

The U.S. Air Force Virtual Enterprise Service Desk (vESD)

A White Paper

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Empowering the user with automation to better initiate help desk fixes.

Building out AFNet—the single, centrally managed Air Force network

In 2015, the TKC Global and Qivliq Federal Group Air Force Network (AFNet) Migration Team completed a 5-year migration of 250 separate networks—with their 850,000 user accounts at 210 locations across the globe—to the Air Force Network (AFNet). This single, centrally-managed global network is under the control of the 24th Air Force Commander at Joint Base, San Antonio, Texas. And it was initially supported by a single Air Force information technology Enterprise Service Desk (ESD) geographically dispersed across four worldwide call centers: Joint Base, San Antonio, Texas; Gunter AFB, Alabama; Ramstein AFB, Germany and Hickam AFB, Hawaii (Figure 1).



Figure 1: Announcements screen keeps users up-to-date on system events and news.

A good step forward but an ESD “game changer” was needed

The original ESD delivered real value in that now it would field all unclassified network issues for Air Force personnel and have full-time IT support technicians available 24/7. Also, users need only know a single number to access the ESD. And all ESD support is tracked in a single enterprise-wide trouble ticket system. But even with these major steps forward, the network was quickly overwhelmed by the number of tickets being submitted. The manpower-intensive process could only

address 50% of the help tickets and the EDS's ability to continue servicing network account management, client support and warfighter requirements was severely degraded. In addition:

- What if the phone is not working?
- Low pay entry level positions resulted in a high ESD technician turnover rate.
- Technicians were largely contractors.
- Positions required certification that the contracting company paid.
- Under manning led to average wait times of over 60 minutes with a call abandonment rate of 40%.
- Sequestration was looming with even greater personnel cuts and longer call waiting times anticipated.

Simply put, a centralized ESD operation of this size, scope and criticality was no longer feasible without significant automated functionality. The Virtual ESD—or vESD—was created to solve this problem.

The “game changer”: A Tier-Zero automated tool set for easy e-mail, network, software, hardware and phone fixes

vESD was designed to provide end users with an intuitive tool to resolve common Help Desk problems currently being reported to the ESD. A client-based, Tier-Zero automated tool set, vESD is targeted to handle any e-mail, network, software, hardware or phone issue that a user can resolve under their own privileges, without requiring them to possess any technical knowledge. To this end, a problem/solution database was developed based on the previous 5+ years of AFNet ESD operation, trouble ticket tracking and known documented fix actions.

vESD gathers key information about a user's computer and accounts when they are in a known good state for use and comparison after the user notices a problem. When an incident occurs, the user runs a system Health Check via the “Run HealthCheck” button near the top of the vESD (the Health Check can also be automatically run at start up). Via the application's “Wizard” buttons, a decision tree system then guides the user to where the problem lies in their account or computer. If the incident cannot be resolved, vESD immediately generates an open trouble ticket and automatically routes it to the appropriate service level technician. Resolved issues generate closed tickets.

Examples of vESD “Fix It” procedures typify how the application interfaces with an end user.

Hardware

The Hardware “Wizard” is designed to help the user through unknown hardware issues and offers the following support: *Existing Equipment*, *New Equipment* and *Other* (Figure 2).



Figure 2: The Hardware Wizard with a specific hardware troubleshooting submenu.

A hardware icon support menu at the bottom of the screen guides the user through hardware troubleshooting steps. If the user knows the issue and the vESD provides support via the sub-menu, the user can bypass the wizard and directly access the sub-menu. Steps include:

- **CAC and CAC Card Reader issue:** Troubleshoots CAC Reader issues and either opens a ticket or forwards the user to other appropriate personnel for a new card.
- **Existing Peripherals:** Attempts to troubleshoot peripheral devices such as keyboard, monitor, mouse or printer.
- **Mobile Device:** Helps user through some simple steps to restore iPhone or Blackberry functionality and data services.
- **Printer:** Uses a Windows Wizard to fix issues with existing network printers.
- **Voicemail:** Creates a ticket that routes to the appropriate personnel for Personal Identification Number (PIN) resets.

Software

Like the Hardware Wizard, the Software Wizard has an icon support menu at the bottom of the screen that can be accessed directly if the user knows the issue. vESD provides troubleshooting support for Adobe Acrobat, Java, Adobe Flash, IBM Forms, Office Communications Server (OCS)/ Lync, Data Recovery and more (Figure 3).



Figure 3: The Software Wizard with a specific software troubleshooting submenu.

Additional features of vESD include assistance with mapping network drives, resolving Outlook and website issues and helping users fix common Government smart phone problems. The application also allows for status checks of any current trouble ticket, feedback submissions and provides further contact information for additional help.

Benefits to AFNet

vESD is currently deployed to all U.S. Air Force Major Commands (MAJCOMs) totaling over 850,000 users. The application:

- Enables 24/7/365 self-service web portal access.
- Eliminates much of the initial symptom identification portion of help desk calls.
- Increases first call resolution.
- Streamlines routine tasks.
- Assigns technicians more efficiently or eliminates them all together on simple fixes.
- Enhances employee satisfaction.
- Handles ~2,000 tickets per day and operates on a success rate for automation greater than 45% and automatically creates trouble tickets for all issues processed.
- Reduced 200,000 person hours from the Enterprise Service Desk.
- Reduced ticket submission time from up to an hour to under 10 minutes.
- Reduced return-to-service time from days to hours.
- Enabled ESD to focus on problem management issues, such as identifying the root cause of common ongoing incidents and develop solutions that prevent their recurrence.



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