

Quest® Secure Copy® 7.6

Deployment in FIPS Environments



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Legend

-  **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.

-  **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

-  **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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Deployment overview and requirements

Overview

Secure Copy 7.6 can be successfully deployed in a Federal Information Processing Standard (FIPS) environment by following the procedure described in this document.

Audience

This document is intended for technical implementation consultants responsible for deploying Secure Copy.

Cryptographic usage

Secure Copy 7.6 relies on the following third-party cryptographic libraries for its cryptographic needs:

Table 1. Cryptographic usage

Cryptographic Usage	Cryptographic Algorithm	Cryptographic Parameters
Communication	SMB v2	HMAC-SHA256
	SMB v3	AES-128-CMAC
		AES-128-GCM
Symmetric encryption of bulk data (email password)	ProtectedData	DataProtectionScope.LocalMachine AES256 – CBC Mode
Symmetric encryption of secrets (licensed server list)	ProtectedData	DataProtectionScope.LocalMachine AES256 – CBC Mode
Asymmetric encryption of secrets	N/A	N/A
Signing	N/A	N/A
Hashing	DPAPI	DataProtectionScope.LocalMachine
	SHA512	SHA512

Background

To execute in a FIPS compliant mode, a Windows environment requires the Microsoft Policy "System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing" setting enabled.

Microsoft states that "This policy is only advisory to applications. Therefore, if you enable the policy, it does not make sure that all applications will comply".

Secure Copy 7.6 leverages Microsoft's CryptoAPI (CAPI) and CryptoAPI Next Generation (CNG) for its cryptographic needs.

Microsoft Product Relationship with CNG and CAPI libraries is documented here:
<https://technet.microsoft.com/en-us/library/cc750357.aspx>

"Rather than validate individual components and products, Microsoft chooses to validate only the underlying cryptographic modules. Subsequently, many Windows components and Microsoft products are built to rely on the Cryptographic API: Next Generation (CNG) and legacy Cryptographic API (CAPI) FIPS 140 validated cryptographic modules. Windows components and Microsoft products use the documented application programming interfaces (APIs) for each of the modules to access various cryptographic services.

Prerequisites

The following prerequisites are necessary to set up an environment for FIPS Mode.

- Windows Server 2008 R2 or later (latest)
- The following group policies must be enabled:
 - System Cryptography: Use FIPS compliance algorithms for encryption, hashing and signing. Ensure this policy is enabled.
 - Network Security: Configure encryption types allowed for Kerberos. Ensure the "AES128_HMAC_SHA1" and "AES256_HMAC_SHA1" values are selected.

Installation and operation

Installing Secure Copy 7.6 in a new environment automatically enforces all FIPS Mode requirements. No updates are required.

In order to ensure FIPS compliance in the environment, older components must be upgraded or uninstalled.

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The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

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- View Knowledge Base articles.
- Sign up for product notifications.
- Download software and technical documentation.
- View how-to-videos.
- Engage in community discussions.
- Chat with support engineers online.
- View services to assist you with your product.