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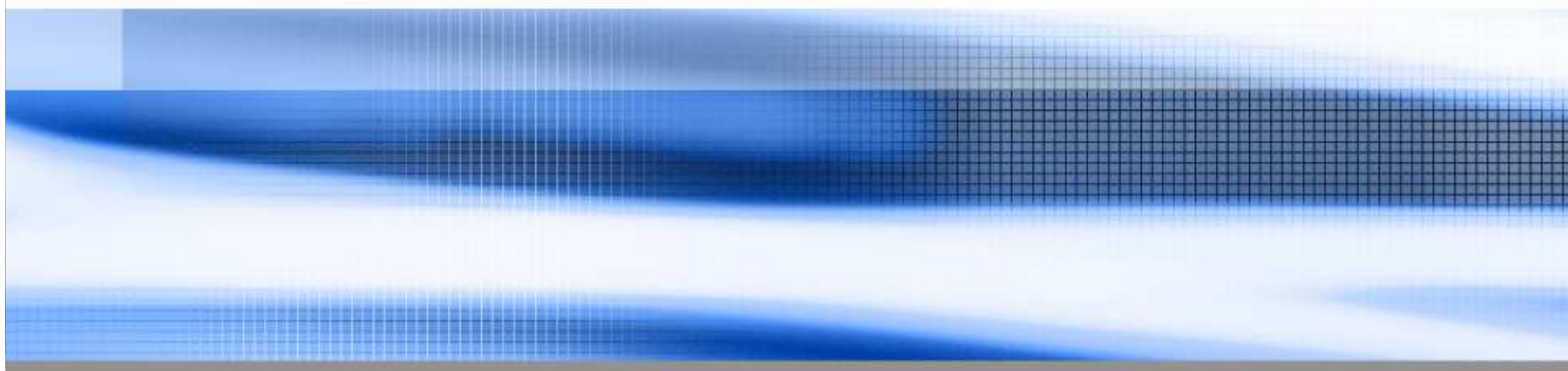
DOPS



DOPS

Docsis OpenSource Provisioning Server

v1.2 Michael Bülte

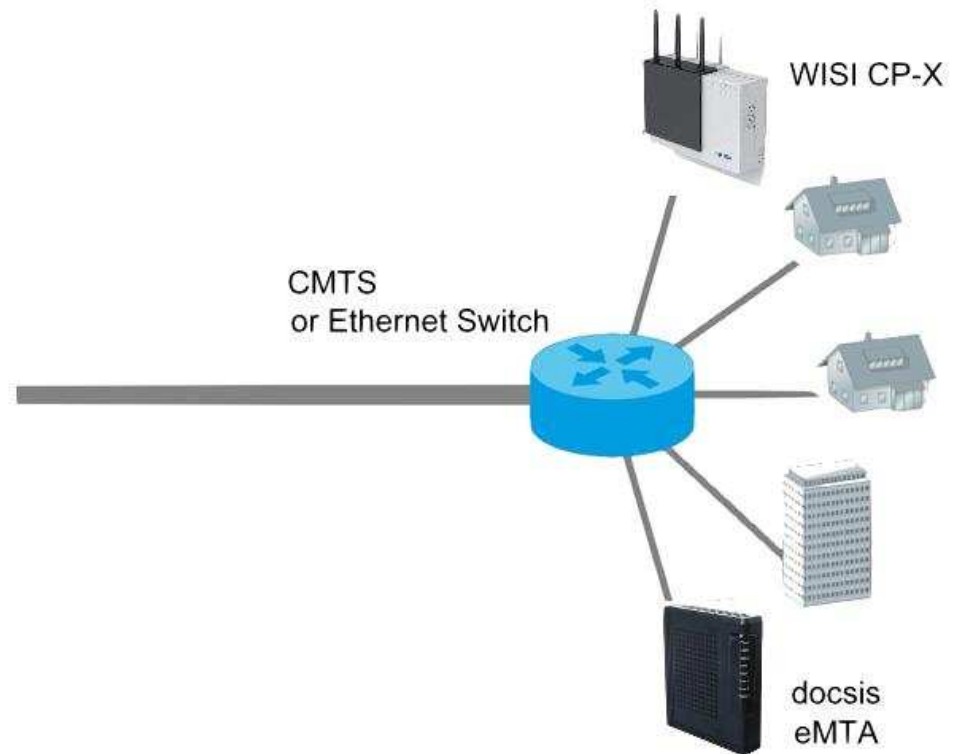


Docsis and FTTx with one Provisioning System



- DHCP-Server
- TFTP-Server
- DNS-Server
- ToD-Server
- Syslog-Server
- Database-Server

CMTS
or Ethernet Switch





... a link to the future

Technical Overview / Feature List

- Based on OpenSource Docsis Tools (designed to bring up 150 Modems per second)
- Extended to provision the WISI CPX FTTx IAD and several DOCSIS eMTA's (NCS and SIP)
- Supports Basic and Hybrid Provisioning flow in mixed mode (US and EuroPacketcable)
- Provides following services:
DHCP-Server, DNS-Server, ToD-Server (Time of Day), TFTP-Server, Syslog-Server
- All services are based on a MySQL database thus having the advantage to easily change, backup or clone the configuration during normal operation without taking the system out of service
- DHCP and TFTP are cached in memory for fast response
- Dynamic configuration file generation for cable modems, MTAs and Fiber CPX
- Runs on CentOS 5.x Linux OS (RHEL 5)
- Can run in a virtual environment on Microsoft Windows based Servers (VMware)
- Web-Browser based GUI gives access to all settings and logs
(Only Web-Browser with Java support needed, tested with IE 6/7, Firefox and Opera)
- Easy provisioning based on predefined templates (no need of DOCSIS/PacketCable knowhow)



... a link to the future

Technical Overview

- Quick startup with preinstalled Appliance-Server (1RU Pizzabox Size) or VMware Image
- Different Service and Support Models for Hardware
- Remote Support and Upgrades for DOPS through SSH
- Scaling licence models designed to fit into your business plan

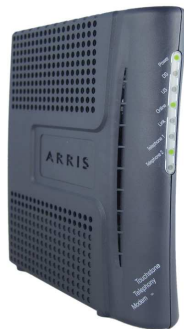




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Tested and Supported SIP eMTA's (will be increased)

- Arris TMB series
- Scientific Atlanta EPC2203
- Thomson THG520 / THG540
- Stollmann/Hitron eMTA+A (Docsis2.0 SIP eMTA)
- Stollmann/Hitron eMTA+I (Docsis 2.0 ISDN SIP eMTA)
- Motorola SBV5120 / SBV5121





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Web-Gui with access to all Services and Settings

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

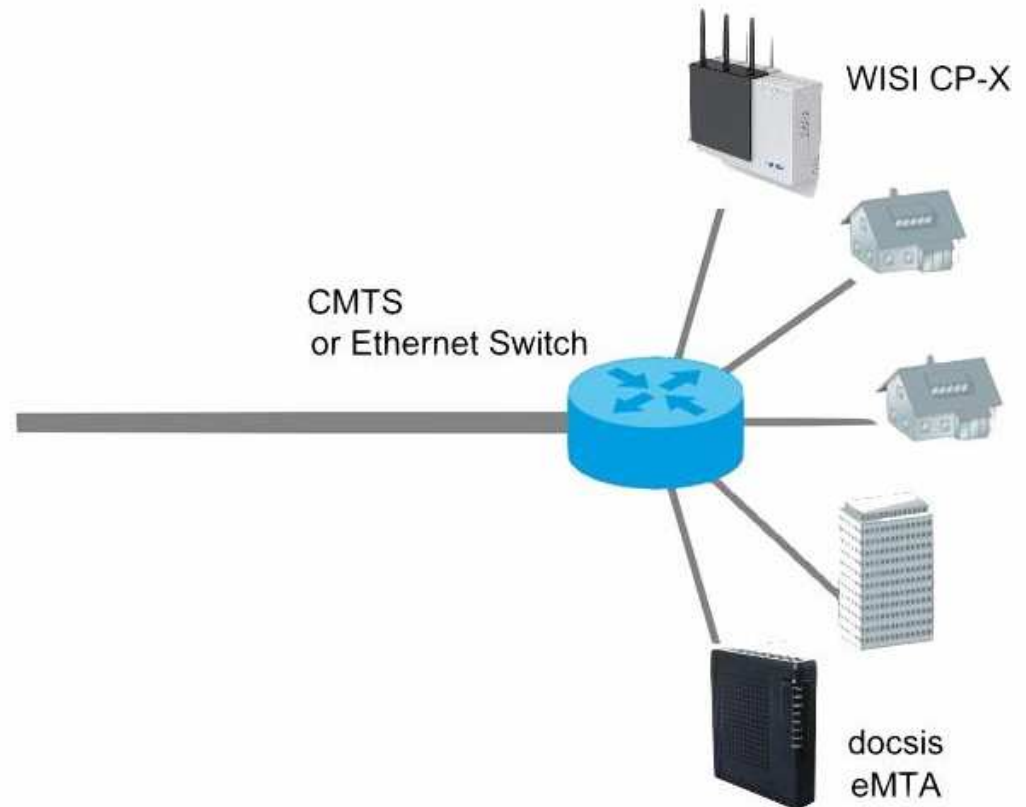
Licences: **2000**

Used Licences: **30**



- DHCP-Server
- TFTP-Server
- DNS-Server
- ToD-Server
- Syslog-Server
- Database-Server

CMTS
or Ethernet Switch





Subnet Configuration and Overview for DHCP

DOPS Subscriber Devices Logging Templates System-Admin ?

Add new subnet

Rows 1 to 16 of 16

Jump to row :

Subnets :

	Subnet ID	Client type	CMTS or Gateway IP	Network	Range-start	Range-end	Gateway	Lease time	Domain Name	DNS Server	
<input type="button" value="Edit"/>	1	CPX	172.17.4.1	172.17.4.0/24	172.17.4.200	172.17.4.230	172.17.4.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	1	CPE	172.17.4.1	172.17.5.0/24	172.17.5.200	172.17.5.220	172.17.5.1	3600	bridacom.lab	172.17.2.21	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	2	CM	10.10.96.1	10.10.96.0/24	10.10.96.200	10.10.96.220	10.10.96.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	2	CPE	10.10.96.1	10.10.104.0/24	10.10.104.200	10.10.104.220	10.10.104.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	3	CPX	172.17.99.1	172.17.99.0/24	172.17.99.200	172.17.99.220	172.17.99.1	86400	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	3	CPE	172.17.99.1	172.17.99.0/24	172.17.99.221	172.17.99.230	172.17.99.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	4	CM	10.10.88.1	10.10.88.0/24	10.10.88.200	10.10.88.230	10.10.88.1	3600	bridacom.lab	172.17.2.21	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	5	CPX	172.17.61.1	172.17.61.0/24	172.17.61.2	172.17.61.100	172.17.61.1	86400	bridacom.lab	172.17.2.21	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	5	CPE	172.17.61.1	172.17.61.0/24	172.17.61.101	172.17.61.200	172.17.61.1	3600	bridacom.lab	172.17.2.21	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	6	MTA	10.10.96.1	10.10.100.0/24	10.10.100.230	10.10.100.254	10.10.100.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	7	CM	10.12.44.1	10.12.44.0/24	10.12.44.200	10.12.44.254	10.12.44.1	7200	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	7	CPE	10.12.44.1	10.12.46.0/24	10.12.46.200	10.12.46.254	10.12.46.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	8	CM	10.10.88.1	10.10.88.0/24	10.10.88.200	10.10.88.254	10.10.88.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	9	MTA	10.10.88.1	10.10.89.0/24	10.10.89.200	10.10.89.254	10.10.89.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	10	MTA	10.12.44.1	10.12.45.0/24	10.12.45.200	10.12.45.254	10.12.45.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	11	CM	10.10.96.1	10.10.96.0/24	10.10.96.200	10.10.96.204	10.10.96.1	3600	bridacom.lab	172.17.2.60	<input type="button" value="Del"/>



... a link to the future

Subscriber/Device Management

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Add new Subscriber

Name



MB*

Filter

can be filtrate by
name,accountid,street,email
,PhoneNo and HW-Address

Subscriber:

	Account ID	Name	Description	Device	Last modified	
Edit	2001	MB	Docsis-Modem 1 Arris CM550B	0015960df5bc	19.08.2009,13:51:38	Del
Edit	2003	MB	Docsis-Modem 3 THG540	0011e356b791	19.08.2009,13:51:38	Del
Edit	2004	MB	Arris Testmodem Lab	0015960df496	19.08.2009,13:51:38	Del
Edit	2010	MB	CP10 Neu Test	000398050058	19.08.2009,13:51:38	Del
Edit	2017	MB	Thomson THG520 SIP	00189b48cdb0	19.08.2009,13:51:38	Del
Edit	2018	MB	Motorolla SBV5121	0017eea21a9a	19.08.2009,13:51:38	Del
Edit	2020	MB	Moto 5120E NCS	00137173a3e4	26.08.2009,14:01:32	Del
Edit	2021	MB	Moto 3.0 Test	002375ff1056	19.08.2009,13:51:38	Del
Edit	2022	MB	Stollmann eMTA+A ED3.0	0005ca52e5a4	19.08.2009,13:51:38	Del
Edit	2027	MB	CP10 Bridacom	000723060086	19.08.2009,13:51:38	Del
Edit	2032	MB	Motorola 4200	0011aef5484a	17.09.2009,16:10:46	Del
Edit	2033	MB	Thomson TCM245	00109522e7fd	18.09.2009,08:24:46	Del



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Subscriber – Device Information

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Subscriber Information:

Account ID:*	2003	Description:	Docsis-Modem 3 THG540
AccountName:*	<input type="text" value="Michael Bülte"/>	City:	<input type="text"/>
Street:	<input type="text"/>	Phone number:	<input type="text"/>
Email:	<input type="text"/>		

*required

Undo

Save

Mac-Addresses are links to device supervision to do ping or SNMP readouts

Devices:

Edit	Macaddress	Type	Service	Delete
<input type="button" value="Edit"/>	0011e356b791	CM	Model Thomson THG540 SIP Hybrid flow, CoS Bronze, MaxCPE:3, Enable MTA	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	0011e356b792	TH-SIP-MTA	TelLine0:enabled, TelLine1:enabled	<input type="button" value="Del"/>



... a link to the future

Cablemodem Provisioning with predefined Templates

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Device:

Device Mac-Address: *

001596354770

Subnet ID:*

Subnet ID 2

* required

created in 'Subnets' for
cablemodems

Model:*

Model Arris TM502B SIP Hybrid Flow

BPI+ enabled:



Class of Service:

CoS Bronze

← predefined CoS

MaxCPE:

3

Enable MTA:*



* affects only if device is an eMTA

Undo

Provision



... a link to the future

CPX Provisioning with predefined Configurations

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Basic Settings:

Device Mac-Address: *

SubnetID:*

created in 'Subnets' for fiber CPX

Configuration-Name:

CPX config template

← predefined configurations

SIP Line 0 Enable:

SIP Line 1 Enable:

Tel. Number:

Tel. Number:

Username:

Username:

Password:

Password:

* required

Undo

Provision



... a link to the future

Cablemodem Devices Overview

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

0013*

MacFilter

← macfilter to find device

CM Devices:

Macaddress	Subnet	Ipaddress	Accountid	Model	CM Details	Ping	Reset
00131135950a	7	10.12.44.200	0815	Model Arris TM502B SIP	ReadCMDData	Ping	<input type="checkbox"/>
001371733e26	7	10.12.44.202	0816	Model Motorola SBV5120 NCS	ReadCMDData	Ping	<input type="checkbox"/>
00137173a3e4	2	10.10.96.204	2020	Model Motorola SBV5120 NCS	ReadCMDData	Ping	<input type="checkbox"/>
0013111ab8fd	2	10.10.96.210	2030	Model default	ReadCMDData	Ping	<input type="checkbox"/>
							Reset

Accountids are links to the subscriber account



... a link to the future

Cablemodem SNMP Readout

DOPS Subscriber **Devices** Logging Templates System-Admin ?

Description	ARRIS Euro-DOCSIS 2.0 / SIP 2.0 Touchstone Telephony Modem HW_REV: 32; VENDOR: Arris Interactive, L.L.C.; BOOTR: 5.01; SW_REV: 5.2.47T.EURO.SIP; MODEL: TM402B
SW Version	5.2.47T.EURO.SIP
UpTime	(900600) 2:30:06.00
Serial	576BMD32R040182
Status	Operational

Downstream Frequency	546 MHz	Upstream Frequency	43.2 MHz
DownstreamPower	16.2 dBmV	Upstream Power	40 dBmV
Downstream Modulation	qam 256		
Downstream S/N Ratio	35.4 dB		
Timing Offset	1224		
Resets	0		
Ranging Aborts	0		
DHCP Server	172.17.2.60		
Configfile	00131135950a.bin		

Close



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CPX Devices Overview

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

*86

MacFilter

← macfilter to find device

CPX Devices:

Macaddress	Subnet	Ipaddress	Accountid	CPX Details	Ping	Reset
000723060086	3	172.17.99.201	2027	ReadCPXData	Ping	<input type="checkbox"/>
						Reset

Accountids are links to the subscriber account



... a link to the future

CPX SNMP Readout

DOPS	Subscriber	Devices	Logging	Templates	System-Admin	?
------	------------	---------	---------	-----------	--------------	---

Firmware	VA_A900131_S0_C049WS_V009				
Kernel	VK_A900131_S0_C049WS_V009				
Bootlader	VB_A900131_S0_C049WS_V008				
SipProxyEnable	Enabled	SipRegistrarEnable	Enabled	SipStunEnable	Disabled
SipProxyDomain	172.17.10.50	SipRegistrarDomain	172.17.10.50	SipStunDomain	
SipProxyPort	5060	SipRegistrarPort	5060	SipStunPort	3400
SipProxyProtokoll	UDP	SipRegistrarProtokoll	UDP	SipStunUser	
SipProxyOutboundProxy	Disabled	SipRegistrarExpTime	1800	SipStunPasswd	

SipLine0Enable	Enabled	SipLine1Enable	Enabled
SipLine0UserID	cp10-10	SipLine1UserID	cp10-11
SipLine0Displayname		SipLine1Displayname	
SipLine0Domain	172.17.10.50	SipLine1Domain	172.17.10.50
SipLine0Realm	cp10-10	SipLine1Realm	cp10-11
SipLine0AuthUsername	cp10-10	SipLine1AuthUsername	cp10-11
SipLine0AuthPasswd	123456	SipLine1AuthPasswd	123456
SipLine0RegistryState	Active	SipLine1RegistryState	Active

MediaSilentSupp	1	CodecFrameSize_1	20
MediaDTMFType	1	CodecPayLoadType_0	0
MediaDTMFPayloadValue	96	CodecPayLoadType_1	0
MediaG723PrefCodec	6	CodecRowStatus_0	1
MediaCodecCount	2	CodecRowStatus_1	1
CodecID_0	1	RTP_RangeStart_0	6000
CodecID_1	2	RTP_RangeEnd_0	6005
CodecFrameSize_0	20	RTP_RangeDSCPMark	184

Close



... a link to the future

DOPS Syslog – helps to find general issues

DOPS Subscriber Devices Logging Templates System-Admin ?

syslog-2.txt - Editor

Datei Bearbeiten Format Ansicht ?

date	time	message
2009-10-05	14:02:40	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	14:02:40	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	14:01:34	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	14:01:34	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	14:01:18	WARN -- bad ip requested 10.10.96.5 mac 0013111ab8fd real-ip 10.10.96.210
2009-10-05	14:00:28	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	14:00:28	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:59:22	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:59:22	NOTICE: Executable not found or not configured (alert-program)
2009-10-05	13:59:22	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:58:16	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:58:16	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:58:02	dropping file (null) fnum 14 (counter 1)
2009-10-05	13:57:10	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:57:10	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:56:23	Dynamic filegenerator startet - config file 92 bytes device version_flag = 1.1
2009-10-05	13:56:04	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:56:04	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:55:41	time: requests 2
2009-10-05	13:54:58	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:54:58	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:53:52	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:53:52	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:53:16	NAK -- no IP addresses to give gi 172.17.5.1 mac 00174289090d
2009-10-05	13:53:16	NAK -- no IP addresses to give gi 172.17.5.5 mac 00174289090d
2009-10-05	13:53:12	NAK -- no IP addresses to give gi 172.17.5.1 mac 00174289090d
2009-10-05	13:53:12	NAK -- no IP addresses to give gi 172.17.5.5 mac 00174289090d
2009-10-05	13:52:46	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:52:46	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:51:40	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:51:40	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:50:33	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:50:33	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:49:27	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:49:27	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:48:21	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:48:21	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:48:16	NAK -- no IP addresses to give gi 172.17.5.1 mac 00217073a7ea
2009-10-05	13:48:16	NAK -- no IP addresses to give gi 172.17.5.5 mac 00217073a7ea
2009-10-05	13:48:11	NAK -- no IP addresses to give gi 172.17.5.1 mac 00217073a7ea
2009-10-05	13:48:11	NAK -- no IP addresses to give gi 172.17.5.5 mac 00217073a7ea
2009-10-05	13:47:15	NAK -- no IP addresses to give gi 172.17.10.3 mac 001a649a298d
2009-10-05	13:47:15	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d
2009-10-05	13:46:09	NAK -- no IP addresses to give gi 172.17.10.1 mac 001a649a298d



... a link to the future

CPX Provisioning Log (Voiceline Provisioning)

DOPS	Subscriber	Devices	Logging	Templates	System-Admin	?
cpxlog-4.txt - Editor						
Datei Bearbeiten Format Ansicht ?						
date	time	macaddr	ipaddr	message		
05.10.2009	11:19:22	000723060086	172.17.99.201	Provisioning of CPX finished		
05.10.2009	11:19:22	000723060086	172.17.99.201	successful sending CPX Line1 Data		
05.10.2009	11:19:22	000723060086	172.17.99.201	successful sending CPX Line0 Data		
05.10.2009	11:19:22	000723060086	172.17.99.201	Beginning sending data to CPX		
05.10.2009	11:19:22	000723060086	172.17.99.201	CPX found in subscriber-Device Database		
05.10.2009	11:19:22	000723060086	172.17.99.201	Provisioning of CPX in progress		
05.10.2009	11:19:22		172.17.99.201	warmstart Trap received		
05.10.2009	10:27:20	000723060086	172.17.99.201	Provisioning of CPX finished		
05.10.2009	10:27:20	000723060086	172.17.99.201	successful sending CPX Line1 Data		
05.10.2009	10:27:19	000723060086	172.17.99.201	successful sending CPX Line0 Data		
05.10.2009	10:27:19	000723060086	172.17.99.201	Beginning sending data to CPX		
05.10.2009	10:27:19	000723060086	172.17.99.201	CPX found in subscriber-Device Database		
05.10.2009	10:27:19	000723060086	172.17.99.201	Provisioning of CPX in progress		
05.10.2009	10:27:19		172.17.99.201	warmstart Trap received		
30.09.2009	14:33:58	000723060086	172.17.99.201	Provisioning of CPX finished		
30.09.2009	14:33:57	000723060086	172.17.99.201	successful sending CPX Line1 Data		
30.09.2009	14:33:57	000723060086	172.17.99.201	successful sending CPX Line0 Data		
30.09.2009	14:33:57	000723060086	172.17.99.201	Beginning sending data to CPX		
30.09.2009	14:33:57	000723060086	172.17.99.201	CPX found in subscriber-Device Database		
30.09.2009	14:33:57	000723060086	172.17.99.201	Provisioning of CPX in progress		
30.09.2009	14:33:57		172.17.99.201	warmstart Trap received		
25.09.2009	11:04:16	000723060086	172.17.99.201	Provisioning of CPX finished		
25.09.2009	11:04:16	000723060086	172.17.99.201	successful sending CPX Line1 Data		
25.09.2009	11:04:15	000723060086	172.17.99.201	successful sending CPX Line0 Data		
25.09.2009	11:04:15	000723060086	172.17.99.201	Beginning sending data to CPX		
25.09.2009	11:04:15	000723060086	172.17.99.201	CPX found in subscriber-Device Database		
25.09.2009	11:04:15	000723060086	172.17.99.201	Provisioning of CPX in progress		
25.09.2009	11:04:15		172.17.99.201	warmstart Trap received		
24.09.2009	12:56:20	0003980506bc	172.17.61.2	No Voicelines enabled for CPX		
24.09.2009	12:56:20	0003980506bc	172.17.61.2	CPX found in subscriber-Device Database		
24.09.2009	12:56:20	0003980506bc	172.17.61.2	Provisioning of CPX in progress		
24.09.2009	12:56:20		172.17.61.2	warmstart Trap received		
22.09.2009	15:55:00	0003980506bc	172.17.61.2	No Voicelines enabled for CPX		
22.09.2009	15:55:00	0003980506bc	172.17.61.2	CPX found in subscriber-Device Database		
22.09.2009	15:55:00	0003980506bc	172.17.61.2	Provisioning of CPX in progress		
22.09.2009	15:55:00		172.17.61.2	warmstart Trap received		
22.09.2009	12:44:51	000723060086	172.17.99.200	Provisioning of CPX finished		
22.09.2009	12:44:51	000723060086	172.17.99.200	successful sending CPX Line1 Data		
22.09.2009	12:44:51	000723060086	172.17.99.200	successful sending CPX Line0 Data		
22.09.2009	12:44:51	000723060086	172.17.99.200	Beginning sending data to CPX		
22.09.2009	12:44:51	000723060086	172.17.99.200	CPX found in subscriber-Device Database		
22.09.2009	12:44:51	000723060086	172.17.99.200	Provisioning of CPX in progress		
22.09.2009	12:44:51		172.17.99.200	warmstart Trap received		
22.09.2009	12:39:56	000723060086	172.17.99.200	Provisioning of CPX finished		



... a link to the future

Pktc Provisioning Log (Hybrid Provisioning Flow)

DOPS	Subscriber	Devices	Logging	Templates	System-Admin	?
pktclog-1.txt - Editor						
Datei Bearbeiten Format Ansicht ?						
date	time	macaddr	ipaddr	message		
05.10.2009	09:03:52	001596354771	10.10.100.230	Provisioningstate received = PASS		
05.10.2009	09:03:47	001596354771	10.10.100.230	successful sending MTA file hash: 36726c3031948a696d24c44e5a0c50b67659fdd5		
05.10.2009	09:03:47	001596354771	10.10.100.230	successful sending MTA its configfilename and location: tftp://172.17.2.60/001596354771.bin		
05.10.2009	09:03:47	001596354771	10.10.100.230	Creating DNS Entry for MTA mta-001596354771.bridacom.lab DomainID=1 EntryID=2011		
05.10.2009	09:03:47	001596354771	10.10.100.230	MTA type: ARRIS-SIP-MTA Configfile-Generator: Config Safari-bridacom-HYBRID OK		
05.10.2009	09:03:47	001596354771	10.10.100.230	Provisioning of MTA in progress		
05.10.2009	09:03:47	10.10.100.230	Euro-DOCSIS-Packetcable	Enrollment received		
05.10.2009	09:01:51	001596354771	10.10.100.230	Provisioningstate received = PASS		
05.10.2009	09:01:46	001596354771	10.10.100.230	successful sending MTA file hash: 36726c3031948a696d24c44e5a0c50b67659fdd5		
05.10.2009	09:01:46	001596354771	10.10.100.230	successful sending MTA its configfilename and location: tftp://172.17.2.60/001596354771.bin		
05.10.2009	09:01:46	001596354771	10.10.100.230	Creating DNS Entry for MTA mta-001596354771.bridacom.lab DomainID=1 EntryID=2011		
05.10.2009	09:01:46	001596354771	10.10.100.230	MTA type: ARRIS-SIP-MTA Configfile-Generator: Config Safari-bridacom-HYBRID OK		
05.10.2009	09:01:46	001596354771	10.10.100.230	Provisioning of MTA in progress		
05.10.2009	09:01:46	10.10.100.230	Euro-DOCSIS-Packetcable	Enrollment received		
05.10.2009	08:10:50	0005ca50de91	10.10.100.238	Provisioningstate received = PASS		
05.10.2009	08:10:35	0005ca50de91	10.10.100.238	successful sending MTA file hash: b82a80c67f4e69e66e1c95b8e4d31c7f7b6c399d		
05.10.2009	08:10:35	0005ca50de91	10.10.100.238	successful sending MTA its configfilename and location: tftp://172.17.2.60/0005ca50de91.bin		
05.10.2009	08:10:35	0005ca50de91	10.10.100.238	Creating DNS Entry for MTA mta-0005ca50de91.bridacom.lab DomainID=1 EntryID=2016		
05.10.2009	08:10:35	0005ca50de91	10.10.100.238	MTA type: eMTA+A Configfile-Generator: Config Safari-bridacom-HYBRID OK		
05.10.2009	08:10:35	0005ca50de91	10.10.100.238	Provisioning of MTA in progress		
05.10.2009	08:10:35	10.10.100.238	DOCSIS-Packetcable	Enrollment received		
05.10.2009	08:09:19	0005ca50de91	10.10.100.238	Provisioningstate received = Configfile Error		
05.10.2009	08:07:19	0005ca50de91	10.10.100.238	successful sending MTA file hash: b82a80c67f4e69e66e1c95b8e4d31c7f7b6c399d		
05.10.2009	08:07:19	0005ca50de91	10.10.100.238	successful sending MTA its configfilename and location: tftp://172.17.2.60/0005ca50de91.bin		
05.10.2009	08:07:19	0005ca50de91	10.10.100.238	Creating DNS Entry for MTA mta-0005ca50de91.bridacom.lab DomainID=1 EntryID=2016		
05.10.2009	08:07:19	0005ca50de91	10.10.100.238	MTA type: eMTA+A Configfile-Generator: Config Safari-bridacom-HYBRID OK		
05.10.2009	08:07:19	0005ca50de91	10.10.100.238	Provisioning of MTA in progress		
05.10.2009	08:07:19	10.10.100.238	DOCSIS-Packetcable	Enrollment received		
05.10.2009	08:06:59	00137173a3e6	10.10.100.232	Provisioningstate received = PASS		
05.10.2009	08:06:54	00137173a3e6	10.10.100.232	successful sending MTA file hash: 3fdbc2af0ad34bc0ae2171ac14875269a4ea6e1c		
05.10.2009	08:06:54	00137173a3e6	10.10.100.232	successful sending MTA its configfilename and location: tftp://172.17.2.60/00137173a3e6.bin		
05.10.2009	08:06:54	00137173a3e6	10.10.100.232	Creating DNS Entry for MTA mta-00137173a3e6.bridacom.lab DomainID=1 EntryID=2020		
05.10.2009	08:06:54	00137173a3e6	10.10.100.232	MTA type: NCS-MTA Configfile-Generator: Config Motorola_SBV5120_ED OK		
05.10.2009	08:06:54	00137173a3e6	10.10.100.232	Provisioning of MTA in progress		
05.10.2009	08:06:54	10.10.100.232	Euro-DOCSIS-Packetcable	Enrollment received		
05.10.2009	08:06:24	001692a3a956	10.10.100.231	Provisioningstate received = PASS		
05.10.2009	08:06:19	001692a3a956	10.10.100.231	successful sending MTA file hash: 8654dbc5792cb64f733a6ed1869458ac0f008505		
05.10.2009	08:06:19	001692a3a956	10.10.100.231	successful sending MTA its configfilename and location: tftp://172.17.2.60/001692a3a956.bin		
05.10.2009	08:06:19	001692a3a956	10.10.100.231	Creating DNS Entry for MTA mta-001692a3a956.bridacom.lab DomainID=1 EntryID=2012		
05.10.2009	08:06:19	001692a3a956	10.10.100.231	MTA type: SA-SIP-MTA Configfile-Generator: Config Safari-bridacom-hybrid OK		
05.10.2009	08:06:19	001692a3a956	10.10.100.231	Provisioning of MTA in progress		
05.10.2009	08:06:19	10.10.100.231	Euro-DOCSIS-Packetcable	Enrollment received		
05.10.2009	08:06:09	0015963545f9	10.10.100.234	Provisioningstate received = PASS		
05.10.2009	08:06:04	0017eea21a9c	10.10.100.233	Provisioningstate received = PASS		



Add/Edit CM-Models with Firmware and Settings

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Add new Model

Models :

	Name	SWUpgradeFilename	Cfg_ID	
Edit	Arris CM550B	CM060013_121106_EU.img	5001	Del
Edit	Thomson THG520 SIP Basic Flow	THG520-67.01.70-090708-S-001-E.img	5002	Del
Edit	Thomson THG540 SIP Hybrid flow	THG540-8B.01.39-090714-S-001-E.img	5003	Del
Edit	Stollmann eMTA+	BRM-35302IS-2.20.3.11_ED.sbn	5004	Del
Edit	SciAtl EPC 2203 Hybrid Flow	epc2203-ESIP-16-v202r1262-080530s-CVC060414.p7b	5005	Del
Edit	Arris TM502B SIP Hybrid Flow	TS050247_021808_EU.MODEL_4_5_6.EURO.SIP.TELNET_ON.img	5006	Del
Edit	Motorola SB5100E		5007	Del
Edit	Stollmann eMTA+A		5008	Del
Edit	Thomson THG520 SIP	THG520-67.01.67-090408-S-115-Euro.img	5009	Del
Edit	Motorola SBV5120E SIP	SBV5121E-SIP-1.0.0-SCM03-SHPC.NNEMN.p7	5010	Del



... a link to the future

Add/Edit CM-Models with Firmware and Settings

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Name:

Stollmann eMTA+I

Firmwarefilename:

BRM-35302IS-2.20.3.11_ED.sbn

MfgCVCDData:

308202f8308201e0a00302010202100ea7e9b0f58a8319

CFG_ID:

5004

Vendor Specific:*

*docsis syntax

```
VendorSpecific
{
  VendorIdentifier 0x0005ca;
  GenericTLV TlvCode 19 TlvLength 1 TlvValue 0x07;
}
```

Vendor certificate
can be imported

Durchsuchen...

import from binary file

Undo

Save



... a link to the future

Add/Edit Class of Service for cablemodems

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Add new CoS

Class of Service :

	Name	Max Traffic-Rate	Cfg_ID	
Edit	Bronze	Downlink: 1024000 b/s - Uplink: 125000 b/s	101	Del
Edit	Silver	Downlink: 2048000 b/s - Uplink: 256000 b/s	102	Del
Edit	Gold	Downlink: 10240000 b/s - Uplink: 512000 b/s	103	Del
Edit	Full	Downlink: 0 b/s - Uplink: 0 Ds b/s	104	Del



... a link to the future

Add/Edit CPX Configurations

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Add new CPX-Config

CPX Configurations :

	Name	Settings	Cfg_ID	
<input type="button" value="Edit"/>	Configuration 2 FW 8.13	Lanmode: bridge; FwUpd: 1; HTTP: 1; PingWan: 1	7002	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	Configuration Sip-Provider	Lanmode: router; FwUpd: 1; HTTP: 1; PingWan: 1	7004	<input type="button" value="Del"/>
<input type="button" value="Edit"/>	V009RC	Lanmode: bridge; FwUpd: 1; HTTP: 1; PingWan: 1	7005	<input type="button" value="Del"/>



... a link to the future

Add/Edit proprietary SIP Configurations

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Arris :

Add/Edit Arris Sip-Configs

Scientific Atlanta :

Add/Edit SA Sip-Configs

Thomson :

Add/Edit Thomson Sip-Configs

Stollmann eMTA+A :

Add/Edit eMTA+A Sip-Configs

Stollmann eMTA+I :

Add/Edit eMTA+I Sip-Configs



... a link to the future

Add/Edit NCS Configurations

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Add new NCS-Config

NCS-Configurations :

	Name	
Edit	Arris_TM502B	Del
Edit	Motorolla_SBV5120_D	Del
Edit	Motorolla_SBV5120_ED	Del
Edit	Thomson_THG520/540	Del



List/Edit DNS Entries

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Add new Record

mta*

Search

← search by name or content

DNS-Entries :

	Name	Content	Type	Modified	
Edit	mta-00131135950b.bridacom.lab	10.12.45.200	A	05.10.2009,08:05:43	Del
Edit	mta-001371733e28.bridacom.lab	10.12.45.201	A	05.10.2009,08:05:53	Del
Edit	mta-0011e356b792.bridacom.lab	10.10.100.235	A	29.09.2009,14:03:49	Del
Edit	mta-001596354771.bridacom.lab	10.10.100.230	A	05.10.2009,09:03:47	Del
Edit	mta-001692a3a956.bridacom.lab	10.10.100.231	A	05.10.2009,08:06:19	Del
Edit	mta-0005ca58cf67.bridacom.lab	10.10.100.236	A	24.09.2009,16:28:30	Del
Edit	mta-0005ca50de91.bridacom.lab	10.10.100.238	A	05.10.2009,08:10:35	Del
Edit	mta-00189b48cdb1.bridacom.lab	10.10.100.237	A	29.09.2009,14:03:49	Del
Edit	mta-0017eea21a9c.bridacom.lab	10.10.100.233	A	05.10.2009,08:05:59	Del
Edit	mta-00137173a3e6.bridacom.lab	10.10.100.232	A	05.10.2009,08:06:54	Del
Edit	mta-0015963545f9.bridacom.lab	10.10.100.234	A	05.10.2009,08:06:04	Del

Resync MTA Entries



... a link to the future

Service Management

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

DOPS-Services:

Running

Manage Services
(DHCP,TFTP,DNS,SYSLLOG)

Stop Services

Start Services

Restart Services

Affect on DHCP-, TFTP-, DNS, ToD, Syslog Services

When you stop services watchdog will also stop!

Licences for IPs: 2000

Used Licences: 30



... a link to the future

Run Scripts

DOPS

Subscriber

Devices

Logging

Templates

System-Admin

?

Scripts:

Del Oldleases

Deletes non active leases
Also done by cronjob hourly

Mass Reset Cablemodems

Resets all active cablemodems

List Oldleases

List Old CPE Leases

Mass Reset CPX

Resets all active CPX



... a link to the future

CPE IP History for lawful use

Microsoft Excel - dhcpoldlog-1.xls [Schreibgeschützt]

File Edit View Insert Format Extras Data Window Help XML Tools

100% Arial

	A	B	C	D	E	F	G	H	I
	ipaddress	macaddress	start_time	end_time	update_time	pc_name	modem_macaddr	subnet	del_date
2	10.12.46.201	001f33dded1	2009-09-14 10:10:51	2009-09-14 11:10:51	2009-09-14 10:10:51		001f33ddecf	7	2009-09-14 12:01:01
3	10.12.46.200	001f33dded1	2009-09-14 09:11:06	2009-09-14 10:11:06	2009-09-14 09:11:04		001f33ddecf	7	2009-09-14 10:10:51
4	10.12.46.201	001f33dded1	2009-09-11 14:30:12	2009-09-11 15:30:12	2009-09-11 14:30:12		001f33ddecf	7	2009-09-11 16:01:02
5	10.12.46.200	001f33dded1	2009-09-11 13:30:27	2009-09-11 14:30:27	2009-09-11 13:30:25		001f33ddecf	7	2009-09-11 14:30:12
6	10.12.46.201	001f33dded1	2009-09-04 14:56:07	2009-09-04 15:56:07	2009-09-04 14:56:07		001f33ddecf	7	2009-09-04 16:01:02
7	10.12.46.200	001f33dded1	2009-09-04 13:56:22	2009-09-04 14:56:22	2009-09-04 13:56:20		001f33ddecf	7	2009-09-04 14:56:07
8	10.10.104.200	00186833a748	2009-09-04 08:30:35	2009-09-04 09:30:35	2009-09-04 08:30:33		00186833a744	2	2009-09-04 10:01:03
9	10.10.104.200	00186833a748	2009-09-03 16:50:03	2009-09-03 17:50:03	2009-09-03 16:50:01		00186833a744	2	2009-09-03 18:01:01
10	10.12.46.201	001f33dded1	2009-09-03 12:02:09	2009-09-03 13:02:09	2009-09-03 12:02:08		001f33ddecf	7	2009-09-03 14:01:02
11	10.12.46.200	001f33dded1	2009-09-03 11:02:23	2009-09-03 12:02:23	2009-09-03 10:28:59		001f33ddecf	7	2009-09-03 12:02:08
12	10.12.46.200	001f33dded1	2009-09-02 17:39:52	2009-09-02 18:39:52	2009-09-02 17:39:52		001f33ddecf	7	2009-09-02 19:01:01
13	10.12.46.201	001f33dded1	2009-09-02 16:40:07	2009-09-02 17:40:07	2009-09-02 15:57:32		001f33ddecf	7	2009-09-02 17:39:52
14	10.12.46.200	001f33dded1	2009-09-02 14:57:47	2009-09-02 15:57:47	2009-09-02 14:57:45		001f33ddecf	7	2009-09-02 15:57:32
15	10.12.46.200	0002021a5b70	2009-08-28 09:27:43	2009-08-28 10:27:43	2009-08-28 09:27:43		0005ca2ebc30	7	2009-08-28 11:01:01
16	10.12.46.201	0002021a5b70	2009-08-28 08:27:58	2009-08-28 09:27:58	2009-08-28 08:27:58		0005ca2ebc30	7	2009-08-28 09:27:43
17	10.12.46.200	0002021a5b70	2009-08-28 07:28:13	2009-08-28 08:28:13	2009-08-28 07:28:13		0005ca2ebc30	7	2009-08-28 08:27:58
18	10.12.46.202	0002021a5b70	2009-08-28 06:28:27	2009-08-28 07:28:27	2009-08-28 06:28:27		0005ca2ebc30	7	2009-08-28 07:28:13
19	10.12.46.200	0002021a5b70	2009-08-28 05:28:42	2009-08-28 06:28:42	2009-08-28 05:28:42		0005ca2ebc30	7	2009-08-28 06:28:27
20	10.12.46.202	0002021a5b70	2009-08-28 04:28:57	2009-08-28 05:28:57	2009-08-28 04:28:57		0005ca2ebc30	7	2009-08-28 05:28:42
21	10.12.46.200	0002021a5b70	2009-08-28 03:29:11	2009-08-28 04:29:11	2009-08-28 03:29:11		0005ca2ebc30	7	2009-08-28 04:28:56
22	10.12.46.202	0002021a5b70	2009-08-28 02:29:26	2009-08-28 03:29:26	2009-08-28 02:29:26		0005ca2ebc30	7	2009-08-28 03:29:11
23	10.12.46.200	0002021a5b70	2009-08-28 01:29:40	2009-08-28 02:29:40	2009-08-28 01:29:40		0005ca2ebc30	7	2009-08-28 02:29:26
24	10.12.46.202	0002021a5b70	2009-08-28 00:29:55	2009-08-28 01:29:55	2009-08-28 00:29:55		0005ca2ebc30	7	2009-08-28 01:29:40
25	10.12.46.200	0002021a5b70	2009-08-27 23:30:10	2009-08-28 00:30:10	2009-08-27 23:30:10		0005ca2ebc30	7	2009-08-28 00:29:55
26	10.12.46.202	0002021a5b70	2009-08-27 22:30:24	2009-08-27 23:30:24	2009-08-27 22:30:24		0005ca2ebc30	7	2009-08-27 23:30:10
27	10.12.46.200	0002021a5b70	2009-08-27 21:30:39	2009-08-27 22:30:39	2009-08-27 21:30:39		0005ca2ebc30	7	2009-08-27 22:30:24
28	10.12.46.202	0002021a5b70	2009-08-27 20:30:54	2009-08-27 21:30:54	2009-08-27 20:30:54		0005ca2ebc30	7	2009-08-27 21:30:39
29	10.12.46.200	0002021a5b70	2009-08-27 19:31:08	2009-08-27 20:31:08	2009-08-27 19:31:08		0005ca2ebc30	7	2009-08-27 20:30:54
30	10.12.46.202	0002021a5b70	2009-08-27 18:31:23	2009-08-27 19:31:23	2009-08-27 18:31:23		0005ca2ebc30	7	2009-08-27 19:31:08
31	10.12.46.200	0002021a5b70	2009-08-27 17:31:38	2009-08-27 18:31:38	2009-08-27 17:31:37		0005ca2ebc30	7	2009-08-27 18:31:23
32	10.12.46.202	0002021a5b70	2009-08-27 16:31:52	2009-08-27 17:31:52	2009-08-27 16:31:52		0005ca2ebc30	7	2009-08-27 17:31:37
33	10.12.46.200	0002021a5b70	2009-08-27 15:32:07	2009-08-27 16:32:07	2009-08-27 15:32:07		0005ca2ebc30	7	2009-08-27 16:31:52
34	10.12.46.202	0002021a5b70	2009-08-27 14:32:21	2009-08-27 15:32:21	2009-08-27 14:32:21		0005ca2ebc30	7	2009-08-27 15:32:07
35	10.12.46.200	0002021a5b70	2009-08-27 13:32:36	2009-08-27 14:32:36	2009-08-27 13:32:36		0005ca2ebc30	7	2009-08-27 14:32:21
36	10.12.46.202	0002021a5b70	2009-08-27 12:32:51	2009-08-27 13:32:51	2009-08-27 12:32:51		0005ca2ebc30	7	2009-08-27 13:32:36
37	10.12.46.200	0002021a5b70	2009-08-27 11:33:05	2009-08-27 12:33:05	2009-08-27 11:33:05		0005ca2ebc30	7	2009-08-27 12:32:51
38	10.10.104.200	000e5ca8b4d6	2009-08-27 11:03:18	2009-08-27 12:03:18	2009-08-27 11:03:16		000e5ca8b4d2	2	2009-08-27 13:01:02
39	10.12.46.202	0002021a5b70	2009-08-27 10:33:20	2009-08-27 11:33:20	2009-08-27 10:33:20		0005ca2ebc30	7	2009-08-27 11:03:18
40	10.12.46.200	0002021a5b70	2009-08-27 09:33:35	2009-08-27 10:33:35	2009-08-27 09:33:35		0005ca2ebc30	7	2009-08-27 10:33:20
41	10.12.46.202	0002021a5b70	2009-08-27 08:33:49	2009-08-27 09:33:49	2009-08-27 08:33:49		0005ca2ebc30	7	2009-08-27 09:33:35
42	10.12.46.200	0002021a5b70	2009-08-27 07:34:04	2009-08-27 08:34:04	2009-08-27 07:34:04		0005ca2ebc30	7	2009-08-27 08:33:49
43	10.12.46.202	0002021a5b70	2009-08-27 06:34:18	2009-08-27 07:34:18	2009-08-27 06:34:18		0005ca2ebc30	7	2009-08-27 07:34:04
44	10.12.46.200	0002021a5b70	2009-08-27 05:34:33	2009-08-27 06:34:33	2009-08-27 05:34:33		0005ca2ebc30	7	2009-08-27 06:34:18

Exported excel sheet with CPE IP history



... a link to the future

**Thank you for your
attention.**