

Avaya Solution & Interoperability Test Lab

Application Notes for Trisys TAPIT EX with Avaya IP Office Delta Server - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the Trisys TAPIT EX Call Accounting for Business software to work with Avaya IP Office Delta Server. TAPIT EX is a call management and accounting software package designed to report on the phone activity of a business. TAPIT EX works with the Call Detail Record (CDR) / Station Message Detail Reporting (SMDR) information output by Avaya IP Office Delta Server. Information in these Application Notes was obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for the Trisys TAPIT EX Call Accounting for Business software to work with Avaya IP Office Delta Server. TAPIT EX is a call management and accounting software package designed to report on the phone activity of a business. TAPIT EX collects call information from a telephone system and stores it for call costing and reporting at a later time. It is a tool to help identify and control expenses, provide statistical information, and assist in the overall management of the business. TAPIT EX works with the Call Detail Record (CDR) / SMDR (Station Message Detail Reporting) information output by Avaya IP Office Delta Server. TAPIT EX offers:

- Automatic data collection
- Automatic report scheduling
- ANI / Caller ID deluxe reporting
- Ability to e-mail reports
- SMDR failure alarm
- Fraud alert detection
- Web enabled reports with permission-based access
- Export to time and billing packages, spreadsheet, or text file
- Graphical reports

TAPIT EX is made up of the following components:

- **CDR Loader** the program used to read the Avaya IP Office CDR file.
- **SMDR Monitor** the program used to process CDR data received from the CDR Loader into a format used by Trisys TAPIT EX.
- **TAPIT EX** the main call accounting program. It loads CDR data processed by SMDR Monitor into the database for report generation. The program is also used to define users and clients, and to generate reports for call accounting.

The configuration in **Figure 1** shows a network consisting of an Avaya IP412 Office, an Avaya IP Office Manager/Voicemail Pro PC, an Avaya IP Office Delta Server PC, a Trisys TAPIT EX Server, and Avaya 4600 Series IP Telephones connected to an Ethernet switch. The Avaya IP412 Office LAN2 port is connected to an Extreme Summit X450-24T.

The Avaya S8300 Media Server with Avaya G700 Media Gateway and Avaya 4600 Series IP Telephones, used to generate IP trunk calls to and from the Avaya IP412 Office, are connected to the Avaya C363-PWR Converged Stackable Switch, which in turn is connected to the Extreme Summit X450-24T. The Avaya C363-PWR Converged Stackable Switch is used in this configuration as a Layer 2 switch.

The Avaya IP412 Office has T1, PRI and Analog trunks to the central office. The Avaya IP Office Delta Server is configured to connect to the Avaya IP412 Office in order to generate CDR data for all inbound and outbound calls as well as internal calls.

The Avaya IP Office Delta Server can be configured to send the CDR records it receives from the Avaya IP Office to a number of destinations via CDR log file, IP polling or sending to a specified IP address and port. The required destination depends on which methods of data transfer are supported by the third-party call accounting application being used. In the case of this solution, the Delta Server is configured to write CDR records to a CDR log file.

In order for the Trisys TAPIT EX software to be able to access the CDR files generated by the Avaya IP Office Delta Server, the CDR folder is shared to the network. Trisys TAPIT EX is configured to look for the CDR file(s) on the share drive of the Avaya IP Office Delta Server PC. It can be configured to automatically retrieve new¹ CDR records every few minutes. Upon CDR record retrieval, the TAPIT EX software parses and processes the CDR data², then stores the parsed CDR data into a TAPIT EX Microsoft Access database for later record retrieval and/or reporting by the end user.

The tested configuration is shown in Figure 1.

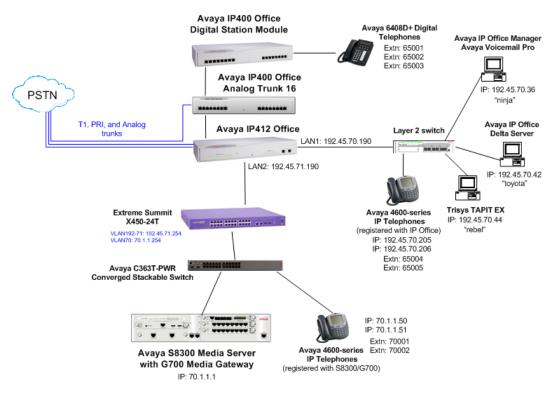


Figure 1 – Network Configuration Diagram

² CDR Loader and SMDR Monitor retrieve, parse and process CDR data from the Delta Server. TAPIT EX parses and processes the CDR data retrieved based on requirements provided by customers. For more detailed information, contact Trisys technical support.

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¹ When automatic record retrieval is initiated, TAPIT EX maintains a timestamp of the last record retrieval performed. All CDR data with timestamps after the last record retrieval is considered new and will be retrieved and processed.

2. Equipment and Software Validated

The following products and software were used for the configuration in Figure 1:

Product	Software/Version
Avaya IP412 Office	3.0(44)
Avaya IP400 Office Analog Trunk 16	5.0(44)
Avaya IP400 Office Digital Station Module	5.0(44)
Avaya IP Office Delta Server	5.0(14)
Avaya Voicemail Pro	3.0(15)
Avaya 4602SW IP Telephones	1.8.2
Avaya 4620SW IP Telephones	2.2
Avaya 6408D+ Digital Telephones	-
Avaya C363T-PWR Converged Stackable Switch	4.3.12
Avaya S8300 Media Server with Avaya G700 Media	Avaya Communication
Gateway	Manager 2.2
Extreme Summit X450-24T	11.2.4.2
Trisys TAPIT EX	4.1.8 Build Date: 05/18/2005
- CDR Loader	- 1.3.55 Build Date: 05/18/2005
- SMDR Monitor	- 4.0.7.4 Build Date: 08/16/2005
PCs for Avaya IP Office Manager, Avaya Voicemail Pro,	Windows 2000 Professional
Avaya IP Office Delta Server, and Trisys TAPIT EX	Service Pack 4

Table 1 – Product and Software Version

3. Configure Avaya IP Office

No additional configuration is required.

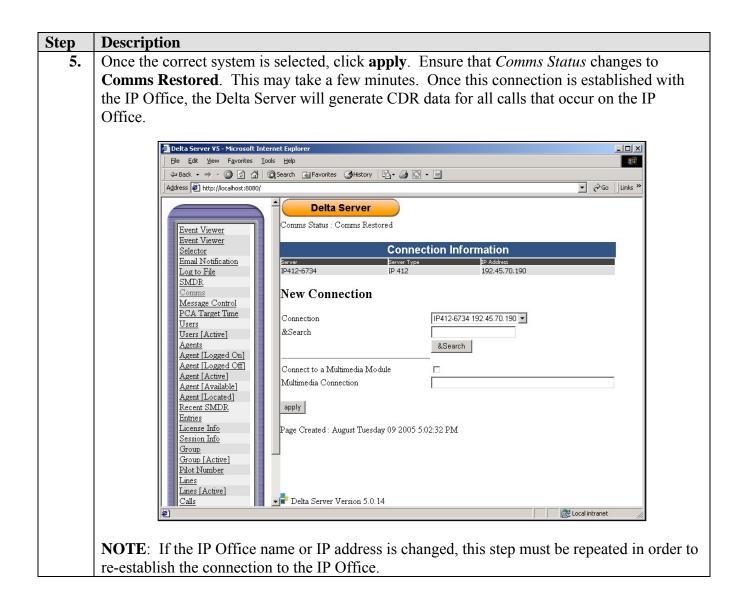
4. Configure Avaya IP Office Delta Server

The configuration information provided in this section describes the steps required to set up Avaya IP Office Delta Server to generate CDR records to a CDR log file and to share the CDR folder on the network.

For all other provisioning information, such as Avaya IP Office Delta Server installation, etc., refer to the Avaya IP Office Delta Server product documentation in reference [2].

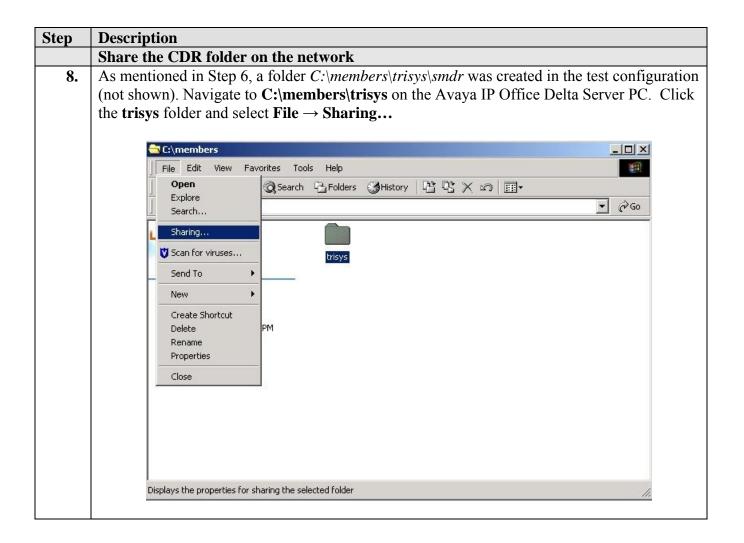
Step	Description						
1.	Navigate to Start \rightarrow Programs \rightarrow Administrative Tools \rightarrow Services on the Avaya IP						
	Office Delta Server PC.						
2.	In the Services window that	t appears verify	CCC D	elta Se	rver is alr	eady starte	ed If it is not
	then start it manually.	······································					
	then start it manually.						
	Services						
	Action View	• 💼 🖬 🗗 🗟			•		
	Tree			-	1	[
		Name A	Description	Status	Startup Type	Log On As	
	Services (Local)	Alerter	Notifies sel		Manual	LocalSystem	
		Application Manage	Provides s Provides s		Manual	LocalSystem	
		ASP.NET State Serv	Enables th	Charles	Manual	.\ASPNET	
				Started	Automatic Manual	LocalSystem	
		Background Intellig	Transfers 1	Started		LocalSystem LocalSystem	
		ClipBook	Supports C	otarteu	Automatic Manual	LocalSystem	
		COM+ Event System	Provides a	Started	Manual	LocalSystem	
		Computer Browser	Maintains a		Automatic	LocalSystem	
		DHCP Client	Manages n		Automatic	LocalSystem	
		Distributed Link Tra			Automatic	LocalSystem	
		Distributed Transac		Startea	Manual	LocalSystem	
		DNS Client	Resolves a	Started	Automatic	LocalSystem	
		Event Log	Logs event		Automatic	LocalSystem	
		Fax Service	Helps you	0.000	Manual	LocalSystem	
		ClarityQoSService			Automatic	LocalSystem	
		Indexing Service			Manual	LocalSystem	
		Internet Connectio	Provides n		Manual	LocalSystem	
		IPSEC Policy Agent	Manages I	Started	Automatic	LocalSystem	
		Key Server		Started	Automatic	LocalSystem	
		Logical Disk Manager	Logical Disk	Started	Automatic	LocalSystem	•
					5		
		· · 11 · · · · · ·		, a		• , , , ,	1
	NOTE : Following initial i	,			er service	is not start	ted until either
	the PC is restarted or the se	ervice is started	manually				

Step	Description
3.	Navigate to Start \rightarrow Programs \rightarrow CCC \rightarrow Delta Server to launch the Delta Server. In the
	Delta Server window that appears, click Comms in the left-hand panel.
	Delta Server V5 - Microsoft Internet Explorer Ele Edt View Favorites Tools Help
	j ← Back → → → ② ② ③ ④ ③ Favorites ③History □ → ④ ⑤ → 目
	Address 🖗 http://localhost:8080/
	Delta Server
	Event Viewer Comms Status : Init Comms
	Event Viewer Selector Events
	Email Notification Start Time Type Info Log to File 17:00:11 service Delta Server Service Available 4.0.5
	SMDR 17:00:11 Could not find Server on
	Comms 17:00:11 Failed Local Connect Message Control Page Created : August Tuesday 09 2005 5:00:26 PM
4.	In the Connection Information page that appears, select the required IP Office system from
	the Connection drop-down. If the required IP Office system is not listed, enter its IP address
	in the & Search field and click & Search.
	Delta Server V5 - Microsoft Internet Explorer
	Ele Edit View Favorites Icols Help
	↓ Back ▼ → ~ ③ ② ③ ③ ③ ③ Gearch ≧Favorites ③History ▷ → ④ ⊙ ▼ □ Address ④ http://localhost:8080/ ▼ ∂ Go Links ≫
	Delta Server
	Event Viewer Comms Status : Init Comms
	Event Viewer
	Selector Connection Information Email Notification There is Currently no data available for this request
	Log to File SMDR New Connection
	Comms Message Control
	PCA Target Time Connection IP412-6734 192.45.70.190
	Users [Active] &Search
	Agents Agent [Logged On]
	Agent [Logged Off] Multimedia Module Agent [Active] Multimedia Connection
	Agent [Available]
	Agent [Located] apply Recent SMDR apply
	Entries License Info Page Created : August Tuesday 09 2005 5:00:44 PM
	Session Info Group
	Group [Active]
	Pilot Number Lines
	Lines [Active] Calls Calls
	Image: Second Volation
1	



Step	Description			
6.	Click SMDR in the left-	hand panel. In the SMI	DR page that appears, check	SMDR Log File
			te path name of the file the I	
	log the SMDR data to (d	lefault: C:\Program File	s\AVAYA\IP Office\SMDR	.CSV) and click
	apply.			
	Delta Server V5 - Microsoft Internet E			
	Eile Edit View Favorites Tools H ↓ ↓ Back ↓ → ↓ ② ② ③ ③ ④	eip ch 📓 Favorites 🏼 🕉 History 🔂 🕶 🎒 💽 🕶 📃		
	Address Address Address Address			Go
		Delta Server		
	Event Viewer	omms Status : Comms Restored		
	Event Viewer			-
	Selector Email Notification		SMDR	
	Log to File SI SMDR	MDR Log File Enabled		
	Comms	MDR File name	c:\members\trisys\smdr\ipo412.csv	
	Message Control PCA Target Time	MDR Port Enabled		
	Users [Active] SI	MDR Port	8082	
	Agents	MDR Port will act as a client		
	Agent Logged Off	emote host IP Address for SMDR Client		
	Agent [Active] Agent [Available]	Send Data every	SMDR 💌	
	Agent [Located] C Recent SMDR	Send Data at	00:00 💌	
	Entries	MDR COM Port enabled		
	Session Info	MDR COM PORT	1	
	<u>Or oup</u>	MDR COM PORT Bits per second anslate to Secure Logix	9600	
	Pilot Number	ansiate to becare hogix		
	Lines Lines [Active]	pply		
	Calls	Delta Server Version 5.0.14		
			10 - 10 - 1 00 -	
	NOTE Since Trieve T	APIT FX requires read-	access to the share directory	where the SMDR
	5	1	rs\trisys\smdr was created for	
	the test configuration (no	-	s unsys smar was created it	n uns purpose m
	inc test configuration (in	ot showin <i>j</i> .		

tep	Description								
7.	Verify the Delta Se	erver properly	genera	tes SMI	DR reco	rds by pl	acing	g int	ound and our
	calls on the Avaya								
	activity is properly		011 0110				o un		
	activity is property	Teffecteu.							
	🖉 Delta Server V5 -	- Microsoft Internet Explorer							
		F <u>a</u> vorites <u>T</u> ools <u>H</u> elp							
	-	🙆 😰 🚮 😡 Search 😹	Favorites 🎯	History 🗟 🕇 🖉) 🖸 • 🗐				
	Address 🖉 http://k	ocalhost:8080/							▼ 🖓 Go 🛛 Links ≫
			Delta Ser	ver					
	Event Viewer	Comms S	tatus : Comm	ns Restored					
	Event Viewer	- C 1							
	Selector Email Notific	ation Time Of Call	Call Bin		MDR Diag		count	K ali	
	Log to File	Arrival	Call Rin Duration Tin 7		r.DDI		:count Interr ode	nal ID Mo	reP1ID P1Name P2ID
	SMDR Comms		.7 _{00:00:035}		70001	70001	0	27 0	E6004 Extn6004 T9601
	Message Con		^{.7} 00:00:04 11	. I	6004	6004	0	25 0	E6004 Extn6004 T9601
	PCA Target Users	Time 2005/08/: 11:36:51	⁷ 00:00:113	6002 C	*97324509643	3*97324509643	О	24 0	E6002 Extn6002 T9041
	Users [Active		.7 _{00:00:062}		2181	2181	ο	22 0	E6001 Extn6001 T9044
	Agents Agent [Logge	ed Onl 2005/08/2	. ⁷ 00:00:064	6000 0		3 *97324509643	0	21 0	
	Agent [Logge								
	Agent [Activ Agent [Availa	e] 11:35:30	00:00:052	7324509643 I	21813	21813	0	20 0	E6001 Extn6001 T9002
	Agent [Locat Recent SMD	ted] 2005/08/3	^{.7} 00:00:060	6004 C	7324509643	7324509643	O	19 0	E6004 Extn6004 T9401
	Entries License Info Session Info	2005/08/3 11:34:47	. ⁷ 00:00:044	7324509643 I	6001	6001	O	18 0	E6001 Extn6001 T9401
	Group	2005/08/3	.7 _{00:00:050}	6001 C	6004	6004	1	17 0	E6001 Extn6001 E6004
	Group [Activ Pilot Number	re Dage Cre			7 2005 11:37:5	53 AM			
	Lines Lines [Active Calls	1							
	Archiver	The last	Server Versio	n 5 0 14					
	() () () () () () () () () ()		Server versio	m J.U. 14					ELocal intranet



Step	Description
9.	In the trisys Properties popup that appears, select Share this folder and click OK .
	trisys Properties
	General Sharing Security
	You can share this folder among other users on your network. To enable sharing for this folder, click Share this folder.
	© Do not share this folder
	Share this folder
	Share name: trisys
	Comment:
	User limit: <u>Maximum allowed</u>
	O Allow 🔄 Users
	To set permissions for how users access this Permissions
	folder over the network, click Permissions.
	To configure settings for Offline access to Caching this shared folder, click Caching.
	OK Cancel Apply
	NOTE: The network share created was not limited to specific users or permissions in the
	lab-tested configuration. However, limiting access to this share to specific network users and
	permissions (read-only) should be considered for security purposes.
10.	The path to the SMDR file from the TAPIT EX PC to the Delta Server PC, called <i>toyota</i> in
	Figure 1 , is <u>\\toyota\trisys\smdr\ipo412.csv</u> . Note this directory for use during the TAPIT
	EX CDR Loader configuration in Section 5.
	🔄 C:\members\trisys\smdr
	Eile Edit View Favorites Tools Help
	Search Pack → → 🔁 🔯 Search Pareliders 🎯 History Pareline 🔀 📉 🖄 🖽 +
	Address C:\members\trisys\smdr
	17-2005).csv
	Image: State
	smdr Sipo412.csv
	Select an item to view its
	description.
	See also:
	My Documents My Network Places
	My Computer TOYOTA
	4 object(s) 110 KB 💭 My Computer

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Step	Description
11.	This completes configuration of the Avaya IP Office Delta Server.

5. Configure Trisys TAPIT EX

The configuration information provided in this section describes the steps required to set up Trisys TAPIT EX to read and import CDR records generated to a file by the Avaya IP Office Delta Server.

For all other provisioning information, such as TAPIT EX software installation, installation of optional components, configuration of TAPIT EX for call accounting, report generation, etc., refer to the Trisys TAPIT EX product documentation in reference [3].

5.1. Initial Configuration

Step	Description				
1.	Log into the Trisys TAPIT EX PC with the appropriate administrative credentials.				
2.	Navigate to Start \rightarrow Programs \rightarrow Tapit \rightarrow Tapit Setup. In the Tapit Setup Message popup window that appears, click Yes.				
	Tapit Setup Message				
	? Tapit Setup has detected:				
	Current Serial Number:				
	XRLY9-0303-003 (DEMO)				
	Software Product:				
	TAPIT, MULTI USER (DEMO)				
	Is this a correct Serial Number?				
	<u> </u>				

Step	Description
3.	In the Tapit Setup window that appears, click START SETUP .
5.	In the Tapit Setup window that appears, circk START SETUP:
4.	In the Tapit Setup Message popup that appears, click Yes . Tapit Setup Message Image: Will THIS COMPUTER BE CONNECTED TO THE TELEPHONE SYSTEM? Note: Call records from your TELEPHONE SYSTEM can be processed on ONE machine only - Tapit Server. If you want to setup this PC as Tapit Server (Call records will be processed on this PC), select YES. To setup this PC as Tapit Client (view Reports, edit Client/User information, but NOT process Call records), select NO. Yes

Step	Description
5.	In the next Tapit Setup Message popup that appears, click No.
	Tapit Setup Message
	CURRENTLY TAPIT DATABASE IS LOCATED IN THE FOLDER:
	C:\TAPITW32\
	THIS VERSION OF TAPIT REQUIRES TO STORE DATABASE IN A SUBFOLDER OF THE FOLDER YOU WANT TO SHARE ON THE TAPIT SERVER MACHINE.
	DO YOU WANT TO KEEP THE CURRENT DATABASE LOCATION? (NOT RECOMMENDED)
	Yes
6.	In the next Tapit Setup Message popup that appears, click Yes.
	Tapit Setup Message
	STORE TAPIT DATABASE IN THE DEFAULT FOLDER FOR TAPIT /W MULTIUSER ACCESS?
	THE DEFAULT FOLDER IS: C:\TAPITW32\DATA\MAIN\
	<u>Yes</u> <u>N</u> o
7.	In the System Parameters – Setup TAPIT window that appears, set <i>Your Telephone Number</i>
	to the phone number for the business, set the <i>PBX Type / SMDR format</i> pull-down field to
	Avaya IP Office SMDR File – CDRL – NXP and click OK.
	System Parameters - Setup TAPIT - Setup TAPIT
	Phone Communications Settings
	Your Telephone Number (732) 450-9628
	Load Calls from Text File: C:\TAPITW32\DATA\MAIN\telmsg.dat
	Process Text File Every 180 seconds
	Load Calls into Database Every 10 minutes
	PBX Type / SMDR format
	Avaya IP Office SMDR File - CDRL - NXP
	Speed 1200 Carteria Contraction (not available for ALL PBX formats)
	Parity Even Use Computer or Telephone System Date?
	Data Bits 07 0 8
	Stop Bits 01 02
	Please verify correct SMDR format selection. Also it may require additional settings to process your
	SMDR format properly. All settings can be changed later.
	<u></u>

Step	Description
8.	In the Tapit Setup Information window that appears, click Close.
	Tapit Setup Information
	Print
	Tapit Setup Message
	Selected PBX Type 'Awaya IP Office SMDR File - CDRL - NXP' requires an additional module 'Tapit CDR Loader'. The module installation will start automatically at the end of the current Tapit Setup.
	The required installation file is located in the Tapit CDR Loader' folder on the Trisys Software CD. Please make sure the CD is in the CD-ROM tray.
	Note: Disregard the StartUp Manager screen which will appear after inserting Trisys Software CD.
9.	In the Tapit Setup Message popup that appears, click No . The V&H Data Package is an
	optional package containing rate information. No V&H Data Package was used for compliance testing.
	compliance testing.
	Tapit Setup Message
	2 Do you have a V&H Data Package?
	Yes
10.	In the next Tapit Setup message popup that appears, click OK .
	Tapit Setup Message
	Now Tapit Setup will launch the 'Tapit CDR Loader' Installation, please complete that process first and then close the Tapit Setup screen.
	ОК

Step	Description
11.	In the TAPIT CDR Loader Setup popup that appears, click OK .
	Control Control C
12.	In the next TAPIT CDR Loader Setup popup that appears, click 🖉 to install Tapit CDR Loader.
	Directory: C:\CDR Loader\ Exit Setup

Step	Description
13.	In the Tapit CDR Loader – Choose Program Group popup that appears, click Continue .
	😴 Tapit CDR Loader - Choose Program Group
	Setup will add items to the group shown in the Program Group box.
	You can enter a new group name or select one from the Existing Groups list.
	Program Group:
	Tapit CDR Loader
	Existing Groups:
	Accessories
	Remote Automation Management Startup
	Tapit
	Tapit CDR Loader
	Cancel
14.	Allow the Tapit CDR Loader Setup progress window to proceed without interruption.
	Tapit CDR Loader Setup
	Tupic obit Louder Setup
	문 Tapit CDR Loader Setup X
	C:\CDR Loader\docs\STARTUP Cisco TALITY.doc

Step	Description
15.	In the Tapit CDR Loader Setup popup that appears, click OK .
	Tapit CDR Loader Setup X Tapit CDR Loader Setup was completed successfully. OK
16.	In the Tapit Setup Message popup that appears, click OK .
	Tapit Setup Message Image: Setup Message Please wait until Tapit CDR Loader installation will be completed. If it is already completed click on the OK button. OK
17.	In the Tapit CDR Loader Message popup that appears, click OK .
	Tapit CDR Loader Message Image: TAPIT CDR LOADER HAS DETECTED AVAYA IP OFFICE SYSTEM SELECTION. TO PROCEED USE THE WIZARD TO CONFIGURE TAPIT CDR LOADER. Image: OK

Step	Description
18.	In the Telephone system Wizard window that appears, select Avaya IP Office from the pull-
	down list and click Next.
	Expt
	Tapit CDR Loader 1.3.55 - Trisys, Inc.
	Wizard Edt To change settings click on the Stop Timer button. Imer button. Imer button.
	Telephone system
	Warning:
	During: During this setup the Wizard makes nessesary changes in the Tapit/Tality settings. Some changes cannot be reversed even by cancelling and quitting the Wizard.
	If you have already set up CDR Loader and it is working properly cancel the Wizard now. You should only use this Wizard for new Tapit/Tality setup with one of the
	supported Telephone Systems from the list.
	Select your Telephone System from the list.
	Then click on the Next button
	Avaya IP Office
	Back Einish Cancel
	0 14:02:31 Thu, 08/11/05 Show Log File
	Stopped Start Timer QK Shut Down
	Form View
	續Start 🛛 🖉 🏓 🕄 🗍 💁 🕼 - Cimembersitrisysi 🖾 Command Prompt 🔄 Dri 🕅 📷 Tapit Setup 🕒 Tapit CDR Loader 1 過後 🖓 🗗 📴 匣 2:02 PM
10	In the Detahase Driver Wizerd window that ennears select (Text File (* txt)) from the null
19.	
	💐 Wizard
	Database Driver
	Select a driver for Avaya IP Office data (select 'Text File').
	By default Avaya IP Office collects CDR data into 'smdr.csv' text file.
	Click on the Next button
	{Text File (*.txt)}
	<u>Back</u> <u>Einish</u> <u>Cancel</u>
19.	In the Database Driver Wizard window that appears, select {Text File (*.txt)} from the pull- down list and click Next.

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Step	Description
20.	In the Data File Wizard window that appears, click Locate and browse to the CDR file on the
	Avaya IP Office Delta Server PC shared folder and click Open . The path to the CDR file
	defined in this configuration is <u>\\toyota\trisys\smdr\ipo412.csv</u> as mentioned in Section 4,
	Step 10.
	•
	Locate the File
	Look in: 🔄 smdr 🗾 🖛 🗈 📸 🎟 -
	History History Desktop Ny Computer My Network P. File name: ipo412.csv File name: ipo412.csv Files of type: Text Files(*.txt,*.csv,*.dat) Cancel
21.	NOTE : The default Avaya IP Office Delta Server CDR file name is SMDR.csv, and it is placed in C:\Program Files\AVAYA\IP Office. However, since the folder where the CDR records were stored was being shared, an alternate folder was created and defined for the test configuration. In the Data File Wizard window that appears, confirm the path to the CDR file on the Delta
	Server PC and click Next.
	Nizard
	Data File Enter the path to Avaya's 'smdr.csv' file. Enter the path to Avaya's 'smdr.csv' file. This is the comma delimited file where Avaya IP Office is collecting the CDR data. The default file path on the Avaya IP Office PC is: 'C\\Program Files\AVAYA\IP Office\SMDR\SMDR_Output\smdr.csv' Locate this file on the Avava IP Office PC and enter the full bath and file name here. \\Toyota\trisys\smdr\ipo412.csv
	Back Next Einish Cancel

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Step	Description	
22.	In the Output File Wizard window that appears, click Set Default and then click Next.	
	Wizard Output File	
	Enter the Output File Name.	
	This is the file which will be processed by Monitor in 'File Processing' mode.	
	For default setting click on the Set Default button.	
	Otherwise follow instructions in the Avaya Readme file and then click on the Locate button to locate the 'telmsg.dat' file manually.	
	Click on the Next button	
	C:\TAPITW32\DATA\MAIN\telmsg.dat	
	Back Next Einish Cancel	
23.	In the Connection String Wizard window that appears, click Test Connect to test the	
	connection to the CDR file.	
	💐 Wizard	
	Connection String	
	Verify the SMDR file path in the field below.	
	Click on the 'Test Connect' to test the connection to the file.	
	You will get appropriate message with file status.	
	Click on the Next button	
	<u>I</u> est Connect	
	\\Toyota\trisys\smd1\ipo412.csv	
	Back Next Einish Cancel	

Step	Description
24.	In the Tapit CDR Loader Message popup that appears, verify the connection is ok and click
	OK.
	Tapit CDR Loader Message
	THIS CONNECTION IS OK.
	SMDR FILE STATUS :
	CURRENT FILE : IPO412.CSV OLDEST FILE :
25.	In the Connection String Wizard window, click Next.
26.	In the Final Site/Node Settings Wizard window that appears, click Next.
	🖷 Wizard
	≤, Wizard
	Site ID Loc. ID Node Sess. ID Location Name Output File
	S_001 Main_39 0 1999/12/31 00:00:00 Main C:\TAPITW32\DATA\MAIN\telmsg.dat
	Number of Sites/Nodes found: 0 Number of Sites/Nodes will be available: 1
	Back Einish Cancel

Step	Description
27.	In the Initial Date Wizard window that appears, click Next.
	Nizard
	Initial Date
	Specify the Initial Date to start call processing from.
	Change of the Initial Date may result in duplication of call records or loss of call
	records in the database.
	We recommend to leave the default value.
	Click on the Next button
	Initial Date (yyyy/mm/dd)
	1999/12/31
	Back Next Einish Cancel
	Back Enrich Cancel
28.	In the Processing Interval Wizard window that appears, click Next.
	Wizard
	Processing Interval
	Specify the Timer Interval.
	This interval (in minutes) will be used by Tapit CDR Loader's timer.
	We recommend to set it to 5 minutes or more.
	The minimum value is 5 minutes.
	Process records every 5 minutes
	Back Next Einish Cancel

Step	Description
29.	In the Finish Wizard window that appears, click Finish .
	🖌 Wizard
	Finish
	Congratulations !
	You have finished the Tapit CDR Loader setup.
	After closing this screen you will need to click on Start Timer button.
	This will start the CDR Loader's timer and CDR Loader will automatically collect calls from the Database.
	Note: The Monitor and Tapit or Tality also must be running in order to process calls and produce reports.
	Click on the Finish button
	Back Next Finish Cancel
	Back Next Einish Cancel

Step	Description
30.	In the Tapit CDR Loader 1.3.55 window that appears, click Shutdown to exit the application.
	🖷, Tapit CDR Loader 1.3.55 - Trisys, Inc.
	Wizard Edit To change settings click on the Stop Timer button.
	Telephone System You can change settings using Wizard or directly on the screen: Avaya IP Office Image: To change settings with Wizard click on the Wizard button and follow instructions: 2. To edit settings directly on the screen click on the Edit button and follow instructions from the Readme file
	Database Driver To test connection settings click on the Get Calls Now button
	Text File (*.txt) If timer is stopped to return to the automatic mode click on the Start Timer button
	Data File Name \\\Toyota\trisys\smdr\ipo412.csv Main Output File C:\TAPITW32\DATA\MAIN\telmsg.dat Process records every 5 minutes
	New records found: New records processed: Last processing started: 0 0 Get Calls Now
	Total records processed: Session started:
	0 14:02:31 Thu, 08/11/05 Show Log File
	Stopped Start Timer DK Shut Down
31.	In the Tapit CDR Loader Message popup that appears, click No .
	Tapit CDR Loader Message
	THIS WILL SHUT DOWN TAPIT CDR LOADER.
	DO YOU WANT TO KEEP IT RUNNING?
	<u>Y</u> es

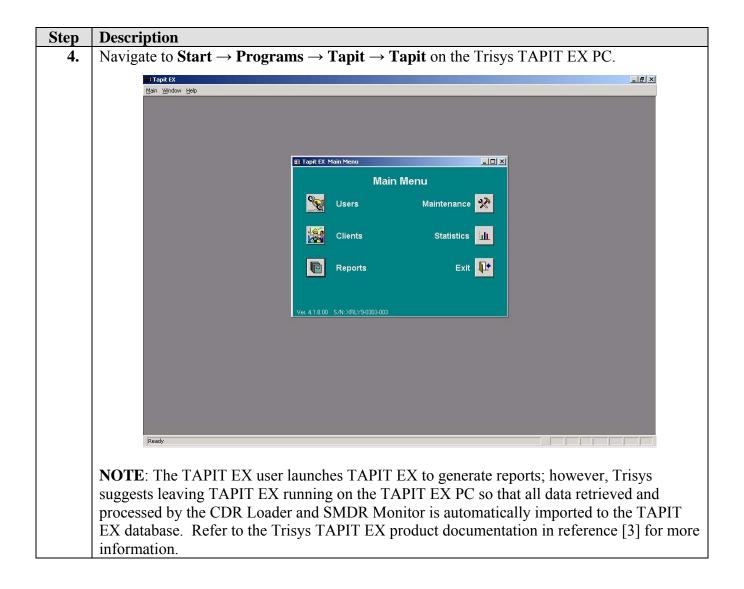
Step	Description
<u>Step</u> 32.	In the Tapit Setup window, click EXIT.
	Phone: (973) 380-2320 E-mail: support@trives.com XRLY9-0303-003 (Demo) Tapit, Multi User (Demo) You have completed the setup of Tapit. Please make sure to register this software. Thank you.
	Tapit Setup SHOW LOG Initial Settings: Initial Settings: Tapit Setup Statue: 100% Tapit Setup Statue: 100%
33.	This completes initial configuration of the Trisys TAPIT EX software for retrieval of Avaya IP Office CDR information.

5.2. How (and when) to run TAPIT EX

The TAPIT EX components, CDR Loader, SMDR Monitor and TAPIT EX must all be running in order to retrieve the CDR data from the Delta Server then process it and load it into the TAPIT EX database.

ер 1.	Description Navigate to Start \rightarrow Programs \rightarrow Tapit CDR Loader \rightarrow CDR Loader on the Trisys
1.	TAPIT EX PC. If the status on the bottom left hand side of the CDR Loader window is
	Active, then it means that the CDR Loader is running and will process CDR records eve
	5 minutes (configurable), after the time displayed in the Session started field. If it is not, the
	click Start Timer to start it.
	💐 Tapit CDR Loader 1.3.55 - Trisys, Inc.
	EditT o change settings click on the Stop Timer button.
	Telephone System You can change settings using Wizard or directly on the screen: 1. To change settings with Wizard click on the Wizard button and follow instructions: 2. To edit settings directly on the screen click on the Edit button and follow instructions for the Readme file
	Avaya IP Office If om the Readme file Database Driver To test connection settings click on the Get Calls Now button
	Text File (*, txt)
	Data File Name
	\\Toyota\trisys\smd\\ipo412.csv
	Main Output File Initial Date (yyyy/mm/dd)
	C:\TAPITW32\DATA\MAIN\telmsg.dat 2005/08/11
	Process records every 5 minutes <u>Multi Sites</u>
	New records found: New records processed: Last processing started:
	0 Get Calls Now
	Total records processed: Session started:
	0 14:07:45 Thu, 08/11/05 Show Log File
	Active Stop Timer DK Shut Down
	NOTE : The CDR Loader must be invoked from an actively logged in account that stays
	logged in on the Trisys TAPIT EX PC. Trisys recommends against running the CDR
	Loader as a service. Trisys, however, does suggest the CDR Loader be placed in the account
	Startup folder for automatic execution when the account is logged in. The user installing the
	software must do this, as the TAPIT EX installation wizard does not do it.

Step	Description
2.	Navigate to Start \rightarrow Programs \rightarrow Tapit \rightarrow Tapit Monitor on the Trisys TAPIT EX PC.
	In the Tapit Register popup that appears, click OK .
	Tapit Register
	You have 30 days left to register software
	OK
	NOTE: The TADIT EX installation wizard undates the registry so that the SMDD Menitor
	NOTE : The TAPIT EX installation wizard updates the registry so that the SMDR Monitor will start automatically following system reboot. Trisys has optional installation wizards and
	instructions for setting up the SMDR Monitor to run as a service. Refer to the Trisys TAPIT
	EX product documentation in reference [3] for more information.
3.	The Trisys TAPIT EX software components required for reading and processing CDR data
0.	from the Avaya IP Office Delta Server are now up and running.
	My Computer
	REBEL (Jo., Services
	My Network Cursontion
	Places
	Internet Deta Server You can change settings using Wizard or directly on the screen:
	2. To edit settings directly on the screen click on the Edit button and follow instructions
	Acrobat Symantec Database Driver To test connection settings click on the Get Calls Now button
	Reader 5.0 pcAnywhere (fext He (tbt))
	WinZip Microsoft Data File Name
	Microsoft Outlook ViToyota\trisy\smdNjoo412.csv Locate
	Command Main Output File Initial Date (yyyy/mm/dd) Prompt
	HoverShap
	_about.bxt Process records every 5 minutes Multir Sites
	Image: Second and the second
	Avaya IP 0 0 <u>Get Calls Now</u>
	Action Settings PBX About
	🏽 🕄 Start 🛛 🖄 🖉 🗍 💁 Cilmembersitrisysi 🖉 Command Prompt 🛛 🕲 Cilpocuments and 🕞 Tapit CDR Loader 1 🕅 SMDR Monitor32 🛛 😹 🔆 🖡 🕅 🕮 💬 2:09 PM



5.3. Verify TAPIT EX connection to Delta Server CDR data

Step	Description
1.	Place inbound and/or outbound calls on the Avaya IP412 Office. After the calls are
	complete, verify CDR data for the calls has been generated on the Delta Server as instructed in Section 4, step 7.

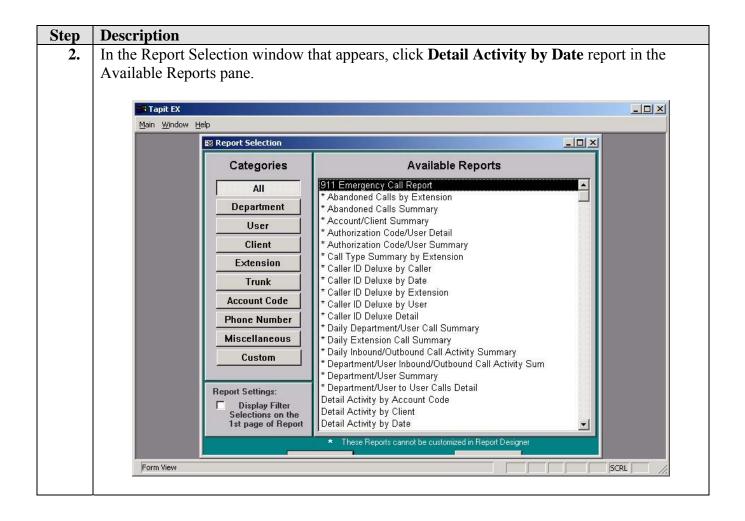
Wizard Edit To change settings click on the Stop Timer button. You can change settings using Wizard or directly on the screen: 1. To change settings using Wizard or directly on the screen: Avaya IP Office Image settings with Wizard click on the Edit button and follow instructions. Database Driver To test connection settings click on the Get Calls Now button [Text File (*txt)] If timer is stopped to return to the automatic mode click on the Start Timer button Data File Name Image settings dat [ViToyota\trisys\smdivipo412.csv Locate Main Output File Initial Date (yyyy/mm/dd) Process records every minutes Mew records found: New records processed: Last processing started: 0 Qet Calls Now Total records processed: Session started: 0 Total records processed: Session started:	🐃 Tapit CDR Loader 1.3.55	5 - Trisys, Inc.
Telephone System You can change settings using Wizard or directly on the screen: Avaya IP Office In to change settings with Wizard click on the Wizard button and follow instructions: Database Driver To test connection settings click on the Get Calls Now button (Text File (*txt)) If timer is stopped to return to the automatic mode click on the Start Timer button Data File Name Initial Date (yyyy/mm/dd (\\Toyota\trisys\smd\vipo412.csv Locate Main Dutput File Initial Date (yyyy/mm/dd C:\TAPITW32\DATA\MAIN\telmsg.dat Locate Process records every 5 minutes New records found: New records processed: Last processing started: 0 0 Get Calls Now	∭izard	Edit
Database Driver To test connection settings click on the Get Calls Now button {Text File [*:tst]} If timer is stopped to return to the automatic mode click on the Start Timer button Data File Name Initial Date (system) \\\Toyota\trisys\smdr\ipo412.csv Locate Main Output File Initial Date (system) C:\TAPITW32\DATA\MAIN\telmsg.dat Locate Process records every 5 minutes Multi Sites New records found: New records processed: Last processing started: Get Calls Now Total records processed: Session started:		You can change settings using Wizard or directly on the screen: 1. To change settings with Wizard click on the Wizard button and follow instruct 2. To edit settings directly on the screen click on the Edit button and follow instru
Data File Name \\\Toyota\trisys\smd\\ipo412.csv Main Dutput File Initial Date (yyyy/mm/dd C:\TAP!TW/32\DATA\MAIN\telmsg.dat		
Initial Date (yyyy/mm/dd) Main Dutput File Initial Date (yyyy/mm/dd) C:\TAPITW32\DATA\MAIN\telmsg.dat Process records every 5 minutes Multi Sites New records found: New records processed: Last processing started: 0 Get Calls Now Total records processed: Session started:	{Text File (*.txt)}	If timer is stopped to return to the automatic mode click on the Start Timer button
C:\TAPITW32\DATA\MAIN\telmsg.dat	\\T oyota\trisys\smdr\ipo412.c	
New records found: New records processed: Last processing started: 0 0		
O Get Calls Now Total records processed: Session started:	Process records every 5	minutes Multi
Total records processed: Session started:		
0 14:07:45 Thu, 08/11/05 Show Log File		
		14:07:45 Thu 08/11/05 Show L

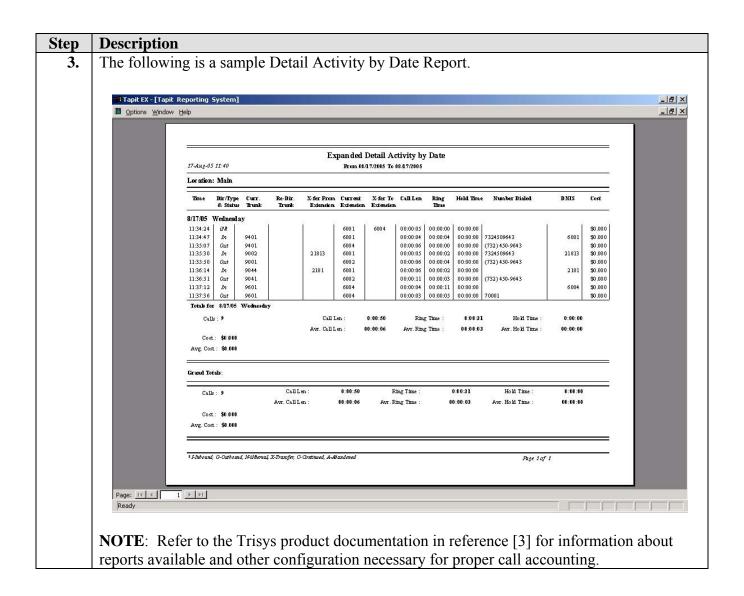
Wizard Edit To change settings click on the Stop Timer button. You can change settings using Wizard or directly on the screen: 1. To change settings using Wizard or directly on the screen: Avaya IP Office It on the Readme file To edit settings directly on the screen click on the Edit button and follow instructions. Database Driver To test connection settings click on the Get Calls Now button If timer is stopped to return to the automatic mode click on the Start Timer button Data File Name \u00e4 Vriogvota Vriogv12.csv Main Output File Initial Date (yyyy/mm/dd) C:\trap!Tw32\DATA\MAIN\telmsg.dat Process records every minutes Medit Sites
\\Toyota\trisys\smdr\ipo412.csv Locate Main Dutput File Initial Date (yyyy/mm/dd) C:\TAPITW32\DATA\MAIN\telmsg.dat Locate Process records every 5 minutes Multi Sites
Hew records round. Hew records processed. East processing stated.
0 Get Calls Now
Total records processed: Session started: 0 14:02:31 Thu, 08/11/05 Show Log File
Stopped Start Timer DK Shut Down

Step	Description
4.	In the Tapit CDR Loader window, if CDR records were successfully found, the New records
	found, New records processed, Total records processed, Last processing started, and
	Initial Date fields will update accordingly.
	🖕 Tapit CDR Loader 1.3.55 - Trisys, Inc.
	Wizard Edit To change settings click on the Stop Timer button.
	You can change settings using Wizard or directly on the screen: Telephone System 1. To change settings with Wizard click on the Wizard button and follow instructions: 2. To edit settings directly on the screen click on the Edit button and follow instructions
	Avaya IP Office
	Database Driver To test connection settings click on the Get Calls Now button
	Text File (*.txt)}
	Data File Name
	\\Toyota\trisys\smdr\ipo412.csv
	Main Output File Initial Date (yyyy/mm/dd)
	C:\TAPITW32\DATA\MAIN\telmsg.dat
	Process records every 5 minutes Multi Sites
	New records found: New records processed: Last processing started:
	10 14:05:42 Thu, 08/11/05 Total records processed: Session started:
	Total records processed: Session started: 10 14:02:31 Thu, 08/11/05 Show Log File
	Stopped Start Timer DK Shut Down
5.	In the Tapit CDR Loader window, click Start Timer to restart the automatic timer so that
	CDR records will be retrieved and loaded every 5 minutes as administered going forward.
	CERTICEORIAS with be retrieved and loaded every 5 minutes as administered going forward.

5.4. Generating a TAPIT EX Report

Step	Description
1.	Navigate to Start \rightarrow Programs \rightarrow Tapit \rightarrow Tapit on the Trisys TAPIT EX PC. In the
	TAPIT EX Main Menu window that appears, click Reports icon .
	RTapit EX
	Main Window Help
	🕫 Tapit EX Main Menu
	Main Menu
	Users Maintenance 📯
	Clients Statistics
	Reports Exit P
	Ver. 4.1.8.00 S/NEXPLY9-0303-003
	Ready





6. Interoperability Compliance Testing

The interoperability compliance testing included feature and performance testing. The feature testing evaluated the ability of TAPIT EX to collect and process CDR records for various types of calls. The performance testing involved generating bulk call volumes for a one to two hour period to generate a large number of CDR records.

6.1. General Test Approach

The general test approach was to manually place intra-switch calls, inbound trunk and outbound trunk calls to and from telephones attached to the Avaya IP Office and verify the TAPIT EX collects the CDR records and properly classifies and reports the attributes of the call. For performance testing, a call generator was used to place calls over a one to two hour period of time.

6.2. Test Results

All test cases performed passed. TAPIT EX successfully collected the CDR records from the Avaya IP Office Delta Server CDR file for all types of calls generated including intra-switch calls, inbound/outbound PSTN trunk calls, inbound/outbound private IP trunk calls, transferred calls and conference calls. Performance testing verified that TAPIT EX could collect call records during a sustained high volume of calls in a one to two hour duration.

The following observations were made on the way that TAPIT EX reports certain types of calls:

- TAPIT EX reports all calls, including conference and transfer, as one of the following types: internal, inbound or outbound. In other words, TAPIT EX does not report calls as being part of a conference or transfer. Users wishing to know if a transfer or conference call occurred must manually verify this information.
- TAPIT EX does not load CDR records with call duration equal to 0 seconds some of these records are generated by the Delta Server for conference calls; however, as stated earlier, TAPIT EX focuses on call accounting of calls so it will ignore 0 second duration CDR records.
- Since not all components of TAPIT EX can run as a service and the TAPIT EX integration with the Delta Server is through reading a CDR log file, serviceability testing was limited. Trisys recommends that customers place the Avaya IP Office Delta Server PC and Trisys TAPIT EX PCs on UPS systems to prevent outages due to power failure. The current release of TAPIT EX does not detect loss of connectivity to the Delta Server; however, there is an optional SMDR Alarm package available with the TAPIT EX software, which will generate alarms if a configurable amount of time has elapsed without CDR records being loaded into the TAPIT EX database. Refer to the TAPIT EX product documentation in reference [3] for more information.

7. Verification Steps

The following steps may be used to verify the configuration:

- Use the **ping** command to verify IP communication between the TAPIT EX PC, the Avaya IP Office Delta Server PC, and the Avaya IP412 Office.
- Verify the Avaya IP Office Delta Server is connected to the Avaya IP Office (Section 4, steps 4 − 5).
- Place an inbound or outbound call. After completing the call, verify the CDR record for the call appears in the SMDR Diagnostics page on the Delta Server (Section 4, step 7).
- Verify the Avaya IP Office CDR records folder is accessible from the TAPIT EX PC (Section 4, steps 8 10).
- Verify TAPIT EX connection to Delta Server CDR data (Section 5.3).

• Verify information appears correctly in a report (Section 5.4).

8. Support

Technical support for TAPIT EX can be obtained by contacting Trisys, Inc. at:

- Phone: (973) 360-2300 option 3
- E-mail: <u>tech@trisys.com</u>
- Web: <u>http://www.trisys.com/TechSupp.htm</u>

9. Conclusion

These Application Notes describe the procedures required for configuring the Trisys TAPIT EX Call Accounting Software to collect CDR data from Avaya IP Office Delta Server CDR log files. TAPIT EX was successfully compliance tested with an Avaya IP412 Office and Avaya IP Office Delta Server.

10. References

The following Avaya product documentation can be found at <u>http://support.avaya.com</u>:

- [1] Avaya IP Office Manager 3.0 Manual, Issue 16p, 20th July 2005
- [2] Avaya IP Office 3.0 Delta Server (V5) and SMDR, Issue 6b, 26th January 2005

The following Trisys product documentation can be found at <u>http://www.trisys.com</u>: [3] *Trisys TAPIT EX Manual ver 4.1.8*, Issue 1.2, 7th June 2005

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