MQSeries

Product Operating Environments

June 1996

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Contents

Summary of changes in this edition

This document differs from the previous edition in the areas given below. The changes are marked by vertical bars in the left-hand margin.

New information

The following products have now been added to the MQSeries range:

- MQSeries for Windows NT
- MQSeries for HP-UX
- MQSeries for OS/400 V3R2
- MQSeries for MVS/ESA V1.1.4
- MQSeries for SunOS V2.2
- MQSeries for Sun Solaris V2.2
- MQSeries for SINIX and DC/OSx Version 2.2

The MQSeries client files can be copied from the IBM Transaction Processing SupportPacs for use as needed.

The IBM Transaction Processing SupportPacs library consists of material that complements the family of CICS and MQSeries products marketed by IBM. The Transaction Processing SupportPacs library is available on the Internet at URL:

http://www.hursley.ibm.com/cics/txppacs/txpsumm.html

MQSeries client software is available at no charge and is subject to the IPLA and License Information terms defined when requesting the MQSeries clients on the Internet. You have the right to make as many copies of the MQSeries client as necessary.

Summary of changes

MQSeries for AIX V2.2.1

- IBM MQSeries for AIX Version 2.2.1
  - Part numbers 33H2267 (CD-ROM) and 33H2242 (8mm tape)

Machine requirements

MQSeries for AIX V2.2.1R2.1 runs on any IBM RISC System/6000 that is capable of running the required level of AIX, and which has sufficient storage to meet the combined requirements of the programming prerequisites, MQSeries for AIX V2.2.1, the access methods, and the application programs.

- MQSeries for AIX server

  All models supported by the operating system, including SMP (symmetric multi-processor) systems:

  - IBM RISC System/6000 POWERserver
  - IBM RISC System/6000 POWERstation
  - IBM Scalable POWERparallel systems
  - Bull** DPX/20 (RISC)
  - Bull** Escala (SMP)
  - Motorola**
  - Zenith**
  - Any other trademarked AIX systems, whether from IBM or other vendors

- MQSeries for AIX clients

  An MQSeries client can run on any personal computer that is capable of running the client code and which has sufficient storage to meet the combined requirements of the programming prerequisites, the client code, access methods, and the application programs.

  Client code for AIX, OS/2, DOS, and Windows 3.1 workstations is distributed with the server code.

Software requirements

Software requirements are identical for server and client AIX environments unless otherwise stated.

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated. Later levels of corequisite products may be required for AIX V4.1.1 and/or SMP. Later levels of the operating system may be required to support corequisite products.

- AIX V3.2.5 (5756-030)
- AIX V4.1.1 (5765-393)
- AIX V4.2 (5765-655)

Connectivity

- AIX SNA Server/6000 V2.1 (5765-247)
- AIX SNA Services/6000 V1.2 (5765-287)
- TCP/IP (as part of the base operating system)

Options

- Transaction Processing Managers (coordination via X/Open XA interface):
  - CICS for AIX on RISC System/6000 V1.1 (5765-148)
  - CICS for AIX V2.1 (5765-553)
  - Encina for AIX V1.2 (5765-117)
  - BEA Tuxedo V4.2.2
- AIX DCE Base Services/6000 V1.1 (5765-117)
- AIX DCE Cell Directory Server/6000 (5765-119)
- AIX DCE Threads/6000 V1.1 (5765-232)
- AIX High Availability Cluster Multi-Processing/6000 (HACMP/6000) V2.1 (5765-257)
- AIXwindows Environment/6000 (5601-257)

Languages and compilers

- C using XLC Compiler in AIX V3.2.5
- C using IBM C Set++ for AIX V3.1.2 (C bindings only) (5765-423)
- COBOL using Micro Focus** COBOL Compiler V3.1 for UNIX
- COBOL using IBM COBOL Set for AIX V1

Delivery

MQSeries for AIX V2.2.1 is supplied on CD-ROM, or 8mm cartridge.

Installation

MQSeries for AIX V2.2.1 is installed using either **smit** or **installp**.

The installation can be performed in approximately 15 minutes. Customization of the product is then required, the duration of this process being dependent on the individual requirements of the enterprise.

The *MQSeries for AIX System Management Guide* contains specific instructions for installing IBM MQSeries for AIX Version 2.2.1.

Service information

Report any difficulties you have using MQSeries for AIX V2.2.1 to your Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

The service information details for MQSeries for AIX V2.2.1 are:

Figure 1. MQSeries for AIX, service information

Component Name	COMP ID	REL	PSP upgrade ID	Subset ID
Base	576551401	100	MQMAIX	100
French	576551401	101	MQMAIX	101
German	576551401	103	MQMAIX	103
Spanish	576551401	102	MQMAIX	102
Japanese	576551401	104	MQMAIX	104

MQSeries for AIX V2.2.1

MQSeries for AT&T GIS UNIX V2

- IBM MQSeries for AT&T GIS UNIX Version 2 Release 2

Machine requirements

MQSeries for AT&T GIS UNIX runs on any AT&T GIS 34XX, 35XX or 36XX system. A minimum of 20 MB of disk space is required.

The network protocols supported are SNA LU 6.2 and TCP/IP.

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- AT&T GIS UNIX SVR4 MP-RAS Version 2.0.3.01 or later Version 2 (includes TCP/IP)

MQSeries for AT&T GIS UNIX clients

Client code for AT&T GIS UNIX, OS/2, DOS, and Windows 3.1 workstations is distributed with the server code.

Connectivity

- AT&T GIS SNA Services Version 2.06 or later Version 2 to match hardware system
- TCP/IP as part of base operating system

Options

- Transaction Processing monitors (coordination via X/Open XA interface)
  - Novell Tuxedo Version 4.2.2

Programming languages

- AT&T GIS High Performance C Version 1.0b

Delivery

MQSeries for AT&T GIS UNIX V2.2 is supplied on CD-ROM or QIC tape.

Installation

MQSeries for AT&T GIS UNIX is installed using the **pkgadd** command.

The installation can be performed in approximately 5 minutes.

The *MQSeries for AT&T GIS UNIX System Management Guide* contains specific instructions for installing this product.

MQSeries for AT&T GIS UNIX V2

MQSeries clients

This section summarizes the machine and software requirements for MQSeries clients that run under:

- DOS
- Windows 3.1

DOS client

Here are the requirements for a DOS client.

Machine requirements

An MQSeries client can run under DOS on any personal computer that is capable of running the client code and which has sufficient storage to meet the combined requirements of the programming prerequisites, the client code, access methods, and the application programs.

Software requirements

The following are prerequisites for MQSeries applications running on a DOS client.

Minimum supported software levels are shown. Later levels, if any, will be supported unless otherwise stated.

Workstation clients

Client code for DOS workstations is distributed with the server code for all servers except OS/400 and MVS/ESA.

- DOS 5.0

Options

- TCP/IP for OS/2 V2.0. The base kit is necessary. The DOS access kit allows clients access to TCP/IP via programs that run in a DOS box.
- TCP/IP V2.1.1 for DOS.
- IBM NetBIOS V2.1.1 for DOS/Windows.
- Novell IPX, using Novell NetBIOS emulation.

Compilers for MQSeries applications on DOS clients

The following compilers are supported:

- Microsoft C7
- Visual C

Windows 3.1 client

Here are the requirements for a Windows 3.1 client.

Machine requirements

An MQSeries client can run under Windows 3.1 on any personal computer that is capable of running the client code and which has sufficient storage to meet the combined requirements of the programming prerequisites, the client code, access methods, and the application programs.

Software requirements

The following are prerequisites for MQSeries applications running on a Windows 3.1 client.

Minimum supported software levels are shown. Later levels, if any, will be supported unless otherwise stated.

Workstation clients

Client code for Windows 3.1 workstations is distributed with the server code for all servers except OS/400 and MVS/ESA.

- Windows 3.1

Options

- TCP/IP for OS/2 V2.0. The base kit is necessary. The DOS access kit allows clients access to TCP/IP via programs that run from WIN-OS2.
- TCP/IP V2.1.1 for DOS.
- IBM NetBIOS V2.1.1 for DOS/Windows.
- Novell IPX, using Novell NetBIOS emulation.

Compilers for MQSeries applications on Windows 3.1 clients

The following compilers are supported:

- Microsoft C7
- Visual C

MQSeries for Digital VMS VAX V1

- IBM MQSeries for Digital VMS VAX Version 1 Release 5

Connectivity can be via DECnet, TCP/IP, or SNA.

Machine and software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- Any DEC VAX
  - Minimum system memory — 3 MB per application + 3 MB + 5 MB per MCA
  - Minimum disk space — 2 MB + 25 KB + Size of Queues
- Digital VMS Version 5.0 or later 5.x with:
  - VAX C 3.1 run-time library, or
  - DEC C 4.0 run-time library, or
  - DEC C 5.0 run-time library

  (For information about compatibility of VMS Version 5.5 on VAX and OpenVMS Version 5.5 on VAX, please contact your Digital representative.)
- Digital OpenVMS VAX Version 6.1 with:
  - DEC C 4.0 run-time library, or
  - DEC C 5.0 run-time library

For DECnet connectivity

- DECnet communications adapter with:
  - For Digital VMS 5.x:
    - DECnet Version 5.5 or later 5.x
  - For Digital OpenVMS VAX 6.1:
    - DECnet for OpenVMS VAX Version 6.1

For TCP/IP connectivity

- Ethernet controller or FDDI controller, with:
  - For Digital VMS 5.x:
    - DEC TCP/IP Services for VMS 2.0B or later 2.x
    - DEC TCP/IP Services for VMS 3.3 or later 3.x
    - DEC TCP/IP Services for VMS 4.0
  - For Digital OpenVMS VAX 6.1:
    - DEC TCP/IP Services for OpenVMS 2.0B or later 2.x
    - DEC TCP/IP Services for OpenVMS 3.3 or later 3.x

For SNA connectivity

- DECnet/SNA Gateway -ST or -CT, with:
  - For Digital VMS 5.x:
    - DECnet/SNA VMS APPC/LU 6.2 Programming Interface Version 2.2 or later 2.x (for Node Type 2.0)
    - Products listed above for DECnet connectivity
  - For Digital OpenVMS VAX 6.1:
    - DECnet/SNA OpenVMS APPC/LU 6.2 Programming Interface Version 2.2 or later 2.x (for Node Type 2.0)
    - Products listed above for DECnet connectivity
- SIMPACT communications adapter with Express Data Transfer Services Version 3.06 or later 3.x (for Node Type 2.1)

Note: Digital-to-Digital connectivity must be via DECnet, not via SNA.

Programming languages and compilers

Supported languages for application development:

- For Digital VMS 5.x:
  - VAX C Version 3.1
  - DEC C Version 4.0
  - DEC C Version 5.0
- For Digital OpenVMS VAX 6.1:
  - DEC C Version 4.0
  - DEC C Version 5.0

Delivery

MQSeries for Digital VMS VAX is supplied on TK50 tape cartridge and 1600bpi tape.

Installation

MQSeries for Digital VMS VAX is installed using the VMSINSTAL command.

The installation can be performed in approximately 10 minutes.

The *MQSeries for Digital VMS VAX User's Guide* contains specific instructions for installing this product.

MQSeries for HP-UX V2 R2.1

- IBM MQSeries for HP-UX Version 2 Release 2.1

The following information applies to server and client environments.

Machine requirements

The MQSeries for HP-UX servers can run on any HP 9000 Series 700 or Series 800 machine. A minimum of 20 MB of disk space is required.

The network protocols supported are SNA LU 6.2 and TCP/IP.

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- HP-UX for Series 700 Version 9.03 or later Version 9
- HP-UX for Series 800 Version 9.04 or later Version 9
- HP-UX Version 10.01 or later Version 10

(each to include TCP/IP)

An HP-UX patch to libc.sl is required on version 9.0x systems. The patch number is PHCO_2820, or any that supercede it.

MQSeries for HP-UX clients

Client code for OS/2, DOS, Windows 3.1, and HP-UX workstations is distributed with the server code.

Connectivity

For SNA:

- HP SNAplusLink
  - J2226A for Series 700 9.03
  - J2220A for Series 800 9.03
- HP SNAplusAPI (only required when developing MQSeries applications that will use SNA)
  - J2229A for Series 700 9.03
  - J2223A for Series 800 9.03
- TCP/IP as part of base operating system

Options

- Transaction Processing monitor (coordination via X/Open XA interface):
  - CICS for HP 9000 Version 1.2
- Lotus Notes

Programming languages and compilers

- C, using the supplied compiler or the HP-UX ANSI C compiler
- COBOL, using the Micro Focus** HP COBOL compiler

Delivery

MQSeries for HP-UX V2.2.1 is supplied on CD-ROM and 4mm DAT tape.

Installation

MQSeries for HP-UX V2.2.1 is installed using the **update** command.

The installation can be performed in approximately 5 minutes.

The *MQSeries for HP-UX System Management Guide* contains specific instructions for installing this product.

MQSeries for MVS/ESA V1.1.4

- IBM MQSeries for MVS/ESA Version 1 Release 1.4

Machine requirements

MQSeries for MVS/ESA runs on any IBM System/370 or System/390 processor that is capable of running the required level of MVS/ESA, and which has enough storage to meet the combined requirements of the programming prerequisites, MQSeries for MVS/ESA, the access methods, and the application programs.

Software requirements

To install MQSeries for MVS/ESA, the prerequisite products listed in Figure 2 are required.

Notes:

1. Unless otherwise noted, any later level is acceptable.
2. The APARs listed might not apply to all versions of the prerequisite products, while having a later version of the product than the minimum specified does not necessarily mean that all the APARs quoted are included. For example, with MVS 4 you still need APAR OY64365.

Figure 2. Installation requirements

Function	MVS	Runtime libraries	Other
Without optional DQM feature	3.1.3		SMP/E 1.8.0 with the following APAR: • IR29060
With optional DQM feature using TCP/IP	3.1.3	Either: • C/370 2.1.0 with the following APARs: – PN35668 – PN34779 • LE/370 1.4 with the following APAR: – PN78163	SMP/E 1.8.0 with the following APARs: • IR26630 • IR29060 TCP/IP 2.2.1 with the following APAR: • PN56110 Or TCP/IP 3.1 only
With optional DQM feature using LU6.2	4.3.0	Either: • C/370 2.1.0 with the following APARs: – PN35668 – PN34779 • LE/370 1.4 with the following APAR: – PN78163	SMP/E 1.8.0 with the following APAR: • IR29060 • IR26630

MQSeries for MVS/ESA V1.1.4

Notes:

1. If you are installing the optional DQM feature, and will be using it with only TCP/IP or LU6.2 (not both), you will also need an assembler to generate the dummy modules. The jobs provided to do this are CSQ8DQM1 and CSQ8DQM4.
2. If you are using the DFSMS/MVS binder utility, ensure that APAR OW05347 has been applied.

To use MQSeries for MVS/ESA, the prerequisite products listed in the following tables are required.

Notes:

1. Unless otherwise noted, any later level is acceptable.
2. The APARs listed might not apply to all versions of the prerequisite products.

Figure 3. General programming requirements

MVS	Other
3.1.3 with the following APARs: • OW07179 • OY64365 • OY67606 JES2 or JES3 3.1.0	DFP 3.1 ESA machine

Figure 4. Programming requirements for security

MVS	Other
3.1.3	RACF 1.9.0 with the following APARs: • OW00233 • OY32816 • OY39629

Figure 5. Programming requirements for measured usage license charges

MVS	Other
3.1.3	MVS APAR OW02855

Figure 6. Programming requirements for applications

Type	MVS	CICS	IMS	Runtime libraries
Batch	3.1.3			C, COBOL, PL/I
IMS	3.1.3		3.1.0	C, COBOL, PL/I
CICS V2	3.1.3	2.1.2 only		C, COBOL, PL/I
CICS V3	3.1.3	3.3.0		C, COBOL, PL/I

Figure 7. Programming requirements for the operations and controls panels

MVS	Other
3.1.3	ISPF/PDF 3.2.0 TSO/E 2.0.0

Figure 8. Programming requirements for distributed queuing without CICS

Communications protocol	MVS	Runtime libraries	Other
LU6.2	4.3.0	Either: • C/370 2.1.0 with the following APARs: – PN35668 – PN34779 – PN59210 – PN73699 – PN36370 • C/370 2.2.0 with the following APARs: – PN67560 – PN73699 – PN60052 • LE/370 1.4 with the following APARs: – PN77759 – PN78163	VTAM as needed by MVS
TCP/IP	3.1.3	Either: • C/370 2.1.0 with the following APARs: – PN35668 – PN34779 – PN59210 – PN73699 – PN36370 • C/370 2.2.0 with the following APARs: – PN67560 – PN73699 – PN60052 • LE/370 1.4 with the following APARs: – PN77759 – PN78163	TCP/IP 2.2.1 with the following APAR: • PN56110 Or TCP/IP 3.1 only

Figure 9. Programming requirements for distributed queuing using CICS

Administration	MVS	CICS	Other
Local	3.1.3	3.2.1	VTAM as needed by MVS
Remote	3.1.3	3.3.0	VTAM as needed by MVS

Figure 10. Programming requirements for the MQSeries-IMS bridge

MVS	IMS
5.1	5.1 with the following APARs: • PN64987 • PN77568

Plus the following if required:

- VS COBOL II or IBM SAA AD/Cycle COBOL/370, if COBOL is required.
- C/370 Release 2.1.0 (with APAR UN37741), if C is required.
- OS PL/I Optimizing Compiler or IBM SAA AD/Cycle PL/I Compiler, if PL/I is required.

Program numbers

MQSeries for MVS/ESA	5695-137
MVS/SP 3.1.3 or later	5685-001 (JES2), 5685-002 (JES3 3.1 or later)
MVS/ESA 4.3 or later	5695-047 (JES2), 5695-048 (JES3)
MVS/ESA 5.1 or later	5655-068 (JES2), 5655-069 (JES3)
SMP/E 1.8	5668-949
DFSMS/MVS binder utility	5695-DF1
DFP 3.1 or later	5665-XA3
RACF 1.9	5740-XXH
ISPF/PDF or later	5685-054
TSO/E 2.0 or later	5685-025
CICS/MVS 2.1.2	5665-403
CICS/ESA 3.2.1 or later	5685-083
CICS/ESA 3.3 or later	5685-083
IMS/ESA 3.1 or later	5665-409
IMS/ESA 5.1 or later	5695-176
High Level Assembler/MVS	5696-234
VS COBOL II	5668-958
SAA AD/Cycle COBOL/370	5688-197
C/370 Compiler	5688-187
SAA AD/Cycle C/370	5688-216
C/370 2.1 library	5688-188
SAA AD/Cycle LE/370	5688-198
OS PL/I Optimizing Compiler	5668-910
SAA AD/Cycle PL/I Compiler	5688-235
ACF/VTAM 3.4.1	5685-085
IBM TCP/IP 2.2.1	5735-HAL
IBM TCP/IP 3.1	5655-HAL

Clients

For MQSeries for MVS/ESA to support clients you need to support distributed queuing without CICS, using either SNA LU6.2 or TCP/IP, as described above. You also need the client/server support code that is provided by the Client Attachment Feature of MQSeries for MVS/ESA. However, you can do administration for clients without this feature.

Compilers and assemblers supported for MQSeries for MVS/ESA applications

- VS COBOL II (5668-958)
- IBM SAA AD/Cycle COBOL/370 (5668-197)
- C/370 (5688-187)
- IBM SAA AD/Cycle C/370 (5688-216)
- Assembler H (5668-962)
- IBM High Level Assembler/MVS (5696-234)
- OS PL/I Optimizing Compiler Version 2 (5668-910)
- IBM SAA AD/Cycle PL/I Compiler (5688-235)

Delivery

MQSeries for MVS/ESA is supplied on either 6250 tape or 3480 cartridge. (It is also available on 4-mm DAT tape for PC/390.) One tape or cartridge contains the product code together with four language features – US English (mixed case), US English (upper case), Japanese, and Simplified Chinese – and the distributed queuing without CICS facility. A second tape or cartridge contains the optional Client Attachment Feature.

Installation

MQSeries for MVS/ESA is installed with SMP/E using the receive-apply-accept approach. JCL is provided on the tape to assist with this process.

The installation can be performed in approximately two hours. Customization of the product is then required, the duration of this process being dependent on the individual requirements of the enterprise.

The *MQSeries for MVS/ESA Program Directory* contains specific instructions for installing MQSeries for MVS/ESA.

New functions for Version 1.1.4

The following functions were added for Version 1.1.4:

- Data conversion
- Client support
- IMS Bridge
- Other functional enhancements

The MQSeries-IMS bridge is a new component of MQSeries for MVS/ESA. The bridge allows direct access from MQSeries applications to applications on your IMS system. It enables implicit MQSeries API support. This means that you can re-engineer legacy applications that were controlled by 3270-connected terminals to be controlled by MQSeries messages, without having to rewrite, recompile, or relink them.

The bridge is an IMS *Open Transaction Manager Access* (OTMA) client.

MQSeries for MVS/ESA V1.1.4

MQSeries for OS/2 V2.0.1

- IBM MQSeries for OS/2 Version 2.0.1
  - Part number 33H2205

Machine requirements

MQSeries for OS/2 V2.0.1 runs on any personal computer that is capable of running the required level of OS/2, and which has sufficient RAM and disk storage to meet the combined requirements of the programming prerequisites, MQSeries for OS/2 V2.0.1, the access methods, and the application programs.

- MQSeries for OS/2 server

  A system unit must have a diskette drive capable of reading 3.5-inch, dual-density (1.44 MB) diskettes or a CD-ROM device.

- MQSeries for OS/2 clients

  An MQSeries client can run on any personal computer that is capable of running the client code and which has sufficient storage to meet the combined requirements of the programming prerequisites, the client code, access methods, and the application programs.

  Client code for AIX, OS/2, DOS, and Windows 3.1 workstations is distributed with the server code.

Software requirements

Software requirements are identical for server and client OS/2 environments unless otherwise stated.

Minimum supported software levels are shown. Later levels, if any, will be supported unless otherwise stated.

- OS/2 V2.1
- OS/2 WARP V3
- OS/2 WARP Connect V3

Connectivity

Note: OS/2 WARP Connect includes connectivity

- Communications Manager/2 V1.1 for OS/2 (this includes LU 6.2 and NetBIOS)
- TCP/IP for OS/2 V2.0 base kit and NetBIOS kit

  Note: TCP/IP for OS/2 V3.0 is included in OS/2 WARP Connect editions.

- Novell IPX (using Novell NetBIOS emulation)

Options

- CICS for OS/2 V2.0.1
- CICS for OS/2 V3.0
- Lotus Notes Server V3R3

Programming languages and compilers

- C using IBM C Set++ V2.1 (C bindings only)
- C using Borland C++ Compiler V2.0 (C bindings only)
- C using IBM VisualAge C++ for OS/2 V3.0 (C bindings only)
- COBOL using Micro Focus** COBOL Compiler V3.0.54 and V2.5
- COBOL using IBM VisualAge for COBOL for OS/2 V1

Service information

Report any difficulties you have using MQSeries for OS/2 V2.0.1 to your Support Centre. If an APAR is required, the Support Centre will provide the address to which any needed documentation can be sent.

The service information details for MQSeries for OS/2 V2.0.1 are:

Figure 11. MQSeries for OS/2, service information

Component Name	COMP ID	REL	PSP upgrade ID	Subset ID
Base	562139001	201	MQMOS2	201
French	562139001	202	MQMOS2	202
German	562139001	203	MQMOS2	203
Spanish	562139001	204	MQMOS2	204
Japanese	562139001	205	MQMOS2	205

Delivery

MQSeries for OS/2 V2.0.1 is supplied on CD-ROM and 3.5-inch diskettes in the same package.

Installation

MQSeries for OS/2 V2.0.1 is installed using Software Installer/2.

The installation can be performed in approximately 15 minutes.

The *MQSeries for OS/2 V2.0.1 Installation and System Management Guide* contains specific instructions for installing MQSeries for OS/2 V2.0.1.

MQSeries for OS/400 V3R1

- IBM MQSeries for OS/400 Version 3 Release 1

Machine requirements

Message Queue Manager/400 V3R1 runs on any AS/400 processor capable of running the required level of OS/400 and which has enough processor storage to meet the combined requirements of the programming prerequisites, the access methods, and the application programs.

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- OS/400 Version 3 Release 1 (5763-SS1)
- To use the MQI in application programs that operate under CICS you require:
  - CICS/400 (5763-DFH)
  - The program libraries for the programming language that you are using
- Connectivity can be through SNA LU 6.2 or TCP/IP

Programming languages and compilers

- IBM ILE COBOL/400 Compiler (5763-CB1)
- IBM ILE C/400 Compiler (5763-CX1)
- IBM ILE RPG/400 Compiler (5763-RG1)

Delivery

Message Queue Manager/400 is supplied:

- Preloaded on total system package (TSP) - US only
- On 1600bpi tape
- On 6250bpi tape
- On 3480 cartridge
- On 1/4 – inch tape cartridge (QIC-525)
- On 1/4 – inch tape cartridge (QIC-120)
- On 8mm tape cartridge

Each contains the base product together with the samples feature and the administration application feature.

Installation

Message Queue Manager/400 is installed with the AS/400 GO LICPGM command.

The installation can be performed in approximately 30 minutes on an AS/400 model E25. Customization of the product to your specific requirements may then be required, the duration of this process being dependent on your specific needs.

The *MQSeries for OS/400 Administration Guide* contains full instructions for installing this product.

MQSeries for OS/400 V3R2

- IBM MQSeries for OS/400 V3R2

Machine requirements

MQSeries for OS/400 V3R2 runs on any AS/400 processor capable of running the required level of OS/400 and which has enough processor storage to meet the combined requirements of the programming prerequisites, the access methods, and the application programs.

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- OS/400 Version 3 Release 2 (5763-SS1)

MQSeries for OS/400 clients

MQSeries for OS/400 supports but does not ship or configure MQSeries clients.

Connectivity

Connectivity can be through SNA LU 6.2 or TCP/IP

Options

- External Transaction Processing Monitors
  - CICS for OS/400 V3R2

    To use the MQI in application programs that operate under CICS you require:
    - CICS for OS/400 (5763-DFH)
    - The program libraries for the programming language that you are using

Compilers supported

- ILE C/400 (Integrated Language Environment C/400) Version 3, 5763-CX2
- ILE COBOL/400 (Integrated Language Environment COBOL/400) Version 3, 5763-CB1
- ILE RPG/400 (Integrated Language Environment RPG/400) Version 3, 5763-RG1

ILE run-time is part of OS/400.

Delivery

MQSeries for OS/400 V3R2 is supplied on all tape and diskette media.

Installation

MQSeries for OS/400 is installed using the AS/400 GO LICPGM command. For installation instructions, refer to the *MQSeries for OS/400 Administration Guide*.

MQSeries for OS/400 V3R6

- IBM MQSeries for OS/400 Version 3 Release 6

Machine requirements

MQSeries for OS/400 runs on any AS/400 Advanced Series processor capable of running the required level of OS/400 and which has enough processor storage to meet the combined requirements of the programming prerequisites, the access methods, and the application programs.

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- OS/400 Version 3 Release 6 (5716-SS1)
- To use the MQI in application programs that operate under CICS you require:
  - CICS for OS/400 (5716-DFH)
  - The program libraries for the programming language that you are using
- Connectivity can be through SNA LU 6.2 or TCP/IP

Programming languages and compilers

- IBM ILE COBOL/400 Compiler (5763-CB1)
- IBM ILE C/400 Compiler (5763-CX2)
- IBM ILE RPG/400 Compiler (5763-RG1)

Delivery

MQSeries for OS/400 is supplied on CD-ROM.

Installation

MQSeries for OS/400 is installed with the AS/400 GO LICPGM command.

The installation can be performed in approximately five minutes on an AS/400 9406 model 510 system. Customization of the product to your specific requirements may then be required, the duration of this process being dependent on your specific needs.

The *MQSeries for OS/400 Administration Guide* contains full instructions for installing this product.

MQSeries for OS/400 V3R6

MQSeries for SCO UNIX V1

- IBM MQSeries for SCO UNIX Version 1 Release 4

Machine requirements

For the following configurations: Combined File/Communications Server, Communications Server only, File Server only, or Client only:

- Any 386 DX PC or better
  - Minimum system memory — 16 MB
  - Minimum disk space

    Combined File/Comms server — 2 MB + size of queues
    File server — Size of Queues
    Communications server — 2 MB
    Client — normal disk space supplied with machine
- Any LAN adapter

For SNA connectivity (communications server):

- Any 486 PC or better (including an ISA bus)
  - Minimum system memory — 16 MB
  - Minimum disk space — 50 MB + size of queues (where appropriate)
- Apertus Technologies Inc ELC Adapter (ISA) with:
  - Express 2.04b

  or
- Emulex Adapter (ISA) with:
  - Express 2.04b

  or
- Madge Smart 16/4 AT card (Part number #52-07) with one of:
  - Express 2.04b
  - Express 2.1.1

  or
- Madge Smart 16/4 AT PLUS card (Part number #52-03 with:
  - Express 2.1.1

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

For the following configurations: Combined File/Communications Server, Communications Server only, File Server only, or Client only:

- SCO Open Desktop Version 3.0 or later Version 3.x, including:
  - SCO Support Level Supplement UOD385A
  - TCP/IP

  or
- SCO Open Server Version 3.0 or later Version 3.x, including:
  - SCO Support Level Supplement UOD385A
  - TCP/IP
- SCO Open Desktop Version 5.0.0b or later Version 5.x

  If you use this, you must also use Express 2.1.1
- For the File Server and Client configurations, appropriate LAN software, for example, NFS to match TCP/IP

  If you plan to use NFS, please contact your services representative to obtain any patches that you may need

Programming languages and compilers

Supported language for application development:

- C

Delivery

MQSeries for SCO UNIX is supplied on 3.5-inch diskettes.

Installation

MQSeries for SCO UNIX is installed using the custom utility.

The installation can be performed in approximately 15 minutes.

The *MQSeries for SCO UNIX User's Guide* contains specific instructions for installing this product.

MQSeries for SINIX and DC/OSx Version 2.2

- IBM MQSeries for SINIX and DC/OSx Version 2.2

Machine requirements

SINIX: RM200, RM300, RM400, RM600 systems with minimum disk space of 30 MB. If DynaText books are installed, a minimum of 50 MB of system disk space is needed.

DC/OSx: MIServer, Nile systems with minimum disk space of 30 MB.

The network protocols supported are SNA LU6.2 and TCP/IP.

Software requirements

Software requirements are identical for server and client environments unless otherwise stated.

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- SINIX operating system, for RM200, RM300, or RM400 — SINIX-N Version 5.42C10 or later
- SINIX operating system, for RM600 — SINIX-Y Version 5.42A40 or later
- DC/OSx operating system Version 1.1-cd079

MQSeries for SINIX and DC/OSx clients

Client code for SINIX and DC/OSx, OS/2, DOS, and Windows 3.1 workstations is distributed with the server code.

The Windows 3.1 client can operate under Windows 3.1, Windows 95 or within the WIN-OS/2 environment under OS/2.

Client software provides a remote interface to a LAN server. It may reside at the server or at a file server and be copied dynamically to the client for use, or it may reside on the client's disk space.

Client support does not result in distributed coordination of units of work.

Connectivity

- SINIX: SNA

  TRANSIT-SERVER 3.4 (SNA Communication Server Version)
  TRANSIT-CLIENT 3.4 (SNA Comm. Client / Local Functions)
  TRANSIT-CPIC 3.4 (SNA LU6.2 Communication and CPI-C)

- SINIX: OpenNet TCP/IP (shipped with base SINIX operating system)
- DC/OSx: TCP/IP Version 1.0
- DC/OSx: SNA requires LU6.2 SW Version 1.3
  - To support the ISC-2 (Intelligent Synchronous Controller) serial line

Comm Services V 1.2 and
ISC with SNA engine V 3.1

- To support the ILC-T (Intelligent LAN Controller, Token ring) interface

  Comm Services V 1.2 and
  Token Ring Mac interface V 1.3

- To support the SNA on the ESCON IBM Channel link

  XVI/ESCON Driver 1.0

Options

- Transaction Processing monitors (coordination via X/Open XA interface)
  - SINIX: Encina (version 1.1A00)
  - SINIX: CICS for Siemens Nixdorf SINIX (version 2.1)
  - SINIX: Novell Tuxedo (Version 5.0)
  - DC/OSx: Novell Tuxedo (Version 5.0)
- DCE
  - SINIX: Version DCE-MI V1.03B00

  Note: DCE cannot be invoked from installable services or from user exits on the SINIX platform. However, stand-alone DCE programs can invoke the MQI.

Compilers supported

- SINIX: C compiler (C-DS, MIPS) version 1.1
- DC/OSx: C4.0 compiler version 4.0.1
- SINIX: Micro Focus Cobol version 3.2
- DC/OSx: Micro Focus Cobol version 3.2

Delivery

- SINIX: CD-ROM
- DC/OSx: QIC-320 cartridge tape

Documentation browsing

- SINIX: To view the online documentation, DynaText is required. Either use SINIX/Windows version 2 or later, which provides a DynaText viewer, or use the SINIX online documention package (separate product), which also provides a DynaText viewer.

Installation

MQSeries for SINIX is installed using the **sysadm** command.

MQSeries for DC/OSx is installed using the **pkgadd** command.

The base directory for installation is /opt/mqm.

MQSeries for SunOS V2.2

- IBM MQSeries for SunOS V2.2

Machine requirements

Only the Sun SPARC hardware is supported. A minimum of 25 MB of system disk space is required.

The network protocols supported are SNA LU6.2 and TCP/IP.

Software requirements

Software requirements are identical for server and client on SunOS. environments unless otherwise stated.

Minimum supported levels are shown. Later levels will be supported unless otherwise stated.

- Sun SunOS UNIX Version 4.1.3

MQSeries for SunOS clients

Client code for Sun SunOS, OS/2, DOS, and Windows 3.1 workstations is distributed with the server code.

The Windows 3.1 client can operate under Windows 3.1, Windows 95 or within the WIN-OS/2 environment under OS/2.

Client software provides a remote interface to a LAN server. It may reside at the server or at a file server and be copied dynamically to the client for use, or it may reside on the client's disk space.

Client support does not result in distributed coordination of units of work.

Connectivity

- SunLink SNA Peer-to-Peer Version 7.0 or later
- TCP/IP as part of the base operating system

Options

- Transaction Processing monitors (coordination via X/Open XA interface)
  - for example, Novell Tuxedo V5.0

Compilers supported

- SPARCompiler C 3.0.1
- Micro Focus COBOL Version 3.0

Delivery

- CD-ROM

Installation

MQSeries for SunOS V2.2 is installed using the shell script amqinst.sh, which is provided in the root directory of the CD-ROM. The base directory for installation is /usr/mqm.

The *MQSeries for SunOS System Management Guide* contains specific instructions for installing this product. Before installing the product refer to the README to see the latest information about prerequisites.

MQSeries for Sun Solaris V2.2

- IBM MQSeries for Sun Solaris, Version 2.2

Machine requirements

Only the Sun SPARC hardware is supported. A minimum of 20 MB of system disk space is required.

The network protocols supported are SNA LU6.2 and TCP/IP.

Software requirements

Software requirements are identical for server and client on Solaris environments unless otherwise stated.

Minimum supported levels are shown. Later levels will be supported unless otherwise stated.

- Sun Solaris Versions 2.4 and 2.5 or later 2.x.

MQSeries for Sun Solaris clients

Client code for Sun Solaris, OS/2, DOS, and Windows 3.1 workstations is distributed with the server code.

The Windows 3.1 client can operate under Windows 3.1, Windows 95 or within the WIN-OS/2 environment under OS/2.

Client software provides a remote interface to a LAN server. It may reside at the server or at a file server and be copied dynamically to the client for use, or it may reside on the client's disk space.

Client support does not result in distributed coordination of units of work.

Connectivity

- SunLink SNA Peer-to-Peer Version 9.0 or later.
- TCP/IP as part of the base operating system

Options

- Transaction Processing monitors (coordination via X/Open XA interface)
  - for example, Novell Tuxedo V5.0
- DCE
  - Multi-threaded applications are not supported

Programming languages and compilers

- SparcWorks Professional C 3.0.1
- Micro Focus COBOL Version 3.2

Delivery

- CD-ROM

Installation

MQSeries for Sun Solaris is installed using the **pkgadd** command or the **sysadm** command. The *MQSeries for Sun Solaris System Management Guide* contains specific instructions for installing this product.

MQSeries for Tandem NonStop Kernel

- IBM MQSeries for Tandem NonStop Kernel Version 1 Release 5

Machine requirements

- With D20 operating system:
  - Tandem NonStop Himalaya machines, including K110, K120, K1000, and K10000 processors
  - Tandem NonStop machines, including CLX700, CLX800, CLX/R1100, CLX/R1200, Cyclone, and Cyclone/R processors
- With D30 operating system:
  - Tandem NonStop Himalaya machines, including K110, K120, K1000, and K10000 processors
  - Tandem NonStop machines, including K200, K2000, and K20000 processors

The machines identified above require:

- Minimum system memory = 16 MB
- Minimum disk space = 8 MB + size of queues
- Appropriate synchronous communications adapter to support SNAX/XF

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- With D20 operating system:
  - NonStop Kernel D20.02 including:
    - TMF
    - ENSCRIBE
    - EMS
  - PATHWAY
  - SNAX/APC for D20 Release 3
  - SNAX/XF, or SNAX/CDF, or both, to match SNAX/APC
- With D30 operating system:
  - NonStop Kernel D30.02 including:
    - TM/MP(TMF)
    - ENSCRIBE
    - EMS
  - TS/MP(PATHWAY)
  - SNAX/APC for D30 Release 3
  - SNAX/XF, or SNAX/CDF, or both, to match SNAX/APC

Programming languages and compilers

Supported languages for application development:

- For D20 operating system
  - TAL (T9250D20)
  - C (T9255D20)
  - COBOL85 (T9257D20)
- For D30 operating system
  - TAL (T9250D30)
  - C (T9255D30)
  - COBOL85 (T9257D30)

Delivery

MQSeries for Tandem NonStop Kernel is supplied on 6250 bpi tape.

Compatibility

MQSeries for Tandem NonStop Kernel is an enhanced release of the MQSeries for Tandem Guardian Himalaya product.

When upgrading from MQSeries for Tandem Guardian Himalaya or MQSeries for Tandem Guardian to the new product, you must at least rebind, and may need to recompile, your MQSeries C language applications. You must also redefine any existing MQSeries queues and channels.

Installation

The *MQSeries for Tandem NonStop Kernel User's Guide* contains specific instructions for installing this product.

MQSeries Three Tier for AIX V1.0

- IBM MQSeries Three Tier for AIX Version 1.0

MQSeries Three Tier for AIX allows you to:

- Run application servers on AIX
- Build applications on AIX

You must run your application clients on Windows 3.1 (or later) or OS/2.

Machine requirements

MQSeries Three Tier for AIX runs on any machine that can run the required software. The exact machine specifications depend on the level of performance you can accept.

Software requirements

The software you require depends on the tasks you want to perform using MQSeries Three Tier for AIX:

- Server
  - IBM AIX Version 3.2.5
  - IBM MQSeries for AIX Version 2.0 with PTF U438737, or Version 2.2
  - IBM SNA Services for AIX
  - DCE Threads
- Application development
  - IBM AIX Version 3.2.5
  - IBM MQSeries for AIX Version 2.0 or later
  - DCE Threads
  - A compiler

Compiler supported

IBM C Set++ for AIX/6000, Version 2.1 (program number 5765-186)

Delivery

MQSeries Three Tier for AIX is supplied on CD-ROM or 8mm tape.

Installation

MQSeries Three Tier for AIX provides an installation utility. Installation takes approximately 15 minutes.

For descriptions of the components you can choose to install, and for instructions on installing, see the *MQSeries Three Tier Administration Guide*, SC33-1451.

MQSeries Three Tier for AIX V1.0

MQSeries Three Tier for OS/2 V1.0

- IBM MQSeries Three Tier for OS/2 Version 1.0

MQSeries Three Tier for OS/2 allows you to:

- Run application clients on Windows 3.1 (or later) and OS/2
- Run application servers on OS/2
- Build applications on Windows 3.1 (or later) and OS/2

Machine requirements

MQSeries Three Tier for OS/2 runs on any machine that can run the required software. The exact machine specifications depend on the level of performance you can accept. Figure 12 indicates some typical machine configurations for MQSeries Three Tier for OS/2 server, client, and developer's workstations. These are not intended to be minimum configurations.

Figure 12. Typical MQSeries Three Tier for OS/2

Configuration	**Processor**	**RAM**	**Video**	**Hard disk**
Three Tier client (OS/2 or Windows 3.1)	486 25MHz CPU or better	16 MB	14x monitor	120 MB
Three Tier server (OS/2)	486DX4 100MHz CPU or better	32 MB	14x monitor	540 MB
Programming	Pentium 66MHz CPU or better	32-64 MB	17x monitor, 2 MB video RAM	760-1520 MB

Note: The recommended minimum configuration for developing applications with VisualAge is 24 MB RAM with 30 MB available for the swapper file.

Software requirements

The software you require depends on the tasks you want to perform using MQSeries Three Tier for OS/2:

- OS/2 client
  - IBM OS/2 Version 2.1 or later
  - IBM MQSeries for OS/2 Version 2.0 with PTF U200051, or later
  - MQSeries communication support:
    - IBM Communication Manager/2 Version 1.1 for OS/2 (this includes LU 6.2 and NetBIOS)
    - TCP/IP for OS/2 Version 2.0
- Windows 3.1 client
  - DOS Version 5 or later
  - Microsoft Windows 3.1

- IBM MQSeries for OS/2 Version 2.0 with PTF U200051 (Windows client), or later
- For communication, one of the following:
  - TCP/IP for OS/2 Version 2.0
  - LU 6.2
  - NetBIOS

- OS/2 server
  - IBM OS/2 Version 2.1 or later
  - IBM MQSeries for OS/2 Version 2.0 with PTF U200051, or later
  - MQSeries communication support:
    - IBM Communication Manager/2 Version 1.1 for OS/2 (this includes LU 6.2 and NetBIOS)
    - TCP/IP for OS/2 Version 2.0
- Application development on OS/2
  - IBM OS/2 Version 2.1 or later
  - IBM MQSeries for OS/2 Version 2.0 with PTF U200051, or later
  - IBM VisualAge Version 2.0 for OS/2 Team Version (optional)
  - A compiler
- Application development on Windows 3.1
  - DOS Version 5.0 or later
  - Microsoft Windows 3.1
  - IBM OS/2 Version 2.1 or later
  - IBM MQSeries for OS/2 Version 2.0 with PTF U200051, or later

Programming languages and compilers

C language For OS/2, IBM C Set++ for OS/2, Version 2.0

For Windows 3.1, the Microsoft Visual C++ Development System, Version 1.5

COBOL IBM COBOL VisualSet for OS/2

Micro Focus** 32-bit COBOL Software Development Kit for OS/2

PL/I The IBM PL/I Package/2 V1 R2

Delivery

MQSeries Three Tier for OS/2 is supplied on CD-ROM and 3.5-inch diskettes.

Installation

MQSeries Three Tier for OS/2 provides an installation utility. Installation takes approximately 15 minutes.

You can install MQSeries Three Tier for OS/2 from a LAN.

For descriptions of the components you can choose to install, and for instructions on installing, see the *MQSeries Three Tier Administration Guide*, SC33-1451.

MQSeries for UnixWare V1

- IBM MQSeries for UnixWare Version 1 Release 4

Machine requirements

For the following configurations: Combined File/Communications Server, Communications Server only, File Server only, or Client only:

- Any 386 DX PC or better
  - Minimum system memory = 16 MB
  - Minimum disk space:

    Combined File/Comms server = 2 MB + Size of queues
    File server = Size of Queues
    Communications server = 2 MB
    Client = normal disk space supplied with machine
- Any LAN adapter

For SNA connectivity (communications server):

- Any 486 PC or better (including an ISA bus)
  - Minimum system memory = 16 MB
  - Minimum disk space = 28.5 MB + size of queues (where appropriate)
- Apertus Technologies Inc ELC Adapter (ISA) with:
  - Express 2.04b

  or
- Emulex Adapter (ISA) with:
  - Express 2.04b

  or
- Madge Smart 16/4 AT card (Part number #52-07) with on of:
  - Express 2.04b
  - Express 2.1.1

  or
- Madge Smart 16/4 AT PLUS card (Part number #52-03) with:
  - Express 2.1.1

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

For the following configurations: Combined File/Communications Server, Communications Server only, File Server only, or Client only:

- UnixWare Application Server SDK Version 1.1 or later Version 1, including TCP/IP. (For bridge support across TCP/IP, contact your Novell service representative.)
- Appropriate LAN software (file server or client): for example, NFS to match TCP/IP. Customers who plan to use NFS should contact their service representative to obtain all available patches.

Programming languages and compilers

Supported language for application development:

- C

Delivery

MQSeries for UnixWare is supplied on 3.5-inch diskettes.

Installation

MQSeries for UnixWare is installed using the **pkgadd** command.

The installation can be performed in approximately 10 minutes.

The *MQSeries for UnixWare User's Guide* contains specific instructions for installing this product.

MQSeries for VSE/ESA V1

- IBM MQSeries for VSE/ESA Version 1 Release 3

Machine requirements

- Any IBM System 370 or 390
  - Minimum system memory = normal memory as supplied with machine
  - Minimum system DASD = 2 cylinders (3390) + Size of Queues
- Any communications hardware supporting SNA/LU 6.2

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- VSE/ESA Version 1.2.0 or later
- CICS/VSE Version 2.1 or later
- VTAM for VSE/ESA Version 3.4 or later
- VS COBOL II Run-Time Library

Programming languages and compilers

Supported language for application development:

- VS COBOL II Version 3.0

Delivery

MQSeries for VSE/ESA is supplied on 1600bpi and 6250bpi tape, and 3480 tape cartridge.

Installation

MQSeries for VSE/ESA is installed using RESTORE command.

The installation can be performed in approximately 30 minutes.

The *MQSeries for VSE/ESA User's Guide* contains specific instructions for installing this product.

MQSeries for Windows NT V2.0

- IBM MQSeries for Windows NT Version 2.0

The following information applies to server and client environments.

Machine requirements

MQSeries for Windows NT can run on any Intel 486 (or above) processor-based IBM PC machine or compatible.

The network protocols supported are SNA LU 6.2, TCP/IP, and NetBIOS.

Software requirements

Minimum supported levels are shown. Later levels, if any, will be supported unless otherwise stated.

- Microsoft Windows NT Version 3.5, 3.5/J, 3.5.1 Workstation and Server including TCP/IP and NetBIOS

MQSeries for Windows NT clients

Client code for OS/2, DOS, Windows 3.1, and Windows NT workstations is distributed with the server code.

The Windows 3.1 client can operate under Windows 3.1, Windows 95, or within the WIN-OS/2 environment under OS/2.

Client software provides a remote interface to a LAN server. It may reside at the server or at a file server and be copied dynamically to the client for use, or may reside on the client's disk space. Client support does not result in distributed coordination of units of work.

Connectivity

For SNA connectivity (communications server):

- Microsoft SNA Server 2.1

For TCP/IP connectivity (communications server):

- Using TCP/IP facilities within Windows NT

For NetBIOS connectivity (communications server):

- Using NetBIOS facilities within Windows NT

Options

- Transaction Processing monitors
  - CICS for Windows NT V2
- Lotus Notes V3.3

Programming languages and compilers

- C, using Microsoft Visual C++ V2.0 compiler for Windows NT
- COBOL, using Micro Focus** COBOL for Windows NT V3.3

Distributed queuing with MQSeries for Windows NT Version 2.0

The network protocols supported by MQSeries for Windows NT are:

- TCP/IP
- SNA LU 6.2
- NetBIOS
- Novell IPX, using Novell NetBIOS emulation

Delivery

MQSeries for Windows NT Version 2.0 is supplied on CD-ROM.

Installation

MQSeries for Windows NT Version 2.0 is installed using the **setup** utility.

The installation can be performed in approximately 15 minutes.

The *MQSeries for Windows NT System Management Guide* contains specific instructions for installing this product.

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The following paragraph does not apply to any country where such provisions are inconsistent with local law:

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