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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

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Разворачивание модулей Web приложений с использованием Application Server Control

Applications

Deploy EAR file | Deploy WAR file ①

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
⊙	BC4J	../applications/BC4J.ear	default	0	Unavailable	0

Deploy Web Application

Select the Web Application (.war file) you ② to deploy. This web application will be wrapped into a J2EE application (.ear file) before deployment.

Web Application | myapp.war | Browse...

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

Application Name | myapp

Map to URL | /myapp

③

Cancel | Deploy

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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
```

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J2EE Архитектура

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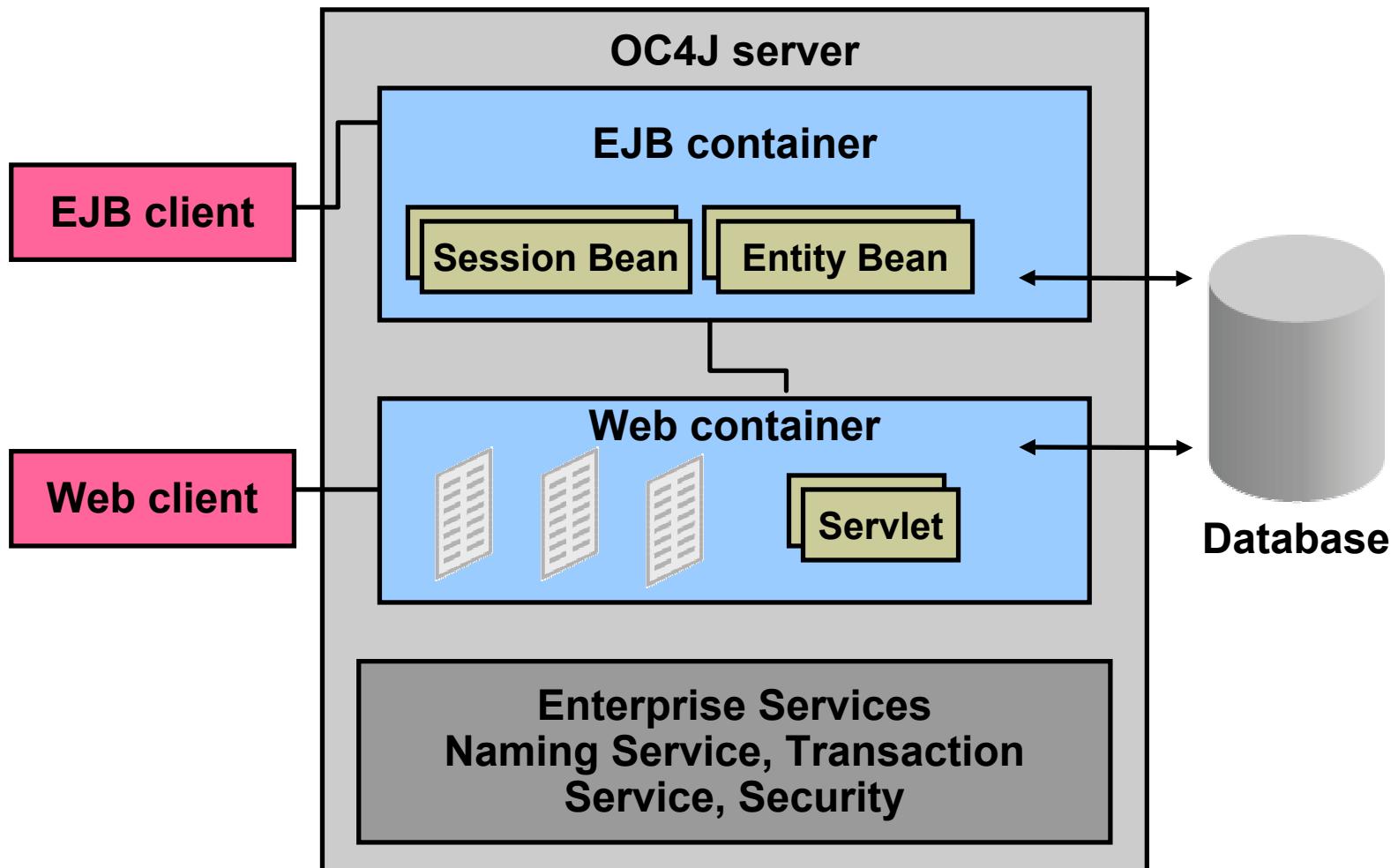
RDBMS и J2EE

- **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.**

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Data Source и роль специалиста по разворачиванию приложений

"Deploy this." ①

OC4J

4 Deploy

OC4J Mappings

Deployed J2EE App

Create mappings ③

Deployer

② **Consider local database schema**
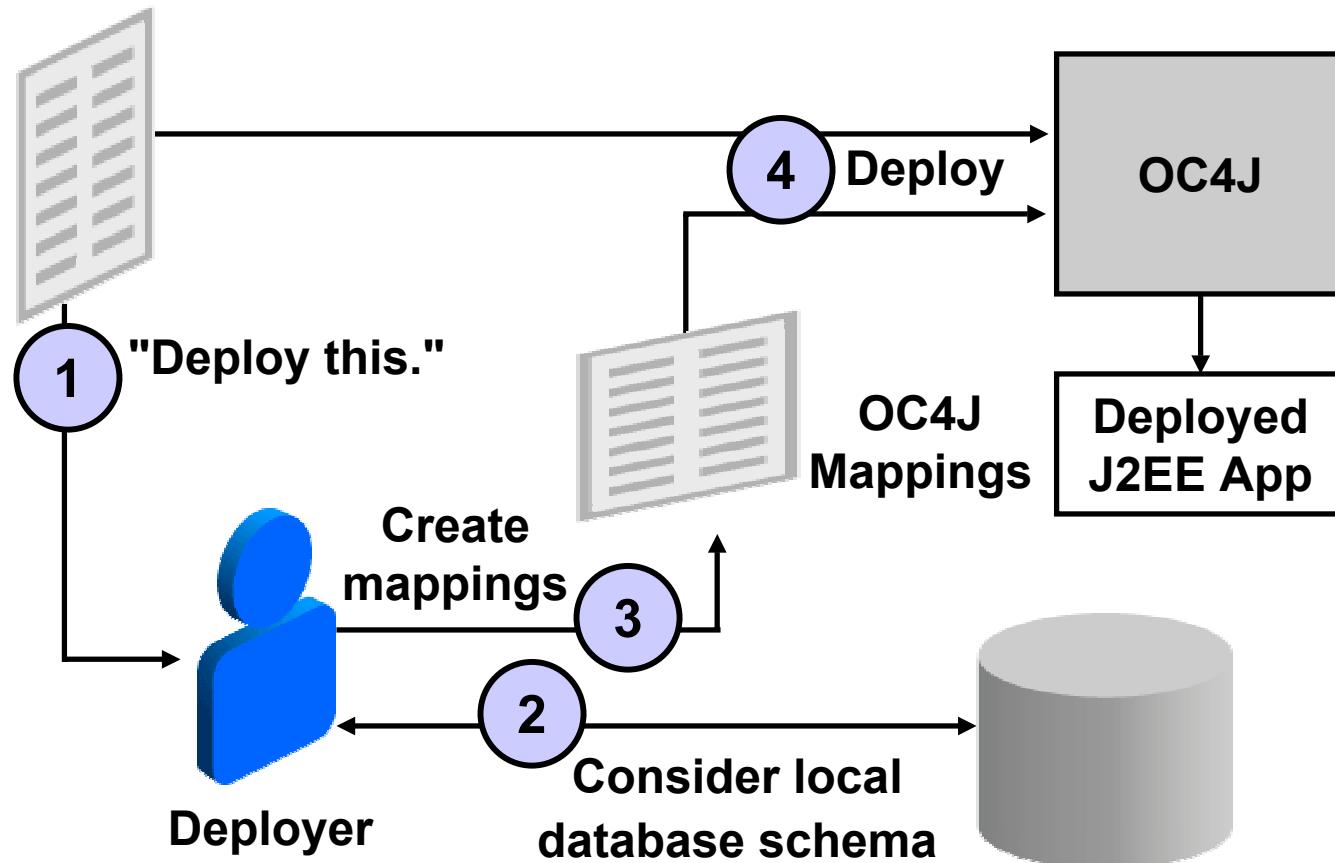
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Задание Data Source

- **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`.**
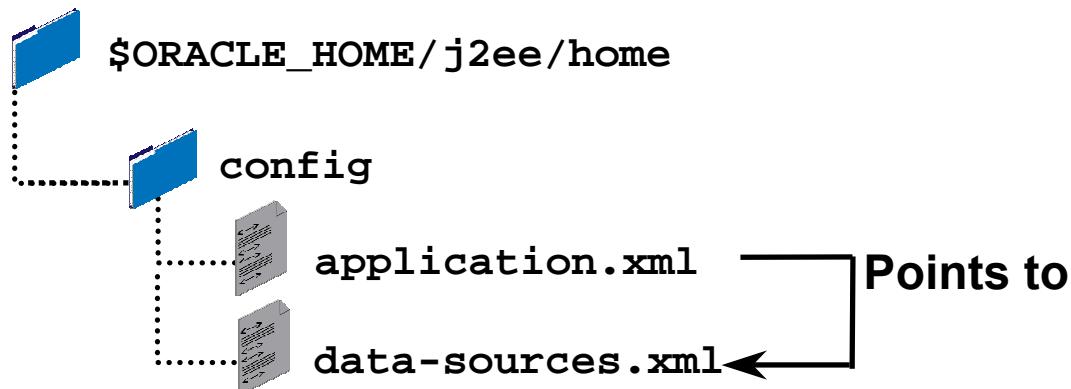
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Получение информации о Data Source

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Пример файла `data-sources.xml`

Configuring a JDBC thin connection data source:

```xml
<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"
/>
```

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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	OracleDS
Description	
* Data Source Class	com.evermind.sql.DriverManagerDataSource
JDBC URL	jdbc:oracle:thin:@localhost:1521:oracle
JDBC Driver	oracle.jdbc.driver.OracleDriver
	This field is required if you are using a generic Orion Data Source Class.
Schema	

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Создание Data Source: Username and Password

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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	jdbc/hrDS
Transactional(XA) Location	jdbc/xa/hrXADS
EJB Location	jdbc/hrDS

For emulated data sources, retrieve the data source using the JNDI value in this field.

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Создание Data Source: Атрибуты и свойства коннекции

Connection Attributes

Connection Retry Interval (seconds)	1
Max Connection Attempts	
Cached Connection Inactivity Timeout (seconds)	30

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

Maximum Open Connections	500
Minimum Open Connections	1
Wait For Free Connection Timeout (seconds)	

Properties

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

Select	Name	Value
	(No items found in J2EE deployment descriptor)	

(Add a Property)

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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.**

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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.**

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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.**

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EJB Модуль

myApp.ear

ejb.jar

META-INF

ejb-jar.xml

orion-ejb-jar.xml ←

- **OC4J-specific**
- **System provides it if not provided by developer**

<ejb>.class

<ejb>Bean.class

<ejb>Home.class
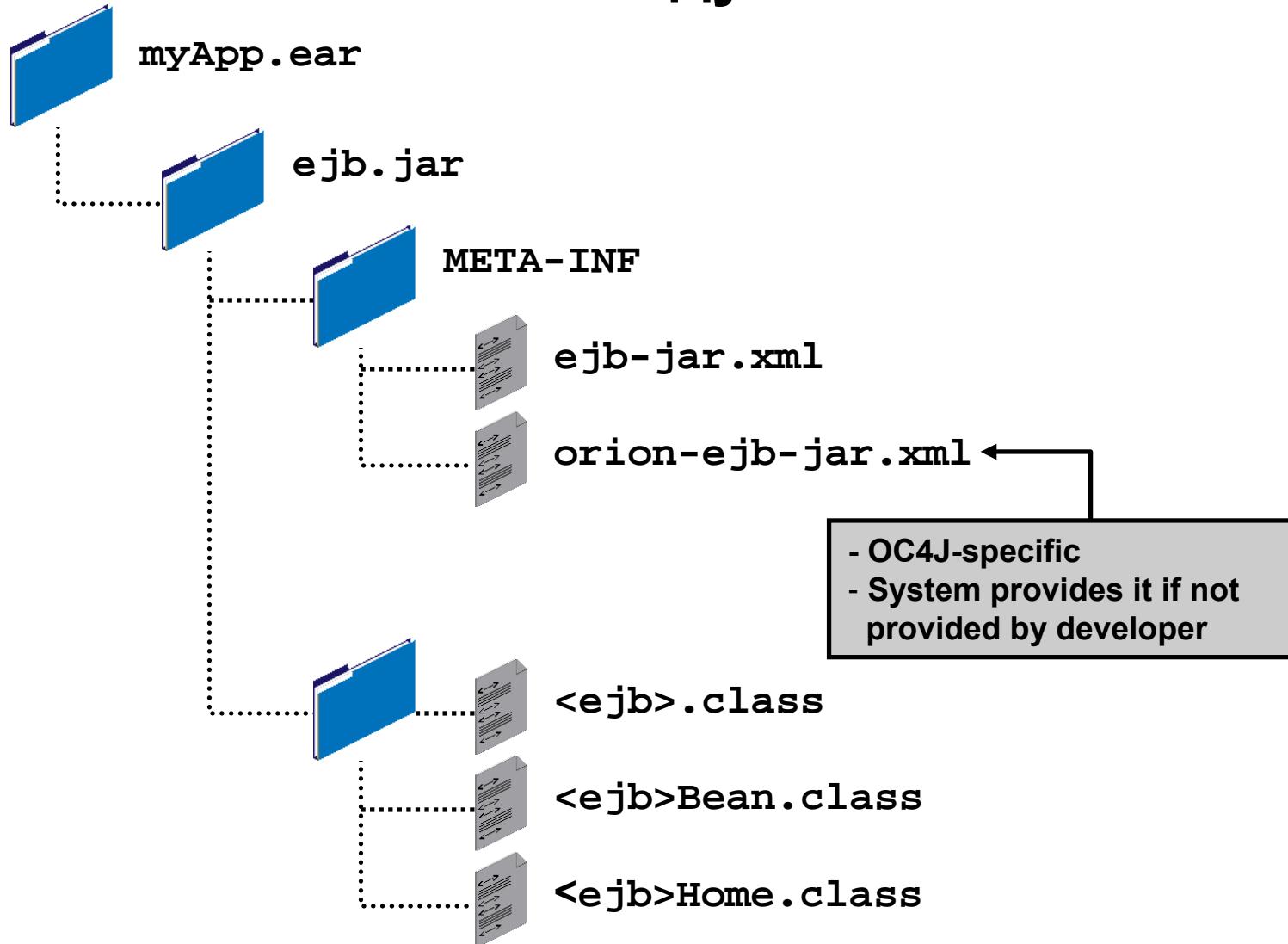
Задание CMP Data Source

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

```
j2ee
    config
        application.xml          Global Level
    application-deployments
        myApp
            orion-application.xml   Application Level
            myEJB
                orion-ejb-jar.xml   EJB Level
```

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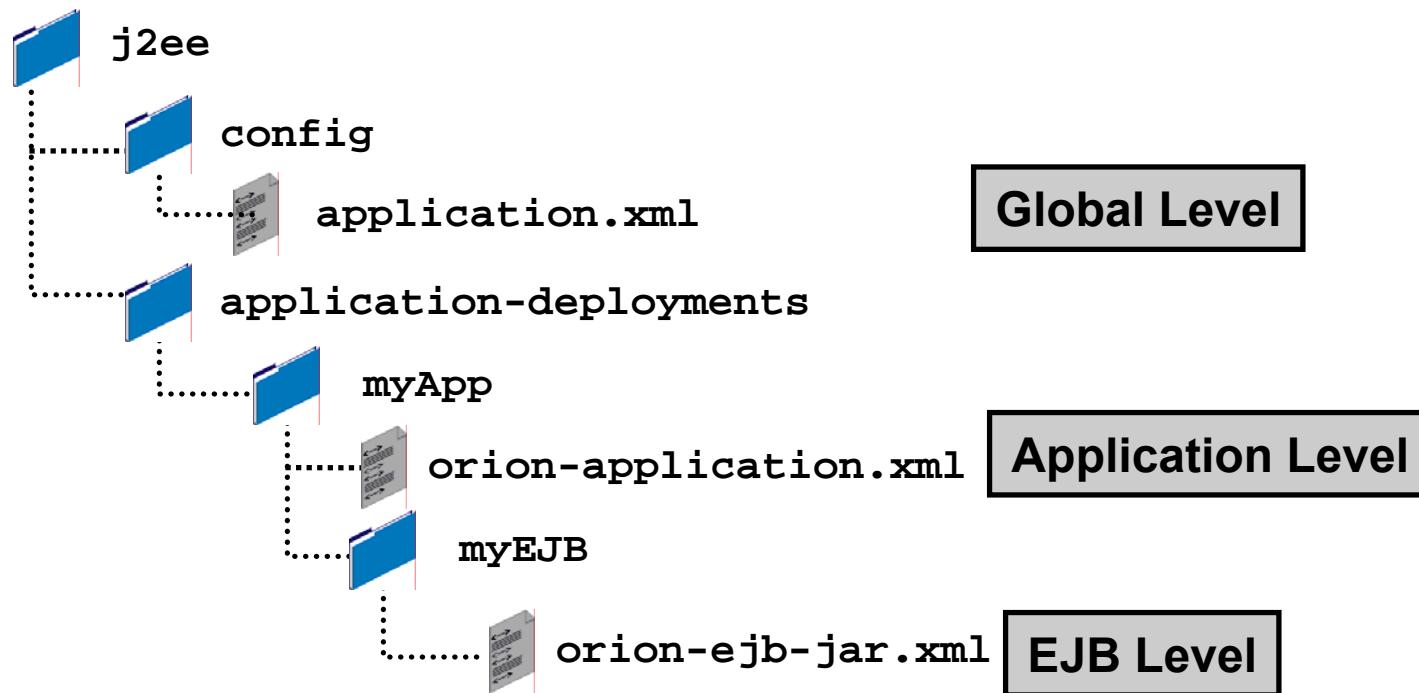
Прикрепление (binding) EJB к существующим таблицам

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">
      …
```

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Разворачивание J2EE-приложений с использованием Application Server Control

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

2. **Deploy Application**

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Разворачивание J2EE-приложений с использованием Application Server Control

3. **URL Mapping for Web Modules page**

4. **Resource Reference Mappings page**

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Разворачивание J2EE-приложений с использованием Application Server Control

5. User Manager Page

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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**

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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
```

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Роль Web-провайдеров

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Тестирование Web-провайдеров

`showTestPage=true`

`showTestPage=false`
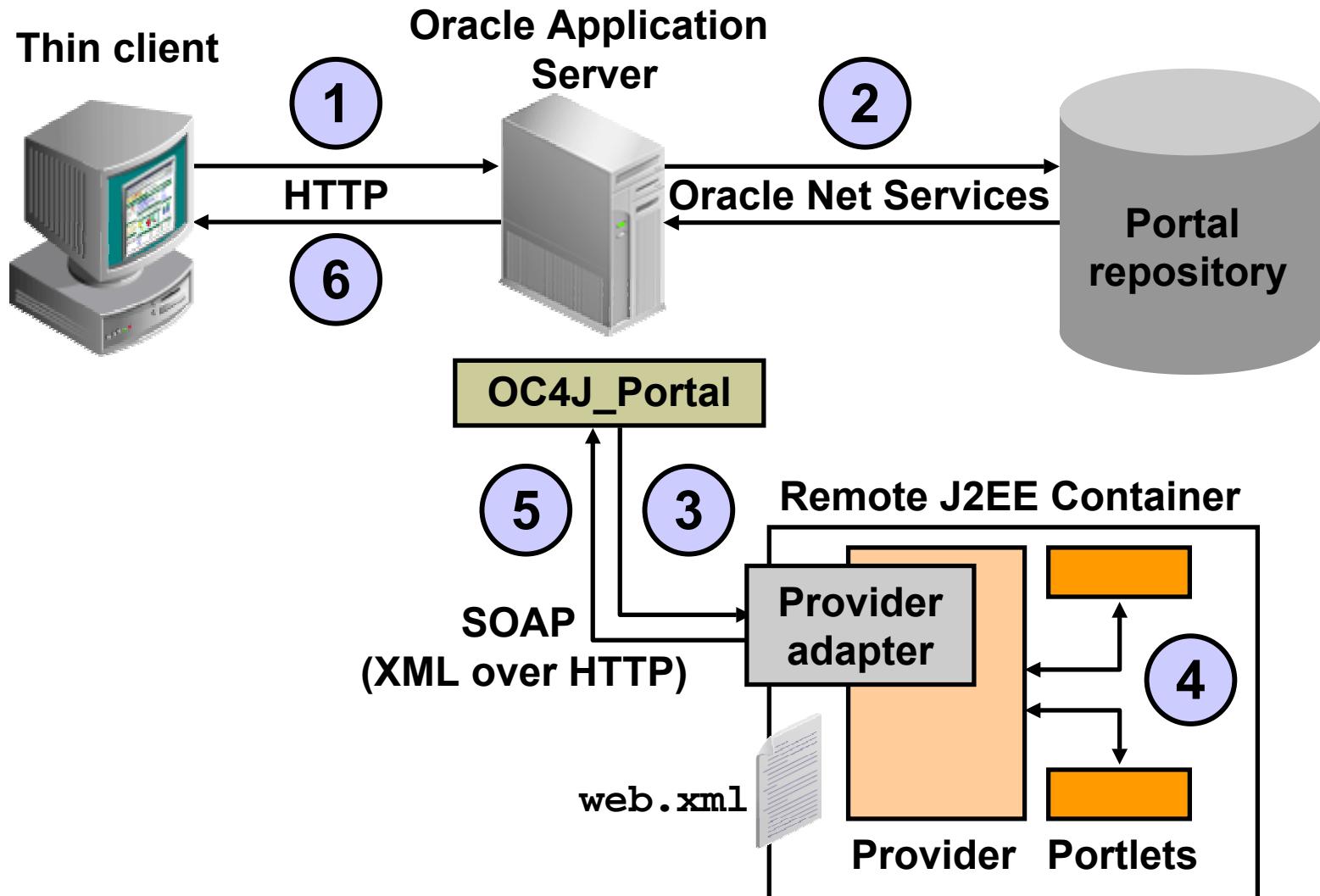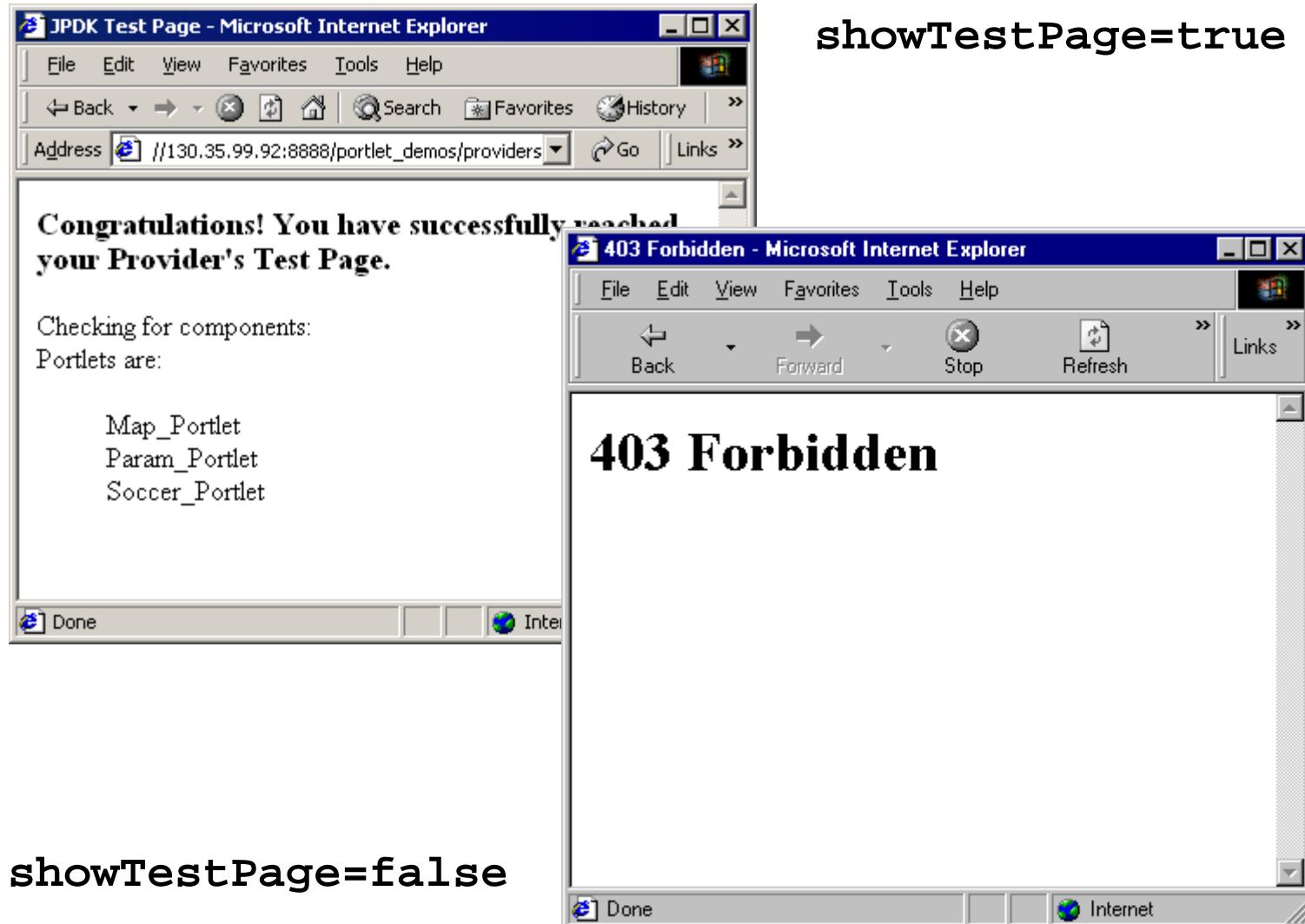
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Регистрирование Web-провайдеров

- **Web providers must be registered in OracleAS Portal.**

- **The portlet developer should provide the detailed deployment and registration instructions.**

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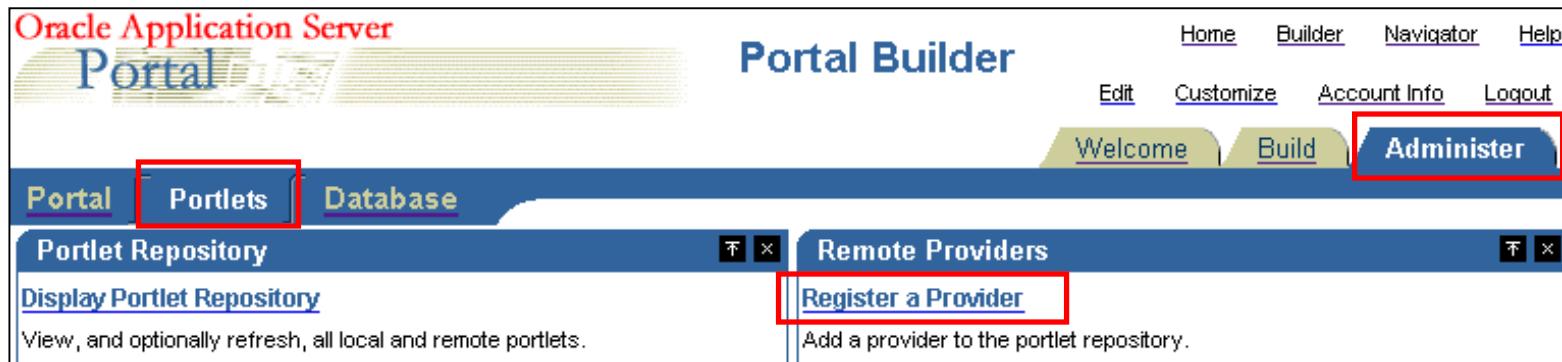
Регистрирование Web-провайдера: Информация о провайдере

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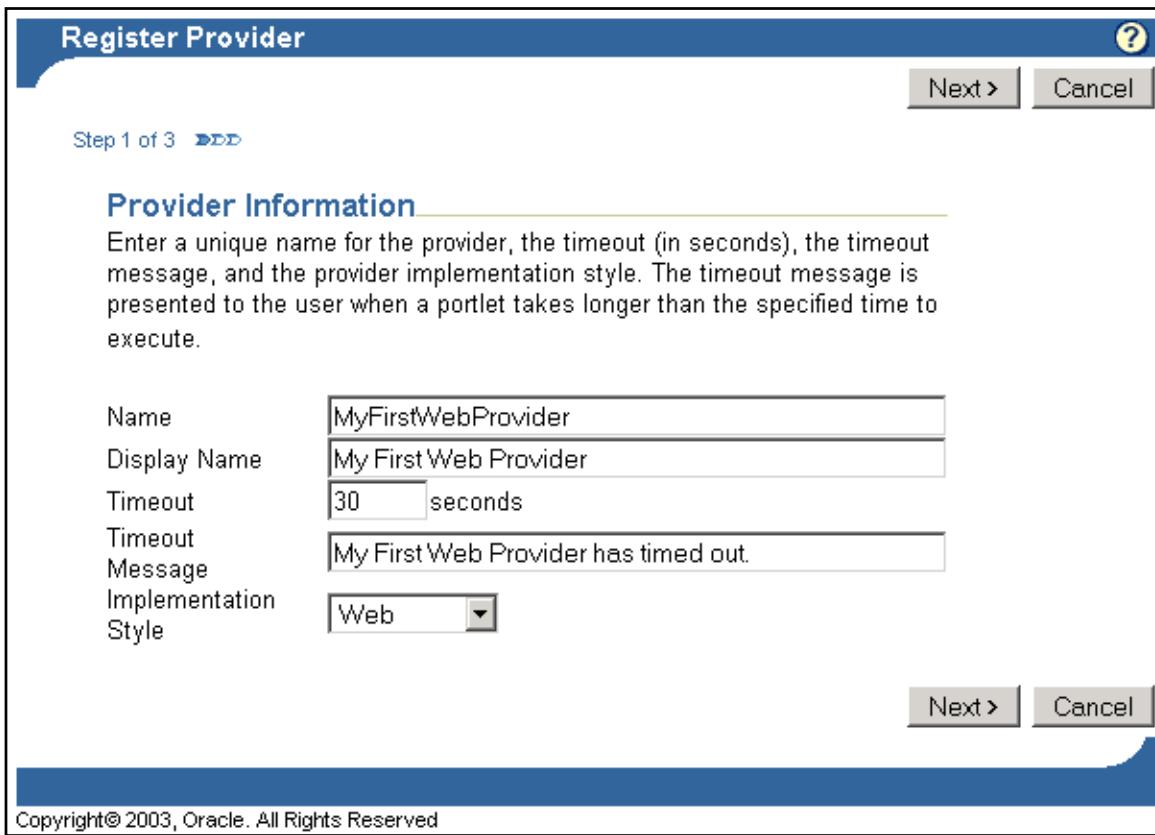
Регистрирование Web-провайдеров: Основные свойства

- **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

http://130.35.99.92:8888/portlet_demos/providers

☐ 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

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Регистрирование Web-провайдеров: Контроль доступа

- **Grant Access**

- **Provider online status:**
  - **Online**
  - **Offline**

- **Cache invalidation:**
  - **Clear cache: To ensure that privilege changes take effect immediately**
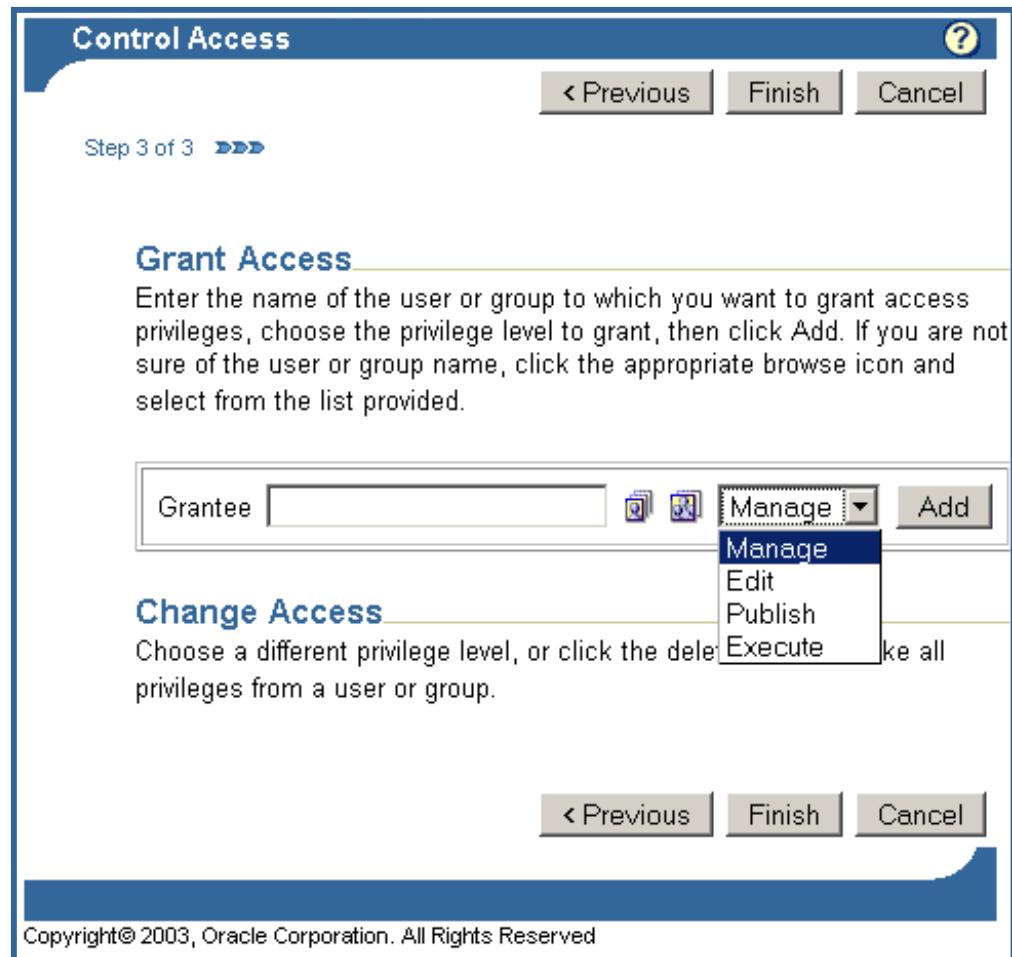
Добавление портлета к странице портала
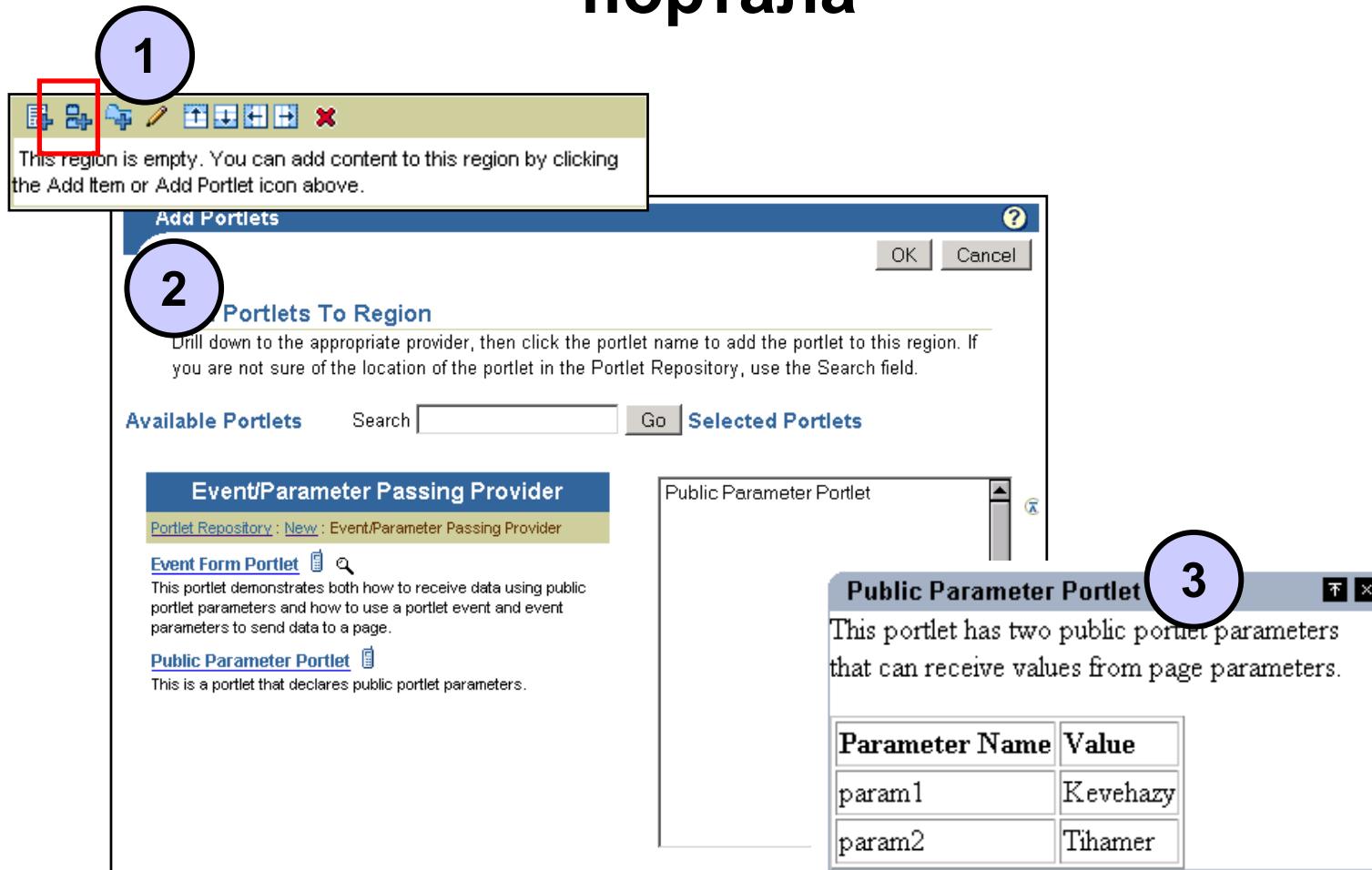
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Заключение

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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Информация для контактов по техническим вопросам:

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