Software Product Description

PRODUCT NAME: DEC DB Integrator Gateway for PC Data   **SPD 63.32.00**
                          Version 3.1A

DESCRIPTION

DEC DB Integrator Gateway for PC Data (PC Data Gateway) provides applications and tools with direct, read/write access to data sources which support a Microsoft™ Open Database Connectivity (ODBC) interface. The PC Data Gateway works with ODBC Data Drivers which meet the following standard conformance levels:

>   ODBC API (Level 1)
>   ODBC SQL Grammer (minimum)

The PC Data Gateway includes the Microsoft ODBC Pack 2 files which includes an ODBC administrator, ODBC Driver manager, and ODBC Drivers for the following data sources:

>   Microsoft ACCESS
>   Microsoft Excel
>   Microsoft FoxPro
>   Microsoft SQL Server
>   Borland dBase™
>   Borland Paradox®
>   Btrieve
>   text files

The PC Data Gateway is available on Digital UNIX and OpenVMS Alpha and VAX. The client software is installed on these platforms and the server software runs on Windows 3.1, Windows 95, and Windows NT platforms.

The PC Data Gateway can be used to provide remote access to PC Data sources from Digital UNIX and OpenVMS platforms. Remote client access is also available through SQL/Services and ODBC drivers which are included as part of the DB Integrator Gateway. (See Desktop Client Software section for a complete list of remote clients supported by the PC Data Gateway.)

DEC DB Integrator (DBI) extends the functionality of the PC Data Gateway by providing a native integration of databases accessed by PC Data Gateways and other DB Integrator gateways. DBI clients may directly access and join views of tables existing on multiple databases. These views may be horizontally or vertically partitioned

and be based on tables existing on any database accessible by these gateways. DBI views may be pre-defined or dynamically declared.

DBI servers maintain a persistent catalog of metadata extracted from databases served by PC Data servers. DBI uses this metadata along with information on network and underlying database manager capabilities to optimize cross-database joins.

Features

Standard SQL Interfaces

The PC Data Gateway provides direct, read/write access to PC Data data sources through standard DEC SQL interfaces. These interfaces include a dynamic SQL interface, an interactive SQL facility and the SQL/Services server.

SQL data manipulation language (DML) is fully supported. SQL data definition language (DDL) is not supported.

The dynamic SQL interface compiles and executes SQL requests passed through its call interface. This programming approach is highly effective in applications such as ad-hoc query access where the exact parameters of requests are not known until runtime. It is compatible with any programming language that supports the operating system's calling standards. The dynamic memory handling capabilities of Ada, C and P/I enable these languages to take full advantage of the power and flexibility of this approach.

The interactive SQL facility supports the interactive query of databases accessed through PC Data servers. Required data format translations are automatically performed.

Optional SQL Compiler Support

Support for SQL 3GL application development is available with the optional purchase of a DEC SQL development licenses. DEC SQL development licenses provide precompiler support for embedded SQL applications, a compiler for SQL module language programs and an

application programming interface (API) to support the development of client/server applications.

Embedded SQL programming places SQL language statements in line with host language statements. Precompilers replace these SQL statements with call statements and object modules. The modified host language program is compiled and linked with the object modules to form an executable image. Precompilers for DEC C, DEC Ada, DEC COBOL, DEC Fortran, DEC Pascal and PL/I for OpenVMS are included.

Table 1 describes the DEC SQL precomplier support by platform.

Table 1

DEC SQL Precompiler Support

Language	Software Platform		
Compiler	OpenVMS VAX	OpenVMS AXP	Digital UNIX
DEC Ada	X	X	–
DEC C	X	X	X
Digital UNIX C	–	–	X
DEC COBOL	X	X	X
DEC Fortran	X	X	–
DEC Pascal	X	X	–
PL/I for OpenVMS	X	X	–

These precompilers support an optional Federal Information Processing Standards (FIPS) flagger that allows the user to identify any SQL statements which are not in the current ANSI/ISO SQL standard. An exception flagger for the Multivendor Integration Architecture (MIA) standard is also provided.

The SQL module language processor allows SQL statements and multistatement procedures to be grouped into modules. When these modules are compiled, the resulting object modules can be linked with objects created by any language compiler that complies with the OpenVMS calling standard. The SQL module language compiler also supports FIPS and MIA flagging.

SQL/Services API programming libraries are used to interface client applications to the SQL/Services server. MS–DOS® or MS Windows client applications can be written in Microsoft C. Macintosh® client applications can be written in MPW™ C or ThinkC.

A DEC SQL development license also includes SQL/Services client programming libraries for Microsoft Windows™, Windows NT™, Digital UNIX, MS–DOS, Sun®, ULTRIX or OpenVMS platforms.

The following table summarizes SQL/Services network support. Clients other than the DEC ODBC Driver for MS Windows are based on the SQL/Services API.

Desktop	SQL/Services Network Support			
Client	DECnet	TCP/IP	IPX/SPX	AppleTalk®
DEC ODBC Driver for MS Windows	X	X	X	–
MS Windows	X	X	X	–
MS–DOS	X	X	X	–
OS/2®	X	–	–	–
Macintosh	X	X	–	X
SPARCstation™	–	X	–	–
Windows NT	X	X	X	–
Digital UNIX/1 AXP	X	X	–	–
OpenVMS	X	X	–	–
ULTRIX	X	X	–	–

CONFORMANCE TO STANDARDS

DB Integrator and all DB Integrator Gateways compile with the International Standard,ISO/IEC 9075:1992 and the American National Standard, ANSI X3.135-1992, Database Language SQL, Entry-Level specification, and the Federal Information Processing Standard for Database Language SQL (FIPS SQL) as defined in FIPS PUB 127-2.

The DEC ODBC Driver for MS Windows complies with the Microsoft Open Database Connectivity specification V2.0.

Disk Space Requirements

Table 3 lists the disk space required to install and operate DBI software by hardware/operating system platform (Platform). The common requirement represents the space required to store software objects that are common to DBI and the DB Integrator family of gateways. If one of these products is not already installed on the system or cluster, the disk space requirement will be increased by this amount.

<div style="display:flex">
<div style="width:50%">

Table 3

Disk Space Requirements by Client Platform

Platform	Disk Space Required (Blocks)		
	Install	Permanent	Common
OpenVMS VAX	56,000	46,000	30,000
OpenVMS Alpha	72,000	62,000	42,000
Digital UNIX Alpha	85,000	85,000	73,260

Table 3

Disk Space Requirements by Server Platform

Platform	Disk Space Required (Megabytes)	
	Install	Permanent
PC Data Server Only	8.5 MB	0.2 MB
Server & ODBC Drivers	8.5MB	5.5MB

These counts refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration, and software options selected.

Additional space must be allowed for programs, logs, temporary database cache files and user interface software.

OPTIONAL HARDWARE

For desktop clients based on DEC ODBC Driver for MS Windows, Microsoft Windows or MS–DOS® :

- Personal Computer XT, Personal Computer AT®, or equivalent
- Ethernet LAN connectivity

For SQL/Services Macintosh platform:

- Macintosh Plus, Macintosh SE and SE/30, Macintosh II, IIx, IIcx, IIci, and IIfx, Macintosh portable
- Ethernet LAN connectivity

For Sun® platform:

- SPARCstation™ 1
- Ethernet LAN connectivity

</div>
<div style="width:50%">

SOFTWARE REQUIREMENTS

PC Data Gateway Windows Server

Software Requirements

One of the following operating systems:

> Winwows V3.1 - V3.1.1
> Windows 95
> Windows NT

Network Transport Options

The PC Data Gateway Windows Server requires the following network software to support client access from Digital UNIX and OpenVMS Client systems:

- Windows Sockets Compliant TCP/IP

PC Data Gateway for OpenVMS VAX Cleint

Software Requirements

- OpenVMS VAX Operating System V5.5-2 - V6.2

Network Transport Options

The PC Data Gateway for the OpenVMS VAX platform will require one of the following network software products to suport communications with the PC Data Gateway Windows Server:

- TCP/IP transport - DEC TCP/IP Services for OpenVMS VAX, V3.0 - V3.1

The PC Data Gateway for the OpenVMS VAX platform will require one or more of the following network software products to support access via remote desktop clients:

- DECnet transport - DECnet for OpenVMS VAX, V5.5-2 - V6.2

- TCP/IP transport - DEC TCP/IP Services for OpenVMS VAX, V3.0 - V3.1

- Novell NetWare - SQL/Services and DEC ODBC Driver client applications communicating via Novell NetWare require a Novell IPX/SPX transport - InterConnections Leverage for NetWare File Sharing Services (FSS), V1.5 - V2.0

PC Data Gateway for OpenVMS Alpha Client

Software Requirements

- OpenVMS AXP Operating System, V6.1-V6.2

Network Transport Options

</div>
</div>

The PC Data Gateway for the OpenVMS Alpha platform will require one of the following network software products to suport communications with the PC Data Gateway Windows Server:

- TCP/IP transport - DEC TCP/IP Services for OpenVMS VAX, V3.0 - V3.1

The PC Data Gateway for the OpenVMS Alpha platform will require one or more of the following network software products to support access via remote desktop clients:

- DECnet transport - DECnet for OpenVMS AXP, V6.1 - V6.2

- TCP/IP transport - DEC TCP/IP Services for OpenVMS AXP, V3.0 - V3.1

- Novell NetWare - SQL/Services and DEC ODBC Driver client applications communicating via Novell NetWare require a Novell IPX/SPX transport - InterConnections Leverage for NetWare File Sharing Services (FSS), V1.5 - V2.0

PC Data Gateway for Digital UNIX Alpha

Software Requirements

- Digital UNIX Operating System V3.0, V3.2

Network Transport Options

The PC Data Gateway for the OpenVMS Alpha platform will require one of the following network software products to suport communications with the PC Data Gateway Windows Server:

- TCP/IP transport - DEC TCP/IP Services for OpenVMS VAX, V3.0 - V3.1

The PC Data Gateway for the OpenVMS Alpha platform will require one or more of the following network software products to support access via remote desktop clients:

- DECnet transport - DECnet/OSI, Version 2.0, for Digital UNIX

- TCP/IP transport - Included with the Digital UNIX Operating System

DESKTOP CLIENT SOFTWARE REQUIREMENTS

This section describes the prerequisite operating system and networking software required by DB Integrator and DB Integrator Gateway Clients.

ODBC and SQL/Services Clients

A site-wide right to use SQL/Services and Digital ODBC client software is included with each traditional or concurrent use license for the DB Integrator or DB Integrator Gateway

Parties selling or distributing a software product that incorporates Digital Equipment Corporation's SQL/Services client application programming interface, may copy and distribute the SQL/Services client runtime libraries with that software product.

Parties selling or distributing a software product that incorporates the Microsoft ODBC application programming interface, may copy and distribute Digital Equipment Corporation's Digital ODBC Driver distribution kit with that software product. The Digital ODBC Driver kit must be distributed in a manner that guarantees the end-user will receive the entire contents of the DEC ODBC Driver kit.

MS Windows v3.1 Clients

- Microsoft Windows, V3.1

- MS–DOS Operating System, V5.0 - V6.2

- One of the following network products:

    — PATHWORKS for DOS, V4.1A

    — PATHWORKS V5, V5.0A or V5.1 for DOS and Windows client software

    — PATHWORKS for DOS (TCP/IP), V2.0

    — A Windows Sockets V1.1 specification compliant transport. [4]

    — Novell NetWare 3.11 Windows Workstation Client with IPX.COM or IPXODI.COM, and NETX shell

Windows NT on Intel™ and Alpha Clients

- Microsoft Windows NT Operating System, V3.1 - V3.5

- One of the following Network products:

    — PATHWORKS for NT V4.1

    — A Windows Sockets V1.1 specification compliant transport

    — Novell NetWare 3.11 Windows Workstation Client with IPX.COM or IPXODI.COM, and NETX shell

MS–DOS
Clients

- MS–DOS Operating System, V5.0 - V6.2

---

[4] PATHWORKS V5, V5.0A and V5.1 for DOS and Windows client software and FTP® PC/TCP V2.3 have been fully tested with the SQL/Services and ODBC driver clients. Other transports that comply with the Windows Sockets V1.1 specification may function correctly but have not been fully tested by Digital

- One of the following network products:

  — PATHWORKS for DOS, V4.1A

  — PATHWORKS V5, V5.0A or V5.1 for DOS and Windows client software

  — PATHWORKS for DOS (TCP/IP), V2.0

  — PATHWORKS V5, V5.0A or V5.1 for DOS and Windows client software with PATHWORKS V5.1.102 or higher PATHWORKS socket library

  — Novell NetWare 3.11 Windows Workstation Client with IPX.COM or IPXODI.COM, and NETX shell

Digital UNIX Clients

- Digital UNIX Operating System, V3.2

- One of the following network products:

  — TCP/IP which comes with the Digital UNIX operating system

  — DECnet/OSI, V2.0, for Digital UNIX
  (Required for DECnet applications only)

ULTRIX/RISC Clients

- ULTRIX Operating System, V4.1 - V4.3

- One of the following network products:

  — TCP/IP that comes with ULTRIX Operating System

  — DECnet/OSI for ULTRIX, V5.1, for RISC and VAX (Required for DECnet applications only)

Sun OS Client

- SunOS™, V4.1.3

- One of the following network products:

  — TCP/IP that comes with Sun OS Operating System

SQL/Services Macintosh System 6.0.8 Clients

- Macintosh Operating System V6.0.8

- One of the following network products:

  — PATHWORKS for Macintosh, V1.2A

  — AppleShare® Workstation Software for System V6.0.8
  (Required for PATHWORKS installation)

- Required for application development only

  — MPW Development Environment, Version 3.2.3, and MPW, Version 3.2.3, C compiler

  — Symantec® ThinkC, V6.0.1, and ThinkC, V6.0.1, C Compiler for the Macintosh system

SQL/Services Macintosh System 7 Clients

- Macintosh Operating System, V7, V7.1

- One of the following network products:

  — PATHWORKS for Macintosh, V1.2A

  — AppleShare Workstation Software for System 7 (required for PATHWORKS installation)

- Required for application development only

  — MPW Development Environment, Version 3.2.3, and MPW, Version 3.3.1, C compiler

  — Symantec ThinkC, V6.0.1, and ThinkC, V6.0.1, C Compiler

Optional SequeLink Clients

If clients or network transport are required, but not supported ODBC or SQL/Services clients, optional SequeLink™ client/server software is available to work with DB Integrator and DB Integrator Gateways. SequeLink is client/Server middleware developed by Techgnosis, which can be used cooperatively with Digital's DB Integrator and DB Integrator Gateway products. SequeLink Clients or Servers can be purchased through Digital or its resellers. The following table contains a list of the SequeLink clients and Networks:

Table 4
Optional SequeLink Client/Network Support

Desktop Client	Transport Supported
Windows 3.x	WIN Sockets TCP
	PATHWORKS 5.x
	SPX/IPX
	NetBIOS
	NetBUEI
Macintosh 6.x-7.x	MAC TCP/IP 1.x
	PATHWORKS 5.x
	Appletalk 1.5
HP UX 8.x-9.x	Native TCP
AIX 3.2x	Native TCP
Solaris 2.x	Native TCP
Sun OS 5.3	Native TCP
DG Aviion	Native TCP
SCO UNIX	Native TCP
Digital UNIX 1.3-3.2	Native TCP
Sequent	Native TCP
Unisys R4	Native TCP
ULTRIX 4.3a	Native TCP
VMS AXP 1.5-6.2	DECNET
	TCP
VMS VAX 5.5-6.2	DECNET

OPTIONAL SOFTWARE

The following products can be used in combination with DB Integrator any DB Integrator Gateway, Data Distributor or Sequelink product. The following is a list of products available through Digital or its resellers.

- DEC DB Integrator Gateway for RMS

- DEC DB Integrator Gateway for DB2 Client

- DEC DB Integrator Gateway for ORACLE

- DEC DB Integrator Gateway for SYBASE

- DEC DB Integrator Gateway for SequeLink

- DEC DB Integrator Gateway for EDA/SQL

- DEC DB Integrator Gateway for Custom Drivers

- DEC DB Integrator Gateway for DBMS

- DEC DB Integrator Gateway for DSM

- DEC DB Integrator Gateway

- DEC Data Distributor

- SequeLink Clients

- SequeLink Server for DB Integrator

- SequeLink Server for DB2/400

- SequeLink Server for DB2/2

- SequeLink Server for DB2/6000

- SequeLink Server for DB2/MVS

- SequeLink Server for Informix

- SequeLink Server for Ingres

- SequeLink Server for Interbase

- SequeLink Server for Oracle

- SequeLink Server for Progress

- SequeLink Server for Cincom

- SequeLink Server for Teradata

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

TK50, Mag Tape

For OpenVMS VAX, this product is available on 9-track 1600 BPI Magnetic Tape, TK50 Streaming Tape.

CD ROM

For all supported server operating systems this product is available on CD–ROM.

Consolidated CD ROM

For all supported server operating systems this product is available on the layered products consolidated CD–ROM.

ORDERING INFORMATION

DEC DB Integrator Gateway for PC Data
for OpenVMS VAX
  Traditional Software Licenses: QL-3DYA*-**
  Concurrent Use License: QL-3DYAA-3*
  Software Documentation: QA-3DYAA-GZ
  Software Product Services: QT-3DYA*-**
  Software Media: QA-3DYA*-** (TK, Mag Tape, CD)
  Software Media QA-VWJ8A-H8 (Consolidated CD)

DEC DB Integrator Gateway for PC Data
for OpenVMS Alpha
  Traditional Software Licenses: QL-3DZA*-**
  Concurrent Use License: QL-3DYAA-3*
  Software Product Services: QT-3DZA*-**
  Software Documentation: QA-3DYAA-GZ
  Software Media: QA-3DZAA-H8 (CD–ROM)
  Software Media: QA-03XAA-H8 (Consolidated CD)

DEC DB Integrator Gateway for PC Data
for Digital UNIX Alpha
  Traditional Software Licenses: QL-3DXA*-**
  Concurrent Use License: QL-3DXAM-3B
  Software Documentation: QA-3DYAA-GZ
  Software Product Services: QT-3DXA*-**
  Software Media: QA-3DXAA-H8 (CD–ROM)
  Software Media: QA-054AA-H8 (Consolidated CD)

*   Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

SOFTWARE LICENSING

This software is furnished only under a license. For more information about Digital licensing terms and policies, contact your local Digital office.

License Management Facility Support

This layered product supports the OpenVMS License Management Facility. Traditional and Concurrent Use licenses are available. A Traditional license permits an unlimited number of authorized users to access this product on a single, identified processor. A Concurrent Use license allows any one user at a time to access the layered product.

For this software product a user is defined as an Open-VMS process serving either an individual or another local or remote process.

For more information on the License Management Facility, refer to the OpenVMS Operating System documentation.

Client Software Licensing

Parties selling or distributing a software product that incorporates the Microsoft ODBC application programming interface, may copy and distribute Digital Equipment Corporation's DEC ODBC Driver distribution kit with that software product. The DEC ODBC Driver kit must be distributed in a manner that guarantees the end-user will receive the entire contents of the DEC ODBC Driver kit.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from Digital. For more information, contact your local Digital office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

® AppleTalk, and Macintosh are registered trademarks of Apple Computer Inc.

® IBM and OS/2 are registered trademarks of International Business Machines Corporation.

® Microsoft, MS, and MS–DOS are registered trademarks of Microsoft Corporation.

® Novell and NetWare are registered trademarks of Novell, Inc.

® ORACLE is a registered trademark of Oracle Corporation

® Sun is a registered trademark of Sun Microsystems, Inc.

® FTP is a registered trademark of Schere Laboratories, Inc.

® SYBASE is a registered trademark of Sybase, Inc.

™ MPW is a trademark of Apple Computer Inc.

™ DB2 is a trademark of International Business Machines Corporation.

™ Windows is a trademark of Microsoft Corporation.

™ SPARCstation is a trademark of Sun Microsystems, Inc.

™ The DIGITAL Logo, AXP, ClusterWide, DATATRIEVE, DEC, DEC Ada, DEC Fortran, DECdtm, DECnet, Digital, OpenVMS, PATHWORKS, ULTRIX, ULTRIX, VAX VAX 11/750, VAX 11/780, VAX 6000, VAX 8200, VAX 8250, VAX 8300, VAX 8350, VAX 8500, VAX 8530, VAX 8550, VAX 9000, VAXstation 4000 VLC, VAXcluster, VAXft, VAXserver, VAXstation, VAX RMS, VMS, VMS RMS and VMScluster are trademarks of Digital Equipment Corporation.