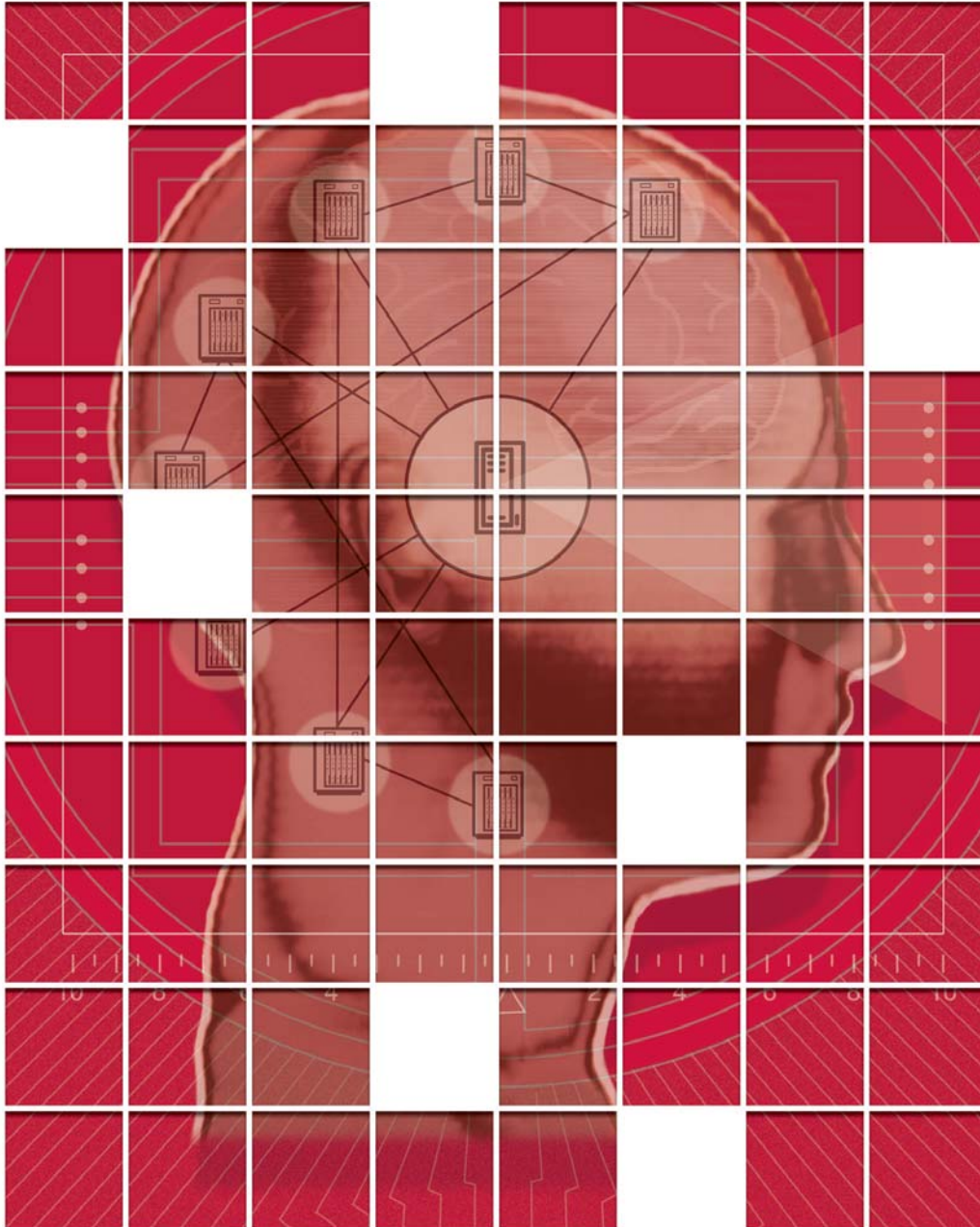




# IT Guru<sup>®</sup> Network Planner

Network Planning and Engineering for Enterprises





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Enterprises rely on networked applications and the supporting IT infrastructure to successfully operate their businesses. Evolving business requirements combined with the complexity of today's technologies have forced enterprises to confront significant challenges in cost-effective and risk-optimized infrastructure management.

IT Guru<sup>®</sup> Network Planner empowers key stakeholders in enterprise network operations and planning departments to be far more effective in addressing these challenges. It encompasses key components of the ITIL (IT Infrastructure Library) best practices, such as service delivery and IT infrastructure management.

IT Guru Network Planner's unique ability to model the behavior of the entire network and the supported applications enables you to:

- Cost-effectively plan the deployment of new applications and networking technologies such as VoIP and IPv6;
- Right-size network capacity to support projected traffic growth;
- Minimize risk by evaluating different what-if scenarios for network changes or migration;
- Achieve service level compliance through QoS and traffic engineering; and
- Ensure network survivability and security.

## Return on Investment

OPNET's extensive, diverse customer base includes some of the world's most sophisticated enterprise IT organizations. These organizations achieve significant return on investment (ROI) from their use of IT Guru Network Planner's robust capabilities.

### Accelerate New Application and Technology Deployments

Application and technology deployments burden the IT infrastructure with unforeseen issues. IT Guru Network Planner allows you to predict the performance of new applications and technologies before they are deployed, minimizing the many potential problems that can occur. By evaluating different scenarios and their implications, you can minimize the risk and reduce the lead time to launch new applications.

### Ensure Operational Integrity

Ensuring network integrity relies on a deep understanding of network configuration, capacity, and traffic, as well as, the impact of change. IT Guru Network Planner ensures network survivability by pinpointing network bottlenecks and by predicting the impact of potential changes prior to deployment, resulting in reduced down-time of business critical applications.

### Optimize Network Performance

The success of today's enterprises is largely dependent on optimal network performance. IT Guru Network Planner's predictive environment gives you the ability to conduct "what-if" analyses, traffic engineering, and capacity planning to minimize application response time, optimize overall network performance and reduce the risk of over-utilization.

### Maximize Existing Network Investments

Optimal network performance does not always entail costly upgrades. It can also be achieved by better leveraging existing network assets. IT Guru Network Planner allows you to optimize network configurations, implement QoS schemes, and re-dimension network capacity to maximize the use of existing network investments.

“...the greatest IT operations sins are an inability to respond quickly to unpredictable events in the infrastructure and a failure to reduce overall IT service delivery costs through greater use of automation and alignment with internal processes.”

**Topic Overview:**  
**IT Management Software**  
 Forrester Research, Inc.  
 November 2007

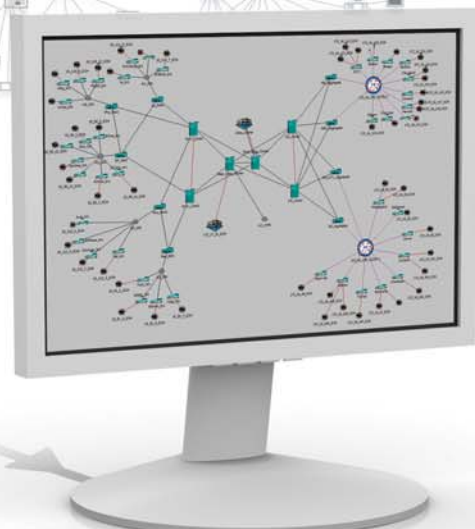
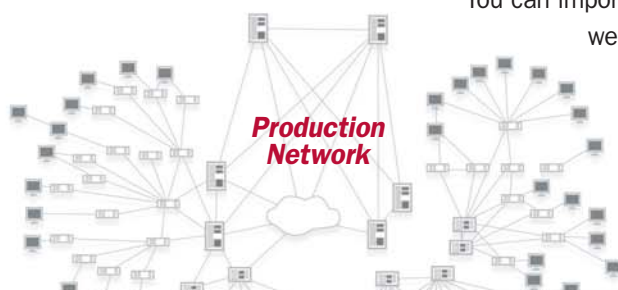


## The Virtual Network Environment

IT Guru Network Planner uses best-in-class network analytics in an interactive virtual network environment to deliver precise predictions in what-if scenarios. The virtual network environment accurately models the behavior of your entire network, including its routers, switches, protocols, servers, and individual applications. A high-fidelity network model is constructed based on data from the operational network environment, which encompasses topology, devices, configurations, and traffic.

IT Guru Network Planner automatically infers topology and sets detailed configuration attributes on each node by importing configuration files from routers, switches, and firewalls on the production network. In addition, network models can be generated by leveraging network management tools from Cisco Systems, HP, Opsware, and others, or by importing xml or csv files. You can import networks in parts or as a whole, replicating all devices individually, or aggregating at the segment or subnet level.

Capacity planning studies require traffic information for comprehensive, reliable, relevant analyses. You can import traffic matrices to generate traffic flows between end systems, as well as link loads to create baseline traffic on your network infrastructure. IT Guru Network Planner supports traffic formats from a broad range of third-party traffic monitoring tools from CA, Cisco Systems, HP, InfoVista, NetScout, Statseeker, and others.



Detailed, near real time production network data model



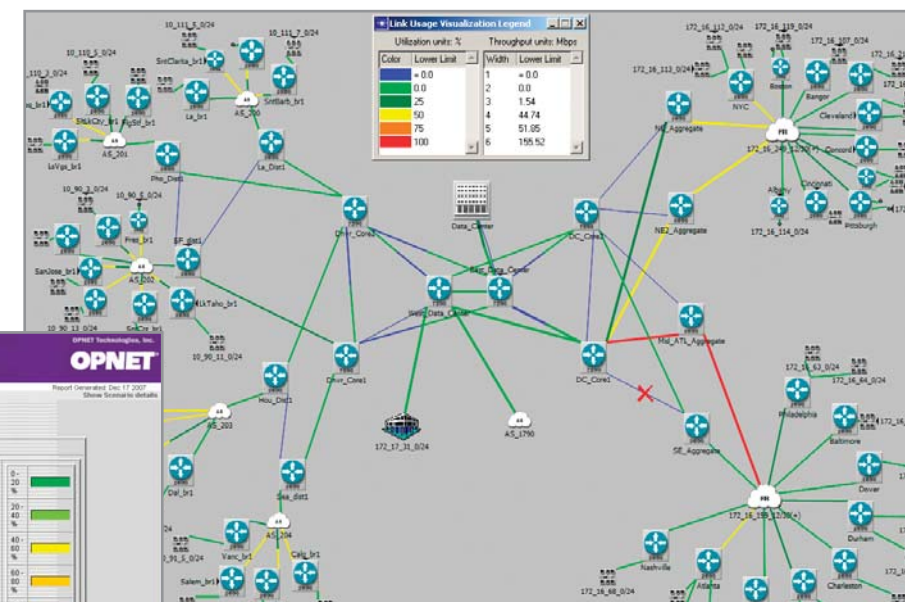
Actionable Analysis



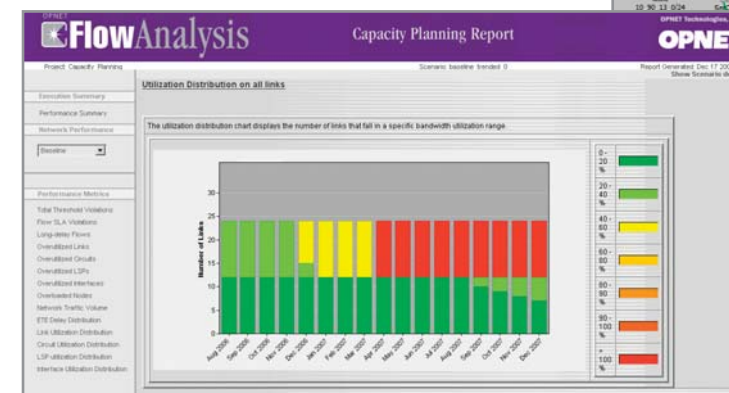
Third Party Tools

## Plan for Network Migration and Growth

- Determine if the network supports current traffic demands and identify any bottlenecks that exist
- Understand how much additional traffic the network can support and what sections of the network need to be upgraded when traffic volume increases in the future
- Explore alternatives such as hardware upgrades, IGP metric tuning, traffic engineering, and QoS implementation
- Predict the impact of equipment (e.g., networks, servers) migration or consolidation on network performance and application response time
- Validate proposed changes prior to deployment

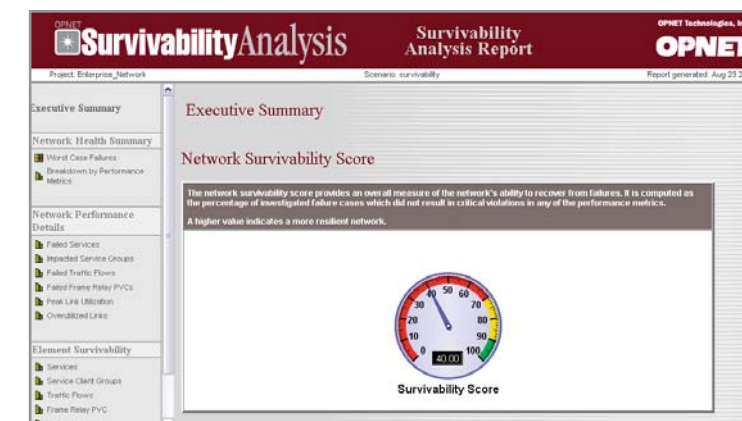


Identify capacity bottlenecks and plan for upgrades ahead of time



## Ensure Network Survivability

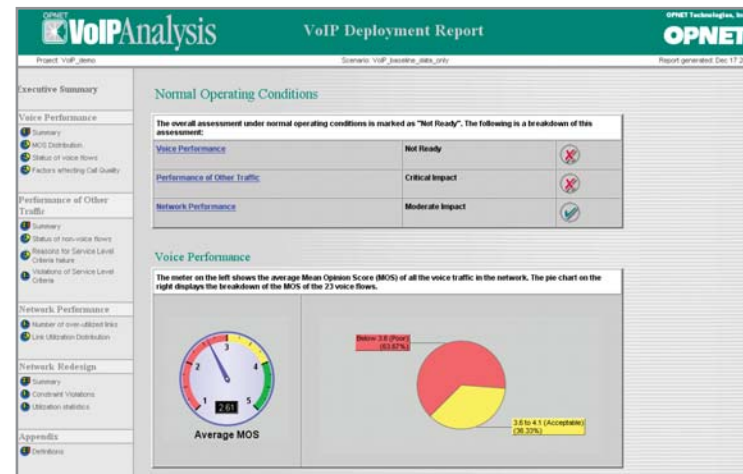
- Simulate network outages quickly and easily to identify risks such as un-routable traffic and insufficient or improperly configured backup resources that can lead to congestion
- Test the fault tolerance and quality-of-service characteristics of a network design
- Quickly assess the overall survivability score and inspect details of network vulnerabilities leveraging the comprehensive survivability analysis report
- Use the virtual environment to explore alternate routes, equipment upgrades, and other solutions to meet survivability requirements



Ensure network survivability, predicting the impact of failing nodes, links, or resource groups

## Ensure a Successful VoIP Deployment

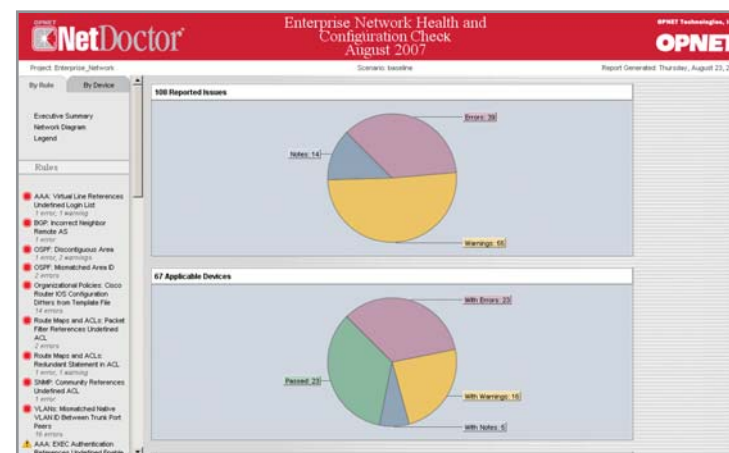
- Assess network readiness for VoIP by selecting desired call quality and network impact criteria
- Use the VoIP analysis reports to highlight network readiness, voice performance, impact on the network and other services, and to predict an average Mean Opinion Score (MOS)
- Leverage recommendations from the reports to re-dimension network resources to support VoIP requirements and maximize network survivability



Plan for a VoIP deployment by assessing network readiness and re-dimensioning capacity

## Validate Configuration Changes

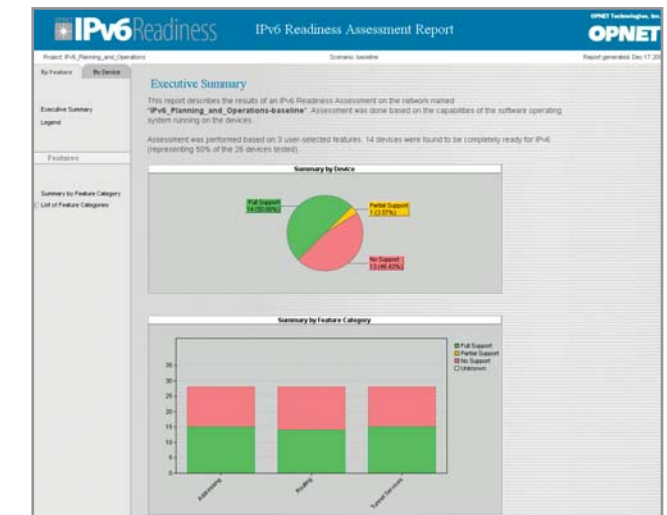
- Validate configuration changes prior to deployment with the optional NetDoctor® module
- Proactively identify problematic device configurations against policies and best practices related to security, routing, addressing, performance, etc.
- Leverage an extensive, customizable suite of 600+ rules of regulatory, organizational, and security policies, including FISMA, Sarbanes-Oxley, HIPAA, PCI, NIST, as well as best practice guidelines by Cisco, NSA, and others
- Test security and configuration policies in anticipation of network changes and failure conditions, without impacting the production network
- Perform security audits of blocked and permitted TCP/UDP services
- Publish web (HTML) and MS Word (RTF) reports for further analysis



Identify problematic device configurations before deployment

## Accelerate Migration to IPv6

- Ensure a successful migration to IPv6 with the optional IPv6 Planning and Operations module
- Determine IPv6 network readiness by automatically assessing the addressing, operating system, routing, QoS, multicast, security, and transition mechanism features of existing network equipment
- Automatically generate IPv6 network designs by defining the subnets that require migration, the proposed transition mechanisms and other key metrics
- Clearly visualize unroutable traffic flows and services arising from the migration in a concise report
- Analyze IPv6 network design to ensure survivability and security
- Validate proposed configuration changes prior to deployment



Assess readiness of existing network equipment

## Deploy Virtual Private Networks

- Configure and right-size VPN tunnels for ensuring adequate connectivity between remote sites and disparate business units
- Validate performance of proposed VPN configurations based on service level criteria of applications running over VPN
- Ensure reachability between remote users and troubleshoot VPN misconfigurations resulting in unintended separation or route leakage

### Complementary OPNET Solutions

OPNET **ACE Plus**  
Analytics for Networked Applications

OPNET **ACE Live**  
End-User Experience Monitoring & Real-Time Network Analytics  
Powered by Network Physics™

IT Guru Network Planner tightly integrates with ACE™Plus and ACE™Live solutions to perform comprehensive application performance assessments:

- Monitor live applications in a production or test environment with ACE Live
- Use ACE Plus to isolate packet traces of an individual application and troubleshoot a multi-tier transaction between end-to-end systems
- Deploy ACE traces in IT Guru Network Planner's virtual network environment to plan new application deployments and accurately predict behavior in various network conditions

# About OPNET Technologies

OPNET Technologies, Inc. is a leading provider of solutions for managing networks and applications. OPNET's best-in-class solutions address application performance management, network operations, capacity management, and network R&D. OPNET's solutions have been operationally proven in thousands of customer environments worldwide, including corporate and government enterprises, government and defense agencies, network service providers, and network equipment manufacturers. For more information about OPNET and its products, visit [www.opnet.com](http://www.opnet.com).

## OPNET Customers

(partial list)

21st Century Insurance  
Abbott Laboratories  
ACCOR  
Accenture  
Ann Taylor  
Ashland Inc.  
Avery Dennison  
Bank of Montreal  
Baptist Healthcare  
BB&T  
Blue Cross Blue Shield  
BNP Paribas Factor  
BNSF Railway Company  
Capital One Financial  
Cardinal Health  
Cargill  
Cargolux Airlines  
Continental Airlines  
CSX Technology  
Cummins  
CVS  
Dow Jones

Enel  
Ernst & Young  
Exec. Office of the U. S. President  
Family Dollar Stores Inc  
Fed. Aviation Administration  
Fed. Communications Commission  
Federated Mutual Insurance  
First American Title Ins. Co.  
Food and Drug Administration  
Freightliner Corporation  
GEICO Insurance  
GlaxoSmithKline  
GMAC Mortgage  
GoDaddy.Com  
Government Accountability Office  
Hershey  
IBM Global Services  
Independence Blue Cross  
Intercontinental Hotels Group  
Internal Revenue Service  
Jacobs Engineering  
Kraft Foods

Las Vegas Valley Water District  
Logitech  
Lowe's  
Medtronic  
Merck  
Moët Hennessy – Louis Vuitton  
NBC Universal  
New York Life Insurance Co  
Northern Trust Company  
Norwich Union Healthcare  
Office Depot  
Oracle  
Paychex Inc  
PetroCanada  
Philadelphia Stock Exchange  
Quicken Loans  
RadioShack  
Roche  
Rolex  
Saudi Aramco  
Scientific Games Corporation  
Smithsonian Institution

Southern California Edison  
State Compensation Insurance Fund  
State Street Corp.  
Sunrise Senior Living  
SunTrust Banks  
Swiss Re  
Toronto Police Service  
Total  
TransCanada PipeLine  
T. Rowe Price Associates, Inc.  
Twentieth Century Fox  
UnitedHealth Group  
U.S. Dept. of Commerce  
U.S. Dept. of State  
U.S. Dept. of Veterans Affairs  
VF Services  
Vision Service Plan  
Waste Management  
Wachovia  
Xerox  
Yellow Book  
Zions Bank



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