



Cisco Expo  
2010

**Solarwinds**  
rješenja za nadzor i  
upravljanje mrežom

Kolaboracija -  
nova snaga poslovne suradnje



**Jozo Stjepanović – STORM Computers**



# Network Management system

- “Network Management” opisuje skup aktivnosti, procedura i alata koji zajedno osiguravaju nadzor, upravljanje, administraciju te aktivaciju mreženih elemenata i usluga
- “Network Management system” predstavlja integrirani skup alata koji omogućuju centralizirano obavljanje Network Management aktivnosti
- Osnovne funkcionalnosti NMS-a:
  - Prikupljanje podataka iz mrežnih uređaja
  - Pohranjivanje i obrada
  - Prezentiranje i izrada izvještaja

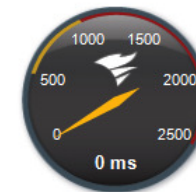


- Orion NMS sustav tvrtke Solarwinds predstavlja cjelovito rješenje za nadzor i upravljanje mrežom
- Osnovne funkcionalnosti:
  - Nadzor mreže, linkova te mrežne i serverske infrastrukture
  - Upravljanje mrežom i uređajima
  - Nadzor platformskih virtualizacija
  - Nadzor aplikacija i procesa
  - Konsolidirani prikaz svih mrežnih karakteristika kroz web sučelje
  - Interaktivnost koja omogućava brz pregled mreže i identifikaciju problematičnih uređaja te “uskih grla”

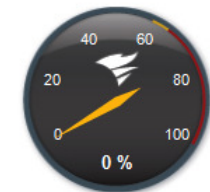
# Komponente sustava

- Komponente sustava
  - Network Performance Monitor
  - NetFlow Traffic Analyzer
  - IP SLA Manager
  - Network Configuration Manager
  - Application performance Monitor
  - IP adres Manager

Average Response Time & Packet Loss - Radial Gauges [HELP](#)



Avg Resp Time

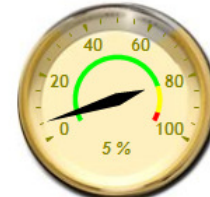


Packet Loss

CPU Load & Memory Utilization - Radial Gauges [HELP](#)



CPU Load



Memory Used

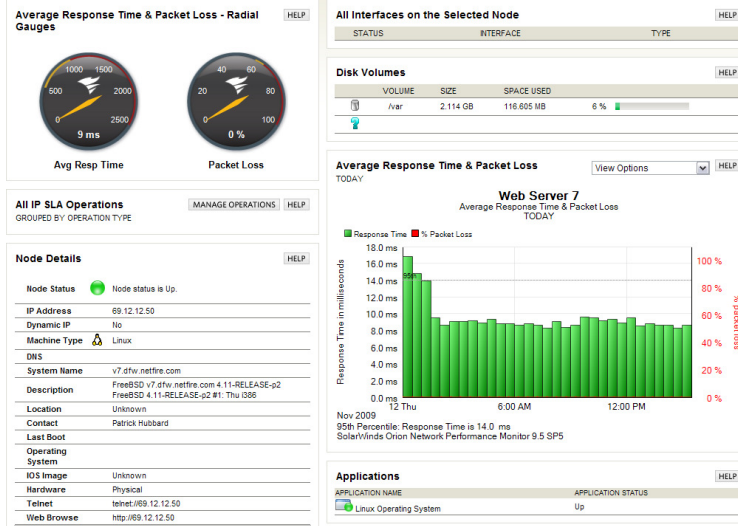
All IP SLA Operations [MANAGE OPERATIONS](#) [HELP](#)

GROUPED BY OPERATION TYPE

- ICMP Echo
- IcmpEcho - Core -> Bastogne
- UDP Echo
- UdpEcho - Core -> BAA

solarwinds 

# Network Performance Monitor



Nadzor i analiza mreže u realnom vremenu

Detaljno prezentiranje statističkih informacija o mrežnoj opremi i vezama

Root cause analiza

Intuitivno sučelje

moгуćava detaljanj

pregled stanja mreže i brz

stup problemu

- Top 10 – prikazivanje opreme i aplikacija po opterećenju, zauzeću linkova, iskorištenosti memorije ili diskovnog prostora
- Detaljan reporting stanja mreže prema SLA kriterijima
- Izveštavanje o sukladnosti sa globalnim normama (SOX, Cisco security policy...)
- Napredno alarmiranje u slučaju ispada
  - Prikazivanje root cause problema
  - Filtiranje po vremenu i učestalosti
  - Eskalacija alarma u slučaju SLA prekršaja

**Top 10 Nodes by Current Response Time**

NODE	CURRENT RESPONSE TIME	PERCENT LOSS
SERVER_1	349 ms	0 %
Tulsa	337 ms	0 %
Steelhead 1020 APAC	313 ms	0 %
I Robot	302 ms	0 %
Test-router/36	298 ms	80 %
Internal Switch	297 ms	0 %
CNL-VOIP	276 ms	0 %
Dev Switch	215 ms	0 %
HDQ ProCurve 2800	215 ms	0 %
Northern CSU	191 ms	0 %

**Top 10 Nodes by Percent Packet Loss**

NODE	PERCENT LOSS
Lab/ Samsung	100 %
Support 12	100 %
Speedy	100 %
Switch sales	100 %
D5150C	100 %
SRD-08-TSTF	100 %
Test 67	100 %
TUL-WDSRV-01	100 %
NETFLOW-VS7	100 %
orionbase	100 %

**Top 10 Nodes by Percent Memory Used**

NODE	MEMORY USED
VM-Test	94 %
tex-lamp	94 %
TUL-SQLSRV-01	92 %
SW-ADMIN	90 %
LAB-VM01-TEXEXC	87 %
LAB-VM03-1	85 %
ecomm1.xtracorp.com	82 %
TDANNER-DEV	78 %
JCLARK-DEV	77 %
Test lab24	77 %

# Network Performance Monitor

**All Nodes - Tree View**  
(AJAX)

- [Unknown]
- 3Com
- Adtran
- American Power Conversion Corp.
- Aruba Networks Inc
- Cisco
- Compatible Systems Corp.
- Dell Computer Corporation
- Extreme Networks
- FlowPoint Corporation
- Foundry Networks, Inc.
- HP
- Juniper Networks
- Linux
- Multi-Tech Systems, Inc.
- net-snmp
- Northern Telecom
- Riverbed
- Samsung Group
- U.S. Robotics, Inc.
- VMware Inc.
- Windows
- ZyXEL Communications Corp.

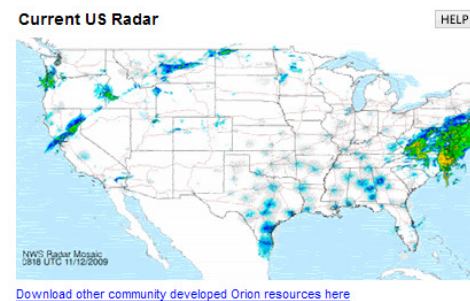
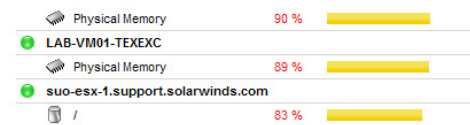
MANAGE NODES   HELP

**Network Map** HELP

» [Download Network Atlas](#) to edit your map.

- Prikaz mreže i stanja mreže kroz interaktivnu geografsku mapu ili mapu tvrtke
- Mogućnost grupiranja mrežne oprem prema dobavljačima, uslugama, korisnicima ili uslugama
- Selektivni pristup pregledu mreže prema korisničkim privilegijama

- Mogućnost prilagodbe i dodavanje specifičnih informacija i resursa
- Meteorološka karta područja
- Otvaranje HelpDesk naloga
- Praćenje Stanja otvorenih naloga u HelpDesk-u



**Custom Resource: My Open Helpdesk Tickets** HELP

EMBEDDED WEB PAGE FROM THE ISSUE MANAGEMENT SERVER

**SERVICE ISSUE MANAGER**

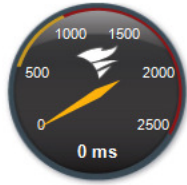
My Requests

6 entries returned - 6 entries matched

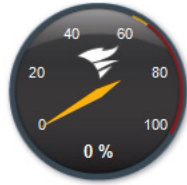
Request ID	Summary	Status	Submit Date	Urgency
In Process	Install Hardware	New	17 minutes ago	2-High
IN000000000534	Router 'AUS3500' down	In Progress	20 minutes ago	1-Critical
IN000000000501	VPN config for sales	Completed	2 hours ago	3-Medium
IN000000000499	Interface 'AUS3500 0/6' down	Completed	2 hours ago	1-Critical
IN000000000488	Push IOS for 'Dev6500-Phx	Completed	3 hours ago	3-Medium
IN000000000481	Add SolarWinds admin user	Closed	5 hours ago	3-Medium



**Average Response Time & Packet Loss - Radial Gauges** HELP

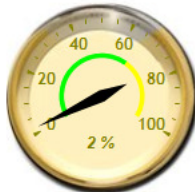


Avg Resp Time



Packet Loss

**CPU Load & Memory Utilization - Radial Gauges** HELP



CPU Load



Memory Used

**All IP SLA Operations** MANAGE OPERATIONS HELP

GROUPED BY OPERATION TYPE

- ICMP Echo
- UDP Echo

**Node Details** HELP

<b>Node Status</b>	Node status is Up.
<b>IP Address</b>	1.3.1.2
<b>Dynamic IP</b>	No
<b>Machine Type</b>	Cisco 2851
<b>DNS</b>	
<b>System Name</b>	NETFLOW.tul.solarwinds.net
<b>Description</b>	Cisco IOS Software, 2800 Software (C2800NM-IPBASE-M), Version 12.4(3e), RELEASE SOFTWARE (fc2) Technical Support: <a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a> Copyright (c) 1986-2006 by Cisco Systems, Inc. Compiled Tue 13-Jun-06 23:24 by alnguyen
<b>Location</b>	Tulsa NOC
<b>Contact</b>	Patrick Hubbard
<b>Last Boot</b>	19. ožujak 2010 13:50
<b>Operating System</b>	12.4(3e), RELEASE SOFTWARE (fc2)
<b>IOS Image</b>	C2800NM-IPBASE-M
<b>Hardware</b>	Physical
<b>Telnet</b>	telnet://1.3.1.2
<b>Web Browse</b>	http://1.3.1.2

**All Interfaces on the Selected Node** HELP

STATUS	INTERFACE	TYPE
Up	GigabitEthernet0/0 - link to CAT3560	Ethernet
Up	GigabitEthernet0/1 - link to PIX	Ethernet

**Disk Volumes** HELP

**Average Response Time & Packet Loss** View Options HELP

TODAY

**Core Router**  
Average Response Time & Packet Loss  
TODAY

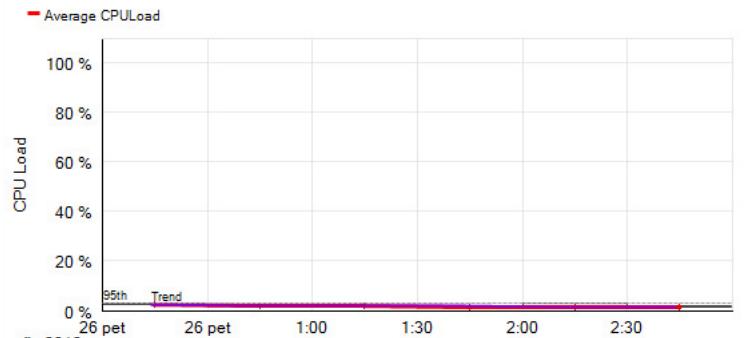


ožu 2010  
95th Percentile: Response Time is 3.0 ms  
SolarWinds Orion Network Performance Monitor v9.5.1

**Min/Max Average CPU Load** View Options HELP

TODAY

**Core Router**  
Min/Max Average CPU Load  
TODAY



ožu 2010  
95th Percentile: Average CPU Load is 3.0 %  
SolarWinds Orion Network Performance Monitor v9.5.1

Show: Access Points

Search

Help

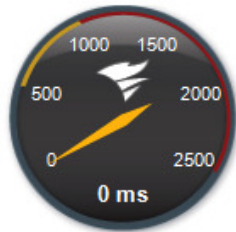
Access Point	IP Address	Type	SSIDs	Channels	Clients				
[-]  CiaAP1130a-Gu...	10.199.20.144	Thin	lab	1, 161	7				
	<b>Client Name</b>	<b>SSID</b>	<b>IP Address</b>	<b>MAC Address</b>	<b>RSSI</b>	<b>Connected</b>	<b>Data Rate</b>	<b>Bytes Received</b>	<b>Bytes Transmitted</b>
	esimonwks	lab	10.199.21.24	00143D963B08		25.3.2010 20:50:00	54 Mbps	105,9 MBytes	160,6 MBytes
	HRHODES-Wks	lab	10.199.21.22	001E227319BC		25.3.2010 21:00:00	11 Mbps	43,2 MBytes	31,4 MBytes
	GBRIGGS	lab	10.199.21.20	001F6D0ACCFE		25.3.2010 21:35:00	54 Mbps	151,1 MBytes	207,5 MBytes
	ORACLE-HR	lab	10.199.21.18	00189ABD4751		25.3.2010 22:40:00	48 Mbps	23,7 MBytes	20,0 MBytes
	EFRANK	lab	10.199.21.19	00135CDFDEE7		25.3.2010 23:00:00	54 Mbps	19,2 MBytes	13,8 MBytes
	ACC-SQL04	lab	10.199.21.25	001147F12303		25.3.2010 23:25:00	54 Mbps	25,9 MBytes	93,6 MBytes
	mpark-win03	lab	10.199.21.28	0015CAED180C		26.3.2010 0:05:00	11 Mbps	12,9 MBytes	86,6 MBytes
1 / 1  10 7 Row(s)									
CiaAP1130a-Lab	10.199.20.145	Thin	lab	161	0				
Cisco1130-1-Cia	10.199.20.141	Thin	lab	11	0				
[+]  Cisco1130-2-Cia	10.199.20.142	Thin	lab	11	1				
Cisco1130-3-Cia	10.199.20.143	Thin	lab	11	0				

1 / 1 100 5 Row(s)

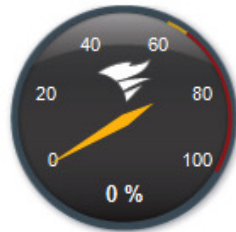


### Average Response Time & Packet Loss - Radial Gauges

HELP



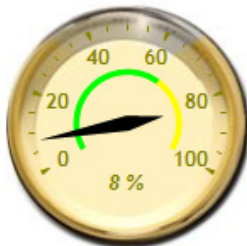
Avg Resp Time



Packet Loss

### CPU Load & Memory Utilization - Radial Gauges

HELP



CPU Load



Memory Used

### All IP SLA Operations

GROUPED BY OPERATION TYPE

MANAGE OPERATIONS

HELP

### Node Details

HELP

**Node Status** Node status is Up, One or more interfaces are Down.

**IP Address** 10.199.10.10

**Dynamic IP** No

**Machine Type** Catalyst 37xx Stack

**DNS** EW-3750A

**System Name** EW-3750A

**Description** Cisco IOS Software, C3750 Software (C3750-IPBASE-M), Version 12.2(0.0.177)SE1, CISCO DEVELOPMENT TEST VERSION Copyright (c) 1986-2009 by Cisco Systems, Inc. Compiled Mon 30-Mar-09 23:46 by amvarma

**Location**

### All Interfaces on the Selected Node

HELP

STATUS	INTERFACE	POWER LEVEL	TYPE
Up	Vlan1 - V11		Proprietary Virtual
Down	StackPort1		Proprietary Virtual
Down	StackSub-St1-1		Proprietary Virtual
Down	StackSub-St1-2		Proprietary Virtual
Down	FastEthernet1/0/1 - Fa1/0/1	10 Full	Ethernet
Down	FastEthernet1/0/2 - Fa1/0/2	10 Full	Ethernet
Unplugged	FastEthernet1/0/3 - Fa1/0/3	10 Full	Ethernet
Unplugged	FastEthernet1/0/4 - Fa1/0/4	10 Full	Ethernet
Unplugged	FastEthernet1/0/5 - Fa1/0/5	10 Full	Ethernet
Unplugged	FastEthernet1/0/6 - Fa1/0/6	10 Full	Ethernet
Unplugged	FastEthernet1/0/7 - Fa1/0/7	10 Full	Ethernet
Unplugged	FastEthernet1/0/8 - Fa1/0/8	10 Full	Ethernet
Unplugged	FastEthernet1/0/9 - Fa1/0/9	10 Full	Ethernet
Down	FastEthernet1/0/10 - Fa1/0/10	10 Full	Ethernet
Down	FastEthernet1/0/11 - Fa1/0/11	10 Full	Ethernet
Down	FastEthernet1/0/12 - Fa1/0/12	10 Full	Ethernet
Down	FastEthernet1/0/13 - Fa1/0/13	10 Full	Ethernet
Down	FastEthernet1/0/14 - Fa1/0/14	10 Full	Ethernet
Down	FastEthernet1/0/15 - Fa1/0/15	10 Full	Ethernet
Down	FastEthernet1/0/16 - Fa1/0/16	10 Full	Ethernet
Down	FastEthernet1/0/17 - Fa1/0/17	10 Full	Ethernet
Down	FastEthernet1/0/18 - Fa1/0/18	10 Full	Ethernet
Down	FastEthernet1/0/19 - Fa1/0/19	10 Full	Ethernet
Down	FastEthernet1/0/20 - Fa1/0/20	10 Full	Ethernet
Down	FastEthernet1/0/21 - Fa1/0/21	10 Full	Ethernet
Down	FastEthernet1/0/22 - Fa1/0/22	10 Full	Ethernet
Down	FastEthernet1/0/23 - Fa1/0/23	10 Full	Ethernet
Up	FastEthernet1/0/24 - Fa1/0/24	10 Full	Ethernet
Down	GigabitEthernet1/0/1 - Gi1/0/1		Ethernet
Unplugged	GigabitEthernet1/0/2 - Gi1/0/2		Ethernet

### Disk Volumes

HELP

### Percent Utilization - Radial Gauges

HELP



RECV % Utilization



XMIT % Utilization

### Interface Details

HELP

#### Management

[Edit Interface](#)
[Unmanage](#)  
[Pollers](#)

#### Status

● Up

#### Name

FastEthernet1/0/24 - Fa1/0/24

#### Alias

#### Index

10024

#### Interface Type

E Ethernet

#### MAC Address

0017.9545.451A

#### Administrative Status

● Up

#### Operational Status

● Up

#### Last Status Change

10.2.2010 15:57

	Receive	Transmit
Interface Bandwidth	100,0 Mbps	100,0 Mbps
Current Traffic	16,81 Kbps	24,55 Kbps
Percent Utilization	0 %	0 %
Packets per Second	22,0 pps	22,0 pps
Average Packet Size	94 bytes	137 bytes

#### MTU

1,5 Kbytes

#### Configured Interface Speed

100,0 Mbps

#### Counter 64 Support

No

### Min/Max/Average bps In/Out

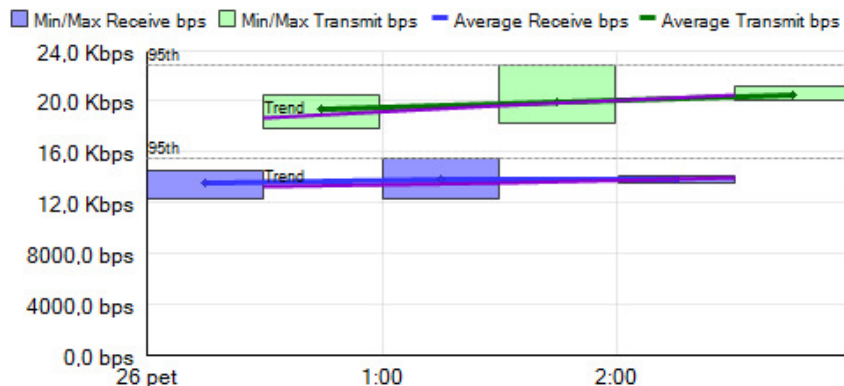
View Options

HELP

TODAY

#### EW-3750A-FastEthernet1/0/24 - Fa1/0/24

Min/Max/Average bps of Recv 100,0 Mbps Xmit 100,0 Mbps  
TODAY



ožu 2010

95th Percentile: Average Receive bps is 15,4115 Kbps, Average Transmit bps is 22,7694 Kb  
SolarWinds Orion Network Performance Monitor v9.5.1

### Percent Utilization - Line Chart

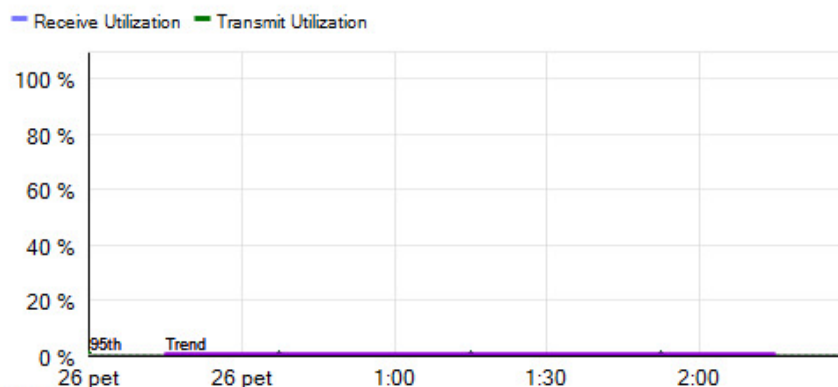
View Options

HELP

TODAY

#### EW-3750A-FastEthernet1/0/24 - Fa1/0/24

Percent Utilization of Recv 100,0 Mbps Xmit 100,0 Mbps  
TODAY



ožu 2010

95th Percentile: Receive Utilization is 0,0154 %, Transmit Utilization is 0,0228 %  
SolarWinds Orion Network Performance Monitor v9.5.1

## IP SLA Manager

- Dolaskom sve većeg broja real time ili interactive servisa nije dovoljno imati samo informaciju o stanju mrežnih uređaja, operativnih sustav i portova
- IP SLA Manager predstavlja alat za nadzor i analizu veza između mrežnih uređaja te prezentira korisnička iskustva sa servisima

# solarwinds IP SLA Manager

## All IP SLA Operations

GROUPED BY OPERATION TYPE

- DHCP
- DNS
- FTP
- ICMP Echo
- TCP Connect
- UDP Echo
- VoIP UDP Jitter
- HTTP

MANAGE OPERATIONS HELP

## Cisco IP SLA Operations Map

WAN QUALITY METRICS FROM REMOTE PERFORMANCE MONITORS



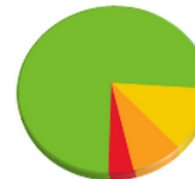
» [Download Network Atlas](#) to edit your map.

HELP

- Nadzor WAN mreže
- Nadzor i statistika VoIP mreže (jitter, MOS, delay)
- Vizualizacija kvalitete mreže između lokacija
- Omogućuje brzu detekciju utjecaja kvalitete veza na funkcionalnost aplikacija
- Izrada mjesečnih izvještaja o kvaliteti mrežnih veza
- Alarmiranje i eskalacija problema prema postavljenim KPI vrijednostima
- Ne zahtjeva posebne SLA probe

## IP SLA Operations Health Overview

HELP



- 19  Operation Up
- 3  Operation Warning
- 2  Operation Critical
- 1  Operation Down
- 0  Unknown

## Operations with Issues

HELP

IP SLA OPERATION	OPERATION TYPE	ROUND TRIP TIME
Ottawa -> Austin.3	VoIP UDP Jitter	
Dns - digg.com	DNS	560.0 ms
UdpEcho - Core -> BAA	UDP Echo	0.0 ms
UdpVoipJitter - 40 -> 3	VoIP UDP Jitter	0.0 ms
Http - yahoo.com	HTTP	0.0 ms
Http - Phx -> salesforce.com	HTTP	473.0 ms

# solarwinds IP SLA Manager

## Podržane SLA operacije

- HTTP –round-trip time za pristup web stranicama
- FTP –round-trip time za prijenos file-ova
- DNS – mjerenje DNS look up time
- DHCP – Mjerenja round-trip time za dodjeljivanje IP adrese
- TCP Connect – Mjerenje vremena spajanja
- UDP Jitter – mjerenje round-trip delay, one-way delay, one-way jitter te one-way packet loss
- VoIP – mjerenje kvalitete VoIP veza
- ICMP Echo – Mjerenje round-trip delay
- UDP Echo – Mjerenje response times

### VoIP Call Paths

HELP

CALL PATH	MOS	JITTER	LATENCY	PACKET LOSS
Austin.3 -> Austin.17	4.40	0.0 ms	16.0 ms	0 %
Austin.3 -> Ottawa	4.40	0.0 ms	16.0 ms	0 %
Austin.3 -> Tulsa	4.40	0.0 ms	16.0 ms	0 %
Austin.17 -> Austin.3	4.40	0.0 ms	16.0 ms	0 %
Austin.17 -> Ottawa	4.40	0.0 ms	16.0 ms	0 %
Austin.17 -> Tulsa	4.40	0.0 ms	16.0 ms	0 %
Ottawa -> Austin.3	2.90	5.0 ms	169.568 ms	12 %
Ottawa -> Austin.17	4.40	0.0 ms	16.0 ms	0 %
Tulsa -> Austin.3	4.40	0.0 ms	16.0 ms	0 %
Tulsa -> Austin.17	4.40	0.0 ms	16.0 ms	0 %
UdpVoipJitter - 3 -> 40	4.40	0.0 ms	16.0 ms	0 %
UdpVoipJitter - 40 -> 3	0.00	0.0 ms	0.0 ms	0 %

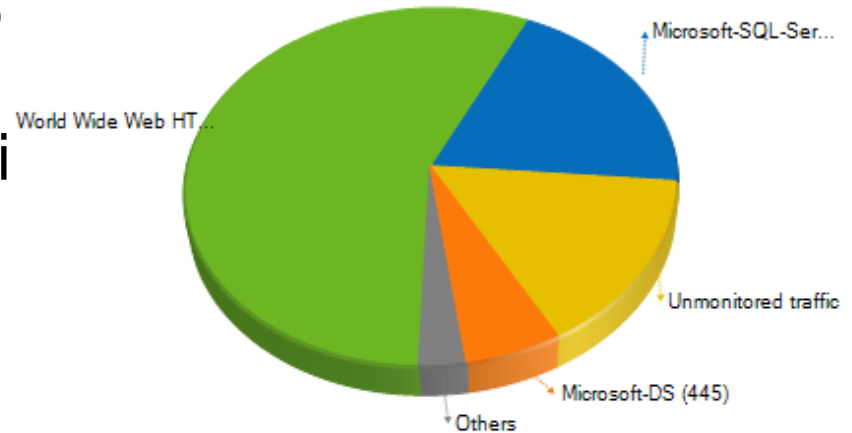


# NetFlow Traffic Analysis

- Omogućava prikupljanje podatka o vrsti prometa i komunikaciji kako bi se utvrdilo na koji način se koristi mreža te koji su najzazetije aplikacije i korisnici
- Nadzor nad postavljenim QoS parametrima
- Planiranje resource mreže prema podacima o iskorištenju

**Top 5 Applications**  
LAST HOUR

HELP

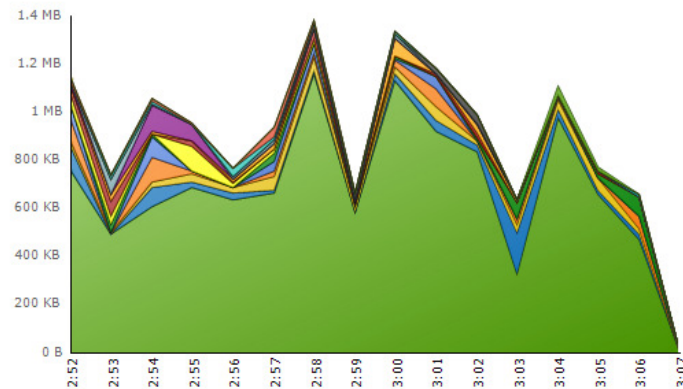

















APP	ROUTER	INTERFACE	BYTES	PACKETS
+		World Wide Web HTTP (80)	201.7 Mbytes	449.535 K packets
+		Microsoft-SQL-Server (1433)	69.9 Mbytes	201.895 K packets
+		Unmonitored traffic	54.6 Mbytes	130.284 K packets
+		Microsoft-DS (445)	20.3 Mbytes	81.901 K packets
+		imap4 protocol over TLS/SSL (993)	9.9 Mbytes	24.356 K packets



# solarwinds NetFlow Traffic Analysis

Top 50 Domains  
LAST 15 MINUTES



DOMAIN	TOTAL BYTES	TOTAL PACKETS	PERCENT
 youtube.com	10.9 Mbytes	24.473 K packets	76.14%
 go.com	594.2 Kbytes	1.318 K packets	4.15%
 aol.com	489.2 Kbytes	1.712 K packets	3.42%
 careerbuilder.com	448.5 Kbytes	985 packets	3.14%
 blogger.com	278.1 Kbytes	527 packets	1.94%
 facebook.com	273.3 Kbytes	540 packets	1.91%
 yahoo.com	241.8 Kbytes	623 packets	1.69%
 about.com	221.6 Kbytes	449 packets	1.55%
 wordpress.com	199.3 Kbytes	469 packets	1.39%
 rapidshare.com	189.2 Kbytes	254 packets	1.32%
 wikipedia.org	119.4 Kbytes	333 packets	0.84%
 google.com	112.0 Kbytes	332 packets	0.78%
 msn.com	102.8 Kbytes	260 packets	0.72%
 amazon.com	84.6 Kbytes	220 packets	0.59%
 ebay.com	58.6 Kbytes	116 packets	0.41%

- “Flow based” Grafički prikaz i reporting realnog stanja i snimljenih vrijednosti kroz određeni period
- Integracija sa Network Performance sustavom u svrhu alarmiranja i izvještavanja o potrošnji mrežnih resursa

# solarwinds Network Configuration Manager

NCM Home Configuration Management Inventory Compliance

### Node List

GROUP BY VENDOR

- Adtran
- Cisco
- Dell Computer Corporation
- Extreme Networks
- HP

### Last 5 Config Changes

NODE NAME	DATE TIME	
Bas-1200AP	11.11.2009 18:47:26	<a href="#">View Change Report</a>
Bas-2621.aus.lab	11.11.2009 18:47:26	<a href="#">View Change Report</a>
Tok-1200AP.lab.tok	11.11.2009 18:47:26	<a href="#">View Change Report</a>
Syd-Ext3808	11.11.2009 18:47:26	<a href="#">View Change Report</a>
Syd-Ext3808	11.11.2009 2:00:08	<a href="#">View Change Report</a>

### Policy Violations

NAME	INFO	WARN	CRITICAL
HIPAA Security Report	0	12	3
Cisco Security Audit	63	27	27
CISP Reports	18	8	0
Cisco Policy Report	18	54	16

[View All Policy Reports](#)

### Overall Devices Backed Up vs. Not Backed Up

AS OF LAST UPDATE

Backed Up  
 Not Backed Up

- Centralno mjesto za upravljanje, administraciju i aktivaciju mrežne opreme i usluga
- Mogućnost podešavanja globalnih postavki na uređajima
- Backup konfiguracija i routing tablica
- Integracija u Performance monitoring sustav olakšava uočavanje i otklanjanje greški vezanih uz pogrešne konfiguracije opreme
- Usporedba konfiguracija

# solarwinds Network Configuration Manager

- Centralno mjesto za pregled mrežnih resursa (Inventory opreme, software-a, licenci)

NCM Home Configuration Management **Inventory** Compliance

VIEW BY	Report Name	Category	Type	Description
Category	All Nodes	Node Details	Node Details	Report of all Nodes in the Configuration Management Database
All	Cisco Card Data	Cisco Inventory	CiscoCardData	Display information about Cisco card data within each device
Audit	ARP Tables	Inventory	ARP Tables	Shows the ARP Tables from each device. Run an Inventory to ensure the latest ARP table data is included.
Cisco Inventory	User Activity Tracking Report	Audit	Audit	
Inventory	Cisco Discovery Protocol	Cisco Inventory	Cisco CDP	The Inventory process includes updating the database with Cisco Discovery Protocol information from each device. This report shows the CDP discovered from each device.
Node Details	Cisco 3750 Stack - Physical Entity	Cisco Inventory	Physical Entities	Display information about Physical Entities within each device
Polling Status	Cisco Chassis IDs	Cisco Inventory	Cisco Chassis Information	Display the Chassis IDs (and Serial Number is possible) for Cisco devices
Route Tables Inventory	Cisco Flash File System	Cisco Inventory	Cisco Flash File System	Display the list of files within the flash memory of each Cisco device
Security	Cisco Flash Memory	Cisco Inventory	Cisco Flash Memory	Show amount of Flash Memory in each Cisco device
Windows Servers Inventory	Cisco IOS Image Details	Cisco Inventory	Cisco Image MIB	Show details about the running IOS in each Cisco device
	Memory in Cisco Devices	Cisco Inventory	Cisco Chassis Information	Display the processor memory in Cisco devices
	Cisco Memory Pools	Cisco Inventory	Cisco Memory Pools	Memory pools within Cisco devices
	ROM bootstrap for Cisco devices	Cisco Inventory	Cisco Chassis Information	Display the ROM bootstrap version for Cisco devices
	Community Strings for each Node	Security	Node Details	Display the SNMP Community String used by each device
	Device Polling Details	Polling Status	Node Details	
	Down Nodes	Polling Status	Node Details	



- Centralno mjesto za pregled i administraciju sukladnosti sa globalnim standardima (npr. SOX, Cisco policy)

NCM Home Configuration Management Inventory **Compliance**


VIEW BY	Report Name	Grouping	Comment
All	Cisco Policy Report	Cisco Reports	Reports any violations found in the Cisco Policies
Cisco Reports	SOX Security Report	SOX Reports	Sample Report for SOX (Sarbanes-Oxley)
CISP Reports	HIPAA Security Report	HIPAA Reports	Sample Report for HIPAA, security regulation to protect Healthcare Patient Data
Foundry Reports	Juniper Policy Report	Juniper Reports	
HIPAA Reports	CISP Reports	CISP Reports	Sample Report for Visa's CISP (Cardholder Information Security Program)
Juniper Reports	Foundry Policy Report	Foundry Reports	
SOX Reports	Cisco Security Audit	Cisco Reports	
Last Update Time: 11.11.2009 23:55:03			


# solarwinds Energywise management

**EnergyWise Interface Details** [HELP](#)

**Management**  Manage EnergyWise  
 Set Power Level

**Name** SolarWinds.interface.Fa1.0.24

**Power level**  10 Full

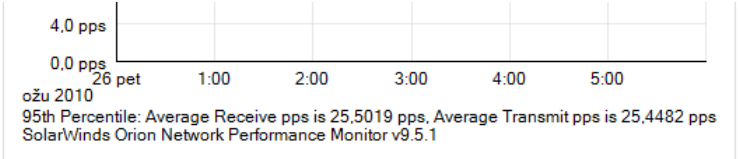
**Policy level**  10 Full

**Keywords**

**Custom Properties for Interfaces** [HELP](#)

**Event Summary For This Interface** [HELP](#)

TODAY



**Entity Power Consumption** [View Options](#) [HELP](#)

TODAY

No Data for Selected Time Period

**EnergyWise Policy Overview Calendar** [HELP](#)

Select Week: 21.3.2010-27.3.2010

	ned 21.3.2010	pon 22.3.2010	uto 23.3.2010	sri 24.3.2010	čet 25.3.2010	pet 26.3.2010	sub 27.3.2010
1	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10
5	10	10	10	10	10	10	10
6	10	10	10	10	10	10	10
7	10	10	10	10	10	10	10
8	10	10	10	10	10	10	10
9	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10
11	10	10	10	10	10	10	10
noon	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10
2	10	10	10	10	10	10	10
3	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10
5	10	10	10	10	10	10	10
6	10	10	10	10	10	10	10
7	10	10	10	10	10	10	10
8	10	10	10	10	10	10	10
9	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10
11	10	10	10	10	10	10	10
midnight	10	10	10	10	10	10	10

**Legend for EnergyWise Power Levels**

- 0 Shut
- 1 Hibernate
- 2 Sleep
- 3 Standby
- 4 Ready
- 5 Low
- 6 Frugal
- 7 Medium
- 8 Reduced
- 9 High
- 10 Full

\* Time according to device.

# Application Performance Monitor

- Centralno mjesto nadzora aplikacija i operativnih sustava u korisničkoj mreži
- Top 10 – prikaz najaktivnijih procesa i aplikacija
- Prikaz i mjerenje korisničkog iskustava sa aplikacija (brzina pristupa, vrijeme odziva)
- Prikaz zauzeća resursa servera po aplikaciji i procesu

Application Health Overview

HELP



Top 10 Components by Statistic Data

HELP

COMPONENT NAME	APPLICATION NAME	NETWORK NODE	STATISTIC DATA
Virtual Memory	Windows Server 2003	Support-7	2095104,00
Virtual Memory	Windows Server 2003	OrionDevServer	2095104,00
Virtual Memory	Windows Server 2003	SW-SQL	2068556,00
Virtual Memory	Windows Server 2003	SW-SERVER	1585152,00
Virtual Memory	Windows Server 2003	TUL-SQLSRV-01	1536000,00
Virtual Memory	Windows Server 2008	LAB-VM01-TEX08	1354512,00
Virtual Memory	Windows Server 2003	SW-BACKUP	589824,00

All Applications

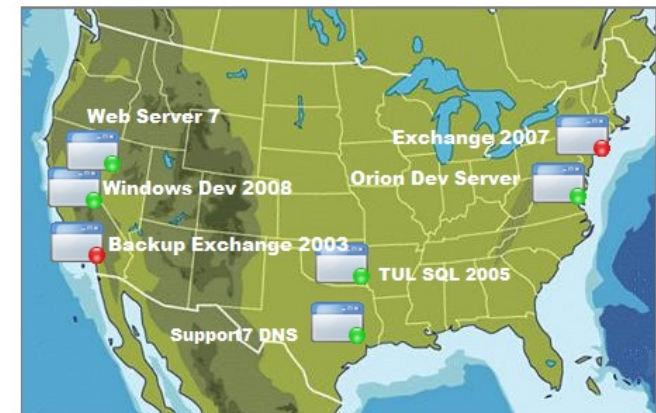
MANAGE APPLICATIONS HELP

GROUPED BY APPLICATION TEMPLATE TYPE

Exchange 2007	1 application down
Exchange 2007 WMI Counters	All applications up
Exchange Server 2000 and 2003	1 application down
HTTP Form Login	All applications up
IIS Logfile Watcher	All applications up
Linux/Unix Operating System	All applications up
Oracle Database	
Orion Server	All applications up
SQL Server 2005 Database	1 application down
Windows DNS Server	All applications up
Windows Server 2003-2008	All applications up

Network Map

HELP



» Download Network Atlas to edit your map.

# Application Performance Monitor

## Pregled podržanih monitora

### Operating Systems

- Microsoft Windows™ Server 2003 and 2008
- IBM AIX®
- HP-UX
- Linux® (Red Hat®, SuSE®, Ubuntu®)
- Sun Solaris™

### Web Servers and URL Monitors

- HTTP user experience
- HTTPS user experience
- Microsoft® Internet Information Service (IIS)
- Apache®

### Email and Directory Server

- Microsoft® Exchange 2000, 2003, and 2007
- Microsoft Active Directory®
- Lotus Domino Servers
- BlackBerry Enterprise server
- BlackBerry Delivery Confirmation

### Database

- SQL query user experience
- Microsoft SQL Server®
- Oracle®
- MySQL

### Network Services

- DNS query user experience
- DNS port
- SNMP
- IMAP4
- POP3
- Cisco Call Manager

### Monitors

- DNS query user experience
- WMI performance counter
- Windows® script
- Linux/Unix script
- Windows service
- Process monitor (Windows, Linux, Unix)
- File and directory
- Nagios® script
- Windows Event Log
- Windows Printer
- Microsoft SharePoint®

### Virtualization Monitors

- Microsoft Hyper-V™
- VMware® ESX Server

### Application Servers

- Microsoft .NET™ Server
- Java™ 2 Platform, Enterprise Edition Server (J2EE)
- Apache Tomcat™
- Apache Geronimo™
- Oracle® E-Business Suite
- IBM WebSphere®
- SAP R/3™
- SAP NetWeaver™

### Backup Servers

- Symantec Backup Exec™
- Symantec NetBackup™
- Microsoft Data Protection Manager

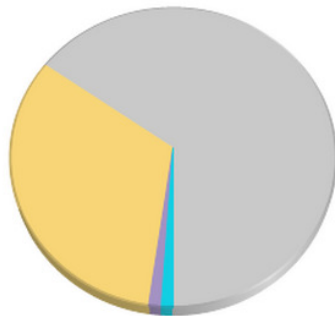
..... Mogućnost razvoja prilagođenih monitora za korisničke aplikacije







# solarwinds IP address Manager

- Kontrola i upravljanje IP adresama
- Alarmiranje slučaju prevelike iskorištenosti subneta i DHCP pool-ova

IP Networks



1324  Available IP addresses (65.22%)  
 660  Used IP addresses (32.51%)  
 24  Reserved IP addresses (1.18%)  
 22  Transient IP addresses (1.08%)  
 -----  
 2030 Total IP addresses

65.22% of IP addresses currently in the Orion database are Available.  
 34.78% of IP addresses currently in the Orion database are Not Available.

**Top 10 Subnets by % IP Address Used**

SUBNET NAME	% IP SPACE USED	IPS AVAILABLE	IPS USED
10.199.20.0 /24	100.00%	0	254
10.199.6.0 /24	86.33%	35	215
10.199.4.0 /24	45.70%	139	115
10.199.1.0/24	23.83%	195	45
10.199.2.0	8.20%	235	17
192.168.1.0/24	4.90%	233	0
10.199.5.0	3.91%	246	8
10.199.3.0 /24	3.21%	241	6

**VoIP Subnets by % IP Address Used**

SUBNET NAME	% IP SPACE USED	IPS AVAILABLE	IPS USED
10.199.6.0 /24	86.33%	35	215
10.199.4.0 /24	45.70%	139	115

**Top 5 Subnets with Transient Addresses**

SUBNET NAME	% IP SPACE USED	IPS AVAILABLE	IPS USED
10.199.6.0 /24	86.33%	35	215
10.199.4.0 /24	45.70%	139	115
10.199.1.0/24	23.83%	195	45
10.199.2.0	8.20%	235	17
192.168.1.0/24	4.90%	233	0

# Q and A





**CISCO**

solarwinds 

**STORM**  
COMPUTERS