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Развертывание J2EE приложений

Цели

После завершения этого урока Вы сможете делать следующее:

- Разворачивать Web-приложения на OAS 10g
- Конфигурировать data sources для использования с OC4J
- Производить необходимое мапирование для Oracle RDBMS
- Разворачивать J2EE приложения
- Разворачивать и регистрировать Web провайдеры

Разворачивание модулей Web приложений с использованием Application Server Control

The screenshot shows the Oracle Application Server Control interface. The top section, titled "Applications", contains buttons for "Deploy EAR file" and "Deploy WAR file". The "Deploy WAR file" button is highlighted with a red box and a circled "1". Below this is a "Select an Application and..." section with "Edit", "Undeploy", and "Redeploy" buttons. A table below shows the application "BC4J" with its path, parent application, and other metrics. The bottom section, titled "Deploy Web Application", contains a "Web Application" field with "myapp.war" and a "Browse..." button. Below this are fields for "Application Name" (myapp) and "Map to URL" (/myapp). A circled "2" is placed over the "Web Application" field. At the bottom right, the "Deploy" button is highlighted with a red box and a circled "3".

Applications

Deploy EAR file Deploy **WAR** file

Select an Application and... Edit Undeploy Redeploy

Previous 1-1 of 1 Next

Select	Name	Path	Parent Application	Active Requests	Request Processing Time (secs)	Active EJB Methods
<input checked="" type="radio"/>	BC4J	../applications/BC4J.ear	default	0	Unavailable	0

Deploy Web Application

Select the Web Application (.war file) you want to deploy. This web application will be wrapped into a J2EE application (.ear file) before deployment.

Web Application Browse...

Specify the name you would like this application to be called and the URL to map this web application to.

Application Name

Map to URL

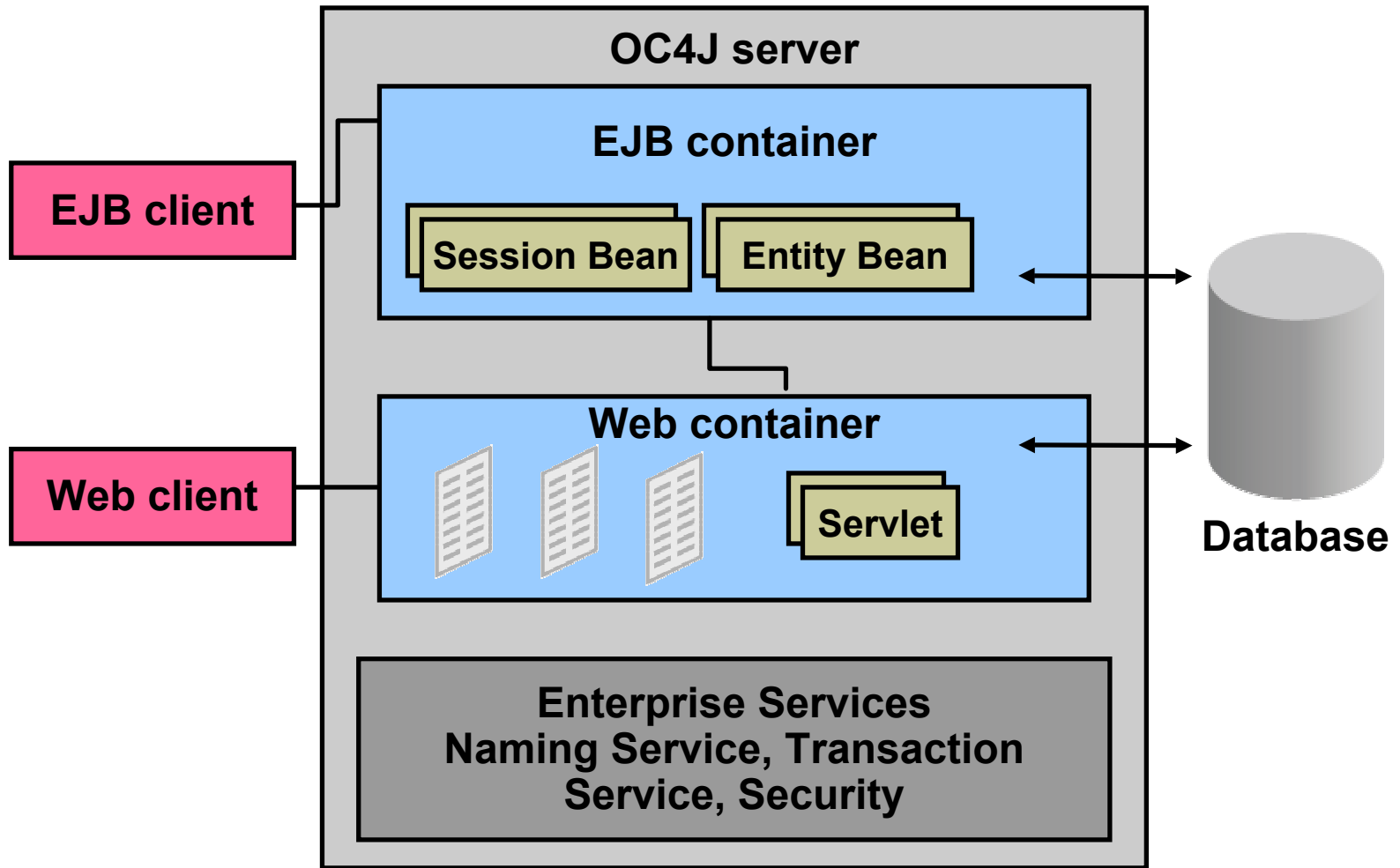
Cancel Deploy

Разворачивание модулей Web приложений с использованием dcmctl

dcmctl утилита может быть использована для deploy, redeploy, or undeploy WAR файлов вручную:

```
dcmctl deployApplication -file  
/private/myapp.war -a myapp -co home -rc  
myapp  
  
dcmctl redeployApplication -file  
/private/myapp.war -a myapp -co home -rc  
myapp  
  
dcmctl undeployApplication -a myapp -co home
```

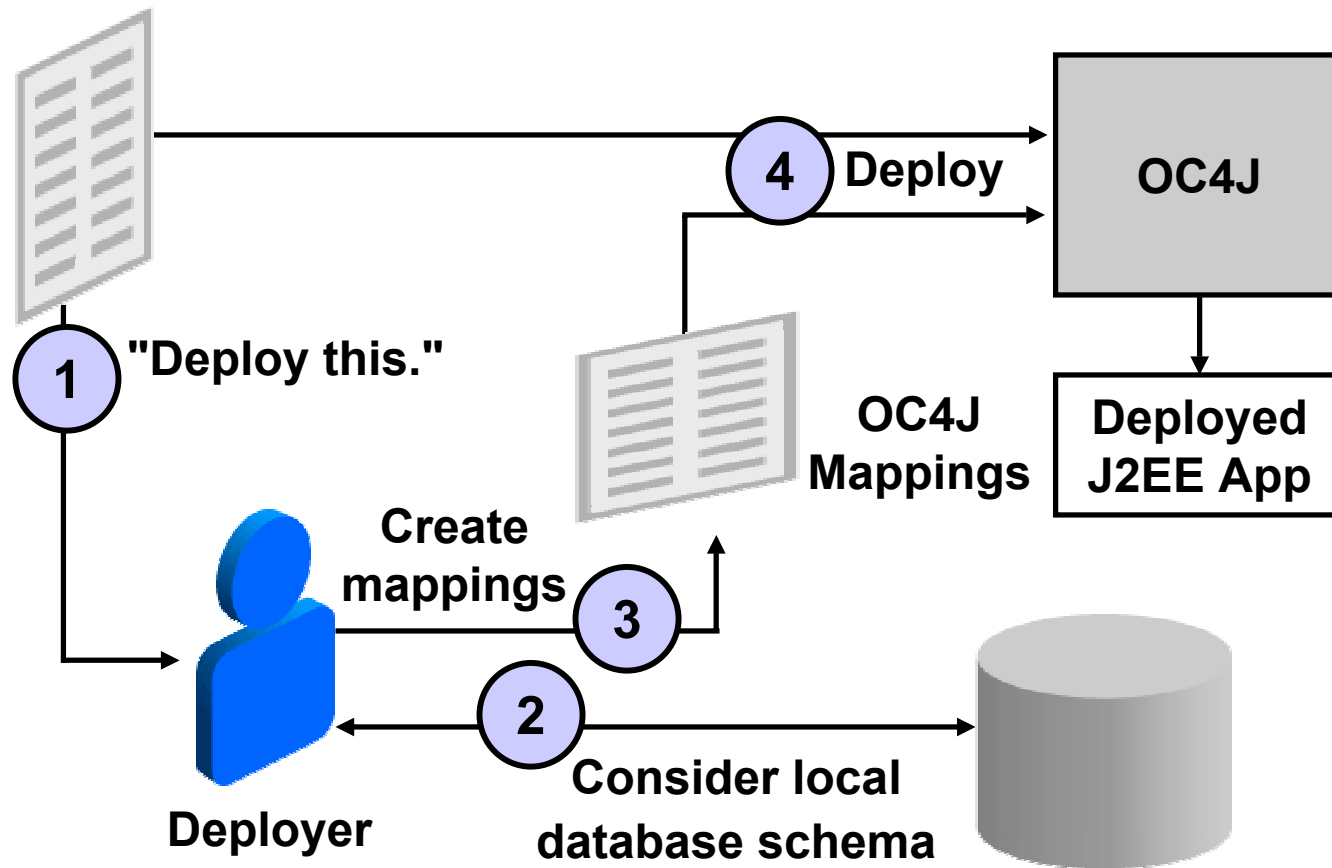
J2EE Архитектура



RDBMS и J2EE

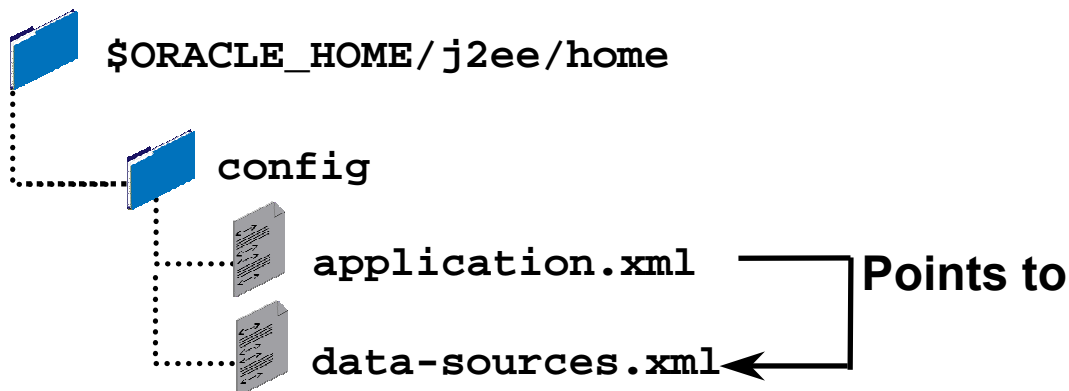
- **Многие J2EE приложения используют RDBMS.**
- **J2EE applications are designed to be portable across application servers, that is, not dependent on operational details.**
- **Operational details are supplied by the deployer, which provides logical-to-physical mappings.**
- **Data sources provide logical definitions of databases.**

Data Source и роль специалиста по разворачиванию приложений



Задание Data Source

- **Global data sources for an OracleAS instance are specified in the `data-sources.xml` file:**
 - Each data source is specified using an XML tag.
 - Attributes specify values for the data source.
- **Application-specific data source files use the `<data-sources>` tag in `application.xml`.**



Получение информации о Data Source

ORACLE Enterprise Manager 10g
Application Server Control

Farm > Application Server: bi.edcdr6p1.us.oracle.com > OC4J: home

OC4J: home

Home Applications Administration

Instance Properties

- Server Properties
- Website Properties
- JSP Container Properties
- Replication Properties
- Advanced Properties

Application Development

- Data Sources**
- Security
- JMS Providers
- Global Web Module

Related Links

- BC4J

Home Applications Administration

ORACLE Enterprise Manager 10g
Application Server Control

Logs Preferences Help

Farm > Application Server: bi.edcdr6p1.us.oracle.com > OC4J: home > Application: default > Data Sources

Data Sources

Page Refreshed Nov 21, 2003 10:50:14 AM

This table contains all the data sources configured for this application. Each data source is bound to the specified JNDI location.

Select a Data Source and...

Create Edit Create Like Delete

Select	Name	JNDI Location	Class	JDBC Driver	Monitor Performance
<input type="radio"/>	OracleDS	jdbc/OracleCoreDS	com.evermind.sql.DriverManagerDataSource	oracle.jdbc.driver.OracleDriver	

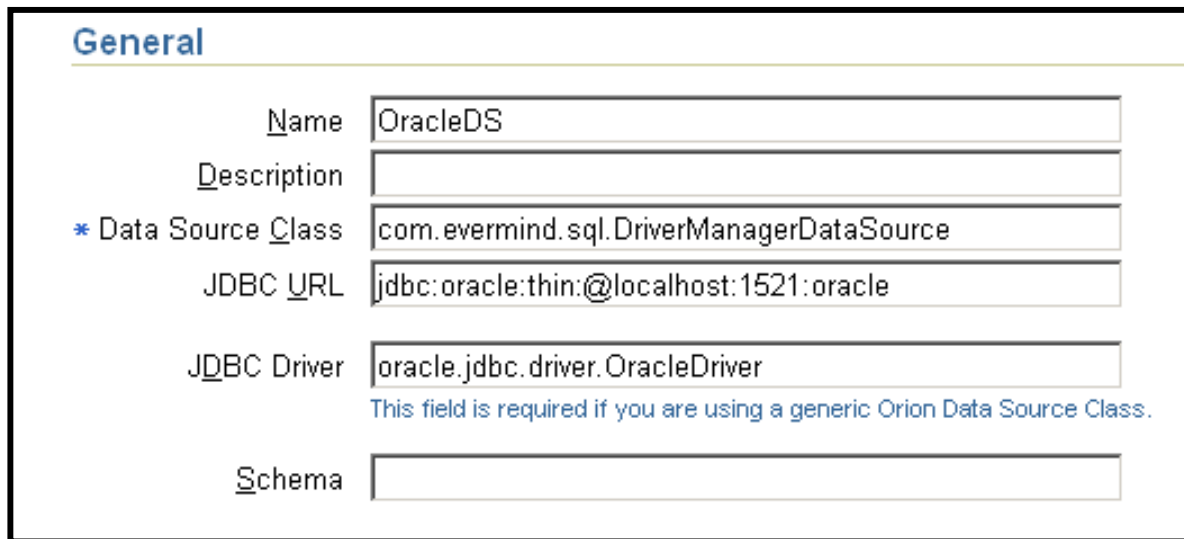
Пример файла data-sources.xml

Configuring a JDBC thin connection data source:

```
<data-source
  class="com.evermind.sql.DriverManagerDataSource"
  name="OracleDS"
  location="jdbc/OracleCoreDS"
  xa-location="jdbc/xa/OracleXADS"
  ejb-location="jdbc/OracleDS"
  connection-driver="oracle.jdbc.driver.OracleDriver"
  username="scott"
  password="tiger"
  url="jdbc:oracle:thin:@localhost:5521:oracle"
  inactivity-timeout="30"
/>
```

Создание Data Source: Основной модуль

The Create Data Source page includes the following regions: General, Datasource Username and Password, JNDI Locations, Connection Attributes, and Properties.



General

Name	<input type="text" value="OracleDS"/>
Description	<input type="text"/>
* Data Source Class	<input type="text" value="com.evermind.sql.DriverManagerDataSource"/>
JDBC URL	<input type="text" value="jdbc:oracle:thin:@localhost:1521:oracle"/>
JDBC Driver	<input type="text" value="oracle.jdbc.driver.OracleDriver"/> <small>This field is required if you are using a generic Orion Data Source Class.</small>
Schema	<input type="text"/>

Создание Data Source: Username and Password

Datasource Username and Password

Cleartext passwords may pose a security risk, especially if the permissions on the data-sources.xml configuration file allows it to be read by any user. You can specify an indirect password to avoid this risk. An indirect password is used to do a look up in the User Manager to get the password.

Username

Use Cleartext Password

Password

Use Indirect Password

Indirect Password

example: Scott, customers/Scott

Создание Data Source: JNDI Locations

JNDI Locations

For an emulated Data Source, please specify all three location attributes. It is recommended that you reference the EJB Location attribute in your code to look up this Data Source. For a non-emulated Data Source, the location attribute is all that is needed.

* Location	<input type="text" value="jdbc/hrDS"/>
Transactional(XA) Location	<input type="text" value="jdbc/xa/hrXADS"/>
EJB Location	<input type="text" value="jdbc/hrDS"/>

[For emulated data sources, retrieve the data source using the JNDI value in this field.](#)

Создание Data Source: Атрибуты и свойства коннекции

Connection Attributes

Connection Retry Interval (seconds)	<input type="text" value="1"/>
Max Connection Attempts	<input type="text"/>
Cached Connection Inactivity Timeout (seconds)	<input type="text" value="30"/>

The following attributes only apply if you are using pooled data sources

Maximum Open Connections	<input type="text" value="500"/>
Minimum Open Connections	<input type="text" value="1"/>
Wait For Free Connection Timeout (seconds)	<input type="text"/>

Properties

Properties may be set when configuring a custom or 3rd-party data source.

Select	Name	Value
<input type="checkbox"/>	(No items found in J2EE deployment descriptor)	

Enterprise JavaBeans

- **Enterprise JavaBeans (EJB) is the server-side component architecture for the J2EE platform.**
- **EJB enables rapid and simplified development of distributed, transactional, secure, and portable Java applications.**
- **EJB applications can be ported across platforms without much difficulty.**
- **EJB applications are object oriented to allow reuse of code.**

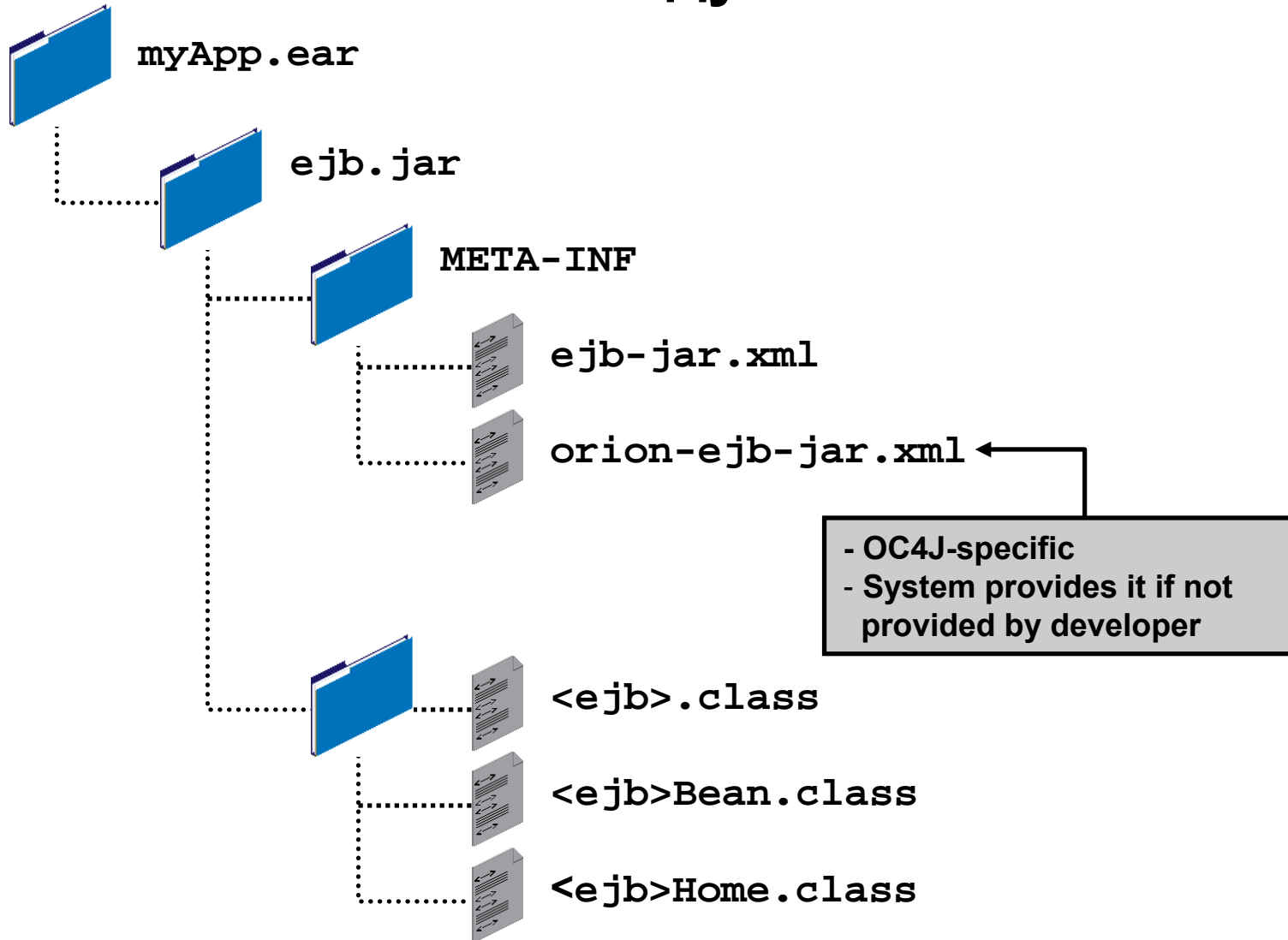
EJB Структура

- **EJB modules are packaged as an EJB Java Archive (JAR) file.**
- **EJB deployment tools use a standard format for packaging enterprise beans with their declarative information.**
- **The `ejb-jar.xml` file contains:**
 - **The deployment descriptor as specified by J2EE**
 - **The run-time attributes of the bean**
- **Using the `ejb-jar.xml` file, you can specify the run-time behavior of enterprise beans.**

EJB и OC4J

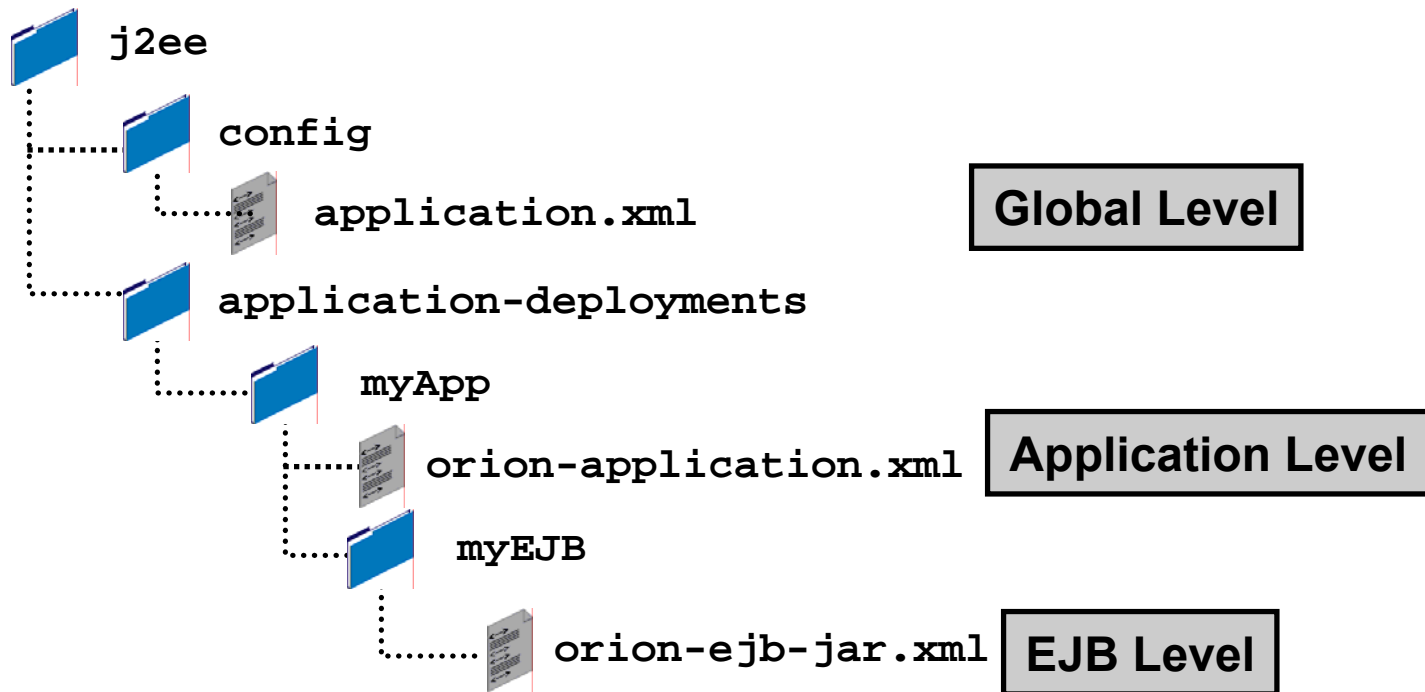
- **EJB modules can be deployed to any J2EE-compliant server.**
- **Although the EJB module does not need to be modified, the module needs to be mapped to its server environment.**
- **The `orion-ejb-jar.xml` file provides the mapping for an EJB module to OC4J.**
- **The EJB modules should be packaged into an EAR before being deployed to Oracle Application Server.**

EJB Модуль



Задание CMP Data Source

The files to configure the Data Source details for an application are provided by the developers.



Прикрепление (binding) ЕJB к существующим таблицам

1. Set `autocreate-tables` to `False`.
2. Deploy `yourEjb` in `yourApp.ear`.
3. Get the generated `orion-ejb-jar.xml` file and reconfigure it to target existing tables.

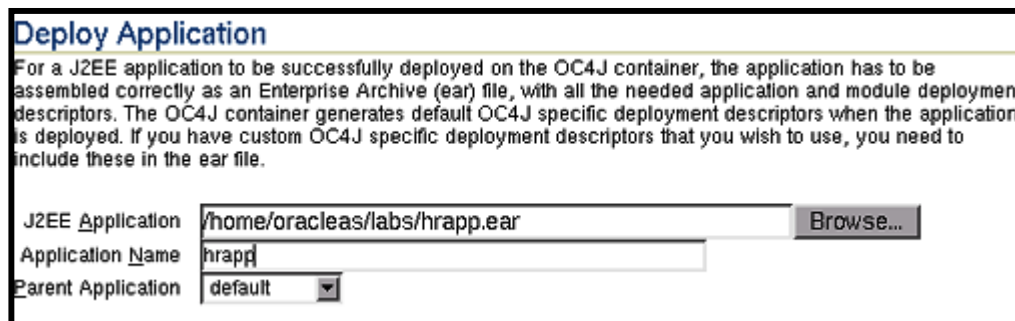
```
<orion-ejb-jar>  
  <enterprise-beans>  
    <entity-deployment table="yourTable">  
      ...
```

Разворачивание J2EE-приложений с использованием Application Server Control

1. Navigate to the Applications properties page and click Deploy EAR file.



2. Deploy Application



Разворачивание J2EE-приложений с использованием Application Server Control

3. URL Mapping for Web Modules page

URL Mappings for Web Modules Resource Reference Mappings User Manager Review

Deploy Application: URL Mapping for Web Modules

A web module needs to be mapped to an URL pattern in the default web site before it can be accessed. The following table lists all the web modules found in your application. Specify the URL mapping for each of these modules.

Name	URL Mapping
	*/*hrapp

Cancel Step 1 of 4 Next Finish

4. Resource Reference Mappings page

The table below lists all resource references found in your application. Resource references need to be associated with the JNDI names of physical entities on the system where the selected instance/cluster is running.

Resource Reference	Type	Referenced By	Authentication	JNDI Location
jdbc/EstoreDataSource	javax.sql.DataSource	Web Module: WebTier	Container	

Разворачивание J2EE-приложений с использованием Application Server Control

5. User Manager Page

URL Mappings for Web Modules **User Manager** Review

Deploy Application: User Manager

Specify a user manager to be associated with the application. Note that all web modules in your application when you use JAZN LDAP as your user manager.

Use JAZN XML User Manager
Default Realm
XML Data File

Use XML User Manager
Path to principals file

Use JAZN LDAP User Manager
LDAP Location
Default Realm

Use Custom User Manager
Name
Class Name
Description

Initialization Parameters for Class

Select Name	Value
No initialization parameters	

Add Another Row

Разворачивание J2EE-приложений с использованием Application Server Control

6. Security Role Mappings Page

Select	Name	Description	Assigned Users	Assigned Groups
	No security roles found in this application			

7. Publish Web Services Page

Web Services

⊖ Previous Next ⊖

Select	Web Service	Web Module	Status
	No Web Services found		

8. Summary Page

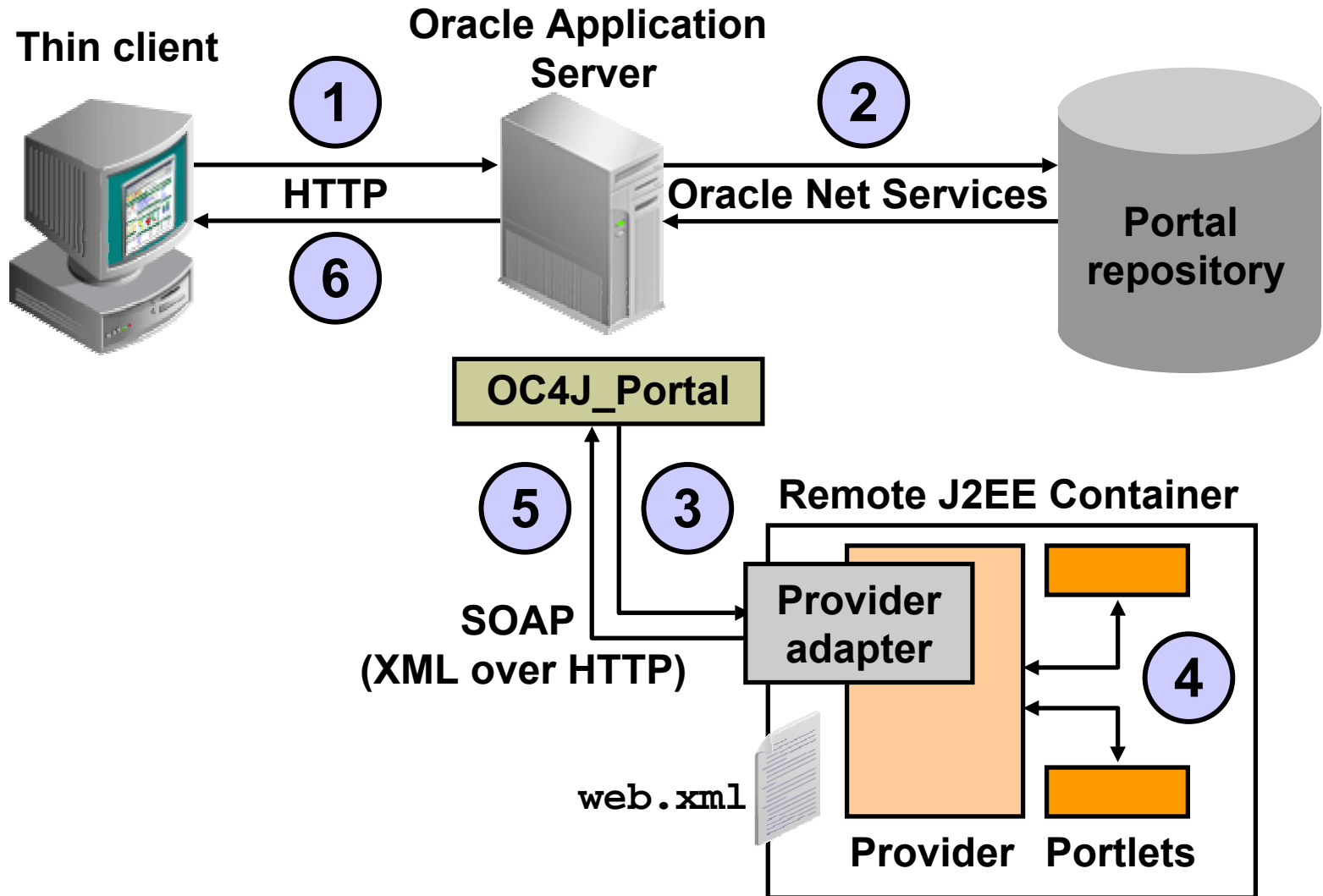
Разворачивание J2EE-приложений с использованием dcmctl

- The OC4J instance must be running.
- The application can be deployed locally or to a remote OC4J instance.
- Examples of deploying applications using dcmctl:

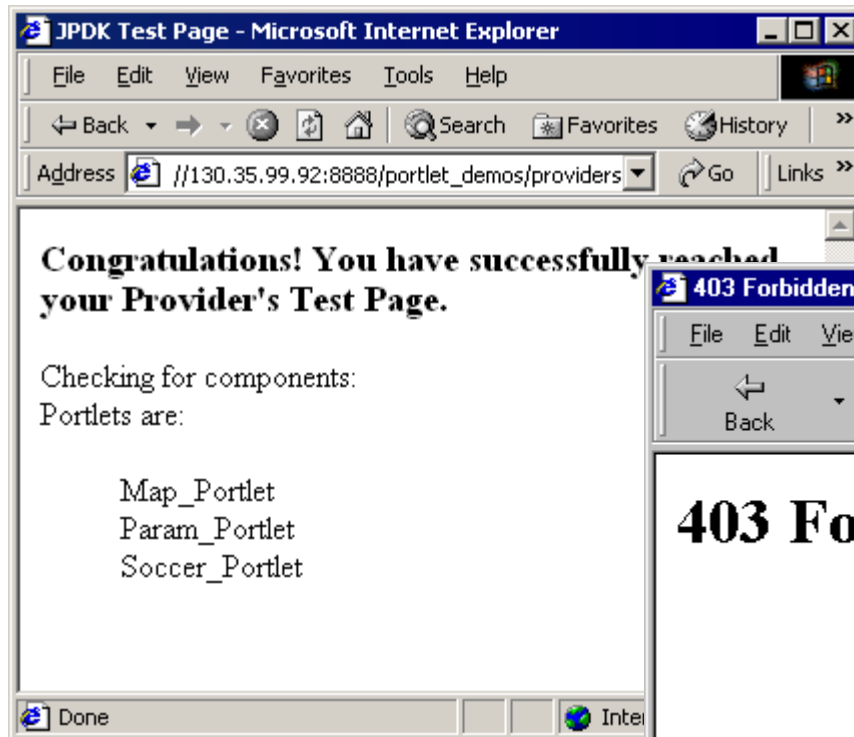
```
To the current OracleAS instance
$> dcmctl deployApplication \
> -file /export/users/myEAR.ear \
> -a myEAR -co home
```

```
To a specific (j2ee01) OracleAS instance
$> dcmctl deployApplication -i j2ee01 \
> - file /export/users/myEAR.ear \
> - a myEAR
```

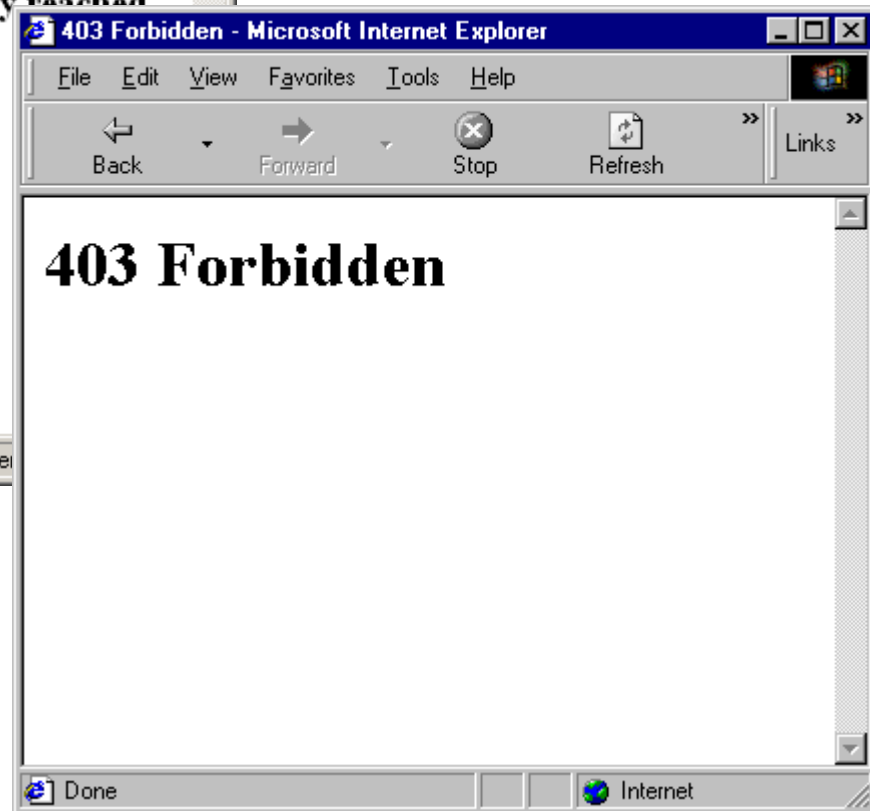
Роль Web-провайдеров



Тестирование Web-провайдеров



`showTestPage=true`



`showTestPage=false`

Регистрирование Web-провайдеров

- Web providers must be registered in OracleAS Portal.
- The portlet developer should provide the detailed deployment and registration instructions.

The screenshot displays the Oracle Application Server Portal Builder interface. At the top, the text "Oracle Application Server" is in red, and "Portal" is in blue. To the right, "Portal Builder" is in blue. Navigation links include "Home", "Builder", "Navigator", "Help", "Edit", "Customize", "Account Info", and "Logout". A secondary navigation bar contains "Welcome", "Build", and "Administer" (highlighted with a red box). Below this, a blue bar contains "Portal", "Portlets" (highlighted with a red box), and "Database". The main content area is split into two panes: "Portlet Repository" and "Remote Providers". The "Remote Providers" pane contains a link "Register a Provider" (highlighted with a red box) and the text "Add a provider to the portlet repository."

Регистрирование Web-провайдера: Информация о провайдере

Register Provider ?

Next > Cancel

Step 1 of 3 >>>

Provider Information

Enter a unique name for the provider, the timeout (in seconds), the timeout message, and the provider implementation style. The timeout message is presented to the user when a portlet takes longer than the specified time to execute.

Name	<input type="text" value="MyFirstWebProvider"/>
Display Name	<input type="text" value="My First Web Provider"/>
Timeout	<input type="text" value="30"/> seconds
Timeout Message	<input type="text" value="My First Web Provider has timed out."/>
Implementation Style	<input type="text" value="Web"/>

Next > Cancel

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Регистрирование Web-провайдеров: Основные свойства

- The administrator defines the URL property.
- The portlet developer should provide the values for the other properties in the provider installation instructions.

Define Connection ?

< Previous Next > Finish Cancel

Step 2 of 3 >>>

General Properties

Specify the URL for the Web provider and configure its communication settings.

URL

Web provider in same cookie domain as the portal

Enter the Service Id, if applicable. Multiple providers can now be accessed via the same URL. The Service Id identifies a specific provider that can be accessed via the specified URL.

Service Id

ENTERED PROVIDER" or "Service Provider")

Регистрирование Web-провайдеров: Контроль доступа

- **Grant Access**
- **Provider online status:**
 - **Online**
 - **Offline**
- **Cache invalidation:**
 - **Clear cache: To ensure that privilege changes take effect immediately**

The screenshot shows a web interface titled "Control Access" with a blue header and a question mark icon. It is on "Step 3 of 3". The main section is titled "Grant Access" and contains the following text: "Enter the name of the user or group to which you want to grant access privileges, choose the privilege level to grant, then click Add. If you are not sure of the user or group name, click the appropriate browse icon and select from the list provided." Below this text is a form with a "Grantee" input field, two browse icons, a "Manage" dropdown menu, and an "Add" button. The "Manage" dropdown is open, showing options: "Manage", "Edit", "Publish", and "Execute". Below the form is a section titled "Change Access" with the text: "Choose a different privilege level, or click the delete icon to remove all privileges from a user or group." At the bottom of the interface are navigation buttons: "< Previous", "Finish", and "Cancel". A copyright notice at the very bottom reads: "Copyright© 2003, Oracle Corporation. All Rights Reserved".

Добавление портлета к странице портала

1

This region is empty. You can add content to this region by clicking the Add Item or Add Portlet icon above.

2

Add Portlets

OK Cancel



Portlets To Region

Drill down to the appropriate provider, then click the portlet name to add the portlet to this region. If you are not sure of the location of the portlet in the Portlet Repository, use the Search field.


Available Portlets Search Go Selected Portlets

Event/Parameter Passing Provider

Portlet Repository : [New](#) : Event/Parameter Passing Provider

Event Form Portlet  

This portlet demonstrates both how to receive data using public portlet parameters and how to use a portlet event and event parameters to send data to a page.

Public Parameter Portlet 

This is a portlet that declares public portlet parameters.

Public Parameter Portlet

3

This portlet has two public portlet parameters that can receive values from page parameters.

Parameter Name	Value
param1	Kevehazy
param2	Tihamer

Заключение

В этом уроке Вы должны были познакомиться, как:

- Разворачивать Web приложения на Oracle Application Server 10g
- Идентифицировать конфигурационные файлы, которые хранят информацию о data source
- Конфигурировать data source для использования с OC4J
- Производить необходимое мапирование для Oracle RDBMS
- Разворачивать J2EE приложения
- Разворачивать и регистрировать Web-провайдеры

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