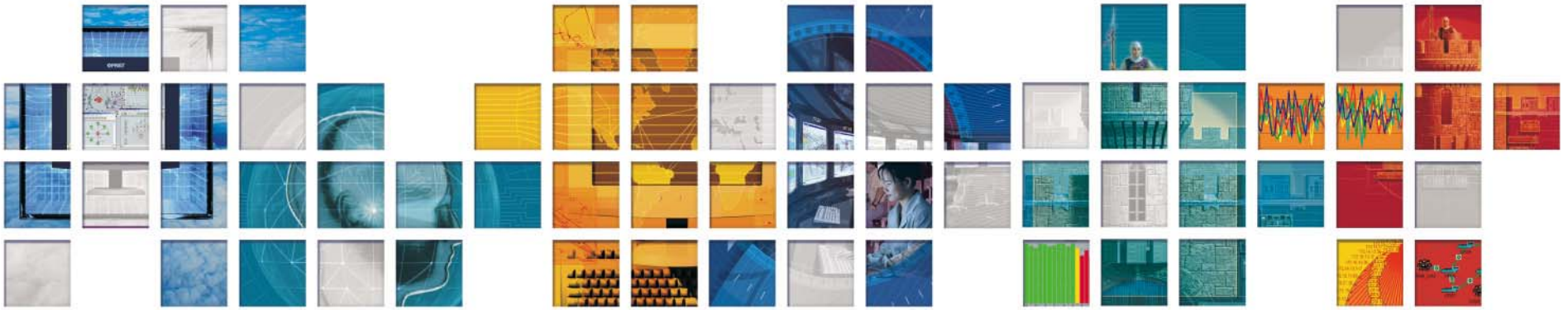
Making Networks and Applications Perform™



Automated IPv6 Readiness Assessment and Migration Planning

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Agenda

- OPNET Corporate Overview
- IPv6 Migration Considerations
- Fundamentals of a Sound Migration Strategy
  - –Documenting your network
  - –IPv6 Network Readiness Assessment
  - –Automated IPv6 Network Design
  - –Predicting the impact of IPv6 on your network
- Conclusion

About OPNET Technologies, Inc.®

Corporate Overview

- Founded in 1986
- Publicly traded (NASDAQ: OPNT)
- HQ in Bethesda, MD
- Approximately 600 employees
- Worldwide presence through direct offices and channel partners

Best-in-Class Solutions and Services

- Application Performance Management
- Network Engineering, Operations, and Planning
- Network R&D

Strong Financial Track Record

- Long history of profitability
- Trailing 12-month revenue of over $120M
- Approximately 25% of revenue re-invested in R&D

Broad Customer Base

- Corporate Enterprises
- Government Agencies/DoD
- Service Providers
- Network Equipment Manufacturers

OPNET's Solutions for Network Engineering, Operations, and Planning

- **Complementary suite** of solutions leveraging a rich behavioral network model, based on operational network data

- **Full life-cycle** coverage
  - –Pre-deployment and planning
  - –Continuous network engineering
  - –Reliable network operations

- Combined **on-line and off-line analytics** for:
  - –Network design and optimization
  - –Network configuration assurance
  - –Automated network documentation
  - –Real-time visualization and situational awareness

IPv6 Migration Considerations

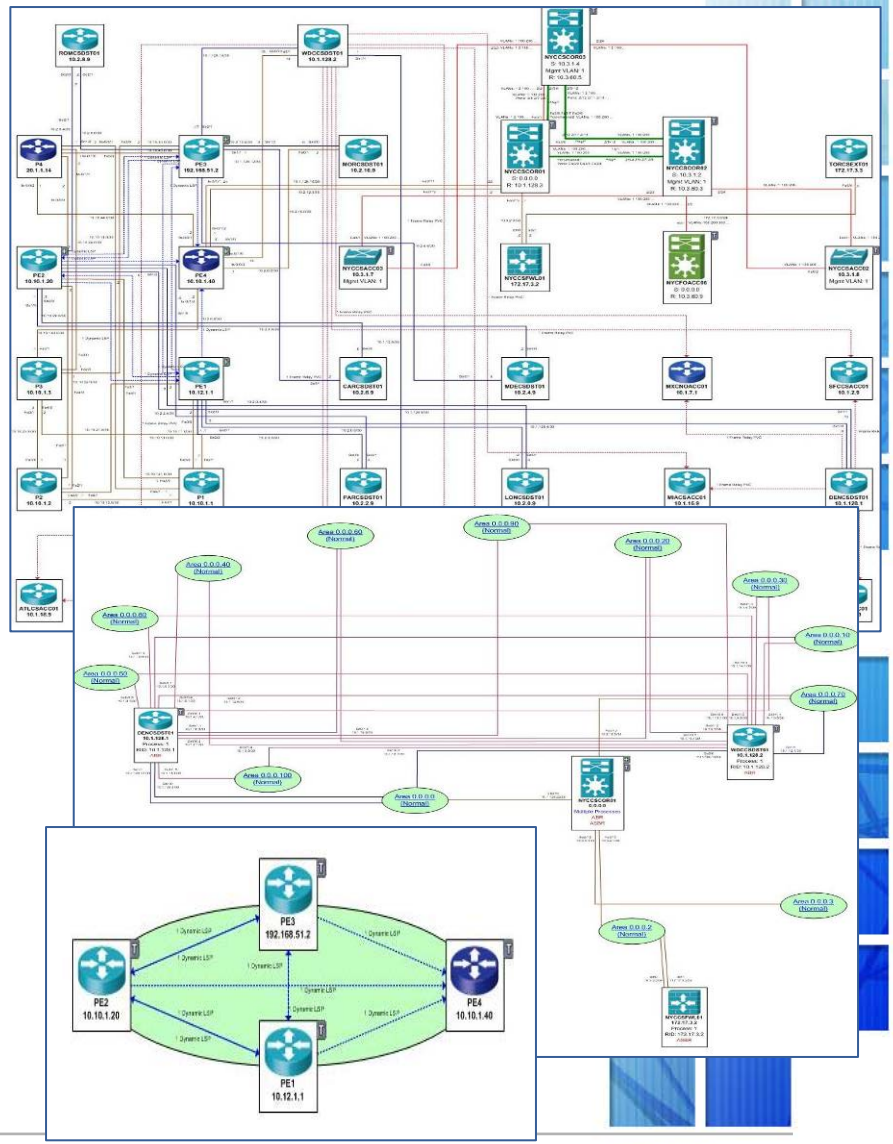
- Industry analysts: migration to IPv6 is a major network transition that requires considerable planning
- Errors could result in costly network outages, security gaps, and application performance problems
- A few of the questions that need to be addressed prior to migration:
  - –What is in my network today? Which parts need to be upgraded first?
  - –Do existing network devices support IPv6? If not, can they be upgraded?
  - –What migration strategy should be used for addressing, tunneling, etc?
  - –How will existing legacy applications perform over IPv6?
  - –Will network capacity be adequate to support migration to IPv6?
  - –How will operational integrity and network security be ensured during the incremental migration?

Fundamentals of a Sound Migration Strategy

- Incremental migrations are more manageable and minimize risk
  - –Existing network is sub-divided into smaller parts
  - –Each part is transitioned separately to minimize risk to overall network
- Migration involves several phases
  - –Document the current state of your network
  - –Assess the “IPv6 readiness” of existing equipment
  - –Upgrade equipment and implement transition mechanisms
  - –Predict the network impact of IPv6
- Network design software accelerates network migration and mitigates associated risks
  - –Software can automatically document the network and validate equipment compatibility quickly and efficiently
  - –Automated workflows facilitate network design especially for users who have limited experience with IPv6

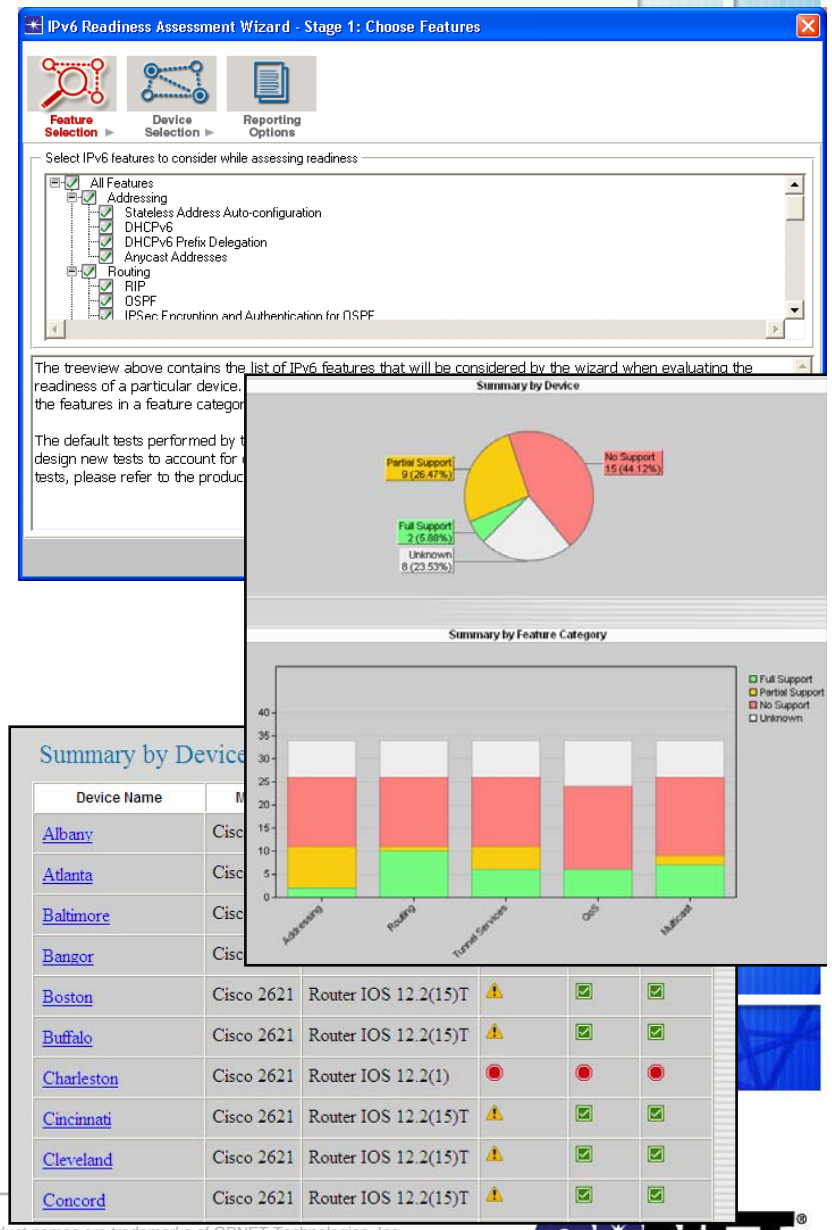
Step 1: Document your Network

- Before making any changes to your network, make sure you understand:
  - –The devices in your network
  - –The physical and logical interconnectivity of devices
  - –How the devices are configured
- OPNET provides:
  - –Automated up-to-date network diagrams
  - –Available in Visio® format
  - –Comprehensive and detailed unified network views
    - Physical layouts
    - Detailed configuration information
    - Logical views: L2/3, VPN, OSPF, BGP, VLANs, etc.
    - Custom annotations



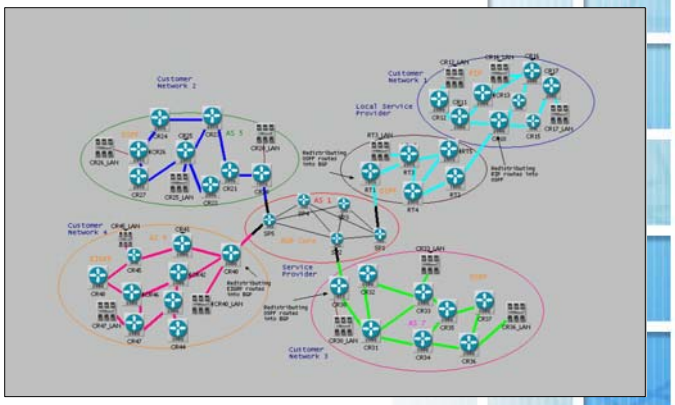
Step 2: Assess IPv6 Readiness

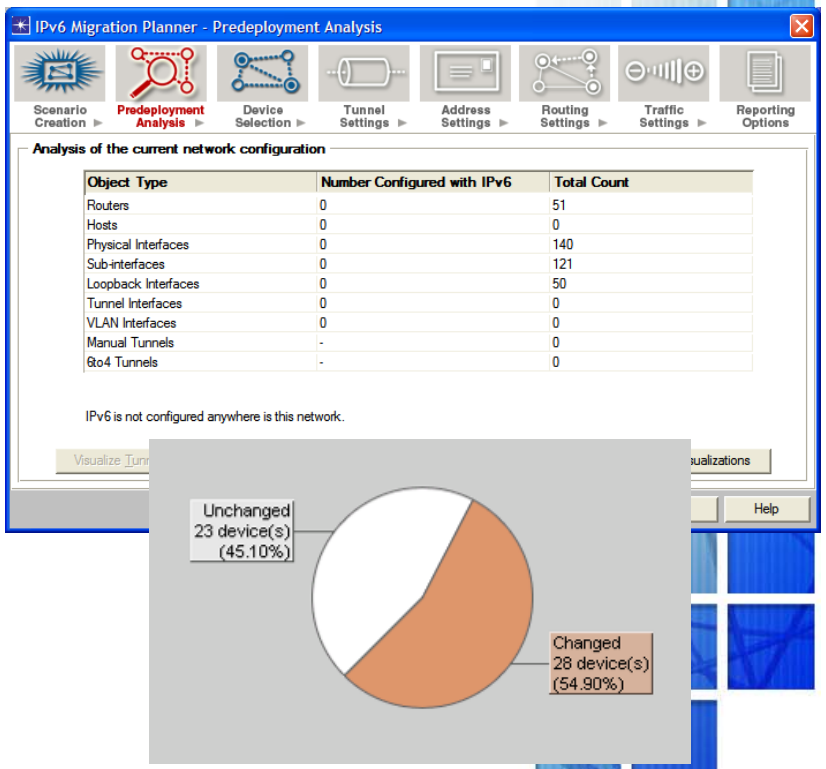
- What does IPv6 readiness mean?
  - –Software (OS) readiness
    - All features may not be available in all releases
    - E.g. addressing, routing, QoS, multicast, security, etc.
  - –Platform readiness
    - Most vendors support IPv6 on all platforms
  - –Hardware readiness
    - Additional RAM/CPU may be required
    - Additional requirement depends on network size and design
- OPNET provides:
  - –Automated rules-based assessment of device capabilities with IPv6 features
  - –Comprehensive reports detailing compliant and non-compliant equipment
  - –Integrated authoring environment for customizing rules



Step 3: IPv6 Migration Design

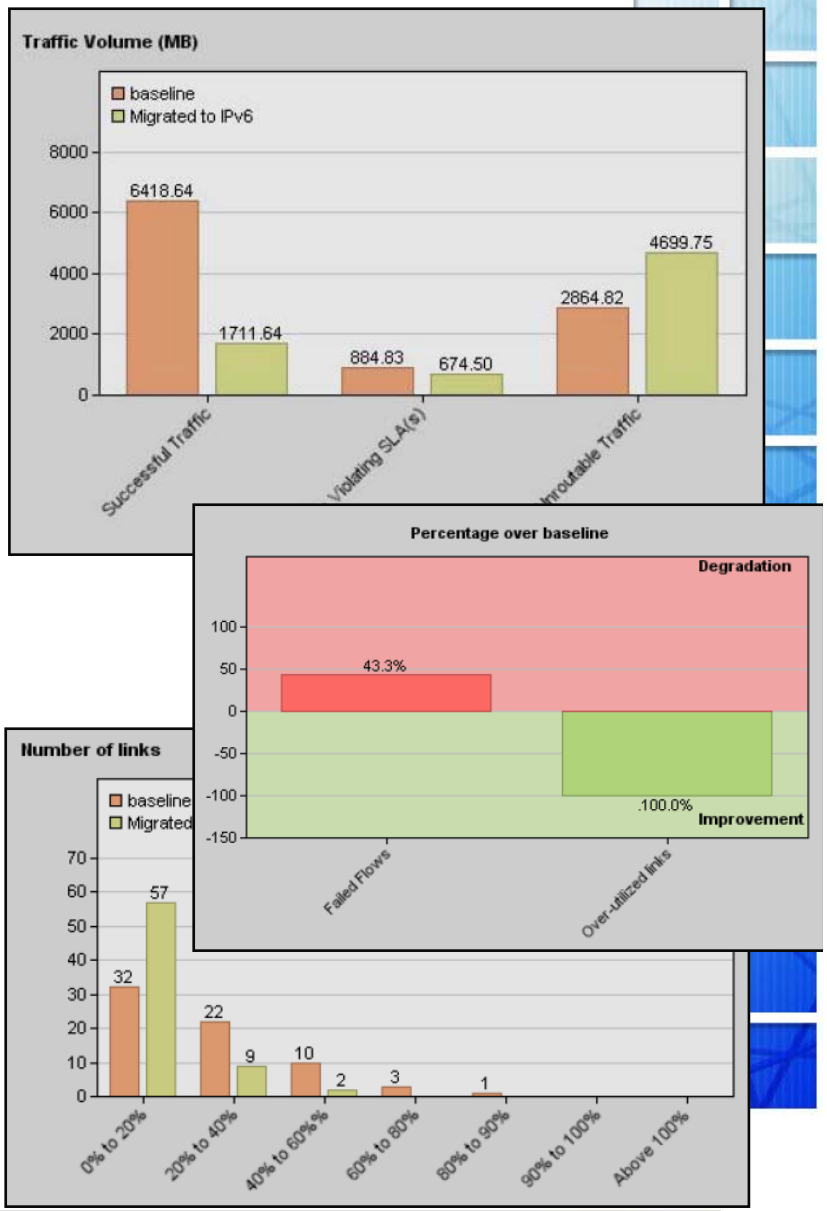
- Incremental migration from IPv4 to IPv6
  - –Identify subnets and devices need to be migrated
    - E.g. migrate your core first
  - –Upgrade all non-compliant devices
  - –Identify tunnels that need to be enabled on each subnet
  - –Determine IPv6-compatible routing protocol(s) to be deployed
- OPNET provides:
  - –A guided workflow to automatically generate designs that transition existing IPv4 networks to IPv6, supporting multiple transition mechanisms
  - –Recommendations on changes required
    - Capacity and configuration changes
    - Equipment enhancements
    - Tunnels and dual-stack devices





Step 4: Predict the Impact of IPv6

- IPv6 can impact:
  - –Network capacity and performance, due to larger overhead and changes in routing
  - –Network security due to changes in addressing and security features
  - –Network survivability
- OPNET provides:
  - –What-if analysis to predict the impact on different IPv6 migration scenarios
  - –Automated network capacity planning
  - –Optimization of routing metrics and QoS to guarantee network performance
  - –Auditing of routers, switches, firewalls to identify misconfigurations and security gaps
  - –Failure impact analysis
  - –Comprehensive before-after reports



Conclusion

- IPv6 migration requires considerable planning and understanding of the impact on your network

- Step by step migration plan
  - –Document the current state of your network
  - –Assess the “IPv6 readiness” of existing equipment
  - –Upgrade equipment and implement transition mechanisms
  - –Predict the network impact of IPv6

- OPNET software accelerates network migration and mitigates risk, through automation, guided workflows, and targeted what-if analysis

Additional Information

- Visit OPNET's website at www.opnet.com/ipv6
- Free White Paper available on IPv6 Migration Planning
- Send an email to info@opnet.com for a web demo of our solutions
- Visit our booth later today!