



DWDM Enhanced State Model

This appendix describes the state model for Cisco ONS 15454 dense wavelength division multiplexing (DWDM) cards, optical payload ports, out-of-band optical supervision channel (OSC) ports, optical channel network connections (OCHNC), and transponder/muxponder cards and ports. Software Release 4.7 states are based on the generic state model defined in Telcordia GR-1093 Core, Issue 2 and ITU-T X.731.

C.1 Service States

Service states include a Primary State (PST), a Primary State Qualifier (PSTQ), and one or more Secondary States (SST). [Table C-1](#) lists the ANSI and ETSI service state PSTs and PSTQs supported by the ONS 15454.

Table C-1 ONS 15454 Service State Primary States and Primary State Qualifiers

ANSI Primary State, Primary State Qualifier	ETSI Primary State, Primary State Qualifier	Definition
IS-NR (In-Service and Normal)	Unlocked-enabled	The entity is fully operational and will perform as provisioned.
OOS-AU (Out-of-Service and Autonomous)	Unlocked-disabled	The entity is not operational because of an autonomous event.
OOS-AUMA (Out-of-Service and Autonomous Management)	Locked-disabled	The entity is not operational because of an autonomous event and has also been manually removed from service.
OOS-MA (Out-of-Service and Management)	Locked-enabled	The entity has been manually removed from service.

[Table C-2](#) defines the ANSI and ETSI SSTs supported by the ONS 15454.

Table C-2 ONS 15454 Secondary States

ANSI Secondary State	ETSI Secondary State	Definition
AINS	automaticInService	The entity is delayed before transitioning to the IS-NR (ANSI)/Unlocked-enabled (ETSI) service state. The transition to IS-NR/Unlocked-enabled depends on correction of conditions. Alarm reporting is suppressed, but traffic is carried. Raised fault conditions, whether or not their alarms are reported, can be retrieved on the CTC Conditions tab or by using the TL1 RTRV-COND command.
DSBLD	disabled	The entity was manually removed from service and does not provide its provisioned functions. All services are disrupted; unable to carry traffic.
MEA	mismatchOfEquipment	An improper card is installed. For example, an installed card is not compatible with the card pre-provisioning or the slot. This SST applies only to cards.
MT	maintenance	The entity has been manually removed from service for a maintenance activity but still performs its provisioned functions. Alarm reporting is suppressed, but traffic is carried. Raised fault conditions, whether or not their alarms are reported, can be retrieved on the CTC Conditions tab or by using the TL1 RTRV-COND command.
SWDL	softwareDownload	The card is involved in a software and database download. This SST applies only to cards.
UAS	unassigned	The card is not provisioned in the database. This SST applies only to cards.
UEQ (Unequipped)	notInstalled	The card is not physically present (that is, an empty slot). This SST applies only to cards.

C.2 Administrative States

Administrative states are used to manage service states. Administrative states consist of a PST and an SST. [Table C-3](#) lists the ANSI and ETSI administrative states supported by the ONS 15454. See [Table C-2 on page C-2](#) for SST definitions.



Note

A change in the administrative state of an entity does not change the service state of supporting or supported entities.

Table C-3 Cisco ONS 15454 Administrative States

ANSI Administrative State (PST,SST)	ETSI Administrative State (PST,SST)	Definition
IS	Unlocked	Puts the entity in-service.
IS,AINS	Unlocked,automaticInService	Puts the entity in automatic in-service.
OOS,DSBLD	Locked,disabled	Removes the entity from service and disables it.
OOS,MT	Locked,maintenance	Removes the entity from service for maintenance.

C.3 Service State Transitions

This section describes the transition from one service state to the next state for DWDM cards, optical payload ports, OSC ports, OCHNCs, and transponder/muxponder cards and ports. A service state transition is based on the action performed on the entity and any autonomous activity.

C.3.1 DWDM Card Service State Transitions

Table C-4 lists ANSI and ETSI service state transitions for AD-1B-xx.x, AD-4B-xx.x, AD-1C-xx.x, AD-2C-xx.x, AD-4C-xx.x, OSC-CSM, OSCM, OPT-BST, OPT-PRE, 4MD-xx.x, 32MUX-O, and 32DMX-O cards.

Table C-4 Cisco ONS 15454 Optical Unit Service State Transitions

Current Service State	Action	Next Service State
IS-NR (ANSI) Unlocked-enabled (ETSI)	Delete the card.	OOS-AUMA,UAS (ANSI) Locked-disabled,unassigned (ETSI)
	Pull the card.	OOS-AU,UEQ (ANSI) Unlocked-disabled,notInstalled (ETSI)
	Reset the card.	OOS-AU,SWDL (ANSI) Unlocked-disabled,softwareDownload (ETSI)
OOS-AU,AINS & MEA (ANSI) Unlocked-disabled,automaticInService & mismatchOfEquipment (ETSI)	Pull the card.	OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)
	Delete the card.	If the card is valid: <ul style="list-style-type: none"> OOS-AUMA,UAS (ANSI) Locked-disabled,unassigned (ETSI) If the card is invalid: <ul style="list-style-type: none"> OOS-AUMA,MEA & UAS (ANSI) Locked-disabled,mismatchOfEquipment & unassigned (ETSI)
OOS-AU,AINS & SWDL (ANSI) Unlocked-disabled,automaticInService & softwareDownload (ETSI)	Restart completed.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Pull the card.	OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)

Table C-4 Cisco ONS 15454 Optical Unit Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)	Insert a valid card.	OOS-AU,AINS & SWDL (ANSI) Unlocked-disabled,automaticInService & softwareDownload (ETSI)
	Insert an invalid card.	OOS-AU,AINS & MEA (ANSI) Unlocked-disabled,automaticInService & mismatchOfEquipment (ETSI)
	Delete the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
OOS-AU,MEA (ANSI) Unlocked-disabled,mismatchOfEquipment (ETSI)	Pull the card.	OOS-AU,UEQ (ANSI) Unlocked-disabled,notInstalled (ETSI)
	Delete the card.	If the card is valid: <ul style="list-style-type: none"> • OOS-AUMA,UAS (ANSI) • Locked-disabled,unassigned (ETSI) If the card is invalid: <ul style="list-style-type: none"> • OOS-AUMA,MEA & UAS (ANSI) • Locked-disabled,mismatchOfEquipment & unassigned (ETSI)
OOS-AU,SWDL (ANSI) Unlocked-disabled,softwareDownload (ETSI)	Restart completed.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Pull the card.	OOS-AU,UEQ (ANSI) Unlocked-disabled,notInstalled (ETSI)
OOS-AU,UEQ (ANSI) Unlocked-disabled,notInstalled (ETSI)	Insert a valid card.	OOS-AU,SWDL (ANSI) Unlocked-disabled,softwareDownload (ETSI)
	Insert an invalid card.	OOS-AU,MEA (ANSI) Unlocked-disabled,mismatchOfEquipment (ETSI)
	Delete the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
OOS-AUMA,MEA & UAS (ANSI) Locked-disabled,mismatchOfEquipment & unassigned (ETSI)	Pull the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
	Provision the card.	OOS-AU,MEA (ANSI) Unlocked-disabled,mismatchOfEquipment (ETSI)
OOS-AUMA,MT & SWDL (ANSI) Locked-disabled,maintenance & softwareDownload (ETSI)	Restart completed.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Pull the card.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)

Table C-4 Cisco ONS 15454 Optical Unit Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-AUMA,UAS (ANSI) Locked-disabled,unassigned (ETSI)	Pull the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
	Provision an invalid card.	OOS-AU,MEA (ANSI) Unlocked-disabled,mismatchOfEquipment (ETSI)
	Provision a valid card.	OOS-AU,SWDL (ANSI) Unlocked-disabled,softwareDownload (ETSI)
OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)	Insert a valid card.	OOS-AU,SWDL (ANSI) Unlocked-disabled,softwareDownload (ETSI)
	Insert an invalid card.	OOS-AUMA,MEA & UAS (ANSI) Locked-disabled,mismatchOfEquipment & unassigned (ETSI)
	Pre-provision a card.	OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)

C.3.2 Optical Payload Port Service State Transitions

Table C-5 lists the ANSI and ETSI optical payload port service state transitions.

Table C-5 Cisco ONS 15454 Optical Payload Port Service State Transitions

Current Service State	Action	Next Service State
IS-NR (ANSI) Unlocked-enabled (ETSI)	Put the port in the OOS,DSBLD administrative state.	OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)
	The OCHNC end-to-end path no longer exists.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)	All required OCHNC connections exist.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Put the port in the OOS,MT administrative state.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Put the port in the OOS,DSBLD.	OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)
OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)	Put the port in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
	Put the port in the OOS,MT.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)

Table C-5 Cisco ONS 15454 Optical Payload Port Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)	Put the port in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
	Put the port in the OOS,DSBLD administrative state.	OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)

C.3.3 OSC Port Service State Transitions

[Table C-6](#) lists the ANSI and ETSI OSC port service state transitions.

Table C-6 Cisco ONS 15454 OSC Port Service State Transitions

Current Service State	Action	Next Service State
IS-NR (ANSI) Unlocked-enabled (ETSI)	Delete the OSC.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)	Create the OSC.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Put the port in the OOS,MT administrative state.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)	Put the port in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)

C.3.4 OCHNC Service State Transitions

[Table C-7](#) lists the ANSI and ETSI OCHNC service state transitions.

Table C-7 Cisco ONS 15454 OCHNC Service State Transitions

Current Service State	Action	Next Service State
IS-NR (ANSI) Unlocked-enabled (ETSI)	Put the connection in the OOS,MT administrative state.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Put the connection in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)

Table C-7 Cisco ONS 15454 OCHNC Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)	Put the connection in the IS administrative state.	IS-NR (ANSI) Unlocked-enabled (ETSI)
OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)	Put the connection in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)

C.3.5 Transponder/Muxponder Card Service State Transitions

Table C-4 lists ANSI and ETSI transponder and muxponder card service state transitions.

Table C-8 ONS 15454 Transponder/Muxponder Card Service State Transitions

Current Service State	Action	Next Service State
IS-NR (ANSI) Unlocked-enabled (ETSI)	Change the administrative state to OOS,MT.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Delete the card.	OOS-AUMA,UAS (ANSI) Locked-disabled,unassigned (ETSI)
	Pull the card.	OOS-AU,UEQ (ANSI) Unlocked-disabled,notInstalled (ETSI)
	Reset the card.	OOS-AU,SWDL (ANSI) Unlocked-disabled,softwareDownload (ETSI)
OOS-AU,AINS & MEA (ANSI) Unlocked-disabled,automaticInService & mismatchOfEquipment (ETSI)	Change the administrative state to OOS,MT.	OOS-AUMA,MEA & MT (ANSI) Locked-disabled,mismatchOfEquipment & maintenance (ETSI)
	Pull the card.	OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)
	Delete the card.	If the card is valid: <ul style="list-style-type: none"> • OOS-AUMA,UAS (ANSI) • Locked-disabled,unassigned (ETSI) If the card is invalid: <ul style="list-style-type: none"> • OOS-AUMA,MEA & UAS (ANSI) • Locked-disabled,mismatchOfEquipment & unassigned (ETSI)

Table C-8 ONS 15454 Transponder/Muxponder Card Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-AU,AINS & SWDL (ANSI) Unlocked-disabled,automaticInService & softwareDownload (ETSI)	Restart completed.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Pull the card.	OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)
OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)	Insert a valid card.	OOS-AU,AINS & SWDL (ANSI) Unlocked-disabled,automaticInService & softwareDownload (ETSI)
	Insert an invalid card.	OOS-AU,AINS & MEA (ANSI) Unlocked-disabled,automaticInService & mismatchOfEquipment (ETSI)
	Delete the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
	Change the administrative state to OOS,MT.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)
OOS-AU,MEA (ANSI)	Pull the card.	OOS-AU,UEQ (ANSI) Unlocked-disabled,notInstalled (ETSI)
	Delete the card.	If the card is valid: <ul style="list-style-type: none"> • OOS-AUMA,UAS (ANSI) • Locked-disabled,unassigned (ETSI) If the card is invalid: <ul style="list-style-type: none"> • OOS-AUMA,MEA & UAS (ANSI) • Locked-disabled,mismatchOfEquipment & unassigned (ETSI)
	Change the administrative state to OOS,MT.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)
OOS-AU,SWDL (ANSI) Locked-disabled,softwareDownload (ETSI)	Restart completed.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Pull the card.	OOS-AU,UEQ (ANSI) Locked-disabled,notInstalled (ETSI)

Table C-8 ONS 15454 Transponder/Muxponder Card Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-AU,UEQ (ANSI) Locked-disabled,notInstalled (ETSI)	Insert a valid card.	OOS-AU,SWDL (ANSI) Locked-disabled,softwareDownload (ETSI)
	Insert an invalid card.	OOS-AU,MEA (ANSI) Locked-disabled,mismatchOfEquipment (ETSI)
	Delete the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
	Change the administrative state to OOS,MT.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)
OOS-AUMA,MEA & MT (ANSI) Locked-disabled,mismatchOfEquipment & maintenance (ETSI)	Change the administrative state to IS.	OOS-AU,MEA (ANSI) Locked-disabled,mismatchOfEquipment (ETSI)
	Pull the card.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)
	Delete the card.	If the card is valid: <ul style="list-style-type: none"> • OOS-AUMA,UAS (ANSI) • Locked-disabled,unassigned (ETSI) If the card is invalid: <ul style="list-style-type: none"> • OOS-AUMA,MEA & UAS (ANSI) • Locked-disabled,mismatchOfEquipment & unassigned (ETSI)
OOS-AUMA,MEA & UAS (ANSI) Locked-disabled,mismatchOfEquipment & unassigned (ETSI)	Pull the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
	Provision the card.	OOS-AU,MEA (ANSI) Locked-disabled,mismatchOfEquipment (ETSI)
OOS-AUMA,MT & SWDL (ANSI) Locked-disabled,maintenance & softwareDownload (ETSI)	Restart completed.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Pull the card.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)

Table C-8 ONS 15454 Transponder/Muxponder Card Service State Transitions (continued)

Current Service State	Action	Next Service State
OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)	Change the administrative state to IS.	OOS-AU,UEQ (ANSI) Locked-disabled,notInstalled (ETSI)
	Insert a valid card.	OOS-AUMA,MT & SWDL (ANSI) Locked-disabled,maintenance & softwareDownload (ETSI)
	Insert an invalid card.	OOS-AUMA,MEA & MT (ANSI) Locked-disabled,mismatchOfEquipment & maintenance (ETSI)
	Delete the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
OOS-AUMA,UAS (ANSI) Locked-disabled,unassigned (ETSI)	Pull the card.	OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)
	Provision an invalid card.	OOS-AU,MEA (ANSI) Locked-disabled,mismatchOfEquipment (ETSI)
	Provision a valid card.	OOS-AU,SWDL (ANSI) Locked-disabled,softwareDownload (ETSI)
OOS-AUMA,UAS & UEQ (ANSI) Locked-disabled,unassigned & notInstalled (ETSI)	Insert a valid card.	OOS-AU,SWDL (ANSI) Locked-disabled,softwareDownload (ETSI)
	Insert an invalid card.	OOS-AUMA,MEA & UAS (ANSI) Locked-disabled,mismatchOfEquipment & unassigned (ETSI)
	Pre-provision a card.	OOS-AU,AINS & UEQ (ANSI) Unlocked-disabled,automaticInService & notInstalled (ETSI)
OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)	Change the administrative state to IS.	IS-NR (ANSI) Unlocked-enabled (ETSI)
	Delete the card.	OOS-AUMA,UAS (ANSI) Locked-disabled,unassigned (ETSI)
	Pull the card.	OOS-AUMA,MT & UEQ (ANSI) Locked-disabled,maintenance & notInstalled (ETSI)
	Reset the card.	OOS-AUMA,MT & SWDL (ANSI) Locked-disabled,maintenance & softwareDownload (ETSI)

C.3.6 Transponder/Muxponder Port Service State Transitions

Table C-9 lists the ANSI and ETSI transponder and muxponder port service state transitions.

Table C-9 ONS 15454 Transponder/Muxponder Port Service State Transitions

Current Service State	Action	Next Service State
IS-NR (ANSI) Unlocked-enabled (ETSI)	Place the port in the OOS,MT administrative state.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Place the port in the OOS,DSBLD administrative state.	OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)
	Place the port in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)	Place the port in the IS administrative state.	IS-NR ¹ (ANSI) Unlocked-enabled (ETSI)
	Place the port in the OOS,MT administrative state.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
	Place the port in the OOS,DSBLD.	OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)
OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)	Place the port in the IS administrative state.	IS-NR ¹ (ANSI) Unlocked-enabled (ETSI)
	Place the port in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
	Place the port in the OOS,MT.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
OOS-MA,LPBK & MT (ANSI) Locked-enabled,loopback & maintenance (ETSI)	Release the loopback.	OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)
OOS-MA,MT (ANSI) Locked-enabled,maintenance (ETSI)	Place the port in the IS administrative state.	IS-NR ¹ Unlocked-enabled (ETSI)
	Place the port in the IS,AINS administrative state.	OOS-AU,AINS (ANSI) Unlocked-disabled,automaticInService (ETSI)
	Place the port in the OOS,DSBLD.	OOS-MA,DSBLD (ANSI) Locked-enabled,disabled (ETSI)
	Place the port in loopback.	OOS-MA,LPBK & MT ^{2 3} (ANSI) Locked-enabled,loopback & maintenance (ETSI)

C.3 C.3.6 Transponder/Muxponder Port Service State Transitions

1. The transponder and muxponder cards have both client and trunk ports. To bring up service, it is not necessary that both the client side and trunk side have to be in the IS-NR (ANSI)/Unlocked-enabled (ETSI) service state.
2. In a client-side facility loopback, the client port is in the OOS-MA,LPBK & MT (ANSI)/Locked-enabled,loopback and maintenance (ETSI) service state and the remaining client and trunk ports can be in any other service state. In a client-side terminal loopback on transponder cards, the client port is in the OOS-MA,LPBK & MT service state and the trunk ports are in IS-NR (ANSI)/Unlocked-enabled (ETSI). For client-side terminal loopbacks on muxponder cards, the client port is in the OOS-MA,LPBK & MT service state and remaining client and trunk ports can be in any service state.
3. In a trunk-side facility loopback, the trunk port is in the OOS-MA,LPBK & MT (ANSI)/Locked-enabled,loopback and maintenance (ETSI) service state and the remaining client and trunk ports can be in any other service state. In a trunk-side terminal loopback, the trunk port is in the OOS-MA,LPBK & MT (ANSI)/Locked-enabled,loopback and maintenance (ETSI) service state and the client ports are in IS-NR (ANSI)/Unlocked-enabled (ETSI) for complete loopback functionality. This type of loopback affects all client ports because it is performed on the aggregate signal.