



National Weather Service Extends CAC Smart Card Authentication across Windows and Linux for HSPD-12 Compliance



The National Weather Service is a component of the National Oceanic and Atmospheric Administration (NOAA), whose mission is to provide weather, water and climate data forecasts and warnings for the protection of life and property and enhancement of the national economy.

THE CHALLENGE

Ensure easy CAC smart card authentication across all Windows and Linux systems. Eliminate the need to provide root access to end users, with a FIPS 140-2 certified solution in accordance with HSPD-12 regulations.

In order to adhere to HSPD-12 regulations, government agencies like NOAA are required to use Common Access Cards (CAC cards) for two-factor authentication across all machines within the environment including Windows and Linux systems. This requirement extends to all of NOAA's organizations, including the National Weather Service.

The decision had already been made to consolidate and manage identities under Active Directory, but the agency's previous solution lacked the breadth of capabilities they required — most importantly, the ability to handle smart cards.

"To extend smart card capabilities, we had to configure each machine individually," says Jeff Williams, systems integration branch chief at the National Weather Service. "So, our options were either to engineer our own solution or look for an identity management solution that could handle smart cards out of the box."

The agency's previous identity management solution had also created a number of challenges when upgrading from Red Hat Linux 5 to 6. "Because there was no support for the new Linux release, our systems engineer spent over 100 hours reconfiguring systems to make the identity management solution compatible with Red Hat 6.7."

Among the criteria NOAA was looking for in a more comprehensive identity management solution:

- Active Directory authentication for Windows and Linux systems
- FIPS 140-2 certified smart card support for Windows and Linux systems
- Day-one support for new OS releases
- Privileged identity management
- Detailed reporting capabilities for security assessments

"I'd estimate that — at a bare minimum — we're saving one hour of support for every system in our environment. At that rate, we're looking at a cost savings of well over \$50,000 a year in support alone."

JEFF WILLIAMS,
Systems Integration Branch Chief
National Weather Service, Southern Region

THE SOLUTION

Centrify's smart card-based, two-factor authentication coupled with its FIPS 140-2 certification means the agency can combine Active Directory credentials with smart card authentication to enable secure access and leverage Group Policy for centralized management — all with a certified solution.

Williams was on the team assigned to evaluate solutions that would assist in maintaining HSPD-12 compliance and deliver all the associated identity management capabilities the agency required. "We were apprehensive about implementing a new solution, but when we discovered Centrify was FIPS certified, we moved forward with a greater degree of certainty."

Centrify's smart card-based, two-factor authentication coupled with its FIPS 140-2 Level 1 certification meant NOAA organizations could combine Active Directory credentials with smart card authentication, quickly enable end user systems for secure access, leverage Group Policy for centralized configuration and management, and do it all with a certified, government-approved solution.

Some essential components of the Centrify solution were privileged access management and auditing. "When people have root access, they tend to go in and tinker with the system. It may not be malicious — in fact it's often with the best of intentions — but the result can be destructive, and a lot of time can be spent trying to figure out

“One of the best things about Centrify has been the level of support. While we installed the solution with no real issues, when we had questions the response from tech support was always fast and efficient. You just don’t get that everywhere..”

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what was done and how to fix it. Least-privilege helps to prevent this, and auditing capabilities provide the necessary forensics when something does happen.”

Centrify Zero Trust Privilege Services deployment across the organization took approximately eight weeks, half of which were for testing. “We had Centrify up and running within 30 minutes in some of our field offices. The deployment manager made it simple and we had great support from Centrify customer service. The product was really intuitive and we were able to roll it out fast,” says Williams.

Once implemented, Williams found it to be an extremely hands-off solution. “We haven’t had to do anything with it since implementation. If we conservatively estimate that Centrify saves just one hour for every system in our environment as we upgrade without the need for custom configuration, we’re looking at well over \$50,000 a year in cost savings.”

THE RESULTS

HSPD-12 requirements are met with ease and CAC smart cards are now used across the agency’s Windows and Linux systems. Day-one support for new OS releases and automated identity management together now save the agency tens of thousands of dollars a year.

In the first 18 months since implementation, the Centrify solution has met the needs of the National Weather Service on virtually every level.

HSPD-12 Regulations and FIPS 140-2 certifications: “Centrify allows us to adhere to HSPD-12 regulations with a government certified solution. We don’t have to jump through hoops to configure something that will work with smart cards.”

Smart card integration: “The real value of this product is its ability to work out of the box. If you’re looking to configure 500 Linux boxes with smart cards and you have to go through each one using a trial and error process to get it to work, you’re spending a lot of time. With Centrify we push everything from a deployment console. The process is simple and saves us huge amounts of time and money.”

Least privilege: “With Centrify we can give administrators very specific access rights to run programs that they once used root access for. We started out with very simple roles and now we manage user privileges with extreme granularity. The roles in Centrify are essential in limiting what people can access and locking our systems down. That’s helped us a lot on our security assessment.”

“I’d estimate that — at a bare minimum — we’re saving one hour of support for every system in our environment. At that rate, we’re looking at a cost savings of well over \$50,000 a year in support alone.”

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Day-one support for new OS releases: “New Linux versions tend to alter libraries and do other things that can break software. With our previous solution, we spent 100 hours reengineering our identity management solution because it couldn’t handle extreme upgrades. Based on what we’ve seen in the systems we’ve upgraded to Red Hat 7, we don’t anticipate any issues with Centrify. And that will equate to a cost savings of thousands of dollars on this one task alone.”

Enhanced security audits: We needed the ability to perform security assessments where we could generate detailed reports showing which people were allowed to do what on each individual system. Centrify provides that out of the box.”

Our mission is to stop the leading cause of breaches – privileged access abuse. Centrify empowers our customers with a cloud-ready Zero Trust Privilege approach to secure access to infrastructure, DevOps, cloud, containers, Big Data and other modern enterprise use cases. To learn more, visit www.centrify.com.

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