

Mitel Technical Configuration Notes – HO4679

March 25, 2022

## Configure MiVoice Office 400 7.0 for use with Tetronik Digital Alarm and Communications Server (DAKS) using SIP and AXI/XML Interface

**Description:** This document provides a reference to Mitel Authorized Solutions providers for configuring the MIVO400 7.0 to connect to the Tetronik Digital Alarm and Communications Server (DAKS) using SIP and AXI/XML Interface.

**Environment**: MiVoice Office 400 7.0 (9237c1), RFP 43 and RFP 35 SIP-DECT 8.3SP2-HA16, Mitel 68XX Phone and Mitel 69XX Phone 6.1.0.146, SIP-DECT Phone 632v2 (Firmware-Version 7.4.5), 612d (Firmware-Version 7.3.2), 622d (Firmware-Version 7.3.2)

## NOTICE

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Networks<sup>™</sup> Corporation (MITEL<sup>®</sup>). The information is subject to change without notice and should not be construed in any way as a commitment by Mitel or any of its affiliates or subsidiaries. Mitel and its affiliates and subsidiaries assume no responsibility for any errors or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate such changes.

No part of this document can be reproduced or transmitted in any form or by any means electronic or mechanical - for any purpose without written permission from Mitel Networks Corporation.

## TRADEMARKS

Mitel is a trademark of Mitel Networks Corporation.

Windows and Microsoft are trademarks of Microsoft Corporation.

Other product names mentioned in this document may be trademarks of their respective companies and are hereby acknowledged.

Mitel Technical Configuration Notes – Configure MiVoice Office 400 7.0 for use with Tetronik Digital Alarm and Communications Server using SIP and AXI/XML Interface.

March 2022 – HO4679

<sup>®</sup>,<sup>™</sup> Trademark of Mitel Networks Corporation
 © Copyright 2022, Mitel Networks Corporation
 All rights reserved

## **Table of Contents**

Overview	1
Interop History	1
Interop Status	1
Software & Hardware Setup	2
Tested Features	3
Device Limitations and Known Issues	4
Network Topology	5
Configuration Notes	6
MiVO400 Configuration Notes	6
Mitel OM-AXI Interface Configuration	22
Mitel SIP-DECT Configuration Notes	22
Basic System Configuration	22
Base Station Startup Configuration	22
System Configuration	24
System Settings	25
SIP Settings	26
DECT Phones	28
DECT Phone Device Subscription	30
Tetronik Digital Alarm and Communications Server Configuration – OM AXI Interface	33
Glossary	36

## Overview

This document provides a reference to Mitel Authorized Solutions providers for configuring the Mitel MiVO400 to connect to Tetronik Digital Alarm and Communications Server using SIP and AXI/XML Interface. The different devices can be configured in various configurations depending on your VoIP solution. This document covers a basic setup with required option setup.

## **Interop History**

Version	Date	Reason
1	March 2022	Interop with MiVoice Office 400 7.0 for use with Tetronik Digital Alarm and Communications Server (DAKS) using SIP and AXI/XML Interface.

## **Interop Status**

The Interop of Service Provider Tetronik Digital Alarm and Communications Server (DAKS) has been given a Certification status. This service provider or trunking device will be included in the Mitel Interoperability Reference Guide (IRG). The status Service Provider Tetronik Digital Alarm and Communications Server (DAKS) achieved is:



The most common certification which means Service Provider Tetronik Digital Alarm and Communications Server (DAKS) has been tested and/or validated by the Mitel Third-Party Interop Team. Mitel Product Support will provide all necessary support related to the interop, but issues unique or specific to the 3rd party will be referred to the 3rd party as appropriate.

## Software & Hardware Setup

This was the test setup to generate a basic call between Tetronik Digital Alarm and Communications Server (DAKS) using SIP and AXI/XML Interface and with MiVO400.

Note – Although this testing was performed on the below tested variants, the scope of this testing can be extended to other product variants that work with the same firmware. The list of components for which this testing can be considered applicable is given in the "Additional Applicable Variants" column of the following table –

Manufacturer	Tested Variants	Software Version	Additional Applicable Variants
Mitel	MiVoice Office 400	Release 7.0 (9237c1)	N/A
Mitel	69XX SIP and 68XX SIP	6.1.0.146	N/A
Mitel	IP- DECT- BS RFP 43 & 35	SIP-DECT 8.3 SP2- HA16	RFP 4X and RFP 3X
Mitel	DECT Handsets 632 v2 612d, 622d	7.4.5 7.3.2	600 DECT Phone Series
DAKS	DAKSpro300	Version 9.04c	DAKSpro200

## **Tested Features**

This is an overview of the features tested during the Interop test cycle and not a detailed view of the test cases.

Feature	Feature Description	Issues
Send Text Message	Sending text messages and alarms with different priorities, differentiate priorities via text colors and/or ring tones.	Ŕ
Offer Alternative Responses	Show a menu offering different response alternatives via menu keys or the dial pad	ľ
Receive response on messages	Recognize answers and start escalation processes, if required	<b></b>
Establish emergency conference	Call several users and start a conference for all users or for those, who answered the call	<b>Z</b>
DTMF	RFC-2833 (Out-of-band)	<b>v</b>
Video	Making and receiving a call through DAKS with video capable devices.	N/A
TLS/SRTP	Making and Receiving Calls through Secure Mode	<b>V</b>

🗹 - No issues found

🔀 - Issues found, cannot recommend to use \Lambda - Issues found

N/A Not applicable

## **Device Limitations and Known Issues**

This is a list of problems or unsupported features when Tetronik Digital Alarm and Communications Server is connected to the MIVO400.

Feature	Problem Description
Codec	G.729 & G722 is not supported by DAKS.
	Recommendation: G729 & G722 codecs are not supported.
	For more details contact Tetronik support.
Video Calls	Video calling not supported.
	<b>Recommendation</b> : Contact Tetronik to know more about the availability of video calling feature.
DTMF	In-Band & SIP-INFO DTMF methods currently not supported.
	Recommendation: Contact Mitel support for more details.
Locating and User	No locating, no user monitoring is currently supported by DAKS.
monitoring	<b>Recommendation</b> : Contact Tetronik to know more about the availability of this feature in upcoming releases.

## **Network Topology**



Figure 1 – Network Topology

## **Configuration Notes**

This section is a description of how the SIP Interop was configured. These notes should give a guideline how a device can be configured in a customer environment and how Tetronik Digital Alarm and Communications Server programming was configured in our test environment.

Disclaimer: Although Mitel has attempted to setup the interop testing facility as closely as possible to a customer premise environment, implementation setup could be different onsite. YOU MUST EXERCISE YOUR OWN DUE DILIGENCE IN REVIEWING, planning, implementing, and testing a customer configuration.

### MiVO400 SIP trunk configuration notes

The following steps show how to program a MiVO400 to interconnect with Tetronik Digital Alarm and Communications Server (DAKS).

## Configuration Template

A configuration template can be found in the same Mitel Knowledge Management System (KMS) article as this document. The template is a Microsoft Excel spreadsheet (.XML format) **solely** consisting of the SIP Peer profile option settings used during Interop testing. All other forms should be programmed as indicated below. Importing the template can save you considerable configuration time and reduce the likelihood of data-entry errors. Refer to the MIVO400 documentation on how the Import functionality is used.

### Network Requirements

- There must be adequate bandwidth to support the voice over IP. As a guide, the Ethernet bandwidth is approx 85 Kb/s per G.711 voice session and 29 Kb/s per G.729 voice session (assumes 20ms packetization). As an example, for 20 simultaneous SIP sessions, the Ethernet bandwidth consumption will be approx 1.7 Mb/s for G.711 and 0.6Mb/s. Almost all Enterprise LAN networks can support this level of traffic without any special engineering. Please refer to the MIVO400 Engineering guidelines for further information.
- For high quality voice, the network connectivity must support a voice-quality grade of service (packet loss <1%, jitter < 30ms, one-way delay < 80ms).

### Assumptions for MIVO400 Programming

The SIP signaling connection uses TCP on Port 5060.

#### Licensing and Option Selection

Ensure that MiVoice Office 400 is equipped with enough SIP Access Channel licenses for the connection to Tetronik Digital Alarm and Communications Server (DAKS). Up to 30 SIP voice channels are available for each SIP provider. For each SIP voice channel, you need a SIP Access Channels license. System overview – Licensing – Interfaces

Check whether the required licenses are available and have the status «enabled».

**Note:** ATAS Interface and ATASpro Interface license is not needed for Tetronik Digital Alarm and Communications Server (DAKS).

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	🔓   😵 🌒   Welcome admin   🕃   ?   🔂 Experimente 💙 💷 🐄 📿 Second
System overview System information	Reload	
State Cards and modules	System	
Licences	Equipment ID (EID)	50085AE28039FC07E33312C753521E808B5C
Security	Sales channel	DE-Freemarket
Configuration	Communication server	SMB Controller
Phone book	Release	7.0
Maintenance	Support ID	454075
Setup wizard	Configured users	10
	User licences (used / available / total)	User: 10/0/10
	Software Assurance (SWA)	
	SWA state	Active unit: 20.04.2027 (Free service period unit: 20.04.2022)
	SWA covered users	50 (unlimited during free service period)
	Configured users requiring SWA	10
	Licence (LIC)	
	Licence file	50085AE28839FCD7E33312C753521E80885C_770_smbc_de_jetronkgmbh_6_20220323 ic
	Licensable features	Licence state Additionally available without licence
	Software	
	Software Release	present
	SW Assurance (Information stored in Licence Code - not ne	sed if system has internet access - might differ from Licence Server )
	Software Assurance	licensed until 20.04.2027
	Software Assurance Users	50
Licensable features	Licence	Ate Additionality available without licence
Distant	2	
Dialers	2	
Hospitality Manager	enabled	
Hospitality PMS Interface	enabled	
Hospitality PMS Rooms	6	
OpenCount Generation		
OpenCount Administration		
OpenCount Basic		
OpenCount Healthcare		
OpenCount Update Comfort		
OpenCount Update Premium		
OpenCount Users		
TWP Connection		
Interfaces		
ATAS Interface		
ATASpro Interface		
CSTA Sessions		
Audio Services		
Conference Bridge	enabled	
Number in Queue	enabled	
Auto-Attendant	enabled	
Enterprise Voice Mail	enabled	
Audio Record & Play Channel	ls 2	
Enaturos		
Apploque Modem		
Analogue mouem	baldena	
Secure voir	0100100	
Silent intrusion		
Resources		
G.729 Codecs		
VoIP Channels for Standard M	Jedia Switch 2	2 in VoIP mode G.711 or Secure G.711
Network		
Lync Option for SIP Access C	hannels	
B-Channels on PRI Cards		10 for each PRI port
SIP Access Channels	4	

Figure 2 – Licensing

The tool that is needed to configure the DAKS Server at a MiVoice Office 400 system is the "MiVoice Office 400 Web Admin", which you will find abbreviated in this document as Web Admin.

This chapter shows you how to configure the MiVoice Office 400 to operate in combination with a DAKS-Server with the coupling realized via VoIP trunk.



🕅 OpenMobility Manager SIP	-DECT X MiVoice Office 400 X +	v – D	×
$\leftarrow \rightarrow C$ A Nicht si	cher   https://192.168.65.168/admin/default.asp	🖻 ☆ 👲 🌲 😩	:
🕅 Mitel	MiVoice Office 400 🔓   😵	🔵   Welcome admin   💽   ?   Expert mode 💙 EN 💙 📿 Search	)
System overview A Configuration Summary Users Terminals	Apply Reload Back Select	✓: 12 14 14 ★ DAKS07 (1) ✓ >>	_
System Routing Services IP network	General SIP node	1	Â
Private networking SIP networking Lvnc	Name Bandwidth control area	DAKS07 Default Area	
PISN user AIN Hospitality	Trunk group Maximum incoming calls	1 - DAKS07 30	
Charges Phone book Maintenance	IP addressing IP address / host name Part	daks0701.aen.tetronik.com	
Setup wizard	SIP signalling Use '+' as international prefix		i
	Try to make external calls: Timeout (s) 'From' field for CLIR	8 🔁 Anonymous with privacy/critical (RFC 3261) 🗸	
	Send session refresh (RFC 4028) Use destination URL from	To' field	
	Music on hold: Signalling Send redirecting information	Automatic	
	Call transfer mode PRACK support (RFC 3262)	Re-INVITE V	1
	Use SAVP for SRTP Session replacement support		
	Audio settings Preferred codec	G.711a V	
	NAI SIP keep alive ALG support		
	Relay RTP data via communication server (indirect switching) Authentication		•
Copyright © 2021 Mitel Netw	vorks Corporation - All rights reserved		

OpenMobility Manager SIP-	DECT X Da MiVoice Office 400 X +		✓ - □
← → C ▲ Nicht si	cher   https://192.168.65.168/admin/default.asp		· ☆ • 🛸 🛓
🕅 Mitel	MiVoice Office 400 🔓   😵	🔵   Welcome admin   💽   ?   Expert mode 🔍 EN 💙 🤇	Q Search
System overview A Configuration Summary	Apply Reload Back		
Users Terminals System	Select	CAKS07 (1) V	
Routing	waximum incoming calls	SU 💌	
Services IP network	IP addressing		
Private networking	IP address / host name	daks0701.aen.tetronik.com	
SIP networking	Port	5060	
Lync DISN waar	SIP signalling		
AIN	Use '+' as international prefix		
Hospitality	Try to make external calls: Timeout (s)	8	
harges	'From' field for CLIR	Anonymous with privacy/critical (RFC 3261)	
hone book aintenance	Send session refresh (RFC 4028)		
etup wizard	Use destination URL from	'To' field	
	Music on hold		
	Music on hold: Signalling	Automatic	
	Send redirecting information	No	
	Call transfer mode	Re-INVITE 💙	
	PRACK support (RFC 3262)		
	Use SAVP for SRTP		
	Session replacement support		
	Audio settings		
	Preferred codec	G.711a 💙	
	NAT		
	SIP keep alive		
	ALG support		
	Relay RTP data via communication server (indirect switching)		
	Authentication		
	Local authentication required		
	User name		
	Password		Show password
	Transport protocol		
	Transport protocol	тср	

Figure 3 – SIP networking

🕅 OpenMobility Manager SIP-DECT 🗙 🗖	MiVoice Office 400 × +	<ul> <li>✓ - □</li> </ul>	×
← → C ▲ Nicht sicher   https://	//192.168.65.168/admin/default.asp	3 🖈 🛛 🛊 🛔	1 E
	ce Office 400 <sup>™</sup>	Search	$\supset$
System overview Configuration Summary Users Terminals System Routing Graphical view List view Exchange Ext./Int. mapping Emergency calls Services LCR Blacklist CLIP based routing Services IP network Private networking Lync PISN user AIN Hospitality Charges Phone book Maintenance Setup wizard Covyright @ 2021 Milel Networks Corporat	ering plan	Users (12)	

🕅 OpenMobility Manager SIP-DECT 🗙 🗖	MiVoice Office 400 × +		v – [	- ×
← → C ▲ Nicht sicher   https://	192.168.65.168/admin/default.asp		🖻 🕁 📀 🌲	<b>.</b> :
	e Office 400 🛛 🔓   😵 🔵   <sup>estanlage</sup>	Welcome admin   💽   ?   Expert r	node V EN V Q Search	
System overview     Image: Configuration     > Number       Configuration     Number       Summary     Network in       Users     Image: Configuration       Terminals     Image: Configuration       System     Image: Configuration       Routing     Image: Configuration       Graphical view     Image: Configuration       List view     Image: Configuration       Exchange     Image: Configuration       Emergency calls     Image: Configuration	ing plan > Switch group > Outgoing > Arro terfaces (4) Trunk groups (4) DDI( 10 10 10 10 10 10 10 10 10 10	ws Q Filter DID) plan (0) Call distribution (2) Add Add 1 1 k format of incoming calls Expand all sec 30	Filter     ?       User groups (99)     Users (12)       All     Add       C     16       Operator console       Etions     Image:	
Service numbers 034 Data services Sil LCR DAK Blacklist CLIP based routing Services IP network Private networking SIP networking Lync PISN user AIN Hospitality Charace	Call distribution element     Call distribution element     DDI(DID) plan     DDI(DID) cut     DDI(DID) cut     DDI(DID) lookup     Trunk line selection mode     Transit route     Region     Emergency location     Emergency location     Emergency location     Emergency location     Emergency location     Emergency location	1       None       0       Efft to right       Linear       None       None       Inherit (⇒)       No location identifier       No Municipality identifier		
Phone book Maintenance Setup wizard	Networking         Network type         Ring if NPI is 'Unknown'         Cut CLIP         Overwrite NPI         Ring back tone for incoming calls         Send immediate release in case of busy         Called Party Number Format         Early media support for Lync         > Features         Call identification (CLIP)	Private   External  C  C  C  C  C  C  C  C  C  C  C  C  C		
Copyright © 2021 Mitel Networks Corporati	Network interfaces			2

Figure 4 – Trunk group configuration

🕅 OpenMobility Manager SIP-DI	ECT × Da MiVoice Office 400 × +	~ – 🗆 ×
$\leftarrow$ $\rightarrow$ C $\blacktriangle$ Nicht sich	er   https://192.168.65.168/admin/default.asp	🖻 🖈 🛛 🛊 😩 :
🕅 Mitel 🗌	MiVoice Office 400 🚡   😵 🔵   Welcome admin   💽   ?   Expert mode 💙 EN 💙	Q Search
System overview Configuration Summary Users Terminals System Routing Graphical view List view Exchange Ext/Int. mapping Emergency calls Service numbers Data services LCR Blacklist CLIP based routing Services IP networking Services IP networking Lync PisN user AIN Hospitality Charges Phone book Maintenance Setup wizard	Numbering plan > Switch group > Outgoing > Arrows C Filter Filter Filter ?   Network interfaces (4) Tunk groups (4) DD((DD) plan (0) Call distribution (2) User groups (9) Add	Add         Operator console         Conference bridge         8800         user-8800         8801         user-8801         8802         user-8803         8805         user-8804         8805         user-8805         8815         NST-8816         8818         NST-8818
Copyright © 2021 Mitel Netwo	rks Corporation - All rights reserved	

Figure 5 – Graphical view

## **Configuration of the DAKS Server**

This chapter shows you how to configure the DAKS server to operate in combination with a MiVoice Office 400 with the coupling realized via sip-trunk.

The tool that is needed to configure the DAKS Server is the "tetronik Virtual Console", which you will find abbreviated in this document as VCON.

📥 Abo	out VCON	×
	tetronik Virtual Console Version 2.05a (Protokoll Version 527)	Close
	Copyright © 2022. All rights reserved.	
	tetronik GmbH	
	Silberbachstrasse 10         65232 Taunusstein         Germany         phone:       +49 (0) 61 28 / 9 63 · 0         fax:       +49 (0) 61 28 / 9 63 · 4 99         e-mail:       info@tetronik.com         Internet:       http://www.tetronik.com	
Note:	The owner of the copyright has the exclusive rights for this computer software program protected by international conventions and treaties. Any copying or manipulation of all or parts of this software program is subject to action pursued under civil and criminal law and will be proceed ted to the full extent of the law.	
	tetronik GmbH does not take any responsibility nor liability arising from the usage of this software program.	
Closes dia	alog	







Figure 6 – DAKS Configurations

## **TLS Configurations details**

Make sure that PBX has Secure VOIP license option enabled

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	🚹   🎯 🛑   Welcome admin   💽   ?   Expert mode 🔽 EN 🔽 📿 Search	
System evenuiour	Biustai		
System information	BluStar Soft Phones		ľ
State	BluStar Soft Phone Video Options		
Cards and modules	Audio Services		
Licences	Conference Bridge	enabled	
Security	Number in Queue	enabled	
Configuration Summary	Auto-Attendant	enabled	
Users	Enterprise Voice Mail	enabled	
Terminals	Audio Record & Play Channels	2	
System	Features		
Access control	Analogue Modem		
Cards and modules	Secure VolP	enabled	
Interfaces Analoguo	Silent Intrusion		

Figure 6 – TLS Licenses

Below are the required options to enable on PBX to setup TLS configurations.

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	The second sec
System overview Configuration	Apply Reload Back	
Users Terminals System	Select	< DAKS07 (1) V >>
Routing Services IP network	IP address / host name Port	daks0701.aen.tetronik.com 5061
SIP networking Lync	SIP signalling Use '+' as international prefix	
PISN user AIN Hospitality	Try to make external calls: Timeout (s) 'From' field for CLIR	8 🔁 Anonymous with privacy/critical (RFC 3261)
Charges Phone book Maintenance	Send session refresh (RFC 4028) Use destination URL from Music se hold	To' field
Setup wizard	Music on hold: Signalling Send redirection information	Automatic
	Call transfer mode PRACK support (RFC 3262)	
	Use SAVP for SRTP Session replacement support	
	Audio settings	

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	<sup>1</sup>   ⊗ ●   Welcome admin   →   ?   Expert mode ∨ EN ∨ O Search							
System overview Configuration Summary	Apply Reload Back								
Users Terminals System	Select	Select CAKS07 (1) V >>							
Routing Services	Call transfer mode	Re-INVITE 🔽							
IP network	PRACK support (RFC 3262)								
Private networking	Use SAVP for SRTP								
Lync	Session replacement support								
PISN user	Audio settings								
AIN	Preferred codec	G.711a 🔽							
Charges	NAT								
Phone book	SIP keep alive								
Maintenance	ALG support								
Setup wizard	Relay RTP data via communication server (indirect switc	thing)							
	Authentication	Authentication							
	Local authentication required								
	User name								
	Password	Show password							
	Transport protocol								
	Transport protocol	TLS 🔽							

Figure 7 – Setup DAKS trunk with TLS

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	<u>ቤ</u>   😵 🛑   We	Icome admin   💽   ?	Expert mode 🔽 EN N	Q Search
System overview System information	Apply Reload				
State	TLS settings				
Licences	TLS keep alive	<b>Z</b>			
Security	VoIP encryption				
Configuration Summary	VoIP encryption (SRTP)				
Users	DoS protection				
Terminals	Suspicious IP blocking time (min)	5			
System	Max SIP authentication failures	10			
Access control	Max SIP transactions per IP address	200			
Cards and modules	Mitel SIP				
Interfaces	Use LLDP for Mitel SIP phones				
Analogue ISDN/CAS					
Digital					
SIP-DECT					
TDM-DECT					
Media resources					
Dual Homing					
Extended					
Routing					
Services					
IP network					
DHCD sopror					

Figure 8 – Enable SRTP

🕅 Mitel	MiVoice tetronik Te	e Office 400 estanlage	'n	518	•   •	Velcome	admin	🛃	?   🗈	kpert mode		EN 🗸	Q 8	earch	
System overview 🏠 ᄎ	Apply	Reload A	uto configuration												
Summary	Soft media sw	itch													
Terminals	Enable														
Standard terminals	State		Operational												
Free seating phones	Active VolP/Fol	P channels	0												
Backup terminals	Standard med	ia switch													
SIP registration	Enable														
System	State		📀 Barred / Dis	abled											
General	VoIP mode		Secure G.71	1											
Access control	Echo tail length		64 ms 🗸												
Interfaces	Available VolP/	FoIP channels	0	-											
SIP-DECT	Active VolP/Fol	P channels	0												
TDM-DECT	DSD resources	allocating audio channels t	o functions)												
Media resources	Slot	Card/module	DSD device	DECT		VolD		FolD		Audio		GSM		CAS	
Extended	0	Mainboard SMB Controller	1	DECT						Audio		0.0111		CHU	
Routing	PM 1 DPD 1	PM DODY1	4												
Services	SWI1_DSF-1	SMIDSEXT													
IP network		Total		0			0		0		0		0		0
Hospitality	Media resourc	es / DSP related licensed feat	ures												
Charges	Mobile or Exter	nal Phone Extensions			-										
Phone book	Audio Record 8	Play Channels			2										

Figure 9 – Secure VOIP mode

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	🚡   😵 🛑   Welcome ad	imin   💽   ?   Expert mod	e V EN V Q Search
System overview 🛛 🏠 💼	Apply Reload			
Configuration				
Summary				
Terminals	Import host certificate	Delete host certificate		
System	State	Not installed		
Routing	Host certificate for SMTP client			
IP network				
IP addressing	Import host certificate	Delete host certificate		
DHCP server	State	Not installed		
VoIP	5 / 11 / 15 / 1011			
IP security	External nost certificates / CA no	ist certificates		
General	Validate host certificates (SIP conn	ections only)		
Certificates	Host certificate	Issued to	Expiration date (DD.MM.YYYY 24 hours mode)	State
Public	Mitel Deutschland Secure Server Root CA	/C=DE/ST=Berlin/L=Berlin/O=Mitel Deutschland GmbH/CN=Mitel Deutschland Secure Server Root CA	25.10.2034 07:22	💿 ок
IP blacklist	Thawte Premium Server CA	/C=ZA/ST=Western Cape/L=Cape Town/O=Thawte Consulting cc/OU=Certification Services Division/CN=Thawte Premium	01.01.2021 23:59	The certificate has expired
IP whitelist		Server CA/emailAddress=premium-server@thawte.com		
SMTP server	Micloud Link	Link/emailAddress=georg.dudas@mitel.com	27.11.2044 10:02	💿 ок
LDAP server	📋 tetronik development CA	/C=DE/ST=Hessen/L=Taunusstein/O=tetronik GmbH/OLI=Development/CN=tetronik development CA	15.02.2027 13:43	📀 ок
Active directory	<ul> <li>Entrust Root Certification</li> </ul>	/C=US/O=Entrust, Inc./OU=See www.entrust.net/legal-		
Picture server Mital conver	Authority - G2	terms/OU=(c) 2009 Entrust, Inc for authorized use only/CN=Entrust Root Certification Authority - G2	07.12.2030 17:55	C OK
CSTA service	thawte Primary Root CA - G2	/C=US/O=thawte, Inc./OU=(c) 2007 thawte, Inc For authorized use only/CN=thawte Primary Root CA - G2	18.01.2038 23:59	📀 ок
MSRP service Private networking	Import host certificate			

Figure	10 -	Import	DAKS	root	certificate
--------	------	--------	------	------	-------------

🕅 Mitel	MiVoice Office 400 tetronik Testanlage	🚡   😵 🌑   Welcome admin   💽   ?   Expert mode 💙 EN 💙 📿 Seauch					
System overview A Configuration Summary	Apply Reload Back						
Users	Select						
User list Permission set	Mitel 6940 SIP, 8800 - user-8800 >>>						
Digit barring Backup users	Olata	Desistand with asthurra variant 6.1.0.446					
Presence profile names	State C Registered with software version: 6.1.0.146						
Terminals	IP address 192.168.58.3						
Standard terminals	SIP port	61880					
Free seating phones	RTP Port	3000					
Backup terminals	MAC address	08:00:0F:D9:A5:DA					
Phone labels SIP registration	MBG controller	None 🔽					
System	SIP user name	8800-T5					
Routing	SIP password	Pn6yCF2TjNBMoht2oHU7					
IP network	MBG SIP user name						
Private networking	MBG SIP password						
Hospitality	Transport protocol	Persistent TLS 💙					
Phone book	Terminal is behind NAT						
Maintenance	Enable keep alive						
Setup wizard	Relay RTP data via communication server (indirect switching)						
	Bandwidth area	Default Area 🔽					
1							

Figure 11 – Enable TLS for SIP terminal

## DAKS trunk settings with TLS & MTLS



A Process configuration			— 🗆 X
E- I DAKS-Pro 300_AF	Name	Value	
🕀 📰 Daks Pro CPH42 on CPH-42-1 slo	ab) peer description	one peer	<u> </u>
E SSL on CPH-42-1 slot 1	ab Proxy		
US on sio-41-3 slot 3	ab address	mivoice400.aen.tetronik.com	X Cancel
US on pra-41-4 slot 4	📖 port	5061	
SWITCH on vsin-1-1 slot 1	protocol type	TLS	
⊟ SIP on vsip-1-1 slot 1	MTLS	Yes	
🗄 🧰 SIP trunk #1	ab Proxy authentication		
🕀 📴 SIP trunk #2	(화) realm		
🖻 🧰 SIP trunk #3	ab) user		
SIP peer	ab password		
Plain SIP	ab Watchdog		
	enable SIP OPTIONS watchdog	yes	
HIP on vsip-I-I slot I	DPTIONS.TO SIP-Identity	DAKS07	
PRUV on Vsip-1-1 slot 1	OPTIONS interval [s]	60	
SEBIAL on sig-41-3 slot 3	OPTIONS ignore error-status	yes	
	and Registrar		
	and use registrar	no	
		/	

Figure 12 – DAKS TLS settings

## Mitel OM-AXI Interface Configuration

## **Mitel SIP-DECT Configuration Notes**

The following basic sections list how to program the Mitel SIP-DECT to interconnect with the MiVoice Connect. The configuration settings below are basic reference points only and should not be considered as comprehensive configuration instructions.

## **Basic System Configuration**

This section describes basic system configuration items that are generally required for each Mitel SIP-DECT system to work with MiVoice Connect.

Before configuration, ensure that Mitel SIP-DECT solution is installed properly and is connected to a local area network (LAN). For installation instructions, see the SIP-DECT OM System Manual – Installation, Maintenance and Administration Guide **Error! Reference source not found.**.

## **Base Station Startup Configuration**

Startup information for each RFP is provided by DHCP or by the OM Configurator. To use DHCP, specific vendor options must be configured on the DHCP Server for SIP-DECT. In this example, the OM Configurator is used to provide a static IP Configuration to the RFPs (RFP 48).

- 1. Connect RFP to your LAN and power up the units.
- 2. Open the OM Configurator and select your network interface via the General  $\rightarrow$  Options Menu.
- *3.* Click Scan to find the base stations connected to your LAN (enter username and password: omm/omm (default credentials).
- 4. Select a base station entry and then double click for configuration.
- 5. Enter the configuration parameters for the RFP and click OK when all configuration parameters are entered. For more detail, see the SIP-DECT OM System Manual Installation, Maintenance and Administration Guide Error! Reference source not found..
- 6. Click Send Configuration to apply the configuration to the DECT base station. This would start up OMM on RFP.
- 7. To configure the next unit, select another base station entry from the table, set the appropriate parameters and confirm with OK.
- 8. Click Send Configuration.

**NOTE:** OM Configurator requires the Java Runtime Environment (JVE) version 1.7 or higher.

🕅 Mitel					General
MAC address	local config IP address Net mask Router	OMM address 2nd OMM addr	TFTP server	TFTP file name	Taska
08:00:0f:c3:de:ca	✓ 192.168.10.100 255.255.255.0 192.168.10.1	192.168.10.100 -	192.168.10.105 prfp4G.dnld		
					Scan
					Add RFP
					Clear List
					Edt configuration
					Copy Configuration
					Paste Configuration
					Send Configuration
					Factory Reset
					Remove selected RFP
					Save RFP Confg
					Load RFP Config
Detail Data 08:00:01:c3:de:ca					
General OpenMobility	Other				
Use local config	<b>v</b>				
IP Address	192.168.10.100				
NetMask	255.255.255.0				
Router	192.168.10.1				
Reset Configuration					
ОК	Cancel				



Detail Data 08:00:0f:c3:de:ca			
General OpenMobility	Other		
OMM address	192.168.10.100	DNS addresses	8.8.8.8
2nd OMM address		RFP configuration file server	
TFTP server address	[192.168.10.105		
TFTP file name	iprfp4G.dnld		
Syslog server address			
Syslog server port			
ОК	Cancel		

Figure 14 - OM Configurator – OpenMobility Tab

## **System Configuration**

After OMM has started up, open a browser, and connect to **https://<RFP\_IPAddress>.** Log in with the default OMM login credentials **(username: omm, password: omm).** The OMM forces password change that is applied to OM Configurator.

OMM Web service provides basic parameters to setup the system. For more detail configuration, use OM Management Portal (OMP), which can be downloaded from OMM. This standalone application supports detailed OMM configuration and monitoring. OMP requires JVE version 1.7 or higher to run.

Figure 15 – Login Web Page

#### **System Settings**

The OMM system settings menu provides the basic settings to operate the SIP-DECT system.

System name: Customer name.

Remote access: Allow SSH access.

Tone Scheme: Scheme to simulate call control tones (country-dependent).

**PARK:** The system needs a PARK code to operate. Use the Online PARK service to obtain a PARK code (five or more RFP systems).

**Regulatory domain**: DECT regulatory domain applicable to your local region.

**DECT authentication code**: Define as template for the subscription of new DECT phones.

System Settings	
OK Cancel	
	General settings
System name	Connect
Remote access	
Tone scheme	DE T
	DECT settings
PARK	1F102EF52B (31100567522545)
DECT power limit 100mW	
Encryption	
Restrict subscription duration	
Authentication before ciphering	
DECT monitor	
Regulatory domain	US (FCC/IC)
DECT authentication code	44444
DECT phone user login type	Number 🔻
Preserve user device relation at DB restore	
Auto-create on subscription	

Figure 16 - OMM System Settings

### **SIP Settings**

Configure the SIP connection to the call server (MiVoice Connect) to which the OMM has to connect in the OMM System  $\rightarrow$  SIP menu. Ensure Advanced option is checked in the top bar for the long form to appear.

SIP settings are configured via OMM Web service or OMP. The default SIP signaling port for SIP-DECT is 5060/UDP. Change this if required by the SIP-Server.

The SIP user account authentication (SIP username, Auth, and password) is part of the DECT Phone configuration.

US .			
em	OK Cancel		
stern Settings		Basic settings	
ovisioning	Proxy server	192 168 10 118	
P	Proxy port	5060	
er	Registrar server	192.168.10.118	
Iministration	Registrar port	5060	
ne Zones	Registration period	3600	540
IMP	Globally Routable User-Agent URL	2	
Management	Outbound proxy server		
ent Log	Outbound proxy port	5060	
	Transport protocol	UDP •	
, Stations	Local UDP/TCP port range	5060	- 5060
Stations	Local TLS port range	5061	- 5061
Users/Devices		Advanced	
em Features	Explicit MWI subscription	0	
	Explicit MWI subscription period	86400	140
1963	User agent info	8	
	User agent info - compatibility mode	0	
	Dial terminator	*	
	Registration failed retry timer	120	Sec
	Registration timeout retry timer	180	54C
	Session timer	1800	sec
	Transaction timer	4000	msec
	Blacklist time out	6	min
	Incoming call timeout	180	sec
	Determine remote party by	P-Asserted-Identity	header
	Multiple 180 Ringing	0	
	Semi-attended transfer mode	Blind •	
	Refer-to with replaces		
	Remove route header	8	
	SIP Contact matching	URL	1
	Call reject state code (user reject)	486	
	Call reject state code (device unreachable)	486	

Figure 17 - SIP Basic Settings

Status		RTP settings
Status	RTP port base	16320
System	Preferred codec 1	G.711 u-law 🔻
System Settings	Preferred codec 2	G.711 A-law 🔻
Provisioning	Preferred codec 3	None •
SIP	Preferred codec 4	None •
User	Preferred packet time	20 • msec
Administration	Silence suppression	
Time Zones	Receiver precedence on codec negotiation	
SNMP	Eliminate comfort noise packets	
DB Management	Single codec reply in SDP	
Event Log		DTMF settings
Sites	Out-of-band	2
Base Stations	Method	RTP(RFC 2833) •
SIP Users/Devices	Payload type	101
WLAN		Registration traffic shaping
System Features	Simultaneous registrations	4
Licenses	Waiting time	60 msec
Info	Spread registration renewals	
	Renewal timer	15 sec
		Supplementary Services
	Call forwarding / Diversion	2
	Local line handling	2
	Automatic ringback on hold call	2
	Call transfer by hook on (Mitel 600)	2
	Call transfer by hook (Mitel 142)	
	Truncate Caller Indication after ','	
	SIP reRegister after 2 active OMM failover	
	Call release timeout	5 sec
	Hold call release timeout	5 sec
	Failed call release timeout	5 sec
	Call reject on silent charging	
		Intercom/Push-to-Talk - Outgoing calls
	Initialization prefix for Push-to-talk	

Figure 18 - SIP Advanced Settings

### **DECT Phones**

SIP DECT allows multiple configuration and provisioning methods for DECT phones. A SIP ID (user/subscriber) must be configured for each DECT phone on the SIP call server. Provisioning a user on MiVoice Connect. When a subscriber registers with MiVoice Connect, it allows the calls to terminate to the subscriber's line.

To create a new DECT phone, click the new button on the OMM DECT phones page.

Display name: Extension Name.

**Number**: The Extension Number, for example, the terminal phone number.

**IPEI:** The handset hardware identifier.

**DECT authentication code:** Code for the handset subscription (44444). If this field is left empty, the system wide DECT authentication code is used.

Authentication username: The SIP username.

**Password:** SIP Extension password.

To edit the configuration of an existing DECT phone click on the pencil icon beside the DECT phones entry.

Configure SIP User/Device					
	General settings				
Display name	DECT1				
Number/SIP user name	3000				
PIN	•••••				
User/Device relation	Fixed <b>v</b>				
IPEI	10345 0601796 2				
DECT authentication code					
Login/Additional ID					
Delete subscription					
SOS number					
ManDown number					
Voice mail number					
Number used for visibility checks					
	SIP authentication				
Authentication user name	3000				
Password	•••••				
Password confirmation	••••••				
	User service				
Use SIP user name	Global T				
Use SIP user authentication	Global <b>▼</b>				
User name	3000				
Authentication name	3000				
Password	•••••				
Password confirmation	•••••				
	Key lock				
Active	<b>v</b>				
PIN					
PIN confirmation					
Timer	None 🔻 sec				
ОК		Cancel			

Figure 19 - New DECT Phone Creation via OMM Web Service

## **DECT Phone Device Subscription**

To subscribe new DECT phones, subscriptions must be permitted by OMM. Go to OMM SIP Users/Devices page and select:

Select Subscription from drop down list with configured IPEI caption. This button enables subscription for the next 24 hours.

Start button and time interval parameter under the Wildcard subscription caption. This button enables wildcard subscription for the selected time. After expiry the subscription with configured IPEIs is still enabled for 24 hours.

Status	SIP Users/Devices			
System Sites	OK Cancel			
Base Stations		General		
SIP Users/Devices	PARK	1F1026F528 (01100667522546)		
WILAN	DECT sumerfication code	44444		
System Features		Subscription		
Licenses	Auto-create on subscription	2		Auto-create on subscription. 🗸
Info	Subscription	Subscription .		futerripton aleveet 🛩
	Midual subscription	2 min. *		
		SIP User Device		
	Create a new SIP Liter/Device	New		
	import	Import		
	Search	Swarch		
			- Desister	
	finite series	1-414 30 030		for the formation of the second
	English same	Number for user same	PER NEW YORK N	huberided Downood
		1000	NORE WORKING 2	
		1000	NUMB CALCULATE A	
		4000	10040 (00054) #	
	0 × 4 • 2000		THE REPORT OF	· •

Figure 20 - Subscription Permission via OMM Web Service

### On the DECT phone device perform the following steps:

Press the softkey  $\stackrel{\text{loc}}{\longrightarrow}$  to bring up the system menu. Navigate to the System  $\rightarrow$  New system and click Ok to confirm.

Enter the authentication code in the Auth. Code field when prompted (for example, 44444). Enter PARK.

Confirm with Ok.

An Information box is displayed with the message Subscription – Please wait. The subscription should finish shortly and display a success message. You can abort the subscription at any time by pressing the Esc softkey.



Figure 21 - SDC DECT Phone Device Subscription

For more information on the steps to follow when using subscription configured IPEI or a wildcard subscription, see the OM SIP-DECT System Manual – Installation, Administration, and Maintenance Guide **Error! Reference source not found.**.

## Configuration details on MIVO400:

🕅 Mitel	MiVoice Office 400		Can   Some admin     ?   Expert mode
System overview A	Apply Reload	OMM Restart OMM WebAdmin OMP Down	load
Summary	System parameters		
Terminals	Service enabled	OpenMobility Manager SIP-DECT 8.1SF	22-FC19 / Uptime: 1:29
System	Primary OMM IP address	172.19.68.167	
General Access control	Secondary OMM IP address		
SIP-DECT	User name	omm	
System	Current password		
DECT phones	New password		The password will be set in OMM too. Please consider the SIP-DECT password rules.
Media resources	Password confirmation		
Extended	PARK	1F102F2912 - 31100571221102	Upload License Built-in license for up to 5 base stations
Routing	System name	Mitel	
Services IP network	Authentication code (AC)	4444	Create new AC
Private networking	DECT Regulatory domain	US	
Hospitality	Tone scheme	DE 🔽	
Charges Phone book	DECT Encryption		
Maintenance	Key lock for all phones (Seconds)	Off 🗸	
Setup wizard	SOS call: call number		
	Backup	Download Upload	
	Sysdump	Create Download	
	> Site 1		

System overview Configuration	9	Reload	New Del	ete Q	Filter	Fi	iter S	Search new ba	se station	s Start			
Users		∧Name (1)	MAC address	DECT On	IP address	Mode	HW Type	Cluster	RPN	Reflective environment	Connected	Active	Version
Terminals		OMM RFP 1	08:00:0F:C3:DE:6C	~	172.19.68.167	OMM	RFP 44	1	00	×	~	×	SIP-DECT 8.1SP2-FC19
System General													
Access control SIP-DECT													
System Base stations DECT phones													

System overview Configuration	Reload Delete	Q Filter	Filter Subscription : X S	witch on Authentic	ation code (AC): 44444 PA	ARK: 31100571221102	
Users	∽Display name (1)	Number	IPEI	HW Type	Subscribed	Download	Version
Terminals	1005	1005	10345 0957921 0	612v2	×	ОК	7.3.2
System							
General							
SIP-DECT							
System							
Base stations DECT phones							

Figure 22 – SIP-DECT Configuration

# Tetronik Digital Alarm and Communications Server (DAKS) Configuration – OM AXI Interface

This chapter shows you how to configure the DAKS server to operate in combination with a MiVoice Office 400 with the coupling realized via om-axi messaging trunk.

The tool that is needed to configure the DAKS Server is the "tetronik Virtual Console", which you will find abbreviated in this document as VCON.

📥 Abo	out VCON	×
	tetronik Virtual Console Version 2.05a (Protokoll Version 527)	Close
	Copyright © 2022. All rights reserved.	
	tetronik GmbH	
	Silberbachstrasse 10 65232 Taunusstein Germany phone: +49 (0) 61 28 / 9 63 - 0 fax: +49 (0) 61 28 / 9 63 - 4 99 e-mail: info@tetronik.com Internet: http://www.tetronik.com	
Note:	The owner of the copyright has the exclusive rights for this computer software program protected by international conventions and treaties.	
	Any copying or manipulation of all or parts of this software program is subject to action pursued under civil and criminal law and will be prosecuted to the full extent of the law.	
	tetronik GmbH does not take any responsibility nor liability arising from the usage of this software program.	
Closes dia	alog	

📥 VCON - [Daks Pro CPH42	ª VCON - [Daks Pro CPH42 on CPH-42 slot 1]								
📰 File Edit Search Pro	cess Host Upload Options View Wind	lows ?							
🔒 🖻 🖷 🐙	Properties/Settings								
	Configure current monitoring Configure start-up monitoring	reLoc> reSub>							
BERIAL on sio-41	Log terminal output temporarily Log terminal output permanently	1748 [04000a38]: 29 Dps:OnReceive Si 1751 [04000a38]: 29 Dps:OnFeatureRequest Si							
RTP on vsip-1 slot	Print current process configuration Print entire server configuration	Send Resp : type=0 soap=0 1 encoding="UTF-8"?> atureWord>							
JEDN on pra-41 slot 4 Jepplication/si on CPH Jepplication/si on CPH Jepplication/si on CPH Jepplication/sio 201 Jepplication/sio 201 Je	-42 slot 1 <featureop>0444</featureop>	reOP> ureLoc> ureSub>							
OS on vsip-1 slot 1 	2022-03-21 13:22:53 2022-03-21 13:22:53 2022-03-21 13:22:53	.5511 [04000a38]: 18 omaxi:Tx <Ping seq="97 .5513 [04000a38]: 18 omaxi:OnTimer .5525 [04000a38]: 18 omaxi:Rx <pingresp seq<="" td=""></pingresp>							
System logging	2022-03-21 13:23:22 2022-03-21 13:23:22	.4747 [04000a38]: 29 Dps:OnReceive S .4751 [04000a38]: 29 Dps:OnFeatureRequest S Send Resp : type=0 soap=0 1							

A Process configuration			– 🗆 X
🖃 📾 01 DAKS-Pro 300_AF 💦 🔨	Name	Value	
🚊 🖬 Daks Pro CPH42 on CPH-42-1	-		≪ <u>D</u> k
General Parameters			
📄 💼 💼 PBX-Trunkgroups			🚺 Close
😟 🕀 💼 Messaging			
🕀 💼 Data-Interfaces			
😟 💼 💼 SMS-Trunks			
😟 💼 🧰 Contact-Trunks			
🕀 💼 Serial Lines			
Retwork Services			
GSM-SMS			
- Tunstall Queues			
🗄 💼 Rauland Responder			
Text-to-Voice			
Prov Server			
E SSL on CPH-42-1 slot 1			
OS on sio-41-3 slot 3			
OS on pra-41-4 slot 4			
⊞ ISDN on pra-41-4 slot 4			
SWITCH on vsip-1-1 slot 1			
	<	>	

A Process configuration			— 🗆 X
TR500 🔨	Name	Value	
TR500 	Name         ab       enabled         ab       IP address         IP port       iP port         ab       IP protocol type         ab       Melody1 (Red)         ab       Melody2 (Orange)         ab       Melody3 (Yellow)         ab       Melody5 (Blue)         ab       Vername         ab       Standard Calling Number         ab       Standard Calling Name	Value           yes           192.168.65.181           12621           TCP           192.168.65.183           Alarm 6           Alarm 2           Alarm 3           Alarm 1           dak           0	Close
		/	

Figure 22 – OM-AXI-Trunk configuration

## Glossary

MiVoice Office 400	MiVO400
MiVoice Border Gateway	MBG
MiCollab	MiCollab
Mitel Solutions Alliance	MSA
Knowledge Management System	KMS
Interoperability Reference Guide	IRG