrp=0-16,trunknum=1 Billing and Measurements Server - BAMS-00 2002-01-08 11:25:03 B COMPLD "SIGPATH" ;</pre>

prov-dply—Provision Deploy

Purpose	Implements changes specified during an active provisioning session.
Format	prov-dply:: [<i>srcver=dirname</i>]
Description	The value of <i>dirname</i> is the directory name; if you are in a provisioning session, you can deploy another session from within the active directory. prov-dply:: copies the changes in the current provisioning session to the active session (directory). If a directory name is specified with the prov-dply command, the files in that directory are copied to the active session.
Example	<pre>mml:2>prov-dply::srcver=test Billing and Measurements Server - BAMS-00 2002-01-08 11:29:15 B COMPLD ;</pre>



Note

When you execute **prov-dply** at the node level, if the values to be provisioned for the NODEPARMS parameters *nailed-cfg* and *interval-minutes* are different from those in the current active configuration, the processing tasks for this node automatically restart so that these parameter changes can take effect. The restart of the node tasks generates MGR801 alarms, which indicate that certain processes are being

terminated and restarted. Since changing these parameters has a significant effect on how the data is processed, the measurements data produced might show some incongruities with previously generated measurements data.

prov-ed—Provision Edit

Purpose Modifies one or more provisioning records in the table specified by the tag ID.

Format `prov-ed:tagID:field name1=["]value1["], ... field name>=["]valueN["][range1-range2]`

Description The value of *tagID* is any valid tag ID.
 The value of *field name1* is a first field name.
 The value of *value1* is a first value.
 The value of *fieldnameN* is an *N*th field name.
 The value of *valueN* is an *N*th value.
 The value of *range1* is a first value of a desired field range.
 The value of *range2* is a second value of a desired field range.



Note Execute the **prov-rtrv** command first, to see the existing configuration.

Example

```
mml:2>prov-ed:sigpath:sigpath=0x50-0x61,bearchan=0x50-0x61,
trunkgrp=0-17,trunknum=1
Billing and Measurements Server - BAMS-00 2002-01-08 11:33:47
B   COMPLD
    "SIGPATH"
    ;
```

prov-exp—Provision Export

Purpose Exports a list of parameters for a specific table or all tables. The parameters are the field names and values of the table or tables.

This command can be executed at the system or node level. When executed at the system level, the command generates a file that contains all of the commands to provision the system and all of the nodes. When executed at the node level, the command generates a file that contains all of the commands to provision the indicated node.

Format `prov-exp:[tagID|all]:dirname=mml subdirectory`

Description The value of *tagID* is any valid tag ID.

The value of *dirname* is the directory name that is created under the /opt/CiscoBAMS/files/mml directory. The **all** option exports all tag IDs.

Example

```
mml:3>prov-exp:sigpath:dirname=testbackup
Billing and Measurements Server - BAMS-00 2002-01-08 11:51:11
B  COMPLD
;
```

prov-rtrv—Provision Retrieve

Purpose Retrieves the configuration for the specified tag ID.

Format **prov-rtrv:** *tagID*:

Description The value of *tagID* is any valid tag ID.

Example

```
mml:3>prov-rtrv:sigpath:
Billing and Measurements Server - BAMS-00 2002-01-08 11:54:15
B  RTRV
  "SIGPATH:sigpath=0x40,bearchan=0x40,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x41,bearchan=0x41,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x42,bearchan=0x42,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x43,bearchan=0x43,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x44,bearchan=0x44,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x45,bearchan=0x45,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x46,bearchan=0x46,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x47,bearchan=0x47,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x48,bearchan=0x48,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x49,bearchan=0x49,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x4a,bearchan=0x4a,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x4b,bearchan=0x4b,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x4c,bearchan=0x4c,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x4d,bearchan=0x4d,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x4e,bearchan=0x4e,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x4f,bearchan=0x4f,trunkgrp=16,trunknum=1"
  "SIGPATH:sigpath=0x50,bearchan=0x50,trunkgrp=16,trunknum=1"
;
```

prov-sta—Provision Start

Purpose Starts a provisioning session.

Format **prov-sta::srcver=***dirname***,dstver=***dirname***[,confirm]**

Description

In order to modify the contents of BAMS tables, you must execute the **prov-sta** command to start a provisioning session.

You specify the source of the tables to be used in the provisioning session with the **srcver** parameter. The value of *dirname* is the name of the source or destination directory. Setting **srcver=new** sets the configuration tables to empty. Setting **srcver=default** sets the configuration tables to the default values. Setting **srcver=active** retrieves the currently provisioned tables.

The **dstver** parameter defines the name of the provisioning session. This parameter creates a separate directory containing the tables for the provisioning session.



Note You must specify the **confirm** command option if the destination directory (**dstver**) already exists.

Once you start a provisioning session by executing the **prov-sta** command, you can modify the BAMS tables by using the MML editing commands **prov-add**, **prov-dlt**, and **prov-ed**, in conjunction with tag IDs.

Once all edits have been made, you execute the **prov-dply** command to make the tables of the provisioning session the current active tables at either the BAMS system level or node level (defined by the **set-node** command). If you do not wish to deploy the edited tables, use the **prov-stp** command to quit the provisioning session.

Example

```
mml:sys>prov-sta::srcver=active,dstver=test,confirm
Billing and Measurements Server - BAMS-00 2002-01-08 14:32:49
B   COMPLD
;
```

**Note**

When you execute the **prov-sta** command, it creates a working directory with the same name as the **dstver** parameter value. These directories are saved so that a user can retrieve tables from this directory at a later time. (In this case the user would execute **prov-sta** where the **srcver** is the name of a previously created **dstver** value.) Over time, these MML working directories can accumulate if many different values are used for the **dstver** parameter. A maintenance script, **clean_mml.sh**, should be executed periodically on the BAMS unit so that the MML working directories do not use up too much disk space. This script prompts you, at the system level and for each BAMS node, to delete an MML directory or not. The newest working directory of each node is automatically saved.

To run this script, log in as the BAMS user and execute the following:

```
$ clean_mml.sh
** clean_mml.sh will clean up the mml working directories.  The latest
** directory for each node will automatically be saved.
** Examining mml directories in BAMS system level:
Remove directory /opt/CiscoBAMS/files/mml/bams_system ?(y/n) y
Newest directory /opt/CiscoBAMS/files/mml/bams_system_vers2
automatically saved.
** Examining mml directories in BAMS node 01:
Remove directory /opt/CiscoBAMS/files/s01/mml/node1_config ?(y/n) n
Remove directory /opt/CiscoBAMS/files/s01/mml/test_config ?(y/n) y
Newest directory /opt/CiscoBAMS/files/s01/mml/jims_config
automatically saved.
** Examining mml directories in BAMS node 02:
Remove directory /opt/CiscoBAMS/files/s02/mml/jims_config ?(y/n) y
Newest directory /opt/CiscoBAMS/files/s02/mml/bobs_config
automatically saved.
** Examining mml directories in BAMS node 03:
Remove directory /opt/CiscoBAMS/files/s03/mml/test ?(y/n) y
Newest directory /opt/CiscoBAMS/files/s03/mml/joes_config
automatically saved.
** Examining mml directories in BAMS node 04:
** Examining mml directories in BAMS node 05:
** Examining mml directories in BAMS node 06:
** Examining mml directories in BAMS node 07:
** Examining mml directories in BAMS node 08:
** clean_mml.sh finished.
```

prov-stp—Provision Stop

Purpose	Stops the current provisioning session.
Format	prov-stp:: [force]
Description	You use this command if you do not want to deploy the changes made in your provisioning session to the active session. Use the force argument to force a provisioning session to stop (that is, when you must clear a lock on a prov-sta session).
Example	<pre>mml:3>prov-stp:: Billing and Measurements Server - BAMS-00 2002-01-08 11:55:57 B COMPLD ;</pre>

prov-sync—Provision Synchronize

Purpose	Copies active parameters from the current unit to the remote unit.
Format	prov-sync::
Description	No arguments are required.
Example	<pre>mml:sys>prov-sync:: Billing and Measurements Server - BAMS-00 2002-01-08 16:56:18 /* Transferring file /opt/CiscoBAMS/files/alm_parms.CTL ... */ /* Transferring file /opt/CiscoBAMS/files/msc_parm.CTL ... */ /* Transferring file /opt/CiscoBAMS/files/msc.CTL ... */ B COMPLD ;</pre>

quit—Quit

Purpose	Quits the MML session.
Format	quit
Description	none
Example	<pre>mml:sys>quit Billing and Measurements Server - BAMS-00 2002-08-22 14:12:03</pre>

r—Repeat

Purpose	Executes a previously entered command.
Format	r:: [<i>n</i>]
Description	Here <i>n</i> is a numeric value.
Example	<pre> mml:3>r::2 Billing and Measurements Server - BAMS-00 2002-01-08 11:58:36 B COMPLD ; mml:3>prov-rtrv:sigpath: Billing and Measurements Server - BAMS-00 2002-01-08 11:58:36 B RTRV ; </pre>

rtrv-alsms—Retrieve Alarms

Purpose	Displays the active alarms or events at the system level (for system-level alarms) or at the node level (for node-level alarms).
Format	rtrv-alsms
Description	This command retrieves only clearable alarms currently maintained in the alarm history file and defined with the alarmslist configuration. It does not retrieve event information generated, for example, by table lookup and other configuration errors. No tag IDs are required, just the command verb.
Example	<pre> mml:3>rtrv-alsms Billing and Measurements Server - BAMS-00 2002-01-08 13:20:09 B RTRV 01/08/01 13:20:03 *C MSC030: Alarm/Event test message ; B COMPLD ; </pre>

rtrv-configs—Retrieve Configuration

Purpose	Displays the available configurations.
Format	rtrv-configs
Description	The configurations are maintained in the /opt/CiscoBAMS/files/mml subdirectory. When you start a provisioning session, your changes are written to this directory. You can use this command to retrieve the current configuration. No tag IDs are required, just the command verb.

Example

```

mml:3>rtrv-configs
Billing and Measurements Server - BAMS-00 2002-01-08 13:23:08
B   COMPLD

/* Current session: ACTIVE */

/* Available Configurations: */

/* /opt/CiscoBAMS/files/s03/mml/test, Mon Jan  8 11:45:48 2002
*/

/* /opt/CiscoBAMS/files/s03/mml/testbackup, Mon Jan  8 11:51:11 2002
*/
;

```

rtrv-file—Retrieve File

Purpose

Displays the contents of a UNIX text file.

Format

rtrv-file: *filename*

Description

The value of *filename* is any existing filename. You need to specify the full UNIX filename that includes the directory path, unless the file exists in the current directory (/opt/CiscoBAMS/bin).

Example

```

mml:sys>rtrv-file::collect_defs
Billing and Measurements Server - BAMS-00 2002-01-08 13:42:53
B   RTRV
#
# Collection variables
#

REDUNDANCY_MODE=1;                                export REDUNDANCY_MODE
;

```

rtrv-ne—Retrieve Network

Purpose

Displays attributes (for example, polling status) of the network elements. Provides information on the type of software, the hardware that it is running on, the vendor, the location, the version of the software that is running, the polling status, sequence numbers, and host names.

**Note**

There is an 8-second interval between system start and POL task start. Within this interval, the status shows ACTIVE or STANDBY, even though the POL task has not started. Once the POL task starts, the polling status is accurate.

Format

rtrv-ne

Description No tag IDs are required, just the command verb.

Example

```
mml:sys>rtrv-ne
Billing and Measurements Server - BAMS-00 2002-08-22 14:41:17
B  RTRV
  "Type: BAMS"
  "Hardware platform: sun4u sparc SUNW,UltraSPARC-III-cEngine"
  "Vendor: "Cisco Systems, Inc.""
  "Location: Billing and Measurements Server - BAMS-00"
  "Version: "3.11""
  "System Status: RUNNING"
  "Polling Status[s01 (test01)]: ACTIVE"
  "s01 (test01) Node Status: ACTIVATED"
  "Polling Status[s02 (node02)]: ACTIVE"
  "s02 (node02) Node Status: ACTIVATED"
  "Polling Status[s03 (node03)]: ACTIVE"
  "s03 (node03) Node Status: DEACTIVATED"
  "Polling Status[s04 (node04)]: ACTIVE"
  "s04 (node04) Node Status: ACTIVATED"
  "Polling Status[s05 (node05)]: ACTIVE"
  "s05 (node05) Node Status: ACTIVATED"
  "Polling Status[s06 (node06)]: ACTIVE"
  "s06 (node06) Node Status: ACTIVATED"
  "Polling Status[s07 (node07)]: ACTIVE"
  "s07 (node07) Node Status: ACTIVATED"
  "Polling Status[s08 (node08)]: ACTIVE"
  "s08 (node08) Node Status: ACTIVATED"
  "Local hostname: "
  "Unit ID: BAMS-00"
  "BAMS-00 hostname: "
  "BAMS-01 hostname: "
  "Mode: Simplex"
```

rtrv-session—Retrieve Session

Purpose Displays the current provisioning session.

Format **rtrv-session**

Description No tag IDs are required, just the command verb.

Example

```
mml:3>rtrv-session
Billing and Measurements Server - BAMS-00 2002-01-08 13:56:52
B  COMPLD

/* Current Session: active */
;
```

rtrv-softw—Retrieve Software

Purpose Displays the status of software processes.

Format **rtrv-softw**: [*process name*|**all**]

Description The value of *process name* is any valid task name.

Example

```
mml:3>rtrv-softw:all
Billing and Measurements Server - BAMS-00 2002-08-22 14:13:00
B   RTRV
"MGR-03 RUNNING"
"ALM-03 RUNNING"
"POL-03 RUNNING"
"FMT-03 RUNNING"
"COR-03 RUNNING"
"AGB-03 RUNNING"
"ASC-03 RUNNING"
"EXT-03 RUNNING"
"CTB-03 RUNNING"
"P01-03 RUNNING"
"NIC-03 RUNNING"
"ACC-03 RUNNING"
B   COMPLD
;
```

Example

```
mml:sys>rtrv-softw:all
Billing and Measurements Server - BAMS-00 2002-08-22 14:25:18

NODE: system
-----
B   RTRV
"MGR-00 RUNNING"
"ALM-00 RUNNING"
"bamsP3MIBagt-00 RUNNING"
>NNL-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MGR-00 RUNNING"
"MSCmain-00 RUNNING"
"mscParmP3MIBagt-00 RUNNING"
"mscP3MIBagt-00 RUNNING"
"pollP3MIBagt-00 RUNNING"
"nodeParmP3MIBagt-00 RUNNING"

NODE: 1
-----
B   RTRV
"MGR-01 RUNNING"
"ALM-01 RUNNING"
"POL-01 RUNNING"
"FMT-01 RUNNING"
"COR-01 RUNNING"
"AGB-01 RUNNING"
"ASC-01 RUNNING"
"EXT-01 RUNNING"
"CTB-01 RUNNING"
"P01-01 RUNNING"
"NIC-01 RUNNING"
"ACC-01 RUNNING"
B   COMPLD
```

rtrv-syslog—Retrieve Syslog

Purpose	Displays the system log (syslog) continuously.
Format	rtrv-syslog:: [cont]
Description	No tag IDs are required, just the command verb.



Note The **cont** command option displays the system log continuously. Press **Ctrl-C** to escape out of the display.

Example

```
mml:sys>rtrv-syslog::
Billing and Measurements Server - BAMS-00 2002-01-08 17:22:39
08/21/02 23:35:51 MSC233: Executing system command: '/opt/CiscoBAMS/bin/msc_
08/21/02 23:35:51 MSC233:+pre_del.sh ebaf*'
08/21/02 23:35:51 MSC233: Executing system command: '/opt/CiscoBAMS/bin/msc_
08/21/02 23:35:51 MSC233:+pre_del.sh ext*csv'
08/21/02 23:35:51 MSC233: Executing system command: '/opt/CiscoBAMS/bin/msc_
08/21/02 23:35:51 MSC233:+pre_del.sh p01_*bin'
08/21/02 23:35:51 MSC902: Block: total=493688 free=92923 used=400765 utiliza
08/21/02 23:35:51 MSC902:+tion: 81% partition: /opt
08/21/02 23:35:51 MSC904: Inode: total=256576 free=254624 used=1952 utilizat
08/21/02 23:35:51 MSC904:+ion: 0% partition: /opt
08/21/02 23:35:51 MSC906: Inodes matching path(s) and prefix(es) in partiti
08/21/02 23:35:51 MSC906:+n /opt: 28
08/21/02 23:45:50 MSC001: MSC version W3.02 (CISCO) cleaning disk
```

set-alm—Set Alarm

Purpose	Generates an alarm message. Use this command to set a test alarm that is written to the syslog. (For details about clearing alarms, see the “clr-alm—Clear Alarm” section on page 4-7.)
Format	set-alm: taskname:msgnumber=nnn, level=n
Description	The value of <i>taskname</i> is any valid BAMS task name. The value of <i>nnn</i> is a three-character message number. The value of <i>n</i> is a valid single-character threshold level (0, 1, or 2).



Note This command works only for alarms maintained in the alarmslist.CTL file in the /opt/CiscoBAMS/files directory.

Example

```
mml:3>set-alm:MSC:msgnumber="030", level=0
Billing and Measurements Server - BAMS-00 2002-01-08 14:13:13
B   COMPLD
;
```

set-node—Set Node

Purpose Sets the node number. Use this command to change from the system level to the node level, or to change from one node to another node.

Format `set-node:node#|nodename|sys:`

Description The value of *node#* is any integer between 1 and 8.
The value of *nodename* is any valid node name.
sys displays the system level.



Note When 1 is specified as the node number, the MML prompt changes from mml:sys> to mml:1>. Exit out of any provisioning sessions before changing the node number. The prompt displays the node name when it is defined. The prompt always displays the node number, except when system is specified.

Example

```
mml:sys>set-node:1:
Billing and Measurements Server - BAMS-00 2002-01-08 14:45:27
mml:1:node01>
```

set-nodename—Set Node Name

Purpose Sets the node name for a node.

Format `set-nodename:node#:name=nodename`

Description The value of *node#* is any integer between 1 and 8.
The value of *nodename* must be a valid UNIX filename, because this name is used to create a directory link in the data directory.
This command must be executed within an MML editing session at the node level.



Note You can use the **set-nodename** command to modify any existing node names. You cannot use the command to modify the system name.

Example

```
mml:sys>set-nodename:1:name="boston"
Billing and Measurements Server - BAMS-00 2002-01-08 14:45:27
mml:1>
```

sta-softw—Start Software

Purpose Starts the system application.

Format **sta-softw**

Description No tag IDs are required, just the command verb.



Note An alternative way to start the software is to use the UNIX **start_system** command, which is found in the /opt/CiscoBAMS/bin directory.

Example

```
mml:sys>sta-softw
Billing and Measurements Server - BAMS-00 2002-01-08 14:14:41
B   COMPLD
;
```

stp-softw—Stop Software

Purpose Stops the system application.

Format **stp-softw::confirm**

Description No tag IDs are required, just the command verb.



Note You can execute this command only at the system level.



Note An alternative way to stop the software is to use the UNIX **stop_system** command, which is found in the /opt/CiscoBAMS/bin directory.

Example

```
mml:sys>stp-softw::confirm
Billing and Measurements Server - BAMS-00 2002-01-08 14:16:34
B   COMPLD

Terminating BAMS

waiting for MGR to shut down...
;
```

sw-ovr—Switch Over

Purpose	Forces a manual rotation of the BAMS unit designated to poll the VSC. (You can execute this command only on the active polling unit.)
Format	sw-ovr
Description	You can use the sw-ovr command to rotate polling from the active BAMS unit to the standby unit in the event of a switch failover. The command is executed immediately on the local BAMS unit. On the remote BAMS unit, the rotation takes effect at the next poll attempt. Poll attempts are typically set at 5-minute intervals.

**Caution**

Do not execute this command while polling is taking place; it will fail.

No tag IDs are required, just the command verb.

**Note**

Successful execution of this command causes a POL105 message to be written to the syslog (see [Appendix A, “Troubleshooting Cisco BAMS”](#)).

Example

```
mml:sys>sw-ovr
Billing and Measurements Server - BAMS-00 2002-08-22 13:26:19
B  COMPLD
;
```