

**Benutzte UNIFY Software Versionen:**

Openscape 4000: V8 R2.22.4

Openscape SBC: V10 R0.04.03

**Benutzte FL1 Switch Version:**

Proxy und Registrar: C5 VoIP Switch Release V 6.0.2.x

## 1 OS4K-Konfiguration für FL1 Trunk

### 1.1 CGWB Anpassung STMI

DNS Eintrag **mus** vorhanden sein

```
| HG3530 HG3550 |
|-----|
| LTU = 17 EBT = 3 SMODE = NORMAL POOLNO: 0 |
|-----|
| GLOBALE DATEN UND ETHERNET INTERFACE DATEN - KONFIGURIERBARE WERTE: |
|-----|
| IPADR = 10 .156.14 .30 TCPP = 4060 (4060) |
| NETMASK = 255.255.255.224 ULAN = NEIN (NEIN) |
| DEFRT = 10 .156.14 .1 (0.0.0.0 = NICHT KONFIGURIERT) |
| BITRATE = AUTONEG (AUTONEG ) ULANID = 0 (0) |
| MUSTER = 213 (213) TLSP = 4061 (4061) |
| TRPRSIP = 30 (0) TRPRH323 = 0 (0) |
| TRPRSTPD = 0 (0) TRPRH323A = 0 (0) |
| DNSIPADR = 10 .156.1 .2 SIPTCPP = 5060 (5060) |
| DNSIPADR2 = 10 .156.1 .4 SIPTLSP = 5061 (5061) |
| USEMANIF = NEIN (NEIN) |
| WPUBIP = 0 .0 .0 .0 |
|-----|
| GLOBALE DATEN - KONSTANTE WERTE: |
|-----|
| AMO INTERFACE VERSION: 0 OPMODE: 1 DATA_VALID: JA |
|-----|
| SERVICE INTERFACE |
|-----|
| LOGINTRM = "TRM" (TRM) |
| PASSW = ***** |
|-----|
| ASC DATEN - KONFIGURIERBARE WERTE: |
|-----|
| TOSPL = 184 (184) TOSSIGNL = 104 (104) |
| UDPPRTLO = 29100 (29100) UDPPRTHI = 30099 (30099) |
| T38FAX = JA (JA) REDFCTN = NEIN (JA) |
| RFCFMOIP = NEIN (NEIN) RFCOTRF = JA (JA) |
|-----|
| PRI01 : CODEC = G711A UAD = JA RTP-SIZE = 20 |
| PRI02 : CODEC = G729A UAD = NEIN RTP-SIZE = 20 |
| PRI03 : CODEC = NONE UAD = NEIN RTP-SIZE = 30 |
| PRI04 : CODEC = NONE UAD = NEIN RTP-SIZE = 20 |
| PRI05 : CODEC = NONE UAD = NEIN RTP-SIZE = 20 |
| PRI06 : CODEC = NONE UAD = NEIN RTP-SIZE = 20 |
| PRI07 : CODEC = G729AB UAD = JA RTP-SIZE = 20 |
| PRI08 : CODEC = NONE UAD = NEIN RTP-SIZE = 20 |
| PRI09 : CODEC = NONE UAD = NEIN RTP-SIZE = 20
```

## 1.2 COT und COP von Trunk TDCSU

```

AB-COT:5;
H500: AMO COT GESTARTET

COT: 5 INFO: TELECOM FL
GERAET: UNAB QUELLE: DB
PARAMETER:
  ABWURF ZUM UF BEI FREI (NACH ZEIT) AWFR
  LEITUNG MIT MELDERKRITERIUM MULT
  UEBERGABE IM BESETZT-, RUF- ODER GESPRACHSZUSTAND UELM
  NETZWEITER RUECKRUF IM BESETZTFALL RRBN
  ANRUF ZU EINEM BESETZTEN SA WERDEN NICHT AUSGELOEST SAAO
  "SENDING COMPLETE" WIRD GESETZT BLOC
  KEINE KNOTENNUMMER ZUM PARTNER SENDEN LOKN
  KOMMENDE LEITUNG VON ANLAGE OHNE LCR OLCR
  TSC-SIGNAL. F. UEBERGR. LM BEI DIGITALEN NETZ (ERFORDERLICH) TSCS
  KOMMENDE GEBUEHRENERFASSUNG PRO SATZ AKTIVIEREN KGZO
  VOREINGESTELLE KNOTENNUMMER DER LEITUNG VERWENDEN UKNN
  KOMMENDE LEITUNG VON ANLAGE OHNE LCR (DATEN) OLRD
  DURCHSCHALTEN BEI UEBERGABE IM RUFZUSTAND BEI TRANSIT DUET
  CORNET-NQ PICKUP-INFO NICHT UNTERSTUETZT NQPI
  AUTOM. MFU UMSETZUNG IM GESPRACHSZUSTAND, KOMMEND AMFC
  SENDE INBAND MFU UOR MELDEN IBBA
  KEIN TON KTON

AMO-COT -111 CLASS OF TRUNK
ABFRAGEN DURCHGEFUEHRT;
<ab-cop:5;
AB-COP:5;
H500: AMO COP GESTARTET

COP: 5 INFO: TELECOM FL
GERAET: UNAB QUELLE: DB
PARAMETER:

AMTSBERECHTIGUNG:
  FERNBERECHTIGUNG FBKW

FERNBERECHTIGUNG:
  FERNBERECHTIGUNG FBKW
    
```

EINRICHTEN-COT:5,AWFR&MLVT&UELMA&RRBN&SAAO&BLOC&LOKN&OLCR&TSCS&KGZO&VKNN&OLRD&DUET&NQPI&AMFC&IBBA&KTON,;  
EINRICHTEN-COP:5,FBKW,FBKW,;

## 1.3 TDCSU

```

AB-TDCSU:1-17-3-200;
H500: AMO TDCSU GESTARTET
+----- DIGITALER SATZ (FORMAT=L) -----+
| GER      = HG3550CD      LAGE      = 1-17-003-200  BUNR      = 21
+-----+-----+-----+
| PROTUAR  = ECHAU2      INBETR  = J          SUCHART  = AB
| COTNR    = 5           COPNR    = 5          WABE    = 0
| UBZ      = 0           COS      = 48         LCOSS   = 32
| LCOSD    = 32         SATZNR  = TELECOM FL  ZLNR    = 0
| SEGMENT  = 8          DEDSCC =          DEDSUC  = KEINE
| FACILITY =            DITIDX  =          SRTIDX  =
| TRTBL    = GDTR       SIDANI  = N          TREFTYP = AMT
| CBMATTR  = KEINE      NWMUXTIM = 10       TCHARG  = N
| ANZUNT   = 0          ZIUO   =          CHIMAP  = N
| ISDNIP   =           ISDNMP  =
| PNPL2P   =           PNPL1P  =          PNPAC   =
| TRACOUNT = 10         SATCOUNT = VIELE      KNNR    = 1 -10 -921
| ALARMNR  = 2          FIDX   = 1          CARRIER = 1
| ZONE     = ANK01     COTX   = 5          AULX    = 5
| DONTYP   =           DOMAINNR =          TPROFNR =
| ENACHT   =           UUSCCY  = 8          CCHDL   =
| UUSCCX   = 16         UUSCCY  = 8          FNIDX   = 1
| CLASSMRK = EC        & 6711          SRCGRP  = (1 )
| TCCID    =           SECLEVEL = TRADITIO
| WMUSIK   = 0         CALLTIM = 60       WARNTIM = 60
+-----+-----+-----+
| BKUER    = J          BKGR    = 1          LWPAR   =
| LWPP     = 0          LWLT   = 0          LWPS    = 0
| LWR1     = 0          LWR2   = 0
| DMCERL   = N         UKNNR   =
| BKANAL   = 1 && 30
+-----+-----+-----+
    
```

### 1.4 LODR

Alle Wahlen werden in E.164 ISDN International abgehend gesendet.

Beispiel 1 Standort FL

Wahl 02355454  
LDPLN 0-xyy

```
AB-LODR:34;
H500: AMO LODR GESTARTET
```

LWR	LWRELPOS	LWREL	PARAMETER
34	1	ZIFFSEND	423
	2	ECHOFELD	2
	3	NPI	ISDN
	4	TON	INTERNAT
	5	ENDE	

Beispiel 2 Standort FL

Wahl 00435230179  
LDPLN 0-0-xyy

```
AB-LODR:14;
H500: AMO LODR GESTARTET
```

LWR	LWRELPOS	LWREL	PARAMETER
14	1	ZIFFSEND	41
	2	ECHOFELD	3
	3	NPI	ISDN
	4	TON	INTERNAT
	5	ENDE	

INFO:NATIONAL CONVERTED TO E164 INTERNATIONAL

### 1.5 LDAT

```
AB-LDAT:LCR,34;
H500: AMO LDAT GESTARTET
```

LRTGEL	LWERT	BUNUM	LWR	LBER	ZEITBAND	CARRIER	ZONE	LATTR	LDSRT	COTIDX
1	1	21	34	3	*****	1	LEER	GEMAKT PUBNUM DMCENDE		0

KNDEF für 00423 235 5060

EINRICHTEN-KNDEF:1-10-123,EIGEN,423,,235,3,NST,,,,,NST,,,,,;

## 1.6 SIP Trunk Profil STMI

Profil NatTrkWithRegistration  
Account von FL1 erhalten (hier am Beispiel LI-949001)  
Passwort von FL1 erhalten

**Konfiguration**  
Grundeinstellungen  
Sicherheit  
Netzwerk & Routing  
Sprachgateway  
HFA-Konfiguration

- Magyar Telekom Nyrt V1
- MediatixGateway
- Microsoft-Lync
- MobiCall
- Mobistar
- NatTrkEnterprise
- NatTrkWithRegistration
- NatTrkWithRegistrationMultiNum
- NatTrkWithoutRegistration
- NatTrkWithoutRegistrationMultiNum
- NeoTel
- O2 Czech

**Accountname**

Gemäss FL1 Kundendatenblatt

Accountname: LI-949001

Autorisierungsname: LI-949001

Provider-Name: NatTrkWithRegistration

Neues Kennwort: .....

Kennwort wiederholen: .....

Übernehmen Rückgängig Löschen

**SIP-Trunk-Profil**

Profil-Name: NatTrkWithRegistration

Provider aktivieren:

Account/Authentifizierung nötig:

Remote Domain-Name: LI-949001.convoip.li

IP-Transport-Protokoll: TCP (used for O/G call establishment)

PAI for anonymous: .....

**Security**

Released Security Level: Signalling und Payload Security

TLS verwendet: Nein

RTP Security-Modus: secure Payload (SDES) with fallback to insecure

Payload Encr. verwendet: Nein

**Registrar**

Registrar verwenden:

IP Adresse/Host-Name: .....

Port festlegen:

Reregistration-Intervall (s): 120

**Proxy**

IP Adresse/Host-Name: 10.156.30.30 SBC IP Adresse

Port festlegen:

TCP/UDP-Port: 50001

TLS-Port: 0

Übernehmen Rückgängig Löschen

## 2 SBC-Konfiguration für FL1 Trunk

### 2.1 Media Profile

The screenshot shows the 'Media Profile' configuration window for the 'FLSIP\_WAN' profile. The window is divided into several sections:

- General:** Name is 'FLSIP\_WAN', Media protocol is 'RTP only'. There are checkboxes for 'Support ICE', 'Enable TURN Client', 'RTP/ RTCP Multiplex in offer', 'SDP Compatibility Mode', and 'Support Mid Attribute', all of which are currently unchecked.
- SRTP configuration:** SRTP crypto context negotiation options are 'MIKEY', 'SDES', and 'DTLS', all unchecked. There is also an unchecked checkbox for 'Mark SRTP Call-leg as Secure'.
- Codec configuration:** There are checkboxes for 'Allow unconfigured codecs', 'Enforce codec priority in profile', 'Send Telephony Event in Invite without SDP', 'Use payload type 101 for telephony event/8000', and 'Enforce Packetization Interval', all unchecked. A 'Codec' dropdown is set to 'G711U 8 kHz - 64 kbps' with an 'Add' button next to it.
- Codec List:** A table showing the configured codecs and their packetization intervals.

Priority	Codec	Packetization interval
1	G722 8 kHz - 64 kbps	Auto
2	G711A 8 kHz - 64 kbps	Auto

Buttons for 'Move up', 'Move down', and 'Delete' are visible below the table. At the bottom right, there are 'OK' and 'Cancel' buttons.

### 2.2 Firewall

The screenshot shows the 'External Firewall' configuration window. It includes the following settings:

- External Firewall
- Circuit Only
- Add WAN IP in ICE Candidates
- Enable Separate Firewall IP for Signaling / Media
- Profile: (dropdown menu)
- Firewall external IP: 195.65.133.147
- Firewall external IP for Signalling: (text input)
- Firewall internal IP: (text input)
- Firewall external IP for Media: (text input)

Buttons for 'OK' and 'Cancel' are located at the bottom right.

### 2.3 Remote Endpoint

**Remote Endpoints**

Select OK to temporarily store changes. Make your changes permanent by selecting 'Apply Changes' on the General page.

SIP Service Provider Profile

Hostname

Remote directory

User name

Password

[Download New Profile List](#)

[Add](#) [Edit](#) [Delete](#)

Row	Name	Registration required	Registration interval (sec)
1	TelecomFL	<input checked="" type="checkbox"/>	1800

Remote endpoint configuration

[Add](#) [Edit](#) [Delete](#)

Row	Name	Access realm profile	Type	Profile / Circuit ID	Remote IP address / Logical-Endpoint-ID / Circuit URL	Remote port	Remote transport	Associated Endpoi
1	TelecomFL	Main-Access-Realm - ipv4	SSP	TelecomFL	t1[REDACTED].x.convoip.li	5083	UDP	

Gemäss  
FL1 Kundendatenblatt

### 2.4 SIP Service Provider Profile

#### SIP Service Provider Profile

Select OK to temporarily store changes. Make your changes permanent by selecting 'Apply Changes' on the General page.

**General**

Name:  Default SSP profile:

Use SIP Service Address for all identity headers

SIP service address:

**SIP User Agent**

SIP User Agent towards SSP:  SIP User Agent:

**Registration**

Registration required

Registration interval (sec):

**Business Identity**

Business identity required

Business identity DN:

**Outgoing SIP manipulation**

Insert anonymous caller ID for blocked Caller-ID

**Manipulation**

**Incoming SIP manipulation**

Calling Party Number:

**Flags**

- FQDN in TO header to SSP
- Use To DN to populate the RURI
- Send Default Home DN in Contact for Call messages
- Allow SDP changes from SSP without session version update
- Do not send INVITE with sendonly media attribute
- Do not send INVITE with inactive media attribute
- Do not send INVITE with video media line
- Do not send Invite without SDP
- Do not send Re-Invite when no media type change
- Do not send Re-Invite
- Remove Silence Suppression parameter from SDP
- Enable pass-through of Optional parameters
- Force direction attribute to sendrcv
- Send default Home DN in PAI
- Send default Home DN in PPI
- Preserve To and From headers per RFC2543
- Disable FQDN pass-through in FROM header
- Keep Digest Authentication Header

**TLS**

TLS Signaling:

**Sip Connect**

Use tel URI

Send user=phone in SIP URI

Registration mode

1TR118

**Sip Connect**

Use tel URI

Send user=phone in SIP URI

Registration mode

1TR118



## 2.5 Remote endpoint configuration

**Remote endpoint configuration** ?

**?** Select OK to temporarily store changes. Make your changes permanent by selecting 'Apply Changes' on the General page.

---

**Remote Endpoint Settings** ?

**Name**  **Edit**

**Type**

**Profile**

**Access realm profile**

**Core realm profile**

**Associated Endpoint**

**Enable Call Limits**

**Maximum Permitted Calls**

**Reserved Calls**

---

**Remote Location Information** ?

**URI based routing**

**Enable access control**

**Signaling address type**

---

**Remote Location domain list** ?

**Add** **Edit** **Delete**

Row	Remote URL	Remote port	Remote transport	Media IP	Media profile	TLS mode	Certificate profile	TLS keep-al
1	t1[redacted]x.convoip.li	5083	UDP		FLSIP_WAN	Server authentication	OSV Solution	<input type="checkbox"/>

---

**Remote Location Identification/Routing** ?

**Core FQDN**

**Core realm port**

**Default core realm location domain name**

**Default home DN**

**Incoming Routing prefix**  **Add**

**Delete**

---

**Digest Authentication** ?

**Digest authentication supported**

**Digest authentication realm**

**Digest authentication user ID**

**Digest authentication password**

Gemäss  
FL1 Kundendatenblatt

---

**Access Side Firewall Settings** ?

**OK** **Cancel**

Access Side Firewall Settings ?

Enable Firewall Settings [Firewall Settings](#)

Emergency configuration ?

Emergency numbers  [Add](#)

[Delete](#)

[Emergency call routing](#)

MSRP Data Configuration ?

Enable MSRP Relay Support **(not licensed)**

use IP address in MSRP-path  use FQDN in MSRP-path FQDN

Authentication required Realm  Password  [Show](#)

Access side only Qop  Expire time/sec

Miscellaneous ?

Open external firewall pinhole

## 2.6 Remote Location domain

### Remote Location Domain

Select OK to temporarily store changes. Make your changes permanent by selecting 'Apply Changes' on the General page.

**General**

Remote URL   Shared domain

Remote port

Remote transport

**Signaling**

INVITE No Answer timeout (msec)

INVITE No Reply timeout (msec)

**TLS**

TLS mode

Certificate profile

TLS keep-alive

Keep-alive interval (seconds)

Keep-Alive timeout (sec)

**Media Configuration**

Media profile

Media realm subnet IP address

**Outbound Proxy Configuration**

Outbound Proxy

Outbound Proxy Port

**Registrar Server Configuration**

Registrar Server

Registrar Server Port

## 2.7 Sip Server Settings

**VOIP** ?

Select OK to temporarily store changes. Make your changes permanent by selecting 'Apply Changes' on the General page.

**Sip Server Settings** | Port and Signaling Settings | Media | QoS Monitoring

General ? ^

Comm System Type:  ▾

Allow Register from SERVER

Node 1 ?

Target type:  ▾

Primary server:  Transport:  ▾ Port:

Backup server:  Transport:  ▾ Port:

SRV record:  Transport:  ▾

Node 2 ?

Target type:  ▾

Primary server:  Transport:  ▾ Port:

Backup server:  Transport:  ▾ Port:

SRV record:  Transport:  ▾

Timers and Thresholds ?

Failure threshold (pings)	<input type="text" value="2"/>	OPTIONS interval (sec)	<input type="text" value="60"/>
Success threshold (pings)	<input type="text" value="1"/>	OPTIONS timeout (sec)	<input type="text" value="4"/>