

# **UNIFY** Open Scape Fault Management

MONITORING OpenScape 4000

# MONITORING OpenScape 4000



# **Monitoring OpenScape 4000**

OSFM Server includes extensive support for OpenScape/Hipath 4000 technology. The prerequisite for monitoring is a functional configuration of the OS4k alarms. OSFM Server receives information from

- OpenScape/Hipath 4000 Assistant (Single System)
   OR
- OpenScape/HiPath 4000 Manager (Managing more Assistants)

Communication with the OS4K Assistant/Manager

- OSFM Sever <u>talks to</u> SNMP Agent from OS4K
- OSFM Server get information from Informix database/OS4K
- OS4K SNMP Agent Traps <u>send traps</u> to OSFM Server

Before the monitoring can start, the access has to be configured first:

- OS4K Assistant/Manager: SNMP access for read/write
- OS4K Assistant/Manager: SNMP trap target: OSFM server as trap target
- > OS4K Assistant/Manager: enable ",hp\_dbr" user for informix connection

# TASK 1 > 0S4K: Setting up access for SNMP and Informix

- → Log in to OS4K Assistant/Manager: rsta/hic\*300
- → Check/Activate SNMP Agents: "Base Administration" -> "Application Control"



→ Add SNMP Communities for read/write:

"Diagnostics" -> "Fault Management" -> "SNMP Configurator"



Configuration Managem     Diagnostics     Generation Alarm Configuration     SNMP Configuration     Switch Diagnosis St     Generation of K	tor tor ipport ey Function Activ F		
OpenScape 4 Fault Management	000 Assistant	t V8	
SNMP Configurator			
Display configuration	Configuration data for S	SNMPv1	
Protocol: SNMPv1	SNMPv1		
Community	SNMPv3	Trap destination	Trap mask
Trap	public		
SNMP Control		10.20.200.52	255.255.255.255
Trap Filter			
Distribute configuration	private		
Reset alarms			

→ Add SNMP Trap Destination: IP-Address from OSFM-Server

SNMP Configurator		
Display configuration	Configuration data for SNM	IPv1
Community	Community	Trap c
Тгар	Add trap destination	
SNMP Control	Remove trap destination	10.2
Trap Filter		

→ Activate Informix Databse User:

"Access Management" -> Account Management" -> "System Account Administration"

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⊙Assistant V8	۷
⊡ Coftware Management	
🛱 🗁 Access Management	
🖽 🗂 Session Management	
El Account Management	
User Account Administration	
- 📃 System Account Administration	
Access Right Configuration	
Access Right Group Configuration	
Export User Reports	
Manage Web Server Certificates	



😟 System Accou	unt Administration					
Edit View Acti	ion Help					
Username	e Description Ma	]Ne]N	IS] Au]			
🛶 nsl-syst	Network single logon at	<b>V</b>		Username	hp_dbr	
📑 nsl-rsta	Network single logon fo	1		Description	Remote/local J	DBC access for OpenScape-FM
🕶 nsl-rsca	Network single logon fo	<b>V</b>				
<del>न्न</del> nsl-cusa	Network single logon fo	1		Actions		
nsl-cust	Network single logon fo	1		New passwo	rd	**********
🧧 disftp	FTP account for disaste	1		Retype pass	word	**************
🛃 hp_dbr	Remote/local JDBC acc	<b>V</b>		Recype puss	nord	
📑 u_repgen	Remote ODBC access f	1		Delete p	assword	
🖪 uas_rdwr	Remote ODBC access (r	1		Force pa	assword change	
🖪 uas_read	Remote ODBC access (r	1				
🗐 ncc	Callback of FT-Hicom to	1		Descention		
🗐 apeftp	Access Point Emergenc	1		Properties	and confiditor	
🔒 rsta	-	1		Max, passwo	ra valiaity	
🔔 rsca	-	1		Passwor	d never expires	
🔔 cusa	-	<b>V</b>		Lock use	er account	
					N	
					i v	

# TASK 2 > Add OpenScape/Hipath 4000 Asisstant/Manager to OSFM

- → Activate the plugin for "OpenScape 4000"
- → Add OS4K Network/Subnet to OSFM Server
- → Add OS4K-Assistant as Host to OSFM
- → Configure SNMP-Access: Enter community names

🚳 R 🔽 🛄 🍇 🦛 🗼 🗖 💥	<b>%</b> 1.8	5.31.21<>Co	nfigure.	•		-	2
Root	- %	P Parameter	r 🔌	System Man	agement		
← 🖤 ECE	In the t	abs below yo	u can co	nfigure IP nod	e specific pai	rametei	r like polling int
← I Logging	IP F	Parameter	SNMF	Parameter	SNMP V1/	V2c	SNMP V3
🔶 🎱 Maps	Config	ure SNMP V	I/V2 Par	ameter	1	L	
🕈 🌐 Network Topology		Label		IP Add	Iress		Port
⊷ 🕑 1.20.0.0	9	1.85.31.21		1.85.31.21			
► 😶 2002:0:0:0:0:0:0:0							
🗢 💽 Default (IPv4)							
🔶 🐻 Nodes OS4k-Network							
<b>♀</b> <mark>₩</mark> 1.85.31.21							
e Events	•						
📃 Open	•						
🕑 Edit	•						
🔋 New	•						
Sonfigure							

→ Configure access to InformixSQL Database



► 💓 192. 100. 107.0 ► 🔮 Default (IPv4)	🚽 🦪 🔵 Normal 11/07/	2017 2 w07fmTR01.u System Ma
OpenScape 4000 Assistant	Events	▶ 10.20.11.10 ( IP Manager
10.20.11.12 ( <assistant>)</assistant>	Open	10.20.11.111 IP Manager
TO.20. TT. TO (NODEA.VM, acuve 054Kn100)	Edit	10.20.11.112 IP Manage
<pre><assistant>: AP-1 (17)</assistant></pre>	Vew New	L. 10.20.11.114 IP Manager
Vestistante : / 4 + ( ( ) /	Properties	10.20.11.113 IP Manage
HTTP 80	Report Center	10.20.11.115 IP Manage
ITTPS 443	System Report	
SSH	A IP	• 10.00.11.116 ID Manage
AP-1 (17)-10 20 11 12 ( <assistant>)</assistant>	Status Explanation	10.20.11.116 IP Manager
10.20.11.12 ( <assistant>)</assistant>	Access Applications	I 10.20.11.118 IP Manager
Assistant>	Layer 2	SOL Connection
Enterprise MIB	Show Status History	Suc Connection
Interfaces	Enterprise MIB	Systems
► 👱 SNMP	HTTPS 443	Assistant web Access
🖉 Events	Interfaces	Alarms On
HTTP 80	Port Collector	Alarms Off
	OpenScape 4000 Assistant	State
P		
10.00.11.12 (chapistents) OpenScope 4000 Appi	intentr 💌 😒	



# Discovery of OpenScape/Hipath 4000

# **Workflow**

The GET command is used to read the information of the OpenScape 4000 Manager from the MIB of the proxy agent of the OpenScape FM server.



The SET command is used to generate an order via the proxy agent, which is sent to the OS4K Systems. These Systems process the AMO commands defined in the order and send the result back to the OpenScape 4000 Manager. The data is added to the SQL database of the OpenScape 4000 Manager and the OpenScape FM Server is informed. The database of the OpenScape 4000 Manager can be accessed via the SQL search and displayed in the OpenScape FM Server. If an AFR message is sent from the OpenScape 4000 systems to the OpenScape 4000 Manager, it is stored in the OpenScape 4000 Manager database and a trap is sent from the SNMP proxy agent to the OpenScape FM server.

# AMO-Disvoveries

A discovery order is sent from the OpenScape FM Server via a SET command to the SNMP proxy agent in the OpenScape 4000 Manager, in detail to the master agent.





The Master Agent forward the order to the Discovery Agent, which generates a job with the necessary AMO commands and sends it to the OpenScape 4000 system. The Discovery Agent also accepts the result sent back from the OpenScape 4000 system, parses it and writes it to the output file. From there, this data is written to the database table temp.db. Depending on the type of discovery (hardware, software, topology or alarm configuration), the sub-agent is informed and the data is written to the correct database tables. The Sub-Agent informs the Master Agent that the operation has been performed positively or negatively. At the end, OpenScape FM get an SNMP (inform) trap from the Master Agent.



# Starting Discovery on the Systems Manually

In order to display the hardware, software, topology and alarm configuration of the OpenScape / HiPath 4000 systems in OSFM, a discovery of the systems must be made. This is started via the respective PABX network. Select the corresponding PABX network and click on the "OpenScape 4000 -> System -> Discoveries"... popup context menu entry. A new window appears displaying the OS4K-Systems. A Discovery lasts approx. 20 minutes, depending on the system.







# **Configuring Automatic Discovery**

The automatic discovery can be started via the "OpenScape 4000 -> System -> Configuration..." context menu. By default, an automatic discovery of the systems is carried out every 168 hours (once a week). Activate the Auto Discovery option and enter the value in hours in the Expiration time field. Afterwards click the Set and Close button.





# Show system configuration of OS4K

Information about which systems are managed by this OpenScape 4000 Manager can be found via the entry OpenScape 4000 Manager SNMP Proxy Agent -> Systems... can be displayed. A new Info Browser window will open displaying this information. The system is displayed line by line with the name in the column System Id, to which network Id the system belongs, to which subnetwork Id the system be-longs, the node number, the PABX Id, the status of the system and whether major, minor or device alarms are present.



🔻 📵 OpenScape 4000 Assistant	Events	
🔻 🙆 10.20.11.12 ( <assistant>)</assistant>	🔲 Open 🕨	
10.20.11.10 (nodeA:VM. active os4kn100)	📝 Edit 🕨 🕨 🥅	
▼ 💪 10.20.11.12 ( <assistant>)</assistant>	New Dev	
Assistant>	S Configure	
Enterprise MIB	Properties TP 80	
Interfaces	Report Center	
▶ 📳 SNMP	System Report	
🖉 Events		
HTTP 80	💡 Status Explanation	
HTTPS 443	Access Applications	
💾 OpenScape 4000 Assistant	Laver 2	
Port Collector	Show Status History SQL Connection	
🐻 SSH	Enterprise MIB Systems	
Assistant>-10.20.11.10 (nodeA:VM, active	HTTPS 443 Assistant Web Access	
10.20.11.10 (17: VM Simplex os4kn100)-10.20	Interfaces Alarms On	
	Port Collector Alarms Off	
	OpenScape 4000 Assistant 🕨 State	
10 21\11 12 ( <assistant>) OpenScape 4000 Assistan</assistant>	🕞 🕘 🏖 🗈 🖕 🛄 👷	
		_
Agent 10.20.11.12		
Agent System Id Network Id Subnet	work Id Node No. Pabx Id State Major Minor	
10.20.11.12 • 4 10.20.1 < locked> < locke	d> 10-42-100 1 Critical 4	0
Lines 1 Reload Stop		

# Information about the status of SNMP agents

Information about the status of the agents that must run next to the SNMP proxy can be viewed via the OpenScape 4000 Host Object-> Status... popup menu. be controlled. The agents cannot be switched on via the Info Browser table.





# **Querying OpenScape 4000 Information**

TASK 3 > Information ab	out CMI Objects					
OpenScape 4     Open     OpenScape 4     Open     OpenScape 4     Open     Open	SQL Connection Systems	HiPath 4000 Manager SNMP Proxy Agent 1.85.31.20	• 2 D 2	<b>e</b> e <b>e</b>		\$ \$ D 3
Port C Status Explanation	Manager Web Access Alarms On	Label	Status	Major	Minor	Device
OpenScape B     Port Collector	Alarms Off	HiPath4000CMI:System S300	Normal		0	0 0
- OpenScape V HTTP 80	State					
∽ ()) OpenScape V Interfaces	CMI Nodes					
- (iii) System Mana OpenScape 4000	FM Snapshots					

# TASK 4 > Display software versions of the system

- → Information, which APS have been installed on the system, can be viewed via the popup menu Software -> APS... per plant can be displayed. The individual APS are listed in the APS Id column with a detailed description in the Info column.
- → Information about which patches are installed on the individual systems can be found via the popup menu Software -> Patches... can be displayed. The patch number, the hardware module and the information whether the patch is to be switched on or not are displayed. The information N in the column Switch on means that the patch is already switched on and does not have to be switched on





Agent 1.85.31.21 System Id 8520	0 Customer UNIFY AC	ADEMY 1-85-200			
APS Id			Info		
A0-E40AC		P30252B4900A00101 ι	undef 49	neutral	AMO-IHS
B0-E40BC		P30252B4900B00101 (	undef 49	neutral	AMO-SWU
D0-E40DC		P30252B4900D00101	undef 49	neutral	IHS (ADS)
L0-E40LC		P30252B4900W00101	undef 49	neutral	Loadware
LO-TNKLK		P30252B4900VV40101	undef 49	neutral	Loadware
S0-E40SC		P30252B4900S00101 (	undef 49	neutral	SWU
S0-T4XSX		P30252B4950800101 (	undef 49	Internation	nal SWU
Y0-E40YC		P30252N4901BH0739	undef 49	German	AMO-SWU
Y7-P4TYT		P30252N4901U00107	undef 49	German	UNIX
1.85.21.212 (85200)<>85200<>S Agent 1.85.31.21 System Id	oftware< 💌 🍣	🗈 🍛 🛄 🥹 🚖 UNIFY ACADEMY 1-85-2	200		
1.85.21.212 (85200)<>85200<>So Agent 1.85.31.21 System Id	oftware< 💌 🍣	DNIFY ACADEMY 1-85-2	200		Activation
1.85.21.212 (85200)<>85200<>So Agent 1.85.31.21 System Id Number	oftware< 💌 😪	🗊 🍛 🛄 🥥 😒 UNIFY ACADEMY 1-85-2 HW Module	200		Activation
<b>1.85.21.212 (85200)&lt;&gt;85200&lt;&gt;S</b> <b>Agent</b> 1.85.31.21 System Id Number PSA0233 PSA0234	oftware<  Customer	🗊 🍛 🛄 🥥 😒 UNIFY ACADEMY 1-85-2 HW Module	200	,	Activation
<b>1.85.21.212 (85200)&lt;&gt;85200&lt;&gt;S</b> <b>Agent</b> 1.85.31.21 System Id Number PSA0233 PSA0234 PSA0236	oftware<  Customer  BPA BPA	🗊 🍛 🛄 🥥 😒 UNIFY ACADEMY 1-85-2 HW Module	800 N N		Activation
<b>1.85.21.212 (85200)&lt;&gt;85200&lt;&gt;So Agent</b> 1.85.31.21 System Id Number PSA0233 PSA0234 PSA0236 PSA0237	oftware<  Customer  BPA BPA BPA BPA	🗊 🍛 🛄 🥥 😒 UNIFY ACADEMY 1-85-2 HW Module	200 N N N	,	Activation
1.85.21.212 (85200)<>85200<>S Agent 1.85.31.21 System Id Number PSA0233 PSA0234 PSA0236 PSA0237 PSA0238	oftware<  Customer  BPA BPA BPA BPA BPA BPA	DNIFY ACADEMY 1-85-2 HW Module	200 N N N N	,	Activation
1.85.21.212 (85200)<>85200<>S Agent 1.85.31.21 System Id Number PSA0233 PSA0234 PSA0236 PSA0237 PSA0238 PSA0240	oftware<  Customer  BPA BPA BPA BPA BPA BPA BPA BPA	DNIFY ACADEMY 1-85-2 HW Module	200 N N N N N	,	Activation
1.85.21.212 (85200)<>85200<>S Agent 1.85.31.21 System Id Number PSA0234 PSA0236 PSA0237 PSA0238 PSA0240 PSA0249	oftware<  Customer  BPA	DNIFY ACADEMY 1-85-2 HW Module	200 N N N N N N	,	Activation
1.85.21.212 (85200) <> 85200 <> Si Agent 1. 85. 31. 21 System Id Number PSA0234 PSA0236 PSA0237 PSA0238 PSA0240 PSA0249 PSA0250	oftware<  Customer  BPA	DNIFY ACADEMY 1-85-2 HW Module	200 N N N N N N N N	,	Activation
1.85.21.212 (85200) <> 85200 <> Si Agent 1. 85. 31. 21 System Id Number PSA0233 PSA0236 PSA0237 PSA0238 PSA0240 PSA0240 PSA0249 PSA0250 PSA0251	oftware<  Customer  BPA	DNIFY ACADEMY 1-85-2 HW Module	200 N N N N N N N N N	,	Activation
1.85.21.212 (85200) <> 85200 <> Si Agent 1. 85.31.21 System Id Number PSA0233 PSA0234 PSA0236 PSA0237 PSA0237 PSA0238 PSA0240 PSA0240 PSA0249 PSA0250 PSA0251 PSA0252	oftware<  Customer  Cus	DNIFY ACADEMY 1-85-2 HWW Module	200 N N N N N N N N N N	,	Activation

# TASK 5 > Detailed information about the system

→ Information about the selected system can be called up via the context menu "System Info"... can be displayed. This browser window displays the values for the attributes, such as network node name, system id, contract, customer, L-number, and so on. is displayed. These values were entered in the OpenScape 4000 Manager system administration and read out by OpenScape FM via SNMP. The status of the individual discoveries of the attachment is also displayed here.



<ul> <li>OpenScape Voice Assistar</li> <li>System Management</li> <li>fe80:0:0:0:0:0:0:0</li> <li>OpenScape Business-1.15</li> <li>OpenScape Business-1.15</li> <li>Server2Server Gateway</li> <li>System</li> <li>User Administration</li> </ul> 1.85.21.212 (85200)<>85200<>S Agent 1.85.31.21 System Id		ation Error Software Fault Hardware System Hosts Appliances Topology/Trunks Discovery System Info Manager Web Access MAR OpenScape 4000 ↓ ② ☆ MY 1-85-200
Attr	ibute	Value -
Node Name		85200
System Id		S200 –
Contract		0185200
Customer		UNIFY ACADEMY 1-85-200
Customer Call No.		
System Service Call No.		
Location		
Remarks		
Version		UV7
Node No.		0
L-Number		L31988Q0318X00000
Pabx-Id		2
Network Id		
Subnetwork Id		
Hardware Status		masterError

# TASK 6 > Information about hardware components

t	▲ ()	LTG	LTU	Address	Conf. Board	Inst. Board	Code	Version	Firmwa
CE		1	1	1	AVAILABLE	AVAILABLE	0	0	
aver 2 Topology		1	1	2	AVAILABLE	AVAILABLE	0	0	
odding		1	1	3	Q2168-X	Q2168-X	SLMO24	1	-D1 -
IP 🔸	Software	F	1	4	AVAILABLE	AVAILABLE	0	0	
Access Applications	Fault	•	1	5	AVAILABLE	AVAILABLE	0	0	
Status Explanation	Hardware	BCSM	1	6	AVAILABLE	AVAILABLE	0	0	
	Eustern Heste	DCSU	1	7	Q2266-X	Q2266-X	LTUCA	1	-13-
H11P3 443	System Husts	BCSU	1	8	AVAILABLE	AVAILABLE	0	0	
Enterprise MIB	Appliances	CDSM	1	9	AVAILABLE	AVAILABLE	0	0	
HTTP 80	Topology/Trunks	CDSU	1	10	AVAILABLE	AVAILABLE	0	0	
<assistant></assistant>	Discovery	Cabinets	1	11	AVAILABLE	AVAILABLE	0	0	
OpenScape 4000 Assistant >	System Info	Frames	1	12	Q2217-X	Q2217-X	STMD3	1	-03-
Port Collector	Manager Moh Access	Dorinhorals	1	13	AVAILABLE	AVAILABLE	0	0	
05000	MAD Owen Coons 1000	- emplier dia	1	14	AVAILABLE	AVAILABLE	0	0	
85200	MAR OpenScape 4000	·							

# Alarms and error messages of the OpenScape 4000 systems

TASK 7 > Display alarm configuration

→ Alarm configuration and alarm filter:



Root	🗞 🗢 🖶 🗶	1.85.21	212 (85200)<>	85200<>Fault<	>Ala 🔻 🍣	0 &	l 🥝 🚖			ة 📋
Root	<b></b>	Agent	1.85.31.21 5	ystem Id 852	200 Customer	UNIFY ACAD	EMY 1-85-20	Discovery	2015-12-15	14:51:21.
e 🔘 ece		Grou	p Class	Name	Base	Minor Thre	. Major Thre	Minor Time	Major Time	Device Time
e 😨 Default (IPv4)		Central	5940	18 RMSTAIEU.		-	1%	U	600	-
🗠 🕙 OS4k-Network		Central	BWU	15 EXTERNAL		1%	2%	600	600	-
~ 🙆 OSV-network	Events	•	WU	16 LTG CENT.		5%	8%	900	900	-
OpenScape 4000	🔲 Open	•	WU	17 CC CENT	-	2%	-	900	900	-
• (m) 1 85 31 21	📝 Edit	•	WU	18 SWITCHIN.		1%	2%	900	900	-
- 1 85 21 212 (85200)	More		WU	19 CLOCKIN	-	2%	4%	900	900	-
	Careford	,	WU	20 SIGNAL U	-	1%	2%	900	900	-
	Sconngure		WU .	23 SWERRU.		-	-	0	0	-
	Properties		VVO	24 8181EM M.		-	-	120	100	-
• • • 1.85.21.212 (85200)	Show Status History		NAT L	26 CM EAILLID		1 70	1 04	120	1000	-
• OpenScape 4000 Manager	📄 System Report		NACLI NACLI	20 SIM PAILOR	_	196	7%	1	1000	-
🗢 🛄 OpenScape Business	📄 Report Center		NACL I	32 ACCESS P	-	1%	2%	120	120	-
🗢 🕘 OpenScape Voice	\lambda IP	•	Software		-	1.0%	50%	120	120	-
🗠 🍥 OpenScape Voice Assistan	Access Applications		Foult		Norm Configure	ation	-	120	0	-
🗢 🍥 System Management	Status Explanation		Fault		Marin Connguis		2%	120	120	-
🕶 😁 fe80:0:0:0:0:0:0:0			Hardware	1	Marm Filters	-	1%	1	1	-
🗢 🗘 OpenScape Business-1.15	HTTPS 443	•	System Hosts	š A	larms Off.		1%	1	1	-
🗢 🗘 OpenScape Business-1.15	Enterprise MIB	•	Appliances	4	larms On		2%	1	1	-
≻ 🕅 Server2Server Gateway	HTTP 80	•	Topology/Tru	iks E	Fror Message	š	2%	1	1	-
🛏 🇐 System	<assistant></assistant>	•	Discovery	• E	rrors		0.000		eup II	ardwara Uni
🗝 🝘 User Administration	OpenScape 4000 As	sistant ⊧	System Info	0	Get Alarm Mirro	I TTIS		11015	эпр На	ai uwal 9 Uni
3	Port Collector	•	Manager Web	Access					<b>A</b> 8 <b>A</b> 2	266 🦳 22
3	85200	•	MAR OpenSca	ape 4000 🔸					<b>U U U</b>	.00 0 22

# TASK 8 > OS4K Show alarms in ON and OFF state

→ Alarms that have already occurred once but have been removed are not deleted from the SQL database of OpenScape 4000 Manager, but are only set to the status off. This means that these alarms can also be queried.

▼	<ul> <li>Configure</li> <li>Properties</li> <li>Report Center</li> <li>System Report</li> <li>IP</li> <li>Status Explanation</li> </ul>	•	
(iii) System Management     (iii) Fe80:0:0:0:0:0:0:0     Server2Server Gateway     System     User Administration	Access Applications Layer 2 Show Status History Enterprise MIB HTTPS 443	* * * *	SQL Connection Systems Assistant Web Access
	Interfaces Port Collector OpenScape 4000 Assistant <assistant> HTTP 80</assistant>		Alarms On Alarms Off State

10,90.11.12 ( <assi< th=""><th colspan="11">10/20.11.12 (<assistant>) OpenScape 4000 Assistan 💽 🥝 😂 🛄 🍃 🛄</assistant></th></assi<>	10/20.11.12 ( <assistant>) OpenScape 4000 Assistan 💽 🥝 😂 🛄 🍃 🛄</assistant>										
Agent 10.20.11.12											
System Id	Group	Class	Name	State	Priority						
SYS1	Central	2	LTU FAILURE	On	major						
SYS1	Central	32	ACCESS POINT	On	major						
SYS1	Central	33	BAD IP CONNE	On	major						
SYS1	SWU Peripheral	8	BASE STATION	On	major						



The alarms are displayed line by line and additional information that led to this alarm can be queried. Actions can also be called to reset or clear the alarm.

1.85.2	5.21.212 (85200)<>85200<>Fault<>Alarms Off 🔽 🤄 🗊 🍛 🏢 🥥 🔅											
Ageı	nt 1.85.31.	21 System I	d 85200 Cus	tomer UNIF	Y ACADEMY 1	-85-200						
up	Class	Name	State	Priority	Module	Time	Arrival Time	Old Time	LTUs	Event State	User	Change Ti
	10	IS RESTAR	Off	minor	A1	06/28/2010	06/28/2016	06/27/2010	0			
	29	MAINTENA	Off	minor	A1	01/05/2016	01/05/2016	01/04/2016	0			
	29	MAINTENA	Off	major	A1	12/16/2015	12/17/2015	12/16/2015	0			
ogic	2	OUTWARD	Off	major	BPA	12/16/2015	12/17/2015	12/16/2015	0			
ogic	10	R010:K100	Off	major	BPA	12/16/2015	12/17/2015	12/16/2015	0			
ogic	30	R030:K300	Off	major	BPA	12/16/2015	12/17/2015	12/16/2015	0			
•												
rval E	rrors	Alarm Confi	guration	SHB	Reset	Hardware U	nits De	lete Co	rr. Targets	Acknow	ledge	Original
4								III				•

#### Error

The error messages that led to this alarm are displayed.

# ▶ Interval Errors ...

The error browser is opened, which lists the errors of the alarm that occurred in a certain period of time. The period is defined by the Time Before (Min) and Time After (Min) fields. These refer to the time stamp of the selected alarm.

# Alarm Configuration

The Info Browser of the alarm configuration is opened, but only the configuration for this selected alarm is displayed.

# • Service Manual (SHB)

The service manual (ALFE) is opened if it has been installed before.

#### Reset

Certain alarms can be reset on the system via the AMO GRA. A separate browser window show whether the alarm could be reset or not.

# ▶ Hardware Units

This list shiw the units for which at least one of the selected alarms is defined.

#### Delete

The alarm will be deleted from the SQL database of the OpenScape 4000 Manager.

# • Corr. Targets

Target alarms that may be related to another alarm are displayed when the affected alarm is selected and the Correlated Targets button is clicked. A list of all possible correlated target alarms will be displayed.

# Acknowledge

Only becomes active if unacknowledged new alarms are also present. This is the case when a new trap arrives.

# Original

The original alarm message of the selected alarms is displayed.



TAS	K 9 > Show error mess	ages in original								
→	The original error messa	ages can be displayed in an Info Browser via the entry Error -> !	Error							
	messages can be disp	blayed. These values can be interpreted via the error description	n in the ser							
	vice manual.									
		Error Messages								
	Recei	ived at: 16-07-04 09:37:52								
	F2066	F2066 M8 N2191 NO ACT BPA AM ADVISORY 10-07-04 09:37:17								
		(MICLASSICENTRALIUZ3								
	PERMIT	WRMAN33								
	CODE	EWORD TIMESTAMP IN FUTURE								
	Events	at 16-07-04 09:37:52								
	Open	•								
	10 R Edit	B N2190 NO ACT A1 CMS ADVISORY 10-07-04 09:35:46								
		LASS:CENTRAL:023								
		14 MESSAGE-ID: 00544								
	10 2 Dromortion									
	er Show Status History	0 C2900913 70580913 40580200 48580200 58580200 60580913 50580400								
	Sustan Banart	D 19000100 0000000 00C00002 03B00400 0000000 00000002 00A85902								
	Benort Center	2 008859FF FF000000 00FFFF00 00000000 000001FF FF000000 0000000								
	Access Applications	Software								
	Status Evaluation	Fault Alarm Configuration								
		Hardware Alarm Filters								
	15 HTTPS 443	System Hosts     Alarms Off								
	Enterprise MiB	Appliances								
	rillP 80	Picocompu								
	SASSISTANI'S	P DISCOVERY P EITOIS								

# TASK 10 > Show list of all error messages

→ The selected errors can be removed manually from the SQL database using the Delete button. It is also possible here to open the original error message via the Error Messages... button. The service manual is also available, which then displays detailed information on the selected fault.



🚄 Properties	4.215 41100	uno.	DULT HE AL	рен	Hum	HUDODUB I		
Show Status History	23 F6066	M8	NO ACT	A1	CMS	ADVISORY		
	23 F2066	M8	NO ACT	BPA	AM	ADVISORY		
System Report	23 F2066	M8	NO ACT	BPA	AM	ADVISORY		
🕙 Report Center	22 52066	MQ	NOACT	DPA	AM			
🔆 IP	Software	M8	NO ACT	BPA	AM	ADVISORY		
Access Applications	Fault	Alarm Configu	ration	BPA	AM	ADVISORY		
Status Explanation	Hardwaro	Alarm Eiltore		BPA	AM	ADVISORY		
		Aldi III Fillei S		BPA	AM	ADVISORY		
HTTPS 443	System Hosts	Alarms Off		BPA	AM	ADVISORY		
Enterprise MIB	Appliances	Alarms On						
HTTP 80	Topology/Trunks	Error Message	-0	SHB Delete				
<assistant></assistant>	Discovery	Errors						
OpenScape 4000 Assistant	System Info	Get Alarm Mirror				8 92		

# TASK 11 > Reloading Alarms into the Informix SQL Database

→ Via the context menu Error -> Alarm mirror, the alarms present on the systems can be synchronized with the OpenScape FM. This may be the case if all existing alarms have been deleted from the SQL database. The alarm mirror can now be used to restore the exact status of the alarms on the systems.

	Centra	al _	23	F2066		M8	NO ACT
	Events	•	23	F2066		M8	NO ACT
	🗖 Open	•	23	F2066		M8	NO ACT
200	P Edit		23	F2066		M8	NO ACT
200			23	F2066		M8	NO ACT
5)	V New	•	23	F2066		M8	NO ACT
	Nonfigure		23	F2066		M8	NO ACT
200	🛛 🗹 Properties		23	F2066		M8	NO ACT
ge	Show Status History		23	F6066		M8	NO ACT
	System Report		23	F2066		M8	NO ACT
	Benort Center		23	F2066		M8	NO ACT
sta	in Report Center		23	F2066	-	M8	NO ACT
	41 2%	' S	nftware			M8	NO ACT
	Access Applications	• Fa	ult		Ala	arm Configura	ntion
1	🚽 💡 Status Explanation	HR	ardware		Ala	arm Filters	
1	HTTPS 443	) S	/stem Hosts		Ala	arms Off	
. 1 .	Enterprise MIB	۱	mliances		AI2	arms On	
		b T	polocy/Trupko		Err		
	desistants		pology/manks			or messages	·
_	<assistant></assistant>	יט	scovery	i i	Eri	TOFS	
	OpenScape 4000 Assistant	• S	/stem Info		Ge	t Alarm Mirro	r
	Port Collector	▶ M	anager Web Ac	cess			
	85200	M	AR OpenScape	4000 >			

# Search for alarms

The search for existing alarms (on/off) and for errors can be started via the entry "Technologies" ->

"OpenScape 4000" in the main menu, or also via the context menu of the PABX network → Menu entry "Search systems...".



😪 Technologies 🛛 🗐 SNM	P 📑 MAR ಿ System Man	agement
OpenScape Business/H3K )		- 2 🗈
OpenScape 4000	List Agents	Sys
OpenScape Voice	Search Systems	
Filter	Alarm Class Notice	Loc
	Error Class Notice	
Agent System Id	🚰 Control Center - Overview	m Nu E

Search Syst	iems					3			<u> </u>	à 🗢 🗢 🔲 🗶
			System I	d S	System Numb	er Versio	n	Network	Last FM older	Host
										1.85.31.21 💌
🗹 Filter			Custome	er L	Location	Establi	shed	Contract	PosNo	Search Type
										Alarm
Agent	System Id	Managed	Customer	System Nu	. Established	Contract	PosNo	Version		
1.85.31.21	MGR1 ( <m< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>V/</td><td></td><td></td></m<>							V/		
1.85.31.21	S200 (852	<b>v</b>	UNIFY ACA L	L31988Q0	23	0185200	85200	UV7		
1.85.31.21	S300 (H4k	~	SIEMENSK L	L31085E0	23	0185300	85300	UV5		
									Oneration	
									oporation	Snapshot
									Search  Delete	Current
									Time Integral Chains	Garrent
										4
									Recent Days	1
									Date	Time
									From	11:00:00 PM
									Date	Time
									🔲 To 🛛 Jul 4, 2016	4:30:34 PM
									Priority State	Module
									Name	i
									Group	Class
									All	
								-	1	

Select the corresponding OpenScape 4000 Manager from the Host field and the Alarms entry from the Search field. Other choices from this field are Error, BCSM, BCSU, CDSM, CDSU, and Systems. Then click the Search Systems button. All systems of this manager are now displayed in the list. Select a system or all of them. So the button search alarms... activated. A search can be defined for certain times. The search can also be restricted by priorities (Major, Minor, Device, All), by status (On, Off, All) and by modules (BPA, BPB, A1, All). The Group field, which offers the options All, Central, SWU Peripherals, SWU Logical, SM Peripherals and Element Manager for selection, can also be used to restrict the search result.

Another option to start search is via the popup menu of the PABX network. Click on the entry OpenScape 4000 -> Error -> Alarms/Error.... there. Here you can also see the systems that belong to this PABX network. Select one or more installations and then click on the Search alarms... button to search. The



search result can be returned via the Priority, Status, Module, Group, etc. fields can be restricted. In both cases the alarms will be displayed in a new Info Browser window.

ape 4000			=								
5.31.21			1								
1.85.2 E	vents										
1.85.3	pen										
<mana e<="" th="" 📴=""><th>an</th><th></th><th>A/E)</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></mana>	an		A/E)								
1.00.2 🤫 N	lew	•	(V5)								
rane B	roperties										
cape V	ystem Repor	t									
cape V 😽 S	itatus Explan	ation									
Mana C	penScape 40	)00 🕨	System	•	_						
0:0:0:0:0:0			Fault	▶ Alar	rms						
cape Busine	ss-1.150.206	.0	Hardware	Erro	DFS						
cape Busine	ss-1.150.205	.0									
uar Cataurau				3							
4 05 24 34 4	- Alarma				) A & E				Â	8	
1.03.31.21	PAIdITIS								<u> </u>	3	
Network											
Agent	System Id	State	e Ma	ijor	Minor	Device	Customer				
1.85.31.21	<manager< th=""><th></th><th>M</th><th>0</th><th>1</th><th></th><th></th><th></th><th></th><th></th><th></th></manager<>		M	0	1						
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								1.00	Date		Time
								From	n		11:00:00 PM
									Date		Time
								🗌 To	Jul 4, 201	6	4:35:52 PM
								Priority	State	1	Module
								All	▼ All	•	All 🗖
								Name		_	
								Group		_	lass
								All		Ŧ	

# TASK 12 > Installing the Service Manual (ALFE)

- → OSFM Server: Create a new folder:
   <OpenScape FM\client\help\alfe>
- → Copy the file P31003H3100S100010029.zip (from the CD:\h4k\Alfe) into the new directory.
- $\rightarrow$  Stop and restart the server.

Trunk groups and trunks



The KNDEF entries can be displayed with the popup menu Topology/Sets -> KNDEF.... These entries are also used for display of the PABX network topology. All KNDEF entries for the selected system are listed here in this table.

<ul> <li>OpenScape 4000</li> <li>1.85.31.21</li> <li>1.85.21.212 (85200)</li> <li>1.85.31.5 (H4kV5)</li> <li>1.85.31.5 (H4kV5)</li> <li>1.85.21.212 (85200)</li> <li>OpenScape 4000 Manager</li> <li>OpenScape Business</li> <li>OpenScape Voice</li> <li>OpenScape Voice Assistan</li> <li>System Management</li> <li>fe80:0:0:0:0:0:0</li> <li>OpenScape Business-1.15</li> <li>OpenScape Business-1.15</li> <li>Server2Server Gateway</li> <li>System</li> </ul>	<ul> <li>Open</li> <li>Open</li> <li>Edit</li> <li>New</li> <li>Configure</li> <li>Properties</li> <li>Show Status History</li> <li>System Report</li> <li>System Report</li> <li>Report Center</li> <li>IP</li> <li>Access Applications</li> <li>Status Explanation</li> <li>HTTPS 443</li> <li>Enterprise MIB</li> <li>HTTP 80</li> <li><assistant></assistant></li> <li>OpenScape 4000 Assistant</li> </ul>		Software Fault System Hosts Appliances Topology/Trunks Discovery Discovery	KNDEF Trunk Groups Trunks					
1.85.21.212 (85200)<>85200<>Topology/ ▼ 2 🗿 2 🛄 2 😪									
Agent 1.85.31.21 S	ystem Id 85200 Custon	ner	UNIFY ACADEMY 1	-85-200					
	Index			Node No.					
			0 10-85-200						

The bundles set up on the system can be displayed with the popup menu Topology/Sets -> Trunk groups.... Information on the setup bundles are displayed in table view. The bundle number (ID), bundle name, device type (Device) and maximum number of sets are displayed by the AMO BUEND. The node number (destination) and alarm number are read from the AMO TDCSU/TACSU. The sets assigned to this bundle can be displayed with the Sets... button.

🖻 Report Center				
🔆 IP	•	Software	Þ	
Access Applications	۲	Fault	×	
💡 Status Explanation		Hardware	Þ	
HTTPS 443	۲	System Hosts		
Enterprise MIB	Þ	Appliances		
HTTP 80	ł	Topology/Trunks	Þ	KNDEF
<assistant></assistant>	P	Discovery	T	Trunk Groups
OpenScape 4000 Assistant	۲	System Info	1	Trunks
Port Collector	۲	Manager Web Access	1	
85200	Þ	MAR OpenScape 4000	Þ	



1.85.21.212	1.85.21.212 (85200)<>85200<>Topology/ 🔻 🍣 🗊 🍛 🛄 🥥 🚖											
Agent 1.85.31.21 System Id 85200 Customer UNIFY ACADEMY 1-85-200 Discovery 2015-12-15												
ld	Name	Device	Туре	Max Trunks	AMO Node	Configured	Alarms					
10	S0 KNOTE	SOCONN	digital	4	10-85-100	0	10					
30	S0 KNOTE	SOCONN	digital	10	10-85-300	0	30					
90	AMT LEIPZIG	SOCOD	digital	2	1-1-290	0	90					

All Trunks are displayed in a table with the popup menu Topology/Sets -> Trunks....

The locations of the setup sets are additionally displayed. The status shows whether or not the trunk is in operation. The assigned alarm number is displayed in the Alarm column.

r	System Report Report Center				
nt	Access Applications		Software	Þ	
			Fault	×	
	💡 Status Explanation		Hardware	×	
50	HTTPS 443	۲	System Hosts		
50	Enterprise MIB	Þ	Appliances		
	HTTP 80	I	Topology/Trunks	Þ	KNDEF
	<assistant></assistant>	P	Discovery	Þ	Trunk Groups
	OpenScape 4000 Assistant	۲	System Info		Trunks
	Port Collector	۲	Manager Web Access	1	
	85200	۲	MAR OpenScape 4000	¥.	

1.85.21.212 (85200)<>85200<>Topology/... 💌 🍣 🗊 🍛 🋄 🥥 🚖

Agent 1.85.31.21 System Id 85200 Customer UNIFY ACADEMY 1-85-200 Discovery 2015-12-15 14:51:21.0													
ld	Туре	Number	Name	Device	State	Alarm	Ch. Group	Channels					
10	digital	1-01-012-0	SO KNOTE	SOCONN	yes	10	0						
10	digital	1-01-012-0	S0 KNOTE	SOCONN	yes	10	0						
30	digital	1-01-012-0	S0 KNOTE	SOCONN	yes	30	0						
30	digital	1-01-012-0	S0 KNOTE	SOCONN	yes	30	0						
90	digital	1-01-012-0	ISDNAMTL	SOCOD	yes	90	0						

2