Externalized authorization for applications

The Axiomatics Policy Server (APS) provides a complete authorization infrastructure that scales with the needs of the enterprise. Its dynamic authorization capabilities have been designed to address the access-control needs of a broad range of systems and organizations.

The Axiomatics Services Manager (ASM), a web-based management console, allows administrators to manage the following components from a central point:

- **Authorization Services** all share the same set of policies and configurations and are managed in **Authorization Domains**. Each instance of an Authorization Service can provide one or more of the following capabilities:
  
  a. **PDP** - a Policy Decision Point for XACML 3.0 request/response services
  b. **ARQ SQL** - an Axiomatics Reverse Query service that applies authorization decisions for database access by returning a SQL SELECT statement that aligns with authorization policies
  c. **ARQ Raw** - an Axiomatics Reverse Query service that returns authorization decisions in a native, XML-based format for further processing client-side

- **Attribute Sources** are centrally managed Policy Information Points (PIPs) configured to retrieve attributes from data sources such as LDAP directories and SQL databases.

- The **Attribute Dictionary** is a centrally maintained repository of XACML attributes.

- Three policy authoring tools are included to provide users with a range of policy writing options:
  1. A **Policy Editor** with a graphical user interface is built into the Services Manager to simplify policy creation and maintenance
  2. A **Policy Administration Point** (PAP) client, a full-blown XACML editor, provides comprehensive XACML policy authoring capabilities
  3. The **ALFA** language in an Eclipse plug-in turns your IDE into an XACML policy programming tool

**Policy Enforcement Point** (PEP) **SDKs** are used to create PEPs that can be deployed in different environments to send access control queries to the centrally managed Authorization Services. PEP SDKs are available on the Axiomatics Support Web.
Axiomatics Policy Server 6.2 specifications

Hardware requirements

- x86-64 CPU
- 2 GB minimum memory, 4 GB recommended
- 900 MB disk space, 2 GB recommended

Operating systems

Axiomatics Policy Server uses a Java Virtual Machine. It can therefore run on a broad variety of systems, such as:

- Windows Server 2012 and 2008 R2
- Redhat Enterprise Linux 5, 6, and 7
- CentOS 5, 6, and 7
- Ubuntu Server 12.04 LTS, 14.04 LTS
- SUSE Linux Enterprise Server 11 and 12

Client access protocols

- Native Java
- SOAP
- REST

Attribute retrieval

- Any LDAP v3 compliant directory with Java LDAP implementation
- Any JDBC 4 compliant SQL database
- Easy-to-use API for plug-ins connecting to custom data sources

Java JVM

- Oracle Java 7 or 8 JDK 64-bit

Protocol stacks

Metro Web Services Stack 2.3

Databases for ASM configurations

- Oracle 11g and 12c
- SQL Server 2008 and 2012
- PostgreSQL 9
- IBM DB2 (LUW) 9.7, 10.1, and 10.5

Application servers

- Tomcat 7 and 8
- 64-bit IBM WebSphere Application Server (WAS and WAS ND), versions 7.0, 8.0 and 8.5

Policy Administration Points

- Policy Editor with web-based graphical user interface is built into the Services Manager
- Java XACML Policy Administration Point (PAP) is supported on Windows platforms only
- Axiomatics Language For Authorization (ALFA) is a plugin for the Eclipse IDE

Policy Enforcement Points

Policy Enforcement Points (PEPs) for a broad variety of environments and applications can be created with related PEP SDKs for Java or .NET. Minimum memory: 2 GB