

MQESS

Installation Manual



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1 Introduction

1.1 Overview

MQ Enterprise Security Suite (MQESS) is a solution that provides authentication and data protection (Channels and Queues) for IBM MQ resource. MQESS will operate with IBM MQ v7.1, v7.5, v8.0, v9.0, v9.1 and v9.2 in Windows, Unix, IBM i and Linux environments.

MQ Enterprise Security Suite is comprised of:

- MQ Authenticate Security Exit for Authentication

Major features are:

- Authenticate a user against the server's native OS (or against a File) or a remote LDAP server
- Support for Proxy UserIDs
- Allow or restrict the incoming 'IP address', 'UserId', 'hostname', 'SSL DN' & 'AD Server Name'** against a regular expression pattern
- Reject the incoming 'IP address', 'UserId', 'hostname', 'SSL DN' & 'AD Server Name'** against a regular expression pattern
- Allows or restricts the incoming UserID against a Group
- Allows or restricts the incoming AD server name against a regular expression pattern (Windows only)
- Limit the number of incoming channel connections on a SVRCONN channel.
- Allow or restrict the use of 'mqm', 'MUSER_MQADMIN' or 'QMQM' UserIDs
- Includes a CHAD exit used to secure cluster channels
- Ability to turn off server-side authentication
- Provides monitoring tool tie-in by using custom MQ event messages
- Provides logging capability for all connecting client applications regardless if they were successful or not.

- MQ Channel Encryption for Data Protection for Channels

Major features are:

- Can be configured as either queue manager to queue manager or client application to queue manager solution
- For both modes, all message data flowing over a channel will be encrypted (nothing missed or forgotten)
- Secure encryption/decryption methodology using AES with 128, 192 or 256-bit keys
- Easy to set up and configure (unlike SSL)
- No application changes required
- Uses the SHA-2 to create a cryptographic hash function (digital signature)
- Standard MQ feature, GET-with-Convert, is supported
- Provides high-level logging capability for encryption / decryption processing

- MQ Message Encryption for Data Protection for Queues
Major features are:
 - All message data written to a selected queue will be encrypted (nothing missed or forgotten)
 - Secure encryption/decryption methodology using AES with 128, 192 or 256-bit keys
 - Easy to set up and configure (unlike SSL)
 - No application changes required
 - Group authority checking against the local OS groups or a group file
 - Standard MQ feature, GET-with-Convert, is supported
 - Provides high-level logging capability for encryption / decryption processing

1.2 Prerequisites

This section provides the minimum supported software levels. These prerequisites apply to server-side installations of MQ Enterprise Security Suite.

1.2.1.1 IBM AIX

- IBM AIX 6L version 6.1 or higher

1.2.1.2 HP-UX IA64

- HP-UX v11.23 or higher

1.2.1.3 IBM i (OS/400)

- IBM i V6R1 or higher

1.2.1.4 Linux x86

- Red Hat Enterprise Linux v5, v6, v7, v8
- SUSE Linux Enterprise Server v11, v12, v15

1.2.1.5 Linux x86_64 (64-bit)

- Red Hat Enterprise Linux v5, v6, v7, v8
- SUSE Linux Enterprise Server v11, v12, v15

1.2.1.6 Linux on POWER

- Red Hat Enterprise Linux v5, v6, v7, v8
- SUSE Linux Enterprise Server v11, v12, v15

1.2.1.7 Linux on zSeries (64-bit)

- Red Hat Enterprise Linux v5, v6, v7, v8
- SUSE Linux Enterprise Server v11, v12, v15

1.2.1.8 Raspberry Pi (Linux ARM 32-bit)

- Raspberry Pi OS v9 or higher

1.2.1.9 Sun Solaris

- Solaris SPARC v10 & v11
- Solaris x86_64 v10 & v11

1.2.1.10 Windows

- Windows 2008, 2012 or 2016 Server (32-bit & 64-bit)
- Windows 7, 8, 8.1 or 10 (32-bit & 64-bit)

1.2.2 IBM MQ

- IBM MQ v7.1, v7.5, v8.0, v9.0, v9.1 and v9.2 (32-bit and 64-bit)

Operating System	MQ v7.1, v7.5, v8.0, v9.0, v9.1 and v9.2
AIX v6.1 or higher	64-bit
HP-UX IA64 v11.23 or higher	64-bit
IBM i (OS/400)	64-bit
Linux x86	32-bit
Linux x86 64	64-bit
Linux on POWER	64-bit
Linux on zSeries	64-bit
Raspberry Pi ARM	32-bit
Solaris SPARC v10 & v11	64-bit
Solaris x86 64 v10 & v11	64-bit
Windows 2003, 2008, 2012, 7, 8, 8.1 & 10	32-bit & 64-bit

2 Installing MQ Enterprise Security Suite

This section describes how to install Capitalware's MQ Enterprise Security Suite.

2.1 Server-side Security Exit

2.1.1 Windows Installation

Please follow the installation instructions in section 2.1.1 of the *Installation and Operation* manuals for MQAUSX, MQCE and MQME.

2.1.2 Linux 32-bit Installation

To install the 32-bit version of MQESS on Linux, first unzip the **mqess.zip** and then select the appropriate TAR file for the target platform. You will find 2 TAR files in the original ZIP file:

- **Linux_x86/mqess_linux.tar**
- **RaspberryPi_ARM/mqess_raspberrypi_arm.tar**

Steps to install the server-side security exit:

- ftp or copy the selected TAR file to the target platform to the */var/mqm/exits/* directory.
- Un-tar the *mqess_XXX.tar* file into the */var/mqm/exits/* sub-directory (XXX is either aix, hpux, solaris or linux)

```
cd /var/mqm/exits/  
tar -xvf mqess_XXX.tar
```

- Change directory to */var/mqm/exits/*
- Next, do the following commands against *mqess*:

```
chown mqm:mqm mqess  
chmod 550 mqess
```

2.1.3 Unix and Linux 64-bit Installation

To install the 64-bit version of MQESS on Unix or Linux, first unzip the **mqess.zip** and then select the appropriate TAR file for the target platform. You will find 7 TAR files in the original ZIP file:

- **AIX/64-bit/mqess_aix71_64.tar** for AIX v7.1 or higher
- **HPUX_IA64/mqess_hpux64_ia64.tar**
- **Linux_x86_64/mqess_linux_x86_64.tar**
- **Linux_POWER/mqess_linux_power64.tar**
- **Linux_zSeries/64-bit/mqess_linux_zseries64.tar**
- **Solaris_SPARC/64-bit/mqess_solaris10_64.tar** for Solaris SPARC v10 or higher
- **Solaris_x86_64/mqess_solaris_x86_64.tar**

Steps to install the server-side security exit:

- ftp or copy the selected TAR file to the target platform to the **/var/mqm/exits64/** directory.
- Un-tar the **mqess_XXX.tar** file into the **/var/mqm/exits64/** sub-directory (XXX is either aix, hpux, solaris or linux)

```
cd /var/mqm/exits64/  
tar -xvf mqess_XXX64.tar
```

- Change directory to **/var/mqm/exits64/**
- Next, do the following commands against **mqess**:

```
chown mqm:mqm mqess  
chmod 550 mqess
```

2.1.4 IBM i Installation

Please follow the installation instructions in section 2.1.4 of the *Installation and Operation* manuals for MQAUSX, MQCE and MQME.

3 Appendix A – IniFile Keywords

Please follow the installation instructions in Appendix A of the *Installation and Operation* manuals for MQAUSX, MQCE and MQME.

4 Appendix B – Upgrade Procedures

Please follow the installation instructions in Appendix A of the *Installation and Operation* manuals for MQAUSX, MQCE and MQME.

5 Appendix C – Support

The support for MQ Enterprise Security Suite can be found at the following location:

By email at:

support@capitalware.com

By regular mail at:

Capitalware Inc.
Attn: MQESS Support
Unit 11, 1673 Richmond Street, PMB524
London, Ontario N6G2N3
Canada

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