Cisco Application Velocity – The Borderless Network Service for Application Performance

Liad Ofek
Manager, Technical Marketing, ADBU, Cisco

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Our World Is Changing…

Ensuring Application Performance Regardless of Location And Device Type Is More Important Than Ever

80% OF NEW APPS WEB ENABLED

XAAS MARKET GROWING TO $241B BY 2020

300% GROWTH IN VIDEO TRAFFIC

5 DEVICES PER USER BY 2016
The Performance Challenge

Lack of Visibility and Control
- Proliferation of apps (mobile, video, VDI)
- Various deployment models (local hosting, DC, cloud)

Resource Utilization
- Wasted bandwidth
  - Non-business applications
  - Inefficient application delivery
- WAN Latency increases app response time

Capacity, Complexity and Reliability
- Performance issues for cloud services cause decreased quality of experience, IT efficiency
- Proliferation of edge devices
- Consolidated data center and cloud environments increase reliability demands
What Should an Application Performance Solution Deliver?

Maximized User Experience

Optimized Resource Utilization

Increased Reliability
Cisco Application Velocity
Maximize User Experience, Optimize Resource Utilization, Increase Reliability

Visibility and Control
- Discovery, Prioritization and Control: AVC
- Performance Monitoring: NAM
- Analytics and Management: NAM, Partners

Acceleration and Optimization
- Application Acceleration: WAAS
- Network Optimization & Utilization: WAAS-Express
- Content Distribution: eCDS

Network and Application Agility
- Virtualization and Cloud Enablement, Application Survivability: UCS-Express
- Adaptability: PfR
Cisco Application Visibility Approach

1. Turn the ISR's, ASR's and WAAS' into intelligent probes that capture and provide rich application info.

2. Provide rich info such as app response time for applications or top talkers directly from the Cisco NAM or WAAS CM.

3. Standards and interoperability—API's to the leading vendors.

4. Customers can extract all the rich info directly from the intelligent Cisco infra directly into their own solutions.
Application Visibility and Control

Market Leading Technology

- Carrier class embedded DPI integrated with IOS Services
- Multi-packet inspection engine improves accuracy
- 1000+ applications recognized
- Advanced application categorization and attributes to simplify deployment
- Advanced graphical reporting interface

Use Cases

- Improve customer insight and intimacy
- Better capacity management through deeper visibility
- Network Planning through customized and pre-defined reports
- Compliance and cost management through application-based policies
- Value-added and Tiered Services through QoS
## Cisco Prime Network Analysis Module

**Network Traffic and Performance Analysis**

<table>
<thead>
<tr>
<th>Application Performance Visibility</th>
<th>Traffic Analysis</th>
<th>Troubleshooting</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Application Response Time</td>
<td>• Applications, Host, Conversations, DSCP/QoS, VLAN</td>
<td>• Advanced Filters, Packet Capture, Decodes, and Error Scan</td>
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<tr>
<td>• Voice Quality</td>
<td>• Per-application, per-Host/VM and per-user granularity</td>
<td>• Port/Interface statistics</td>
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<tr>
<td>• WAN Optimization</td>
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<tr>
<td>• URL monitoring</td>
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- **Cisco Prime NAM for Nexus 1010**
- **Cisco Prime NAM for WAAS VB**
- **Cisco Prime NAM for ISR G2 SRE**
- **Cisco ISR/G2 NAM Blade**
- **NAM 2200 Series Appliance**
- **Cat65xx NAM Blade**
- **Cat65xx/C76xx NAM1, NAM2 Blades**
# Performance Agent (ISR G2)

## Key Features
- Extend NAM visibility into remote sites
- Measure app response times at branch edge
- Licensed feature on 88x, 89x, ISR G2; no truck roll
- Deployable with and without WAAS Express
- Discounted bundle with WAAS Express and PA
- Standard netflow v9 export enables 3rd party

## Use Cases
- Visibility into application performance issues across WAN
- Quantify user experience
- Trouble shoot application performance
- Track service levels for application delivery
- Quantify benefits of services such as WAAS

## PA Key Features and Benefits

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Wide Area Application Services (WAAS)

Accelerate Applications

Accelerate Performance for All Centralized Applications: Email, Web, Voice, Multimedia

Optimize Bandwidth

Achieve Cost Savings by Increasing Your Bandwidth Capacity Up to 4x

Consolidate Branch IT Services

Host Services Such as Windows Server, DHCP, DNS Using the Virtual Blade Technology

Evolve To the Cloud

Offer Value-Added, Cloud-Optimized Application Services
Cisco WAAS Improves Performance and BW Utilization for Key Business Applications

**Problem**
- Application latency
- WAN Bandwidth inefficiencies

**Solution**
- Reduce load
  - Data Redundancy Elimination, Compression, TCP optimization
- Application Optimization
  - Fewer protocol messages, Meta data caching, ...

**Sample Applications**

![Diagram showing reduction in bandwidth and latency](image-url)
Solution for Every Part of Your Business

- **Large Branch Office**: Services-Ready Engine
- **Data Center**: Data Center Appliance, Virtual WAAS (vWAAS)
- **Small Branch Office**: WAAS Express
- **Teleworker**: WAAS Mobile
- **HQ**: Appliance Supporting Virtual Blades
- **Cloud**: Virtual WAAS (vWAAS)

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## UCS Express
Simplifying Branch Office Infrastructure

### Server Virtualization
- Consolidate multiple physical servers to reduce costs
- Improve application uptime and failure recovery time
- Shorten time-to-deployment for new applications

![Server Virtualization Image](image)

### Blade Form Factor
- Eliminate wires, components, and space to reduce costs
- Rapidly provision hardware with plug-and-play modularity
- Right-size hardware profile for the lean branch office

![Blade Form Factor Image](image)

### All-in-One Device
- Integrate all branch devices into one box to reduce costs
- Simplify infrastructure to reduce operational burden
- Improve IT responsiveness with on-demand services

![All-in-One Device Image](image)
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Thank you.