VMS Software

AXIS2 for VSI OpenVMS x86-64

December 2023

`VSI-X86VMS-AXIS2-V0108-0-1.PCSI$COMPRESSED`

1.   Introduction

Apache AXIS2 for VSI OpenVMS is the core engine for implementing web services using the Java programming language. It is a complete redesign and rewrite of the previously used Apache AXIS SOAP stack. This release of AXIS2 for VSI OpenVMS is based on the latest 1.8.0 release from the Apache Software Foundation and includes various new features and bug fixes. The release provides a prebuilt Java servlet (`axis2.war`), which can be deployed within an application server such as Tomcat. Users are strongly encouraged to upgrade to 1.8.0 to take advantage of these improvements and bug fixes.

This VSI OpenVMS port of AXIS2 includes all Apache AXIS2 functionality provided by the open source 1.8.0 release.

2.   Acknowledgements

VMS Software Inc. would like to acknowledge the work of the Apache AXIS2 development team for their ongoing efforts in developing and supporting this software.

3.   What's new in this release

AXIS2 version 1.8-0 for VSI OpenVMS is based on Apache AXIS2 1.8.0, and includes various bug fixes, new features, and enhancements. Most notably, this release includes an updated version of Log4j that addresses security vulnerabilities related to CVE-2021-44228.

For a detailed description of the new features and bug fixes included in this release, please read https://axis.apache.org/axis2/java/core/release-notes/1.8.0.html.

4.   Requirements

The kit you are receiving has been tested using the operating system, Java, and TCP/IP versions listed below. While it is highly likely that you will have no problems installing and using the kit on systems running higher versions of the products listed, we cannot say for sure that you will be so lucky if your system is running older versions.

- VSI OpenVMS x86-64 V9.2-1 or higher

- Apache Tomcat for VSI OpenVMS V8.5-50 or higher

- OpenJDK 8 for VSI OpenVMS x86-64 (any version)

- An ODS-5-enabled disk with at least 180,000 blocks of free disk space

  As with most Java-based applications on OpenVMS, AXIS2 must be installed on an ODS-5-enabled disk.

In addition to the above requirements, it is assumed that the reader has a good knowledge of OpenVMS and of software development using Java-based technologies in the OpenVMS environment.

5.   Recommended reading

It is recommended that developers look at the comprehensive documentation available via the Apache AXIS2 web site (http://axis.apache.org/axis2/java/core/index.html).

6.   Installing the kit

The kit is provided as an OpenVMS PCSI kit (`VSI-X86VMS-AXIS2-V0108-0-1.PCSI`) that can be installed by a suitably privileged user using the following command:

```
$ PRODUCT INSTALL AXIS2

Performing product kit validation of signed kits ...

The following product has been selected:
    VSI X86VMS AXIS2 V1.8-0             Layered Product

Do you want to continue? [YES]

Configuration phase starting ...

You will be asked to choose options, if any, for each selected product and
for any products that may be installed to satisfy software dependency
requirements.

Configuring VSI X86VMS AXIS2 V1.8-0

    VMS Software Inc. and The Apache Software Foundation.

* This product does not have any configuration options.

Execution phase starting ...

The following product will be installed to destination:
    VSI X86VMS AXIS2 V1.8-0             DISK$V921_BULOVA:[VMS$COMMON.]

Portion done: 0%...90%...100%

The following product has been installed:
    VSI X86VMS AXIS2 V1.8-0             Layered Product
```

6.1.   Post-installation steps

The command procedure `@SYS$MANAGER:AXIS2$DEFINE_LOGICALS.COM` can be used to define the logical name `AXIS2$ROOT` for your system. VMS Software Inc. recommends you include this command procedure in `SYSTARTUP_VMS.COM`.

To deploy the AXIS2 servlet in Tomcat, copy the file `axis2.war` to your Tomcat `webapps` directory. For example:

```
$ copy axis2$root:[000000]axis2.war tomcat$root:[webapps]
```

After this file is copied, you can verify that AXIS2 for OpenVMS is deployed correctly by accessing the following web address using your browser:

http://nodename:8080/axis2

From this page you can validate that the AXIS2 Tomcat application has access to all of the required jar files. Be sure to copy the `axis2.war` file into the `webapps` directory in lower case, otherwise it will be deployed as http://nodename:8080/AXIS2 (as with most Java applications, Tomcat is very case-sensitive).

Note that depending on Tomcat version it may be necessary to explicitly start the AXIS2 application via the Tomcat Web Application Manager after deploying.

6.2. Privileges and quotas

Apache AXIS2 is a large and complex Java-based product and accordingly it can require considerable resources to operate efficiently. The following quotas should be adequate for most purposes; however, resource usage should be monitored, and quotas adjusted as necessary.

```
Maxjobs:          0  Fillm:     2048  Bytlm:       800000
Maxacctjobs:      0  Shrfillm:     0  Pbytlm:           0
Maxdetach:        0  BIOlm:      150  JTquota:       4096
Prclm:          100  DIOlm:      150  WSdef:         4096
Prio:             4  ASTlm:      300  WSquo:         8192
Queprio:          4  TQElm:      100  WSextent:     16384
CPU:         (none)  Enqlm:     8000  Pgflquo:    3000000
```

In most cases AXIS2 will be used in conjunction with the Apache Tomcat web server. Quota and tuning recommendations for Apache Tomcat are applicable to AXIS2-based web services deployed under Tomcat.

7. What's missing?

The supplied Apache AXIS2 kit for OpenVMS includes all functionality supported by the Open Source AXIS2 1.8.0 release.