

ALPOO – Introdução ao JEE



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JSE e JEE

Diferenças

- O **Java Standard Edition (JSE)** é o coração da tecnologia Java. Nada é feito em Java sem o seu uso!
- O **Java Enterprise Edition (JEE)** é uma plataforma de software utilizada para a criação de aplicações distribuídas fazendo-se uso da linguagem JAVA.
- O JEE acrescenta ao Java SE vários recursos específicos (APIs) para a construção de serviços de software que rodam em servidores de aplicação disponíveis na “Nuvem”.

JSE e JEE

Java EE



Enterprise
Software/
Servers

Java SE



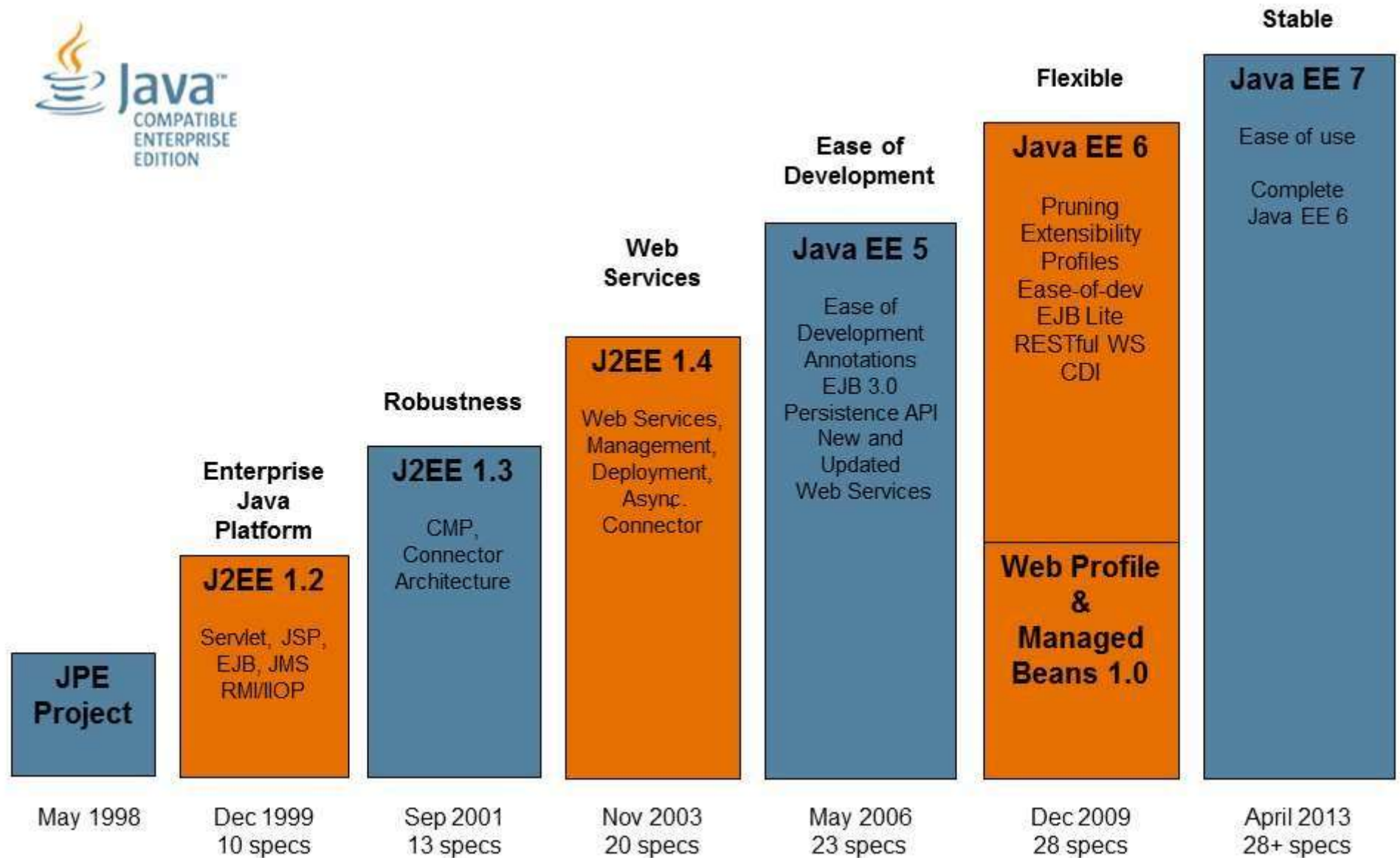
Applications/
Desktop
Software

Java ME & Card



Client
Deployed
Services

Evolução JEE

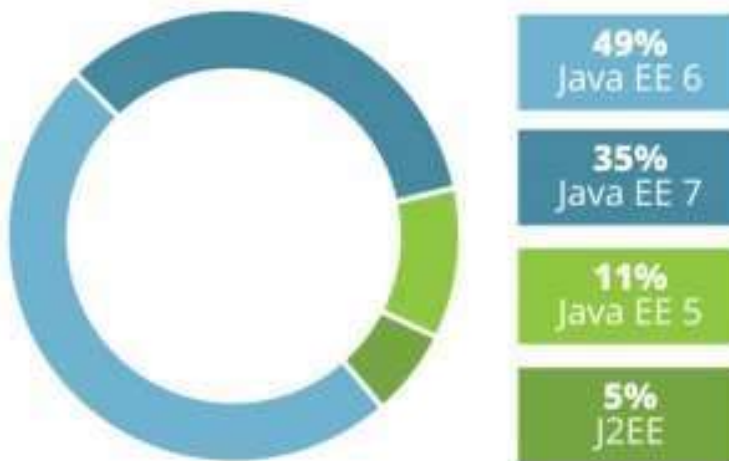


Evolução JEE

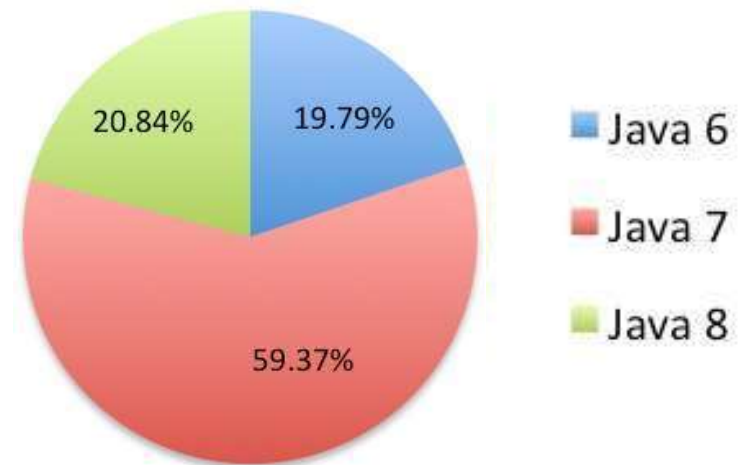
WHO IS USING JAVA EE?



Java EE versions in use*



Java SE versions in use



* The results were normalized to exclude non-users

JEE 7

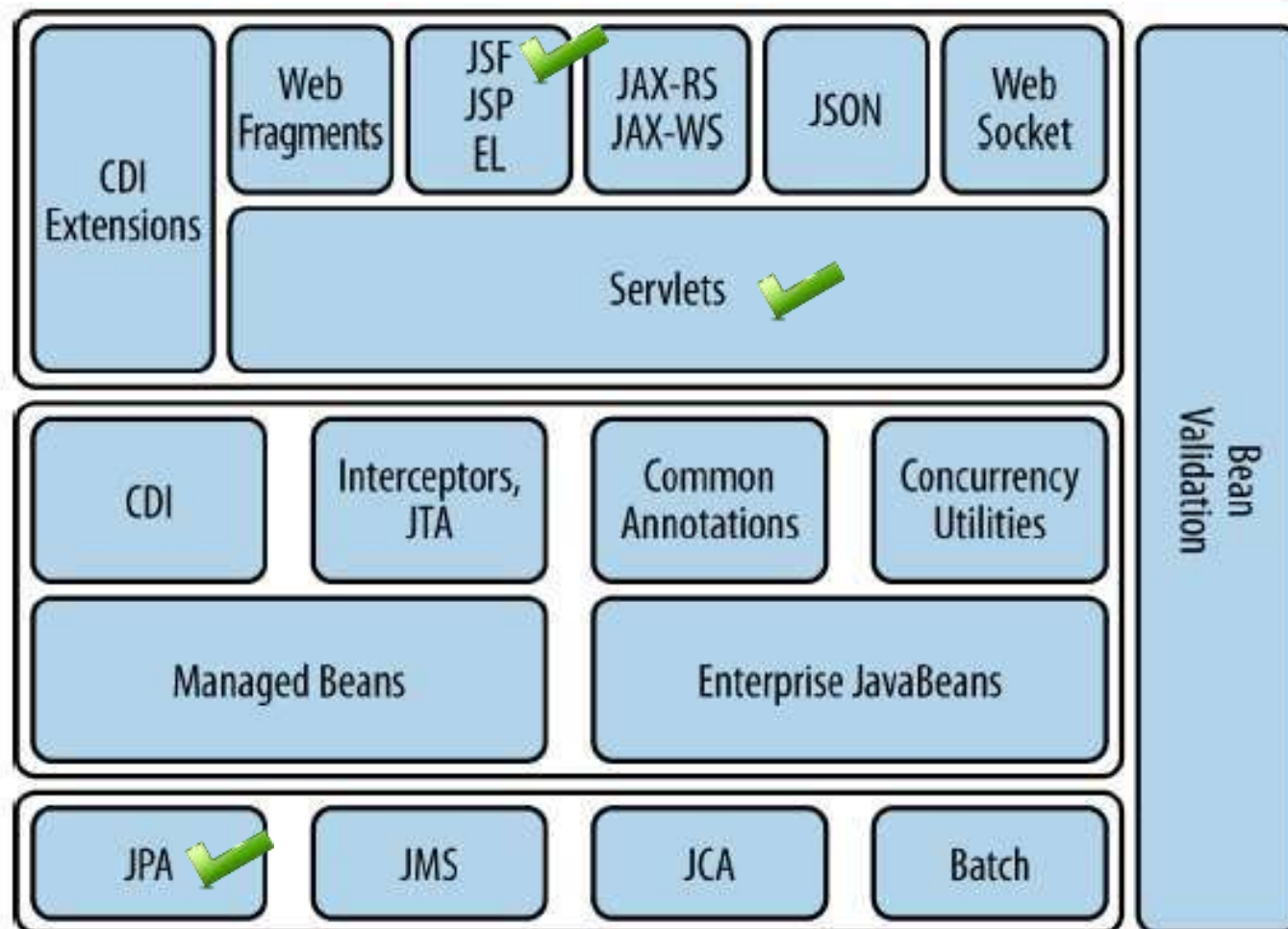
Principais Vantagens:

- A Plataforma Java EE oferece novas bibliotecas que disponibilizam funcionalidades para a criação de software multicamada, tolerante a falhas, distribuído, baseado em componentes modulares e que pode ser executado via Internet (Web).



Arquitetura JEE 7

- A plataforma JEE contém uma série de especificações, cada uma com funcionalidades distintas.



Modelo de Aplicação JEE

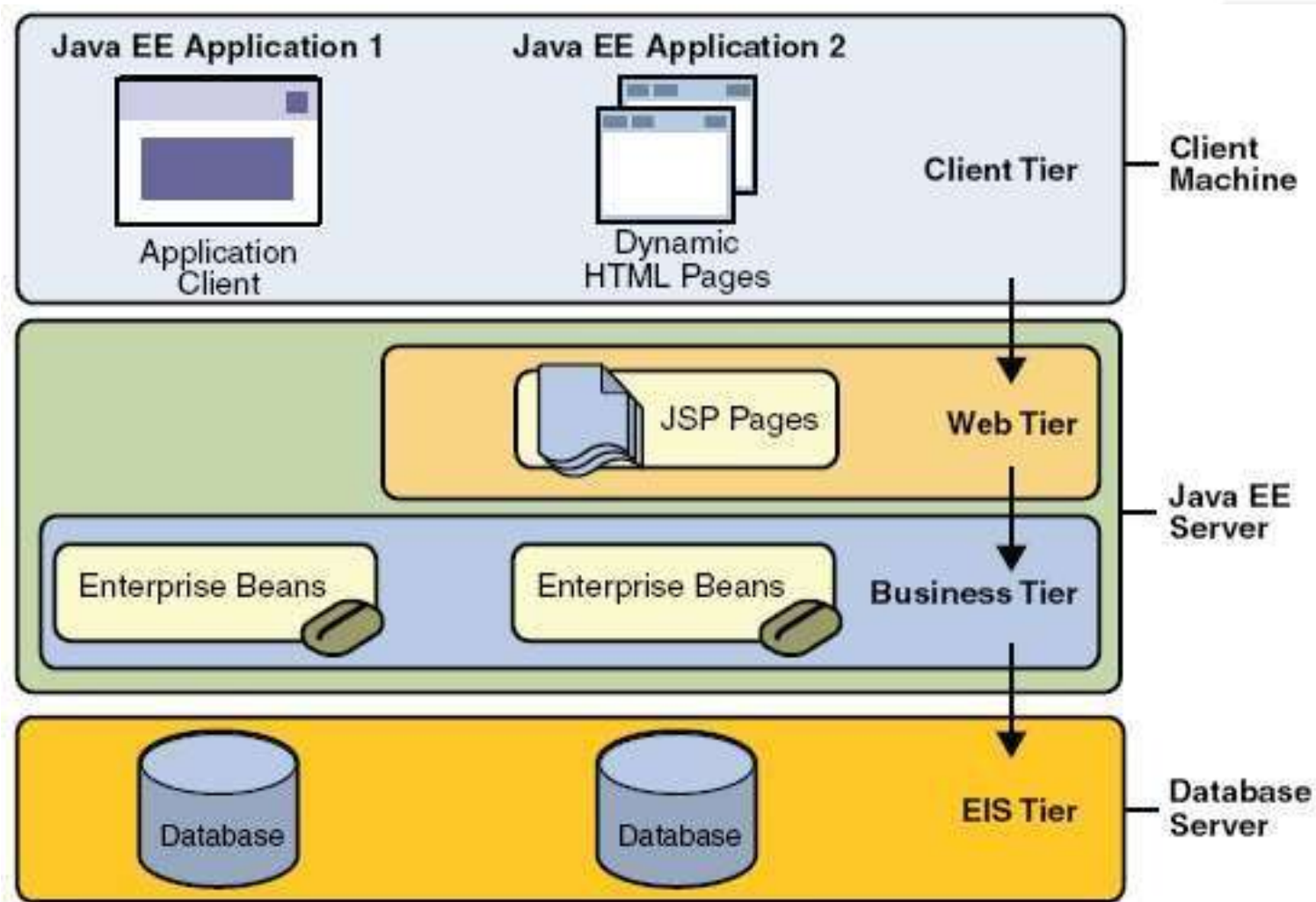
Modelo de Aplicação JEE

- A plataforma JEE utiliza um modelo de aplicação distribuída multicamada.



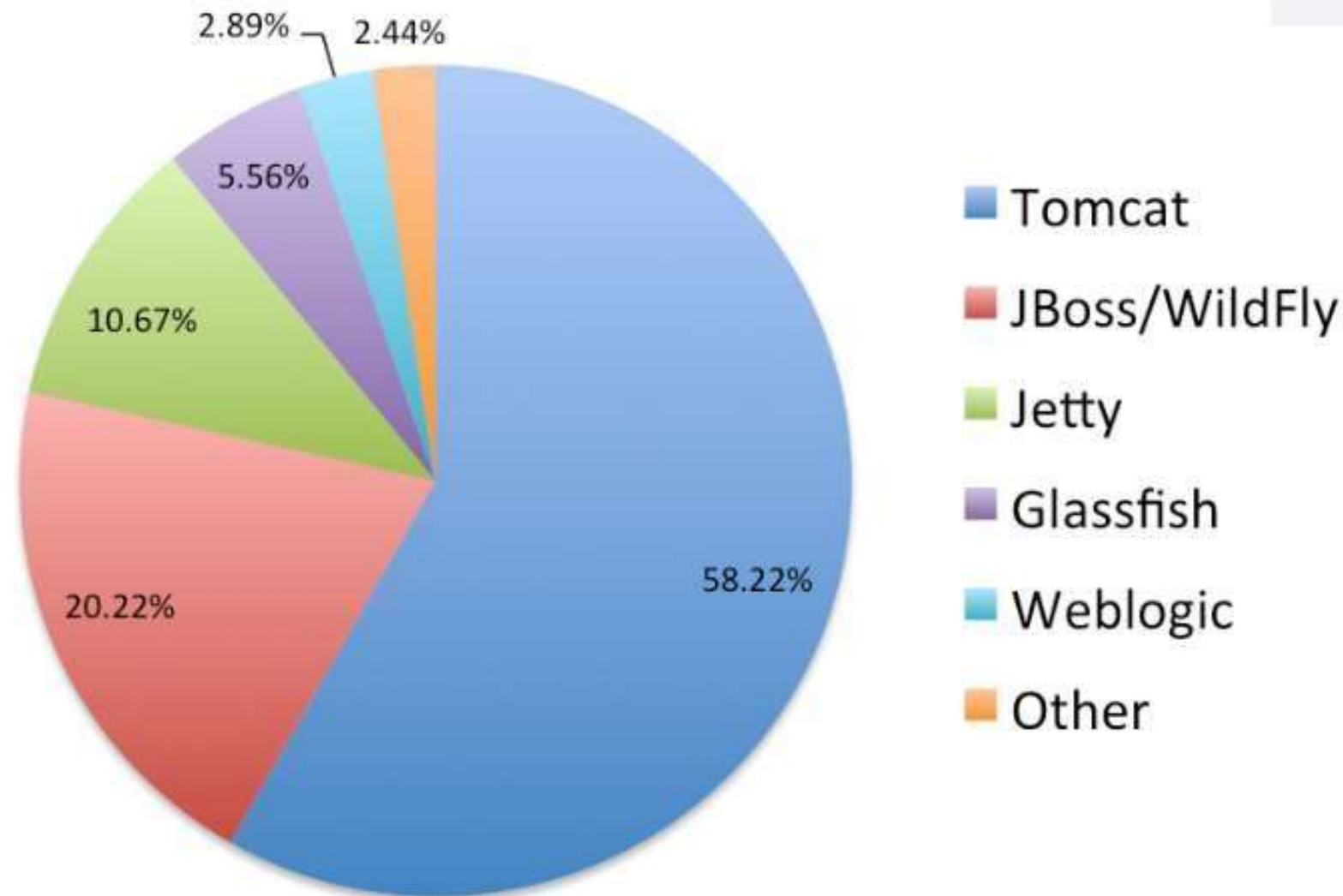
- A lógica da aplicação é dividida em componentes de acordo com a sua função.
- Os vários componentes que constituem uma aplicação JEE são instalados em diferentes equipamentos.

Modelo de Aplicação JEE



Baseado em 04 Camadas: *Client Tier, Web Tier (JEE Server), Business Tier (JEE Server) e Enterprise Information Systems Tier (Database Server)*

Servidores de Aplicação JEE Mais Utilizados em 2016



Instalação do JEE 7 SDK

Obtendo o JEE 7

The screenshot shows the Oracle Technology Network (OTN) website. The top navigation bar includes the Oracle logo, a search bar, and links for Sign In/Register, Help, Country, Communities, I am a..., and I want to... Below this is a secondary navigation bar with links for Products, Solutions, Downloads, Store, Support, Training, Partners, and About. The main content area is titled "Oracle Technology Network > Java > Java EE > Downloads". On the left, there is a sidebar with a list of Java products: Java SE, Java EE, Java ME, Java SE Support, Java SE Advanced & Suite, Java Embedded, Java DB, Web Tier, Java Card, Java TV, New to Java, Community, and Java Magazine. The main content area has tabs for Overview, Downloads, Documentation, Community, Technologies, and Training. The "Downloads" tab is selected, showing the "Java Platform, Enterprise Edition 7 SDK Update 2" page. This page includes a license agreement section and a table of download links. On the right, there are two sections: "Java SDKs and Tools" with links to Java SE, Java EE and Glassfish, Java ME, Java Card, NetBeans IDE, and Java Mission Control; and "Java Resources" with links to Java APIs, Technical Articles, Demos and Videos, Forums, Java Magazine, and Java.net.

Oracle Technology Network > Java > Java EE > Downloads

Overview Downloads Documentation Community Technologies Training

Java Platform, Enterprise Edition 7 SDK Update 2

Java Platform, Enterprise Edition 7 SDK Update 2

You must accept the [Java Platform, Enterprise Edition 7 SDK License Agreement](#) to download this software.

Thank you for accepting the Java Platform, Enterprise Edition 7 SDK License Agreement; you may now download this software.

Product / File Description	File Size	Download
Universal zip Installer	128 MB	java_ee_sdk-7u2.zip

Java SDKs and Tools

- [Java SE](#)
- [Java EE and Glassfish](#)
- [Java ME](#)
- [Java Card](#)
- [NetBeans IDE](#)
- [Java Mission Control](#)

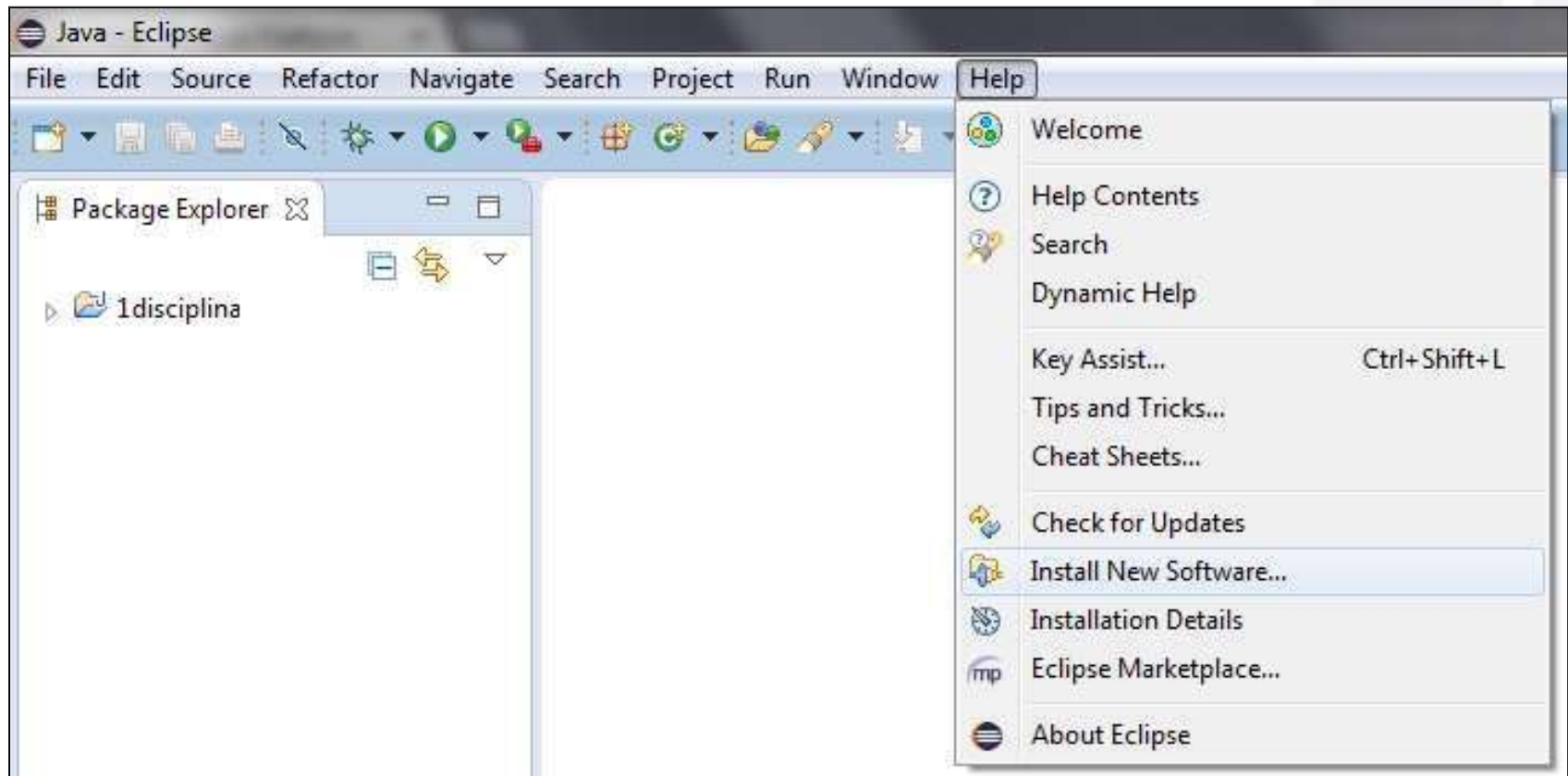
Java Resources

- [Java APIs](#)
- [Technical Articles](#)
- [Demos and Videos](#)
- [Forums](#)
- [Java Magazine](#)
- [Java.net](#)

<http://www.oracle.com/technetwork/java/javaee/downloads/index.html>

Instalação do JEE no Eclipse Luna

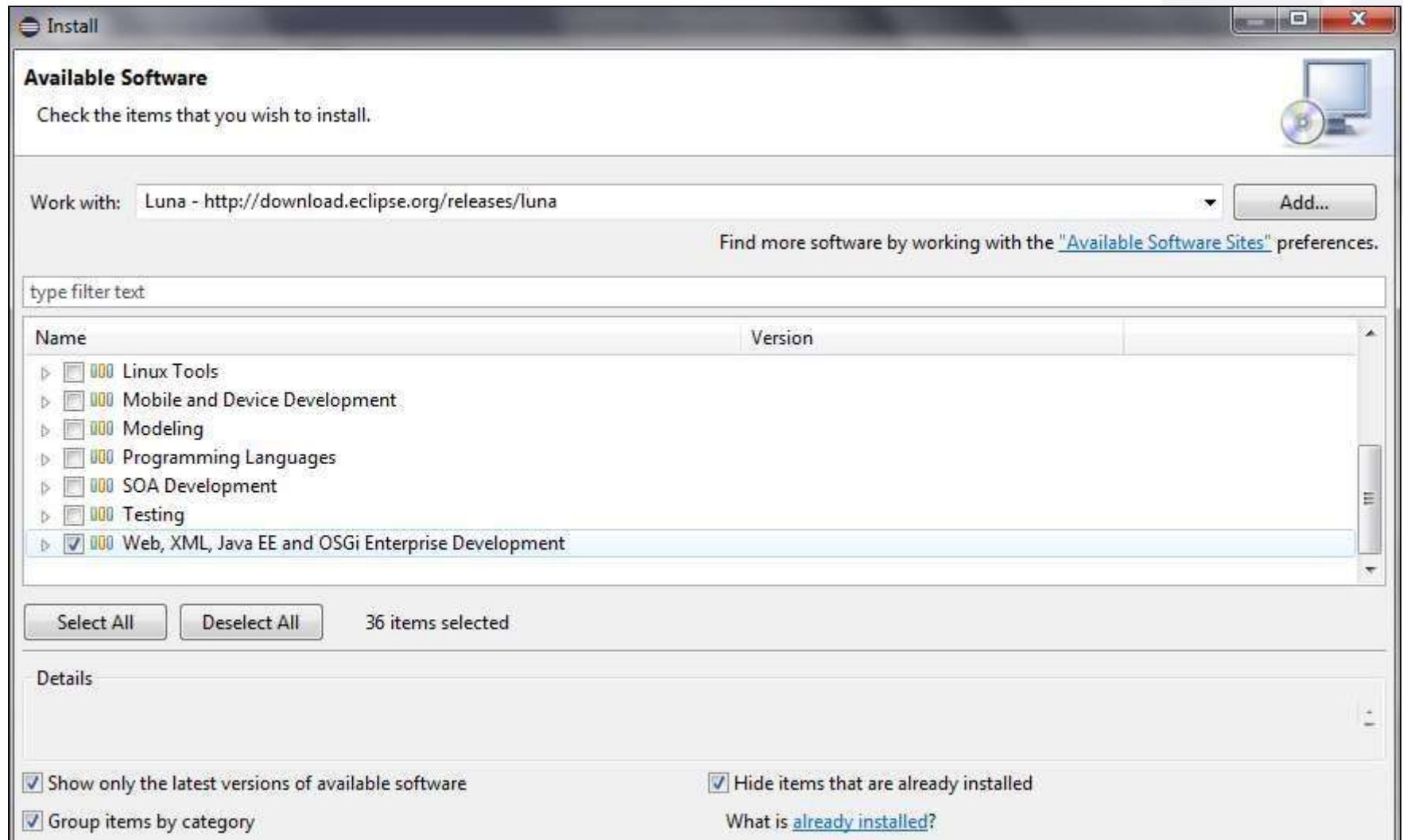
- No Eclipse selecionar o Menu “**Help**” e depois a opção “**Install New Software**”.



- Informar o endereço <http://download.eclipse.org/releases/luna>

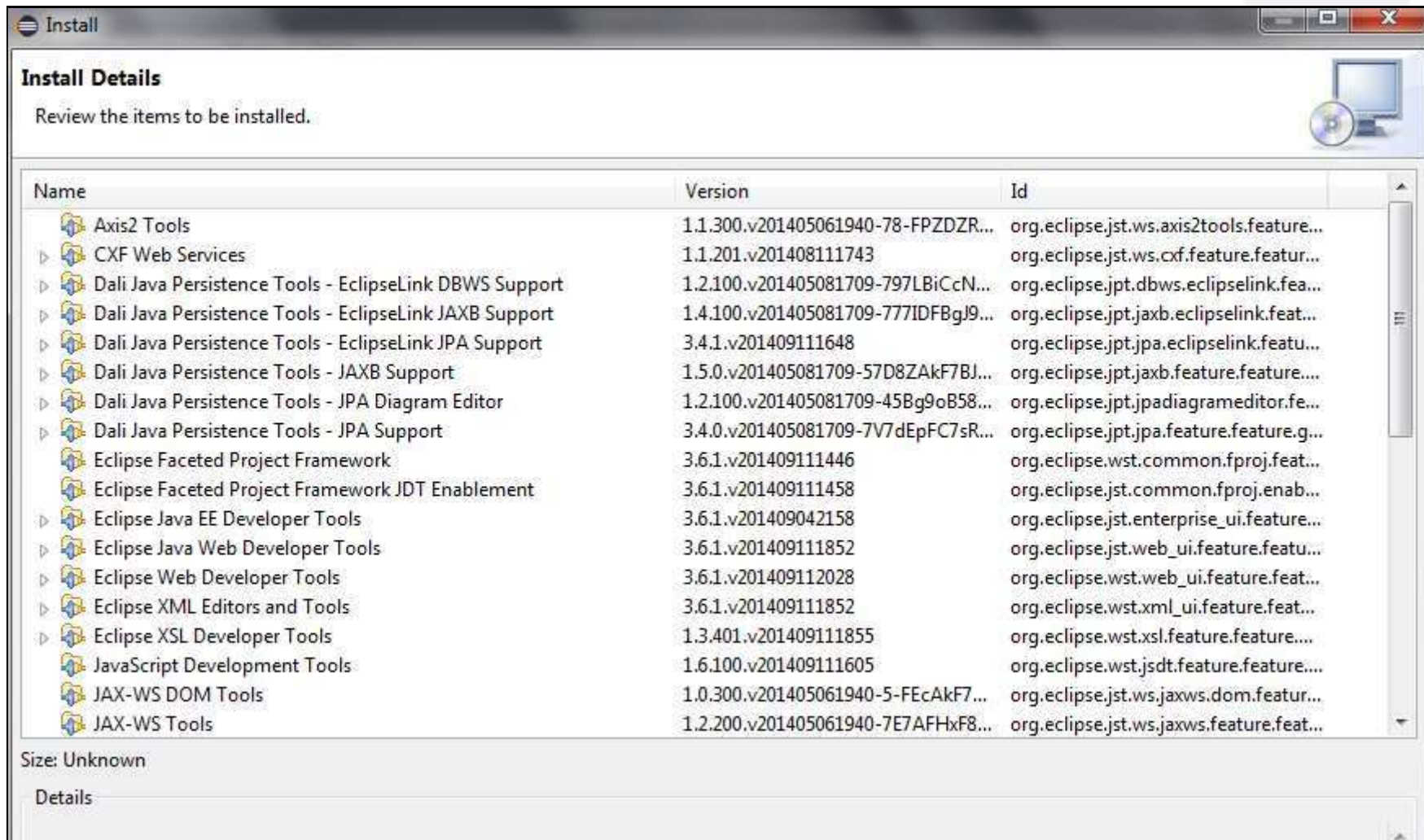
Instalação do JEE no Eclipse Luna

- Na próxima tela, selecionar a opção “**Web, XML, Java EE and ...**” e pressionar o botão “**Next >**”.



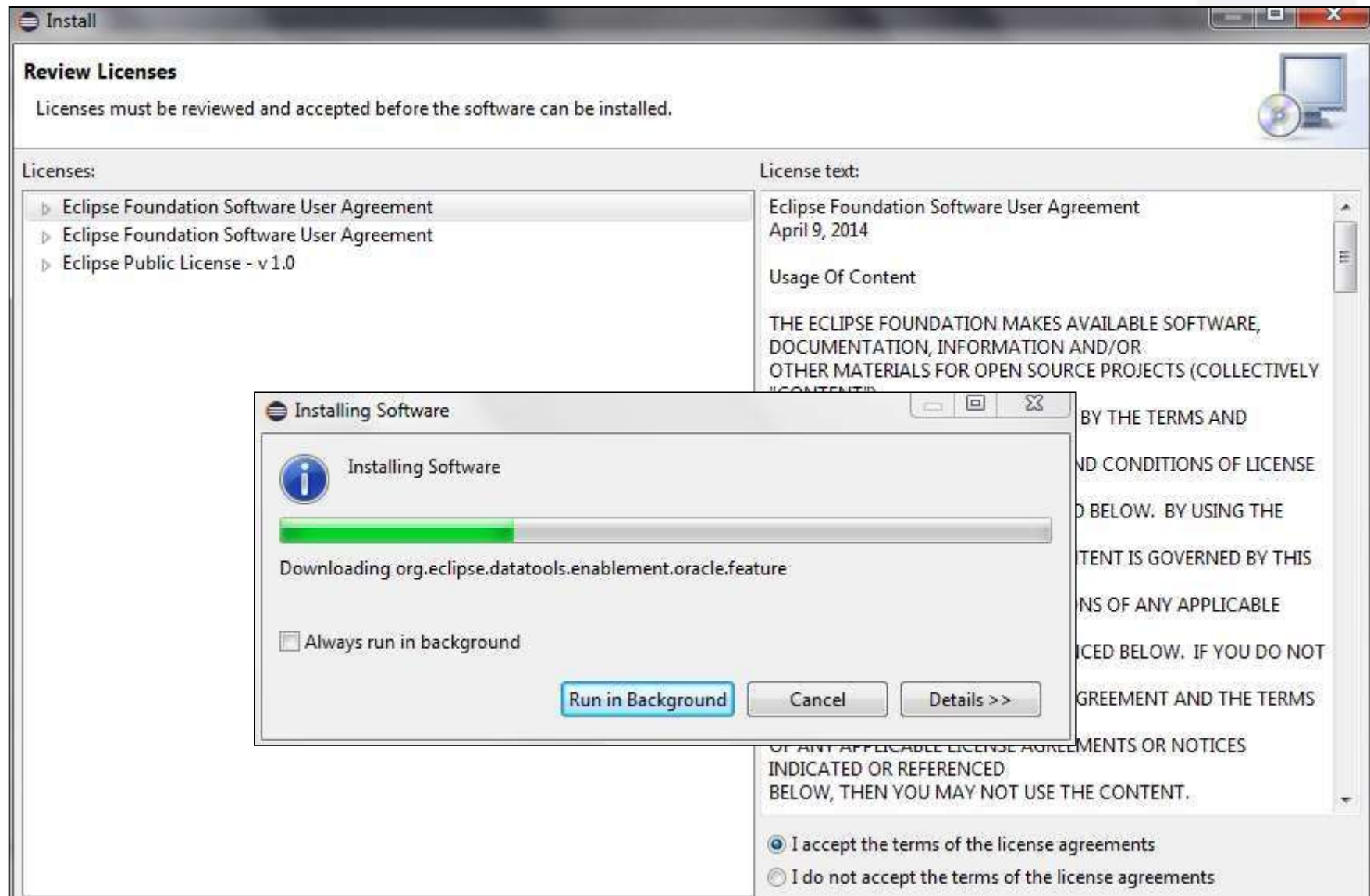
Instalação do JEE no Eclipse Luna

- Na próxima tela, pressionar o botão “**Next >**”.



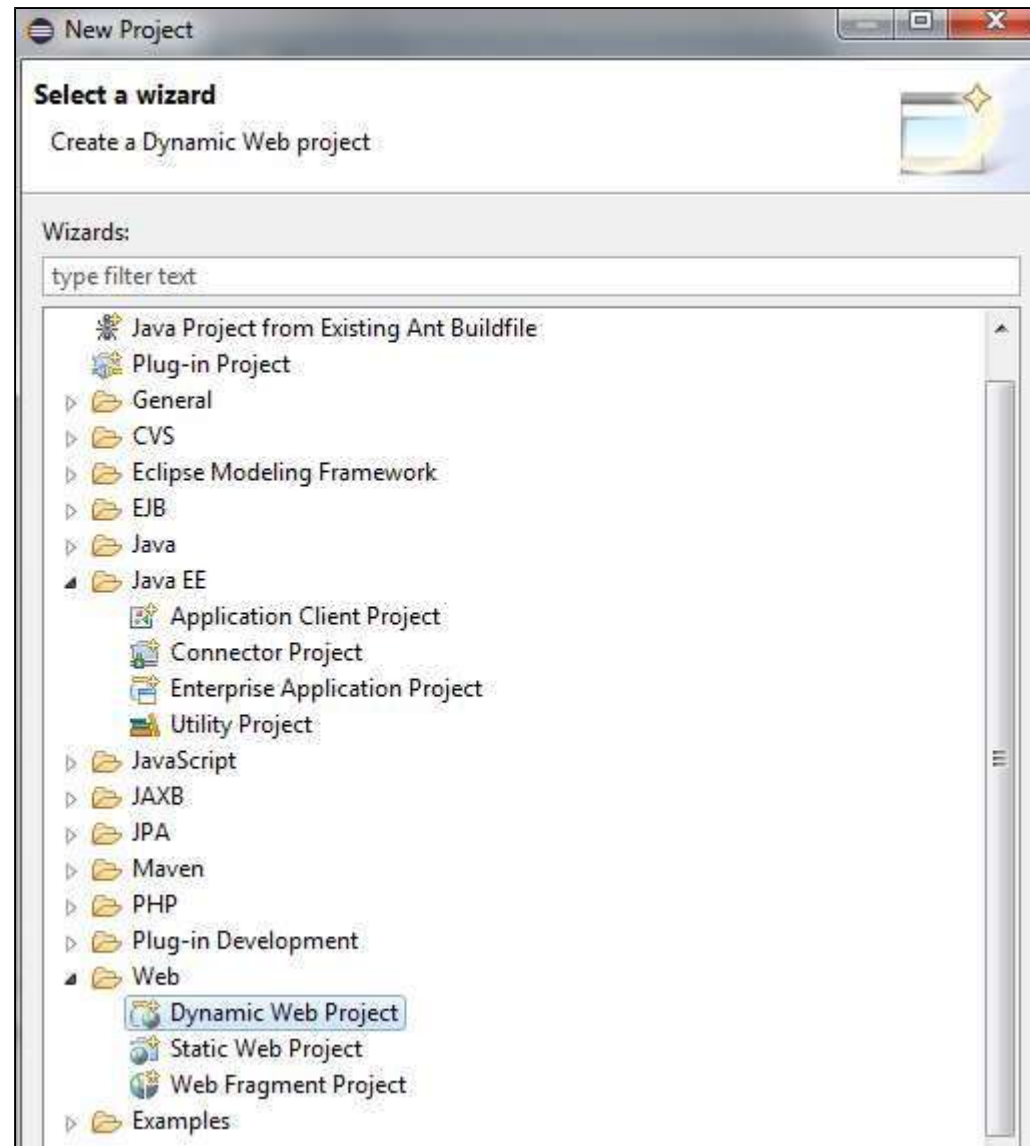
Instalação do JEE no Eclipse Luna

- Na próxima tela, marcar a opção “**I accept ...**” e pressionar o botão “**Finish**”.

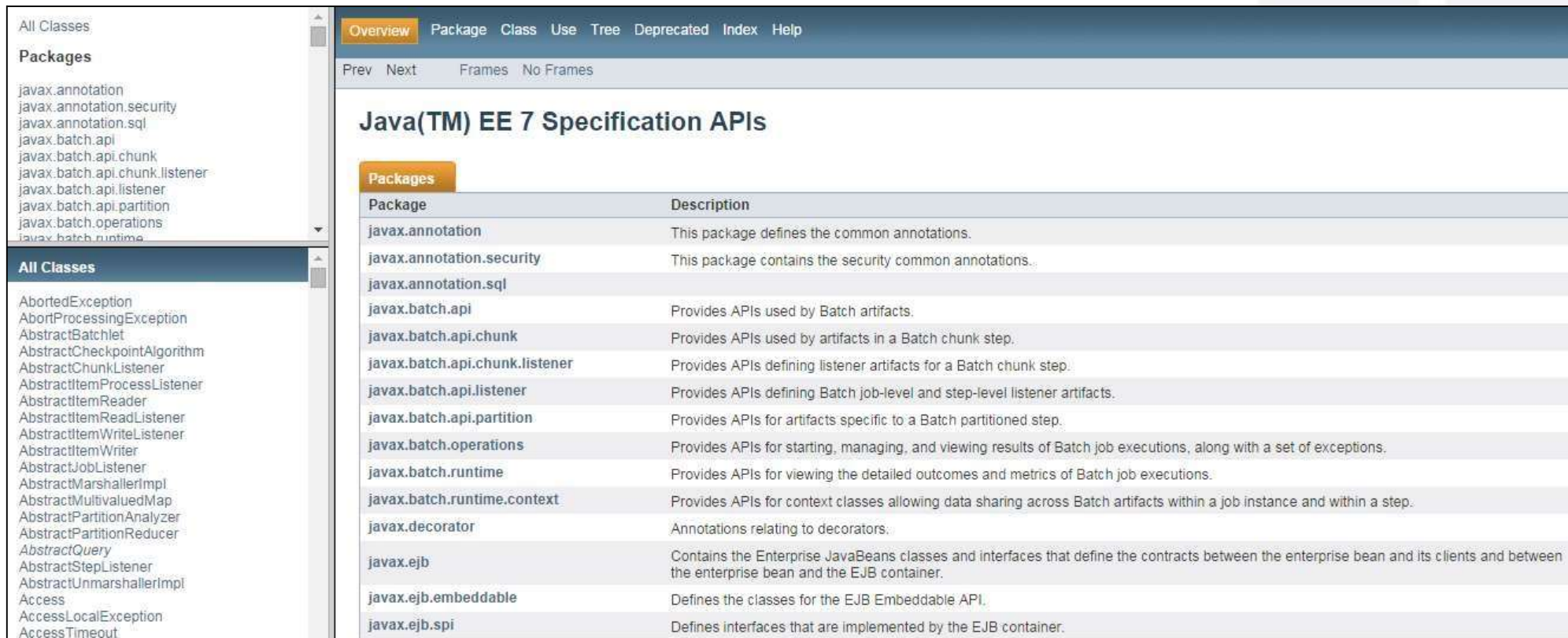


Confirmando a Instalação

- Selecionar “**File -> New Project -> Web -> Dynamic Web Project**”.



Documentação da API



The screenshot displays the Java(TM) EE 7 Specification APIs documentation. The interface includes a sidebar on the left with two sections: 'All Classes' and 'Packages'. The 'All Classes' section lists various classes such as `AbortedException`, `AbortProcessingException`, `AbstractBatchlet`, `AbstractCheckpointAlgorithm`, `AbstractChunkListener`, `AbstractItemProcessListener`, `AbstractItemReader`, `AbstractItemReadListener`, `AbstractItemWriteListener`, `AbstractItemWriter`, `AbstractJobListener`, `AbstractMarshallerImpl`, `AbstractMultivaluedMap`, `AbstractPartitionAnalyzer`, `AbstractPartitionReducer`, `AbstractQuery`, `AbstractStepListener`, `AbstractUnmarshallerImpl`, `Access`, `AccessLocalException`, and `AccessTimeout`. The 'Packages' section lists packages like `javax.annotation`, `javax.annotation.security`, `javax.annotation.sql`, `javax.batch.api`, `javax.batch.api.chunk`, `javax.batch.api.chunk.listener`, `javax.batch.api.listener`, `javax.batch.api.partition`, `javax.batch.operations`, and `javax.batch.runtime`.

The main content area features a navigation bar with tabs: 'Overview', 'Package', 'Class', 'Use', 'Tree', 'Deprecated', 'Index', and 'Help'. Below the navigation bar, there are links for 'Prev', 'Next', 'Frames', and 'No Frames'. The title of the page is 'Java(TM) EE 7 Specification APIs'. Below the title, there is a 'Packages' section with a table listing the packages and their descriptions.

Package	Description
<code>javax.annotation</code>	This package defines the common annotations.
<code>javax.annotation.security</code>	This package contains the security common annotations.
<code>javax.annotation.sql</code>	
<code>javax.batch.api</code>	Provides APIs used by Batch artifacts.
<code>javax.batch.api.chunk</code>	Provides APIs used by artifacts in a Batch chunk step.
<code>javax.batch.api.chunk.listener</code>	Provides APIs defining listener artifacts for a Batch chunk step.
<code>javax.batch.api.listener</code>	Provides APIs defining Batch job-level and step-level listener artifacts.
<code>javax.batch.api.partition</code>	Provides APIs for artifacts specific to a Batch partitioned step.
<code>javax.batch.operations</code>	Provides APIs for starting, managing, and viewing results of Batch job executions, along with a set of exceptions.
<code>javax.batch.runtime</code>	Provides APIs for viewing the detailed outcomes and metrics of Batch job executions.
<code>javax.batch.runtime.context</code>	Provides APIs for context classes allowing data sharing across Batch artifacts within a job instance and within a step.
<code>javax.decorator</code>	Annotations relating to decorators.
<code>javax.ejb</code>	Contains the Enterprise JavaBeans classes and interfaces that define the contracts between the enterprise bean and its clients and between the enterprise bean and the EJB container.
<code>javax.ejb.embeddable</code>	Defines the classes for the EJB Embeddable API.
<code>javax.ejb.spi</code>	Defines interfaces that are implemented by the EJB container.

<http://docs.oracle.com/javaee/7/api/>

- Essa documentação descreve todas as APIs Java e como elas devem ser utilizadas.

Instalação do Servidor Tomcat

Servidor de Aplicação JEE

APACHE TOMCAT

- Desenvolvido pela *Apache Software Foundation*, o Apache Tomcat é o servidor JEE mais popular do mercado, por ser gratuito e possibilitar a execução de Componentes WEB JEE.
- Na época em que foi criado, foi oficialmente endossado pela Sun (antiga proprietária do Java) como a implementação de referência para as tecnologias Java Servlet e JavaServer Pages. Hoje, no entanto, a implementação de referência é o GlassFish.



Apache Tomcat

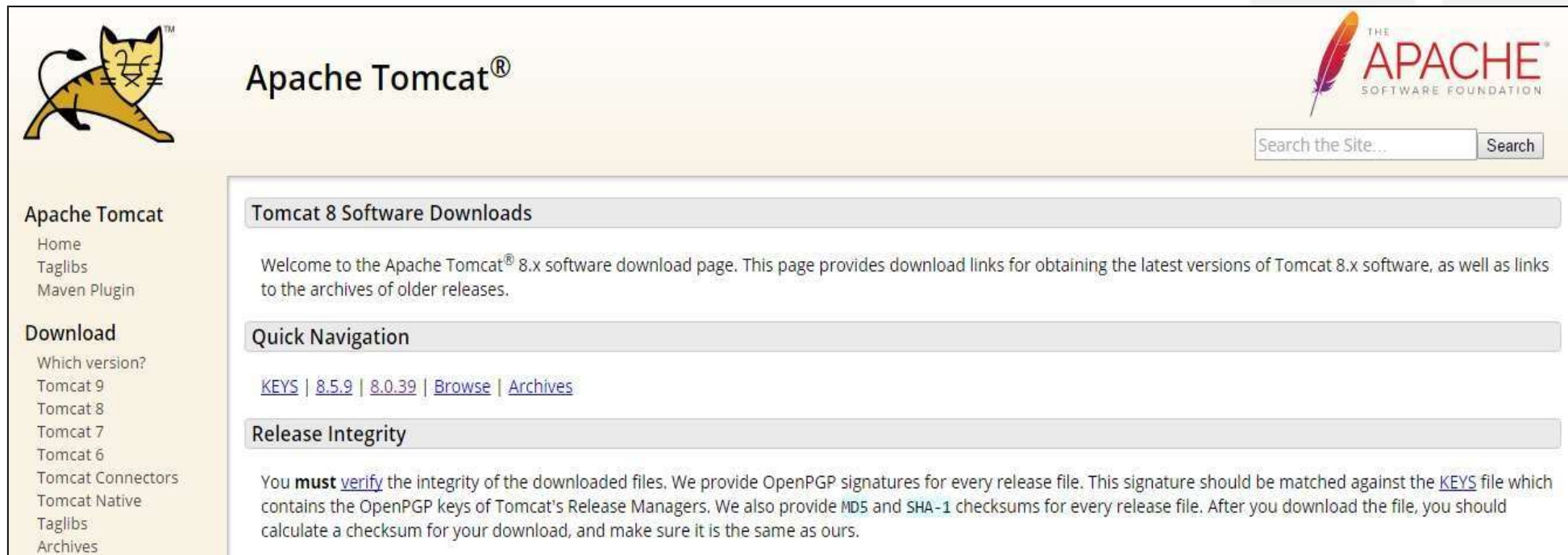
<http://tomcat.apache.org/>

Servidor de Aplicação JEE

APACHE TOMCAT

- Ele cobre parte da especificação Java EE com tecnologias como Java Servlet, JSP e JSF, e tecnologias de apoio relacionadas como Realms e segurança, JNDI Resources e JDBC DataSources. Ele tem a capacidade de atuar também como servidor web, ou pode funcionar integrado a um servidor web dedicado como o Apache ou o IIS. Como servidor web, ele provê um servidor web HTTP puramente em Java.
- O servidor inclui ferramentas para configuração e gerenciamento, o que também pode ser feito editando-se manualmente arquivos de configuração formatados em XML.
- **Versão Atual 8.5.**

Instalação e Configuração do Tomcat



The screenshot shows the Apache Tomcat website's download page. The header includes the Tomcat logo (a yellow cat) and the Apache Software Foundation logo. A search bar is located in the top right. The left sidebar contains navigation links for 'Apache Tomcat' (Home, Taglibs, Maven Plugin) and 'Download' (Which version?, Tomcat 9, Tomcat 8, Tomcat 7, Tomcat 6, Tomcat Connectors, Tomcat Native, Taglibs, Archives). The main content area is titled 'Tomcat 8 Software Downloads' and contains a welcome message, a 'Quick Navigation' section with links for KEYS, 8.5.9, 8.0.39, Browse, and Archives, and a 'Release Integrity' section explaining the importance of verifying downloads with OpenPGP signatures, MD5, and SHA-1 checksums.

Apache Tomcat®

THE APACHE SOFTWARE FOUNDATION

Search the Site... Search

Tomcat 8 Software Downloads

Welcome to the Apache Tomcat® 8.x software download page. This page provides download links for obtaining the latest versions of Tomcat 8.x software, as well as links to the archives of older releases.

Quick Navigation

[KEYS](#) | [8.5.9](#) | [8.0.39](#) | [Browse](#) | [Archives](#)

Release Integrity

You **must** [verify](#) the integrity of the downloaded files. We provide OpenPGP signatures for every release file. This signature should be matched against the [KEYS](#) file which contains the OpenPGP keys of Tomcat's Release Managers. We also provide MD5 and SHA-1 checksums for every release file. After you download the file, you should calculate a checksum for your download, and make sure it is the same as ours.

<http://tomcat.apache.org/download-80.cgi>

8.0.39

Please see the [README](#) file for packaging information. It explains what every distribution contains.

Binary Distributions

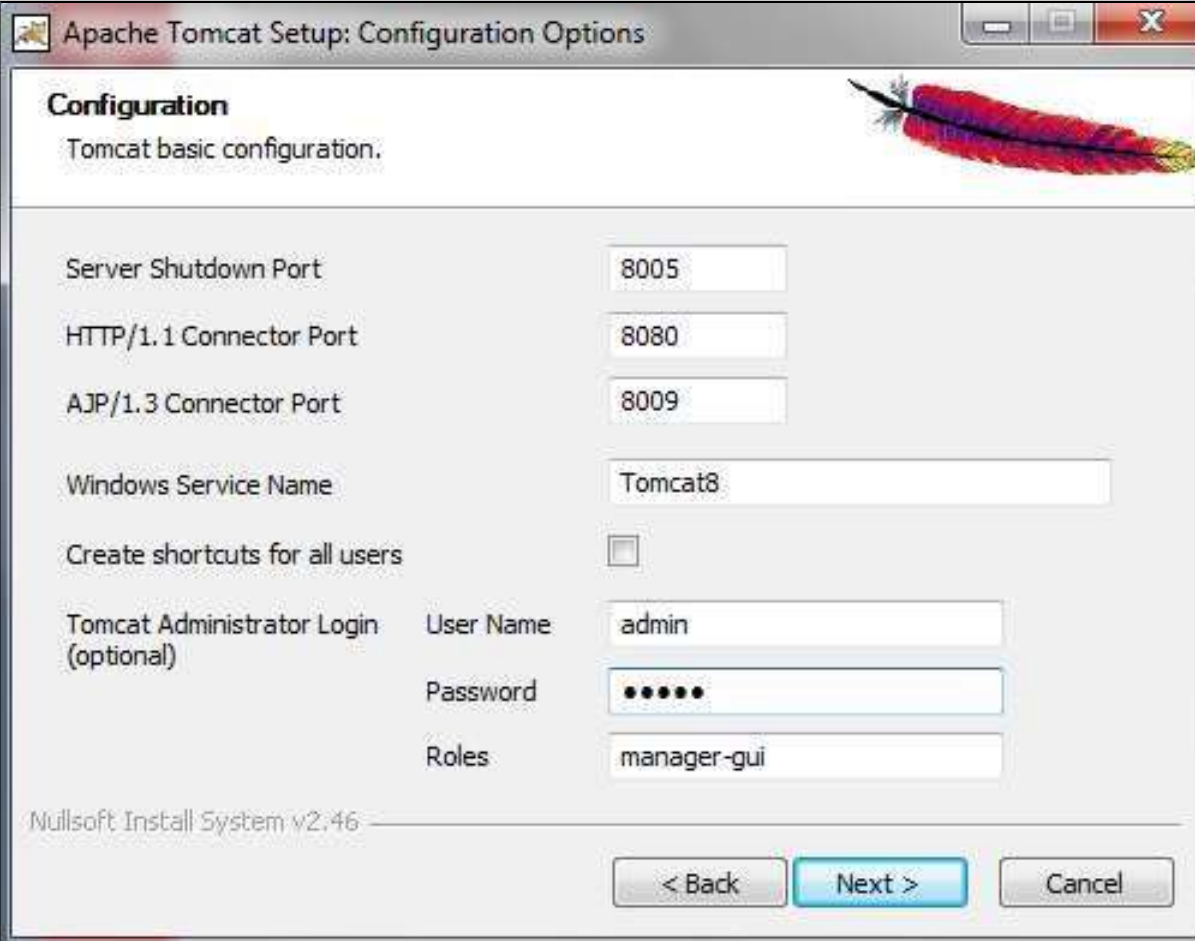
- Core:
 - [zip \(pgp, md5, sha1\)](#)
 - [tar.gz \(pgp, md5, sha1\)](#)
 - [32-bit Windows zip \(pgp, md5, sha1\)](#)
 - [64-bit Windows zip \(pgp, md5, sha1\)](#)
 - [32-bit/64-bit Windows Service Installer \(pgp, md5, sha1\)](#)



Instalação e Configuração do Tomcat



Instalação e Configuração do Tomcat



Apache Tomcat Setup: Configuration Options

Configuration
Tomcat basic configuration.

Server Shutdown Port: 8005

HTTP/1.1 Connector Port: 8080

AJP/1.3 Connector Port: 8009

Windows Service Name: Tomcat8

Create shortcuts for all users: ☐

Tomcat Administrator Login (optional)

User Name: admin

Password: •••••

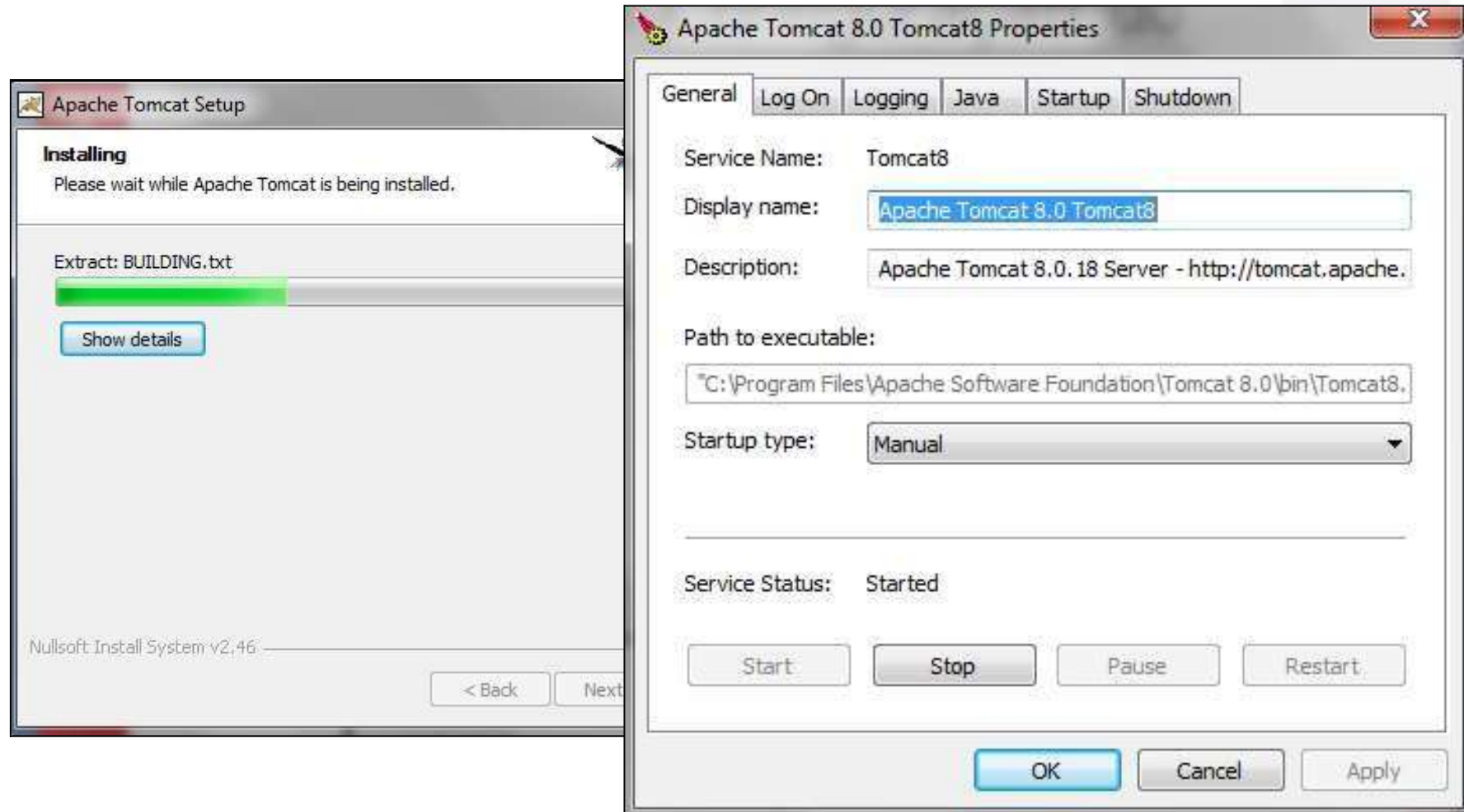
Roles: manager-gui

Nullsoft Install System v2.46

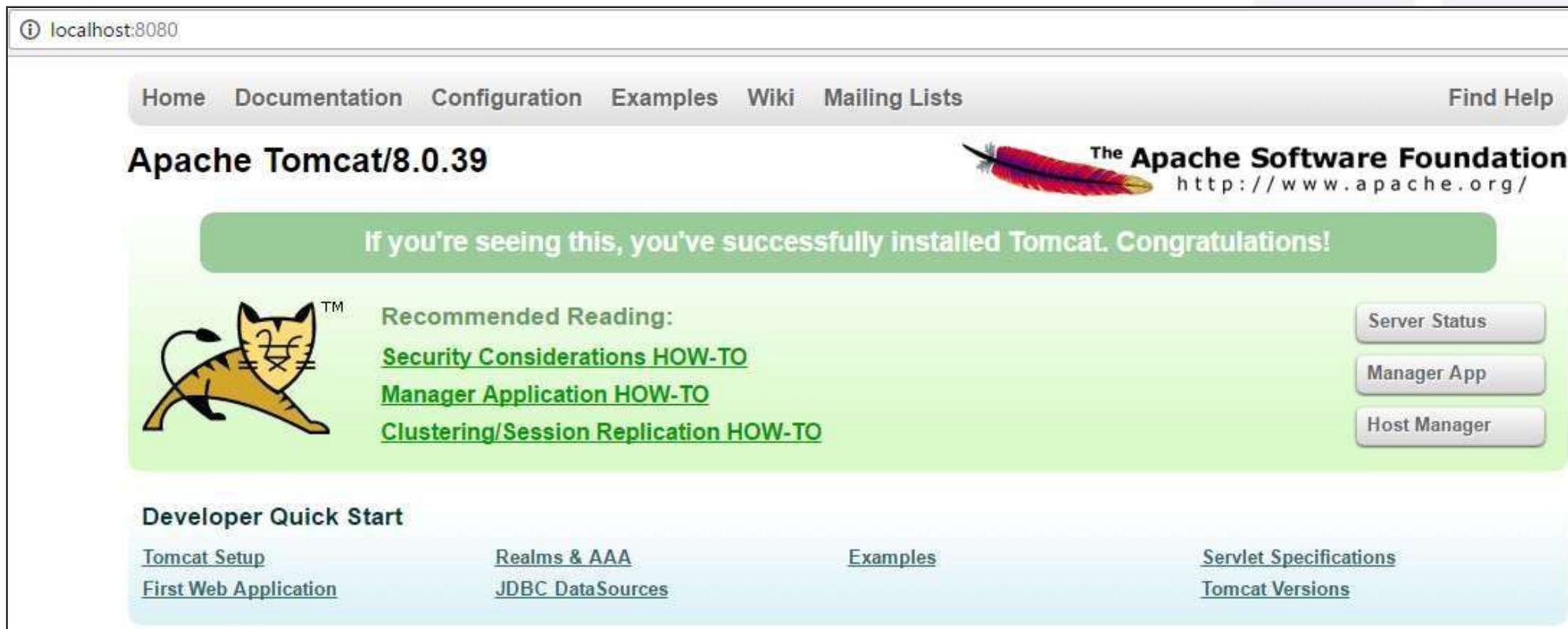
< Back Next > Cancel

- **User Name:** admin
- **Password:** admin

Instalação e Configuração do Tomcat



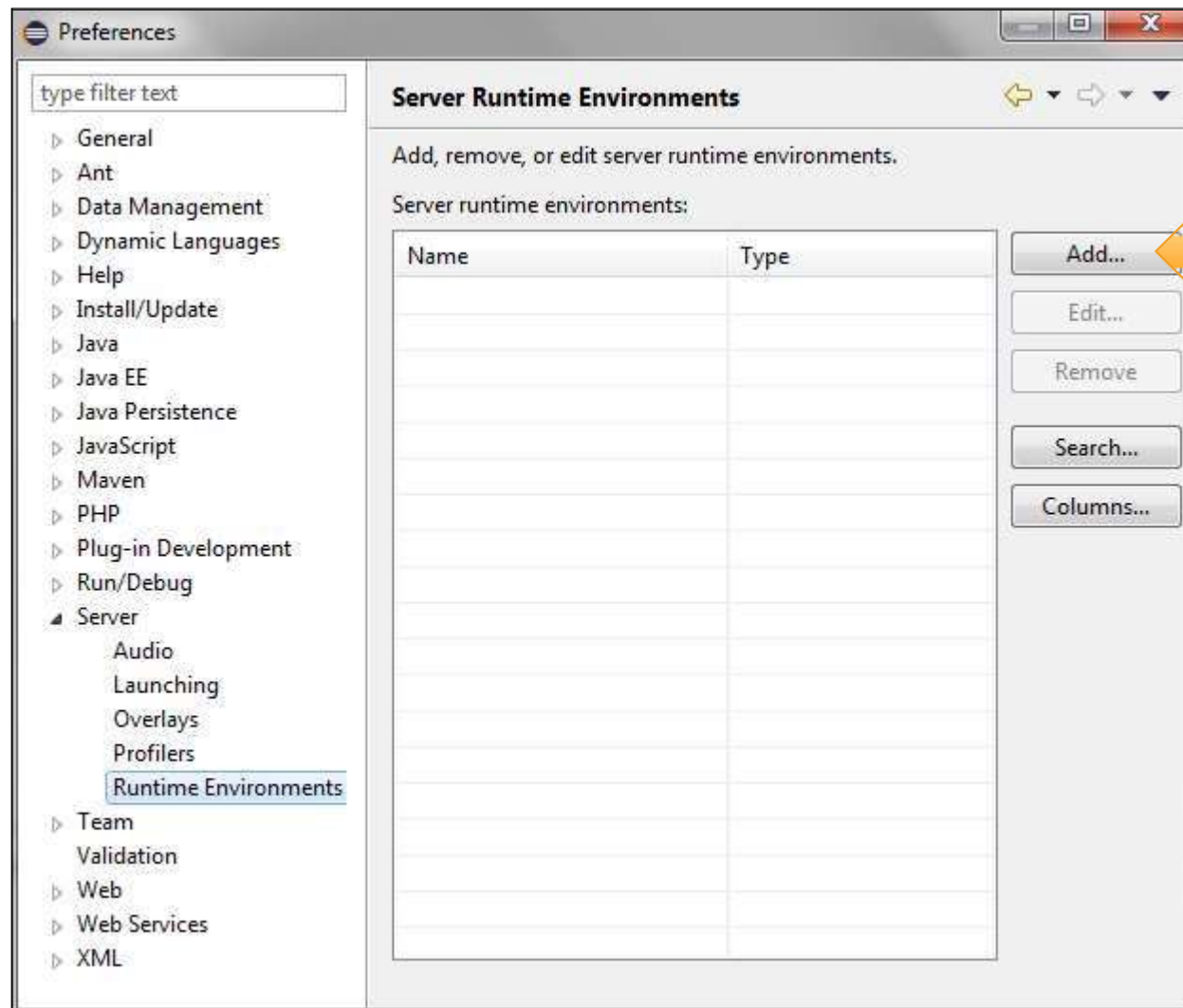
Testando o Tomcat



<http://localhost:8080>

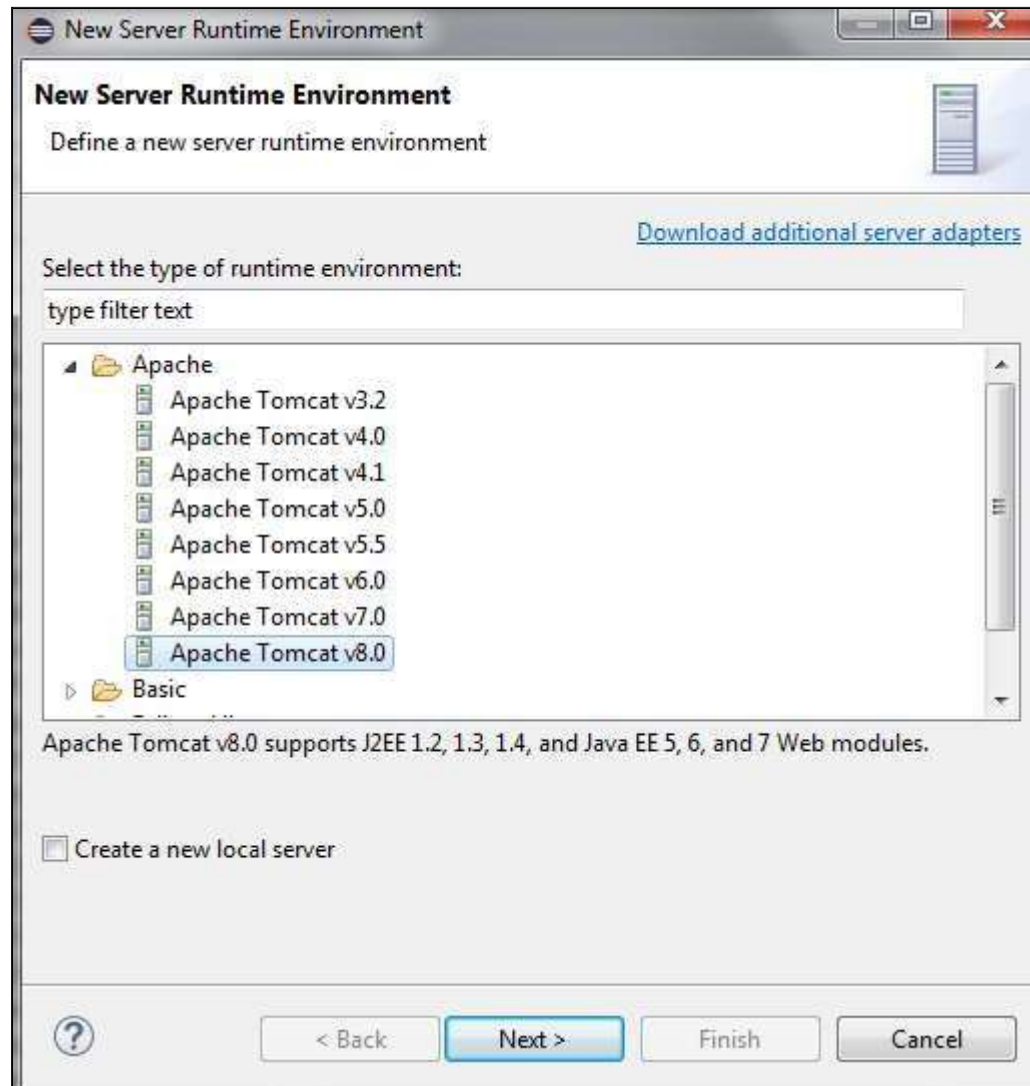
Configuração do Tomcat no Eclipse

- Seleccionar **“Window-> Preferences ->Server -> Runtime Environments”**.

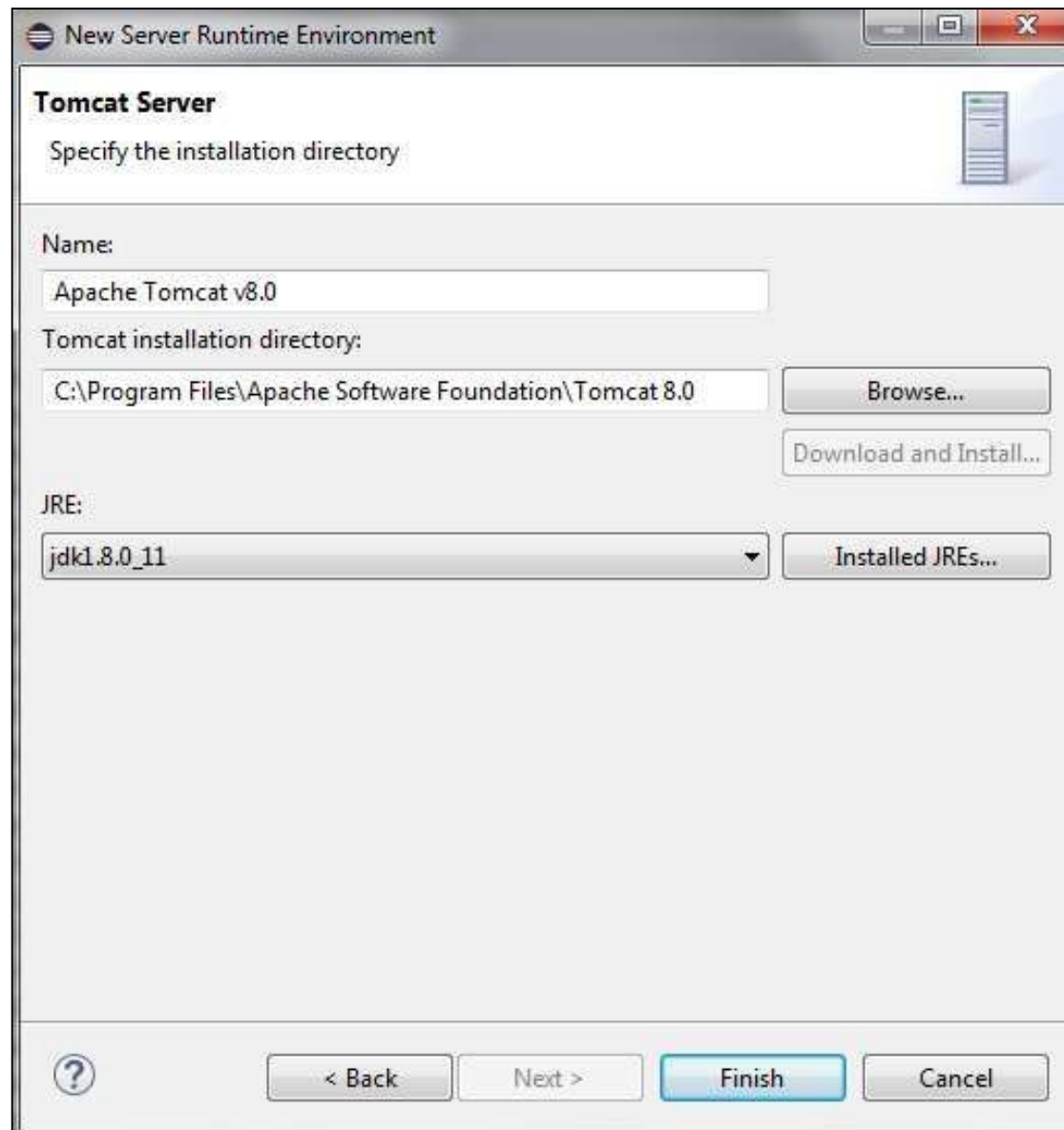


Configuração do Tomcat no Eclipse

- Selecionar “**Apache Tomcat v8.0**” e pressionar o botão “Next >”.



Configuração do Tomcat no Eclipse



Inicialização do Tomcat no Eclipse

