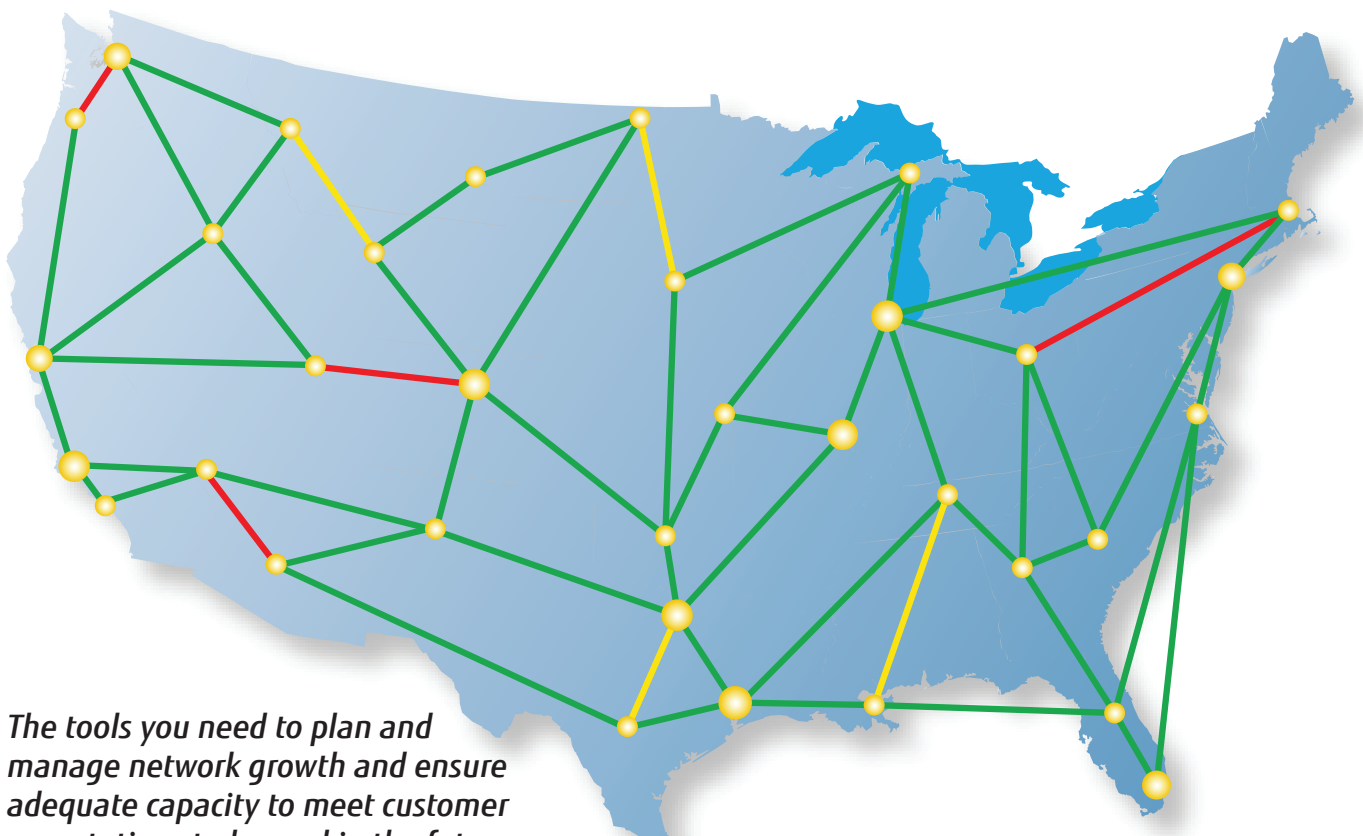FUJITSU

# Capacity Management Services

*The tools you need to plan and manage network growth and ensure adequate capacity to meet customer expectations today and in the future.*

# Capacity Management Services

## Network Capacity Insight at your Fingertips

Network planning groups are responsible for designing and upgrading their networks and these responsibilities require ongoing monitoring of growth in network traffic and usage. In particular, network planners must ensure that the capacity of the links and routes on the network provides adequate capacity to support the addition of new customers and services on their network.

Manually monitoring network capacity usage and maintaining awareness of developing trends is an extremely difficult task that requires personnel to record link usage data over time, generate trend reports and projections, and determine when and where capacity will be exhausted. Without projections on when link capacity will be depleted, new service additions may be significantly delayed due to the time it takes to order, install and turn up new equipment.

### A Scalable Solution for Anticipating Demand

The Fujitsu capacity management solution provides a state of the art system to monitor network resources and compile usage and trending reports. These reports identify current and future network congestion that will require deployment of additional resources to meet customer demands. We work with you to understand your unique network requirements and architecture, and help you to develop key performance indicators (KPIs) that assist in predicting demand. With a proactive approach to network expansion, you can plan your network to meet end user demands without delay, ensuring customer satisfaction and retention—and making the best use of network resources.

Our Capacity Planning solution is highly scalable. Adding additional network monitoring capability is as simple as adding a new appliance to the solution. Users automatically see the newly supported network resources in the system GUI and reports.
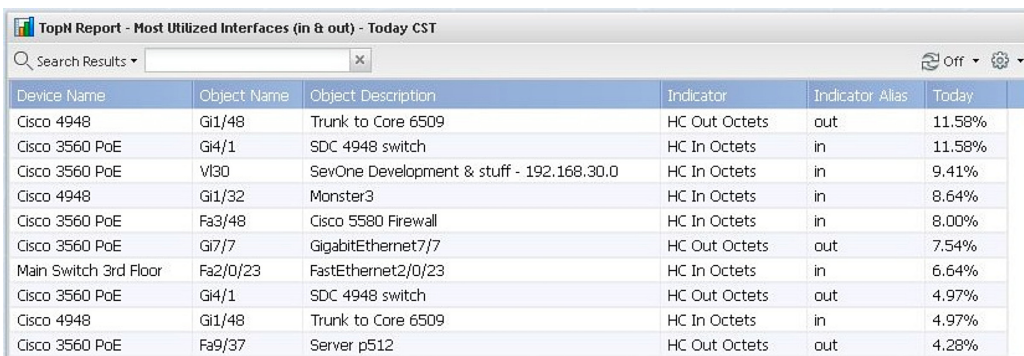
Measuring and analyzing network resource usage over time is critical to planning future network expansion. Knowing the capacity of network links as well as how those links are currently being used provides data that identifies where extra network resources need to be deployed. However, reacting to an immediate need to expand can lead to delays in service fulfillment while those resources are being deployed.

Therefore, to help network planners manage capacity better, our Capacity Management solution automatically collects capacity information, builds trend reports and provides projections of when capacity will be exhausted on network links. By collecting this usage data over time and performing trend analysis, the Capacity Management solution provides insight into when and where network resources will be depleted. Planners can then take a proactive approach to network growth.

**Proactively Plan Network Capacity**
The Capacity Management System monitors your business-critical network resources and provides valuable metrics:

- Generates usage reports automatically
- Identifies resources with the highest utilization rates
- Projects future demand with trend analysis reports based on historical usage data
- Identifies when and where network resources will be exhausted
- Enables advance planning of network expansion

**TopN Report - Most Utilized Interfaces (in & out) - Today CST**

| Device Name | Object Name | Object Description | Indicator | Indicator Alias | Today |
|---|---|---|---|---|---|
| Cisco 4948 | Gi1/48 | Trunk to Core 6509 | HC Out Octets | out | 11.58% |
| Cisco 3560 PoE | Gi4/1 | SDC 4948 switch | HC In Octets | in | 11.58% |
| Cisco 3560 PoE | Vl30 | SevOne Development & stuff - 192.168.30.0 | HC In Octets | in | 9.41% |
| Cisco 4948 | Gi1/32 | Monster3 | HC In Octets | in | 8.64% |
| Cisco 3560 PoE | Fa3/48 | Cisco 5580 Firewall | HC In Octets | in | 8.00% |
| Cisco 3560 PoE | Gi7/7 | GigabitEthernet7/7 | HC Out Octets | out | 7.54% |
| Main Switch 3rd Floor | Fa2/0/23 | FastEthernet2/0/23 | HC In Octets | in | 6.64% |
| Cisco 3560 PoE | Gi4/1 | SDC 4948 switch | HC Out Octets | out | 4.97% |
| Cisco 4948 | Gi1/48 | Trunk to Core 6509 | HC In Octets | in | 4.97% |
| Cisco 3560 PoE | Fa9/37 | Server p512 | HC Out Octets | out | 4.28% |

**Example of top N report of most utilized interfaces**

### Capacity Management Services Portfolio

If you have a capacity management project or requirement but are uncertain how to proceed, talk to Fujitsu. We will work with you to determine where to start, what questions need to be addressed, and how to lay out a plan to get there.

# A Seamless Implementation Path

Fujitsu Capacity Management Services include the following:

- Deployment and turn-up of the Capacity Management solution
- KPI Development and report customization
- Automatic trigger of network expansion
- Regular system maintenance and upgrades

**Deployment and Turn-Up of Capacity Management Solution**

During deployment and turn-up, Fujitsu engineers analyze your network and determine the number of elements that will need to be monitored. They then define a detailed system configuration based on the size of the network. The finished system consists of one or more appliances that monitor the network and store the historical data. The capacity planning system is a scalable solution that can be used on networks of almost any size. Each appliance can manage from 20,000 to 60,000 elements each; to monitor more resources than this, you simply add appliances to the solution. After the system has been defined and specified, Fujitsu engineers deploy the appliances, set up connections to the network equipment, and start the data collection processes.
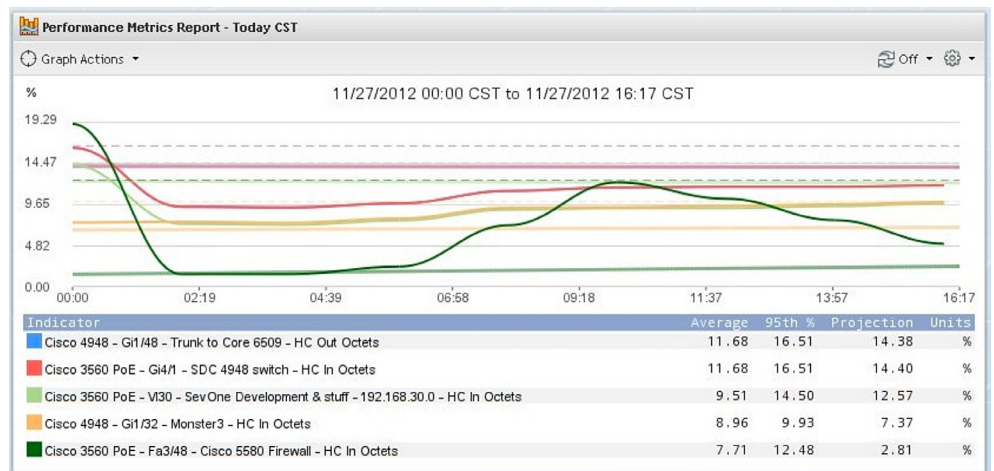


**Example of historical graph of interface utilization**

**KPI Development and Report Customization**

A key feature of the capacity planning system is a powerful reporting engine that provides insight into current network capacity usage, which network links are near maximum utilization, and which interfaces will be most utilized 30 days from now. The reporting engine provides a consolidated view of current, historical, and baseline performance of network resources.



**Example of top N report of least utilized interfaces**

The system's reporting capabilities allow users to build their own custom reports based on the information collected from the network equipment. Technicians can define key performance indicators (KPIs) which can be calculated based on the data collected. Both the data and the KPIs are recorded over time and included in daily, weekly and monthly reports. They can also be viewed on demand as needed.

# Capacity Management Services

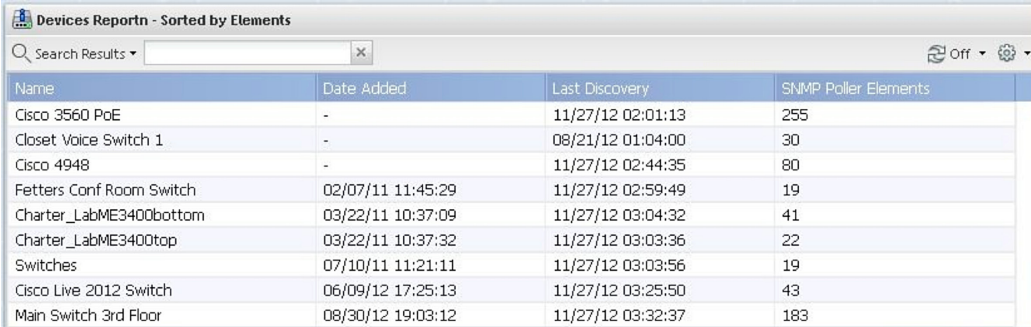## Predict and Prepare for Future Expansion

### Customizable Reporting

A number of reports are defined out of the box. However, one of the strengths of this solution is the ability to build and customize new reports to meet specific customer requirements. Using the intuitively designed GUI interface, users can quickly define and schedule the reports they need.

### Automatic Trigger of Network Expansion and Predetermined BoMs

By combining the system-generated trend reports with usage thresholds, it is possible to identify when network resources are going to be exhausted. In combination with the current network configuration, this enables staff to identify what equipment needs to be deployed when expanded capacity is needed for that part of the network. In turn, this information is used to determine a list of network equipment configurations (Bill of Materials) that can be deployed for specific services. If one of these types of services is going to be exhausted, the predetermined BOM will be generated for that network expansion and scheduled early enough to ensure there will always be capacity available to meet customer demand.

### Regular System Maintenance

As part of the maintenance agreement, your Capacity Management system is maintained by Fujitsu. This includes regular upgrades and new releases of software, as well as adapters for newly supported equipment types. Fujitsu engineers remotely access the system, download the software changes and upgrade the system for you.

**Devices Reportn - Sorted by Elements**

Search Results ▾

| Name | Date Added | Last Discovery | SNMP Poller Elements |
|---|---|---|---|
| Cisco 3560 PoE | - | 11/27/12 02:01:13 | 255 |
| Closet Voice Switch 1 | - | 08/21/12 01:04:00 | 30 |
| Cisco 4948 | - | 11/27/12 02:44:35 | 80 |
| Fetters Conf Room Switch | 02/07/11 11:45:29 | 11/27/12 02:59:49 | 19 |
| Charter_LabME3400bottom | 03/22/11 10:37:09 | 11/27/12 03:04:32 | 41 |
| Charter_LabME3400top | 03/22/11 10:37:32 | 11/27/12 03:03:36 | 22 |
| Switches | 07/10/11 11:21:11 | 11/27/12 03:03:56 | 19 |
| Cisco Live 2012 Switch | 06/09/12 17:25:13 | 11/27/12 03:25:50 | 43 |
| Main Switch 3rd Floor | 08/30/12 19:03:12 | 11/27/12 03:32:37 | 183 |

**Example of device summary report**

### Experts in Capacity Management

Fujitsu is well-known throughout the industry for commitment to best-in-class solutions in every area of our business. Our established history and high level of technical expertise has resulted in very strong customer loyalty, exemplified by our unprecedented customer retention rate. We have extensive experience in collaborative network and system deployments of every scale, and our understanding of network capacity planning is second-to-none.

## FUJITSU

**Fujitsu Network Communications Inc.**

2801 Telecom Parkway, Richardson, TX 75082
Tel: 888.362.7763

**us.fujitsu.com/telecom**