

DEPLOYMENT ON CLOUD (Candidate no: 244851)

The Web application was successfully Deployed on the cloud

1) Amazon instance connection

The screenshot displays the AWS Management Console interface for connecting to an EC2 instance. The breadcrumb navigation shows the path: EC2 > Instances > i-0a5c81659331ceaf2 > Connect to instance. The main content area is titled 'Connect to instance' with an 'Info' link. Below the title, it states: 'Connect to your instance i-0a5c81659331ceaf2 using any of these options'. There are four tabs: 'EC2 Instance Connect', 'Session Manager', 'SSH client' (which is selected), and 'EC2 Serial Console'. Under the 'SSH client' tab, the 'Instance ID' is listed as 'i-0a5c81659331ceaf2'. A list of steps is provided: 1. Open an SSH client. 2. Locate your private key file. The key used to launch this instance is webapplicationprojectkey.pem. 3. Run this command, if necessary, to ensure your key is not publicly viewable: `chmod 400 webapplicationprojectkey.pem`. 4. Connect to your instance using its Public DNS: `ec2-34-228-38-196.compute-1.amazonaws.com`. An 'Example:' section shows the command: `ssh -i "webapplicationprojectkey.pem" ubuntu@ec2-34-228-38-196.compute-1.amazonaws.com`. A blue-bordered note box contains the text: 'Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.' A 'Cancel' button is located at the bottom right of the console window. The browser's address bar shows the URL: `https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#ConnectToInstance:instanceId=i-0a5c81659331ceaf2`. The Windows taskbar at the bottom shows various application icons, including the Start menu, search bar, and several open applications like Edge, File Explorer, and VS Code.

2) Commands for starting glassfish server and javaDB

```
ubuntu@ip-172-31-17-190: ~/glassfish4/bin
PS C:\Users\HP\Desktop> ssh -i "webapplicationprojectkey.pem" ubuntu@ec2-50-19-15-219.compute-1.amazonaws.com
The authenticity of host 'ec2-50-19-15-219.compute-1.amazonaws.com (50.19.15.219)' can't be established.
ECDSA key fingerprint is SHA256:zAn12Pas/2VAAOajYcj9s8ilWxaXlZy9TCM/LZPtasDg.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-50-19-15-219.compute-1.amazonaws.com,50.19.15.219' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-1022-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Thu May  5 23:32:47 UTC 2022

System load:  0.19           Processes:            108
Usage of /:   33.4% of 7.69GB Users logged in:        0
Memory usage: 19%          IPv4 address for eth0: 172.31.17.190
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.

https://ubuntu.com/aws/pro

14 updates can be applied immediately.
12 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Last login: Thu May  5 18:05:34 2022 from 139.184.223.193
ubuntu@ip-172-31-17-190: $ cd /home/ubuntu/glassfish4/bin/
ubuntu@ip-172-31-17-190: ~/glassfish4/bin$ ./asadmin start-domain domain1
Enter master password (3) attempt(s) remain)>
Waiting for domain1 to start .....
Successfully started the domain : domain1
domain Location: /home/ubuntu/glassfish4/glassfish/domains/domain1
Log file: /home/ubuntu/glassfish4/glassfish/domains/domain1/logs/server.log
Admin Port: 4848
Command start-domain executed successfully.
ubuntu@ip-172-31-17-190: ~/glassfish4/bin$ /home/ubuntu/glassfish4/javadb/bin/./startNetworkServer &
[1] 991
ubuntu@ip-172-31-17-190: ~/glassfish4/bin$ Thu May 05 23:36:18 UTC 2022 : Security manager installed using the Basic server security policy.
Thu May 05 23:36:18 UTC 2022 : Apache Derby Network Server - 10.10.2.0 - (1582446) started and ready to accept connections on port 1527
```

3) JDBC Connection pool created in glassfish server

The screenshot displays the GlassFish Server Open Source Edition web console. The left sidebar shows a tree view of the server's configuration, with the 'WebappsDBPool' under 'JDBC' selected. The main panel is titled 'Edit JDBC Connection Pool' and contains the following sections:

- General Settings:**
 - Pool Name:** WebappsDBPool
 - Resource Type:** javax.sql.DataSource
 - Datasource Classname:** org.apache.derby.jdbc.ClientDataSource40
 - Driver Classname:** (empty)
 - Ping:** ☐ Enabled
 - Deployment Order:** 100
 - Description:** (empty)
- Pool Settings:**
 - Initial and Minimum Pool Size:** 8 Connections
 - Maximum Pool Size:** 32 Connections
 - Pool Resize Quantity:** 2 Connections
 - Idle Timeout:** 300 Seconds
 - Max Wait Time:** 60000 Milliseconds
- Transaction:**
 - Non-Transactional Connections:** ☐ Enabled

The bottom of the screen shows the Windows taskbar with various application icons and the system clock indicating 00:41 on 06-05-2023.

4) Security Configuration

The screenshot shows the GlassFish Server Open Source Edition web interface. The browser address bar displays `https://ec2-50-19-15-219.compute-1.amazonaws.com:4848/common/index.jsf`. The page title is "GlassFish™ Server Open Source Edition". The user is logged in as "admin" on the "domain1" server "ec2-50-19-15-219.compute-1.amazonaws.com".

The left sidebar shows a tree view of the configuration hierarchy. The "Security" section is expanded, and "Realms" is selected. The "WebappsRealm" is highlighted in the list.

The main content area is titled "Edit Realm" and contains the following configuration details:

- Configuration Name:** server-config
- Realm Name:** WebappsRealm
- Class Name:** com.sun.enterprise.security.auth.realm.jdbc.JDBCRealm

Below these are the "Properties specific to this Class":

- JAAAS Context:** jdbcRealm (Identifier for the login module to use for this realm)
- JNDI:** jdbc/WebappsDB (JNDI name of the JDBC resource used by this realm)
- User Table:** SYSTEMUSER (Name of the database table that contains the list of authorized users for this realm)
- User Name Column:** USERNAME (Name of the column in the user table that contains the list of user names)
- Password Column:** USERPASSWORD (Name of the column in the user table that contains the user passwords)
- Group Table:** SYSTEMUSERGROUP (Name of the database table that contains the list of groups for this realm)
- Group Table User Name Column:** (Name of the column in the user group table that contains the list of groups for this realm)
- Group Name Column:** GROUPNAME (Name of the column in the group table that contains the list of group names)
- Password Encryption Algorithm:** AES (This denotes the algorithm for encrypting the passwords in the database. It is a security risk to leave this field empty.)
- Assign Groups:** (Comma-separated list of group names)
- Database User:** (Specify the database user name in the realm instead of the JDBC connection pool)
- Database Password:** (Specify the database password in the realm instead of the JDBC connection pool)

The bottom of the screen shows the Windows taskbar with the date and time as 06-05-2022, 00:43.

5)JDBC Resource

The screenshot shows the GlassFish Server Open Source Edition web console. The browser address bar indicates the URL is `https://ec2-50-19-15-219.compute-1.amazonaws.com:4848/common/index.jsf`. The page title is "GlassFish™ Server Open Source Edition".

The left sidebar shows the "Resources" tree. The "JDBC Resources" folder is expanded, showing the following resources:

- jdbc/WebappsDB
- jdbc/_TimerPool
- jdbc/_default
- JDBC Connection Pools
 - DerbyPool
 - WebappsDBPool
 - _TimerPool

The main panel displays the "Edit JDBC Resource" page for the selected resource. The page includes the following fields:

- JNDI Name:** jdbc/WebappsDB
- Pool Name:** WebappsDBPool (dropdown menu)
- Deployment Order:** 100 (text input)
- Description:** (text input)
- Status:** ☒ Enabled

Below the fields is the "Additional Properties (0)" section, which is currently empty. The table below shows the structure of this section:

Select	Name	Value	Description
No items found.			

The bottom of the screenshot shows the Windows taskbar with various application icons and the system tray displaying the date and time.

5) Application Just before launching

The screenshot shows the GlassFish Server Open Source Edition web console. The browser address bar indicates the URL is `https://ec2-54-160-182-115.compute-1.amazonaws.com:4848/common/index.jsf`. The user is logged in as `admin` on `domain1`, with the server address `ec2-54-160-182-115.compute-1.amazonaws.com`.

The left sidebar contains a navigation tree with the following items:

- Common Tasks
- Domain
 - server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
 - Applications (selected)
 - Lifecycle Modules
 - Monitoring Data
- Resources
 - Concurrent Resources
 - Connectors
 - JDBC
 - JMS Resources
 - JNDI
 - JavaMail Sessions
 - Resource Adapter Configs
- Configurations
 - default-config
 - server-config
- Update Tool

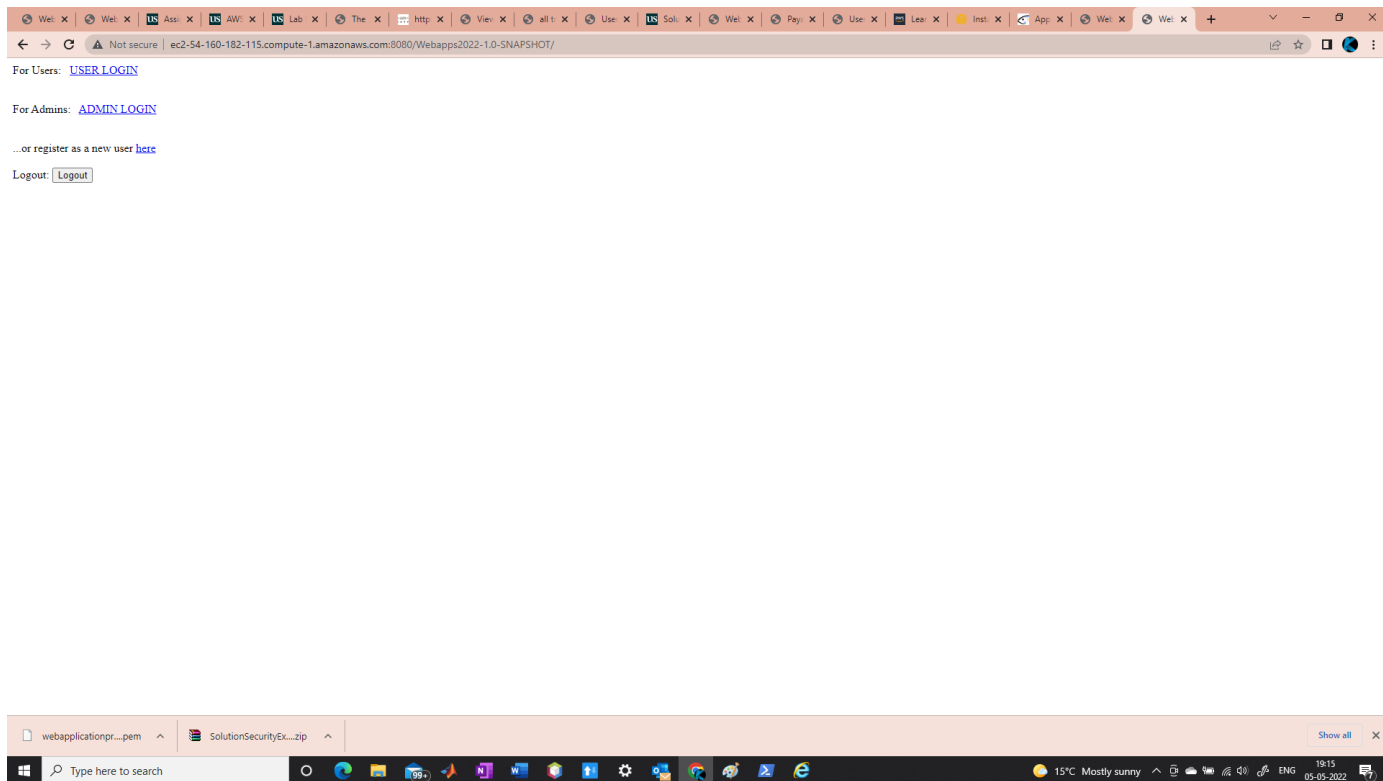
The main content area is titled **Applications**. Below the title, it states: "Applications can be enterprise or web applications, or various kinds of modules. Restart an application or module by clicking on the reload link, this action will apply only to the targets that the application or module is enabled on."

Below this text is a section for **Deployed Applications (1)**. It includes a table with the following columns: **Select**, **Name**, **Deployment Order**, **Enabled**, **Engines**, and **Action**.

Select	Name	Deployment Order	Enabled	Engines	Action
<input type="checkbox"/>	Webapps2022-1.0-SNAPSHOT	100	✓	ejb, web	Launch Redeploy Reload

The Windows taskbar at the bottom shows the search bar and several open applications, including a file explorer with `webapplicationpr...pem` and `SolutionSecurityEx...zip`.

6) My Web Application deployed in the cloud , Yay!



7) Another pic of my webapplication running in cloud!

