



# ZeroOutages Global Manager

v 1.1

# Central Management System

## WAN Management & Reporting



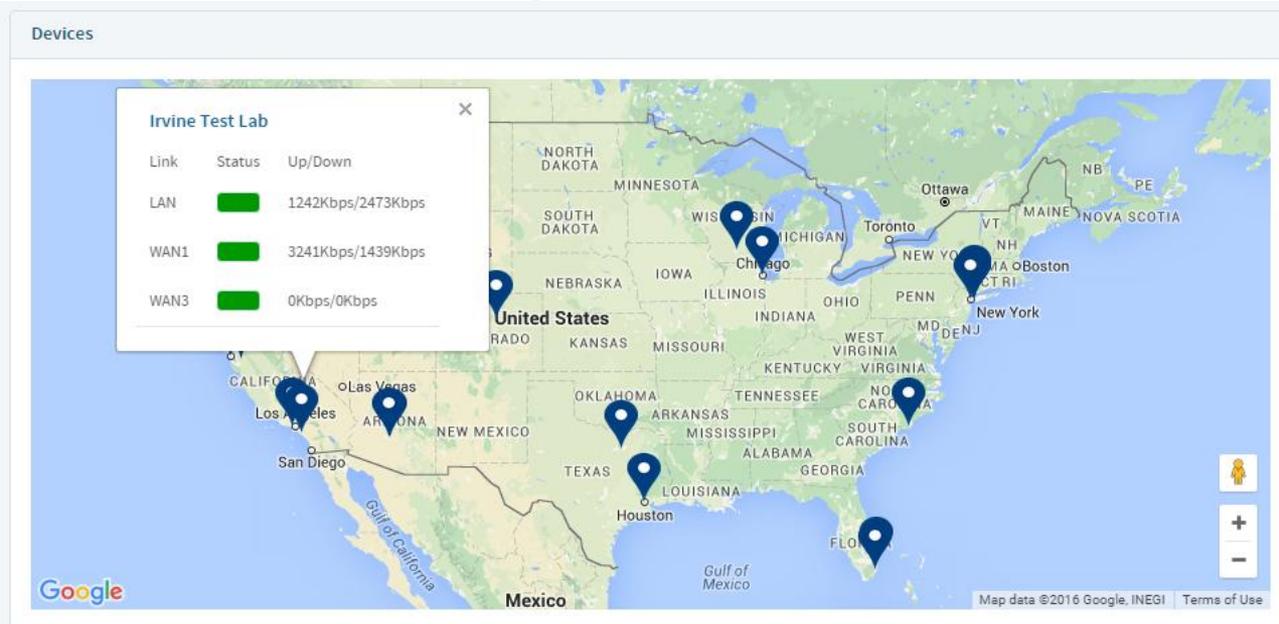
**The ZeroOutages Global Management system is an easy to use tool for monitoring customer networks.**

- ZOOM includes a host of tools to monitor WAN circuits, perform SLA test, and report on the score of the circuit.
- ZOOM automatically detects new custom installations and provides details onsite device reporting.
- ZOOM enables our partners and their customers to quickly see their entire WAN network, status, usage, and performance statistics.

# Single Global View

**How It Works:** The **ZOOM** portal provides your customers with a single view for all of their deployed appliances.

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



# Vivo WAN Monitoring

**How It Works:** The **Vivo** service performs over 10 different WAN circuit tests in order to determine the quality of the customers connection to the Internet.

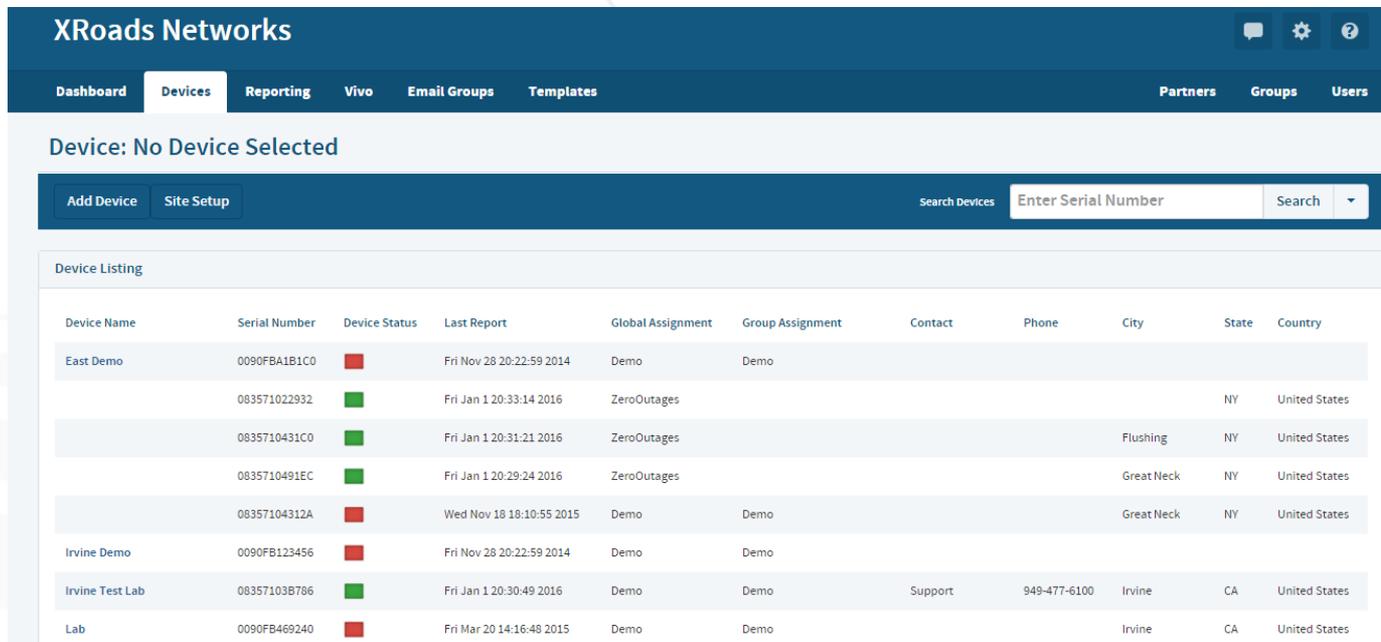
Vivo then uses an algorithm in order to score the circuit and determine how well it is performing. If the circuit is under-performing credits may be issued.

Vivo Testing												
	Vivo Admin	Node Address	Status	Score	Type	RRT Last	RRT AVG	RRT MAX	RRT MIN	24 Hr Loss	Last Outage (PST)	Last TurnUp (PST)
	1032	64.79.224.58	■	NA%	Basic	52.457ms	77ms	78ms	76ms	0%	4:25:39,2015-12-27	4:30:39,2015-12-27
	1012	99.192.12.30	■	NA%	Basic	ms	ms	ms	ms	0%	NONE	
	1035	96.98.247.61	■	NA%	Basic	95.459ms	94ms	99ms	88ms	0%	3:05:45,2015-12-18	3:10:45,2015-12-18
Gateway	1005	72.211.221.193	■	100%	Sonar	9.836ms	9ms	10ms	9ms	0%	9:15:05,2015-12-20	9:20:05,2015-12-20
	1021	173.68.200.164	■	NA%	Basic	81.941ms	81ms	84ms	80ms	0%	13:45:13,2015-12-30	9:15:13,2015-12-30
	1022	23.246.116.46	■	NA%	Basic	110.712ms	110ms	116ms	105ms	0%	21:00:15,2015-12-27	21:05:15,2015-12-27
Irvine TEST	1001	98.164.238.115	■	85%	Sonar	11.801ms	10ms	12ms	9ms	0%	10:35:03,2015-10-11	
	1038	96.233.133.89	■	NA%	Basic	ms	ms	ms	ms	0%	NONE	
	1024	74.92.135.225	■	NA%	Basic	86.742ms	85ms	86ms	85ms	0%	NONE	
	1025	68.50.60.244	■	NA%	Basic	89.741ms	88ms	89ms	87ms	0%	12:55:23,2015-12-23	13:00:26,2015-12-23
	1027	173.8.22.177	■	NA%	Basic	86.312ms	86ms	86ms	85ms	0%	20:50:29,2015-12-25	20:55:29,2015-12-25
	1023	50.253.15.250	■	NA%	Basic	95.297ms	92ms	97ms	89ms	0%	4:20:22,2015-12-18	5:15:21,2015-12-18
	1029	162.17.202.10	■	NA%	Basic	83.952ms	83ms	84ms	83ms	0%	13:55:37,2015-12-31	14:00:37,2015-12-31

# Automated Device Reporting

**How It Works:** When a new customer is turned up with an onsite ZeroOutages appliance, the appliance will automatically report back to the ZOOM portal.

The appliance will provide detailed network reporting information which the customer can monitor.



The screenshot displays the XRoads Networks web interface. At the top, there is a navigation bar with the following tabs: Dashboard, Devices (selected), Reporting, Vivo, Email Groups, and Templates. On the right side of the navigation bar, there are links for Partners, Groups, and Users. Below the navigation bar, the main content area shows "Device: No Device Selected". There are two buttons: "Add Device" and "Site Setup". A search bar is present with the text "Search Devices" and a search input field containing "Enter Serial Number" and a search button.

Device Listing

Device Name	Serial Number	Device Status	Last Report	Global Assignment	Group Assignment	Contact	Phone	City	State	Country
East Demo	0090FBA1B1C0	Red	Fri Nov 28 20:22:59 2014	Demo	Demo					
	083571022932	Green	Fri Jan 1 20:33:14 2016	ZeroOutages					NY	United States
	0835710431C0	Green	Fri Jan 1 20:31:21 2016	ZeroOutages				Flushing	NY	United States
	0835710491EC	Green	Fri Jan 1 20:29:24 2016	ZeroOutages				Great Neck	NY	United States
	08357104312A	Red	Wed Nov 18 18:10:55 2015	Demo	Demo			Great Neck	NY	United States
Irvine Demo	0090FB123456	Red	Fri Nov 28 20:22:59 2014	Demo	Demo					
Irvine Test Lab	08357103B786	Green	Fri Jan 1 20:30:49 2016	Demo	Demo	Support	949-477-6100	Irvine	CA	United States
Lab	0090FB469240	Red	Fri Mar 20 14:16:48 2015	Demo	Demo			Irvine	CA	United States

# WAN Circuit Speed Tests

**How It Works:** The **ZOOM** portal can perform speed tests after-hours with our onsite device in order to obtain relative throughput performance for a customer.

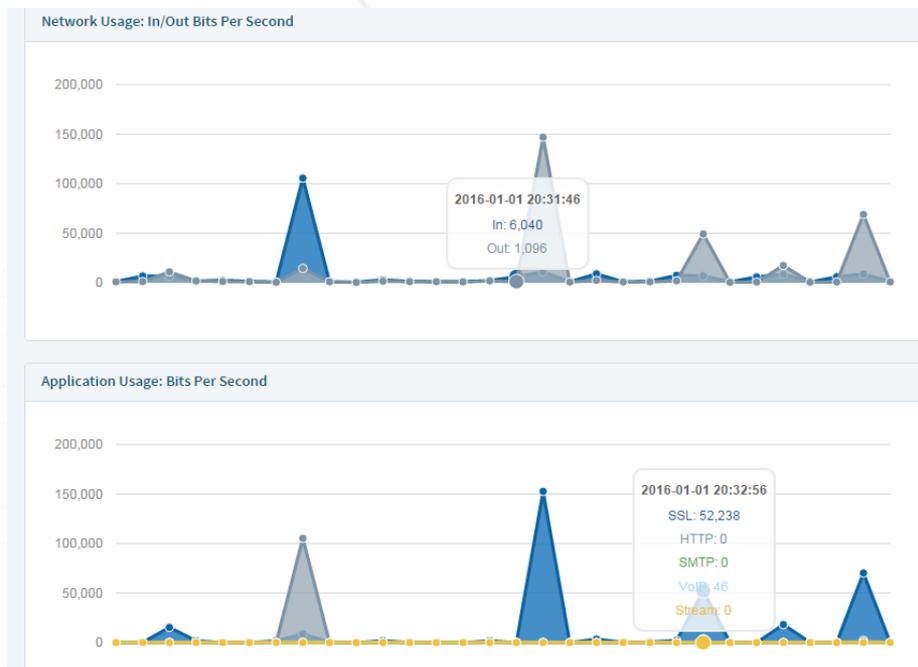
This testing is used to help determine the cause if a customer is having a problem with their Internet link.

The screenshot displays the XRoads Networks web interface. At the top, the 'XRoads Networks' logo is on the left, and navigation icons for chat, settings, and help are on the right. Below the logo is a navigation menu with 'Dashboard', 'Devices', 'Reporting', 'Vivo', 'Email Groups', and 'Templates'. On the right side of the menu are 'Partners', 'Groups', and 'Users'. The main content area is titled 'Device: Irvine Test Lab'. Below this title are two buttons: 'Add Device' and 'Site Setup'. To the right is a search bar labeled 'Search Devices' with the value '08357103B786' and a 'Search' button. The interface is divided into two main sections. The left section, 'Device Information', includes fields for 'XOS License Date:', 'ApeXfilter Active Date:', 'Site2Site Active Date:', and 'CLOUDaXcel Active Date:'. Below these is a blue bar with 'Backup Config: 08357103B786' and 'Group ID: Demo'. A 'Modify' button is located to the right of the 'Device Information' header. The right section, 'Appliance Status - Active', features a 'Registration' button. Below this is a blue header for 'EdgeXOS (Code 279820210410067)'. Underneath is a row of eight colored boxes representing network interfaces: LAN (green), WAN1 (green), WAN2 (red), WAN3 (green), WAN4 (red), WAN5 (red), WAN6 (red), DMZ1 (grey), and DMZ2 (grey).

# Bandwidth Usage Reporting

**How It Works:** Customers can quickly view how much bandwidth they are using and which applications are using the most bandwidth.

Bandwidth usage can be viewed over time (day, week, month, year) in order to determine when to upgrade.



# Detailed Network Information

**How It Works:** Customers can see exactly how the onsite WAN gateway appliance is configured and see how each link is being utilized, status of Site2Site tunnels, etc.

Customers can request changes to the gateway appliance based on the configuration displayed in the ZOOM portal.

Interfaces Overview							
	MAC Address	IP Address	Status	Mode	Rx(Kbps)	Tx(Kbps)	ISP Name
LAN Interface	08-35-71-02-29-32	206.22.199.137	UP	Static/Bridge	2628	4839	
WAN Interface One	08-35-71-02-29-33	72.89.70.110	UP	NAT	3102	749	
WAN Interface Two	08-35-71-02-29-34	23.246.126.210	UP	NAT	3283	789	
WAN Interface Three	08-35-71-02-29-35	...	DOWN	NAT	0	0	

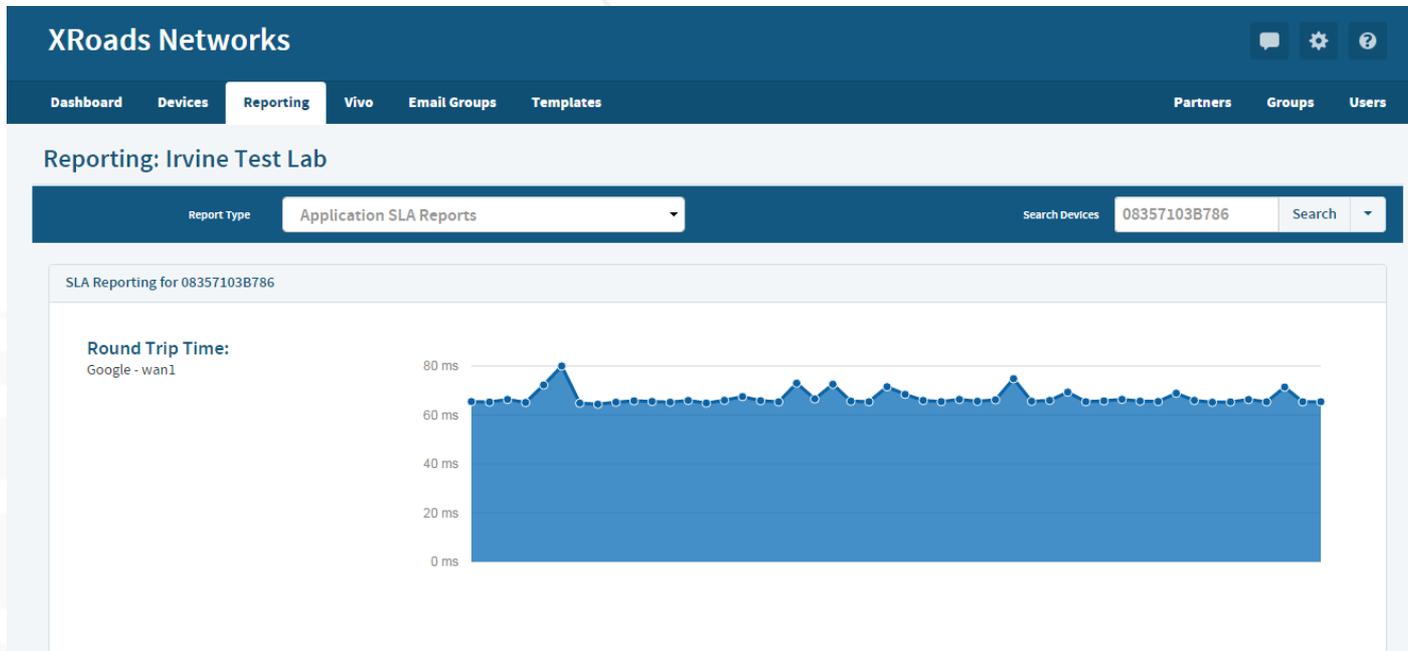
  

Tunnel Information										
Tunnel Name	Status	Hub/Client	State	Last Outage (PST)	RRT Avg	RRT Max	RRT Min	Pkt Loss	Speed	Last Test (PST)
	Active	Client	<span style="color: green;">■</span>	Wed Dec 30 19:24:44 2015	8 ms	9 ms	7 ms	%		Fri Jan 1 01:10:12 2016
	Active	Client	<span style="color: green;">■</span>	Wed Dec 30 19:24:44 2015	32 ms	37 ms	27 ms	%		Fri Jan 1 01:10:23 2016
	Active	Client	<span style="color: green;">■</span>	Wed Dec 30 19:24:44 2015	14 ms	16 ms	11 ms	%		Fri Jan 1 01:10:34 2016
	Active	Client	<span style="color: green;">■</span>	Wed Dec 30 19:24:44 2015	46 ms	58 ms	34 ms	%		Fri Jan 1 01:10:45 2016

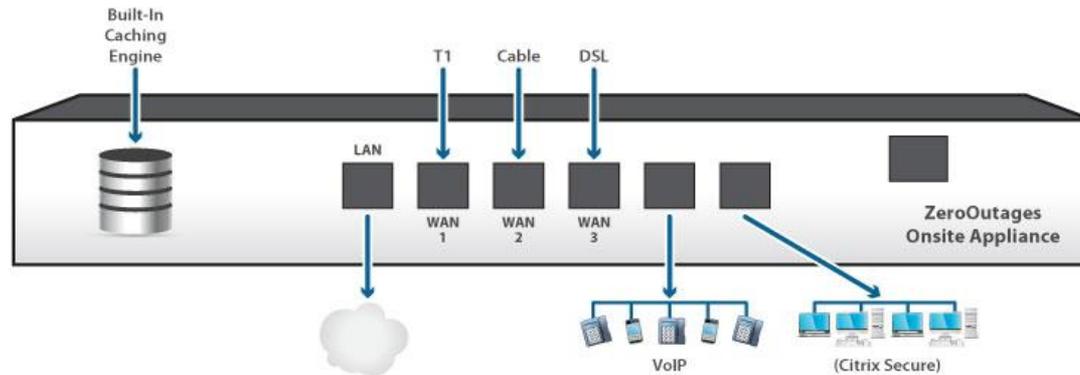
# Real-Time SLA Reporting

**How It Works:** Each onsite WAN gateway appliance can perform application specific SLA testing, i.e. they can test to a specific cloud service, website, or server.

This testing data is then sent back to the ZOOM portal for customers to view under the Reporting tab.



# ZeroOutages Onsite WAN Gateway



**The ZeroOutages Active/Failover and Site2Site services are deployed with using our WAN gateway appliances.**

These platforms integrate with our ZOOM portal so that all of the detailed reporting information collected by the appliance is sent to the portal. This information can then be viewed by our partners and their customers.

# ZOOM Improves Quality

ZeroOutages ZOOM portal provides our partners and their customers the tools needed to better understand their WAN deployments and provide a comprehensive solution for WAN management.



**“Comprehensive WAN management and monitoring.”**

When ZeroOutages is deployed with our onsite WAN gateway 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.



Contact your ZeroOutages representative or visit our website, <http://www.zerooutages.com>, for more information or to begin an evaluation.