

PhoneSuite - TAPI for Asterisk Acceptance Test

Approved (Basic CTI), with restrictions

Legal Information / Imprint

The information contained in this document reflects the state of knowledge at the time the document was created. Errors and subsequent alterations are reserved.

estos GmbH rejects any liability for damage caused by the direct or indirect use of this document. All brand and product names quoted are trademarks or property of their respective owners.

Our current General Terms and Conditions can be found on our website at <u>http://www.es-</u> tos.com/about-us/imprint.html

Copyright estos GmbH. All rights reserved.

estos GmbH Petersbrunner Str. 3a 82319 Starnberg Germany <u>info@estos.de</u> <u>www.estos.de</u>

Table of contents

1.	Do	cum	ent Status and Information 4
	1.1.	Ger	neral 4
	1.2.	Cha	ange History 4
2.	Pre	eface	5
	2.1.	Wh	o should read this Manual5
	2.2.	Wh	at is not covered5
	2.3.	Wo	rd Usage5
3.	Int	rodu	ction 6
	3.1.	Bac	kground Information 6
	3.2.	Tes	t Procedure
	3.2	.1.	Exceptions7
	3.2	.2.	Specialities7
	3.2	.3.	ECSTA for SIP-Phones7
	3.3.	Exa	mple7
4.	Sof	ftwai	re Acceptance
	4.1.	Pho	oneSuite - TAPI for Asterisk
	4.1	.1.	Result of Acceptance9
	4.1	.2.	Reasons of Approval
	4.1	.3.	References23
	4.2.	Pro	Call Enterprise – Remote Office 24
	4.2	.1.	Result of Acceptance 24
	4.2	.2.	Reasons of Approval 24
	4.2	.3.	References25
	4.3.	Pro	Call Analytics
	4.3	.1.	Result of Acceptance 26
	4.3	.2.	Reasons of Approval 26
	4.3	.3.	References27

1. Document Status and Information

1.1. General

Current Status of the document is summarized here:

Project initiative : Kerio Operation, Technologie Partnerschaft (Brainworks)
Document type :
Original author : Thomas Pecher-Wagner
Current status : draft
Phone : 08151 368 561 61
Email : tp@estos.de

1.2. Change History

History of the document is outlined here.

Version	Date	Author	Changes
1.0	18.03.2016	Thomas Pecher-Wagner	initial
1.1	25.03.2016	Thomas Pecher-Wagner/ Matthias Becker	Final tests

2.Preface

2.1. Who should read this Manual

The intended audience of this documentation is for technical skilled personnel interested in the functional and non-functional specifications of the tested TAPI-driver as well as its interoperability with other estos software components.

The document describes what telephony related functional and non-functional features are supported by the tested TAPI-driver. As the TAPI-driver is rarely used as a standalone component, but rather used in combination with certain applications (e.g. Call Center, CTI etc.) it is also in scope of this manual to document the grade of interoperability between the tested component and ProCall Enterprise and its OEM variants.

2.2. What is not covered

It is not possible to cover every aspect of the software presented here in this short document. We exclude topics that depend on special-purpose hardware, other software and special features of the respective communication system.

It is not likely and not intended that the tested software supports all features mentioned in this document. So this document only states test cases performed successfully or errors. While features not supported by the tested communication system will be counted as neutral (with not influence on the approval).

2.3. Word Usage

In this document the usage of "must", "shall" and "have to" are used in the meaning of mandatory without any exception. "Should" has the meaning of mandatory but exceptions are possible if desired with an adequate explanatory statement. "May" and "can" are used in the meaning of optional.

"NOK" means "not okay" because test ended with error or failed and one or more reasons must be commented. "OK" means "okay" because test succeeded or ended with success and additional comment is optional. "N/R" means "not required" but a reason must be commented (e.g. "Test needed but customer agreed not to perform due to resource lack"). "N/A" means "not applicable" e.g. test cannot be done (nothing of that kind implemented in SW or specified in a requirement).

3. Introduction

3.1. Background Information

There are differences between the actions initiated via TAPI or directly at the phone. Contrary to the phone, actions initiated via TAPI already provide rich information to the interface (especially conferences). So actions initiated using the phone can lead to different behavior on the TAPI interface or in ProCall.

3.2. Test Procedure

Prerequisites for the test environment:

- Connection to outside line
- At least three (3) connected phones

As test application for ECSTA or any third party TSP estos ephone.exe shall be used. Each test case has to be executed with internal and external participants and should be verified using the phone.

The result has to be set in RESULT column using the results set forth above, any observations and errors shall be reported using the COMMENTS column. Before reporting errors the tester should determine whether the error originates from the TSP or PBX system.

The mention of party A1, A2 or similar in the PARTY column always refers to different line states as stated in the screenshot below.

📕 ESTOS TAPI	Phone Dialer	Extended -	4.0.0.1					
- Session				4	🕩 2 of 2			
	103 [User 2]			•	End Session			
Address:								
MWI E	🛛 LCK 🗹 CO	N 🔽 SVC	Fw/D		Configure			
Phone #:			Ma <u>k</u> e Call	<u>P</u> ickup	<u>U</u> npark			
Calls		Max	Calls: 21		▶ 2 of 2			
Call Features CallType CallDirection Caller Called Connected	Call State: Ringback Trunk ID: 0xFFFFFFF Call Features: 0x800000A0 Host CallID: 0x30303535 CallType: Direct Media: Voice Rel. CallID: 0x0 CallDirection: Outbound Appspecific: 0x0 Caller: 103 Called: 601 Connected: Redirecting: Connected: Connected:							
QOS Info	ISDN Info	U <u>s</u> er Info	Call <u>D</u> ata	Features	00:00:05			
Acc <u>e</u> pt	A <u>n</u> swer	Hojd	<u>S</u> wap	Hang Up	Dial Digits			
Complete	<u>R</u> edirect	<u>T</u> ransfer	<u>M</u> erge	Conference	<u>P</u> ark			
Appspecific	Conference	Add Party	Drop Party	Conf <u>L</u> ist	Forward			
			· · · · · · · · · · · · · · · · · · ·	09.09	.2015 - 17:15:57			

3.2.1. Exceptions

An exception are hidden TAPI functions, e.g. different types of call forwarding. Tests, which are not doable due to hidden TAPI features, have to be marked accordingly as stated above.

3.2.2. Specialities

Mostly conferences are displayed differently between the TSP and the phone. The conference itself is only displayed for the starter, not for the participants, they only see a connection to the starter.

3.2.3. ECSTA for SIP-Phones

ECSTA for SIP Phones controls the phones directly, without using a central entity. So there is no connection between calls in different scenarios where multiple phones are involved.

- Group call scenarios will fail, as calls do not get the same HOSTCALLID.
- Redirecting of calls will eventually lead to wrong CALLED and REDIRECTING information.

3.3. Example

		A	CallState: Dialtone -> Dialing -> Ringback
			Direction: Outbound
			Caller: A
	Make Call:		Called: B
1.1.1	A calls B	В	CallState: Offering
			Direction: Inbound
			Caller: A
			Called: B

📰 ESTOS TAPI	Phone Dialer	Extended -	4.0.0.1		_ 🗆 ×	<	📱 ESTOS TAPI	Phone Dialer	Extended -	4.0.0.1		_ 🗆 ×
Session					▶ 1 of 1		Session					▶ 1 of 1
Device:	102 [User 1]				End Session		Device:	103 [User 2]				ind Session
Address:	102 · ID 0			▼ Ag	gent Phone		Address:	103 - ID 0			Ag	ent Phone
⊢ MWI I	🗆 LCK 🗹 CO	N 🗹 SVC	PWD		Configure		E MWI E	🛛 LCK 🗖 CO	N 💌 SVC	FWD		Configure
Phone #:	103		Make Call	Pickup	Unpark		Phone #:			Make Call	Pickup	Unpark
Calls		Max	(Calls: 21	T	▶ 1 of 1		Calls		Мах	Calls: 21	T	▶ 1 of 1
Call Feature: CallType CallDirection Calle	ŗ		: Voice	Trunk ID: (Host CallID: (Rel. CallID: (Appspecific: (AddressID: (DxO DxO		Call Features CallType CallDirection Caller	: Inbound/Int : 102 : 103 :	Media	: Voice	Trunk ID: (Host CallID: (Rel. CallID: (Appspecific: (AddressID: ()x30303839)x0)x0
QOS Info	ISDN Info	User Info	Call Data	Features	00:00:03		QOS Info	ISDN Info	User Info	Call Data	Features	00:00:03
Accept	Answer	Hold	Swap	Hang Up	Dial Digits		Accept	Answer	Hold	Swap	Hang Up	Dial Digits
Complete	Redirect	Transfer	Merge	Conference	Park		Complete	Redirect	Transfer	Merge	Conference	Park
Appspecific	Conference	Add Party	Drop Party	Conf List	Forward		Appspecific	Conference	Add Party	Drop Party	Conf List	Forward
				02.09.	2015 - 09:12:08						02.09.	2015 - 09:12:08

The next step is to verify the test scenario involving an external participant using ephone.exe. In this case party B has to become external participant.

Then both test should be executed using the phone.

4.Software Acceptance

4.1. PhoneSuite - TAPI for Asterisk

4.1.1. Result of Acceptance

Test type :	Test of functional and non-functional requirements
Install Package :	PhoneSuite (TAPI for Asterisk) 1.1.098
Test object :	PhoneSuite (TAPI for Asterisk) 1.1.098 and Kerio Operator Combination
Test environment :	Kerio Operator V300, 2.4.5 build 5285, snom820, snom821, Panasonic KX-UT670
Main focus :	CTI functionality and interoperability with ProCall Enterprise
Overall status :	Approval successful with restrictions (Basic CTI Function is given)

4.1.2. Reasons of Approval

	Inspection Records								
Test case	Test description	Expected result			Comments				
no.		Party	Call states	Result	Comments				
1.1			Basic test scenarios	;					
1.1.1	Make Call: A calls B	В	CallState: Dialtone -> Dialing -> Ringback Direction: Outbound Caller: A Called: B CallState: Offering Direction: Inbound Caller: A Called: B	— ОК	Snom 820 to snom 821				

		A	CallState: Connected		
			Direction: Outbound		
			Caller: A		
			Called: B		
	Incoming Call: Answer		Connected: B	01/	
1.1.2	A calls B, B answers the call	В	CallState: Connected	ОК	
			Direction: Inbound		
			Caller: A		
			Called: B		
			Connected: A		
	Incoming Call: reject	A	No Call	ОК	
1.1.3	A calls B, B rejects	В	No Call	UK	
		A	CallState: Ringback		
			Direction: Outbound		
			Caller: A		
			Called: B		
			Connected:		
	In coming Colly Dodigost		Redirecting: B		
1.1.4	Incoming Call: Redirect A calls B, B redirects to C	С	CallState: Offering	NOK	Not possible
	A calls B, B redirects to C		CallType: Redirect		
			Direction: Inbound		
			Caller: A		
			Called: B		
			Connected:		
			Redirecting: B		

1.1.5	Redirected Call: Answer A calls B, B redirects to C, C an- swers the call	A CallState: Connected Direction: Outbound Caller: A Called: B Connected: C Redirecting: B C CallState: Connected CallType: Redirect Direction: Inbound Caller: A Called: B Connected: A Redirecting: B	NOK	Not possible
1.1.6	Outbound Call: Hang Up A calls B, A hangs up before con- necting.	A Hang up is possible and workingB No call anymore	ОК	
1.1.7	Connected Call: Hang up A is connected to B, A hangs up	A,B Hang up is possible and working	ОК	
1.1.8	Connected Call: Hold A is connected to B, A holds the call	A1 CallState: On Hold (no A2) or CallState: On Hold Pending Transfer A2 CallState: Dial tone B CallState: Connected	ОК	
1.1.9	Held call: Unhold A holds B, A Unhold	A,B Connected	ОК	

1.1.10	Connected Call: blind transfer (single step transfer) A connected to B, A transfers the call to C, C answers	A No call B CallState: Connected Call Type: Transfer Direction: Inbound Direction: Inbound Caller: A Called: B Connected: C Redirecting: A CallState: Offering -> Connected C CallState: Offering -> Connected Call Type: Transfer Direction: Inbound Called: B Connected: / -> B Redirecting: A Called: B Connected: / -> B Redirecting: A	ОК	B wrong ConnectID No usable Redirecting Information
1.1.11	Connected call: consultation transfer A is connected to B, A starts a consultation transfer with, C an- swers	A1 CallState: On Hold Pending Transfer A2 CallState: Connected Caller: A Called: C Connected: C Connected: C B CallState: Connected (oder On Hold) Caller: A Called: B Connected: A CallState: Connected C CallState: Connected Called: B Connected: A C CallState: Connected Caller: A Called: C Connected: A Called: C	ОК	

1.1.12	Connected call: consultation transfer, merge Like 1.1.11, A merges the call be- tween B and C	A B C	Feature: Merge Caller: A Called: B Connected: C Redirecting: A Caller: A Called: C Connected: B Redirecting: A	N/A		
1.1.13	DTMF A connected with B, A starts dial digits	A	Hears DTMF	ОК		
1.2	Conference					

1.2.1	Conference A starts conference with B and C	A1 CallState: Connected CallDirection: Conference A2 CallState: Conferenced Caller: A Called: B Connected: B A3 CallState: Conferenced Caller: A Called: C Connected: C B CallState: Connected Called: C Connected: A Called: B Connected: A C Callet: A Called: B Connected: A C Callet: A Called: B Connected: A C Callet: A Caller: A Caller: A Caller: A Caller: A Called: C Connected: A	NOK	No conference Support via TAPI Via Phone, TAPI shows wrong info
1.2.2	Conference: Participant hangs up A conferenced with B and C, B hangs up	A No conference Connected: C C Connected: A	NOK	No conference Support via TAPI
1.2.3	Conference: Starter hangs up A conferenced with B and C, A hangs up	 A, Depends on PBX settings. Normally B and C are connected B, or the conference is hung up C 	NOK	No conference Support via TAPI
1.2.4	Conference: Remove Party A conferenced with B and C, A removes B	A No conference Connected: C B No call C Connected: A	NOK	No conference Support via TAPI
1.3		Advanced test scenario)S	

1.3.1	Connected and incoming call: busy A is connected to B, C calls A, busy	A1 (A2) ¹ C	CallState: Connected Direction: Outbound Caller: A Called: B Connected: B CallState: Offering CallState: Busy	ок	
1.3.2	Connected and incoming call: Call waiting A is connected to B, C calls A, call waiting	A2 C	CallState: Connected Direction: Outbound Caller: A Called: B Connected: B CallState: Offering Direction: Inbound Caller: A Called: B (CallType: CampedOn) CallState: Dial tone -> Dialing -> Ringback Direction: Outbound Caller: A Called: B	ОК	
1.3.3	Connected and incoming call: Call waiting and answer A is connected to B, C calls A, call waiting, A answers	A2	B on Hold Connected to C Connected to A	NOK	
1.3.4	Connected and incoming call: Call waiting and reject A is connected to B, C calls A, call waiting, A rejects C	A (Connected to B	NOK	Wrong party is disconnected

¹ Not possible with all ECSTA

1.3.3	Connected and incoming call: Call waiting and redirect A is connected to B, C calls A, call waiting, A redirects C to D	A C D	Connected to B Caller: C Called: A Connected: D Redirecting: A Connected: C Redirecting: A	NOK	Maybe misconfiguration at pbx side
1.3.4	Connected call and one on hold: Swap hold A is connected to B, A consulta- tion transfer to C, C answers, A swap hold between B and C	A1 A2		N/A	No swap hold available
1.3.5	Complete Call: Callback A is connected to B, C calls A and busy, C completes call: callback, A hangs up	C	Callback	N/A	
1.3.6	Complete Call: Callback and Answer A is connected to B, C calls A and busy, C completes call: callback, A hangs up, C answers callback	CA	Outbound call to A Inbound call from C	N/A	
1.3.7	Complete Call: Callback, Reject A is connected to B, C calls A and busy, C completes call: callback, A hangs up, C rejects callback	С	No callback	N/A	

1.3.8	Pickup: direct Call Incoming call on A, B picks the call	B CallType: Pickup Called: A Redirecting: A	NOK	
1.3.9	Call on Group (circular/paral- lel): incoming C calls group. Call rings on A, B	A CallState: Offering HostCallID: like B Direction: Inbound Caller: C Called: Group Redirecting: Group B CallState: Offering HostCallID: like A Direction: Inbound Called: Group Redirecting: Group	ОК	Wrong CallID and no Redirecting ID (no ProCall Analytics Support)
1.3.10	Call on Group: answer C calls group. Call rings on A, B. A answers the call	A CallState: Connected HostCallID: like 1.2.9 Direction: Inbound Caller: C Called: Group Connected: C Redirecting: Group	ОК	Wrong CallID and no Redirecting ID (no ProCall Analytics Support)
1.3.11	Pickup: Call on Group C calls group. Call rings on A, B. D picks call from A	D CallState: Connected CallType: Pickup HostCallID: like 1.2.9 Direction: Inbound Caller: C Called: Group Connected: C Redirecting: Group or A	N/R	

1.3.12	Redirect: Call on Group C calls group. Call rings on A, B., A redirects to D, D answers the call	D	CallState: Connected CallType: Redirect Direction: Inbound Caller: C Called: Group Connected: C Redirecting: Group or A	NOK	
1.3.13	Drop to Extension C calls A, Call is dropped to B, B answers the call	В	CallState: Connected Direction: Inbound Caller: C Called: A Connected: C Redirecting: A	ок	Wrong CallID
1.3.14	Drop to Group C calls A, Call is dropped to Group (B is member), B answers the call	В	CallState: Connected Direction: Inbound Caller: C Called: A Connected: C Redirecting: Group or A	NOK	CallerID only after a call is connnected, no Redirecting Information
1.4			Forwarding test scenari	os	
1.4.1	Call Forwarding: Unconditional A Call Forwarding: Uncondi- tional B	A	Forwarding is set	NOK	Not possible in Phone.exe Possible in ProCall, but no effect
1.4.2	Call Forwarding: Unconditional C calls A	B	Caller: C Called: A Redirecting: A Caller: C Called: A Redirecting: A	NOK	Not possible in Phone.exe

1.4.3	Call Forwarding: Internal (Un- conditional) A Call Forwarding: Internal (Un- conditional)B	A Forwarding is set N/A
1.4.4	Call Forwarding: Internal (Un- conditional) C calls A	B Caller: C Called: A Redirecting: A C Caller: C Called: A Redirecting: A Redirecting: A
1.4.5	Call Forwarding: External (Un- conditional) A Call Forwarding: External (Un- conditional)B	A Forwarding is set
1.4.6	Call Forwarding: External (Un- conditional) External contact calls A	B Caller: external contact Called: A Redirecting: A
1.4.7	Call Forwarding: Busy A Call Forwarding: Busy B	A Forwarding is set N/A
1.4.8	Call Forwarding: Busy C calls busy A	B Caller: C Called: A Redirecting: A C Caller: C Called: A Redirecting: A Redirecting: A
1.4.9	Call Forwarding: (internal) Busy A Call Forwarding: (internal) Busy B	A Forwarding is set NOK

1.4.10	Call Forwarding: (internal) Busy C calls busy A	B Caller: C Called: A Redirecting: A C Called: A Redirecting: A Redirecting: A
1.4.11	Call Forwarding: (external) Busy A Call Forwarding: (external) Busy B	A Forwarding is set N/A
1.4.12	Call Forwarding: (external) Busy External contact calls busy A	B Caller: external contact Called: A Redirecting: A
1.4.13	Call Forwarding: No Answer A Call Forwarding: No Answer B	A Forwarding is set N/A
1.4.14	Call Forwarding: No Answer C calls A, A doesn't answer	B Caller: C Called: A Redirecting: A C Called: A Redirecting: A Redirecting: A
1.4.15	Call Forwarding: No Answer (internal) A Call Forwarding: No Answer (Internal) B	A Forwarding is set N/A

1.4.16	Call Forwarding: No Answer (internal) C calls A, A doesn't answer	B	Caller: C Called: A Redirecting: A Caller: C Called: A Redirecting: A	N/A	
1.4.17	Call Forwarding: No Answer (external) A Call Forwarding: No Answer (external) B	A	Forwarding is set	N/A	
1.4.18	Call Forwarding: No Answer (external) External contact calls A, A doesn't answer	В	Caller: external contact Called: A Redirecting: A	N/A	
1.4.19	Call Forwarding: Unconditional / do not disturb A do not disturb	A	DND is set	NOK	
1.4.20	Call Forwarding: Unconditional / do not disturb C calls A	C	DND tone	NOK	
1.4.21	Forwarding: Remove A removes forwarding	A	Forwarding is removed	N/R	
1.4.22	DND: remove A removes DND	A	DND is removed	N/R	Can be set in ProCall, but has no effect
1.5	Special test scenarios (not controllable via ProCall)				

1.5.1	Complete Call: Intrude A connected to B, C calls A and it is busy, C intrudes A Complete Call: Intrude, Hang	A No change B No change C Conferenced with A, B	N/A	
1.5.2	up A connected to B, C calls A and it is busy, C intrudes A, C hangs up	A No change B No change C No call	N/A	
1.5.3	Complete Call: Intrude, one hangs up A connected to B, C calls A and it is busy, C intrudes A, A or B hangs up	A, B, No call C	N/A	
1.5.4	Active participation A connected to B, C calls A and it is busy, C participate actively on A	AConferenced with C and BBNo changeCConferenced with A and B	N/A	
1.6		Non-functional test scena	rios	
1.6. 1	PBX restart	A Line is not in service (SVC) and gets into service after the re- start	NOK	Seems always to be "green" (in Service)
1.6.2	Device restart	A Line is not in service (SVC) and gets into service after the re- start	NOK	Seems always to be "green" (in Service)
1.6.3	Connection PBX – Server is dis- connected	A Line is not in service (SVC)	NOK	Seems always to be "green" (in Service)

1.6.4	Connection PBX – Server is re- established	A Line is in service (SVC)	ОК	
1.6.5	Snapshot Device	A In the set time interval the Snapshot can be seen in the log	N/R	
1.6.6	Read out lines	A Line is read out	ОК	All lines can be read out via PhoneSuite TSP

4.1.3. References

4.2. ProCall Enterprise – Remote Office

4.2.1. Result of Acceptance

Test type :	Test of functional requirements
Install Package :	
Test object :	
Test environment :	
Main focus :	
Overall status :	Approval failed

4.2.2.Reasons of Approval

	Inspection Records					
Test case Test description		Expected result		Result	Comments	
no.		Party	Call states	- Result	Comments	
2	2					
2.1.0	Call Forwarding: Unconditional A Call Forwarding: Uncondi- tional to external contact	A Forwarding is	set	NOK	No forwarding	
2.2.0	Make Call: A calls external contact in hands-free mode	A The call is set	up in hands-free mode of the device	ОК	Just with snom devices	

2.3.0	Consultation Transfer ² like 2.2.0, consultation transfer to 2nd external participant	A1 On Hold A2 CallState: Ringback Feature: Merge	NOK	
2.4.0	Blind Transfer like 2.2.0, call is transferred blind	A Blind transfer is possible and will be executed		Only root number is displayed, without ddi.

4.2.3.References

_	

² Please necessarily note FIVE-2190 regarding Ringback

4.3. ProCall Analytics

4.3.1. Result of Acceptance

Test type :	Test of functional requirements
Install Package :	
Test object :	
Test environment :	
Main focus :	
Overall status :	Approval successful with restrictions

4.3.2. Reasons of Approval

	Inspection Records					
Test case	Test description	Expected result		Result	Comments	
no.		Part	/ Call states	Kesolt	Comments	
3						
3.1.0	Call on Group (circular/paral- lel): incoming C calls group. Call rings on A, B	В	CallState: Offering HostCallID: like B Direction: Inbound Caller: C Called: Group Redirecting: Group CallState: Offering HostCallID: like A Direction: Inbound Called: Group Redirecting: Group	ОК		

		Α	CallState: Connected		
			HostCallID: like 3.1.0		
	Call on Group: Answer		Direction: Inbound		
3.2.0	C calls group. Call rings on A, B.		Caller: C	ОК	
	A answers the call		Called: Group		
			Connected: C		
			Redirecting: Group		

4.3.3. References