



SD-WAN Deployment Snapshot

v 3.0

Bullet Points

Key benefits of ZeroOutages Solutions:

- **SD-WAN Improves Performance and Reliability**
 - ZeroOutages Has Unique Patented Technology
 - Intelligent Failover Prevents Downtime
- **SD-WAN Reduces Costs (by up to 50%)**
 - Augment Existing MPLS and Private Links
 - Built-In Network Reporting & Alerting
- **SD-WAN Produces more Flexibility**
 - Easily switch carriers and connection types
 - Gain the upper hand in contract negotiations



Primary Benefits of SD-WAN



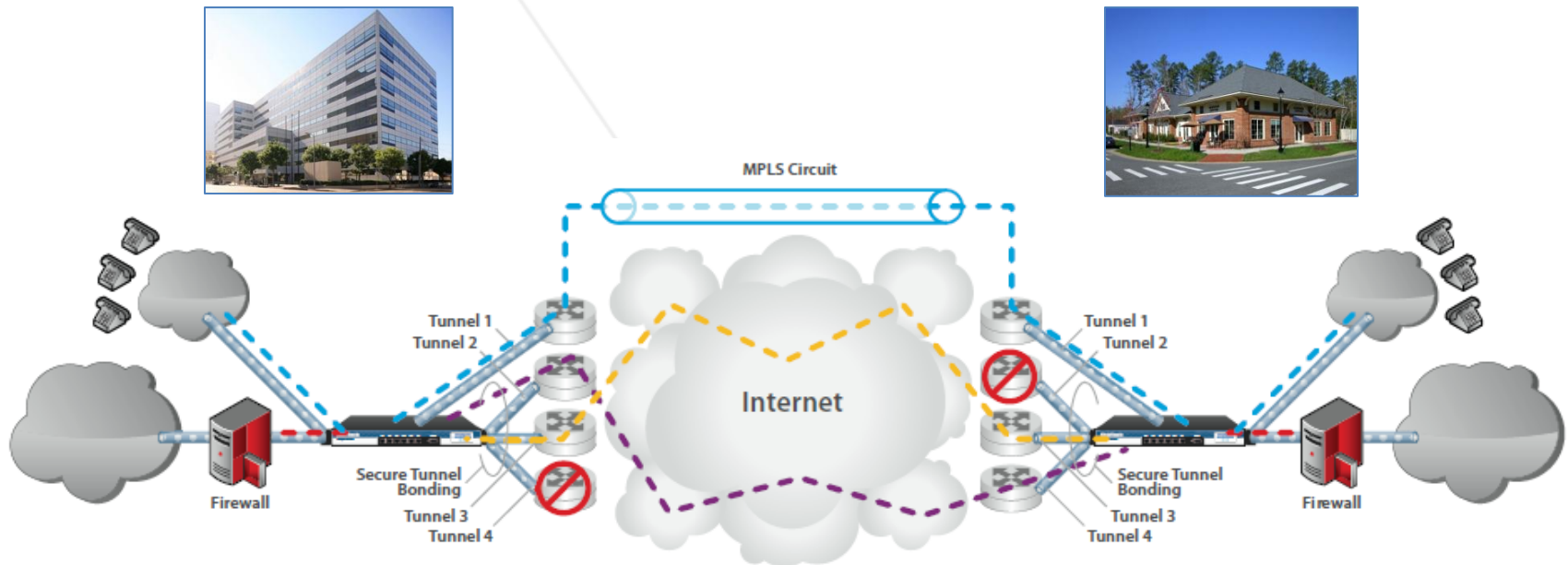
Network Redundancy - Most wide-area network solutions today suffer from a lack of redundancy. ZeroOutages has built-in self-healing functionality.

Network Optimization - Existing solutions don't have the intelligence to utilize the best possible path based on changing network conditions.

Network Monitoring – With ZeroOutages SD-WAN solution our customers have unsurpassed network intelligence. Each deployment has over 30 reports.

The Solution

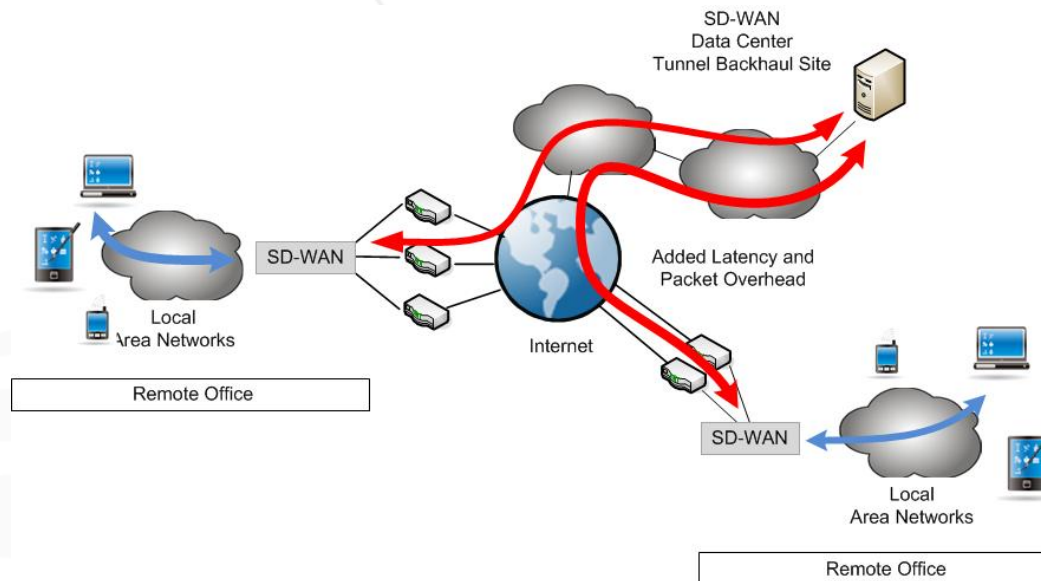
SD-WAN Implementation by ZeroOutages



ZeroOutages Software Defined WAN Services -
Utilizes broadband and intelligent WAN routing to improve performance and reduce costs.

ZeroOutages SD-WAN Advantage

Many SD-WAN vendors require that your traffic go through a third-party data center before going out to the Internet or between remote sites. This can cause significant security and reliability issues. ZeroOutages “OnSite Intelligence” means that our appliances speak directly to each other.



ZeroOutages Advantages



Aside from our 15 years of experience in deploying SD-WAN solutions, ZeroOutages has a number of unique capabilities:

- **Unique Technology:** ZeroOutages holds patents on a number of capabilities, including MSA Dynamic Throttling, Source-Based Session Aggregation, and Best Path Routing.
- **Session vs Packet:** ZeroOutages is a session-based solution, which means no out-of-order packets or re-transmissions.
- **Next Generation Security:** ZeroOutages incorporates a number of security features not found in other solutions.

Trusted by Fortune 500 Companies

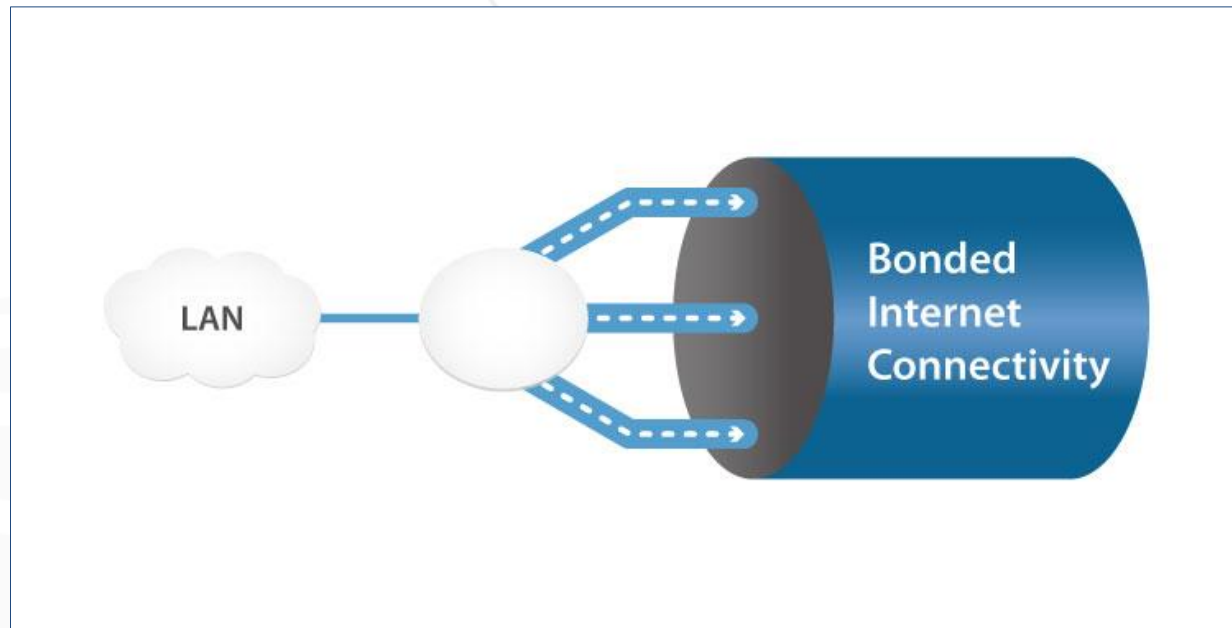
ZeroOutages has been deployed to thousands of sites including Fortune 500 organizations in over 50 countries for over 15 years.

- Pure Play SD-WAN Provider
- Patented Session Bonding
- End-to-End Solution
- Ticketing Services
- Carrier Agnostic



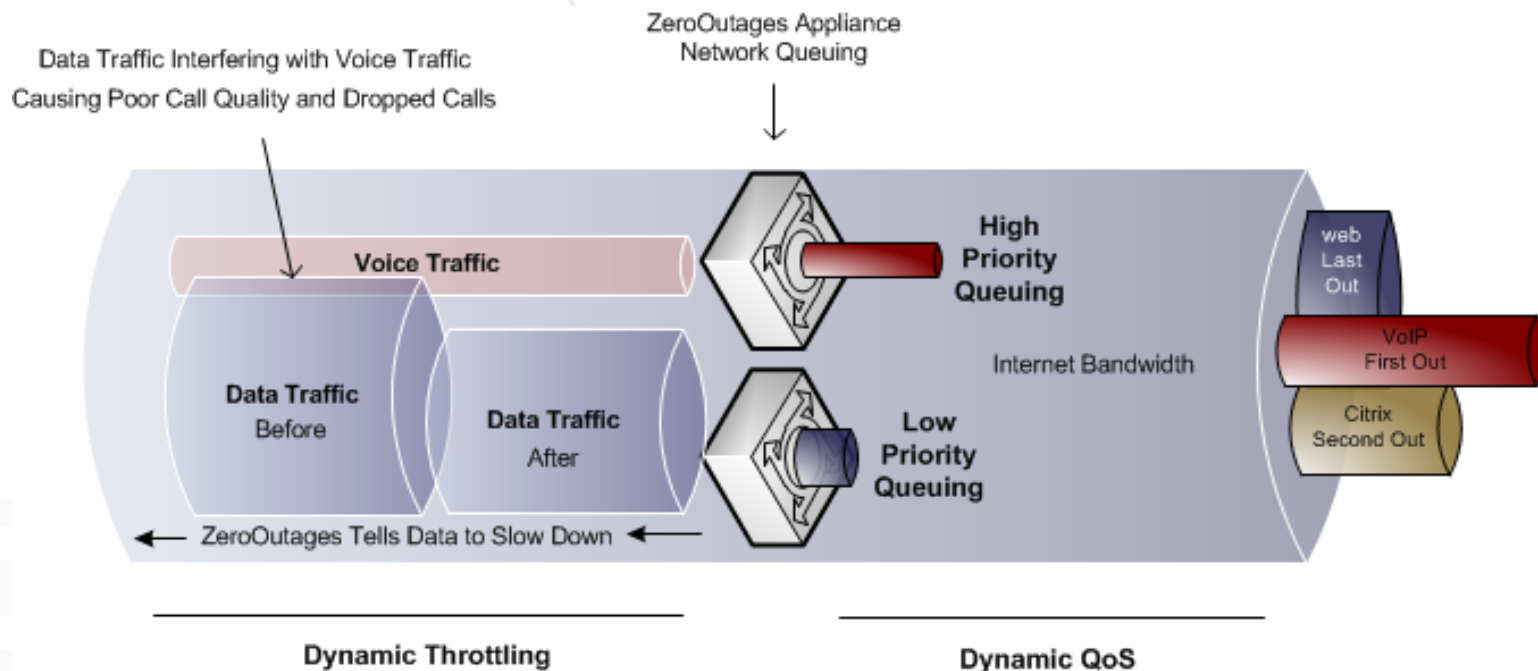
Vector Routing / Best Path Routing

SD-WAN w/Best Path Routing: ZeroOutages has the ability to dynamically select the best possible path based on a number of metrics which our OnSite Intelligence I constantly monitoring. Thus Microsoft might go out one link while Google goes out another based on these factors.



MSA Dynamic Throttling

SD-WAN QoS & Traffic Shaping: ZeroOutages leverages our patented shaping technology to prioritize mission critical applications while throttling non-critical data.



Built-In Branch Office Firewall

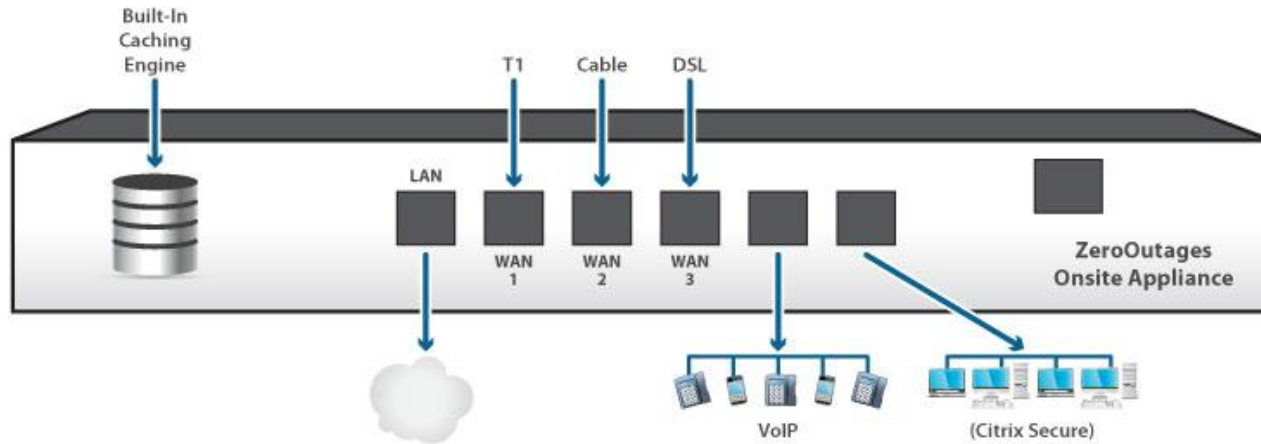
ZeroOutages appliances incorporate next generation network protection and security.



The Internet is full of threats.

- Intrusion Detection / Prevention (ProofPoint)
- Real-Time Category-Based Content Filtering
- Anti-Virus and Malware Protection
- Annual Security Audits
- Packet level firewall that is PCI/HIPAA Compliant

ZeroOutages = Easy Deployment



ZeroOutages “zero-touch” platforms allow for seamless integration in to our customers existing network environments.

The base system includes connectivity for three different ISP (Public/Private) connections with a combined throughput rate of over 100Mbps. Scalable solutions up to 40Gbps are available to meet various customer requirements.

Global Management System

Centrally manage all of your remote sites and their network usage from a single pane of glass.

ZeroOutages Global Manager

[Dashboard](#)[Devices](#)[Reporting](#)[Circuits](#)[Email Groups](#)[Templates](#)


Status

✓ Interface wan2 Up - Medical Specialist Associ - Wed Aug 3 13:34:13 2016
✗ Interface wan2 Down - Medical Specialist Associ - Wed Aug 3 11:14:20 2016
✗ Interface wan1 Down - IPCOMS - BTC3 - Wed Aug 3 02:34:58 2016
✓ Interface wan1 Up - IPCOMS - BTC3 - Wed Aug 3 02:19:39 2016
✗ Interface wan1 Down - IPCOMS - BTC3 - Wed Aug 3 02:14:59 2016
✓ Interface wan1 Up - IPCOMS - BTC3 - Wed Aug 3 01:59:35 2016
✓ Interface wan2 Up - HelmsBros - Bayside - Wed Aug 3 00:56:31 2016
✗ Interface wan2 Down - HelmsBros - Bayside - Wed Aug 3 00:51:22 2016
✓ Interface wan2 Up - HelmsBros - Bayside - Tue Aug 2 23:36:28 2016
✗ Interface wan2 Down - HelmsBros - Bayside - Tue Aug 2 23:31:20 2016
✓ Interface wan2 Up - HelmsBros - Bayside - Tue Aug 2 22:41:38 2016
✗ Interface wan2 Down - HelmsBros - Bayside - Tue Aug 2 22:31:22 2016
✓ Interface wan1 Up - Denver Ticket - Tue Aug 2 19:49:19 2016
✗ Interface wan1 Down - Denver Ticket - Tue Aug 2 19:44:43 2016
✓ Interface wan1 Up - VMG-Phoenix - Tue Aug 2 16:52:24 2016
✗ Interface wan1 Down - VMG-Phoenix - Tue Aug 2 16:47:17 2016
✓ Interface wan2 Up - VMG-Broward - Tue Aug 2 15:04:09 2016
✗ Interface wan2 Down - VMG-Broward - Tue Aug 2 14:59:02 2016

System Alerts / Notifications

Wed Aug 3 12:08:37 2016	Device Started Reporting WSS - Long Beach 39 - 0060E06391DE
Wed Aug 3 11:33:18 2016	Device Stopped Reporting WSS - Long Beach 39 - 0060E06391DE
Wed Aug 3 10:08:40 2016	Device Started Reporting WSS - Long Beach 39 - 0060E06391DE
Tue Aug 2 07:14:00 2016	Device Started Reporting Quality Air - Dallas - 0060E0639122
Tue Aug 2 06:44:49 2016	Device Started Reporting Call Center Solutions - 0060E0639162

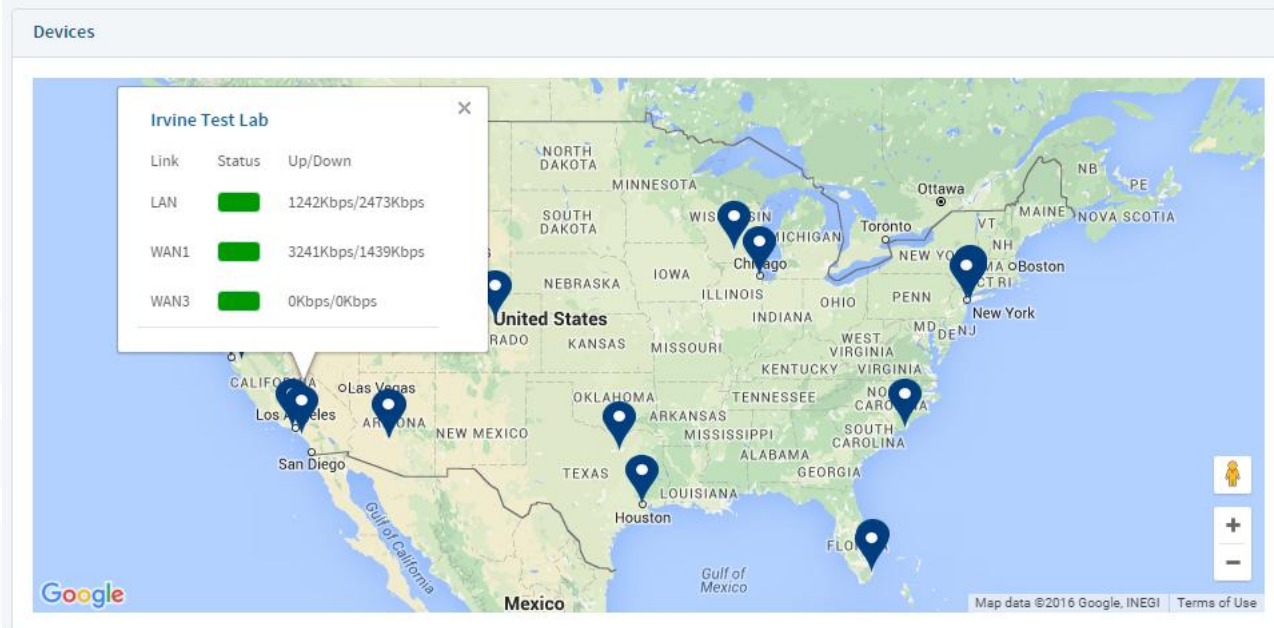
Devices



Single Global View













Network Map: The **ZOOM** portal provides your customers with a single view for all of their remote sites.

Customers can quickly and easily track network issues, check on bandwidth usage and whether the provider is meeting their service level agreements.



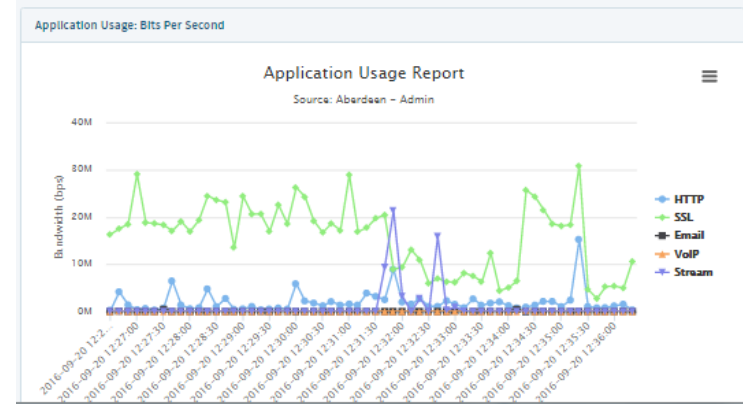
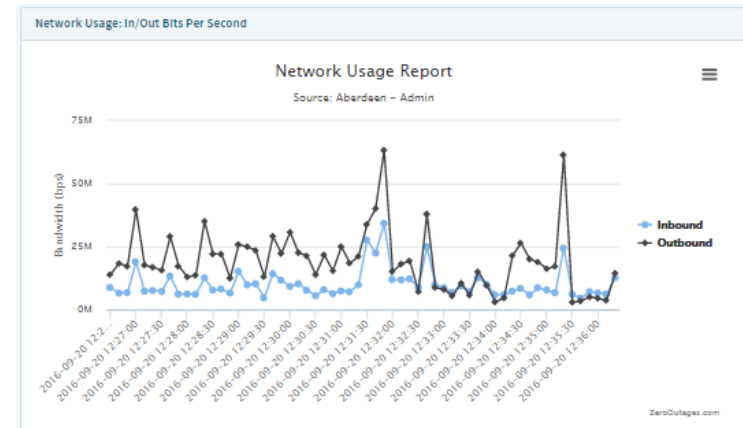
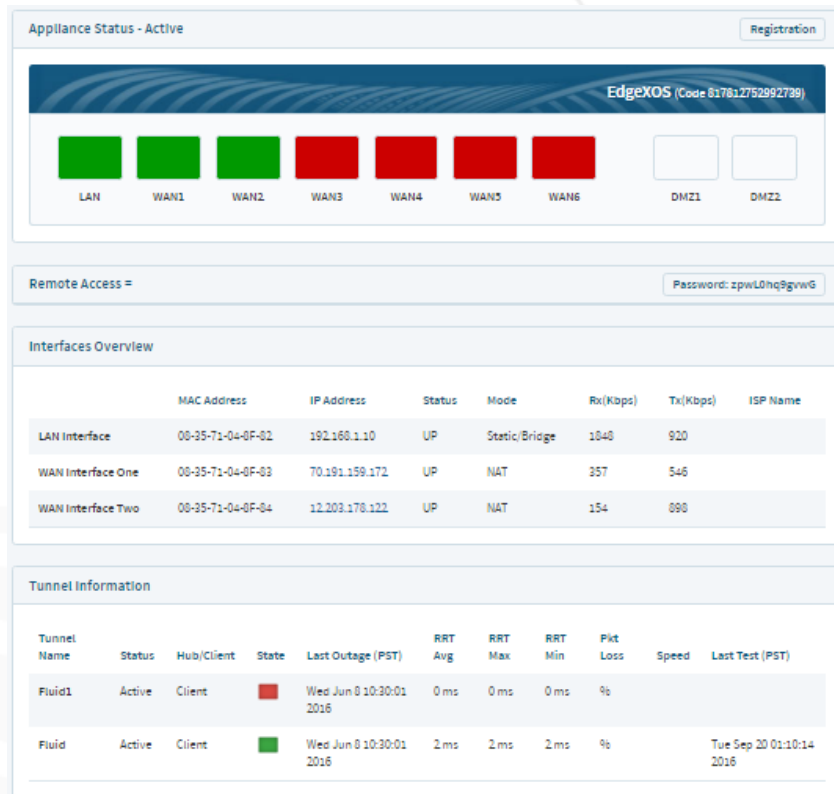
Device Monitoring

Remote Sites: The portal gives network administrators a quick view of all of their remote offices, and how they are performing. Select a device for detailed information.

ZeroOutages Global Manager					
Dashboard	Devices	Reporting	Circuits	Email Groups	Templates
Device: No Device Selected					
Add Device Site Setup					
Device Listing - 111					
Device Name	Serial Number	Device Status	Last Report	Global Assignment	Group Assignment
Amsterdam - Office	003571048F02		Tue Sep 20 12:22:23 2016	ZeroOutages	Amsterdam
Amsterdam - Office	003571043170		Tue Sep 20 12:22:10 2016	ZeroOutages	Amsterdam
CPM - Amsterdam	0060E0635148		Tue Sep 20 12:26:31 2016	ZeroOutages	Car Park - Warehouse
CPM - Amsterdam	0060E0635120		Tue Sep 20 12:25:57 2016	ZeroOutages	Car Park - Warehouse
CPM - Amsterdam	0060E0635124		Tue Sep 20 12:22:35 2016	ZeroOutages	Car Park - Warehouse
CPM - Amsterdam	0060E0639216		Tue Sep 20 12:25:57 2016	ZeroOutages	Car Park - Warehouse
CPM - Amsterdam	0060E063511C		Tue Sep 20 12:26:45 2016	ZeroOutages	Car Park - Warehouse
Comcast Media - Helsinki	0060E063923A		Wed Jul 10 11:21:31 2016	ZeroOutages	Comcast Media
Comcast Media - Helsinki	0060E063926E		Tue Sep 20 12:26:25 2016	ZeroOutages	Comcast Media
Comcast Media - Helsinki	0060E06391AE		Mon Sep 19 10:31:44 2016	ZeroOutages	Comcast Media
Denmark - Office	0060E0639266		Tue Sep 20 12:22:34 2016	Denmark Communications	Denmark - Primary
Denmark - Office	0035710520EA		Thu Mar 3 03:14:53 2016	APG Solutions	Denmark - Primary

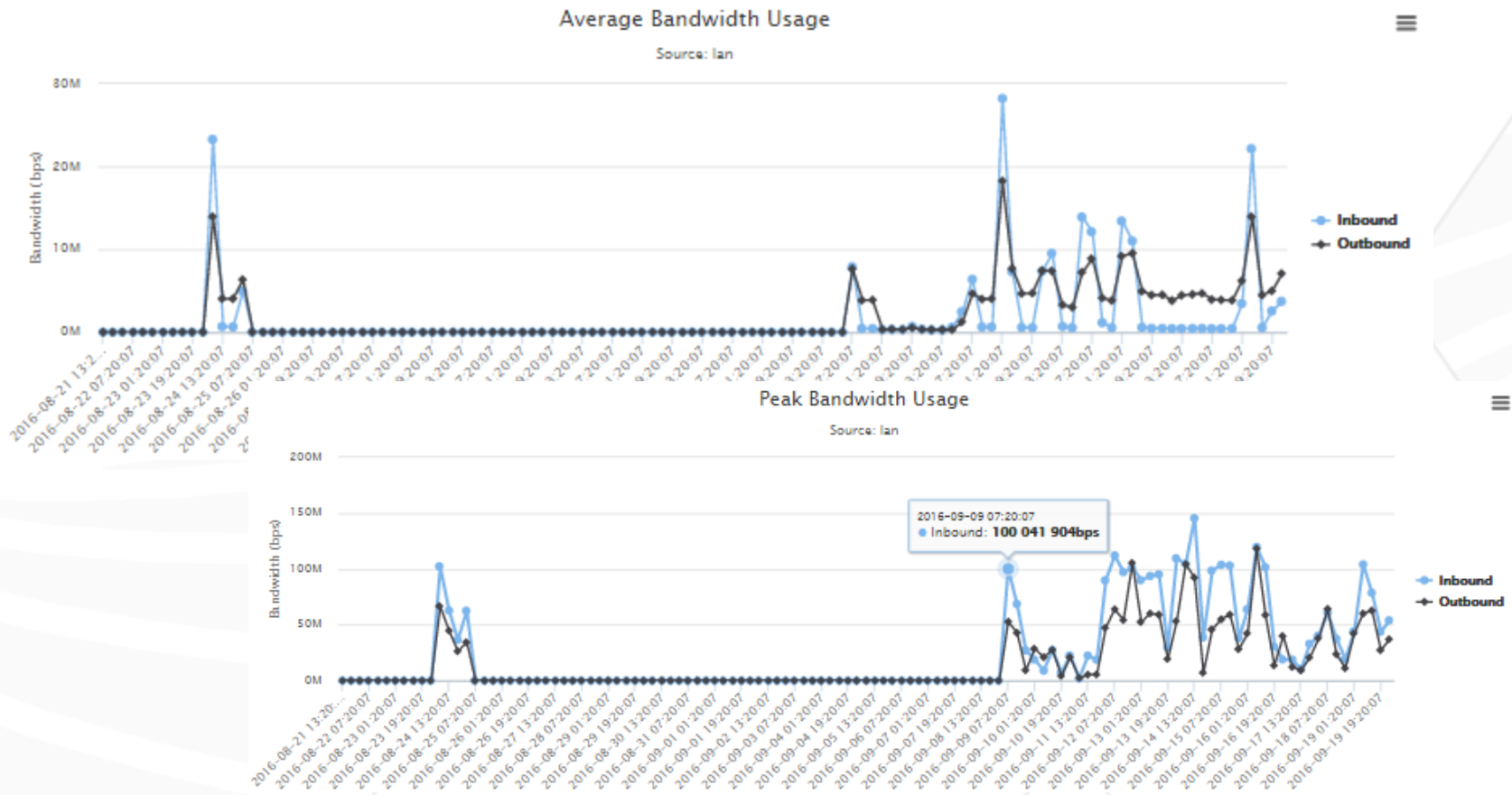
Real-Time Reporting

Per Device: Click on a specific site to get real time network reporting for that location along with configuration information and tunnel stats.



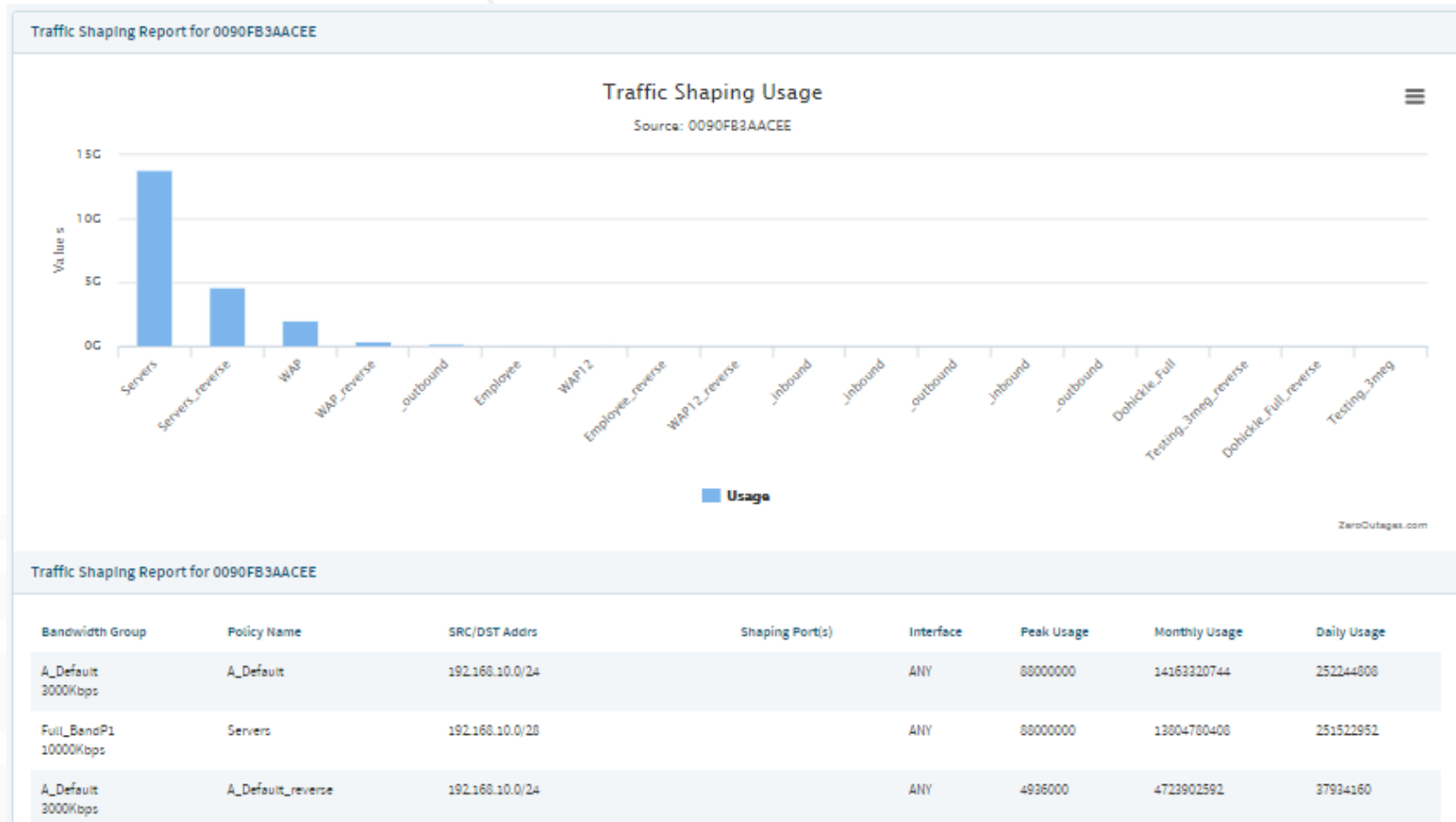
Monthly Usage Reporting

Bandwidth Usage: View bandwidth usage over time, and see whether peak usage is affecting critical applications or whether it is time for a bandwidth upgrade.



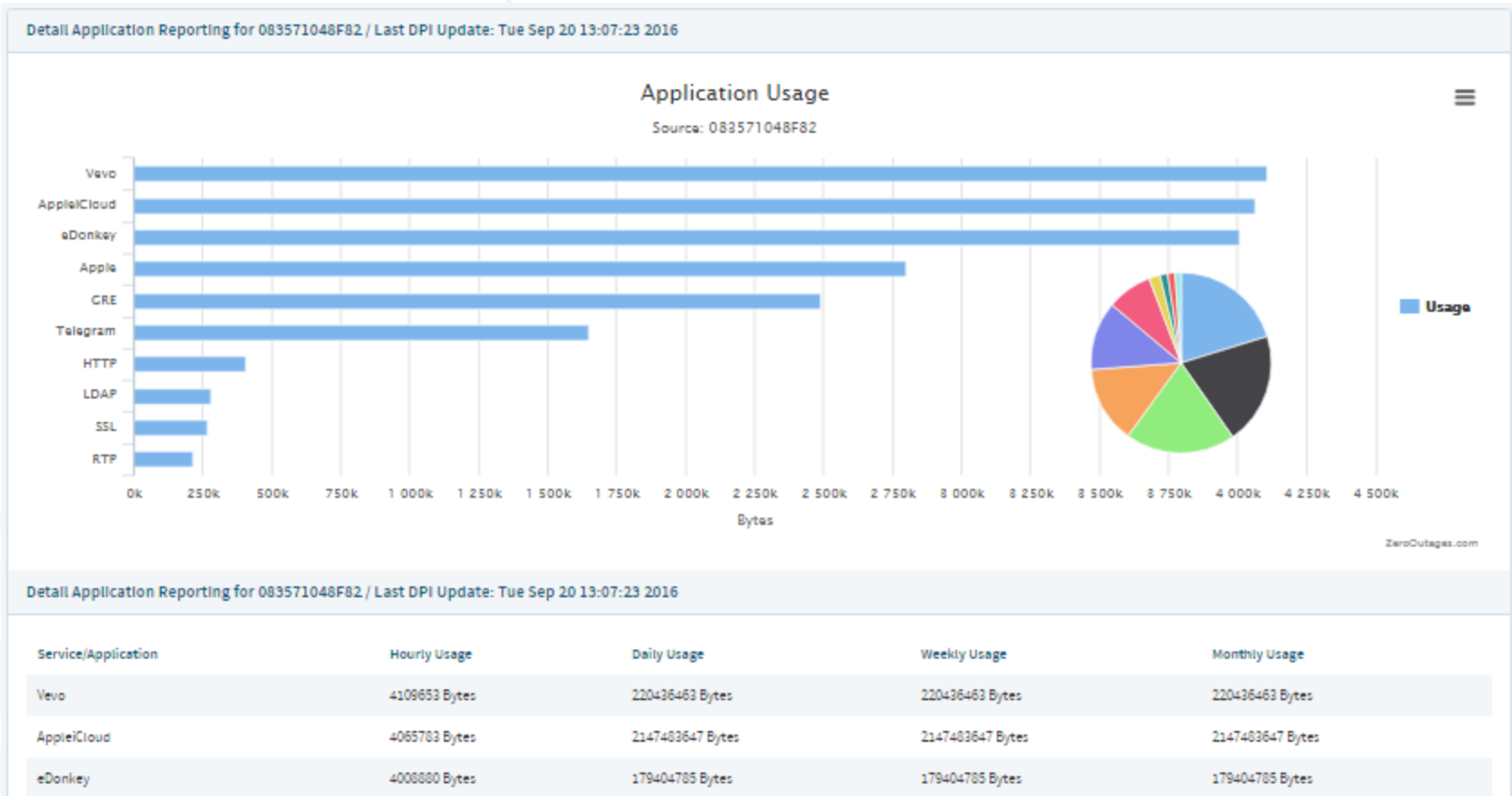
Shaping Policies Report

QoS Rules: If peak usage is affecting critical applications, shaping rules are applied to guarantee bandwidth for those applications, which includes per policy reporting.



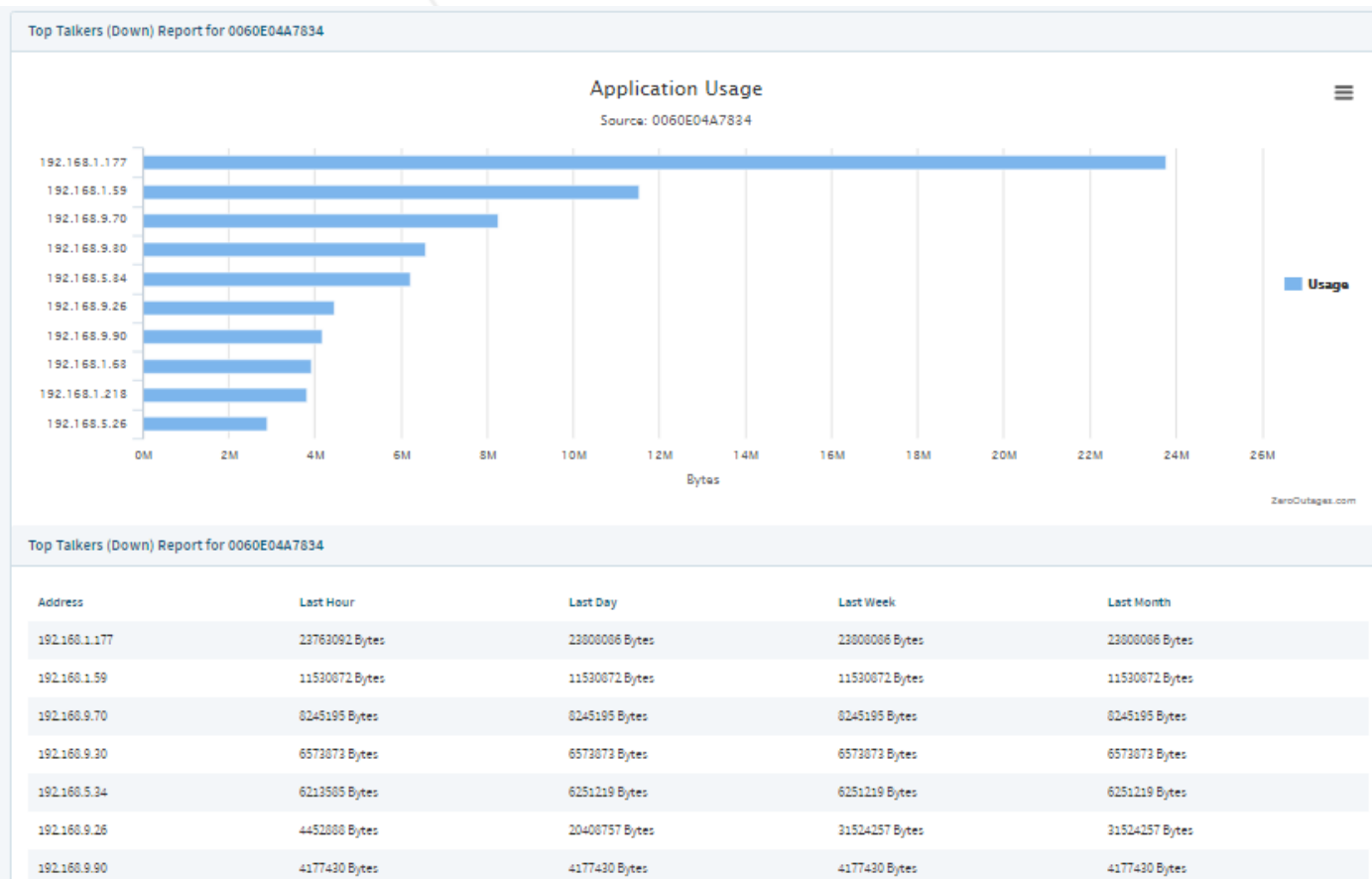
Application Usage

View Top Apps: Understand which applications are being used on the network and how much bandwidth they are consuming over time.



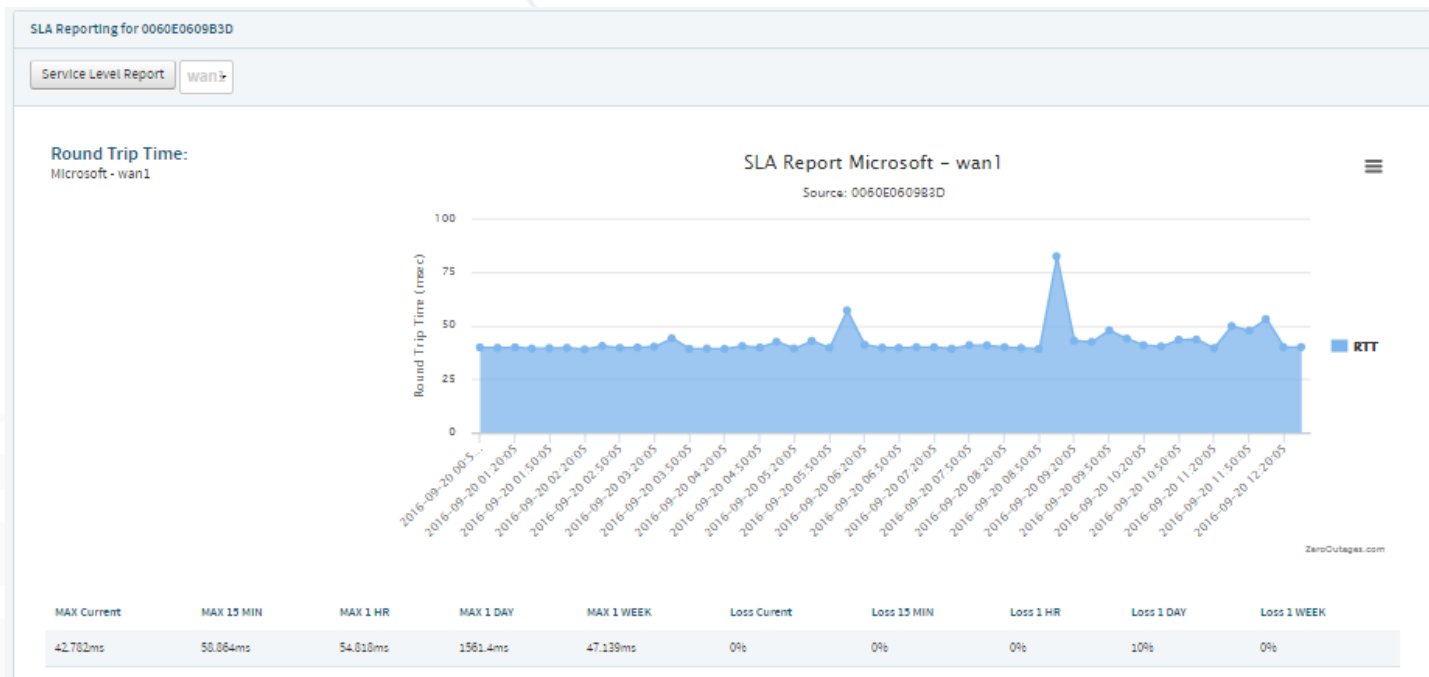
End-User Reporting

View Top Users: Understand which users are taking up the most bandwidth on the network and how much bandwidth they are consuming over time.



Best Path Routing

Application SLA Reporting: Customers can quickly see if any application issues are network related using our 24/7 SLA testing to your critical cloud applications like Microsoft365, CRM, ERP, or hosted VoIP services.



24/7 Circuit Monitoring

Circuit Scoring: View all of your circuits on a single screen and see how well they are performing based on a circuit score, which the ZOOM portal assigns based on testing.

ZeroOutages Global Manager

DashboardDevicesReportingCircuitsEmail GroupsTemplates

Add Node

Search Nodes

Enter Circuit ID

Search

Circuit Testing

		Circuit Admin	Account	Node Address	Status	Score	Type	RTT Last	RTT AVG	RTT MAX	RTT MIN	24 Hr Loss	Last Outage (PST)	Last TurnUp (PST)
A	WAN1	1069		70.191.159.172	<div></div>	100%	Enhanced	64.067ms	64ms	68ms	60ms	0%	22:58:42,2016-09-07	23:13:20,2016-09-07
A	WAN2	1070		12.203.178.122	<div></div>	100%	Enhanced	42.932ms	42ms	42ms	42ms	0%	0:18:59,2016-08-24	0:36:59,2016-08-24
A	IAN1	1071		24.249.74.82	<div></div>	100%	Enhanced	52.652ms	52ms	54ms	48ms	0%	4:43:25,2016-09-09	7:43:03,2016-09-09
A	IAN2	1072		12.206.141.220	<div></div>	100%	Enhanced	40.125ms	40ms	40ms	40ms	0%	0:19:23,2016-08-24	0:37:03,2016-08-24
E	IAN1	1056		70.167.197.109	<div></div>	85%	Enhanced	30.630ms	25ms	30ms	20ms	100%	16:01:18,2016-06-19	14:51:20,2016-06-19
E	IAN2	1057		63.158.100.66	<div></div>	100%	Enhanced	14.316ms	14ms	14ms	13ms	0%	0:17:09,2016-08-24	0:36:39,2016-08-24
E	WAN1	1058		98.174.246.170	<div></div>	100%	Enhanced	19.903ms	20ms	22ms	18ms	0%	23:42:03,2016-08-23	23:56:52,2016-08-23
E	WAN2	1059		65.152.60.2	<div></div>	90%	Enhanced	19.544ms	18ms	20ms	18ms	0%	23:58:06,2016-09-07	0:57:44,2016-09-08
E	IAN1	1060		72.203.245.195	<div></div>	100%	Enhanced	21.146ms	20ms	22ms	18ms	0%	15:42:50,2016-08-31	15:57:28,2016-08-31
E	IAN2	1061		65.152.60.10	<div></div>	100%	Enhanced	14.401ms	14ms	14ms	13ms	0%	9:42:53,2016-08-31	15:57:30,2016-08-31
E	WAN1	1062		24.249.181.59	<div></div>	100%	Enhanced	20.738ms	20ms	22ms	18ms	0%	10:13:11,2016-09-08	10:42:51,2016-09-08

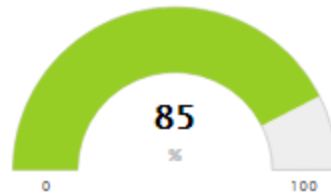
24/7 Circuit Monitoring

Circuit Scoring: View all of your circuits on a single screen and see how well they are performing based on a circuit score, which the ZOOM portal assigns based on testing.

ZeroOutages performs over 10 different tests in order to determine the circuit score, including after-hours stress testing.

Circuit Score

Circuit Score for Beatrice Admin WAN1



Stress Testing

Stress Test Max RTT for Beatrice Admin WAN1



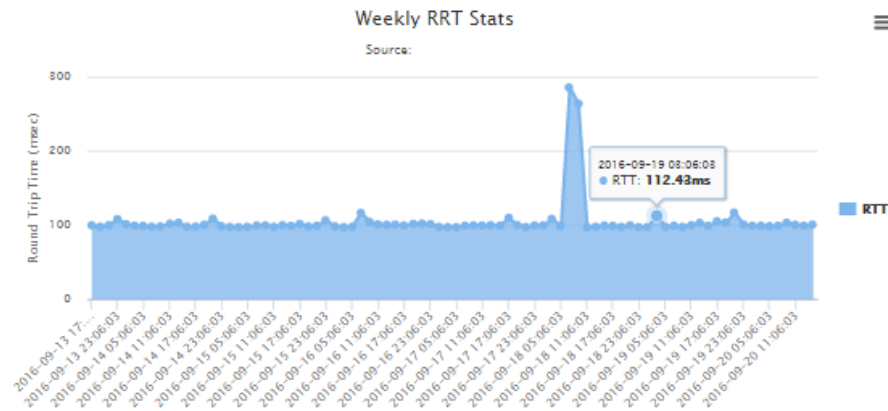
Stress Test Packet Loss for Beatrice Admin WAN1



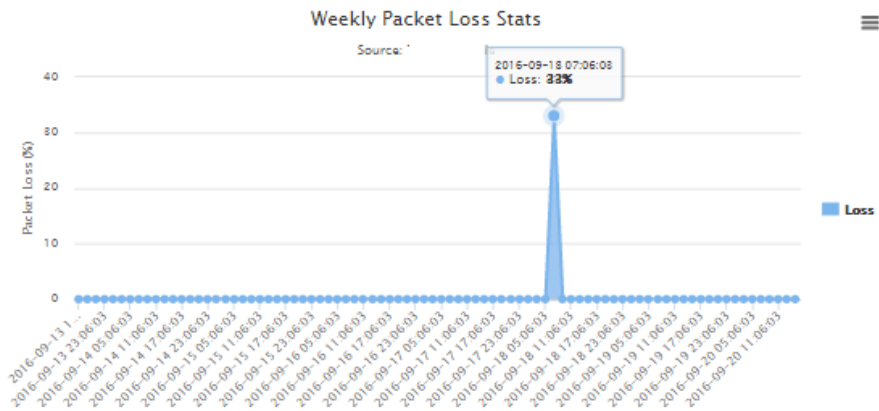
24/7 Circuit Monitoring

Latency / Packet Loss: Each circuit is also tested for latency and packet loss. This testing is performed continuously in order to ensure there are no network issues.

Round Trip Time

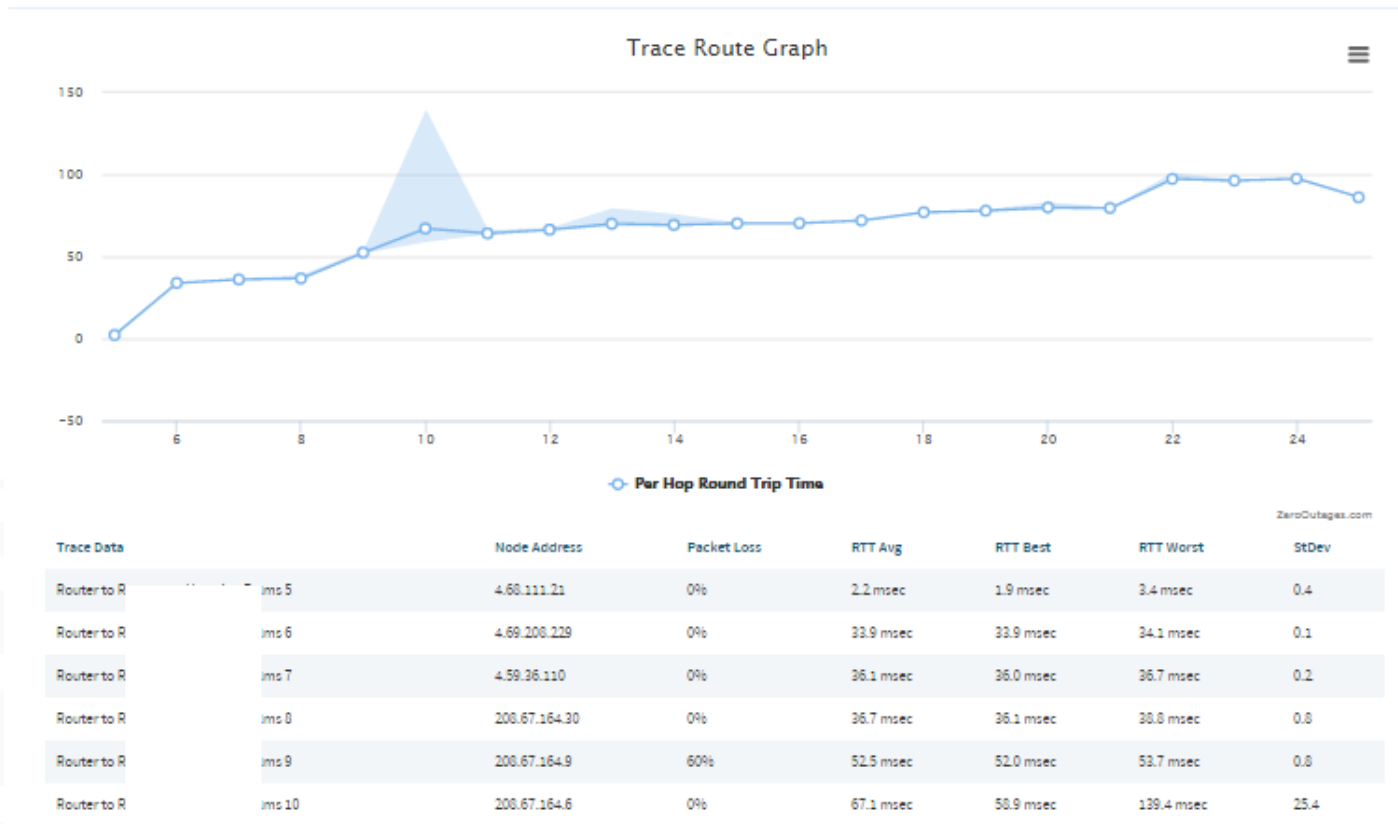


Packet Loss



24/7 Circuit Monitoring

Deep Path Inspection: ZeroOutages performs test from its data centers to each onsite device in order to monitor the entire path, including peering points, etc.



Case Studies

ZeroOutages has case studies from top organizations around the world.

Mercedes Benz Dealerships

Site2Site improves performance and reliability between locations.

When Mercedes Benz was looking for fast and reliable connectivity for their dealerships, they turned to ZeroOutages. The Site2Site service deployed by ZeroOutages allows this dealership to ensure uptime for both their access to cloud applications and connectivity between offices. ZeroOutages support staff monitor their WAN circuits 24/7 and automatically open tickets with their service providers in the event of an outage or poor network performance.



Hoag Hospital

HIPPA compliance requires reliable access to cloud-based services, ZeroOutages delivers.

As any health care organization knows, network redundancy and reliability is critical. ZeroOutages ensures five nines continuity for Hoag and accelerates cloud applications, like VoIP, across their wide-area network. ZeroOutages also enables Hoag to maintain their HIPPA compliance through additional security measures built within its WAN gateway appliances, as well as easily and cost effectively scale their bandwidth across multiple broadband providers.

Visit our website for more details on our vast and growing customer base.

Top SD-WAN Vendor

ZeroOutages is the only independent SD-WAN company to be named as a Top 10 Provider by:

The Gartner logo, featuring the word "Gartner" in a bold, blue, sans-serif font with a registered trademark symbol.The enterprise networking logo, with "enterprise" in black and "networking" in red, separated by a vertical line. A globe icon is integrated into the letter "o" of "networking".The CIOReview logo, with "CIO" in red and "Review" in blue, both in a serif font.The SD-WAN EXPO logo, with "SD-WAN" in black and "EXPO" in blue, all in a bold, sans-serif font. A blue horizontal line is positioned below "SD-WAN".

Over 4000 Deployments

ZeroOutages ZOOM provides a comprehensive WAN management and monitoring service. Our SD-WAN solutions include everything from site-to-site link and failover to 24/7 circuit monitoring.



“An evolutionary disruptor in the SD-WAN industry.”

Gartner Research

When ZeroOutages is deployed with our intelligent onsite appliances, our customers can receive detailed network reporting, usage monitoring, SLA performance metrics, and application availability alerts... all in real-time, 24 hours a day, 365 days per year.





Contact your ZeroOutages representative or
visit our website

<http://www.zerooutages.com>
for more information or to begin an evaluation.