



Proven ways to Reduce  
Network Downtime by  
up to 55%

4 steps to optimum network performance



# Reduce network outages by up to 55%

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## Discover proven ways to reduce the frequency & duration of your network outages while also optimizing your network performance

The key to maximizing network uptime and reducing costly and reactive *firefighting* is to ensure your IT has the right infrastructure, information, and processes in place to proactively manage your network.

95% of all network outages or degraded service are due to:

- 1) Network Equipment failure
- 2) Telecommunications Carrier Network outages

According to InformationWeek and CA Technologies, the total estimated losses from IT outages are \$26.5 billion. This equates to an average of \$150,000 per business.

## Consider 4 steps to help achieve optimum network performance, & reduce IT resource drain

1. Infrastructure/Processes
2. Information
3. Analysis
4. Implementation



# 1) Infrastructure/Processes

Is your network infrastructure up to the task?

For optimum performance it is critical your network infrastructure is set up and available to deliver the IT requirements of all your company's business objectives.

- Are your primary data and voice circuits efficiently managing all data and capacity requirements?
- Do you have enough backup/failover circuits essential for continuity in the event of primary failure or degradation?
- Are you checking for optimal performance and active lifecycle of your network equipment?
- Is your network monitoring tool set configured correctly, with proper alert threshold settings?
- Do you have the resources and staffing necessary to:
  - Respond to critical outages within 15 minutes?
  - Be available on site for critical equipment remediation or replacement within 4 hours?
- Is there an escalation plan and necessary contact information required to resolve any network issue?
- Is your database accessible and updated for all network equipment and carrier inventory?

# 2) Information

Does your organization have current and accurate network information?

A network failure can throw your company into a crisis. How quickly can you detect the problem?

Resolution time can be significantly reduced when key network information is readily available and current, in an easily accessible database. Relevant and important information includes:

## **Carrier Network Inventory and Information**

Determine and confirm all data and voice circuit inventory and information such as:

- Location addresses
- Circuit types at each location and specific carriers identified (primary and redundant)
- Carrier Identifiers and information (Including circuit IDs, escalation contact information)
- Bandwidth speeds
- All Access Carrier or LEC details and escalation information (If applicable)

## **Network Topology Inventory**

Verify information related to all network equipment

- Identify and catalog all makes, model numbers and associated IP addresses
- Analyze current life cycle status
- Deduce equipment requiring refresh/replacement
- Conduct equipment inventory of Telco room
- Review current network diagrams to evaluate interconnectivity of all locations

Establishing the correct information in your database will initially take some time, but moving forward, it becomes a simple matter of maintenance and updates whenever changes are made. This should not take more than 1 hour per month.



## 3) Analysis

Does your team have the tools, resources and time to analyze network performance issues?

Another critical requirement to dramatically improve your network's health and uptime is to carefully analyze performance issues, alert commonalities, and key data points. A thorough analysis and evaluation allows you to set a baseline of standards for your *optimal* environment. After this diagnostic assessment, adjustments need to be made accordingly. Continued analysis and review should then be performed regularly (at least once per week). This can usually be done in one hour or less, depending on the complexity of your network.

The analysis should include the following:

### **Carrier Network Environment Analysis**

- Evaluate carrier incident history per month by location. This data can be obtained from the carrier directly. Most carriers generally don't offer this information, but you have a right as a customer to request and receive it
- Analyze and evaluate bandwidth utilization and capacity limitations for all locations
- Determine incident ratios tied to bandwidth capacity
- Gauge whether credits are due from the carrier for not meeting their contractual *Mean Time to Repair* (MTTR) requirements. Many customers are surprised by the amount of credits available to them. But, if customers don't request credits, the carrier will not proactively issue them
- Assess the time spent by your team resolving carrier issues each month. If the monthly requirement is above 10 hours, calculate the opportunity cost of these tasks. Consider other high value IT projects the team could be working on that could potentially be more advantageous to the company.

### **Network Maintenance and Management Assessment**

- Monitor tool set up so that the dashboard and top reports are based on your priorities
- Determine equipment incident volumes per month. **If your tool set is signaling more than 10 alerts per device per month, the alerts become 'noise' and are not an actionable alert volume that can be effectively managed by your team**
- Pinpoint all commonalities of high frequency alerts
- Evaluate current incident workflow process, including use of any 3rd party service providers
- Assess current network maintenance schedules and processes
- Apprise current IT staff, core functions and capabilities
- Identify any workload pain points and operational bottlenecks
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## 4) Implementation

After evaluating all of the infrastructure, information, processes, inventory and performance data points, what now?

The next vital steps are the key components for attaining significant reduction in downtime. As with all the recommendations, once this phase is completed, your team's resource drain should be limited to periodic maintenance and updates. This will result in more proactive management. Here are the steps we recommend:



1. Determine if the implementation phase can be done fully by your in house IT team, or if you should work with an experienced IT organization to assist in the execution of your priorities
2. Set an overall implementation plan with target project completion milestones
3. Order any required upgrades to existing primary circuits based on bandwidth utilization needs or bottlenecks
4. Purchase any necessary redundant backup/failover circuits for all critical locations. There are numerous broadband and fixed wireless options that will deliver the capacity you need at a reasonable price
5. Establish the ability of your team to respond to carrier escalation and resolution tasks. This will be dependent upon the volumes of trouble tickets per month. Is your team able to react to these outages within 15 minutes? If outage durations average more than 30 minutes in length, you might consider working with a partner that has the direct network carrier experience necessary to escalate and resolve outages quickly.
6. Calculate whether it is cost effective to manage any required equipment replacement/refresh project in house or whether it would be better to outsource this function. Set priorities for replacement based on the critical business needs of each location and device and on the lifecycle status of the equipment. Any equipment past its product lifecycle is more difficult to repair if replacement parts are not available and may not be serviceable in the event of failure.
7. Upgrade/adjust the current calibration of your tool set as needed to reduce alert 'flows' to actionable 'drips'. If, after evaluation, you determine monitoring and remediation of your network is not a core competency of your team, a more viable answer may be to work with an IT partner who can either manage your tool set or provide both a tool set and the resources to resolve issues remotely. **Any reputable network management company should have performance SLA's (Service Level Agreements) for response times and should be able to follow any required processes you set. The best companies offer credits for all missed SLAs, which keep them accountable as they have 'skin the game.'**
8. Set up user dashboards and reports for real time evaluation of incidents, and also timely delivered, weekly analysis of network performance data
9. Ascertain the maintenance requirements for all network infrastructure and monitoring information each month. If you feel your team's time is better utilized in other areas, consider working with a partner to manage this function as well. Possessing updated inventory and incident history for analysis is crucial, for the reasons already listed in this document.

These recommendations, if implemented, will significantly improve the proactive health of your network. The result will be reduced incident frequency and shorter outage durations. It will also dramatically reduce the IT resource/time wasted on reactive events and problems. Time previously relegated to these tasks can now be devoted to innovation and high value projects that help improve the company's competitive advantage, revenue and market share. Work satisfaction will most likely increase and turnover will decrease as a result.



## Why consider Splice Network Solutions as your partner?

Firstly, if the suggestions of ways to optimize performance seem somewhat overwhelming, Splice can alleviate the stress. We can assist in any of the above areas and tasks either on a project basis or as a regular extension of your IT team. Since 2003, Splice has provided network services and consulting to our valued clients with the simple goal of helping them realize maximum uptime and reduced incident volumes and resource drain. Here is how we can help.

- **New Carrier Service Provisioning:** Splice owns the entire carrier installation process from order placement to final test and turn-up of the services as required. This service does not require Splice to be the underlying carrier of record. Utilizing a Letter of Agency, Splice acts on behalf of the customer and works directly with their carrier(s) as required to complete any project.
- **Carrier Trouble Ticket Escalation/Resolution:** All outage and resolution activities related to the client's sites/locations and complete circuit inventory are managed by the Splice Support team, 24x 7 x 365. Our U.S. based support center is located in Salt Lake City, Utah. This service does not require Splice to be the underlying carrier of record. Utilizing a Letter of Agency, Splice acts on behalf of the customer and works directly with their carrier(s) as required to complete any project.
- **Direct Carrier Services:** Splice can provide services from any of our 90+ carrier partners (Including Verizon Business, AT&T, Level 3 Communications, XO and many regional carriers globally). By utilizing Splice, our customers receive multiple carrier options with one point of contact for all services. They also benefit from a single billing source vs. receiving multiple bills from various carriers. There are no per carrier minimum commitments required.
- **On-Site IT Support Services:** Splice provides comprehensive project management, scheduling and completion of most on site IT projects including site surveys, equipment replacement/installation, cabling, configuration and other tasks as required. Splice provides specialists and certified technicians to most locations in the U.S., Europe, Asia, South America and Canada.
- **Network Monitoring Services:** Our monitoring platform provides the best in class monitoring and management functionality. More importantly, Splice provides a service that administers up/down ping and remediation, full hosting and management of all monitoring service upgrades, alert threshold adjustments, and incident history detail and reporting. We also provide full management services such as patch management, root cause analysis, and firmware upgrades.

Splice views every client engagement as a critical component in a continuing relationship. Should you decide to partner with us, we strive to become an extension of your team and company. Our commitment is to continually provide ongoing and relentless support of your network infrastructure. We will work with a sense of urgency and provide honest and proactive communication, while contributing to your company's growth and success.

Our network experts are anxious to help you with any questions. Please contact us at <http://www.splicens.com/contact-us> or call us at 650-577-2342

