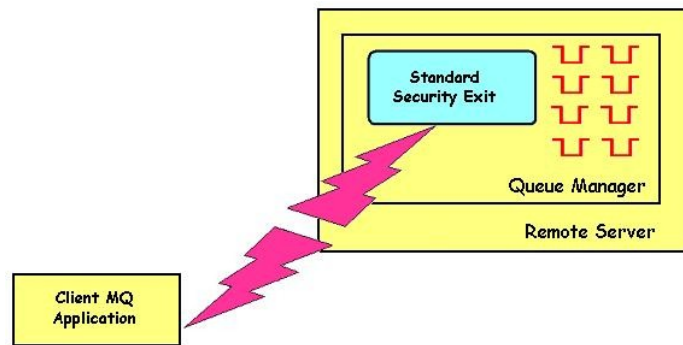


# *MQ Standard Security Exit Overview*



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# 1 Introduction

## 1.1 Overview

*MQ Standard Security Exit* (MQSSX) is a new solution that allows a company to control and restrict who is accessing a WebSphere MQ resource. The security exit will operate with WebSphere MQ v5.3, v6.0 or v7.0 (and MQSeries v5.2) in Windows, IBM i (OS/400), Unix and Linux environments. It works with Server Connection, Receiver and Requestor channels of WebSphere MQ queue manager.

The MQ Standard Security Exit solution is comprised of a server-side security exit.

The server-side security exit has the ability to allow or restrict the incoming UserID. The server-side security exit uses a regular expression parser to parse the incoming client UserID against a predefined regular expression pattern.

The server-side security exit supports the concept of 'Proxy IDs'. After a user has been successfully validated against the native OS or file based validation data and the 'Proxy Mode' flag is set, then the security exit will look up the user's UserID in the Proxy file for their Proxy ID. The Proxy ID will be used for all MQ interactions.

The server-side security exit has the ability to allow or restrict users from connecting with a blank UserID value. This is controlled by the server-side security exit's property keyword 'AllowBlankUserID'.

The server-side security exit has the ability to block users from logging in with the 'mqm' or 'MUSR\_MQADMIN' or 'QMQM' UserIDs. This is controlled by the server-side security exit's property keyword 'Allowmqm'.

The server-side security exit has the capability to allow or limit the incoming channel connections according to the name of the associated Server Connection channel (SVRCONN). Each Server Connection channel can be allocated a maximum number of connections and the server-side security exit will ensure that this maximum is not exceeded.

Client connections to a queue manager are limited by either channel name or the 'DefaultMCC' property keyword in the initialization file. In today's use of J2EE applications, it is a possibility that one J2EE application could overwhelm the queue manager with client connections, thus preventing any connections being made from other applications.

The server-side security exit has the ability to allow or restrict the incoming IP address. The server-side security exit uses a regular expression parser to parse the incoming client IP address against a predefined regular expression pattern.

## 1.2 Executive Summary

The MQ Standard Security Exit solution is comprised of a server-side security exit.

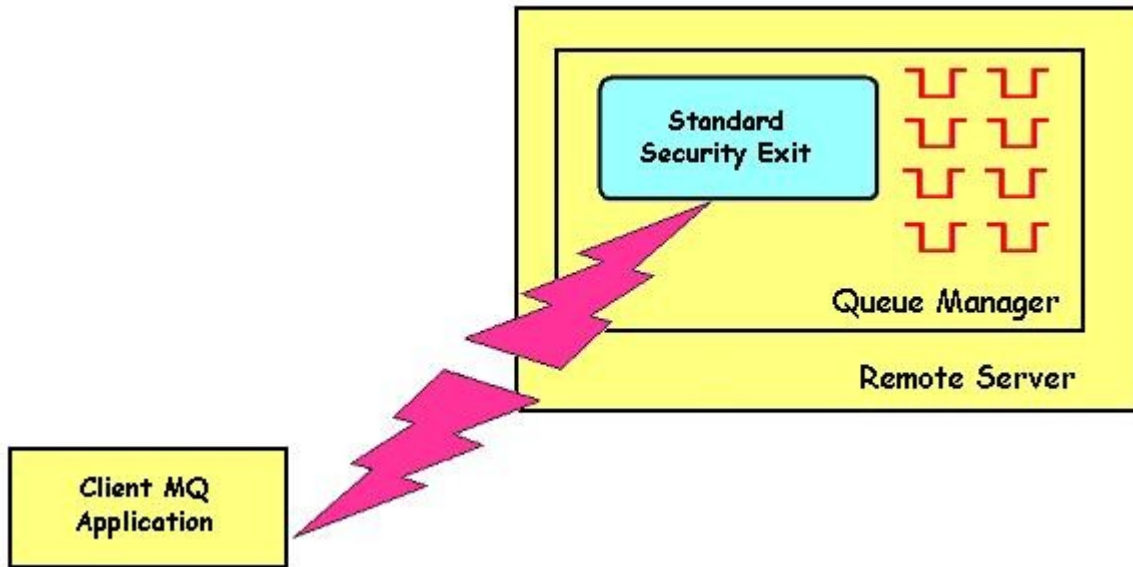
The server-side security exit is available in 3 forms:

- Windows DLL
- Shared library for AIX, HP-UX, Linux, and Solaris
- IBM i exit module

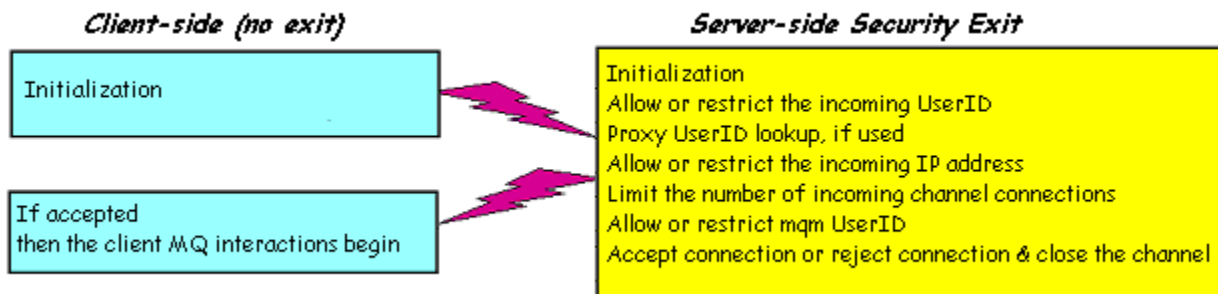
The server-side security exit major features are:

- Allows or restricts the incoming UserID against a regular expression pattern
- Provides support for Proxy UserIDs
- Allows or restricts the incoming IP address against a regular expression pattern
- Limit the number of incoming channel connections on a SVRCONN channel.
- Allows or restricts the use of 'mqm', 'MUSER\_MQADMIN' or 'QMQM' UserIDs
- 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.

### 1.3 Context Diagram (Logical View)



### 1.4 Security Message Flow (Logical View)



## 1.5 Prerequisites

This section provides the minimum supported software levels. These prerequisites apply to both client-side and server-side installations of MQ Standard Security Exit.

### 1.5.1 Operating System

MQ Standard Security Exit can be installed on any of the following supported servers:

#### 1.5.1.1 IBM AIX

- IBM AIX 5L version 5.1 or higher

#### 1.5.1.2 HP-UX IA64

- HP-UX v11.23 or higher

#### 1.5.1.3 HP-UX PA-RISC

- HP-UX v11.00 or higher

#### 1.5.1.4 IBM i (OS/400)

- IBM i V5R3 or higher

#### 1.5.1.5 Linux x86

- Linux kernel, version 2.4
- glibc version 2.2.5 or greater

Sample distributions:

- Red Hat Linux v7.3
- SuSE Linux Enterprise Server v7

#### 1.5.1.6 Linux x86\_64 (64-bit)

Sample distributions:

- Red Hat Enterprise Linux v4.0
- SUSE Linux Enterprise Server v9

#### 1.5.1.7 Linux on POWER

Sample distributions:

- Red Hat Enterprise Linux v3.0 (with Update 2)
- Red Hat Enterprise Linux v4.0
- SUSE Linux Enterprise Server v9

#### 1.5.1.8 Linux on zSeries (32-bit)

- Linux kernel, version 2.4
- glibc version 2.2.5 or greater

Sample distributions:

- Red Hat Enterprise Linux v3.0 (with Update 2)
- SUSE Linux Enterprise Server v8 (with Service Pack 3)
- SUSE Linux Enterprise Server v9

### 1.5.1.9 Linux on zSeries (64-bit)

Sample distributions:

- Red Hat Enterprise Linux v4.0
- SUSE Linux Enterprise Server v9

### 1.5.1.10 Sun Solaris

- Solaris SPARC v8 or higher
- Solaris v10 x86\_64 (64-bit)

### 1.5.1.11 Windows

- Windows NT, 2000, 2003 or 2008 Server (32-bit)
- Windows XP Professional, Vista or 7 (32-bit)

## 1.5.2 WebSphere MQ

- WebSphere MQ v5.3 (or MQSeries v5.2)
- WebSphere MQ v6.0 and v7.0 (both 32-bit and 64-bit)

Operating System	WMQ v5.3 (or MQ 5.2)	WMQ v6.0 & v7.0
AIX v5.1 or higher	32-bit	64-bit
HP-UX IA64 v11.23 or higher	n/a	64-bit
HP-UX PA-RISC v11.00 or higher	32-bit	64-bit
IBM i (OS/400)	64-bit	64-bit
Linux x86	32-bit	32-bit
Linux x86_64	n/a	64-bit
Linux on POWER	n/a	64-bit
Linux on zSeries	32-bit	32-bit & 64-bit
Solaris SPARC v8 or higher	32-bit	64-bit
Solaris x86_64 v10	n/a	64-bit
Windows NT, 2000, 2003, XP Pro, Vista & 7	32-bit	32-bit