

Documentation

Welcome to the Apache Geronimo v2.1 documentation. This is a work in progress and the documentation is to be updated frequently based on the newer release.

To help you find the content you are looking for we are separating the documentation in two main groups, User's guide and Developer's guide. In a nutshell, the former is mostly targeted to system administrators and overall users that will be installing and configuring Geronimo and applications. The latter on the other hand is targeted to application developers, the idea is to provide all the info you need to know 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's guide

- [What is changed in 2.1](#)
 - [Geronimo distributions](#)
 - [Feature enhancements and additions](#)
 - [Custom server assemblies](#)
 - [Geronimo Administration Console](#)
 - [GShell](#)
 - [Clustering Support](#)
 - [Monitoring Console Plugin](#)
 - [Component versions](#)
 - [Configuration changes](#)
 - [Backwards compatibility](#)
 - [Global JNDI for resources and admin objects](#)
 - [RELEASE-NOTES-2.1.7.TXT](#)
 - [RELEASE-NOTES-2.1.6.TXT](#)
 - [RELEASE-NOTES-2.1.5.TXT](#)
 - [RELEASE-NOTES-2.1.4.TXT](#)
 - [RELEASE-NOTES-2.1.3.TXT](#)
 - [RELEASE-NOTES-2.1.2.TXT](#)
 - [RELEASE-NOTES-2.1.1.TXT](#)
 - [RELEASE-NOTES-2.1.TXT](#)
- [Quick start - Apache Geronimo for the impatient](#)
 - [Getting the software](#)
 - [Start the server](#)
 - [Create and deploy a sample application](#)
 - [Summary](#)
- [Installation and configuration](#)
 - [Prerequisite software](#)
 - [Downloading Geronimo](#)
 - [Building from source](#)
 - [Installing Geronimo from binaries](#)
 - [Initial configuration](#)
 - [Available configuration files](#)
 - [Changing the default port numbers](#)
 - [Aliasing modules](#)
 - [Changing the username and password](#)
 - [Topology planning](#)
 - [Two-tier system](#)
 - [Three-tier system](#)
 - [Remote Apache HTTPd](#)
 - [Summary](#)
- [Administration](#)
 - [Administrative Tasks](#)
 - [Administering applications](#)
 - [Installing and removing applications](#)
 - [Starting and stopping application modules](#)
 - [Administering the Apache Geronimo Server](#)
 - [Adding new listeners for the Web containers](#)
 - [Configure JAX-WS engine](#)
 - [Configure log level](#)
 - [Configure secure JMX server](#)
 - [Configuring a remote Apache HTTP server](#)
 - [Configuring the JMS server](#)
 - [Display JVM information](#)
 - [Monitor Server status](#)
 - [Performance monitoring](#)
 - [Starting and stopping the server](#)

- Configuring security
 - Administering certificates
 - Administering security realms
 - Administering users and groups
 - Certificate Properties File Realm
 - Certification Authority
 - Configuring HTTP header-based authentication
 - Configuring Kerberos Realm
 - Configuring SSL client authentication
 - Database (SQL) Realm
 - LDAP Realm
 - Properties File Realm
 - Using SPNEGO in Geronimo
 - Configuring services
 - Adding archives to the Geronimo repository
 - Configuring database pools
 - Configuring JMS
 - Configuring the Transaction Manager Identity
 - Configuring databases in Geronimo
 - Configuring Geronimo as a Windows Service
 - Configuring Virtual Hosts in Geronimo-Jetty
 - Configuring Virtual Hosts in Geronimo-Tomcat
 - Geronimo Administration Console
 - Running Geronimo
 - Multiple Repositories
 - Running Geronimo as a non-root user
 - Running Multiple Instances of Geronimo
 - Tools and commands
- ✓ Monitoring
 - ✓ Configuring your own Monitoring Plugin DataSource
- Deployment
 - What changed ??
 - Deployment Options
 - Standard command line
 - GShell command line
 - Clustered deployment
 - Plugins
 - Console
 - GEP - Eclipse
 - Hot deployment
 - ✓ Plan Creator
 - Annotations
 - Deployment plans
 - ✓ Plan Creator
 - XML Schemas
 - Java EE Deployment Plans
 - Common Elements & Configuration
 - Configurations
 - Connection pools
 - Embedded Derby Database connection pool
 - Embedded ActiveMQ resource adapter
 - Security
 - geronimo-admin security realm
 - Applications
 - Web Application deployment plan
 - EJB Application deployment plan
 - Sample EJB deployment plans
 - Enterprise application deployment plan
 - JEE Application Client deployment plan
 - Message Driven Bean deployment plan
 - Java Persistence API deployment plans
 - Constructing a special-purpose server using maven
- GShell
 - Running GShell
 - Geronimo GShell Commands
 - Starting and Stopping Geronimo in Gshell
 - Connecting to an Already Running Geronimo Instance
- Extensible Administration Console
 - What is it?
 - Installation Planning

- Installing a Console Extension in .war format from an archive file
- Installing a Console Extension in .car format from a repository
- Examples
- Customization
- Architecture
- How to Develop an Administrator Console Extension (ACE)
- Plugin infrastructure
 - What are the plugins?
 - Enhancements from previous releases
 - Plugin infrastructure/architecture
 - plugin.xml
 - Plugins install
 - Pluggable console
 - GShell commands option
- Connectors and Transaction Management (JDBC, JMS, J2CA, DataSource, Connection Pool, EIS)
- Security
 - Basic Hints on Security Configuration
 - Configuring JavaEE App Client Security
 - Configuring login modules
 - Configuring run-as and Default Subjects, and principal-role mapping
 - OpenID
 - Replace default realm with others
- Tooling
 - Devtools
 - Geronimo eclipse plugin
 - j2g
- Migrating to Apache Geronimo
 - Best Practices Tomcat to Geronimo Migration
 - Deployment descriptor changes for going from G 1.1 to G 2.1
 - JBoss to Geronimo - EJB-BMP Migration (Unverified on 2.1)
 - JBoss to Geronimo - EJB-Session Beans Migration
 - JBoss to Geronimo - Hibernate Migration
 - JBoss to Geronimo - JDBC Migration
 - JBoss to Geronimo - Servlets and JSPs Migration
 - Migrating with the J2G Migration Tool
- Clustering
 - Farming
 - Tomcat Native Clustering
 - WADI Clustering Support
- Clients
 - Servlets/EJBs/AppClients
 - Referring to an EJB from outside its EAR
 - Standalone Clients
 - InitialContext configuration
 - Global JNDI names for EJBs
 - Windows Remote EJB Performance
- Troubleshooting
 - Runtime issues
 - Web Services issues
- Sample Applications
 - app-per-port - Running multiple web apps on different ports
 - bank - EJB sample application
 - calculator - Using EJB 3.0 Functions
 - customer - Simple ejb application with a JPA entity
 - dbtester - DB Pool Testing sample application
 - inventory - Simple Database Access Application
 - jaxws-calculator - Simple Web Service with JAX-WS
 - jms-mdb - JMS and MDB Sample Application
 - ldap-sample-app - LDAP Sample Application
 - myphonebook - Very Simple Entity EJB Example
 - mytime - Very Simple Session EJB Example
 - not-in-svn - Inbound JCA example
 - sendmail - Using Geronimo's Default JavaMail Session
 - timereport - Web Application Security Sample

Developer's guide

-  Quick start - fast and easy development
 -  Getting the software
 -  Installing Geronimo Eclipse Plugin
 -  Install GEP Using WTP
 -  Install GEP Using Eclipse Update Manager
 -  Manual Installation of GEP
 -  Defining a New Server Runtime
 -  Package your applications
 -  Deploy your application
 -  Run your application
-  Development environment
 -  Options and tools
 -  Eclipse
 -  Apache Geronimo Development Tools Project
 -  NetBeans
 -  Apache Maven
 -  Web Tools Platform (WTP)
 -  Geronimo Eclipse Plugin
 -  JBoss to Geronimo Migration Tool (J2G)
 -  Maven Integration for Eclipse
 -  Installing Eclipse
 -  WTP All-in-One package
 -  Eclipse and WTP downloaded separately
 -  Using Ant script from GEP build
 -  Installing Geronimo Eclipse Plugin
 -  Install GEP Using WTP
 -  Install GEP Using Eclipse Update Manager
 -  Manual Installation of GEP
 -  Geronimo Server Runtimes and Servers
 -  Defining a Geronimo Server Runtime
 -  Defining a Geronimo Server
 -  Creating a new project
 -  Configuring your development environment
 -  Editing a Server configuration
 -  Other configuration
- Geronimo architecture
 - JEE spec compliance
 - Components/modules
 - Containers
 - Services
 - Database
 - Persistence
 - Web services
 - Security
 - Resource adapters
 - Maven
 - Geronimo plugin architecture
 - Plugable console
 - Repositories
 - GBeans
 - Classloaders
 - APIs
 - Configuration
- Development and deployment planning
 - Configuring Application Specific Logging with Log4j
 - Executing SQL statements at Deployment Time
 - Locating your application specific configuration files
 - Quick Debugging JSPs of your application
 - Using datasource pool wizard in GEP
 - Using security realm wizard in GEP
- Building Geronimo
 - with maven
 - from eclipse
 - Custom server assemblies
- Tutorials
 - Web applications
 -  Hello World Web Application
 -  Web application for JMS access
 -  Web Application for EJB access
 -  Web Application for JDBC access
 -  JavaServer Faces

- ✓ Developing a Simple JavaServer Faces application
 - AJAX with JSF
 - Using JSP Immediate Expressions to access JSF
 - User Interface development with JSF
 - JSF application to perform create, delete, update operation against a database table
- Application clients
 - ✓ Deploy and Run a Java EE Application Client
 - ✓ Developing an Application Client to access EJB
- EJB applications
 - ✓ 5-minute Tutorial on Enterprise Application Development with Eclipse and Geronimo
 - ✓ Stateless Session Bean
 - ✓ Stateful Session Bean
 - ✓ JMS application with Message-Driven Bean
 - Container Managed Persistence with JPA
 - Bean Managed Persistence with JPA
- ✓ Web services
 - ✓ Developing a simple Calculator Web Service
 - ✓ Developing JAX-RPC Web Services
 - ✓ Migrating from JAX-RPC to JAX-WS
 - ✓ 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
 - ✓ RESTful Web Services
 - ✓ Developing a simple RESTful Service
 - ✓ Developing Client for RESTful Web Service
 - ✓ SAAJ Messaging Web Services
 - MTOM Web Services
 - WS Addressing
 - Securing your applications
- Persistence
 - Using Java Persistence API in application client
 - Working with JSF and JPA
- Annotations
 - JAX-WS web service and client using annotations
- Geronimo plugins
 - ✓ Convert your current applications into plugins
 - ✓ Custom server assemblies using Geronimo Administrative console
 - Constructing a special-purpose server using maven
 - Clone your server environment with plugins
- Portlets