Software Product Description

PRODUCT NAME: COM Version 1.4 for HP OpenVMS™ 70.45.03

DESCRIPTION

COM (Component Object Model) is a technology from Microsoft® that allows developers to create distributed network objects. Digital Equipment Corporation and Microsoft jointly developed the COM specification. First released by Microsoft on Windows® NT™ as NetOLE (Network Object Linking and Embedding) and then renamed DCOM (Distributed COM), the COM specification now includes network objects. COM for HP OpenVMS is an implementation of the Microsoft Windows NT 4.0 code that supports the COM draft standards.

COM is used to create distributed applications that are made up of reusable objects. COM locates objects locally or in a network and uses the Remote Procedure Call (RPC) wire protocol to communicate between these objects across the network.

COM for OpenVMS delivers connectivity and interoperability between OpenVMS and Windows NT/Windows 2000 systems. With COM for OpenVMS, programmers write distributed applications that run across a heterogeneous environment of systems. COM for OpenVMS V1.4 is based on Microsoft's COM that shipped with Windows NT 4.0 SP5 and implements on OpenVMS many Microsoft COM features, including activation, automation, monikers, Type Libraries, and structured storage.

A developer might implement COM applications on OpenVMS in the following ways:

- For existing OpenVMS applications and data, a developer can encapsulate an OpenVMS application as a COM object. A Windows COM client can then interact with the existing OpenVMS application and data. This allows business-critical applications and data to stay on the OpenVMS system while making the OpenVMS data and code accessible through a Windows application.
- Use the Active Template Library (ATL) based on Microsoft's ATL V3.0. Using ATL, you can build small, self-contained binaries without requiring any additional runtime DLLs.

This allows business-critical applications and data to stay on the OpenVMS system while making the OpenVMS data and code accessible through a Windows application as follows:

- For existing COM applications on other operating systems, a developer can port COM objects to OpenVMS to take advantage of specific OpenVMS features. This allows you to leave other COM objects associated with the application unchanged on their current platforms, and lets you port only the objects you need to your OpenVMS system. You can then revise the ported code to maximize OpenVMS benefits and at the same time minimize the change to the overall application.
- For new OpenVMS applications, a developer can create a COM server on OpenVMS. COM client applications on Windows NT/Windows 2000 systems, on other OpenVMS systems, or on other COM-enabled operating systems can access this OpenVMS COM server.

To implement COM on OpenVMS, HP has made the following changes to the OpenVMS operating system:

- Added COM APIs to OpenVMS:

HP has added a set of Microsoft COM APIs to OpenVMS. These APIs allow developers to write and debug COM objects on OpenVMS systems.

- Added an OpenVMS Registry:

COM Version 1.4 for HP OpenVMS™
70.45.03

COM applications can add, read, change, and delete the OpenVMS Registry contents. You can view and edit the contents of the OpenVMS Registry either from OpenVMS (using the REG$CP utility or the $REGISTRY system service) or from Windows NT (using RegEdt32).

The OpenVMS Registry also includes IMPORT and EXPORT commands. The EXPORT command allows you to save or export all or part of the OpenVMS Registry database to Windows NT. The IMPORT command allows you to import Windows NT registry keys and values into the OpenVMS Registry.

COM Version 1.4 for OpenVMS supports full NTLM authentication between OpenVMS and Windows NT/Windows 2000.

COM for OpenVMS provides the user with two options for security: Unauthenticated COM and Authenticated COM. These two forms of security are defined as follows:

- *Unauthenticated COM*: The COM process is executed with an OpenVMS security identity only; OpenVMS does not authenticate COM requests from Windows NT/Windows 2000 clients or process any Windows NT/Windows 2000 credentials.
- *Authenticated COM*: The COM server process can execute in the security context of the requesting Windows NT/Windows 2000 client. The COM for OpenVMS server process includes Windows NT/Windows 2000 credentials that OpenVMS can use for OpenVMS Registry access and outbound COM requests. Authenticated COM utilites the implementation of NTLM security on OpenVMS.

For information about development, registry, and authentication in COM for OpenVMS, see the Documentation Section that follows.

HARDWARE SUPPORT

You can run COM for OpenVMS on any Alpha™ CPU, as documented in the *OpenVMS Operating System for Alpha and VAX Software Product Description* (SPD 25.01.xx). The minimum memory requirement for running COM for OpenVMS is 96 MB; however 128MB or higher is recommended.

SOFTWARE REQUIREMENTS

COM for OpenVMS runs on OpenVMS Alpha systems only. The following software is required:

- For OpenVMS systems:
  - — OpenVMS Version 7.3.1 or higher
  - — Advanced Server Version 7.3 or higher for OpenVMS (not required for Unauthenticated COM)
  - — HP C++ Version 6.5 or higher is recommended (for COM for OpenVMS application development)
  - — TCP/IP software supported by OpenVMS DCE. See the *Compaq OpenVMS DCE Software Product Description* (SPD 43.05.xx) for details.
- For developing distributed applications that will run across OpenVMS and Windows NT/Windows 2000, the following software is required for interoperation with Windows NT/Windows 2000 systems:
  - — Windows NT 4.0 with Service Pack 5 (SP5) or higher installed or Windows 2000 with Service Pack 4 (SP4) or higher.
  - — Microsoft Visual C++® (for Windows NT client development and information on MIDL compiler). See the Microsoft website for version requirements (www.microsoft.com).
  - — TCP/IP (needed for OpenVMS connectivity)

OPTIONAL SOFTWARE

None.

GROWTH CONSIDERATIONS

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

DISTRIBUTION MEDIA

COM for OpenVMS development and run-time support is distributed on the OpenVMS e-Business Infrastructure Package CD which accompanies the OpenVMS operating system. See the *OpenVMS e-Business Infrastructure Package Software Product Description* (SPD 80.58.XX) for more information. It is also distributed on the OpenVMS Software Product Library (Consolidated Software Distribution) on CD-ROM.

ORDERING INFORMATION

COM for OpenVMS is orderable as follows:

Every Alpha system on which you want to develop COM applications will require COM Version 1.4 for OpenVMS.

The run-time support for COM for OpenVMS is licensed with the OpenVMS operating system.

The binaries for COM for OpenVMS (both developer and run-time) are included with the OpenVMS e-Business Infrastructure Package which accompanies the Operating System, and on the Alpha Consolidation Service.

COM Version 1.4 for HP OpenVMS™
70.45.03

DOCUMENTATION

The *COM, Registry, and Events for hp OpenVMS Developers Guide* is available on the OpenVMS CD-ROM in PostScript®, PDF, and HTML formats.

SOFTWARE PRODUCT SERVICES

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

SOFTWARE WARRANTY

This software is provided by HP with a 90-day conformance warranty in accordance with the HP warranty terms applicable to the license purchase.

This information is valid at the time of release. Contact your local HP office for the most up-to-date information.

© 2004 Hewlett-Packard Development Company, L.P.

NT, Windows 95, Windows 98, and Windows 2000 are trademarks of Microsoft Corporation. ActiveX, Microsoft, Visual C++, Win32, Windows, and Windows NT are registered trademarks of Microsoft Corporation. Motif is a registered trademark of The Open Group, Inc. PostScript is a registered trademark of Adobe Systems Incorporated. Wind/U is a registered trademark of Bristol Technology, Inc. All other product names mentioned herein may be trademarks of their respective companies.

Confidential computer software. Valid license from HP and/or its subsidiaries required for possession, use, or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Neither HP nor any of its subsidiaries shall be liable for technical or editorial errors or omissions contained herein. The information in this document is provided "as is" without warranty of any kind and is subject to change without notice. The warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.