

InfiMONITOR



InfiMONITOR is a Network Monitoring System that enables service providers to monitor the status of InfiNet Wireless systems in their network from a network operations centre.

KEY PRODUCT FEATURES

Network Layouts:

- Links view
- Hosts view
- · Alarm dashboard
- Event log
- Map view*
- Hierarchical view*
- * Roadmap items

Graphing Features:

- Automatic creation of graphs for key parameters
- Unlimited history
- Analysis tools

Discovering:

- Hosts and links auto discovery using OS WANFleX SNMP proxy functionality
- · Automatic addition of discovered units

SYSTEM REQUIREMENTS

INSTALLATION PACKAGE

Virtual PC image with all software packages pre-installed.

SERVER

Minimal hardware requirements:

- CPU: 2.5 GHz, dual-core,
 VT-x/AMD-V x64 architecture
- ▶ RAM: 4 Gigabytes
- HDD: 40 Gigabytes free storage space

Software:

 VirtualBox virtulization hypervisor or VMWare virtualization hypervisor (VMWare Player, VMWare Workstation, VMWare ESX Server)

CLIENT

Minimal hardware requirements:

- > CPU: 2 GHz x86
- ▶ RAM: 4 Gigabytes

Software:

Web browser:
 Mozilla Firefox 11 or newer,
 Google Chrome, MS IE10 or newer

InfiMONITOR

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Alni	iNet		Ţ.										
WIT		In	fimonitor LogH	listory	Dashboard	Graphs Set	tings						
<u>nsole</u> -> InfiMo	initor											Logged in as a	admin (Loc
Links	Hosts												
lame :		Status : Up, Unkr	nown, Unreachab 🛩	Model :		Serial :		Version : 1.9	0.6, , 1.90.	5, 1.90.4, 1. 🛩 Ta	gs : -no tags-, u	i1 Y	
Name 🔦	Status	Since	Last Reboot	Last Reboo	ot Reaso Model	Serial	Version	Tags	*	✓ Host Genera	I Properties		
AKoynov2	unreachable	2014.03.17 11:5	1:0 0	-	-	43407	-		-	Parameter		Value	_
Domus-Sklad	unreachable	2014.03.17 11:5	1:0 0	-	-	5799	-					ems to show.	
Ezub	unreachable	2014.03.17 11:5	1:C 0	-	-	23554	-				NOR	ems to snow.	
nfinet-Aurora	unreachable	2014.03.17 11:5	1:0 0	-	-	191518	-	u1					
Koynov	unreachable	2014.03.17 11:5	1:C 0	-	-	13	-		=				
Temnikov	unreachable	2014.03.17 11:5	1:C 0	-	-	5140	-						
ab_home	up	0	2014.02.05 06:20:	1 unexpected	I restart InfiNet R5	000-Sm/3 191516	1.90.5						
AKoynov2	up	2014.03.25 20:21	7:5 2014.03.26 12:41:	1 firmware u	pgrade InfiNet R5	000-Smn/ 195330	1.90.6						
Amirov-Koynov	up	2014.03.25 17:19	9:2 2014.03.25 20:25:	3 unexpected	I restart InfiNet R5	000-Sm/3 43406	1.90.5						
Amirov2	up	0	2014.03.25 20:25:	4 unexpected	l restarl -	43408	1.90.5						
AmirovN	up	0	2014.03.11 22:09:	C firmware u	ograde -	36382	1.90.6						
APetrov	up	2014.04.05 16:48	8:5 2014.04.05 16:46:	3 unexpected	I restart R5000-Mn	nx/5C.30(999990	1.90.6						
Aurora_BS	up	2014.03.26 12:44	4:0 2014.03.26 12:42:	C unexpected	I restart InfiNet R5	000-Mmx 191513	1.90.6						
Aurora-Stas	up	2014.03.26 12:44	4:0 2014.03.26 12:41:	3 firmware u	pgrade SkyMAN F	R5000-Sn 196170	1.90.6						
Aviator-Chern	up	0	2014.02.28 12:38:	5 unexpected	l restart -	34389	1.90.5						
Aviator-H06	up	0	2014.01.22 14:03:	4 unexpected	l restart -	38893	1.90.4			✓ Host Detailed	d Properties		
Aviator-N	up	0	2014.03.25 18:00:	5 firmware u	pgrade -	47038	1.90.6			IP Addresses	Endpoints		
BD5	up	0	2014.02.25 19:30:	4 unexpected	I restart -	5739	1.90.6			Interface		Value	
Domus	up	0	2014.01.29 16:22:	5 unexpected	I restart -	34387	1.90.4				No.it	ems to show.	
extin f6G	up	0	2014.03.11 22:11:		-		1.90.6				110 1		
zub	up	0	2014.03.26 12:41:				1.90.6						
nfimesh	up	0	2014.03.11 22:11:	C firmware u	pgrade SkyMAN F	R5000-Mr 196866	1.90.6		-				
Log				Sev	erity : Emergency	, Critical, Alert, 🛩 Par	ameter : Bitrate, Sy	stem Description, I	Distance 🗸				
Timestamp	Obj	ect name	Object type	М	essage	Source	Se	verity					
014.04.11 16:30	:10 INFI	SHISH-PTP SHISH-I	NF Link	Bi	trate changed fror	n 240 to Trap	Info)	-				
014.04.11 16:30	:08 INFI-	SHISH-PTP SHISH-I	NF Link	Bi	trate changed fror	n 180 to : Trap	Info)	=				
014.04.11 16:30	:04 INFI	SHISH-PTP SHISH-I	NF Link	Bi	trate changed fror	n 240 to Trap	Info)					
014.04.11 16:30	:02 INFI	SHISH-PTP SHISH-I	NF Link	Bi	trate changed fror	n 180 to : Trap	Info)					
014.04.11 16:29	:35 INFI	SHISH-PTP SHISH-I	NF Link	Bi	trate changed fror	n 240 to Trap	Info)					
2014.04.11 16:29	:33 INFI	SHISH-PTP SHISH-I	NF Link	Bi	trate changed fror	n 180 to : Trap	Info)					
2014.04.11 16:28	-58 INEL	SHISH-PTP SHISH-I	NELink	Bi	trate changed fror	n 240 to Tran	Info		-				

LINKS VIEW FEATURES:

Links summary table

- Link status and last change time
- Signal levels, bitrates, retries and errors percentage, traffic load
- Flexible sorting and filtering
- Color highlighting of unstable links

Log window

Link properties

• Detailed link data updated online

Endpoint properties

- General information
- Interface parameters
- Interface counters
- RF and MINT parameters

HOSTS VIEW FEATURES:

Hosts summary table

- Host status and last change time
- Last reboot reason and time
- Part number, serial number, software version

Log window

Endpoint properties

- General parameters
- Links
- Interface parameters, counters and IP addresses

DISCOVERING:

 Hosts and links auto discovery using OS WANFleX SNMP proxy functionality

Automatic addition of discovered units

GRAPHING FEATURES:

- Automatic creation of graphs for all interfaces and links
- Shortcut to graphs from link summary table
- Flexible and powerful Cacti graphing engine including:
 - Unlimited history
 - Configurable views, zoom, etc.
 - Export to CSV

Links Summary Table

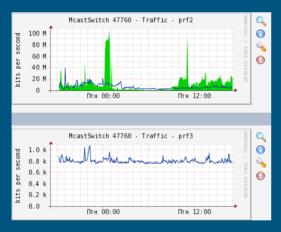
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Links	Hos	ts										
Endpoint :			Type : JOI	N, MINT, PRF	× 3	Status : Up, U	Inknown, Dov	vn, Unr 👻 T	ags : -no tag	is-, u1	~	
Endpoints Å	Туре	Status	Since	Transmit Pov	Monitor Leve	Current Leve	Bitrate (MBit	Retries (%)	Errors (%)	Load (kbps)	Load (pps)	Tags
Amirov-4.0 -	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	76/1669	95/175	
Amirov-4.0 -	MINT	up	2014.03.31	1 18/23	31/33	12/6	54/117	0/7	0/0	1662/82	169/100	
Amirov-Koyr	JOIN	up	2014.03.25	1 -/-	-/-	-/-	-/-	-/-	-/-	8/7	9/5	
Amirov-Koyr	MINT	down	2014.03.17	1 -/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	
Amirov-Koyr	MINT	up	2014.03.26	1 19/12	54/48	21/21	45.5/45.5	0/0	0/0	9/13	4/8	
Amirov2 /	PRF	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	7/8	4/6	
Amirov2 /	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	14/16	8/14	
Aurora_BS -	JOIN	up	2014.03.26	1 -/-	-/-	-/-	-/-	-/-	-/-	5/6	2/6	
Aurora_BS -	PRF	up	2014.03.26	1 -/-	-/-	-/-	-/-	-/-	-/-	0/3	1/2	
Aurora_BS -	MINT	up	2014.03.31	1 23/23	27/26	14/13	180/180	0/0	0/0	14/11	14/9	
Aurora-Stas	MINT	up	2014.03.26 1	1 23/23	40/38	16/15	117/117	0/0	0/0	8/10	4/5	
Aurora-Stas	JOIN	up	2014.03.26 1	1 -/-	-/-	-/-	-/-	-/-	-/-	3/7	2/4	
Aviator-Dom	MINT	up	2014.03.31	1 15/15	37/41	14/17	58.5/58.5	0/0	0/0	263/439	123/118	
Aviator-Dom	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	379/271	143/149	
Aviator-H06	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	3/4	1/4	
Aviator-H06-	PRF	up	2014.03.31	1-/-	-/-	-/-	-/-	-/-	-/-	7/51	0/5	
Aviator-N	JOIN	up	2014.03.31	1-/-	-/-	-/-	-/-	-/-	-/-	280/583	153/168	
Aviator-N-PF	PRF	up	2014.03.31	1-/-	-/-	-/-	-/-	-/-	-/-	4/1	1/1	
Aviator-N-PF	PRF	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	289/401	153/149	
BD3_4.0 I	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	3/3	3/3	
BD3_4.0 I	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	1/3	1/3	
BD3_4.1 I	JOIN	up	2014.03.31	1 -/-	-/-	-/-	-/-	-/-	-/-	1/3	1/3	[

Graphs



Link Properties

- .

Parameter	Value
Туре	MINT
Status	up
Since	2013.07.24 11:43:54
Endpoints	RD_BS124 RD_CPE125
Transmit Power (dBm)	18/18
Monitor Level (dB)	23/24
Current Level (dB)	12/13
Bitrate (MBit/s)	240/240
Retries (%)	5/12
Errors (%)	0/0
Load (kbps)	3/5
Load (pps)	3/3

Endpoint Properties

♥ Endpoint <mgn-pmp1-5.0> Properties</mgn-pmp1-5.0>		4
General IP Addresses eth0 rf5.0) prf0	
Parameter	Value	
General		^
MAC Address	00:0E:8E:20:14:4D	
IP Address 1	10.1.1.45	1
Admin Status	up	
Operational Status	up	
Counters		
Rx Bytes	107495417	
Tx Bytes	4193053307	
Rx Packets	1099921500	
Tx Packets	1244894675	
Rx Errors	14340	E
Tx Errors	1956	
Rx Load (pps)	333	
Tx Load (pps)	510	
Rx Load (kbps)	213	
Tx Load (kbps)	2441	
MINT Parameters		
Noise Floor	-94 dBm	
MINT Node Type	master	
MINT Node Mode	fixed	
MINT Links Count	3	
Marker Access Status	on	
MINT Roaming Status	leader	
AutoBitrate	on	
AutoBitrate Correction	-4	
AutoBitrate Min Level	1	
MINT Extra Cost	0	-
Endpoint <amirov2> Properties</amirov2>		4

Log Window

Log		Severity : Er	mergency, Critical, Alert, 🛩 Parameter : Bitr	ate, System (Description, Distar	106 *
Timestamp	Object name	Object type	Message	Source	Severity	
2014.04.11 17:35:55	INFI-SHISH-PTP SHISH-INFI-PTP	Link	Bitrate changed from 180 to 240 Mbps on IN	Trap	Info	^
2014.04.11 17:35:48	INFI-SHISH-PTP SHISH-INFI-PTP	Link	Bitrate changed from 240 to 180 Mbps on IN	Trap	Info	1
2014.04.11 17:35:43	INFI-SHISH-PTP SHISH-INFI-PTP	Link	Bitrate changed from 180 to 240 Mbps on IN	Trap	Info	
2014.04.11 17:35:38	INFI-SHISH-PTP SHISH-INFI-PTP	Link	Bitrate changed from 240 to 180 Mbps on IN	Trap	Info	
2014.04.11 17:35:37	INFI-SHISH-PTP SHISH-INFI-PTP	Link	Bitrate changed from 180 to 240 Mbps on IN	Trap	Info	
2014.04.11 17:35:33	INFI-SHISH-PTP SHISH-INFI-PTP	Link	Bitrate changed from 240 to 180 Mbps on IN	Trap	Info	
1	ALEL CLUCH OTD CHICH ALEL OTD	1.546	Director of feature 400 in 040 Million and W	Ŧ	1	, -

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Log History & Settings:

History view

Flexible sorting and filtering

Filters settings

- Severity assignment (emergency, critical, alert, error, warning, notice, info, debug, drop)
- Conditions selection (date, time, object name, object type, source, message, parameter, current value, previous value, tags)

Alerts settings

- Conditions selection (date, time, object name, object type, source, message, parameter, current value, previous value, severity, tags)
- Actions assignment

Actions settings

(send SMS, send E-mail, run command or execute script, send SNMP trap, create task on dashboard)

Alarm dashboard

Tracker features

(filtering by priority, by alert, by status, by object name, by message)

History view

• Flexible sorting and filtering



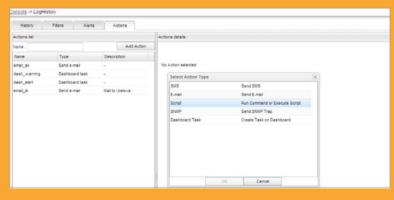
Filters settings

Histo	ry Fiters	Alerts	Actions	
Fibers Is				Fiter details
Name :			Add filter	New Filter
Enabled	Name	Severity	Description	
	Koynov_bitr	Warning	-	Name . New Filter
	unit_reboot	Alert	•	Severity : info
	backhaul_bbr	Warning		
	retr_warning	Warning	-	Description :
1	err_alert	Alert	•	
				C Date v equals v liar v 27 v 2014 v
				Time Capet name Capet name Capet name Capet name

Alerts settings

Consele > LogHistory									Logged in as admin (Logou		
History Fibers	Alets A	ctions									
Alerts list			Alers details								
Name :		Add alert									
Enabled Name	Description		New A	lert							
alert_warning			Name : No	ter Allert							
reis_tres 🕅											
			Reporting Ind	hvdua M							
			Threshold . 5								
			Re-Alert 11 Cytle: 11		minutes	w.					
			Description :								
			Save	Reset	Deleta						
			Condition								
				Date	m equals	la la c	× 27 × 2014	1.			
			Match All M	Care Date	C ettes	1.1	10 27 10 2014	10.00			
				Time Obectinane							
				Object Type							
				Source Message							
				Parameter							
				Current value Previous value							
				Severty							
			V Actiona	Tags							
			Enabled Actions				AlAdore				
			Name	Туре	Description		Name	Type	Description		
				Ni Actors are stabled	for the direct		enal_ak	enal			
							deah_warring	deshboardTask.			
							desh_ale1	deshboardTask			
							enal_b	enal	Mail to Libelova		

Actions settings



Alarm dashboard

SinfiNet	Dantourol Dirate Sellings			
Contails - Dealetoant				Coppetie as where Called
Tucker Namy				4
Auroj Art Spring	n inner	Salas a bene par page 10	2	
Searce Aut	(highed name	Produ	Manage Bala	
2014.04.11 met_met	Aurora_83 Aberan	regn	1307133471446, Aurore_BE Abertin, Link, Poller, E. New	
2014.04.09 alert_alert	SVY_ND-SVV_M	High	1397039230866, \$VV_N3 \$VV_N4, Link, Poller, Errc New	
2014.04.07 met_met	Snaturn-N Aviator-N	High	1396639874196, Stronm-M Avlator-N, Link, Polley, Elvew	
2014 04 05 alert_aren	MP3.0 Nasheret	High	1390007117734, RVI8.0 - Nesheret, Link, Puller, Drox New	
2014 54 55 met_set	Austor-Domin Domin	regn	13906712543953, Avator Comus — Domus, Link, Folio New	
2014.05.28 wert_wert	OtherMaster OtherStave	нр	1300067302083, OtherMasher OtherStave, Link, Pub New	
2014 00.28 aert_aert	Noikov	High	1305905513171, Noskov, Hust, Poler, Engine Boot challers	
2014.04.11 alert_xaming	MSN PMP1-5.8 - Anicor2	Normal	1307165358544, MSN PWP1-5.0 Ankrow?, Link, TraiNew	
2014-04-00 met_warring	Shawe HOE Availor HOE	Noma	1307031234100, Dhishim HDG Availor HDE, Line, Tichiew	
2014.04.05 alert_warring	MG5_41-Paras	Noma	1306670921372, MG5_4.1 Parus, Link, Trap. Rative New	
2014.54.64 ator_warning	M05_41Nevetor8H	Normal	1396582715263, MID5_4.1 Novator(Ht. Link, Trap. R New	
2014 04 04 allort_warning	M05,41 BND,4,1	Normal	1305552713700, MD5_41 5HD_4_1, LM4, Trap. R New	
2014.04.01 aiwt_waming	Milli PMP1 5.8 - Ameriki	Nomai	1396235664528, Millio PhiP1.5.0 AMITSHILLINK, TTA New	
2014-03.31 and_exemp	Autor Donus Donus	Normal	1306200576281, Availur Colleus Darkin, Lille, Trap. New	
2014.00.30 atort_warning	MTHORSHPTP - SHORHNFHPTP	Normal	1390163362409, NFI-DHSH-P1P SHSH-NFI-P1P, LNov	
2014 00.30 alert_warning	M/10-MMor	Normal	1300165307005, BIFE.0 APetrov, Unit, Trap. Retries New	
2014-03.25 awd_warring	MP-3H5H28 SH5H-NP-PTP	townai	1300112004757, 8/FL9H95-28 SHSR-JVLFTP, LF New	
2014-03.25 alort_earning	Arran, M Abran	Normal	1398012127041, Aurora_85 Advess, Link, Trap, Re New	ৰ