Cisco Advanced Services

Network Availability Improvement Support

Prepared for XX
Agenda

Market Conditions Today

Network Availability Improvement Support

Cisco Advanced Services Overview

The Cisco Advantage

Next Steps
Business Drivers Influencing Network Performance

- Operating Expenses Pressure
- Resource Allocation Core vs. Context
- Skilled Resources
- Cost of Network Downtime
- Multiple Functional Applications

Customer Success
The Importance of Network Solutions

**Addressing Uncertainties**
- Disaster Recovery
- High Availability
- Bandwidth Flexibility for Future Needs
- Security Concerns/ New Laws

**Lowering Costs**
- Lowering Total Cost of Ownership (TCO)
- Reduce OpEx
- Higher Bandwidth at Lower Cost per Mbps
- New Technologies on Existing Infrastructure

**Realizing Productivity**
- Minimize Business Disruption Due to Network Downtime
- On-demand Bandwidth Availability Between Enterprise Sites
- Industry Accepted Technology
- Transparent Application Activation
Features Enterprise Customers Want Most

High availability tops the list of features desired for building WANs, VPNs, and Internet access

1. High availability/automatic failover
2. Manageability
3. Ease of use
4. Integrated security
5. Standards based
Sustaining Availability—Continual Process Improvement

Identify Gaps
Assess customer practices against industry standards

Develop HA Plan
• Specific plans to resolve the gaps
• Measurement and timelines

Take Corrective Action
• Implement fixes
• Eliminate gaps

Verify
• Gaps are resolved
• Impact on availability

Repeat Process
• Move on to next level of assessment detail

Availability Improvement Process
Factors Affecting Network Availability

- Change-management discipline
- Process consistency, methodology
- Team communication

- Hardware and/or Cisco IOS® Software issues
- Technology incompatibility
- Environmental issues
- Natural disasters
- Lack of redundancy

- Application issues
- Cannot support load
- Not scaled to user group

Source: Gartner Group
What is High Availability?

- Network path availability
- Device availability
- End-user service availability

<table>
<thead>
<tr>
<th>Percent Availability</th>
<th>No. of Nines</th>
<th>Downtime Minutes per Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>99%</td>
<td>2 nines</td>
<td>5000</td>
<td></td>
</tr>
<tr>
<td>99.9%</td>
<td>3 nines</td>
<td>500</td>
<td>Well-managed</td>
</tr>
<tr>
<td>99.99%</td>
<td>4 nines</td>
<td>50</td>
<td>Highly available</td>
</tr>
<tr>
<td>99.999%</td>
<td>5 nines</td>
<td>5</td>
<td>Carrier class</td>
</tr>
<tr>
<td>99.9999%</td>
<td>6 nines</td>
<td>0.5</td>
<td></td>
</tr>
</tbody>
</table>
The High Cost of Network Downtime

- Loss of productivity, overtime, rework
- Ability to meet service-level agreements
- Effect on customer commitments, deadlines
- Decline in customer satisfaction
- Weakened market position, business image
Potential Loss of Revenue by Industry Sector

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Revenue/Hour</th>
<th>Revenue/Employee/Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial institutions</td>
<td>$1.49 M</td>
<td>$1079</td>
</tr>
<tr>
<td>Banking</td>
<td>$997 K</td>
<td>$131</td>
</tr>
<tr>
<td>Healthcare</td>
<td>$636 K</td>
<td>$143</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>$2.06 M</td>
<td>$169</td>
</tr>
<tr>
<td>Retail</td>
<td>$1.11 M</td>
<td>$244</td>
</tr>
</tbody>
</table>

Source: Meta, Feb 5, 2002

- Cisco® can help you assess costs for network investment as well as your return on investment
- Network Availability Improvement Support has demonstrated return on investment for Fortune 250 companies worldwide
Cisco Services Portfolio

**Accelerate Customer Success**

<table>
<thead>
<tr>
<th>Networked Virtual Organization</th>
<th>Advisory Services</th>
<th>Vision to Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of Migration</td>
<td>Advanced Services</td>
<td>Network to Application</td>
</tr>
<tr>
<td>Investment Optimization</td>
<td>Technical Support Services</td>
<td>Device to Network</td>
</tr>
<tr>
<td>Investment Protection</td>
<td></td>
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</tbody>
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_Accelerate Customer Success_

_Speed of Migration_

_Investment Optimization_

_Investment Protection_
## Network Availability Improvement Support Services

<table>
<thead>
<tr>
<th>Standard Packaged Subscription Services</th>
<th>Subscription Options</th>
<th>A-La-Carte Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Analysis Support</td>
<td>Onsite Program Management</td>
<td>Curriculum Planning Service</td>
</tr>
<tr>
<td>Gap Resolution Support</td>
<td>Onsite Gap Resolution Support</td>
<td>Functional Area Analysis</td>
</tr>
<tr>
<td></td>
<td>Software Management Process Analysis*</td>
<td>Network Reliability Improvement Analysis</td>
</tr>
<tr>
<td></td>
<td>Software Management Process Analysis Implementation*</td>
<td>Operational Readiness Assessment</td>
</tr>
</tbody>
</table>

* Software Management Process Analysis and Software Management Process Analysis Implementation are subscription options from Network Availability Improvement Support that require the purchase of the Software Strategy service from Network Optimization Support.
# Standard Packaged Subscription Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Analysis Support</td>
<td>Helps you achieve network health and availability targets</td>
</tr>
<tr>
<td></td>
<td>- Analyzes your environment for conformance to leading operational practices</td>
</tr>
<tr>
<td></td>
<td>- Identifies gaps, recommends changes</td>
</tr>
<tr>
<td>Gap Resolution Support</td>
<td>Helps you implement gap resolution projects recommended through Network Analysis Support</td>
</tr>
</tbody>
</table>
## Subscription Options

<table>
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<th>Value</th>
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<tr>
<td>Onsite Program Management</td>
<td>Work with a Cisco® Advanced Services program manager to implement gap-resolution projects</td>
</tr>
<tr>
<td>Onsite Gap Resolution Support</td>
<td>Work with a Cisco Advanced Services engineer to implement gap-resolution projects</td>
</tr>
</tbody>
</table>
| Software Management Process Analysis* | Identifies critical conformance gaps in your software management processes  
Recommendations improvements                                                                                                      |
| Software Management Process Analysis Implementation* | Helps reduce the time to implement recommendations and improve network performance  
Augments your staff’s knowledge and experience through ongoing consultation                                                                 |

* Software Management Process Analysis and Software Management Process Analysis Implementation are subscription options for Network Availability Improvement Support that require the purchase of the Software Strategy service from Network Optimization Support.
## A-La-Carte Services

<table>
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<tr>
<th>Service</th>
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<tr>
<td>Curriculum Planning Service</td>
<td>Helps increase your network-support staff’s skill and experience by providing a roadmap for training or informal knowledge transfer</td>
</tr>
<tr>
<td>Functional Area Analysis</td>
<td>Delivers a targeted, in-depth analysis that identifies conformance gaps in critical areas</td>
</tr>
<tr>
<td></td>
<td>Recommends improvements</td>
</tr>
<tr>
<td>Network Reliability Improvement Analysis</td>
<td>Help you improve resiliency and availability by assessing areas of your network design, operational processes, and operational readiness to identify gaps</td>
</tr>
<tr>
<td></td>
<td>Provides recommendations</td>
</tr>
<tr>
<td>Operational Readiness Assessment</td>
<td>Helps you to avoid costly errors that could contribute to downtime and outages by analyzing your network management and operational methods for conformance to leading practices</td>
</tr>
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Customer Case Study—EDS

Profile

• A recognized global leader in delivering quality service to its business and government clients

• EDS’ global IT infrastructure is unmatched in the services industry

• EDS has operated a global service delivery base for more than a decade, enabling delivery of services around-the-clock or from specific countries or time zones to better serve clients

Concerns

• Achieving maximum value from its global IT infrastructure

• Continuously improving service quality

• Aggressive delivery-time schedules

• Increased need for high-availability networks
Customer Case Study—EDS (continued)

Services Engaged

• Operational Readiness Assessments

Results

• Improved network availability
• Improved network change management
• Network management and operational methods aligned with leading industry practices
Customer Testimonial—EDS

“The support that we're receiving from Cisco Advanced Services enables EDS to provide a higher level of service across our network than we could provide without Cisco Advanced Services. I can get Cisco resources when I need them, where I need them, and I can have access to their expertise that enables me to blend it with the EDS team so that ultimately we can provide a better end deliverable to the EDS clients.”

− Tom Egan
President, Global Services Delivery
EDS
Network Availability Improvement Support Customers
Cisco Services
Sustainable Differentiators

People
- Cisco® certifications (2400+ CCIE® certified engineers)
- Industry-recognized experts
- Received several patents
- Authored numerous technical books

Processes
- Cisco Advanced Services knowledge database
- Operational leading practices
- High-availability methods and procedures
- Close alignment with development engineering

Tools
- NATKit
- Audits
- TAC Web
- Cisco Net Collector

Partners
- Globally scalable
- Specialized
- Use leading practices
Benefits Summary

• Maintain high availability of your network and minimize the effects of outages

• Decrease operating expenses and increase the return on your network investment

• Manage network consolidation, network security threats, software updates, and new solution deployments

• Maintain an optimized, high-performance network
Next Steps

- Gap analysis
- Operational services mapping
- ROI analysis
High Availability—Outline of Approach

• Phase I
  Set up data collection and analysis methodology
  Establish network availability baseline
  Set high availability targets

• Phase II
  Regular measurement and tracking of network availability (DPM/MTTR)
  Conversions to defects per million (DPM)
  Set up core team and subteams

• Phase III
  Track network and application impact for each ticket/MTTR
  Categorize DPM by root cause and begin trending
  Jointly identify key initiatives or areas of focus to eliminate defects
  Carry out key assessments as needed (for example, Operational Readiness Assessment)
  Identify requirements for network monitoring and data collection
Data Collection and Analysis Process

- Understand current data collection methodology
  - Customer internal ticket database
  - Manual
- Collect and provide to Cisco® the following network performance data monthly:
  - Outage start time (date and time)
  - Service restore time (date and time)
  - Problem description
  - Root cause
  - Resolution
  - Number of customers affected
  - Equipment model
  - Component or part
  - Planned maintenance activity and unplanned activity
  - Total customers and ports on network
Cisco Advanced Services Return on Investment

• Cost displacement such as reduced investment due to network optimization services, or reduced training expenses due to knowledge transfer support

• Cost avoidance such as reduced network outages as a result of critical problem resolution services

• Revenue gain such as faster time to market from Cisco® design reviews and implementation support services