



# CLAVISTER®

## Reference Guide ATCA Shelf Manager Software

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## **Reference Guide**

### **ATCA Shelf Manager Software**

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## Table of Contents

Preface .....	4
1. Using the CLI .....	5
2. CLI Reference .....	8

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# Preface

## Target Audience

The target audience for this guide is the administrator who is managing a Clavister SC6300 Series Chassis through a SF6090 Switch Fabric Blade.

## Notes to the Main Text

Special sections of text which the reader should pay special attention to are indicated by icons on the left hand side of the page followed by a short paragraph in italicized text. There are the following types of such sections:



### **Note**

*This indicates some piece of information that is an addition to the preceding text. It may concern something that is being emphasised or something that is not obvious or explicitly stated in the preceding text.*

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### **Tip**

*This indicates a piece of non-critical information that is useful to know in certain situations but is not essential reading.*

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### **Caution**

*This indicates where the reader should be careful with their actions as an undesirable situation may result if care is not exercised.*

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### **Important**

*This is an essential point that the reader should read and understand.*

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### **Warning**

*This is essential reading for the user as they should be aware that a serious situation may result if certain actions are taken or not taken.*

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# Chapter 1: Using the CLI

The platform-management CLI provides the means for configuring the Shelf Manager, controlling the Shelf Manager service, viewing and acknowledging all alarms in the chassis, and viewing information about the *field replaceable units* (FRUs) in the chassis. The platform-management CLI is accessible from the SCM master CLI.

## Accessing the Platform-management CLI and its Command Modes

The platform-management CLI is separated into several command modes. The command modes can be entered as prefixes to the commands or as separate commands solely to enter the modes. The prompt changes each time you change modes.

To access the SCM's master CLI:

1. Access the SCM via Telnet or using the serial console.
2. Log into the SCM as an administrator:

```
admin
```

The SCM master CLI prompt displays:

```
ATCA-2xxx#
```

From here you can access the platform-management CLI. You can exit any mode by typing:

```
exit
```

The reference pages for individual commands indicate when to use the various modes.

## Platform Management

Platform-management mode allows you to:

- Perform shelf rediscovery.
- View summary information about the shelf, current alarms, and installed FRUs.
- Access other command modes within the platform-management CLI.

From the master CLI, enter:

```
platform-mgmt
```

The platform-management prompt is then displayed. From here you can enter platform management commands.

## CLI Modes

The CLI can operate in various *modes* which are listed below.

- **Alarms**

Alarms mode allows you to view, acknowledge, and add alarms. From platform-management mode, enter:

```
alarms
```

- **Controls**

Controls mode allows you to set the HPI controls, configuring items such as the shelf address, Shelf Manager IP address, and FRU power-on sequences. From platform-management mode, enter:

```
controls
```

- **Sensors**

Sensors mode allows you to access the value of each shelf sensor, including the aggregate thermal, power, and operational sensors. From platform-management mode, enter:

```
sensors
```

- **Shelf Management**

Shelf management mode allows you to view or change items such as the Shelf Manager status and role. It allows you to stop and restart the Shelf Manager and cause a failover to the peer Shelf Manager. From platform-management mode, enter:

```
shelf-mgmt
```

- **Slot**

Slot mode allows you to access each slot and the installed FRU to initiate a FRU hotswap event or to view information such as slot or FRU sensor data. From platform-management mode, enter:

```
slot <slot_type> <slot_num>
```

The combinations of <slot\_type> and <slot\_num> can be:

<slot_type>	<slot_num>
front	<1-14> for a 12U shelf or <1-6> for a 5U shelf
fan	<1-4> for a 12U shelf or <1-2> for a 5U shelf
pem	<1-2>

## Command Line Completion

Pressing the tab key completes a partially typed command keyword. For example, typing a partial command *con* and pressing the tab key completes the keyword *configure*.

Typing a question mark (?) lists valid entries after a command keyword. For example, typing the keyword *configure* and then a question mark brings up a list of valid options that follow *configure*.

## Editing and history keys

The editing key sequences are similar to those used by EMACS text editors. Any character typed is inserted into the command line at the current cursor position, and all characters to the right of the typed character shift to the right. The history key sequence is similar to that used by the UNIX C shell. You can obtain a list of key sequences by entering *help* at the main CLI prompt.

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## Chapter 2: CLI Reference

The platform-management CLI allows you to view and configure many items related to the Shelf Manager and FRUs, including alarm and sensor data.

As discussed previously, the CLI is divided into the following modes:

- **Platform-management commands**
- **Alarm commands**
- **Control commands**
- **Sensor commands**
- **Shelf management commands**
- **Slot commands**

### Platform-management commands

The following are the platform-management CLI commands:

- **rediscoverShelf**

Performs a discovery of all shelf Resources by issuing the saHpiDiscover() function. This is helpful after physically removing a module that was shut down through software, or when recovering from a problem with an incomplete resource presence table.

Syntax:

```
rediscoverShelf
```

Mode: *Platform management*

- **show alarmSummary**

Displays a summary of the alarms in the system, including the number of alarms in each severity category.

Syntax:

```
show alarmSummary
```



Mode: *Platform management*

- **show chassis**

Summarizes the chassis and the installed FRUs.

Syntax:

```
show chassis { information | details }
```

Mode: *Platform management*

Output:

- FRU firmware versions and hot-swap states.
- The shelf address and IP address.
- The alarm status by alarm severity.

The *details* option additionally displays the shelf power availability.

- **show fans**

Summarizes the fan information, including the fan firmware versions and their hotswap states.

Syntax:

```
show fans
```

Mode: *Platform management*

- **show frus**

Summarizes the blade and RTM information, including the firmware versions and the blade hot-swap states.

Syntax:

```
show frus
```

Mode: *Platform management*

- **show pems**

Summarizes the power entry module (PEM) information, including their firmware versions and hot-swap states.

Syntax:

```
show pems
```

Mode: *Platform management*

## Alarm commands

The following are the alarms CLI commands:

- **acknowledge alarmId**

Acknowledges a particular alarm by ID. Using the "?" to obtain help lists the alarms and their IDs.

Syntax:

```
acknowledge alarmId <id>
```

Mode: *Alarms*

- **acknowledge all**

Acknowledges all alarms.

Syntax:

```
acknowledge all
```

Mode: *Alarms*

- **acknowledge severity**

Acknowledges all alarms of a certain severity.

Syntax:

```
acknowledge severity { minor | major | critical }
```

Mode:

- **configure add**

Adds an alarm of a specified severity with a user-defined text description that can be up to 20 characters long. Alarms added by users are listed under slot 0. You can include blank spaces in the description by enclosing the description in quotation marks (" ").

Syntax:

```
configure add { minor | major | critical } <descript>
```

Mode: *Alarms*

- **configure delete**

Deletes a particular alarm by ID.

Syntax:

```
show alarmId <id>
```

Mode: *Alarms*

Slot 0 indicates shelf alarms or alarms added by users.

- **show alarmId**

Displays a particular alarm by ID and lists the slot, blade type, time stamp, severity, acknowledged state, and description.

Syntax:

```
show alarmId <id>
```

Mode: *Alarms*

Slot 0 indicates shelf alarms or alarms added by users.

- **show all**

Displays all current alarms and identifies the slot, blade type, time stamp, severity, acknowledged state, and description.

Syntax:

```
show all
```

Mode: *Alarms*

Slot 0 indicates shelf alarms or alarms added by users.

See also: *show alarmSummary*

## Control commands

The following are the controls CLI commands:

- **configure shelf-address numeric**

Specifies the shelf address as a hexadecimal number.

Syntax:

```
configure shelf-address numeric
```

Mode: *Controls*

The sixth byte of the shelf address is assumed to be the logical shelf number, which is used to configure some IPv4 interfaces upon startup.

- **configure shelf-ip-address**

Sets the Shelf Manager IP address. This command can be issued only on the active Shelf Manager.

Syntax:

```
configure shelf-ip-address <ip_addr>
```

Mode: *Controls*

The command takes effect immediately and is replicated to the standby Shelf Manager automatically. The changes are also written to the shelf FRU device so that the command is

persistent even across shelf reboots.

- **configure shelf-subnet-mask**

Specifies the subnet mask of the Shelf Manager.

Syntax:

```
configure shelf-subnet-mask <mask>
```

Mode: *Controls*

- **configure shelf-gateway-address**

Specifies the gateway address of the Shelf Manager.

Syntax:

```
configure shelf-gateway-address <gateway_addr>
```

Mode: *Controls*

- **configure fru-power-on-seq**

Sets a new position for a certain FRU in the shelf's power-on sequence. This may put two FRUs in the same sequence position until the command is run again to change the other FRU's position.

Syntax:

```
configure fru-power-on-seq <sequence_num> { front <1-14> |  
fan <1-4> | pem <1-2> | spm <1-2> }
```

Mode: *Controls*

The new power-on order does not take effect until it is written to the shelf FRU information using the `configure fru-power-on-seq-commit` command, which will not work until all FRUs have unique sequence numbers. You can view the current positions of the FRUs in the sequence using the `show` command from controls mode.

The number of power-on positions in the sequence are limited by the number of modules possible in the shelf.

- **configure fru-power-on-seq-commit**

Saves the current FRU power-on sequence persistently in the shelf FRU information.

Syntax:

```
configure fru-power-on-seq-commit PULSE_ON
```

Mode: *Controls*

To determine whether the current information is already saved persistently, use the `show sensorId` command with ID 1300. The value 0001 means it is already persistent.

- **show**

Displays the shelf controls with corresponding numbers and current values. The *all* option displays all of them, including identifying the shelf address, Shelf Manager IP address, and the current positions of the FRUs in the shelf's power-on sequence.

Syntax:

```
show { all | controlId <control_num> }
```

Mode: *Controls*

## Sensor commands

The following are the sensors CLI commands:

- **show all**

Displays the name, sensor number, and value of each shelf sensor.

Syntax:

```
show all
```

Mode: *Sensors*

The shelf sensors include:

- FRU power-on sequence commit status.
  - Shelf FRU information valid.
  - Aggregate thermal status.
  - Aggregate power status.
  - Aggregate operational status.
- **show sensorId**
- Displays the value of the sensor specified by its sensor number. Some sensors provide additional information, such as the threshold status details.

Syntax:

```
show sensorId <number>
```

Mode: *Sensors*

## Shelf management commands

The following are the shelf management CLI commands:

- **configure domainTag**

Specifies a new domain tag, which is the name of the shelf. The `show chassis` command displays this information.

Syntax:

```
configure domainTag <new_domain-tag>
```

Mode: *Shelf management*

When specifying a new name that includes multiple words, enclose the name in quotation marks (" ").

- **configure eventLog-erase**

Erases the HPI domain event log. In a troubleshooting situation, it may help to isolate the relevant events by copying the existing log contents elsewhere and then erasing the log before reproducing the problem.

Syntax:

```
configure eventLog-erase
```

Mode: *Shelf management*

- **configure logging-level**

Sets the amount of logging for messages in the Shelf Manager log. The values can be from 0 to 7, with 7 displaying the most verbose debug messages. Use 5 to select moderate debug level. If you use a value less than 3, you will not receive error/informational messages.

Syntax:

```
configure logging-level <0-7>
```

Mode: *Shelf management*

- **configure restart**

Stops and restarts the Shelf Manager server. This is equivalent to running both the configure stop and configure start commands. This command is primarily for debugging purposes.

Syntax:

```
configure restart
```

Mode: *Shelf management*

- **configure sel-erase**

Erases the local system event log (SEL) device.

Syntax:

```
configure sel-erase
```

Mode: *Shelf management*

- **configure start**

Starts the Shelf Manager server. The server automatically starts when the SCM boots, so this

command is primarily for debugging purposes.

Syntax:

```
configure start
```

Mode: *Shelf management*

This command:

- Loads the IPMI physical device driver.
- Starts the Shelf Manager Server daemon in background.
- Does nothing if service is already started.
- **configure stop**

Stops the Shelf Manager server. A failover will occur if this server is the active Shelf Manager. This command is primarily for debugging purposes.

Syntax:

```
configure stop
```

Mode: *Shelf management*

- **configure switchover**

Forces a switchover from the active Shelf Manager to the standby Shelf Manager.

Syntax:

```
configure switchover
```

Mode: *Shelf management*

This command can be issued on either SCM. It will first query the status of both SCMs to determine how to create the switchover. If the SCMs are not in an active/standby state (e.g. active/active), then the command will fail. This command:

- Forces the standby Shelf Manager to become active.
  - Has no effect if there is no standby Shelf Manager.
  - Can be executed from either the active or standby SCM; the command is always routed properly.
  - **show all**
- Summarizes the Shelf Manager status.

Syntax:

```
show all
```

Mode: *Shelf management*

Output:

- *Version* - The Shelf Manager software version.
- *Status* - The Shelf Manager server current status and role. The possible values are Active, Standby, and Stopped.
- *Redundancy Status* - Whether the Shelf Manager is currently functioning in concert with a redundant peer Shelf Manager. The possible values are Redundant and Non-redundant.
- *Slot of Active* - The physical slot containing the SCM hosting the active Shelf Manager.
- *Slot of Standby* - The physical slot containing the SCM hosting the standby Shelf Manager. The value is None if no standby exists.
- *Logging level* - The amount of logging currently set.
- *SEL Entries* - The number of system event log entries.
- *SEL Free-space* - The amount of free space available for system event log entries, in MB.

- **show events**

Shows the HPI domain event log in chronological order. You can view the messages separately for each severity or view all at once.

Syntax:

```
show events { all | informational | minor | major |critical }
```

Mode: *Shelf management*

Output:

- *Slot* - The slot where the blade is installed.
- *Blade type* - The blade model number or descriptor.
- *Timestamp* - The date and time of the event.
- *Severity* - The event severity.
- *Source* - The source of the event, such as a sensor.
- *Event* - The event data.

- **show sensors**

Shows all sensors related to the Shelf Manager.

Syntax:

```
show sensors {all | sensorId <id>}
```

Mode: *Shelf management*

Output:

- *Name* - The sensor name.



- *Number* - The sensor ID.
- *Value* - The sensor's current value.
- **show log-messages**  
Displays the Shelf Manager log file contents. This information may be used to provide additional details about a problem to technical support.

Syntax:

```
show log-messages {all | errors | warnings | informational}
```

Mode: *Shelf management*

## Slot commands

The following are the slot CLI commands:

- **fru configure hotswap**  
Initiates the software sequence for insertion or removal of a FRU in this slot. This command should be performed from the SCM hosting the active Shelf Manager.

Syntax:

```
fru configure hotswap { insert | extract }
```

Mode: *Slot*

For extractions, the shelf shuts down the FRU except for its IPMC. The FRU is reported as "inactive" after that point. If you physically remove an inactive FRU from the shelf, the Shelf Manager is unaware of it until it rediscovers the shelf resources. To cause rediscovery, use the *rediscoverShelf* command.

For insertions, the shelf powers up an inactive module to its normal working state.

- **show**  
Displays the characteristics of the slot itself.

Syntax:

```
show { information | sensors { all | sensorId <id> } }
```

Mode: *Slot*

Options:

- *information* - Displays the slot's entity path and its capabilities in terms of controls and sensors.
- *sensors* - Displays details of the slot's sensors, including the sensor name, number, and value. Selecting a specific sensor by ID sometimes displays additional information, such as thresholds.
- **fru show**

Displays information about the FRU in the slot.

Syntax:

```
fru show { information | details | events | sensors { all | sensorId <id> } }
```

Mode: *Slot*

Options:

- *information* - Displays the slot, module type, firmware version, hot-swap state, and alarm severity.
- *details* - Displays additional information, including the E-Key status and type of backplane interfaces for blades.
- *events* - Displays the events for this FRU that are included in the domain event log.
- *sensors* - Displays the sensors by name, number, and value. Selecting a specific sensor by ID sometimes displays additional information, such as thresholds.

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