Introduction to Sun ONE Application Server 7

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The Sun™ ONE Application Server 7 provides a high-performance J2EE platform suitable for broad deployment of application services and web services. It offers a new modular architecture based on industry standard components, including proven implementations of the HTTP server infrastructure, Java Message Service (JMS), and rigorous support of the latest Java 2 Platform, Enterprise Edition (J2EE) and web services specifications with J2EE 1.3, J2SE 1.4, and the Java APIs for XML (JAX) from the Java Web Services Pack software.

Product Line Overview

The (This doubles as the Product Intro doc - this info should come from marketing as well)

Sun ONE Application Server is a breakthrough product that raises the bar in application server technologies. It incorporates the latest Java technologies in an easy-to-use, developer-friendly package. The Sun ONE Application Server product leverages over six years of Sun expertise in delivering highly scalable application server technology, enabling developers to rapidly build robust applications that are based on JavaServer Pages (JSP™) technology, Java Servlet, and Enterprise JavaBeans™ (EJB™) technology. This technology supports a broad range of business requirements from small departmental applications to enterprise-scale, mission-critical services. Three editions of the application server are offered to suit a variety of needs for both production and development environments:

- Platform Edition
- Standard Edition
- Enterprise Edition

Platform Edition

Platform Edition forms the core of the Sun ONE Application Server 7 product line. This product offers a high-performance, J2EE 1.3 specification-compatible runtime environment that is ideally suited for basic operational deployments, as well as for embedding in third-party applications.

Platform Edition deployments are limited to single application server instances (that is, single virtual machines for the Java platform (Java virtual machine or JVM™)). Multi-tier deployment topologies are supported by the Platform edition, but the web server tier proxy does not perform load balancing. In Platform Edition, administrative utilities are limited to local clients only.

The Platform Edition of Sun ONE Application Server 7 is scheduled to be integrated into Solaris 9 from early 2003 onward.

Standard Edition

The Standard Edition builds on the functionality of the Platform Edition, and layers enhanced remote-management capabilities which allows the management of multiple application server instances from a central administration station. This edition also includes the ability to partition web application traffic through a web server tier proxy. Standard Edition supports configuration of multiple application server instances per Administration Domain. Additionally, you can use SNMP to monitor your Standard Edition application server. Sun ONE Directory Server is bundled with Standard Edition for user authentication and limited application configuration storage.

Enterprise Edition

Enterprise Edition enhances the core application server platform with high availability, load balancing and cluster management capabilities suited for the most demanding J2EE-based application deployments. The management capabilities of the Standard Edition are extended in Enterprise Edition to account for multi-instance and multi-machine deployments.

Clustering support includes easy-to-configure groups of cloned application server instances to which client requests can be load balanced. Both external load balancers and load balancing web tier-based proxies are supported by this edition. Session failover for various application server components are included in the Enterprise Edition. The patented "Always On" highly available database technology forms the basis for the high availability persistence store in the Enterprise Edition.

For more product information, see the Sun ONE Application Server page on the Sun Microsystems web site, http://www.sun.com. Also review the Supplemental Terms included in the product (accepted during installation or download) to understand your rights for each edition of the application server.

Key Features

The Sun ONE Application Server 7 product includes the following components:

- Application Server
  - ❍ Sun ONE Messages Queue 3.0.1
  - ❍ PointBase Database Server and Type 4 JDBC Driver
  - ❍ Java 2 Software Development Kit, Standard Edition 1.4.0_02
- Sun ONE Studio 4, Enterprise Edition for Java Plugin Module (trial license)

Application Server

The Application Server is J2EE 1.3 certified and supports all included specifications.

- Supports the Java Web Services APIs:
  - ❍ JAX-P
  - ❍ JAX-M
  - ❍ JAX-RPC
  - ❍ JAX-R
  - ❍ SAAJ
- Core Runtime Including Runtime Control, Process and Thread Management
- HTTP Server Based on Sun ONE Web Server
- Embeds a highly scalable and high-performance CMP runtime
- JTS-based, All Java Transaction Manager
- Object Request Broker (ORB)
- SNMP Agent (placed after ORB)
- HTTP Proxy Plugin (placed after SNMP Agent)
- J2EE Verifier Utilities
- Apache Ant and Sun Optional Tasks

- Administrative Capabilities

  - Web-based Administration Interface with local and remote (Standard Edition and higher) administration.Server JMX technology used for internal underlying administration infrastructure.

  - Full-featured, Command-line Interface Local and Remote (Standard Edition and higher) operation. Command line with interactive and scripting mode.

- Multiple Administrative Domains capabilities for creating wholly separate application server configurations. Provides multiple instances in each domain (Standard Edition).

- Java Authentication and Authorization Service support. Multiple authentication realms including file, Solaris realms and LDAP. Bundled Sun ONE Directory Server for authentication use (Standard Edition and higher).

- Additional Facilities

  - J2EE Application Verification Utilities

  - Apache Ant and Sun Optional Tasks

Sun ONE Messages Queue 3.0.1

Also available as a separate product, the Sun ONE Message Queue 3.0.1 product (formerly known as iPlanet Message Queue) is an integral part of the of the application server. This all-Java component delivers a robust JMS provider for both JMS clients and message-driven beans. It is extremely scalable, wit high-performance. The Platform Edition and Standard Edition of the Sun ONE Application Server include the Sun ONE Messages Queue 3.0.1, Platform Edition. To get enhanced JMS features, the Sun ONE Messages Queue 3.0.1, Enterprise Edition can be separately purchased. Once a license key for the Sun ONE Messages Queue 3.0.1, Enterprise Edition is purchased, the enhanced functionality can be used with the Sun ONE Application Server, Platform or Standard Edition.

PointBase Database Server and Type 4 JDBC Driver

PointBase Server 4.2 relational database is included with the Sun ONE Application Server to support the bundled sample applications and development of JDBC-based applications. PointBase's Type 4 driver supporting the JDBC™ API ("JDBC driver") is preconfigured during installation. Tables are also created and populated for all of the sample applications that depend on JDBC. The bundled PointBase distribution has a 5 Mb total database size limitation.

Java 2 Software Development Kit, Standard Edition 1.4.0_02

Sun ONE Application Server is certified with the J2SE 1.4.0_02, SDK and leverages the performance and feature improvements that are part of the J2SE 1.4 platform.

Sun ONE Studio 4, Enterprise Edition for Java Plugin Module

Sun ONE Application Server provides a module which provides rich development features for developing J2EE and Web Services using Studio and the Application Server. This module works with the Sun ONE Studio 4, Enterprise Edition for Java. A trial license for the Sun ONE Studio 4, Enterprise Edition for Java, IDE product is included as part of the application server distribution.

For developers, additional Sun ONE modules for Sun ONE Studio enhance the developer's experience as well as provide rich capabilities, including the Sun ONE Application Builder module and the Sun ONE Connector Builder module.

The Sun ONE Application Builder module provides rapid application development with model-view-controller style applications. The Sun ONE Connector Builder allows the creation of J2EE connector architecture compliant resource adaptors.