



CHAPTER 5

CHG Commands

This chapter provides change (CHG) commands for the Cisco ONS 15454 SDH, Cisco ONS 15454 M2, Cisco ONS 15454 M6, and Cisco ONS 15600 SDH.



Note

All commands supported on the Cisco ONS 15454 SDH platform are also supported on Cisco ONS 15454 M2 and Cisco ONS 15454 M6 platforms.

5.1 CHG-ACCMD-<MOD_TACC>

(Cisco ONS 15454 SDH and Cisco ONS 15600 SDH) The Change Test Access Mode for DS3I, E1, E3, VC3, VC44C, VC38C, VC464C, VC48C, VC36C, VC4, VC416C, VC42C, VC43C, VC11, or VC12 (CHG-ACCMD-<MOD_TACC>) command changes the test access (TACC) mode for the circuit being tested. This can be a change from monitoring the data to inserting data into the VC. For more information on TACC, refer to the *Cisco ONS SDH and Cisco ONS 15600 SDH TL1 Reference Guide*. See [Table 27-1 on page 27-1](#) for supported modifiers by platform.



Note

The VC3, VC4, VC416C, VC42C, VC43C, VC44C, VC464C, VC48C are the only modifiers supported on the Cisco ONS 15600 SDH platform.

Usage Guidelines

This command can only be applied to an existing test access point (TAP) connection.



Caution

For this command to be applicable, first create the TAP using the ED-<MOD_PATH> command. Intrusive test access modes are traffic-affecting. If a facility/path is connected to a TAP in an intrusive test access mode, it is forced to go into the Out of Service, Maintenance (OOS-MT) state. The forced transition could be traffic-affecting. The present state of the facility/path is stored by the network element (NE) and is restored when the TAP connection is terminated. Test access connections are dropped automatically if the TL1 session is terminated or is timed out.



Note

- If there is no TAP connection, a DENY error message is returned.
- If a requested condition already exists, a SRCN error message is returned.
- If a requested access configuration is invalid, a SRAC error message is returned.

- If a requested TAP does not exist, a RTEN error message is returned.

Category Troubleshooting and Test Access

Security Maintenance

Input Format CHG-ACCMD-<MOD_TACC>:[<TID>]:<TAP>: <CTAG>::<MD>;

Input Example CHG-ACCMD-VC3:CISCO:8:123::MONE;

Table 5-1 CHG-ACCMD-<MOD_TACC> Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
<TAP>	The Test Access Path number. The TAP number must be an integer with a range of 1 to 999. TAP is a string Note This command supports changing the mode for only a single TAP number at a time.	Y	Y
<MD>	The test access mode. (SPLTE, SPLTF, LOOPE and LOOPF require an external quasi-random signal [QRS] input signal.) Single facility access digroup (FAD) Test Access does not support MONEF, SPLTEF, and SPLTAB modes. The parameter type is TACC_MODE, which is the test access mode.	Y	Y
• LOOPE	Indicates to split both the A and B paths. Connect the line incoming from E direction to the line outgoing in the E direction, and connect this looped configuration to the FAD. The line outgoing in the F direction shall have a QRS connected, and the line incoming from the F direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.	Y	Y
• LOOPF	Indicates to split both the A and B paths. Connect the line incoming from F direction to the line outgoing in the F direction, and connect this looped configuration to the FAD. The line outgoing in the E direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.	Y	Y
• MONE	Indicates that a monitor connection is to be provided from the FAD to the A transmission path of the accessed circuit.	Y	Y
• MONEF	Indicates that a monitor connection is to be provided from the FAD1 to a DFAD, or the odd pair of a FAP, to the A transmission path and from FAD2 of the same DFAD, or the even pair of a FAP, to the B transmission path of the accessed circuit.	Y	Y
• MONF	Indicates that a monitor connection is to be provided from the FAD to the B transmission path of the accessed circuit.	Y	Y

Table 5-1 CHG-ACCMD-<MOD_TACC> Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
<ul style="list-style-type: none"> SPLTA 	Indicates that a connection is to be provided from both the E and F sides of the A transmission path of the circuit under test to the FAD and split the A transmission path. Intrusive test access mode.	Y	Y
<ul style="list-style-type: none"> SPLTB 	Indicates that a connection is to be provided from both the E and F sides of the B transmission path of the circuit under test to the FAD and split the B transmission path. Intrusive test access mode.	Y	Y
<ul style="list-style-type: none"> SPLTE 	Indicates to split both the A and B paths and connect the E side of the accessed circuit to the FAD. The line outgoing in the F direction shall have a QRS connected, and the line incoming from the F direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.	Y	Y
<ul style="list-style-type: none"> SPLTEF 	Indicates to split both the A and B paths, and connect the E side of the accessed circuit to FAD1 and the F side to FAD2. Intrusive test access mode.	Y	Y
<ul style="list-style-type: none"> SPLTF 	Indicates to split both the A and B paths, and connect the F side of the accessed circuit to the FAD. The line outgoing in the E direction shall have a QRS connected, and the line incoming in the E direction shall have a QRS connected, and the line incoming from the E direction shall be terminated by the nominal characteristic impedance of the line. Intrusive test access mode.	Y	Y

5.2 CHG-EQPT

(Cisco ONS 15454 SDH) The Change Equipment (CHG-EQPT) command performs an in-service optical card upgrade or downgrade.

Usage Guidelines

- Optical (STM) card upgrades and downgrades are supported within the limitations of the MRC-12 card.
- Two upgradable cards provisioned in a 1:1 protection group cannot be upgraded.

Category

Equipment

Security

Maintenance

Input Format

```
CHG-EQPT:[<TID>]:<AID>:<CTAG>::<EQPTTYPE>:[PPMTYPE=<PPMTYPE>],
[PPMNUM=<PPMNUM>],[PORTNUM=<PORTNUM>],[PORTRATE=<PORTRATE>];
```

Input Example**Cisco ONS 15454 SDH**

```
CHG-EQPT::SLOT-14:1::MRC-2.5G-12:PPMTYPE=PPM-1,PPMNUM=1,PORTNUM=1,
PORTRATE=STM16;
```

Table 5-2 CHG-EQPT Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
<SRC>	The source access identifier from the 25.13 EQPT , page 25-24.	Y	N
<EQPTTYPE>	The equipment type to be upgraded. The parameter type is EQUIPMENT_TYPE.	Y	N
• 10GE-XP	(ONS 15454) 2 x 10 Gbps. muxponder/L2 ethernet switch card	Y	N
• 15216-MD-40-EVEN	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on even grid	Y	N
• 15216-MD-40-ODD	Thermal Multiplex/Demultiplex Passive Unit, spaced at 50 GHz on odd grid	Y	N
• 15216-MD-ID-50	Thermal Interleaver Passive Unit, spaced at 50 GHz grid	Y	N
• 40-MXP-C	40 Gbit/Sec Multirate Muxponder	Y	N
• 40-SMR1-C	The single module 40-channel ROADM on C-band	Y	N
• 40-SMR2-C	The single module 40-channel ROADM with EDFA on C-band	Y	N
• 40-TXP-C	40 Gigabits per second Multirate Transponder	Y	N
• 80-WXC-C	80-channel wavelength cross-connect spaced at 100 GHz grid	Y	N
• AD-1B	(ONS 15454) Optical add/drop multiplexed (OADM) 1 band filter	Y	N
• AD-1C	(ONS 15454) Optical add/drop multiplexed (OADM) 1 channel filter	Y	N
• AD-2C	(ONS 15454) Optical add/drop multiplexed (OADM) 2 channels filter	Y	N
• AD-4B	(ONS 15454) Optical add/drop multiplexed (OADM) 4 bands filter	Y	N
• AD-4C	(ONS 15454) Optical add/drop multiplexed (OADM) 4 channels filter	Y	N
• ADM-10G	(ONS 15454) 16 x OC3/OC12/OC48/GIGE and OC192/Trunk ADM 10 Gbps card	Y	N
• AIC	(ONS 15454) AIC card	Y	N
• AICI	(ONS 15454) AICI Card	Y	N
• ASAP-4	(ONS 15600) Any service any port (ASAP) carrier card with four PIM slots	N	N
• CE-1000-4	(ONS 15454) Modena mapper card	Y	N
• CE-100T-8	(ONS 15454) Exige/Elise mapper card	Y	N
• CE-MR-10	(ONS 15454, ONS 15454 SDH) Lotus20g ce2 card	Y	N

Table 5-2 CHG-EQPT Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
• CXC	(ONS 15600) Cross connect card	N	N
• DCU	Dispersion Compensation Unit	Y	N
• DS1-E1-56	(ONS 15454) DS1-E1-56 card	Y	N
• DS3I	(ONS 15454) DS3I card	Y	N
• DS3IN	(ONS 15454) DS3IN card	Y	N
• E1-42	(ONS 15454) 42 port E1 card	Y	N
• E1000T	(ONS 15454) E1000T card	Y	N
• E100T	(ONS 15454) E100T card	Y	N
• E3	(ONS 15454) E3 card	Y	N
• FC-MR-4	(ONS 15454) FC-MR-4 card	Y	N
• FILLER-CARD	(ONS 15454, ONS 15600) Blank filler card	Y	N
• FMEC-155E-1TO3	The equipment type for FMEC STM1E12 card with 1:3 protection	Y	N
• FMEC-155E-UNPROT	The equipment type for FMEC STM1E12 card without protection	Y	N
• G1000-4	(ONS 15454) A 4-port G1000 card	Y	N
• GE-XP	(ONS 15454) 20 x 1 Gbps muxponder/L2 ethernet switch card	Y	N
• MD-4	(ONS 15454) Four channel optical multiplexer/demultiplexer	Y	N
• MESH-PP-SMR	The passive unit Patch Panel device used to connect upto four 40-SMR2-C cards	Y	Y
• ML-100T-8	(ONS 15454) Exige/Elise mapper card	Y	N
• ML1000-2	(ONS 15454) Daytona 2-port GigE	Y	N
• ML100T-12	(ONS 15454) Daytona 12-port FSTE	Y	N
• ML100X-8	(ONS 15454) 8-port 100T card with optical interface	Y	N
• MRC-12	(ONS 15454) Humvee - 12-port multirate optical card	Y	N
• MRC-2.5G-4	(ONS 15454) 4-port MRC 2.5G (Hummer 4 15454-ANSI card)	Y	N
• MRC-2.5G-12	(ONS 15454) 12-port MRC 2.5G (Hummer 12 15454-ETSI card)	Y	N
• MXP-2.5G-10E	(ONS 15454) Monviso 10G (4 * 2.5G) muxponder card with enhanced FEC	Y	N
• MXP-2.5G-10EX	(ONS 15454) Cengalo 10G (4 * 2.5G) muxponder with enhanced FEC card	Y	N
• MXP-2.5G-10G	(ONS 15454) Skane 10G (4 * 2.5G) muxponder card	Y	N
• MXP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder unprotected	Y	N
• MXPP-MR-2.5G	(ONS 15454) Bernina multirate 2.5G muxponder protected	Y	N

Table 5-2 CHG-EQPT Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
• MXPP-MR-10DME	(ONS 15454) Multirate 10Gbps datamux	Y	N
• MXPP-MR-10DMEX	(ONS 15454) Multirate 10Gbps datamux with enhanced dispersion	Y	N
• OC12	(ONS 15454, ONS 15327) OC12 card	Y	N
• OC12-4	(ONS 15454) A 4-port OC12 card	Y	N
• OC192	(ONS 15454) OC192 card	Y	N
• OC192-XFP	(ONS 15454, ONS 15454 SDH) Mongoose - 1-port OC192 XFP	Y	N
• OC192-4/STM64-4	(ONS 15600) 4-port OC192 card	Y	N
• OC192-4-DWDM/STM64-4-DWDM	(ONS 15600) Leatherneck: 4-port OC192 card with tunable laser for C band	Y	N
• OC3	(ONS 15454) OC3 card	Y	N
• OC3-8	(ONS 15454) 8-port OC3 card	Y	N
• OC48	(ONS 15454) OC48 card	Y	N
• OC48-16/STM16-16	(ONS 15600) 16-port OC48 card	Y	N
• OPT-AMP-17-C	(ONS 15454) Optical booster/pre-amplifier for C band 17 dBm	Y	N
• OPT-AMP-23-C	(ONS 15454) Optical booster/pre-amplifier for C band 23 dBm	Y	N
• OPT-AMP-L	(ONS 15454) Optical booster/pre-amplifier for L band	Y	N
• OPT-AMP-C	(ONS 15454) Optical booster/pre-amplifier for C band	Y	N
• OPT-BST	(ONS 15454) Optical booster amplifier	Y	N
• OPT-BST-E	(ONS 15454) Optical booster enhanced amplifier for C band	Y	N
• OPT-BST-L	(ONS 15454) Optical booster amplifier for L band	Y	N
• OPT-PRE	(ONS 15454) Optical pre-amplifier	Y	N
• OPT-RAMP-C	Raman pump amplifier C-band	Y	N
• OPT-RAMP-CE	An extended version of Raman pump amplifier	Y	N
• OPT-RAMP-E	Raman pump amplifier E-band	Y	N
• OSC-CSM	(ONS 15454) Optical service channel (OSC) with combiner/separator module (SCM)	Y	N
• OSCM	(ONS 15454) Optical service channel (OSC) module	Y	N
• OTU2-XP	A 4x10G transponder that is capable to operate with multiple bit rates - 10G FC, 10GE, and OC192/STM64	Y	N
• PIM-1	(ONS 15600) 1-port pluggable interface module	Y	N
• PIM-4	(ONS 15600) 4-port pluggable interface module	Y	N
• PP-4-SMR	Patch-Panel, 4 degrees, for SMR cards	Y	N
• PP-MESH-4	Patch-Panel, 4 degrees	Y	N

Table 5-2 CHG-EQPT Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
• PP-MESH-8	Patch-Panel, 8 degrees	Y	N
• PPM-1	(ONS 15454, ONS 15600) Pluggable port module with one SFP port	Y	N
• SSXC	(ONS 15600) Cross connect card	Y	N
• STM1E-12	(ONS 15454 SDH) STM1E-12 card	Y	N
• TCC	(ONS 15454) TCC card	Y	N
• TDC-CC	Coarse tunable dispersion compensation unit	Y	N
• TDC-FC	Fine tunable dispersion compensation unit	Y	N
• TXP-MR-10E	(ONS 15454) Skane 10G multirate transponder card with enhanced FEC	Y	N
• TXP-MR-10G	(ONS 15454) Skane 10G multirate transponder card	Y	N
• TXP-MR-2.5G	(ONS 15454) Rockwell multirate 2.5G unprotected	Y	N
• TXPP-MR-2.5G	(ONS 15454) Rockwell multirate 2.5G protected	Y	N
• XC	(ONS 15454) XC card	Y	N
• XC10G	(ONS 15454) XC10G card	Y	N
• XCVT	(ONS 15454) XCVT card	Y	N
• XCVXC-10G	(ONS 15454) XCVXC-10G card	Y	N
• XCVXC-2.5G	(ONS 15454) XCVXC-2.5G card	Y	N
• XCVXL-10G	(ONS 15454) XCVXL-10G card	Y	N
• XCVXL-2.5G	(ONS 15454) XCVXL-2.5G card	Y	N
<PPMTYPE>	Identifies the pluggable port module type. This parameter can take only one value.	Y	N
• PPM-1	Single-port PPM	Y	N
<PPMNUM>	Identifies the pluggable port module number. This parameter is an Integer.	Y	N
• 1	PPM No. 1	Y	N
• 2	PPM No. 2	Y	N
• 3	PPM No. 3	Y	N
• 4	PPM No. 4	Y	N
• 5	PPM No. 5	Y	N
• 6	PPM No. 6	Y	N
• 7	PPM No. 7	Y	N
• 8	PPM No. 8	Y	N
• 9	PPM No. 9	Y	N
• 10	PPM No. 10	Y	N
• 11	PPM No. 11	Y	N
• 12	PPM No. 12	Y	N

Table 5-2 CHG-EQPT Command - Parameter Support

Input Parameters	Description	ONS 15454 SDH	ONS 15600 SDH
<PORTNUM>	Identifies the port number, which is used on the entity port with PPM. This parameter is an integer.	Y	N
• 1	Port No. 1	Y	N
<PORTRATE>	Identifies the port rate, which is used to specify the port rate of the multi-rate card.	Y	N
• STM1	STM-1 rate	Y	N
• STM4	STM-4 rate	Y	N
• STM16	STM-16 rate	Y	N