



IW SPM IP Security and Administration

Security and administration strategy

Security and administration can be performed on circuit packs, carriers, and trunks. This includes locking, unlocking, protection switching, and posting them.

Tools and utilities

SPM security is performed using the MAP display commands.

MAPCI Commands

The following tables list SPM MAPCI commands.

BULKABTK command

BULKABTK is an SPM, MAPCI level command. BULKABTK aborts the ongoing BULKMTC activity initiated by any of the BULK commands.

BULKLOAD command (Sheet 1 of 2)

| Command | Display |
|----------|---|
| BULKABTK | >MAPCI;MTC;PM;POST SPM <spm_no>;UPGRADE where spm_no is in the SPM number (range 0 to 85) |

BULKLOAD command (Sheet 2 of 2)

| Command | Display |
|----------|---|
| | <pre>>BULKABTK <variant> <option> <force> <noprompt> <noreply></pre> <p>where</p> <p>variant specifies the SPM variant on which to perform the Bulk operation (IW for the inter-working SPM).</p> <p>noprompt - suspends any Yes/No prompts from displaying. Replies to prompts defaults to "YES.</p> <p>noreply - suspends map response upon execution of the command.</p> |
| Quit all | Exits the UPGRADE level and returns to the CI prompt. |

BULKBSY command

BULKBSY is an SPM, MAPCI level command that brings all the SPMs in a posted set to a valid state. Valid states are OFFL, INSV, ISTB, and SYSB.

BULKLOAD command

| Command | Display |
|----------|---|
| BULKBSY | <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;UPGRADE</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85)</p> <pre>>BULKBSY <variant> <option> <force> <noprompt> <noreply></pre> <p>where</p> <p>variant specifies the SPM variant on which to perform the Bulk operation (IW for the inter-working SPM).</p> <p>option provides two options to bring a CEM/SPM to INSV state.</p> <p><i>PM option</i> - attempts to bring all the nodes (SPMs) in the posted set to INSV from a MANB (manual busy) state. The PM option requires both CEMs of the SPM on which the command is issued to be in the MANB state.</p> <p><i>INACTIVE option</i> - attempts to bring the inactive unit of the all the SPMs in the posted set to INSV. The inactive option requires the inactive CEM of the SPMs on which the command is issued to be in the MANB state</p> <p>force - used in conjunction with the PM option - indicates override.</p> <p>noprompt - suspends any Yes/No prompts from displaying. Replies to prompts defaults to "YES."</p> <p>noreply - suspends map response upon execution of the command.</p> |
| Quit all | Exits the UPGRADE level and returns to the CI prompt. |

BULKLOAD command

BULKLOAD is an SPM, MAPCI level command used to Perform load operations on the selected CEM on the posted SPM.

The manual BULKLOAD command generates a failure response when the CEM restarts with Wrong Application Data as shown in the following table.

BULKLOAD command

| Command | Display |
|----------|--|
| BULKLOAD | <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;UPGRADE</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85)</p> <pre>>BULKLOAD <variant> <filename> <load_option> <noprompt> <noreply></pre> <p>where</p> <p>variant specifies the SPM variant on which to perform the Bulk operation (IW for the inter-working SPM).</p> <p>filename the name of the load file with which the specified CEMs are loaded.</p> <p>load_option - INSVLD is the only valid option for performing the INSV Loading operation on the inactive CEMs of all the SPMs in the posted set.</p> <p>noprompt - suspends any Yes/No prompts from displaying. Replies to prompts defaults to "YES."</p> <p>noreply - suspends map response upon execution of the command.</p> |
| Quit all | Exits the UPGRADE level and returns to the CI prompt. |

BULKOFFL command

BULKOFFL is an SPM, MAPCI level command. BULKOFFL changes all the SPMs in the posted set to OFFL state providing the SPMs are in a valid state.

BULKLOAD command

| Command | Display |
|----------|--|
| BULKOFFL | <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;UPGRADE</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85)</p> <pre>>BULKOFFL <variant> <noprompt> <noreply></pre> <p>where</p> <p>variant specifies the SPM variant on which to perform the Bulk operation (IW for the inter-working SPM).</p> <p>noprompt - suspends any Yes/No prompts from displaying. Replies to prompts defaults to "YES."</p> <p>noreply - suspends map response upon execution of the command.</p> |
| Quit all | Exits the UPGRADE level and returns to the CI prompt. |

BULKRTS command

BULKRTS is an SPM, MAPCI level command used to Return the selected CEM to Service on the posted SPMs.

The manual BULKRTS command generates a failure response when the CEM restarts with Wrong Application Data as shown in the following table.

BULKRTS command

| Command | Display |
|----------|--|
| BULKRTS | <p>>MAPCI;MTC;PM;POST SPM <spm_no>;UPGRADE</p> <p>where</p> <p>spm_no</p> <p>is in the SPM number (range 0 to 85)</p> <p>>BULKRTS <variant> <option> <noprompt> <noreply></p> <p>where</p> <p>variant specifies the SPM variant on which to perform the Bulk operation (IW for the inter-working SPM).</p> <p>option provides two options to bring a CEM/SPM to INSV state.</p> <p><i>PM option</i> - attempts to bring all the nodes (SPMs) in the posted set to INSV from a MANB (manual busy) state. The PM option requires both CEMs of the SPM on which the command is issued to be in the MANB state.</p> <p><i>INACTIVE option</i> - attempts to bring the inactive unit of the all the SPMs in the posted set to INSV. The inactive option requires the inactive CEM of the SPMs on which the command is issued to be in the MANB state</p> <p>noprompt - suspends any Yes/No prompts from displaying. Replies to prompts defaults to "YES.</p> <p>noreply - suspends map response upon execution of the command.</p> |
| Quit all | Exits the UPGRADE level and returns to the CI prompt. |

BULKSWCT command

BULKSWCT is an SPM, MAPCI level command that switches activity of CEMs in all the INSV/ISTB SPMs in the posted set.

BULKLOAD command

| Command | Display |
|----------|--|
| BULKSWCT | <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;UPGRADE</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85)</p> <pre>>BULKSWCT <variant> <force> <noprompt> <noreply></pre> <p>where</p> <p>variant specifies the SPM variant on which to perform the Bulk operation (IW for the inter-working SPM)</p> <p>force - used in conjunction with the PM option - indicates override.</p> <p>noprompt - suspends any Yes/No prompts from displaying. Replies to prompts defaults to "YES."</p> <p>noreply - suspends map response upon execution of the command.</p> |
| Quit all | Exits the UPGRADE level and returns to the CI prompt. |

ERASEFL command

ERASEFL is an SPM, CEM level MAPCI command used to erase the flash memory of the CEM.



CAUTION

Possible service interruption

The ERASEFL command can be used only when the CEM card is being relocated or decommissioned (in MANB state). Execution of this command in other instances may result in service degradation.

When a CEM is de-commissioned or removed from the SPM shelf, it is highly recommended that the flash information be cleared.

Because the flash memory stores the IP address and the load of a CEM, moving the CEM to a different location or platform may cause the one or more of the following:

- Two CEM's trying to own the same IP address,
- CEM does not recover due to mismatch in the IP address, and/or
- CEM auto-boot the incorrect SW load.

The ERASEFL command should be executed with the CEM in Manually Busy (ManB) state and have a software on RAM state and have no other maintenance in progress.

ERASEFL command

| Command | Parameter | Description |
|---------|-----------|---|
| ERASEFL | NIL | <p>(No parameters)</p> <p>To access the SPMCEMDIR level from the CI environment, type:</p> <pre>>MAPCI;MTC;PM;POST SPM <SPMNo>;SELECT CEM <X>(0 or 1)</pre> <p>where</p> <p>SPMNo is in the range 0 to 85</p> <p>and</p> <p>X is 0 or 1 (for CEM 0 or CEM 1)</p> <p>Below is an example:</p> <pre>>MAPCI;MTC;PM;POST SPM 0;SELECT CEM 0</pre> <p>To return to the CI environment, type:</p> <p>Note: The command take about 2 minutes to successfully complete the erase task.</p> <pre>>QUIT ALL</pre> |

ERASEFL command at the CEM level of the MAPCI

```

XAC      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
AMDI     Istb    lIOCOS  REx 0   6LIU7  2 RTRC  .        10CC.  1Crit  .
 *C*                M                *C*    *C*                *C*    *C*
CEM
0 Quit          PM                6      2      2      0      10      5
2              SPM                0      2      2      0      3      0
3 ListSet      CEM                0      1      0      0      1      0
4
5 Trnsl       SPM   10 CEM  0  InAct  ManB
6 Tst
7 Bsy        Loc : Row B  FrPos  6 ShPos  0 ShId 0 Slot  7   Class: IW
8 RTS        Default Load: IWS18BS
9 OffL       Clock:
10 LoadMod   Input Ref:          Source:          Current Mode:
11           Select 0
12 Next
13 Select_
14 QueryMod
15 ListAlm
16 Prot
17 EraseFl
18
ADMIN
Time 01:45 >

```

INFO Command

The Info command is accessed through the Maintenance and Administration Position Command Interpreter (MAPCI).

Info command

| Command | Parameter | Description |
|---------|------------------------------------|---|
| Info | Valid DRM stream names (see below) | Provides a list of the mounted volumes for the storage of PMA data. Also displays OM data. |
| | PM15 | Displays the mounted volumes for collecting 15 minute PMA data |
| | PM24 | Displays the mounted volumes for collecting 24 hour PMA data |
| | OM | Displays information about OM mounting |

IP RM Commands

The IP RM commands are accessed through the Maintenance and Administration Position Command Interpreter (MAPCI).

IP RM commands

| Command | Description |
|----------|---|
| BSY | Manually place the selected device into manual out-of-service state. The NOWAIT and NOREPLY option are not support with ALL parameter. |
| ListAlm | Manually list all alarms set against the posted RM. |
| ListSet | Lists the posted set. |
| LoadMod | Manually download a specific loadfile to the selected device. The INSVLD and MATE options are not supported. |
| Next | Selects the next RM in the posted set. |
| Offl | Manually set the selected device into an offline state. The NOWAIT and NOREPLY option are not support with ALL parameter. |
| Prot | Manually switch from the active device to a protection device. |
| QueryMod | Manually query local CM information on the selected device. |
| Quit | Quit the current MAP level. |
| RTS | Manually return the selected device from manual out-of-service to in-service state. The NOWAIT and NOREPLY option are not support with ALL parameter. |
| Select | Selects another device configured on the currently selected SPM. |
| Tst | Manually run diagnostics on the selected device. The device can be in-service or out-of-service. |

LOADMOD command

LOADMOD is an SPM, CEM level MAPCI command used to Perform load operations on the selected resource module on the posted SPM.

The manual LOADMOD command generates a failure response when the CEM restarts with Wrong Application Data as shown in the following table.

LOADMOD command

| Command | Display |
|---------|--|
| LOADMOD | <p>The following example shows using the LOADMOD command with a CEM.</p> <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;SELECT CEM <cem_no>;LOADMOD</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85), and</p> <p>cem_no is in the CEM number (0 or 1)</p> <p>The following example shows the screen output and action for a failed Loadmod command.</p> <pre>>Command Failed : CEM has Application Data of Mate CEM.</pre> <p>The Loadmod command restarted CEM with Wrong Application Data and will not allow the CEM to return to service.</p> <p>If INSV Loading restarts the CEM with Wrong Application Data then the CEM will remain in SYSB state.</p> <p>System or user actions:</p> <p>Check NODE303 & LINK300 Logs for more information about the problem. Take appropriate action to restart the CEM with correct Application Data before attempting RTS on the CEM.</p> |

Mount and Demount Commands

The mount command mounts a disk volume for writing access by OM and PMA. The demount command demounts the disk volumes. These

commands are accessed from the DRM level of the Maintenance and Administration Position Command Interpreter (MAPCI).

Note: Demounting all PMA volumes turns off PMA data collection.

Mount and Demount commands (Sheet 1 of 2)

| Command | Parameter | Description |
|---------|------------------------------------|--|
| Mount | Valid DRM stream names (see below) | <p>Mounts a disk volume for writing access by OM and PMA.</p> <p>Below is an example of the mount command:</p> <pre>>mapci;mtc;appl;oamap;drm;mount pm15 f021pm15</pre> <p>where</p> <p>PM15 is the volume designation for 15 minute PMA records</p> <p>F021PM15 is the volume number</p> <p>Note: There are two designations for the volume names, PM15 and PM24. PM15 is for 15 minute data collection intervals, and PM24 is for 24 hour data collection intervals.</p> |
| | OM | Mount a volume for writing by the OM system. |
| | PM15 | Mount a volume to write 15 minute interval PMA records. |
| | PM24 | Mount a volume to write 24 hour interval PMA records. |

Mount and Demount commands (Sheet 2 of 2)

| Command | Parameter | Description |
|---------|------------------------|--|
| Demount | Valid DRM stream names | <p>Demounts a disk volume used by OM and PMA</p> <p>Below is an example of the demount command:</p> <pre>>mapci;mtc;appl;oamap;drm;demount pm15 f021pm15</pre> <p>where</p> <p>PM15 is the volume designation for 15 minute PMA records</p> <p>F021PM15 is the volume number</p> <p>Note: There are two designations for the volume names, PM15 and PM24. PM15 is for 15 minute and PM24 is for 24 hour data collection intervals.</p> |
| | OM | Demount a volume used by the OM system. |
| | PM15 | Demount a volume used to store 15 minute interval PMA records. |
| | PM24 | Demount a volume used to store 24 hour interval PMA records. |

MSP Protection command

The MSP Protection command is accessed through the Maintenance and Administration Position Command Interpreter (MAPCI).

```
> MAPCI;MTC;PM;POST SPM #;SELECT STM #;PROT
```

The following table explains the MSP Protection commands.

MSP Protection commands

| Command | Description |
|----------|--|
| Clear | <p>Clears all the commands listed below:</p> <ul style="list-style-type: none"> • Exercise • Force • Lockout • Manual |
| Exercise | <p>This command is only available for bidirectional compatible process and applies only when there is no failure. It initiates a switch but does not perform any switching action.</p> |
| Force | <p>This command is applied either to the Protection section or the Working section and forces the system to switch to the inactive section. This command last until it is cancelled by a higher priority request, a Forced Switch, or a Clear.</p> <p>Perform this command through the MAP CI by typing:</p> <p>Force <Card A> <Card B></p> <p>This spares the active section from Card A to Card B.</p> |
| Lockout | <p>If applied to optimized protocol, this command freezes the position of the selector. It has the highest priority (higher than any other request).</p> <p>If applied to other than optimized protocol, this command prevents from switching to the Protection. It has the highest priority. This means that if any signal failure occurs on the Working section, the system will not switch to the Protection section. If the Protection section is active the system will switch back to the Working section even if an SF is raised against the Working section.</p> |
| Manual | <p>This command is not available for optimized process. It acts either on the Protection section or the Working section. It has the same behavior as the Forced Switch command with a lower priority level.</p> |

Performance Monitoring Archival (PMA) Commands

The Carrier Performance Monitoring Archival (PMA) commands are accessed through the Maintenance and Administration Position Command Interpreter (MAPCI).

To enable PMA, mount a disk volume at the drm level, for example,

```
>mapci;mtc;appl;oamap;drm;mount pm15 f021pm15
```

Volumes are mounted separately for 15 minute and 24 hour data collection intervals. Data is collected in files on the mounted volume(s) with file names such as, PMA15N24. The 15 represents the 15 minute data collection interval and 24 represents the 24 collection period of the day.

To see what volumes are mounted, use the 'info' command, for example,

```
info pm15
```

To turn off PMA, demount all volumes at the mapci drm level, for example,

```
demount pm15 fo21pm15
```

Performance monitoring archival commands (Sheet 1 of 2)

| Command | Parameter | Description |
|----------|------------------------------|---|
| PMAUTILS | | From the MAPCI level, enters the PMA utility. |
| Help | SetCarr GetHist | Displays text about how to use the SetCarr or GetHist commands and how to use the PMA utility. |
| SetCarr | SPM NO (0 to 85) SPM TYPE | Allows the carrier(s) to be placed in context. Below are examples of how the carrier can be selected by number or type: <pre>>setcarr spm10 type oc3s</pre> <pre>>setcarr spm 10 14</pre> |

Performance monitoring archival commands (Sheet 2 of 2)

| Command | Parameter | Description |
|--|-----------------------------|--|
| GetHist | Min(ute) Range Day Range | Retrieves historical performance monitoring data for the carriers selected by the SetCarr command. Below are examples of how the carrier can be selected by number or type: <pre>>gethist min 10:30</pre> <pre>>gethist min 2:00 3:00</pre> <pre>>gethist day 03/24 03/26</pre> |
| Quit | | exits the PMAUTILS CI increment. |
| <p>Note 1: The SetCarr command must be run successfully before the GetHist command can be run.</p> <p>Note 2: A PMA volume of the appropriate type must be mounted before data can be retrieved from it. For example, a 15 minute volume to retrieve 15 minute data or a 24 hour volume to retrieve 24 hour data. To access the PMA volumes, refer to the Enabling and Disabling PMA procedure in this Security and Administration document.</p> | | |

Post commands

The POST command is accessed through the CARRIER level of the Maintenance and Administration Position Command Interpreter (MAPCI).

```
> MAPCI;MTC;TRKS;CARRIER
```

The following table explains the Post Command.

Post command

| Command | Parameter | Description |
|------------------------|-----------|---|
| POST (by Condition) | | Allows carriers to be displayed. The first screen displays the OC3S carriers. Select NEXT to see subsequent screens displaying other carriers. The order of the displayed carriers is: <ul style="list-style-type: none">• OC3S• STS1S• STS3L• STS1L• STS3cP• STS1P• VT15P• DS1P |
| | BSY | Busying |
| | INSV | In-service |
| | MANB | Manual busy |
| | OFFL | Offline |
| | RTS | Return to Service |

PREPDATACHNG command

The PREPDATACHNG command facilitates the modification of RM resource datafill changes in table MNTCKTPAK.

The PREPDATACHNG command is accessed through the RM level of the Maintenance and Administration Position Command Interpreter (MAPCI).

PREPDATACHNG command

| Command | Description |
|--------------|---|
| PREPDATACHNG | Prepares the device for resource datafill changes. PREPDATACHNG returns to service the DSP/VSP if it is found to be in MANB or OFFL state and PWID & RMID are not aligned. The display provides instructions for various responses to the PREPDATACHNG command. |

PRIMSGTRC Commands

The PRI message tracing tool is available through the Maintenance and Administration Position Command Interpreter (MAPCI). This sublevel can be entered by typing PRIMSGTRC at the CI prompt.

PRI message tracing provides the capability of tracing Q931 and Q921 messages being exchanged on a the SPM.

PRIMSGTRC commands (Sheet 1 of 3)

| Command | Description |
|---------|--|
| ALLOC | <p>Allocates memory for Lyr2 or Lyr3 tracing.</p> <pre>>ALOC [L2, L3]<nmb1ks>SPM<SPMNo></pre> <p>where</p> <p>L2, L3 is the layer</p> <p>nmb1ks is the number of memory blocks (range 11 to 1000)</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |
| CLEAR | <p>Clears the memory. Clears traces collected at Lyr2 and/or Lyr3.</p> <pre>>CLEAR [L2, L3, both] <SPMNo></pre> <p>where</p> <p>L2, L3, both is the layer number</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |
| DCHDUMP | <p>Dumps the SPM PRI D channels on an SPM or on the entire DMS.</p> <pre>>DCHDUMP <SPMNo></pre> <p>where</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |
| DEALLOC | <p>Deallocates the memory for Lyr2 and/or Lyr3.</p> <pre>>DEALLOC [L2, L3, both] SPM<SPMNo></pre> <p>where</p> <p>L2, L3, both is the layer number</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |

PRIMSGTRC commands (Sheet 2 of 3)

| Command | Description |
|---------|--|
| DISABLE | <p>Disables tracing at Lyr2 and/or Lyr3.</p> <pre>>DISABLE [L2, L3, both]<rem>SPM<SPMNo></pre> <p>where</p> <p>L2, L3, both is the layer number</p> <p>rem is the remove/deselect all option</p> <p>SPMNo is the SPM number (range 0 to 85)</p> <p>Note: Rem removes/deselects all the selected D channels if neither layer 2 nor layer 3 message tracing is ON. If the disable command is executed without rem, then the default is to retain the selected D channels.</p> |
| DISPLAY | <p>Displays Lyr2 and/or Lyr3 tracing buffers.</p> <pre>>DISPLAY [L2, L3, both]</pre> <p>where</p> <p>L2, L3 is the layer number</p> |
| ENABLE | <p>Enables tracing at Lyr2 and/or Lyr3.</p> <pre>>ENABLE [L2, L3][in, out, both] SPM<SPMNo></pre> <p>where</p> <p>L2, L3 is in the layer number</p> <p>in, out, both is the direction</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |
| HELP | Displays help on the available PRIMSGTRC commands. |

PRIMSGTRC commands (Sheet 3 of 3)

| Command | Description |
|-----------------|---|
| HEX | <p>Turns Hex traces at lyr3 ON or OFF.</p> <pre>>HEX [on, off] SPM<SPMNo></pre> <p>where</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |
| q<command_name> | Displays help on an individual command. |
| QUIT | Quits PRIMSGTRC and return to the CI level. |
| REMOVEDCH | <p>Removes the D channel from list to be traced.</p> <pre>>REMOVEDCH SPM<SPMNo><cktno><ts></pre> <p>where</p> <p>SPMNo is the SPM number (range 0 to 85)</p> <p>cktno is the circuit number (range 0 to 185)</p> <p>ts is the time slot (range 0 to 31)</p> |
| SELECTDCH | <p>Selects a D channel for tracing.</p> <pre>>SELECTCH SPM<SPMNo><cktno><ts></pre> <p>where</p> <p>SPMNo is the SPM number (range 0 to 85)</p> <p>cktno is the circuit number (range 0 to 185)</p> <p>ts is the timeslot (range 0 to 31)</p> |
| STATUS | <p>Displays the status of tracing tool for an SPM or the entire DMS.</p> <pre>>STATUS SPM<SPMNo></pre> <p>where</p> <p>SPMNo is the SPM number (range 0 to 85)</p> |

QueryPM command

The QueryPM command is accessed through the Maintenance and Administration Position Command Interpreter (MAPCI).

QueryPM command (Sheet 1 of 2)

| Command | Parameter | Description |
|---------|---------------------|---|
| QueryPM | | <p>Displays the following information for all the datafilled modules (CEM, DSP, VSP, OC3, ATM, SYNCRM, IEM, STM or DLC) for DMS Call Processing (DMSCP) and Inter-working (IW) class variants:</p> <ul style="list-style-type: none"> • shelf number, • slot number, • unit number, • state, and • activity status. <p>The QueryPM command is executed from the SPMDIR directory. Some examples are:</p> <pre>>MAPCI;MTC;PM;POST SPM <SPMNo></pre> <p>where</p> <p>SPMNo is in the range 0 to 85</p> <pre>>MAPCI;MTC;PM;POST SPM <node_no></pre> <pre>>MAPCI;MTC;PM;POST SPM all</pre> <p>To return to the CI command level, type:</p> <pre>>QUIT ALL</pre> |
| | FILES (optional) | <p>This option displays the:</p> <ul style="list-style-type: none"> • default load names and the currently running loads in all devices on the posted SPM, • Flash Loader's load file for each device that supports Flash Loader functionality, and • image file for each device on the posted SPM. |
| | FLT (optional) | <p>Displays a list of devices on the posted SPM that are currently reporting a fault (FLT) condition.</p> |

QueryPM command (Sheet 2 of 2)

| Command | Parameter | Description |
|---------|------------------------------|--|
| | FLT REASON (optional) | Displays the reasons for the ISTB/SYSB state of the supported devices on the posted SPM. |
| | FLT ALL (optional) | Displays a list of devices, on all the posted SPMs that are currently reporting fault conditions regardless of the SPM currently displayed on the MAP. |
| | FLT REASON ALL (optional) | Displays the reasons for the ISTB/SYSB states of supported devices on all the posted SPMs regardless of the SPM currently displayed on the MAP. |
| QUIT | ALL | Returns you to the CI environment. |

Note: Perform alarm clearing procedures to clear system faults if necessary.

RESETMOD command

RESETMOD is an SPM MAPCI command used to Perform Reload Restart on the selected resource module of a posted SPM.

The manual RESETMOD command generates a failure response when the RM restarts with Wrong Application Data as shown in the following table.

RESETMOD command

| Command | Display |
|----------|---|
| RESETMOD | <p>The following examples show the Resetmod command used with a CEM.</p> <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;SELECT CEM <cem_no>;RESETMOD</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85), and</p> <p>cem_no is in the CEM number (0 or 1)</p> <p>The following example shows the screen output and action for a failed Resetmod command.</p> <pre>>Command Failed : CEM has Application Data of Mate CEM.</pre> <p>The Resetmod command restarted CEM with Wrong Application Data and will not allow the CEM to return to service.</p> <p>System or user actions:</p> <p>Check NODE303 & LINK300 Logs for more information about the problem. Take appropriate action to restart the CEM with correct Application Data before attempting RTS on the CEM.</p> |

RTS command

RTS is an SPM MAPCI command used to Return the selected resource module to Service on the posted SPM.

The following table uses the CEM as an example for the RTS command.

RTS command

| Command | Display |
|---------|--|
| RTS | <p>The following is an example of using the RTS command to return a CEM to service.</p> <pre>>MAPCI;MTC;PM;POST SPM <spm_no>;SELECT CEM <cem_no>;RTS</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85), and</p> <p>cem_no is in the CEM number (0 or 1)</p> <p>The following example shows the screen output and action for a failed RTS command.</p> <pre>>Command Failed : CEM has Application Data of Mate CEM.</pre> <p>The RTS command was attempted on CEM with Wrong Application Data.</p> <p>System or user actions:</p> <p>Check NODE303 & LINK300 Logs for more information about the problem. Take appropriate action to restart the CEM with correct Application Data before attempting RTS on the CEM.</p> |

SHERLOCK command

Sherlock allows data collection of a specified SPM and one or more RMs of a given type. Individual RMs data can be collected if the RM number is specified.

The Sherlock command is accessed through the Maintenance and Administration Position Command Interpreter (MAPCI).

SHERLOCK command

| Command | Parameter | Description |
|----------|-----------|---|
| Sherlock | NIL | <p>(No parameters)</p> <p>Some examples of the Sherlock command are:</p> <pre>MAPCI> sherlock collect spm 0 <volume> <starttime> <endtime></pre> <p>In the above example, data is collected only from the Core and from both CEMs of SPM 0.</p> <pre>MAPCI> sherlock collect spm 0 oc3 <volume> <starttime> <endtime></pre> <p>In the above example, data is collected from the Core, both CEMs of SPM 0, and all (both) OC3 RMs of SPM 0.</p> <pre>MAPCI> sherlock collect spm 0 oc3 1 <volume> <starttime> <endtime></pre> <p>In the above example, data is collected from the Core, both CEMs of SPM 0, and OC3 1 on SPM 0.</p> |

SPMCP commands

The SPMCP (SPM call processing) commands are accessed through the SPMCP level of the Maintenance and Administration Position Command Interpreter (MAPCI).

The SPMCP commands were introduced in SP17.

SPMCP commands (Sheet 1 of 7)

| Command | Description |
|---------|--|
| DISRCVY | <p>Disable autonomous recovery on an SPM.</p> <pre>>DISRCVY spm_no</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85)</p> <p>Note: The display provides instructions for various responses to the DISRCVY command.</p> <p><i>Example</i></p> <pre>>DISRCVY 3</pre> <p>Command succeeded. WARNING: Autorecovery will be reenabled in 24 hours.</p> |
| ENARCVY | <p>Enables autonomous recovery on an SPM.</p> <pre>>ENARCVY spm_no</pre> <p>where</p> <p>spm_no is in the SPM number (range 0 to 85)</p> <p>Note: The display provides instructions for various responses to the ENARCVY command.</p> <p><i>Example</i></p> <pre>>ENARCVY 3</pre> <p>Command succeeded.</p> |

SPMCP commands (Sheet 2 of 7)

| Command | Description |
|---------|---|
| QRYRCVY | <p>Query whether autonomous recovery is enabled or disabled on an SPM.</p> <pre>>QRYRCVY spm_no where spm_no is in the SPM number (range 0 to 85)</pre> <p>Note: The display provides instructions for various responses to the QRYRCVY command.</p> <p><i>Example</i></p> <pre>>QRYRCVY 3 Autorecovery is enabled</pre> |
| QUERYFL | <p>Query spm call processing faults.</p> <pre>>QUERYFL spm_no where spm_no is in the SPM number (range 0 to 85)</pre> <p>Note: The display provides instructions for various responses to the QUERYFL command. The list below gives additional help for some of the screen responses.</p> <pre>>The SPMCP state is call processing There are no faults; the SPM is call processing normally. System or user actions: None</pre> <pre>>The SPMCP state is not call processing The call processing task in the SPM is no longer responding to pings. System or user actions: The system will cold swact the CEMs. If this does not clear the condition, a critical alarm occurs. User should investigate.</pre> |

SPMCP commands (Sheet 3 of 7)

| Command | Description |
|---------|--|
| | <p>>The SPMCP has spent excessive time in overload The SPM has spent one or more hours in level 2 overload.</p> <p>System or user actions: System raises an alarm and log. User should investigate.</p> <p>>The SPMCP has excessive tossed origination call pegs The SPM has exceeded the tossed origination threshold during a 15 minute interval.</p> <p>System or user actions: System raises an alarm and log. User should investigate.</p> <p>>HMon CallCount found PTS no setup fault Calls using pts trunks are not being set up.</p> <p>System or user actions: Scenario one: Single trunk type configured in an SPM, or mixed trunk configuration in an SPM and all call types in fault condition:</p> <ol style="list-style-type: none">1. SWACT CEMs.2. bsy and rts inactive CEM. <p>Scenario two: Mixed trunk configuration in an SPM and not all call types in fault condition. System raises an alarm. User should investigate.</p> <p>>HMon CallCount found PTS no answer fault Calls using pts trunks are being set up but not answered.</p> <p>System or user actions: System raises an alarm. User should investigate.</p> <p>>HMon CallCount found PTS no cleanup fault Calls using pts trunks are not transitioning from answered, seized, etc. to idle.</p> <p>System or user actions: System raises an alarm. User should investigate.</p> |

SPMCP commands (Sheet 4 of 7)

| Command | Description |
|---------|---|
| | <p>>HMon CallCount found ISUP no setup fault Calls using isup trunks are not being set up.</p> <p>System or user actions: Scenario one: Single trunk type configured in an SPM, or Mixed trunk configuration in an SPM and all call types in fault condition:</p> <ol style="list-style-type: none">1. SWACT CEMs.2. bsy and rts inactive CEMs. <p>Scenario two: Mixed trunk configuration in a SPM and not all call types in fault condition. System raises an alarm. User should investigate.</p> |
| | <p>>HMon CallCount found ISUP no answer fault Calls using isup trunks are being set up but not answered.</p> <p>System or user actions: System raises an alarm. User should investigate.</p> |
| | <p>>HMon CallCount found ISUP no cleanup fault Calls using isup trunks are not transitioning from answered, seized, etc. to idle.</p> <p>System or user actions: System raises an alarm. User should investigate.</p> |
| | <p>>HMon CallCount found PRI no setup fault Calls using pri trunks are not being set up.</p> <p>System or user actions: Scenario one: Single trunk type configured in an SPM, or Mixed trunk configuration in an SPM and all call types in fault condition:</p> <ol style="list-style-type: none">1. SWACT CEMs.2. bsy and rts inactive CEM <p>Scenario two: Mixed trunk configuration in a SPM and not all call types in fault condition. System raises an alarm. User should investigate.</p> |

SPMCP commands (Sheet 5 of 7)

| Command | Description |
|----------------|---|
| | <p>>HMon CallCount found PRI no answer fault Calls using pri trunks are being set up but not answered. System or user actions: System raises an alarm. User should investigate.</p> |
| | <p>>HMon CallCount found PRI no cleanup fault Calls using pri trunks are not transitioning from answered, seized, etc. to idle. System or user actions: System raises an alarm. User should investigate.</p> |
| | <p>>There are excessive pts trunks in lockout or RMB A significant quantity of pts trunks are either in lockout or remote make busy. System or user actions: Scenario one: More than 50% of the pts trunks are in lockout. System raises an alarm. User should investigate</p> <p>Scenario two: More than 75% or greater than 96 of the pts trunks are in lockout. System raises an alarm. SWACT CEMs. User should investigate.</p> |
| | <p>>There are excessive isup trunks in lockout A significant quantity of isup trunks are in lockout. System or user actions: Scenario one: More than 50% of the pts trunks are in lockout. System raises an alarm. User should investigate</p> <p>Scenario two: More than 75% or greater than 96 of the isup trunks are in lockout. System raises an alarm. SWACT CEMs. User should investigate.</p> |

SPMCP commands (Sheet 6 of 7)

| Command | Description |
|----------------|---|
| | <p>>There are excessive d-channels in lockout A significant quantity of d-channels are in lockout. System or user actions: More than 70% of the of the d-channels are in lockout. SWACT CEMs. System raises an alarm. User should investigate.</p> <p>>Missing contexts detected Call processing contexts are not being created properly. System or user actions: If this is the active CEM, system will: 1. Cold swact and reset the inactive CEM. 2. Raise an alarm. User should investigate.</p> <p>If this is the inactive CEM, system raises an alarm. User should investigate.</p> <p>>Missing execs in table MNNODE detected Execs which should be datafilled in table MNNODE have been detected as missing. System or user actions: If this is the active CEM, system will: 1. Cold swact and reset the inactive CEM. 2. Raise an alarm. User should investigate.</p> <p>If this is the inactive CEM, system raises an alarm. User should investigate.</p> |

SPMCP commands (Sheet 7 of 7)

| Command | Description |
|---------|---|
| | <p>>Too many contexts in a bad state</p> <p>An excessive amount (more than 30%) of pts contexts have been detected in null Phase.</p> <p>System or user actions:</p> <p>If this is the active CEM, system will:</p> <ol style="list-style-type: none">1. Cold swact and reset the inactive CEM.2. Raise an alarm. User should investigate. <p>If this is the inactive CEM, system raises an alarm. User should investigate.</p> <p>>DDM data corruption detected</p> <p>PTS trunks could not be fully Returned to Service (RTS'ed) because of missing DDM data.</p> <p>System or user actions:</p> <p>If this is the active CEM, system will:</p> <ol style="list-style-type: none">1. Bulk DDM Download.2. Cold swact and reset the inactive CEM.3. Raise an alarm. User should investigate. <p>If this is the inactive CEM, system raises an alarm. User should investigate.</p> |
| QUIT | <p>Quits the spmcp level and returns to the appl level of mapci.</p> <p>To return to the CI level, type the following:</p> <p>>QUIT ALL</p> |

SPRI CM Tool

The SPRI commands are accessed through the SPRI level of the Maintenance and Administration Position Command Interpreter (MAPCI).

SPRI commands

| Command | Description |
|--------------|---|
| DISPLAY_DCH | This command provides capability to covert CLLI to d-channel tid. |
| DISPLAY_TSM | View terminal states of TID. |
| QUERY_AUDIT | Provides statistics for D-channel audit |
| QUERY_DCH | Provides D-channel status per node and per switch basis. |
| QUERY_NODE | Provides the capability to see all trunk states in bitmap format for all agents or for only PRA agent |
| SEND_SCP_MSG | Sends any CPINTENT message to SPM on particular TID |
| SET_TSM | Changes (sets) the TSM state for any terminal |

Unlocking a circuit-pack

Unlocking a circuit-pack

At the MAP level

- 1 Post the SPM by typing

```
>MAPCI;MTC;PM;POST SPM <spm_no>
```

and pressing the Enter key.

where

spm_no

is the ID (number) of the SPM

Example

```
>MAPCI;MTC;PM;POST SPM 23
```

- 2 Select the circuit pack to unlock by typing

```
>select <rm> <rm_unit>
```

and pressing the Enter key.

where

rm

is the circuit pack to unlock (CEM or GEM)

rm_unit

is the unit number of the rm to unlock (0 for SRM, 0 or 1 for CEM or GEM)

Example

```
>select GEM 0
```

- 3 Unlock the circuit pack by typing the circuit pack must be in manb state in order to unlock it)

```
>RTS
```

and pressing the Enter key.

Locking a circuit pack

Locking a circuit-pack

At the MAP level

- 1 Post the SPM by typing

```
>MAPCI;MTC;PM;POST SPM <spm_no>
```

and pressing the Enter key.

where

spm_no

is the ID (number) of the SPM

Example

```
>MAPCI;MTC;PM;POST SPM 23
```

- 2 Select the circuit pack to lock by typing

```
>select <rm> <rm_unit>
```

and pressing the Enter key.

where

rm

is the circuit pack to lock (CEM or GEM)

rm_unit

is the unit number of the rm to unlock (0 or 1 for CEM or GEM)

Example

```
>select GEM 1
```

- 3 Lock the circuit pack by typing

```
>BSY
```

and pressing the Enter key.

Invoking manual protection switch

Invoking manual protection switch

At the MAP level

- 1 Post the SPM by typing

```
>MAPCI;MTC;PM POST SPM <spm_no>
```

and pressing the Enter key.

where

<spm_no>

is the ID (number) of the SPM

Example

```
>MAPCI;MTC;PM;POST SPM 23
```

- 2 Select an active RM by typing

```
>select rm rm_unit
```

and pressing the Enter key.

where

rm

is the circuit pack (CEM or GEM)

rm_unit

is the unit number of an active circuit pack (0 or 1 for CEM or GEM)

Example

```
>SELECT GEM 1
```

- 3 Access the protection level of the MAP by typing

```
>PROT
```

and pressing the Enter key.

- 4 Switch activity from an active RM that you have not downgraded to an inactive RM in the circuit pack protection group by typing

```
>MANUAL active_rm_unit inactive_rm_unit
```

and pressing the Enter key.

where

active_rm_unit

is the unit number of an active RM that has not been downgraded

inactive_rm_unit

is the unit number of an inactive RM in the circuit pack group

Example

```
>MANUAL 0 1
```

Example of MAP display

```
A sparing action may impact services on this node.
```

```
Do you wish to continue?
```

```
Please confirm ("YES", "Y", "NO", or "N"):
```

Note: When doing a manual protection switch for a CEM, the unit numbers are not necessary. The SPM will automatically switch activity to the other CEM if the MANUAL command is used.

- 5 Confirm the system prompt by typing

```
>Y
```

and pressing the Enter key.

Displaying a Load Lineup

Use the following procedure to display the load lineup information for a Succession (SN) load release. The results display the information contained in the SPMLDVAL table.

For instances where the table contains multiple product lineups with the same release, then all listed load lineups display according to the following product line information:

Succession Product Lines for Load Lineup

| Product | Abbreviation |
|-------------|--------------|
| MG 4000 ATM | MG4K ATM |
| DPT SPM ATM | DPT ATM |
| IW SPM ATM | IW ATM |
| IW SPM IP | IW IP |

The [Variable Abbreviations](#) table defines the variables used in this procedure.

Variable Abbreviations

| Abbreviation | Definition |
|--------------|---|
| gen_rel | the milestone release number value ranging from 1 through 99 |
| main_rel | the maintenance release number ranging from 0 to 9 Enter zero (0) for a milestone release. |
| emer_rel | the emergency release number ranging from 0 through 9 Enter zero (0) for a maintenance or milestone release. |

This procedure requires pressing the Enter key after typing a command.

Displaying a Load Lineup

At the MAP level

- 1 Enter the SPMLDINFO command level by typing

```
>SPMLDINFO
```

- 2 List the load lineup by typing

```
>LISTLOAD SN gen_rel main_rel emer_rel
```

Example

```
>LISTLOAD SN 07 3 1
```

Response Example

```
Circuit Pack Load Lineup for MG4K ATM Load Release SN07.3.1
CEM Load : MG420AL
ATM Load : ATC20AL
OC3 Load : OC320AL
DSP Load : DSP20AL
DLC Load : DLC20AL
.....
Circuit Pack Load Lineup for IW ATM Load Release SN07.3.1
CEM Load : IWS20AL
ATM Load : ATC20AL
SRM Load : SYN20AL
.....
Circuit Pack Load Lineup for DPT ATM Load Release SN07.3.1
CEM Load : IWS20AL
ATM Load : ATC20AL
DSP Load : DSP20AL
.....
```

Note: If the SPMLDVAL table does not contain the load release then an appropriate message displays in lieu of the load lineup.

- 3 Return to the CI prompt by typing

```
>QUIT
```
- 4 The procedure is complete.

Displaying the Release for a Device

Use the following procedure to display the load release that corresponds to a specified device load. A device load must be identified by a seven character loadname. The results display the release information contained in the SPMLDVAL table.

This procedure requires pressing the Enter key after typing a command.

Displaying the Release for a Device

At the MAP level

- 1 Enter the SPMLDINFO command level by typing

```
>SPMLDINFO
```

- 2 List the load lineup by typing

```
>LISTRELEASE load_name
```

Example

```
>LISTRELEASE DSP20AL
```

Response Example

```
Circuit pack load DSP20AL is valid in the following load
releases
SN20.2.1
```

Note: If the SPMLDVAL table does not contain the load release then an appropriate message displays in lieu of the release.

- 3 Return to the CI prompt by typing

```
>QUIT
```

- 4 The procedure is complete.

Displaying the Running Release for a Node

Use the following procedure to display the running release load name for SPM-based nodes in an office. The procedure allows three options for node identification:

- a single node
- a range of nodes
- all nodes

A warning indicates if a running device load does not match any of the load release lineups datafilled in the SPMLDVAL table. If the resource modules in a node are out of service a message indicates that the device contact was not possible and information could not be retrieved

This procedure requires pressing the Enter key after typing a command.

Displaying the Running Release for a Node

At the MAP level

- 1 Enter the SPMLDINFO command level by typing

```
>SPMLDINFO
```

| If | Do |
|------------------|------------------------|
| a single node | step 2 |
| a range of nodes | step 3 |
| all nodes | step 4 |

- 2 List the running release load name for a single node by typing

```
>LISTSPMLOAD SPM spm_no
```

Example

```
>LISTSPMLOAD SPM 21
```

Response Example

```
SPM 21 : SN20.3.1
```

- 3 List the running release load name for a consecutive range of nodes by typing

```
>LISTSPMLOAD SPM spm_no spm_no
```

Example

```
>LISTSPMLOAD SPM 21 23
```

Response Example

```
SPM 21 : SN20.3.1  
SPM 22 is not datafilled  
SPM 23 : SN20.3.1
```

- 4 List the running release load name for all nodes in an office by typing

```
>LISTSPMLOAD ALL
```

Response Example

```
SPM 21 : SN20.3.1  
SPM 22 is not datafilled  
SPM 23 : SN20.3.1  
SPM 24 : Unable to contact the devices. The requested data  
cannot be retrieved  
SPM 25 : SN20.3.1  
SPM 26 :Load lineup does not match with any of the load  
releases datafilled in table SPMLDVAL
```

- 5 Return to the CI prompt by typing

```
>QUIT
```

- 6 The procedure is complete.

Displaying the Running Release for Devices

Use the following procedure to display the running release load names for the devices (CEMs and RMs) on a posted SPM-based node.

A message indicates if a running device load does not match any of the load release lineups datafilled in the SPMLDVAL table. If the resource modules in a node are out of service a message indicates that the device contact was not possible and information could not be retrieved

In addition to the device load listings, the list provides the running release load for the Succession SPM-based node designated as follows:

Succession Product Lines for Load Lineup

| Product | Abbreviation |
|-------------|--------------|
| MG 4000 ATM | MG4K ATM |
| DPT SPM ATM | DPT ATM |
| IW SPM ATM | IW ATM |
| IW SPM IP | IW IP |

The following message occurs if the load is not listed in the SPMLDVAL table:

Load lineup of this SPM does not match with any of the load releases datafilled in table SPMLDVAL.

This procedure requires pressing the Enter key after typing a command.

Displaying the Running Release for Devices

At the MAP level

- 1 Post the appropriate node by typing
>MAPCI;MTC;PM;POST SPM spm_no

Example

```
>MAPCI;MTC;PM;POST SPM 21
```

- 2 List the running release load names for all devices on the node by typing

```
>QUERYPM FILES
```

Response Example

```
SPM 21 InSv
DSP 0 InSv Act Default Loadname: DSP20BW
                Default Filename: DSP20BW_010032
                Running Load: DSP20BW_010032
                Load in Flash: DSP20BW_010032
DSP 1 InSv Act Default Loadname: DSP20BW
                Default Filename: DSP20BW_010032
                Running Load: DSP20BW_010032
                Load in Flash: DSP20BW_010032
Running MG4K ATM Load Release: SN07.3.1
```

Note: To view the entire list of devices, press the Enter key whenever the “More...” prompt appears

- 3 Return to the CI prompt by typing

```
>QUIT ALL
```
- 4 The procedure is complete.