Observations / Issues	Initial Analysis CheckList	Resolution Steps/Data Collection Inputs
CTIOS SERVER GETTING RESTARTTED (Crash CTIOSServer.exe Abandoned), CTIOS Server -High Memory, CPU usage.	Are the customers using multiple PIM's? [Can be verified from CTIOS server logs by seeing more than one pheriphral ID value]	Fix in CTIOS to take information from a single PIM (if multiple PIMs are configured) are available in the following versions: 1. CTIOS 7.1.5 or earlier : CTIOS 7.1.5 ES 30. For compatibility, CTI Server also should be upgraded to CTIServer 7.1.5. 2. CTIOS 7.2.x : Reccomendation is to migrate to CTIOS 7.2.5
	Any Synchronization issues being observed in logs? (Service BrokerQ:Critical Exception)	One of the reasons for this exception is due to the usage of multiple PIM's,events not received correctly by CTIOS server. Fix in CTIOS to take information from a single PIM (if multiple PIMs are configured) are available in the following versions: 1. CTIOS 7.1.5 or earlier : CTIOS 7.1.5 ES 30. For compatibility, CTI Server also should be upgraded to CTIServer 7.1.5. 2. CTIOS 7.2.x : Recommendation is to migrate to CTIOS 7.2.5
	What is the type of call (straight, transfer, and conference)	Get the % of straight, transfer and conference calls, BHCA (Busy Hour Call Attempt), CPS (Calls/Second), CHA (Call/Hour/Agent)
	Are the resources at customer site exceed the capacity of the CTIOS version customer is running on. (Resource details include Total configured agents, Number of Skill group, Number of Supervisors(for IPCC only), Number of Agents Configured per Supervisor, Maximum number of skillgroups configured per Agent, Total number of teams, Number of agents and supervisors per team, Number of Monitor mode applications)	Check the max compatibility for the specific CTIOS server version customer is using. Userdump tool needs to be installed to get automatically generated userdump logs when crash occurs for DE analysis. Ref : http://zed.cisco.com/confluence/display/CCBUKB/CTI-OS
	Is the CTIOS Server co-located with the PG	CG,PG & CTIOS Server must be co-located since 7.1(x)
	Is CTIOS Server Tracemask high when issue occurred	? The default trace mask is 0x3 in all releases except in release 7.0(0) where it is set to 0x20003. ? Setting the trace mask high (i.e. 0xf or higher) will have an impact on CTI OS server performance and the call completion rate. The trace mask need to be set high ONLY during debugging any issues. When the required logs are collected, the trace mask must be turned back to its default value.
	Are the versions of PG,CG,CTI,CTIOS,CTIOS CLIENT as per the compatibility matrix	Incompatible versions has to be changed with compatible ones

	Is CTIOS Server Installed on XP O/S	CTIOS Server does not support installation on Win XP. [While installing CTIOS server it shows a warning if on XP that it is not recommended]. Please refer the BOM for more information.
	Is the total Number of monitor mode applications exceed the supported numbers (Monitor mode applications examples are All agents Sample, All calls sample application)	CTIOS supports only a max of 2 monitor mode applications. Please refer the BOM for more information.
	Are the Hardware & Software used adhere to compatibility matrix	Check for compatibility for O/S and H/W. Also ensure that minimum requirements for installing CTIOS depending on versions is met. Please refer the BOM for more information.
	Are any antivirus running on the customer system or any other un-related process running in CTIOS Server causing Memory growth	Check the antivirus version and other unrelated process are supported or not.
Agents are not able to login from the agent desktop	If the agents are not able to login using standard desktop, try the CTI test to login agents.	Even if with CTI test the agents are not logging in this is an issue with CTIServer and not with CTIOS. The issue needs to be diverted to CTIServer team
	Check the CTIOS Server (A side and B Side) if any are active. If both are active, please check the registry of the client to confirm if it is pointed to the correct server and port number	HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems\CTI Desktop\CtiOs\CTIOSA & CTIOSB ,Port A ,Port B
	If CTIOS Server is not active, (from the logs SYS_PHERIPRAL_OFFLINE is shown continuous in CTIOS Server logs) Check the registry to confirm if CTIOS is pointed to the correct CG and port number	HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\Ctios\CTIOS_CTIOS\CTIOS1\CtiDriver\Config ,SIDEAHOST,SIDEBHOST,SideAPort,SideBPort
	Is the customer desktop a customized one?	Ask the customer to use standard CTIOS desktop. If the CTIOS Standard Desktop doesn?t show any issues, then the problem is with Customized Desktop. In this case Advanced Services needs to be contacted.
	Recycle CTIOS process. Is Agent configuration in Call Manager appropriate	If still the problem persists, it might be an issue with PG and/or Call manager where the agents are configured.
Problems with Agent Desktop and Agent Status	Is the customer desktop a customized one?	Ask the customer to use standard CTIOS desktop. If the CTIOS Standard Desktop doesn?t show any issues, then the problem is with Customized Desktop.
	Try the CTI test to login agents and observe the behavior.	Even if with CTI test, the agent behavior is similar, this is an issue with CTIServer and not with CTIOS. The issue needs to be diverted to CTIServer team.
Distinguishing which component	Logs of all the components for the same time stamp to be	Please forward the issues the components corresponding to which errors are found in logs.

	collected. Look for any errors or event juggling in those components (OPC/CTI SERVER,PIM,JTAPI)	OPC/CTIServer : debug /agent /routing /cstacer /closedcalls with EMSTraceMask set to 0x40 (hex) PIM : Depends on the PIM. Contact PIM team for details
of ICM causing the issue (No errors seen in CTIOS logs, Issue seems to be happening after agents logged in through CTI test, Issue is not resolved even after CTIOS cycling, CTIOS is not receiving events while it is supposed to recive,juggling of events from logs, etc.)		
Installation related issues. Unable to install the CTIOS client or Server or both on customer systems. Errors dialogs are coming during installation	Confirm that all installations are done locally (the setup.exe copied to local machine for installation)	The installation is supposed to be done locally or directly from the CD and not from a network path or CD drive accessed from the network path
	Are there error displaying Setupdll.cpp and O/S (XP) while installing client	Ask customer to upgrade to XP ServicePack2 or above. Please refer the BOM for more information
	Error installing CTIOS server on Win XP	CTIOS server is not supported on XP. Please refer the BOM for more information
Silent Monitor Issues	If Supervisor unable to Silent Monitor the Agent	Check whether the SM service is running on the Agent and Supervisor Desktop. In case of Span port check, the Remote Silent Monitor Server is Up and SM Service running on that machine. Refer System Manager Guide for further details
	If Supervisor unable to hear the voice packets	Install software or hardware packet sniffer between the AgentŽs Host computer and the IP Phone PC Port and Capture traffic for RTP packets. Collect a traffic capture at PC port when the issue appears.Capture File Format must be *.CAP Check Version of WinPcap Check NIC card model and NIC Diver Version at the Agent and Supervisor host computers Model of the IP phone involved on the issue Codec used by the IP phone to process the VoIP call (g711 or g729) IP Address of the IP Phone used by the agent on which the packet capture occurred VLAN number Check if there is trasn coding dynamically happening when the call is active
	Is NATting present at customer setup	CTIOS Silent Monitor does not work in a production environment where all the servers of the IP Contact Center Solution (ICM AW, ICM PG , CTI OS Server and Call Manager) are located on a remote data center with a private addressing schema and the agent and supervisor desktops and hard IP phones are on the call center network, that also has its own address schema where both networks (data

		center and call center) are joined together using Network Address translation (NAT).
Siebel Issue	Siebel Failover issues	Fixed in CTIOS 7.1(5) ES 29 and 7.2(5)
	Siebel button enablement issues and crashes	Check the Siebel Driver and Seibel version compatibility. DE needs to verify the DEF file and Siebel Driver logs. Please collect them as well while raising a case.

	Siebel Driver Memory leak observed in CTIOS 6.x	Siebel Memory leak observed so far has been fixed in the following versions
		
		`- CTIOS 6.0 SR5 ET4`
		`- CTIOS 7.2.5`