

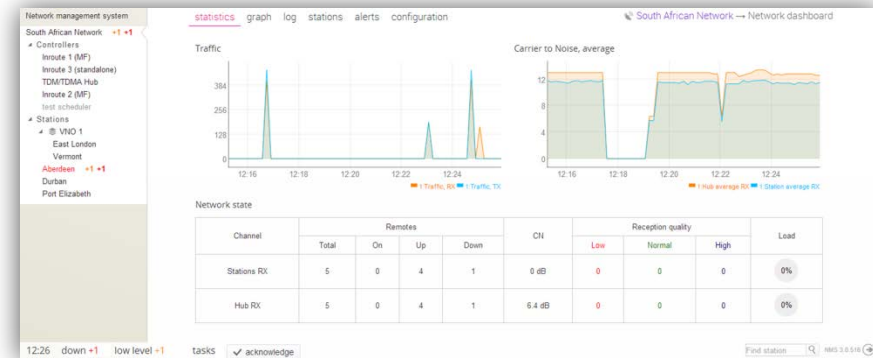
UHP NMS 3.1

NETWORK MANAGEMENT SYSTEM
FOR UHP VSAT PLATFORM



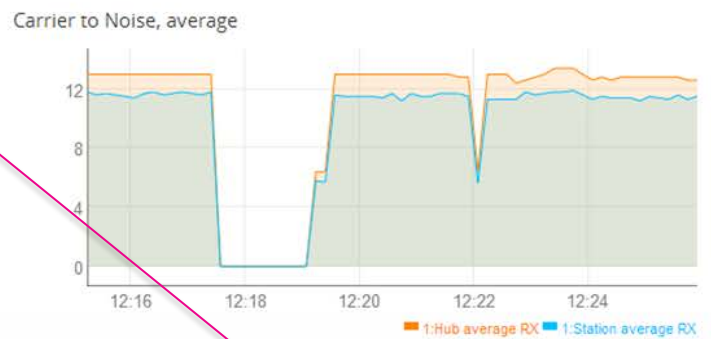
UHP Network Management System v3.1

- **Enhanced Graphical Interface**
 - web-based, multiuser, multi-language
- **Comprehensive dash-board**
 - complete network overview just in one screen
- **Multi-Hub management**
 - combine all your networks in a single NMS
- **Virtual Network Operator**
 - share you network and NMS with multiple VNO
- **Ideal for any size Networks**
 - from simple SCPC link and up to multi-hub network
- **Advanced statistics and analysis**
 - exhaustive data for network troubleshooting
- **Works with all UHP modes of operation**
 - SCPC, TDM/TDMA, Hubless TDMA
- **Customized reports and graphics**
 - export network statistics for further analysis



- South African Network +1 +1
- Controllers
 - Inroute 1 (MF)
 - Inroute 3 (standalone)
 - TDM/TDMA Hub
 - Inroute 2 (MF)
 - test scheduler
- Stations
 - VNO 1
 - East London
 - Vermont
 - Aberdeen +1 +1
 - Durban
 - Port Elizabeth

statistics graph log stations alerts configuration



Network state

Channel	Remotes				CN	Reception quality			Load
	Total	On	Up	Down		Low	Normal	High	
Stations RX	5	0	4	1	6.4 dB	0	0	0	0%
Hub RX	5	0	4	1	6.4 dB	0	0	0	0%

12:26 down +1 low level +1 tasks acknowledge

Find station NMS 3.0.516

Single tool for multiple networks, VNO support

Customized, dynamic events groups with smart prioritization

Quick overview of network performance

User-scalable, customized graphs

Easy and intuitive navigation

UHP NMS: Comprehensive dash-board

- Controllers
 - Inroute 1 (MF)
 - Inroute 3 (standalone)
 - TDM/TDMA Hub
 - Inroute 2 (MF)
 - test scheduler
- Stations
 - VNO 1 +1 +2
 - East London +1 +1
 - Vermont +1
 - Aberdeen +1 +1
 - Durban +1 +1
 - Port Elizabeth +1 +1

Short State RF details All Local

#	Name	RX controller	TX controller	Faults	Hub level,dB	Remote level, dB	TX, kbps	RX, kbps	Updated
3	Aberdeen	TDM/TDMA Hub	TDM/TDMA Hub		13.0	10.5			04 Mar 17:01
4	Durban	TDM/TDMA Hub	TDM/TDMA Hub		13.0	12.1			04 Mar 17:01
8	Port Elizabeth	Inroute 3 (standalone)	TDM/TDMA Hub		12.4	11.9			04 Mar 17:01
6	East London	TDM/TDMA Hub	TDM/TDMA Hub		11.0	10.8			04 Mar 17:01
5	Vermont	TDM/TDMA Hub	TDM/TDMA Hub		14.6	11.9			04 Mar 17:01

Clear

Add station

Quick overview of stations

Different views

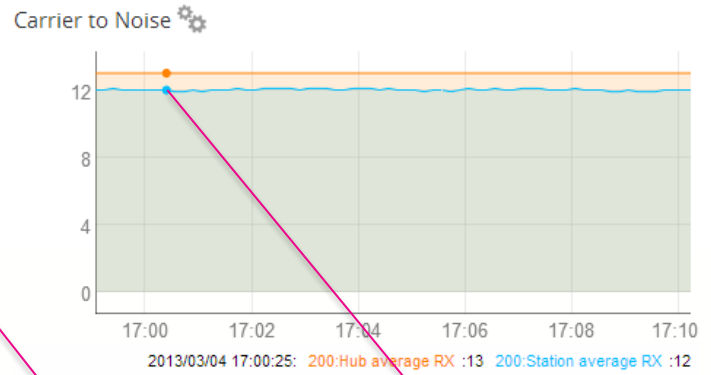
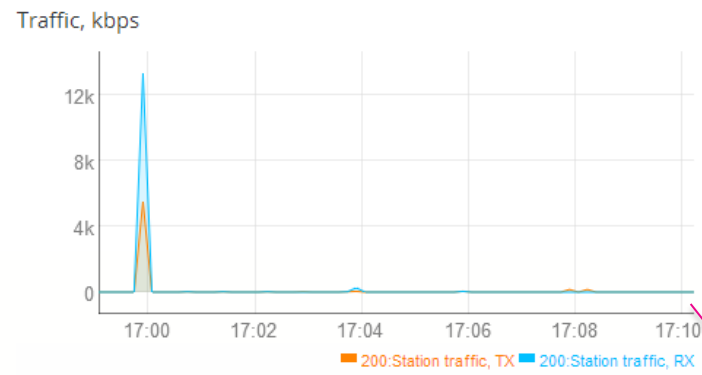
Recent faults

Actual RF performance

Actual throughputs

UHP NMS: Network Stations overview

- Network management system
- South African Network +3 +3
- Controllers
 - Inroute 1 (MF)
 - Inroute 3 (standalone)
 - TDM/TDMA Hub
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 - Vermont +1
 - Aberdeen +1 +1
 - Durban +1 +1
 - Port Elizabeth +1 +1



Remote state TX: TDM/TDMA Hub RX: TDM/TDMA Hub

Link	State	Hub RX level, dB	RX level, dB	TX speed, kbps	RX speed, kbps	Last fault	Last recovery	Last updated
Up	OK	13.0	12.1	0	0	?	04 Mar 17:11	04 Mar 17:11

Alerts [short] Down Low level Up

Last log entries

15:20:25 State acknowledged by

15:00:05 State acknowledged by

1 knowledge

1

1 knowledge

1 knowledge

1 knowledge

1 knowledge

A down

Errors

Last events with time stamp

Actual state and performance

List of active alerts

User-scalable graphs of performance

Smart graph pointer tool

UHP NMS: Station status monitor

- South African Network +3 +3
- Controllers
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 - Inroute 2 (MF)
 - test scheduler
- Stations
 - VNO 1 +1 +2
 - East London +1 +1
 - Vermont +1
 - Aberdeen +1 +1
 - Durban +1 +1
 - Port Elizabeth +1 +1

Short State RF details New Current History

Clear all

Down

#	Name	First in	Last out	Flaps	Duration	Last clear
3	Aberdeen	28 Feb 17:30	04 Mar 15:12	168	34 m	28 Feb 15:02
4	Durban	28 Feb 17:30	04 Mar 15:12	11	160 s	28 Feb 15:02
6	East London	28 Feb 17:25	04 Mar 15:12	6	285 s	28 Feb 15:02
8	Port Elizabeth	28 Feb 17:28	04 Mar 15:12	4	165 s	28 Feb 15:02
5	Vermont	28 Feb 17:25	04 Mar 15:12	7	5 m	28 Feb 15:02

Clear

Low level

#	Name	First in	Last out	Flaps	Duration	Last clear
3	Aberdeen	04 Mar 10:32	04 Mar 13:25	61	-	-
4	Durban	-	-	1	-	-
6	East London	-	-	1	-	28 Feb 15:02
8	Port Elizabeth	-	-	2	-	28 Feb 17:29

Clear

Up

#	Name	First in	Last out	Flaps	Duration	Last clear
3	Aberdeen	-	-	168	4 d	28 Feb 15:02
4	Durban	-	-	11	4 d	28 Feb 15:02
6	East London	-	-	6	4 d	28 Feb 15:02
8	Port Elizabeth	-	-	4	4 d	28 Feb 15:02
5	Vermont	-	-	7	4 d	28 Feb 15:02

Clear

Detailed information for analysis and troubleshooting

Selective events clearance

Easy to correlate alerts groups

UHP NMS: Smart Alerts Monitor

- Network management system
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 - Vermont
 - Aberdeen
 - Durban
 - Port Elizabeth

back to monitoring settings routing

Basic settings RF setup Site setup IP protocols

DVB mode

Mode DVB-S1 DVB-S2

TDM Rx

Frequency (kHz) 950 000 - 2 050 000 kHz or target frequency if local oscillator enabled

Symbol rate (kSps) DVB-S1: 250-34000 (240-54000 kbps); DVB-S2: 550-32000 (530-86000 kbps)

TDM Tx

Frequency (kHz) 950 000 - 2 050 000 kHz or target frequency if local oscillator enabled

Symbol rate (kSps) DVB-S1: 250-34000 (240-54000 kbps); DVB-S2: 550-32000 (530-86000 kbps)

FEC Forward Error Correction algorithm

Modulator mode CCM ACM-LF ACM-SF

ACM Settings

Enable ACM Adaptive Coding and Modulation

ACM FEC2

Streamlined network configuration tool

Access to any network settings

Validation of input values and useful drop-down lists

Context help for every parameter with valid ranges

User-friendly configurator of IP routes

UHP NMS: Network Configuration

South African Network

↳ Controllers

Inroute 1 (MF)

Inroute 3 (standalone)

TDM/TDMA Hub

Inroute 2 (MF)

test scheduler

↳ Stations

↳ VNO 1

East London

Vermont

Aberdeen

Durban

Port Elizabeth

Timetable ⚙️

Map Timetable Add reservation Hour Day Two days Week Month << >>

New reservation

Comment

SNG Live HD

Start

02/28/2013 20:00

End

02/28/2013 21:00

Action on start

Switch off

Station1(Saxony)_profile0

Action on end

Switch off

SCPC_channel_1

Switch on

Station1(Saxony)_profile1

Switch off

Station1(Saxony)_profile1

Switch on

SCPC_channel_1

Switch on

Station1(Saxony)_profile0

Add another action

Add another action

Add reservation

Allocation



Channels,
throughput
and/or modes
of operation
on-schedule

Customized
network
configuration
actions

Visual
interface to
scheduled
actions

Applications:

- SCPC and TDMA DSNG
- Day/night network adjustments
- Support of videoconferencing
- Flexible network throughput

UHP NMS: Scheduler

UHP NMS: SPECIFICATIONS



SERVER

Hardware	Rack-mountable 1U, Intel 2.6 GHz, 3GB RAM, 200GB/SATA (higher on demand)
Operating System	Linux
Network Interface	4 Fast Ethernet/Gigabit Ethernet

NETWORK

Supported UHP networks	TDM/TDMA, TDM/TDMA MESH, Hubless TDMA
Multi-Hub operations	Up to 25 Hubs
Virtual Network Operators	Up to 25 VNOs per each hierarchy level
Statistics database disc usage	20 Mbytes/year/terminal
Statistics gathering interval	From 10 seconds (1 minute default)

ORDER CODE / MODIFICATIONS

UHP-NMS-BASE	UHP NMS 3.X Server Basic: Support for one network
UHP-NMS-VNO	UHP NMS 3.X Server VNO: Support for multiple networks and VNO