

National Oceanic and Atmospheric Administration
National Weather Service
Regions & Files
Full UPI Code: 006-48-01-12-01-3118-00
Annual Operational Analysis - 2006

This project provides operational steady state office automation capabilities for basic infrastructure, including network, desktop and server capabilities at 121 NWS field offices. These are critical to NWS administration, financial and management activities, employee training, electronic mail and calendaring services, research and provision of forecast information via the web.

Objective analysis of this project is accomplished using existing mechanisms that are utilized for operation of the NWS Regions and Field infrastructure. This includes

1. Monthly technical and customer service coordination meetings to discuss new requirements, set objectives, plan implementation, review past month system performance and resolve current operational issues.
2. Network and data server performance measures are routinely collected and analyzed to monitor system performance, detect bottlenecks and failures, identify areas for improvement, and to evaluate design improvements and other IT investments.
3. Annual IT investment plans are submitted by each FMC to the CIO office for approval, and IT procurements are reviewed for compatibility with NOAA IT architecture.
4. Customer Service feedback is obtained through informal means by each region. In most cases the customer is the NWS field office, River Forecast Center or Regional Headquarters, and customer satisfaction feedback is readily available.

CUSTOMER RESULTS

While an objective analysis of user satisfaction was not performed, subjective methods were used to assess program performance based on antidotal comments and observations from users. Users needs taken as a whole are generally met, but we do note increasing levels of user dissatisfaction that can be attributed to system performance issues. These performance issues can be traced to occasional network congestion, network single points of failure and office automation software failures due to inconsistent configuration. These occasional performance shortfalls result in lost employee productivity and increasing system maintenance costs. This issue was most dramatically demonstrated during Hurricane Katrina in CY05, when a single network hub failure in New Orleans resulted in loss of network connectivity across several southern states for extended number of days. To address both the network congestion and single point of failure issues, a project to replace the current Frame Relay communications technology with Multilayer Protocol Switching (MPLS) technology is underway during FY07. By inherent design, MPLS technology eliminates both network congestion bottlenecks and single points of failure. MPLS is being utilized for VPNs which support Regions and Field and AWIPS networks. This shared access may provide opportunity for recurring savings in communications costs in future years. Further analysis of potential efficiencies is required during FY07 to fully understand optimum network configuration and security considerations before estimating potential savings.

STRATEGIC AND BUSINESS RESULTS

Accreditation and Certification (C&A) of systems which comprise the Regions and Field Service program is nearly complete. System security plans, contingency plans and disaster recovery plans have been updated and are ready for testing. Interim operational authority was granted for applicable systems until March 16, 2007, at which time final contingency testing will be performed to complete the C&A process and obtain full authority, which is a major objective for FY07.

FINANCIAL PERFORMANCE

An analysis of IT security workload was conducted that indicated unexpectedly high IT security administration labor costs. An equivalent of 39 staff years was expended for administrative support of IT security at NWS Regions and Field Offices. This workload impacts work responsibilities of IT staff at these offices and in many cases inhibits accomplishment of other important IT work assignments. A plan to implement improved IT security labor saving tools such as Active Directory, Windows Update, and McAfee E-Policy Orchestrator is underway for FY07, as well as consolidation of portions of the IT security administrative workload during FY07.

INNOVATION

An analysis of IT security for the year indicates satisfactory performance with regards to intrusions, infections and compromised systems that would impact the NWS mission or system availability. However, securing Personally Identifiable Information (PII) continues to be a major challenge. An analysis of PII compromise incidents both within and outside NWS over the last year indicates that portable devices such as laptops, PDAs and memory drives pose the greatest risk. As an interim solution, encryption of user file systems was implemented last year until a full disk encryption solution could be purchased and implemented. Implementation of Safeboot full disk encryption is now underway for most portable devices used in NWS and scheduled to be completed in the late spring of 2007 enterprise wide.