Gain Network Visibility with Hardware Sensors

NetBeez Webinar





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Goal of the webinar

To review important configuration steps

Learn tips and tricks

Maximize use of NetBeez' dashboard



Important steps to setup a NetBeez dashboard

- Deploy the agents
- Create monitoring targets
- Add scheduled tests
- Review anomaly detection settings
- Configure notification options
- Schedule reports
- Invite more users
- Review API and build your own service status dashboard



Working with wired & WiFi sensors

Wired FastE

- Raspberry Pi 3 B
- 1.2 GHz (quad-core)
- 1 GB RAM
- 8 GB Storage
- 10/100 Mbps NIC
 - Throughput 90 Mbps

Wired GigE

NB

NB

- Intel UpBoard
- 1.9 GHz (quad-core)
- 8 GB Storage
- 2 GB RAM
- 10/100/1000 Mbps NIC
 - Throughput 930 Mbps



WiFi FastE

- Raspberry Pi 3 B
- 1.2 GHz (quad-core)
- 1 GB RAM
- 8 GB Storage
- 10/100 Mbps NIC
 - Throughput 245 Mbps (5.0 GHz)
 - Throughput 160 Mbps (2.4 GHz)

WiFi NIC

- Asus AC56
- Dual-Mode (2.4/5.0 GHz)
- 802.11ac

Monitoring web and cloud applications

- Building blocks
 - Ping, DNS, HTTP, and Traceroute
- Targets
 - Web applications
 - DNS servers
 - Full-mesh
 - TCP-based applications
- Interactive console
- Define your monitoring strategy early on!

Test	Default Interval
PING	5 seconds
DNS	30 seconds
HTTP	60 seconds
Traceroute	120 seconds

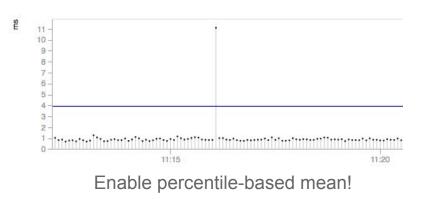


Configuring alerts

• Alert types

- Generated by tests
- Types: Up-down, baseline, and watermark
- Percentile-based mean

Test	Metrics
PING	Packet loss, round-trip-time (RTT)
DNS	Lookup time, failed DNS lookups
HTTP	HTTP GET time, failed HTTP GETs
Traceroute	Failed test, mean hop count





Configuring incident

- Incidents
 - Aggregate of alerts per agent or target basis
 - Network versus application problems
- Notifications
 - SNMP, SMTP, Syslog
 - Integrations with Splunk, Slack, PagerDuty
- Recommendation
 - Enable notification of incidents, opt out alerts

Ping:	
Incident	threshold: 90% of Ping tests with alert status
DNS:	
Incident	threshold: 90% of DNS tests with alert status
HTTP:	
Incident	threshold: 90% of HTTP tests with alert status
Tracero	ute:
	threshold: 90% of Traceroute tests with alert status
Target	
Target Set aler	Incidents
Target Set aler Ping:	Incidents
Target Set aler Ping:	Incidents t percentage thresholds for Target incidents:
Target Set aler Ping: Incident DNS:	Incidents t percentage thresholds for Target incidents:
Target Set aler Ping: Incident DNS:	Incidents t percentage thresholds for Target incidents: threshold: 80% of Ping test templates with alert status
Target Set aler Ping: Incident DNS: Incident HTTP:	Incidents t percentage thresholds for Target incidents: threshold: 80% of Ping test templates with alert status

Agent Incidents



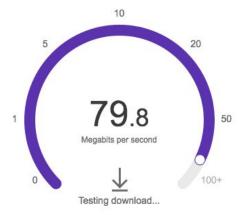
Setting up network performance tests

• Iperf

- Site-to-site throughput test
 - Packet loss, jitter, throughput
- TCP, UDP, and Multicast
- Agent to agent and many to server
- Iperf version 2 and 3

• Speed Tests

- Download and upload speed to Internet
- Speedtest
- NDT and Fast.com (coming up!)
- VolP
 - Agent to agent
 - Mean Opinion Score (MOS)





Reports!

- In-dashboard reports
 - Extract as PDF
 - Schedule periodic emails
 - Report types:

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- Network summary
- Agents
- Targets
- Scheduled Tests

BUZZ AGE	ENTS TAR	GETS TESTS AD-	HOC TESTING REPORTS	ALERTS		0		
etwork Status May 2018 00:00 → 13 May 2018 23:59								
Agents					-	Filter Repor		
Agent Name	¢ Availability	Download	\$ Upload		Performance Alei	AGENTS By Group All Ag		
New York	100.000 %	78.752 Mbps	24.349 Mbps	0 Alerts	0 Alerts	by croup Turrig		
Hague	100.000 %	51.318 Mbps	16.577 Mbps	0 Alerts	0 Alerts	G Agent Types		
Pittsburgh 2	100.000 %	74.745 Mbps	52.980 Mbps	0 Alerts	0 Alerts	🕑 Pittsburgh		
Pittsburgh - GigE	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts	🐼 International I		
Cloud - Google	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts			
Datacenter - Virtual	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts	External Agen		
Lawrenceville	100.000 %	53.021 Mbps	27.471 Mbps	0 Alerts	0 Alerts	G Webinar		
Cloud - Amazon	100.000 %	103.371 Mbps	183.784 Mbps	0 Alerts	0 Alerts	C Ungrouped		
Etna	100.000 %	42.489 Mbps	10.195 Mbps	0 Alerts	8 Alerts			
Pittsburgh WiFi 1	100.000 %	N/A Mbps	N/A Mbps	205 Alerts	232 Alerts	TARGETS		
San Jose	99.859 %	40.308 Mbps	13.975 Mbps	2 Alerts	6 Alerts	Google		
Paris	100.000 %	19.327 Mbps	0.931 Mbps	0 Alerts	3 Alerts	Salesforce		
Pittsburgh	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts	☑ NetBeez Webs		
San Jose WiFi	99.859 %	45.990 Mbps	58.280 Mbps	77 Alerts	54 Alerts	C DNS Servers		
Pittsburgh WiFi 2	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts	Voutube		
Pittsburgh WiFi 3	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts	Google Apps		
Squirrel Hill, PGH	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts 0 Alerts			
Alcoa Downtown	100.000 %	51.346 Mbps	25.030 Mbps	0 Alerts	0 Alerts	Cisco Live!		
Penn Hills	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts	Slack		
Uniontown	100.000 %	2.080 Mbps	1.281 Mbps	30 Alerts	0 Alerts	Cloud App		
Craig Beez	100.000 %	78.432 Mbps	5.319 Mbps	0 Alerts	4 Alerts	C DiscoverOrg		
San Jose (Stretch)	99.859 %	22.110 Mbps	4.240 Mbps	11 Alerts	19 Alerts	CNN		
Azure Agent	100.000 %	N/A Mbps	N/A Mbps	0 Alerts	0 Alerts			

API and service status dashboard

- Public API available
- Review endpoints on the dashboard
 - Generate API key
 - Swagger: https://<INSTANCE_FQDN>/swagger/index.html
 - Look for the **{}** icon to inspect some endpoints
- Build your own service status dashboard
 - Start from the "public" dashboard
 - GitHub: https://github.com/netbeez/public-dashboard

NetBeez Demo Network Status

A demo of the new network status dashboard! Learn more at netbeez.net

Your Network Locations

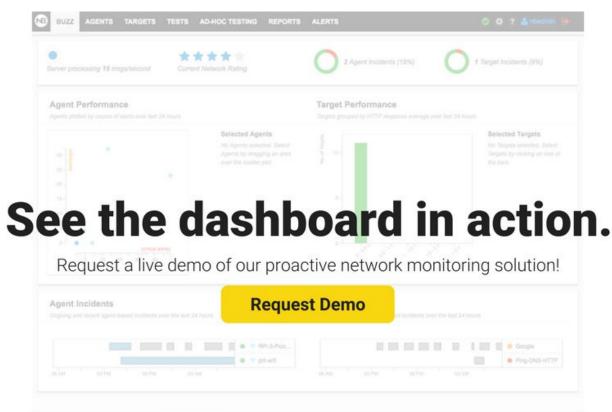
Click on a Location's name to see more information.

Name	Status	Availability		Download (mbps)	
Datacenter - Virtual	Operational	100%	0 Mbps		0 Mbps
Azure Agent	Operational	100%	0 Mbps		0 Mbps
Cloud - Amazon	Operational	100%	98.7 Mbps		171.28 Mb
San Jose (Stretch)	Operational	99.23%	9.3 Mbps	8	9.5 Mbps
Cloud - Google	Operational	100%	0 Mbps		0 Mbps
Penn Hills	Operational	100%	0 Mbps		0 Mbps
San Jose WiFi	Operational	99.23%	0 Mbps		0 Mbps
San Jose	Operational	99.06%	28.66 Mbps	-	11.27 Mbp
Pittsburgh - GigE	Operational	100%	0 Mbps		0 Mbps
San Jose (Stretch)- Router	Operational	100%	7.04 Mbps	1	7.43 Mbps
Squirrel Hill, PGH	Operational	100%	0 Mbps		0 Mbps
Lawrenceville	Operational	100%	53.76 Mbps		27.53 Mbp
Alcoa Downtown	Operational	100%	52.06 Mbps		24.73 Mbp
Hague	Operational	100%	42.77 Mbps		14.41 Mbp
Uniontown	Operational	99.8%	6.19 Mbps	1	1.76 Mbps
Pittsburgh 2	Operational	100%	70.07 Mbps		44.67 Mbp
New York	Operational	86.57%	78.32 Mbps		25.02 Mbp
Craig Beez	Operational	100%	72.65 Mbps		5.12 Mbps

Where to get help?

- 1. Online documentation: <u>https://netbeez.zendesk.com/hc/en-us</u>
 - a. Accessible via the dashboard (look for the icon)
 - b. Link available on our website (Resources -> Documentation)
- 2. NetBeez community: https://community.netbeez.net
- 3. Chat in the dashboard (bottom right sicon)
- 4. Online support: support@netbeez.net





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