

Documentation

Welcome to the Apache Geronimo v3.0 documentation. This is a work in progress and at this point in time we are starting to outline the new features that will become part of this new release, so expect this documentation to be updated frequently. Look into [here](#) to find out which topics are being updated and which ones are completed.

To help you find the content you are looking for we are separating the documentation into different chapters. In a nutshell, you can play with Geronimo by building, deploying and administering, and you can also learn how to develop applications and to get the most of them (and your time) when deploying to Geronimo.

So, how are we doing this? [Check this out!](#)

User Guide

- [Quick start - Apache Geronimo for the impatient](#)
 - [Getting the software](#)
 - [Starting the server](#)
 - [Creating and deploying a sample application](#)
- [What changed in 3.0](#)
 - [New features and enhancements](#)
 - [Component versions](#)
 - [Compatibility with earlier versions](#)
- [Installing and running](#)
 - [Installing prerequisite softwares](#)
 - [Getting and installing Geronimo](#)
 - [Building Geronimo from source](#)
 - [Building Geronimo with Maven](#)
 - [Building Geronimo from Eclipse](#)
 - [Initial configuration](#)
 - [Changing the default port numbers](#)
 - [Changing the username and password](#)
 - [Substituting one module with another](#)
 - [Configuring the OSGi environment](#)
 - [Starting and stopping the server](#)
 - [Running Geronimo](#)
 - [Running Geronimo as a non-root user](#)
 - [Running multiple Geronimo instances](#)
 - [Running Geronimo as a service](#)
- [Configuring and administering](#)
 - [Introducing Geronimo Administration Console](#)
 - [Deploying and administering assets in Geronimo](#)
 - [Managing OSGi Bundles](#)
 - [Deploying and administering applications](#)
 - [Deploying and undeploying applications](#)
 - [Starting and stopping applications](#)
 - [Deploying and administering plugins](#)
 - [Plugin and plugins group](#)
 - [Administering plugins](#)
 - [Converting applications into plugins using the Administration Console](#)
 - [Configuring and administering the Apache Geronimo Server](#)
 - [Configuring the Web container](#)
 - [Adding new listeners](#)
 - [Managing valve](#)
 - [Configuring session manager of Tomcat](#)
 - [Configuring virtual host](#)
 - [Configuring Virtual Host in Tomcat](#)
 - [Configuring Virtual Host in Jetty](#)
 - [Configuring JAX-WS engine](#)
 - [Configuring a remote Apache HTTP server](#)
 - [Configuring the JMS server](#)
 - [Configuring EJB Containers](#)
 - [Clustering and farming](#)
 - [Farming using Deployment](#)
 - [Plugin based Farming](#)
 - [WADI clustering](#)
 - [Tomcat Native Clustering](#)
 - [Customizing server assemblies](#)
 - [Configuring services](#)
 - [Configuring multiple repositories](#)
 - [Adding JARs to the Geronimo repository](#)
 - [Configuring datasources](#)
 - [Configuring JMS resources](#)
 - [Administering security](#)
 - [Basic Hints on Security Configuration](#)

- Configuring JavaEE App Client Security
 - Configuring login modules
 - Replacing default realm in Geronimo
 - Configuring run-as and Default Subjects, and principal-role mapping
 - Administering certificates
 - Administering users and groups
 - Certification authority
 - Creating your keystorefile for SSL authentication
 - Administering security realms
 - Certificate properties file realm
 - Database (SQL) realm
 - LDAP realm
 - OpenID
- Configuring the transaction manager identity
- Creating an embedded database in Geronimo
- Monitoring the health of the Apache Geronimo server
 - Configuring log level
 - Server uptime and resource utilization
 - Monitoring components on Geronimo Server
 - Configuring your own Monitoring Plugin DataSource
 - Displaying JVM information
 - Monitoring Thread Pools
- Extensible Administration Console
 - What is an Extensible Administration Console
 - Planning and installing the Extensible Administration Console
 - Installing an ACE in .war format from an archive file
 - Installing an Administration Console Extension in .car format from a repository
 - Examples
 - Customizing the Extensible Administration Console
 - The Extensible Administration Console architecture
- Creating deployment plans
 - Understanding deployment plans
 - geronimo-web.xml
 - geronimo-ra.xml
 - geronimo-application.xml
 - geronimo-application-client.xml
 - openejb-jar.xml
 - Creating deployment plans for applications
 - Annotations
 - Creating deployment plans for Web applications
 - Creating deployment plans for EJB applications
 - Creating deployment plans for enterprise applications
 - Creating deployment plans for Java EE application clients
 - Creating deployment plans for Java Persistence API
 - Configuring resources in the application scope
 - Naming (JNDI)
 - Creating deployment plans using the deployment plan wizard
- Migrating
 - General considerations for migrating applications from other application servers
 - Migrating from JBoss to Geronimo
 - Using the J2G migration tool
 - EJB-BMP migration
 - EJB-session beans migration
 - Hibernate migration
 - JDBC migration
 - Servlets and JSPs migration
 - Building J2G from source
 - Migrating from Tomcat to Geronimo
 - Migrating from G 2.x to G 3.x
- Developing
 - Fast and easy development
 - Setting up your development environment
 - Installing Geronimo Eclipse Plugin
 - Installing GEP using Eclipse Update Manager
 - Installing GEP within WTP
 - Installing GEP manually

- Installing OSGi Application Development tools
- Configuring your development environment
 - Editing a server configuration in Eclipse
 - Using Eclipse XML tools in Apache Geronimo
 - Assembling a server using GEP
 - Making other configuration changes in Eclipse
- Apache Geronimo Development Tools Project
 - Developing GEP and Geronimo
 - How to Build Geronimo Eclipse Plugin from Source
 - How to Develop Geronimo Eclipse Plugin in Eclipse
- Tutorials
 - Getting familiar with the development environment
 - Configuring application specific logging with Log4j
 - Preparing to run SQL statements at Deployment Time
 - Locating your application specific configuration files
 - Quick Debugging JSPs of your application
 - Using shared libraries in your applications
 - Getting familiar with Geronimo Eclipse Plugin (GEP)
 - Deploying and debugging applications using GEP
 - Converting Applications into Geronimo Plugins using GEP
 - Importing applications built with car-maven-plugin into GEP
 - Making deployment plan changes with Geronimo Deployment Plan Editor
 - Developing Aries applications
 - Developing a Hello World Blueprint application
 - Developing Web applications
 - Developing a Hello World Web application
 - Accessing EJB in Web applications
 - Accessing JDBC in Web applications
 - Accessing JMS in Web applications
 - Developing JavaServer faces applications
 - Basics of JavaServer Faces
 - Developing a Simple JavaServer Faces application
 - Developing user interface with JSF
 - Developing applications with AJAX and JSF
 - Using JSF immediate expressions to access JSP
 - Developing EJB applications
 - Configuring, developing, and deploying enterprise applications with Eclipse and Geronimo
 - Developing EJB applications with Stateless Session Bean
 - Developing EJB applications with Stateful Session Bean
 - Developing JMS applications with Message-Driven Bean
 - Developing JPA applications
 - Developing container managed persistence with JPA
 - Developing bean managed persistence with JPA
 - Developing persistence for JSF applications with JPA
 - Developing application clients
 - Deploying and running EJB application clients
 - Deploying and running Java EE application client

- Deploying and running JPA application client
 - Developing Web services
 - Overview of Web services
 - Web Services Architecture
 - Web Services Description Language (WSDL)
 - Developing Web services
 - Developing a simple Calculator Web service
 - Developing JAX-RPC Web services
 - Developing a JAX-WS POJO Web Service
 - Developing a JAX-WS EJB Stateless Session Bean Web Service
 - Developing Clients for a JAX-WS Web Service
 - Developing SAAJ Messaging Web Services
 - Developing MTOM Web Services
 - Developing a simple RESTful Service
 - Developing Client for RESTful Web Service
 - Migrating from JAX-RPC to JAX-WS
 - WS Addressing
 - Securing your applications
 - Developing an Administrator Console Extension (ACE)
- Reference
 - Tools and commands
 - gogo commands for Geronimo
 - startup
 - shutdown
 - geronimo
 - deploy
 - client
 - jaxws-tools
 - cxf-tools
 - Samples
 - Apache Aries sample applications
 - Java EE sample applications
 - Sample plug-ins
 - Geronimo architecture
 - Topology planning
 - Geronimo directory structure
 - var directory
 - Repositories
 - GBeans
 - Developing and Deploying a Geronimo GBean
 - Geronimo Modules
 - Classloading
 - Plugin Group
 - Connectors and Transaction Management
- Debugging and Troubleshooting
 - Debugging OSGi problems
 - Troubleshooting runtime issues
 - Troubleshooting Web services issues
 - Troubleshooting development issues