

ICOM COMMANDS:

DN and Agent commands	
rg	Register
un	UnRegister
ld	ListDN
sc	SetCur
ra	RegAll
ua	URegAll
qu	QueryAddr
we	WaitEvent
ln	Login
lf	Logout
ry	Ready
rn	NotReady
by	Busy
bn	NotBusy
mn	MBoxLogon
mf	MBoxLogof
fo	Forward
fe	ForwardCan
mwon	MsgWaitOn
mwof	MsgWaitOff

Data Handling and Treatments commands	
at	AttachData
up	Update Data
du	DelUDData
da	DelAllData
cv-	CloseVoice
ov-	openvoice
pv-	PlayVoice
gm	GvMusic
gs	GvSilence
gr	GvRBack
atr	AppTrmt

Simple, Transfer and Conference Call commands		Other commands	
mk	Make	cd	ColDig
al	Alternate	qs	QuerySrv
an	Answer	sd	dtmf
re	Retrieve	sca	SetCAtr
mp	MkPredict	?	Help
cl	Clear	dl	Delay
hc	Hold	q	Quit, Finish
rd	Redirect	ps	PlayScript
rt	Route	sb	StartLog
rc	Reconnect	se	StopLog
rl	Release		
qc	Query		
ti	TrfInit		
tc	TrfCompl		
tr	Stransfer		
mt	Mtransfer		
ci	CfInit		
cc	CfCompl		
dc	CfDel		
mc-	Merge		
ldc	LstDscon		
ldr	LstRecon		

ICOM Status

Agent Status	
Less then 0	Unknown status
0	Logged Out
1	Just Logged In
2	Ready
3	Not Ready
4	ACW
5	WalkAway

Phone Status	
0	On Call
1	Not on Call

Error Messages

The following table presents the complete set of error messages that T-Server distributes in EventError, which T-Server generates when it cannot execute a request because of an error condition.

Table 12: Error Messages for T-Server for Cisco Unified Communications Manager

Code	Symbolic Name	Description
40	TERR_NOMORE_LICENSE	No more licenses are available.
41	TERR_NOT_REGISTERED	Client has not registered for the DN.
42	TERR_RESOURCE_SEIZED	Resource is already seized.
43	TERR_IN_SAME_STATE	Object is already in requested state.
50	TERR_UNKNOWN_ERROR	Unknown error code. Request cannot be processed.
51	TERR_UNSUP_OPER	Operation is not supported.
52	TERR_INTERNAL	Internal error.
53	TERR_INVALID_ATTR	Attribute in request operation is invalid.
54	TERR_NO_SWITCH	No connection to the switch.
55	TERR_PROTO_VERS	Incorrect protocol version.
56	TERR_INV_CONNID	Connection ID in request is invalid.
57	TERR_TIMEOUT	Switch or T-Server did not respond in time.
58	TERR_OUT_OF_SERVICE	Out of service. <i>DN, TS, switch</i>
59	TERR_NOT_CONFIGURED	DN is not configured in the Configuration Database.
61	TERR_INV_CALL_DN	DN in request is invalid.
96	TERR_CANT_COMPLETE_CONF	Call cannot add new conference party
119	TERR_BAD_PASSWD	Password was invalid

Can also happen if client sends req to TS in backup mode

Table 12: Error Messages for T-Server for Cisco Unified Communications Manager (Continued)

Code	Symbolic Name	Description
122	TERR_CANT_REG_DNS	Cannot register DNSs on the switch
128	TERR_BAD_DN_TYPE	Invalid DN type for DN registration
166	TERR_RES_UNAVAIL	(JTAPI object) resource is not available
168	TERR_INV_ORIG_ADDR	Originating address in request was invalid
177	TERR_TARG_DN_INV	DN target (in route call) was invalid
195	TERR_CFW_DN_INV	Call forwarding address is invalid.
243	TERR_CLNT_NOT_MON	Internal error—client corrupted in T-Server
302	TERR_INV_DTMF_STRING	DTMF string invalid
410	TERR_INAPPR_TRTM	Invalid treatment type
415	TERR_INV_DEST_DN	The destination DN in the request is invalid
470	TERR_PARTY_NOT_ON_CALL	Party in request is not involved in a call
496	TERR_INV_CALL_STATE	Party in request is in the call state
506	TERR_RECVD_INV_STATE	Call/Party is in invalid state for this time
700	TERR_INV_LOGIN_REQ	Agent cannot log in at this time
701	TERR_INV_LOGOUT_REQUEST	Agent cannot logout
702	TERR_INV_READY_REQ	Agent cannot go to ready state
1605	TERR_INVALIDPARTY	Party in request was invalid on switch
1703	TERR_SOFT_AGENT_WRONG_ID	Wrong Agent ID
1704	TERR_SOFT_AGENT_ID_IN_USE	Agent ID already used
1705	TERR_SOFT_AGENT_PSWD_DOESNT_MATCH	Agent Password does not match

715 OPERATION_NOT_ALLOWED

DN-100 Search and CMC
Config don't match

Table 12: Error Messages for T-Server for Cisco Unified Communications Manager (Continued)

Code	Symbolic Name	Description
1706	TERR_SOFT_AGENT_ALREADY_LOGGED_IN	AGENT is already logged in
1707	TERR_SOFT_AGENT_NOT_LOGGED_IN	AGENT is not logged in
3002	TERR_PRIVVIOLATION	User doesn't have security privilege on the switch
3005	TERR_UNSUCC_ROUTECALL	Routecall request was unsuccessful
Network Attended Transfer/Conference Error Messages		
1901	TERR_NATC_UNEXP_CONSULT	Unexpected request TNetworkConsult.
1902	TERR_NATC_UNEXP_ALTERNATE	Unexpected request TNetworkAlternate.
1903	TERR_NATC_UNEXP_RECONNECT	Unexpected request TNetworkReconnect.
1904	TERR_NATC_UNEXP_TRANSFER	Unexpected request TNetworkTransfer.
1905	TERR_NATC_UNEXP_MERGE	Unexpected request for TNetworkMerge.
1906	TERR_NATC_UNEXP_SST	Unexpected request TNetworkSingleStepTransfer.
1907	TERR_NATC_UNEXP_NPS	Unexpected request TNetworkPrivateService.
1908	TERR_NATC_UNEXP_MSG	Unexpected message.

Agent Login and Agent States

T-Server internally manages agent login and agent states, because the CUCM switch does not contain this functionality. The agent login IDs for the CUCM switch are arbitrary, and there is no coordination between these IDs and the “users” configured in the switch.

The valid agent-state behavior, transitions, and events for T-Server for CUCM are described in the following books:

- *Genesys 7 Events and Models Reference Manual*

Table 18: Use of the Extensions Attribute (Continued)

Request/Event	Attribute Extensions		
	Key	Value Type	Value Description
Call Related Event	LastFwdNumber	string	Reported by switch—identifies the number from which the last forward call was made, in a multiple call forwarding scenario
Call Related Event	CalledPartyAddress	string	Included in the event when a call processing message from the switch contains the cpadigs parameter set

- If the agent's logon failed with `ErrorCode: 749`, and the agent is already logged in, the `AgentID` is not present in subsequent `EventAddressInfo` because it was not received from the switch. The switch message with the error does not provide `AgentId`.
- `EventRegistered` for a position does not contain the `queue-1` in the attribute extensions until a call has been placed to this position. Afterwards, any registration of the DN contains the associated `queue-1`.

Even though an agent is logged in and in a Ready state before T-Server startup, `EventRegistered` reports the agent's status as 0 (unknown) until it receives new information about the agent's activity (login, ready).

Error Messages

Table 19 presents the complete set of error messages T-Server distributes in the `EventError`.

Table 19: Error Messages: T-Server for the Nortel Communication Server 2000/2100 Switch

Code	Symbolic Name	Description
40	TERR_NOMORE_LICENSE	No more licenses are available.
41	TERR_NOT_REGISTERED	Client has not registered for the DN.
42	TERR_RESOURCE_SEIZED	Resource is already seized.
43	TERR_IN_SAME_STATE	Object is already in requested state.
50	TERR_UNKNOWN_ERROR	Unrecognized error
51	TERR_UNSUP_OPER	Unsupported operation
52	TERR_INTERNAL	Internal error

Table 19: Error Messages: T-Server for the Nortel Communication Server 2000/2100 Switch (Continued)

Code	Symbolic Name	Description
53	TERR_INVALID_ATTR	Invalid attribute
54	TERR_NO_SWITCH	The switch is not connected
55	TERR_PROTO_VERS	Incorrect protocol version.
56	TERR_INV_CONNID	Invalid ConnectionID.
57	TERR_TIMEOUT	Timeout expired.
58	TERR_OUT_OF_SERVICE	The link is out of service
59	TERR_NOT_CONFIGURED	DN is not configured in the Configuration Database.
100	TERR_UNKNOWN	Unknown cause
174	TERR_UNSUCC_ANSWER	Unsuccessful answer request
175	TERR_UNSUCC_RELEASE	Unsuccessful release request
496	TERR_INV_CALL_STATE	Call in invalid state
545	TERR_INV_ELEM_VAL	Invalid value within a message element
700	TERR_INV_LOGIN_REQ	Invalid login request
701	TERR_INV_LOGOUT_REQ	Invalid logout request
702	TERR_INV_READY_REQ	Invalid ready request
703	TERR_INV_NOT_RDY_REQ	Invalid not ready request
704	TERR_INV_MAKE_CALL	Invalid make call request
705	TERR_INV_ROUTE_REQ	Invalid route call request
706	TERR_INV_MUTE_TRSFR	Invalid mute transfer request
707	TERR_INV_INIT_CONF	Invalid initiate conference request
708	TERR_INV_INIT_TRSFR	Invalid initiate transfer request
709	TERR_INV_CMPL_CONF	Invalid complete conference request
710	TERR_INV_CMPL_TRSFR	Invalid complete transfer request
711	TERR_INV_RETR_REQ	Invalid retrieve original request

Table 19: Error Messages: T-Server for the Nortel Communication Server 2000/2100 Switch (Continued)

Code	Symbolic Name	Description
712	TERR_INV_CNTRL_DN	Invalid control DN
713	TERR_CANT_CONVERT	Cannot convert DN to Position ID
714	TERR_INV_CALL_ID	Invalid call ID
715	TERR_DMS_NOT_ALLOWED	Operation not allowed
716	TERR_DMS_NOT_IDLE	Not idle
717	TERR_DMS_NOT_LOGGED_IN	Agent not logged in
718	TERR_DMS_ORIG_TIME_OUT	Origination timed out
719	TERR_DMS_MAKECALL_RCRS	MakeCall resources unavailable
720	TERR_DMS_MISS_ORIG_ADDR	Missing origination address
721	TERR_DMS_MISS_DEST_ADDR	Missing destination address
722	TERR_DMS_MISS_CALL_TYPE	Missing MakeCall type
723	TERR_DMS_INV_ORIG_ADDR	Invalid origination address
724	TERR_DMS_INV_DEST_ADDR	Invalid destination address
725	TERR_DMS_INV_CALL_TYPE	Invalid MakeCall type
726	TERR_DMS_INV_AUTHCODE	Invalid AuthCode
727	TERR_DMS_INV_ACCTCODE	Invalid AcctCode
728	TERR_DMS_AUTH_OP_NSUBSCR	AuthCode has been sent when the optional parameter has not been subscribed to
729	TERR_DMS_ACCT_OP_NSUBSCR	AcctCode has been sent when the optional parameter has not been subscribed to
730	TERR_DMS_OPER_ABORTED	MakeCall aborted
731	TERR_DMS_MISMATCH_STATE	MakeCall mismatch state
732	TERR_DMS_UNEXP_ACCT	Unexpected AcctCode
733	TERR_DMS_ILL_OPERATION	Illegal operation
734	TERR_DMS_INV_ASSOC_DN	Invalid Associated DN

Table 19: Error Messages: T-Server for the Nortel Communication Server 2000/2100 Switch (Continued)

Code	Symbolic Name	Description
735	TERR_DMS_ASSOC_OTH_SESS	Associated DN already associated with another session
736	TERR_DMS_MAX_NO_OF_LINES	Maximum number of DN's allowed to be DN-associated to that host application has been reached
737	TERR_DMS_NO_RESOURCES	No software resources available to store information for the non-ACD call
738	TERR_DMS_MISSING_ASSOC_DN	Missing the Associated DN parameter
740	TERR_DMS_ALREADY_IN_SET	AssociatedDN already in set
741	TERR_DMS_NOT_IN_SET	AssociatedDN not in set
742	TERR_DMS_INV_DN	Invalid DN
743	TERR_DMS_UNKNOWN_DN	Unknown DN
744	TERR_DMS_INV_FILTER	Query DN request has invalid parameter
745	TERR_DMS_MIS_PARAM	Missing parameter
746	TERR_DMS_INV_PARAM	Invalid parameter
747	TERR_DMS_INV_CONTENT	Invalid parameter content
748	TERR_DMS_INV_LINE_CONF	Invalid line configuration
749	TERR_DMS_ALRDY_LOGIN	Agent already logged in
750	TERR_DMS_LOGID_IN_USE	Login ID in use elsewhere
751	TERR_DMS_POS_ALRD_LOGIN	Position already logged in
752	TERR_DMS_INV_SET_STATE	Invalid set state
753	TERR_DMS_INV_PASSWD	Password mismatch
754	TERR_DMS_RSRC_UNAVAIL	Resource unavailable
755	TERR_DMS_AGNT_NOT_LOGIN	Agent not logged in
756	TERR_DMS_AGNT_LOG_PEND	Agent logout pending
757	TERR_DMS_INV_POS_STATE	Invalid agent position state
758	TERR_DMS_AGNT_READY	Agent presently ready

Table 19: Error Messages: T-Server for the Nortel Communication Server 2000/2100 Switch (Continued)

Code	Symbolic Name	Description
759	TERR_DMS_AGNT_NOT_RDY	Agent presently not ready
760	TERR_DMS_SUPERV_OVERRIDE	Supervisor override
761	TERR_DMS_INV_RECON_CALL	The call cannot be reconnected because it is not in an appropriate state for reconnection (no party on hold)
762	TERR_DMS_INV_DEL_FROM_CONF	Invalid TDeleteFromConference request
763	TERR_DMS_AGENT_POSITION_BUSY	Agent position is busy
Network Attended Transfer/Conference Error Messages		
1901	TERR_NATC_UNEXP_CONSULT	Unexpected request TNetworkConsult.
1902	TERR_NATC_UNEXP_ALTERNATE	Unexpected request TNetworkAlternate.
1903	TERR_NATC_UNEXP_RECONNECT	Unexpected request TNetworkReconnect.
1904	TERR_NATC_UNEXP_TRANSFER	Unexpected request TNetworkTransfer.
1905	TERR_NATC_UNEXP_MERGE	Unexpected request for TNetworkMerge.
1906	TERR_NATC_UNEXP_SST	Unexpected request TNetworkSingleStepTransfer.
1907	TERR_NATC_UNEXP_NPS	Unexpected request TNetworkPrivateService.
1908	TERR_NATC_UNEXP_MSG	Unexpected message.

Reasons Keys

Table 27 provides details of the Reasons keys.

Table 27: Reasons Keys

Key	Type	Used in	Description
GCTI_NOT_READY_ACTIVATION	Integer/string	TAgentNotReady EventAgentNotReady	Specifies an application-specific withdrawal type (values 1–9 as defined in Processing Group configuration). Activated if the corresponding Extensions key ReasonCode is not set in extensions.
ReasonCode	String in events Integer/string in requests	TAgentNotReady EventAgentNotReady	Used to specify an application specific withdrawal type (values 1–9 as defined in PG configuration). The Extensions key has the same value as in reason GCTI_NOT_READY_ACTIVATION. This reason key is checked only if reason GCTI_NOT_READY_ACTIVATION is not specified in requests. ReasonCode cannot be filtered out.

T-Server Error Messages

Table 28 presents the complete set of error messages T-Server distributes in EventError.

Table 28: T-Server Error Messages

T-Library Error Code	Description
T-Server-Defined Errors	
40	No additional licenses
41	Client has not registered for DN

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
42	Resource is already seized
43	Object is already in requested state
50	Unknown error
51	Unsupported operation
52	Internal error
53	Invalid attribute
54	Switch not connected
55	Incorrect protocol version
56	Invalid connection ID
57	Timeout expired
58	Out of service
59	DN not configured in Configuration Manager
71	Invalid called DN
88	Origination DN not specified
96	Cannot complete conference
97	Cannot initiate transfer
98	Cannot complete transfer
99	Cannot retrieve original signal
100	Unknown cause
105	Information element missing
109	Link down or bad link specified
111	Too many outstanding requests
118	Requested service unavailable
119	Invalid password
123	DN for association does not exist

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
128	Invalid DN type for DN registration
132	Invalid link ID
133	Link already established
147	No link responding
148	Facility already enabled
149	Facility already disabled
164	Invalid system command
166	Resource unavailable
168	Invalid origination address
169	Invalid destination request
171	Switch cannot retrieve call
172	Switch cannot complete transfer
173	Switch cannot complete conference
174	Cannot complete answer call
175	Switch cannot release call
177	Target DN invalid
179	Feature could not be invoked
185	Set is in invalid state for invocation
186	Set is in target state
191	Agent ID IE is missing or invalid
192	Agent ID is invalid
202	Another application has acquired the resource
220	No internal resource available
221	Service not available on device
223	Invalid parameter passed to function

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
231	DN is busy
236	Timeout performing operation
256	API restricted from monitor
259	Invalid password
263	Must be logged on to use this command
302	Invalid DTMF string
323	No answer at DN
380	Interdigit timeout occurred
402	Invalid route address
452	No trunk for outbound calls
477	Invalid call ID
496	Invalid call state
503	Network failed to deliver outbound call
504	Network rejected outbound call
506	Invalid teleset state
527	Agent ID already in use
627	Unknown information element detected
700	Invalid login request
701	Invalid logout request
704	Invalid make call request
705	Route request is invalid
706	Invalid mute transfer request
708	Invalid initiate transfer request
710	Invalid complete transfer request
711	Invalid retrieve request

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
231	DN is busy
236	Timeout performing operation
256	API restricted from monitor
259	Invalid password
263	Must be logged on to use this command
302	Invalid DTMF string
323	No answer at DN
380	Interdigit timeout occurred
402	Invalid route address
452	No trunk for outbound calls
477	Invalid call ID
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503	Network failed to deliver outbound call
504	Network rejected outbound call
506	Invalid teleset state
527	Agent ID already in use
627	Unknown information element detected
700	Invalid login request
701	Invalid logout request
704	Invalid make call request
705	Route request is invalid
706	Invalid mute transfer request
708	Invalid initiate transfer request
710	Invalid complete transfer request
711	Invalid retrieve request

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
712	Cannot find route point in call
714	Invalid Call_ID
717	Agent not logged in
742	Invalid DN
749	Agent already logged in
804	Invalid Call_ID
ISCC (Inter Server Call Control) Errors	
1000	Invalid or missing server location name
1001	Remote server disconnected
1002	Remote server has not processed request
1004	Remote link disconnected
1005	External routing feature not initiated
1006	No free CDNs
1007	No access number
1008	TCS feature is not initiated
1009	Invalid route type
1010	Invalid request
1011	No primary server was found on location
1012	Location is invalid or missing
1013	Timeout performing requested transaction
1014	No configured access resources are found
1015	No registered access resources are found
1016	Client is not authorized
1017	Invalid transaction type
1018	Invalid or missing transaction data

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
1019	Invalid location query request
1020	Invalid origin location
Operational Errors	
1110	Duplicate invocation (packet missed)
1111	Unrecognized operation (packet transmission error)
1112	Mistyped argument (packet transmission error)
1113	Resource limitation
1114	Initiator releasing
1115	Unrecognized link ID
1116	Unexpected linked response
1117	Unexpected child operation
1120	Unrecognized invocation
1121	Result response unexpected
1122	Mistyped result
1130	Unrecognized invocation
1131	Unexpected error response
1132	Unrecognized error
1133	Unexpected error
1134	Mistyped parameter
1140	Generic
1141	Request incompatible with object
1142	Value is out of range
1143	Object not known
1144	Invalid calling device
1145	Invalid called device

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
1146	Invalid forwarding destination
1147	Request caused privilege violation on device
1148	Request caused privilege violation on called device
1149	Request caused privilege violation on calling device
1150	Invalid call identifier
1151	Invalid device identifier
1152	Invalid CSTA connection identifier
1153	Invalid call destination
1154	Invalid feature requested
1155	Invalid allocation state
1156	Invalid cross-reference identifier
1157	Invalid object type provided in the request
1158	Security violation
State-Incompatibility Errors	
1160	Generic
1161	Invalid object state
1162	Invalid connection ID
1163	No active call
1164	No held call
1165	No call to clear
1166	No connection to clear
1167	No call to answer
1168	No call to complete
System Resource—Availability Errors	
1170	Generic

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
1171	Service is busy
1172	Resource is busy
1173	Resource is out of service
1174	Network busy
1175	Network out of service
1176	Overall monitor limit exceeded
1178	Conference member limit exceeded
Subscribed Resource–Availability Errors	
1180	Generic
1181	Object monitor limit exceeded
1182	Trunk limit exceeded
1183	Outstanding request limit exceeded
Performance-Management Errors	
1185	Generic
1186	Performance limit exceeded
Security Errors	
1190	Unspecified
1191	Sequence number violated
1192	Timestamp violated
1193	PAC violated
1194	Seal violated
1700	The agent is already reserved by another server
Switch-Routing Errors	
1195	Routing timer or delay ringback timer expired
1196	Caller abandoned call

Table 28: T-Server Error Messages (Continued)

T-Library Error Code	Description
1197	Call successfully routed
1198	Aborted because of RouteSelect resource problem
Network Attended Transfer/Conference Errors	
1901	Unexpected request TNetworkConsult
1902	Unexpected request TNetworkAlternate
1903	Unexpected request TNetworkReconnect
1904	Unexpected request TNetworkTransfer
1905	Unexpected request for TNetworkMerge
1906	Unexpected request TNetworkSingleStepTransfer
1907	Unexpected request TNetworkPrivateService
1908	Unexpected message

Business types :

- 0 - private
- 1 - business
- 2 - work

Business Calls : Any call from an ACD Q or RP

Work

- any non business call made by agent while in ACD (automated business call handling is not applied)
- wrap-up timer is paused when making or receiving work related calls
- If agent receives direct work-related call during legal-guard time legal guard time is cancelled and re-started after call is finished
- no automatic business call handling after call
- wrap up or legal-guard time not interrupted

private