MQ Channel Throttler Overview

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1 Introduction

1.1 Overview

MQ Channel Throttler (MQCT) provides the ability to control/throttle the number of connection calls, open calls and/or messages (or bytes) that flow over a channel. MQCT operates with IBM MQ v7.1, v7.5 v8.0, v9.0, v9.1 and v9.2 in Windows, Unix, IBM i (OS/400) and Linux environments. It operates with Sender, Receiver, Server, Requester, Cluster-Sender, Cluster-Receiver and Server Connection channels of the MQ queue managers.

MQCT is a simple drop-in solution that provides throttling for MQ queue managers. The throttling can be configured for queue manager to queue manager channels or for client application to queue manager channels.

> ➢ Queue manager to queue manager throttling means all messages (or bytes) flowing over a channel between 2 queue managers will be throttled.

> ➢ Client application to queue manager throttling means application-level connection calls, open calls and/or messages (or bytes) flowing between a MQ client application and queue manager will be throttled.

MQCT can be used to throttle the following MQ API calls: MQCONN, MQCONNX, MQOPEN, MQGET, MQPUT and MQPUT1.

The MQCT can be configured as a channel message exit or as a channel send/receive exit.

On AIX, HP-UX, Linux, Solaris and Windows, MQCT can be configured and used with a non-default installation of MQ in a multi-install MQ environment.

Note: Raspberry Pi is a Linux ARM 32-bit OS (Operating System). Hence, simply follow the Linux 32-bit instructions for installing and using the solution on a Raspberry Pi.

1.2 Executive Summary

The MQCT solution is an MQ channel exit. It is available for a wide range of platforms: AIX, HP-UX, IBM i, Linux, Solaris and Windows.

Major Features of MQCT:

- ➤ Easy to set up and configure
- ➤ No application changes required
- ➤ 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 can be throttled (controlled)
- ➤ Standard MQ feature, GET-with-Convert, is supported
- ➤ Provides high-level logging capability for throttling process

1.3 Context Diagram (Logical View)

1.4 Prerequisites

This section details the minimum supported software levels. These prerequisites apply to both client-side and server-side installations of MQ Channel Throttler.

1.4.1 Operating System

MQ Channel Throttler can be installed on any of the following supported servers:

1.4.1.1 IBM AIX
➢ IBM AIX 6L version 6.1 or higher

1.4.1.2 HP-UX IA64
➢ HP-UX v11.23 or higher

1.4.1.3 IBM i (OS/400)
➢ IBM i V6R1 or higher

1.4.1.4 Linux x86
➢ Red Hat Enterprise Linux v5, v6, v7, v8
➢ SUSE Linux Enterprise Server v11, v12, v15

1.4.1.5 Linux x86_64 (64-bit)
➢ Red Hat Enterprise Linux v5, v6, v7, v8
➢ SUSE Linux Enterprise Server v11, v12, v15

1.4.1.6 Linux on POWER
➢ Red Hat Enterprise Linux v5, v6, v7, v8
➢ SUSE Linux Enterprise Server v11, v12, v15

1.4.1.7 Linux on zSeries (64-bit)
➢ Red Hat Enterprise Linux v5, v6, v7, v8
➢ SUSE Linux Enterprise Server v11, v12, v15

1.4.1.8 Raspberry Pi (Linux ARM 32-bit)
➢ Raspberry Pi OS v9 or higher

1.4.1.9 Sun Solaris
➢ Solaris SPARC v10 & v11
➢ Solaris x86_64 v10 & v11

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

1.4.2 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 2008, 2012, 2016, 7, 8, 8.1 & 10	32-bit & 64-bit

1.4.3 Windows 32-bit

The following is the software prerequisite for Windows 32-bit:

• Microsoft Visual C++ 2010 Redistributable Package (x86)
  https://www.microsoft.com/en-ca/download/details.aspx?id=5555

1.4.4 Windows 64-bit

The following is the software prerequisite for Windows 64-bit:

• Microsoft Visual C++ 2010 Redistributable Package (x64)
  https://www.microsoft.com/en-ca/download/details.aspx?id=14632