

## XML Java Technology for HP OpenVMS

### Installation Guide and Release Notes

Version 2.0, based on  
Apache Xerces-Java Version 2.3.0 and  
Apache Xalan-Java Version 2.4.1

### Contents

- » Before Installing XML Java Technology
  - » Hardware prerequisites
  - » Software prerequisites
- » Downloading and Installing XML Java Technology
  - » Downloading the kit
  - » Expanding the kit
  - » Installing the kit
- » After Installing XML Java Technology
- » Removing XML Java Technology
- » Release Notes
- » Support

## Before Installing XML Java Technology

### Hardware Prerequisites

*XML Java Technology for OpenVMS* is available on HP OpenVMS Alpha and HP OpenVMS Industry Standard 64.

The *XML Java Technology for OpenVMS* ZIP file requires approximately 58,000 blocks (29.7 MB) of disk space. Expanding the ZIP file requires an additional 211,000 blocks.

The installation procedure allows you to choose to install some or all of the XML components. The total disk space required is approximately 15,600 to 173,800 blocks, depending on the installation options you choose.

### Software Prerequisites

For Alpha:

HP OpenVMS Alpha Version 7.2-2 (or higher)

- » HP Software Development Kit (SDK) *for the Java™ Platform* Version 1.3.1 (or higher)

For I64:

HP OpenVMS I64 Evaluation Release Version 8.1

» HP Software Development Kit (SDK) *for the Java™ Platform* Version 1.4.2 (or higher) for HP OpenVMS I64

For both Alpha and I64:

» All patches required for the HP SDK *for the Java™ Platform*. Check the SDK documentation for the version of Java you are installing to be sure that you have all prerequisite OpenVMS patches.

Installing on an ODS-5 enabled disk is required. Because of long file names and directory depth issues, the installed code base and the accompanying documentation cannot be guaranteed to function properly in a non-ODS5 environment.

## Downloading and Installing XML Java Technology

### Downloading the Kit

The XML Java Technology for OpenVMS kit is included with the OpenVMS I64 and OpenVMS Alpha layered product distributions. A compressed, self-extracting file is also available for download from the XML for OpenVMS web site at <http://www.hp.com/products/openvms/xml/>.

### Expanding the Kit

To expand the *XML Java Technology for OpenVMS* JAR file, perform the following steps:

Set default to a directory where the installation files can be extracted. You can download and extract the files to either an ODS-2 or an ODS-5 disk. However, you must install the kit on an ODS-5 disk.

For example:

```
$ SET DEFAULT DISK:[EXTRACT]
```

Enter the following commands to extract the files from the XML Java kit. The DEFINE command is required for the JAR command to create the correct directory names. In this example, the JAR file was downloaded to DISK:[DOWNLOADS].

```
$ DEFINE DECC$EFS_CASE_PRESERVE ENABLE
$ jar -xvf DISK:[DOWNLOADS]XML-J-2_0.jar
```

The JAR command extracts INSTALL\_XML-J-2\_0.COM and a number of other files needed to complete the installation.

## Installing the Kit

To install the *XML Java Technology for OpenVMS* kit, enter the following command:

```
$ @[.XML-2_0.KIT]INSTALL_XML-J-2_0
```

Following is an example of an XML Java Technology for OpenVMS installation log. This sample log is from an OpenVMS Alpha installation. The procedure is identical for OpenVMS I64.

```
Welcome to OpenVMS (TM) Alpha Operating System, Version V7.2-2

Username: system
Password:
  Welcome to OpenVMS (TM) Alpha Operating System, Version V7.2-2 on node
MYNODE
  Last interactive login on Wednesday, 25-FEB-2004 16:32:51.91
  Last non-interactive login on Tuesday, 24-FEB-2004 15:15:10.54
```

```
$ @SYS$MANAGER:JAVA$131_SETUP
Setting up symbols for foreign command line usage...
JAVA$FILENAME_CONTROLS now set to: -1
```

```
$ CREATE/DIR DISK:[EXTRACT]
$ SET DEFAULT DISK:[EXTRACT]
$ DEFINE DECC$EFS_CASE_PRESERVE ENABLE
$ jar -xvf DISK:[DOWNLOADS] XML-J-2_0.jar
created: META-INF/
extracted: META-INF/MANIFEST.MF
  created: XML-2_0/
  created: XML-2_0/DOCUMENTATION/
extracted: XML-2_0/DOCUMENTATION/xalan-j-docs-2_0.SAV
extracted: XML-2_0/DOCUMENTATION/xerces-j-docs-2_0.SAV
  created: XML-2_0/EXAMPLES/
extracted: XML-2_0/EXAMPLES/xalan-j-samples-2_0.SAV
extracted: XML-2_0/EXAMPLES/xerces-j-samples-2_0.SAV
  created: XML-2_0/KIT/
extracted: XML-2_0/KIT/DOC_DESCRIPS_XML-J-2_0.TXT
extracted: XML-2_0/KIT/index.html
extracted: XML-2_0/KIT/INSTALL_XML-J-2_0.COM
extracted: XML-2_0/KIT/SRC_DESCRIPS_XML-J-2_0.TXT
extracted: XML-2_0/KIT/UNINSTALL_XML-J-2_0.COM
extracted: XML-2_0/KIT/xalan-j-bin-2_0.SAV
extracted: XML-2_0/KIT/XALAN_SAMPLES_XML-J-2_0.COM
extracted: XML-2_0/KIT/xerces-j-bin-2_0.SAV
extracted: XML-2_0/KIT/XERCES_SAMPLES_XML-J-2_0.COM
extracted: XML-2_0/KIT/XML-J-2_0-TP.COM
extracted: XML-2_0/KIT/XML-J-2_0_INDEX.HTML_TEMPLATE
extracted: XML-2_0/KIT/XML-J-2_0_INDEX.HTML_TEMPLATE2
extracted: XML-2_0/KIT/XML-J-2_0_SetClassPath.com
  created: XML-2_0/SOURCES/
extracted: XML-2_0/SOURCES/xalan-j-src-2_0.SAV
extracted: XML-2_0/SOURCES/xerces-j-src-2_0.SAV
  created: XML-2_0/TOOLS/
extracted: XML-2_0/TOOLS/xerces-j-tools-2_0.SAV
```

```
$ @[.XML-2_0.KIT]INSTALL_XML-J-2_0
```

```
XML-J V2.0 Installation Procedure
```

```
-----
Before installing this kit, please make sure that the following prerequisites
have been met. If they have not been met, the installation procedure may be
unable to complete and may terminate:
```

```
For the Alpha Architecture:
```

- 1) The installed operating system is OpenVMS Alpha V7.2-2 or later.
- 2) Software Development Kit (SDK) for the Java Platform Version 1.3.1 (or higher) is installed, including any required OpenVMS patches.

For the IA64 Architecture:

- 1) The installed operating system is OpenVMS I64 Evaluation Release 8.1 or later.
- 2) Software Development Kit (SDK) for the Java Platform Version 1.4.2 (or higher) is installed, including any required OpenVMS patches.

For either Architecture:

- 3) An ODS-5 enabled disk is available and mounted.

```
*****
                          Note
Questions, where indicated, accept a response of
      "H" to request additional Help and information.
*****
```

Please enter the ODS-5 target destination device and directory or logical name indicating the location where you would like to install XML-J V2.0. This location will become the base directory for XML-J V2.0: (H) [ SYS\$SYSDEVICE:[XML] ] : SYS\$SYSDEVICE:[XML]

#### Documentation

-----

Most documentation is in the form of HTML files. Using a web browser, the documentation can be accessed locally or remotely if served by a locally installed web server, or accessed locally without a web server by accessing the files directly.

Installing documentation is optional. Even if you decide to install none of the documentation, it will still be available to you online.

You can choose to install all of the documentation, or none of it.

```
-----
1.   [ ]      Xerces Java 2 V2.3.0           ~ 47208 blocks
2.   [ ]      Xalan  Java 2 V2.4.1          ~ 71339 blocks
-----
[x] = Selected, [ ] = Not Selected
```

Enter: 1 through 2 - To toggle a selection  
A - To select All documentation  
N - To select No documentation  
Y - To proceed with the installation

A, N, 1-2, or Y : A

```
-----
1.   [x]      Xerces Java 2 V2.3.0           ~ 47208 blocks
2.   [x]      Xalan  Java 2 V2.4.1          ~ 71339 blocks
-----
[x] = Selected, [ ] = Not Selected
```

Enter: 1 through 2 - To toggle a selection  
A - To select All documentation  
N - To select No documentation  
Y - To proceed with the installation

A, N, 1-2, or Y : Y

#### Sources

-----  
The components included in this kit are implemented entirely in Java. It is not necessary to install the sources or to build them. The sources are provided for those that may wish build them in order to do development work in this area.

You can choose to install all of the sources, or none of it.

-----  
1. [ ] Xerces V2.3.0 ~ 16060 blocks  
2. [ ] Xalan V2.4.1 ~ 19155 blocks  
-----

[x] = Selected, [ ] = Not Selected

Enter: 1 through 2 - To toggle a selection  
A - To select All sources  
N - To select No sources  
Y - To proceed with the installation

A, N, 1-2, or Y : A

-----  
1. [x] Xerces V2.3.0 ~ 16060 blocks  
2. [x] Xalan V2.4.1 ~ 19155 blocks  
-----

[x] = Selected, [ ] = Not Selected

Enter: 1 through 2 - To toggle a selection  
A - To select All sources  
N - To select No sources  
Y - To proceed with the installation

A, N, 1-2, or Y : Y

No further questions will be asked.

Installing binaries...  
Xerces-J-2\_0...  
Xalan-J-2\_0...

Installing examples...  
Xerces-J-2\_0...  
Xalan-J-2\_0...

Installing sources...  
Xerces-J-2\_0...  
Xalan-J-2\_0...

Installing documentation...  
Xerces-J-2\_0  
Xalan-J-2\_0

Press the <Enter> key to continue:

XML-J V2.0 Installation complete.

-----  
XML-J\$ROOT, XERCES-J\$ROOT and XALAN-J\$ROOT have been defined.  
The following lines must be added to SYS\$MANAGER:SYLOGICALS.COM so  
that it will be defined each time the system is rebooted.

```
$ define/sys/nolog/trans=concealed XML-J$ROOT SYS$SYSDEVICE:[XML.]
$ define/sys/nolog/trans=concealed XERCES-J$ROOT
SYS$SYSDEVICE:[XML.Xerces-J-2_0.]
$ define/sys/nolog/trans=concealed XALAN-J$ROOT SYS$SYSDEVICE:[XML.Xalan-
J-2_0.]
-----
```

Press the <Enter> key to continue:

```
Post Installation Checkout
-----
```

Verification of the installation can be performed using the XML-J Test Procedure. To run the XML-J Test Procedure, enter the following command:

```
$ @XML-J$ROOT:[XML-J-2_0]XML-J-2_0-TP
```

The file XML-J\$ROOT:[XML-J-2\_0]XML-J-2\_0\_SetClassPath.com has been provided to set up the Java class path for the XML-J Test Procedure. It may also be useful to retain for your own XML applications.

Should you wish to remove XML-J V2.0, enter the following command:

```
@XML-J$ROOT:[XML-J-2_0]UNINSTALL_XML-J-2_0
```

## After Installing XML Java Technology

After the installation is complete, perform the following tasks.

Add the following lines to SYS\$MANAGER:SYLOGICALS.COM so that XML Java Technology is defined each time the system is rebooted.

```
$ define/sys/nolog/trans=concealed XML-J$ROOT ODS5_DISK:[XML.]
$ define/sys/nolog/trans=concealed XERCES-J$ROOT ODS5_DISK:[XML.Xerces-J-
2_0.]
$ define/sys/nolog/trans=concealed XALAN-J$ROOT ODS5_DISK:[XML.Xalan-J-2_0.]
```

**Optionally** run the XML Java Test Procedure. To run the test procedure, enter the following command:

```
$ @XML-J$ROOT:[XML-J-2_0]XML-J-2_0-TP
```

### Interpreting the results of the XML Java Test Procedure

The XML Test Procedure compares the output from the tests with a set of benchmarks. Because of the nature of the tests, some differences between the results and the benchmarks are to be expected. The following describes the common differences which are expected to occur. These differences can be ignored because they do not indicate a potential problem with the XML installation:

Xerces dom.Counter

The output of this program shows the time and count of elements, attributes, ignorable whitespaces, and characters appearing in the document. Three times are shown: the parse time, the first traversal of the document, and the second traversal of

the tree. The times are not likely to match the times in the benchmark; however, the element counts should match.

**Note:** The results produced by this program should never be accepted as true performance measurements.

Following is a session log containing a run of the XML Test Procedure followed by a section showing the differences between the run log and supplied benchmark:

```
$ define/sys/nolog/trans=concealed XML-J$ROOT SYS$SYSDEVICE:[XML.]
$ define/sys/nolog/trans=concealed XERCES-J$ROOT
SYS$SYSDEVICE:[XML.Xerces-J-2_0.]
$ define/sys/nolog/trans=concealed XALAN-J$ROOT SYS$SYSDEVICE:[XML.Xalan-
J-2_0.]
$@XML-J$ROOT:[XML-J-2_0]XML-J-2_0-TP
```

No test specified. All applicable tests will be run.

Starting Xerces-J tests...

```
%DCL-S-SPAWNED, process SYSTEM_77 spawned
%DCL-S-ATTACHED, terminal now attached to process SYSTEM_77
%DCL-S-RETURNED, control returned to process SYSTEM
```

Starting Xalan-J tests...

```
%DCL-S-SPAWNED, process SYSTEM_155 spawned
%DCL-S-ATTACHED, terminal now attached to process SYSTEM_155
%DCL-S-RETURNED, control returned to process SYSTEM
```

Tests complete. Check XML-J\$ROOT:[XML-J-2\_0]XML-J-TP.LOG for errors.

```
$ type XML-J$ROOT:[XML-J-2_0]XML-J-TP.LOG
*****
File XML-J$ROOT:[Xerces-J-2_0.samples.RESULTS]XML-XERCES-TP.OUT;1
49 personal.xml: 580;46;0 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
50 $ java "dom.Counter" -x 5 personal.xml
51 personal.xml: 750/5=150;45;0 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
52 $ java "dom.Counter" -n personal.xml
53 personal.xml: 581;46;0 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
54 $ java "dom.Counter" -N personal.xml
55 personal.xml: 581;46;1 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
56 $ java "dom.Counter" -s personal-schema.xml
57 personal-schema.xml: 1307;30;0 ms (37 elems, 20 attrs, 0 spaces, 268
chars)
58 $ java "dom.Counter" -S personal-schema.xml
59 personal-schema.xml: 1312;28;1 ms (37 elems, 20 attrs, 0 spaces, 268
chars)
60 $ java "dom.Counter" -f personal.xml
61 personal.xml: 575;54;1 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
62 $ java "dom.Counter" -F personal.xml
63 personal.xml: 580;51;1 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
64 $ java "dom.Counter" -v personal.xml
65 personal.xml: 620;44;1 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
66 $ java "dom.Counter" -V personal.xml
67 personal.xml: 626;45;0 ms (37 elems, 18 attrs, 140 spaces, 128 chars)
68 $ set nover
*****
File XML-J$ROOT:[Xerces-J-2_0.samples.benchmarks]XML-XERCES-TP.BMK;1
49 personal.xml: 1054;108;1 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
50 $ java "dom.Counter" -x 5 personal.xml
```

```

51 personal.xml: 1259/5=251;107;1 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
52 $ java "dom.Counter" -n personal.xml
53 personal.xml: 1046;103;1 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
54 $ java "dom.Counter" -N personal.xml
55 personal.xml: 1050;108;1 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
56 $ java "dom.Counter" -s personal-schema.xml
57 personal-schema.xml: 2507;64;1 ms (37 elems, 20 attrs, 0 spaces, 268
chars)
58 $ java "dom.Counter" -S personal-schema.xml
59 personal-schema.xml: 2617;64;0 ms (37 elems, 20 attrs, 0 spaces, 268
chars)
60 $ java "dom.Counter" -f personal.xml
61 personal.xml: 1094;109;1 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
62 $ java "dom.Counter" -F personal.xml
63 personal.xml: 1022;115;1 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
64 $ java "dom.Counter" -v personal.xml
65 personal.xml: 1080;112;0 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
66 $ java "dom.Counter" -V personal.xml
67 personal.xml: 1216;112;0 ms (37 elems, 18 attrs, 140 spaces, 128
chars)
68 $ set nover
*****

```

```

Number of difference sections found: 1
Number of difference records found: 19

```

```

DIFFERENCES
/IGNORE=(SPACING,TRAILING_SPACES,FORM_FEEDS,CASE,BLANK_LINES)/MERGED=1-
XML-J$ROOT:[Xerces-J-2_0.samples.RESULTS]XML-XERCES-TP.OUT;1-
XML-J$ROOT:[Xerces-J-2_0.samples.benchmarks]XML-XERCES-TP.BMK;1
Number of difference sections found: 0
Number of difference records found: 0

```

```

DIFFERENCES
/IGNORE=(SPACING,TRAILING_SPACES,FORM_FEEDS,CASE,BLANK_LINES)/MERGED=1-
XML-J$ROOT:[Xalan-J-2_0.samples.RESULTS]XML-XALAN-TP.OUT;1-
XML-J$ROOT:[Xalan-J-2_0.samples.benchmarks]XML-XALAN-TP.BMK;1

```

To locally access the XML Java reference page, point your browser to the following URL:

```
file:///XML-J$ROOT/XML-J-2_0/index.html
```

## Removing XML Java Technology

To remove the *XML Java Technology for OpenVMS* kit, enter the following command:

```
$ @XML-J$ROOT:[XML-J-2_0]UNINSTALL_XML-J-2_0
```

The following information is displayed:

```
XML-J V2.0 UnInstall Procedure
-----
```

```
Please enter device and directory where XML-J is installed [
SYS$SYSDEVICE:[XML] ] :
```



\*\*\*\*\* Warning \*\*\*\*\*

This procedure will delete all files in the following directories and all subdirectories of the following directories. You may wish to preserve any changes and additions you have made before continuing with this procedure.

```
SYS$SYSDEVICE:[XML.Xerces-J-2_0...]  
SYS$SYSDEVICE:[XML.Xalan-J-2_0...]  
SYS$SYSDEVICE:[XML.XML-J-2_0...]
```

Files modified by the XML-J installation procedure will be restored, provided there have been no additional modifications since XML-J was installed.

Would you like to continue this procedure? (Y, N [N]) Y

```
Removing Xerces-J-2_0...  
Removing Xalan-J-2_0...  
Removing XML-J-2_0...
```

XML-J V2.0 Un-Install complete.

#### Note

You may wish to delete the top level directory that the XML-J\$ROOT logical equates to ( SYS\$SYSDEVICE:[XML] ).

You may also wish to remove the XML-J\$ROOT logical name definition from SYS\$MANAGER:SYLOGICALS.COM.

## Release Notes

There are no release notes for the current release of *XML Java Technology for OpenVMS*.

## Support

### Version 2.0 Customer Release Version

Support for *XML Java Technology Version 2.0 for OpenVMS* is provided by the Hewlett-Packard Company under existing OpenVMS service agreements through standard support channels.

See HP support for worldwide support center telephone numbers.

If you do not have a support contract and are not interested in acquiring one, you can informally exchange information with other users in the OpenVMS newsgroup `comp.os.vms`.

For technical feedback to the *XML Java Technology for OpenVMS* engineering team, please send mail to `OpenVMS.eBusiness@hp.com`.