



Arqit NetworkSecure™ Standalone (Test Mode) Adaptor v3.3.0 Release Notes

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What's new

Version 3.3 of the Arqit NetworkSecure™ Adaptor includes functionality that enables the adaptor to be configured in Standalone or Test Mode (referred to as ‘Standalone Adaptor’ in the rest of the document) to provide the following features:

- Installs and runs as a systemd service on an Ubuntu Linux Virtual Machine (VM)
- Supports the ETSI 014 interface standard for testing external/out-of-band encryption key delivery to connected devices
- Generates and provides on-demand 256-bit fixed symmetric keys for purposes of integration testing

Deployment

The Standalone Adaptor deploys and runs as a Linux daemon using native systemd functionality. The setup script will create the required folder structure in the Linux file system including the systemd service file. The Standalone Adaptor auto-starts once deployed, as well as on VM reboots and application failures.

The VM image is available to download from the Cloud Marketplace and can be used to deploy and run the software as an AWS EC2 instance or Azure VM within a customer’s cloud account. The Standalone Adaptor Installation Guide provides a detailed description of the pre-requisites and setup process.

Adaptor VM Specifications and OS Requirements

Entity	vCPUs	Minimum RAM (GB)	Minimum Data Disk (GB)	System Type	Guest OS	Java Virtual Machine (JVM)
NetworkSecure Adaptors	Single Core 2.8 GHz (minimum 1 vCPU)	2	4	X86 64-bit	Ubuntu 22.04 LTS	Version 17.07

ETSI 014 interface

The ETSI 014 specification is a comprehensive description of the interface used between applications or network devices such as firewall gateways (known as SAEs and referred to as 'Devices' in this document) and the Standalone Adaptor.

The Standalone Adaptors replace the KME devices shown in this specification, allowing key agreement over a classical network.

https://www.etsi.org/deliver/etsi_gs/QKD/001_099/014/01.01.01_60/gs_qkd014v010101p.pdf

256-bit symmetric key delivery via the ETSI 014 interface

The Standalone Adaptor is suitable for integration testing with Devices that support the ETSI 014 interface. This solution provides a quick and easy setup enabling OEM network or security appliance vendors or application developers to request fixed 'dummy' symmetric keys (256 bits) to test the ETSI 014 REST interface and related API calls.

A single Standalone Adaptor instance/virtual machine can be deployed to provide the same test keys to 2 different Devices in the same network or 2 instances/virtual machines of the Standalone Adaptor can be installed in different networks, with each providing keys to a locally connected Device (e.g. a firewall). The 2 Devices can then establish a point-to-point communication link with each other using the same symmetric key provided by each of the Standalone Adaptors.

The Standalone Adaptor provides keys for testing purposes and is not suitable for production environments that require secure i.e. quantum safe keys for enhanced security. It additionally does not provide the policy and management features of Arqit's Symmetric Key Agreement Platform QuantumCloud™ or the full set capabilities of the licensed NetworkSecure™ Adaptor product.

Application Logging

As the Standalone Adaptor runs as a Linux daemon, systemd service logs are generated that provide information level messages including any errors encountered during the Standalone Adaptor startup process and whilst it is running. These logs are in addition to the detailed Standalone Adaptor application logs in the 'adaptor.log' file.

Compatibility

The Standalone Adaptor is compatible with any device and/or application that supports the ETSI 014 specification for external key delivery.