

# DISA CLASSIFIED AGENCY

## Infrastructure Case Study

December 2019

### Background

#### Industry:

United States  
Federal Government

#### Location:

Washington, D.C.

#### Key Challenges:

- Legacy infrastructure
  - Unsupported end of life appliances
- Physical and software limitations
- Increased costs due to inefficiencies

#### Solution:

VMware vSphere Suite

#### Benefits:

- 99.999% uptime
- Faster recovery
- Increased security
- Maintain timely hardware lifecycle requirement

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## DISA Classified Agency: Building a Virtual Infrastructure

**DISCLAIMER:** Our customer, a Federal intel agency, requested that we maintain discretion in describing their program and our active contract. They requested that we refer to them as a “DISA Classified Agency”.

Improvix Technologies, Inc., an IT integrator and service provider, was tasked to help modernize and transform an aging infrastructure and help them achieve their mission.

### The Challenge

The DISA Classified Agency was operating on a legacy infrastructure with end of life appliances and software running on bare metal servers that couldn't be readily upgraded or swapped out. The agency was also facing physical rack space limitations, software compatibility issues, and inefficient costs due to this legacy infrastructure.

### The Solution

The government leadership identified these challenges and looked to Improvix Technologies to help solve these challenges by proposing new, industry-leading solutions.

Utilizing the vSphere ESXi 6.7, VMWare Converter, and Veeam stack, our team was able to consolidate the enterprise to 12 physical servers, each with multiple VMs across 6 separate networks. This allowed us to maintain geographic diversity of core servers, as well as efficiently add hardware resources as needed. In addition, the ESXi web interface was used to manage the VMWare instances because we are held to certain software and protocols.

Implementing VMware allowed for much faster patching and upgrading of all hosts to maintain a robust security posture. We used Cisco UCS servers that used custom ESXi builds. These builds contained custom drivers for Cisco NICs and Cisco storage options. Patching the custom ESXi builds for security compliance and feature additions required downloading and manually updating VIBs without removing the drive and NIC drivers via the ESXi command line.

### Results & Benefits

By leveraging the VMware ESXi out of box features and functionality, we maintained a 99.999% uptime on all systems. AutoStart and the server's lights out features allow for orders of magnitude and faster recovery in the event of unexpected power outages.

Our government customer is now able to take an agnostic approach to migrating and converting virtual machines to VMware and to migrating existing VMware hosts to new physical servers. This allows the customer to maintain their hardware lifecycle requirements in a more timely and precise manner which would not have been possible without VMware.