

Network Communications Guideline

Overview

The Office of Information Technology, Telecommunications Division (TD) is responsible for monitoring and maintaining the devices that comprise the Rutgers Network (RUNet). This responsibility includes tracking and repairing problems that arise on the network, performing installations of new network devices, and performing maintenance on existing devices.

Purpose

RUNet is composed of a variety of network devices, the majority of which are managed by TD. These devices provide connectivity for customers at the University to each other, to the commodity Internet, and to Internet2. As with all forms of computer equipment, these devices need to be maintained. They require regular cleaning, hardware and software upgrades, and in the event of a failure, replacement. In addition, as new areas are formed or buildings become capable of supporting network infrastructure, network devices are installed or re-configured to provide connectivity. TD regularly performs operations that potentially impact a department or customer's ability to connect to electronic resources. In an attempt to minimize disruption in service, Network Operations works within announced timeframes/windows when possible. The purpose of this document is to clarify the policies and procedures governing maintenance work on RUNet and the communication of issues that occur on the network.

Disruptions

A disruption consists of any event or condition that may negatively impact either performance or service to our customers. Disruptions are classified as one of the following types:

Transparent – Transparent maintenance should not impact network services.

Degradation – Degradation is a reduction in network service to a device or area. Degradation can occur in with respect to connectivity or other services that are provided on the network. The service or network is still functioning, but it is functioning in a diminished capacity.

Outage – An outage is a loss in network service to a device or area. An outage can occur with respect to connectivity or other services that are provided on the network. The service or network is not functioning, and there is a total loss in connectivity.

Disruptions can be caused by failure of a network device or server, power outages, failed cables, lost configurations, improper configuration, failure of a service, denial of service attacks, and a variety of other activities that can occur on a network. In all cases, a disruption will result in maintenance activity.

Maintenance

All work performed on RUNet is conducted as a form of maintenance. This work may or may not result in a disruption of service, depending on the scope of the activity. There are two types of maintenance activities:

Scheduled Maintenance - Proactive work to address service enhancements or changes, architecture modifications, infrastructure upgrades, equipment replacement or reconfiguration, etc. Regularly scheduled maintenance occurs as follows:

- Network Maintenance:
 - Tuesday mornings between 0600 and 0800
 - Wednesday mornings between 0600 and 0800
 - Thursday mornings between 0600 and 0800
 - Thursday evenings between 1700 and 2200
- Modems Maintenance:
 - Tuesday mornings between 0600 and 0800
- Network Systems/Services:
 - Wednesday mornings 0500 and 1000

Customer scheduled maintenance is generally narrow in scope and is coordinated directly with those directly impacted or their designated agents. These activities will be announced with consideration given to lead-time.

Emergency Maintenance - Reactive or proactive work to address an extant service disruption or credible threat thereof. This includes responding to power failures, device failures, security vulnerabilities, etc. While these activities will be announced and consideration given to lead time, remediation of disruptions or mitigation of credible threats will receive precedence.

Communications

All disruptions and maintenance activities are communicated to the University community as events allow. Announcements attempt to clearly indicate the nature of the event, and where practical, include a summary of the event, campus location, network status, start time and end times, and the list of affected devices and/or areas. Announcements regarding the activities occurring on the network may take place before, during, or after an action has taken place. The following is a list of announcements that take place prior to activity:

Regularly Scheduled Maintenance Announcement – Made in advance of work to be performed. An initial announcement will be made on the Friday prior to the work date. A second announcement will be made on the day the work is to be performed.

Customer Scheduled Maintenance Announcements – Made in advance of work to be performed. An initial announcement will be made as soon as practical after a customer has requested work to be performed and it has been scheduled. If the initial announcement precedes the scheduled date by more than one workday, a second announcement will be made on the day the work is to be performed.

Emergency Maintenance – Made when a credible threat of disruption in service requires work to be performed on a network or service. The announcement will be made upon determining the work necessary to restore the network to normal operation. The following is a list of announcements that take place while a disruption is actively occurring:

Disruption Announcement – Made when a degradation or outage in service is recognized and acknowledged by the Network Operations Center. The announcement will be made once a determination can be made between the issue being an outage or a degradation, and the appropriate details regarding such will be made known to the community. As the situation changes, updates will be sent to the community.

Emergency Maintenance – Made when a disruption in service requires work to be performed on a network or service. The announcement will be made upon determining the work necessary to restore the network to normal operation.

The following is a list of announcements that take place once maintenance or a disruption has been resolved:

Resolved Maintenance Announcement – Made when scheduled work has been completed.

Resolved Disruption Announcement – Made when a degradation or outage is resolved. A final notice will be sent to communicate that the network has returned to normal operation.

TD provides mailing lists and web pages to notify customers of maintenance activities and outages.

TD maintains the net_people@email.rutgers.edu mailing list for network announcements. To subscribe to the mailing list, please visit http://www.td.rutgers.edu/services/Mailing_Lists. TD maintains a web site at www.td.rutgers.edu. The Network Maintenance Calendar http://www.td.rutgers.edu/services/Network_Outages_and_Maintenance gives a monthly view of the past, current, and future events. The Network Status page http://www.td.rutgers.edu/tools/Network_Status shows known outages and the current list of announcements for that day.

Requesting Maintenance / Reporting and Outage

The campus network is monitored on an ongoing basis. Network Operations staff can be contacted when significant outages are detected through the Network Operations Center (NOC). The NOC may be contacted Monday through Friday via phone at 732-445-7541 or via email at noc@rutgers.edu.