LOGIN

20. hroug godišnja konferencija

Matej Drageljević

Case study: Nadogradnja na 11g

software

Agenda

- Prije migracije
- Migracija
- Nakon migracije

Prije migracije

Apache HTTP + mod_security (reverse proxy)

Oracle Identity Management 10g (10.1.4.2.0)

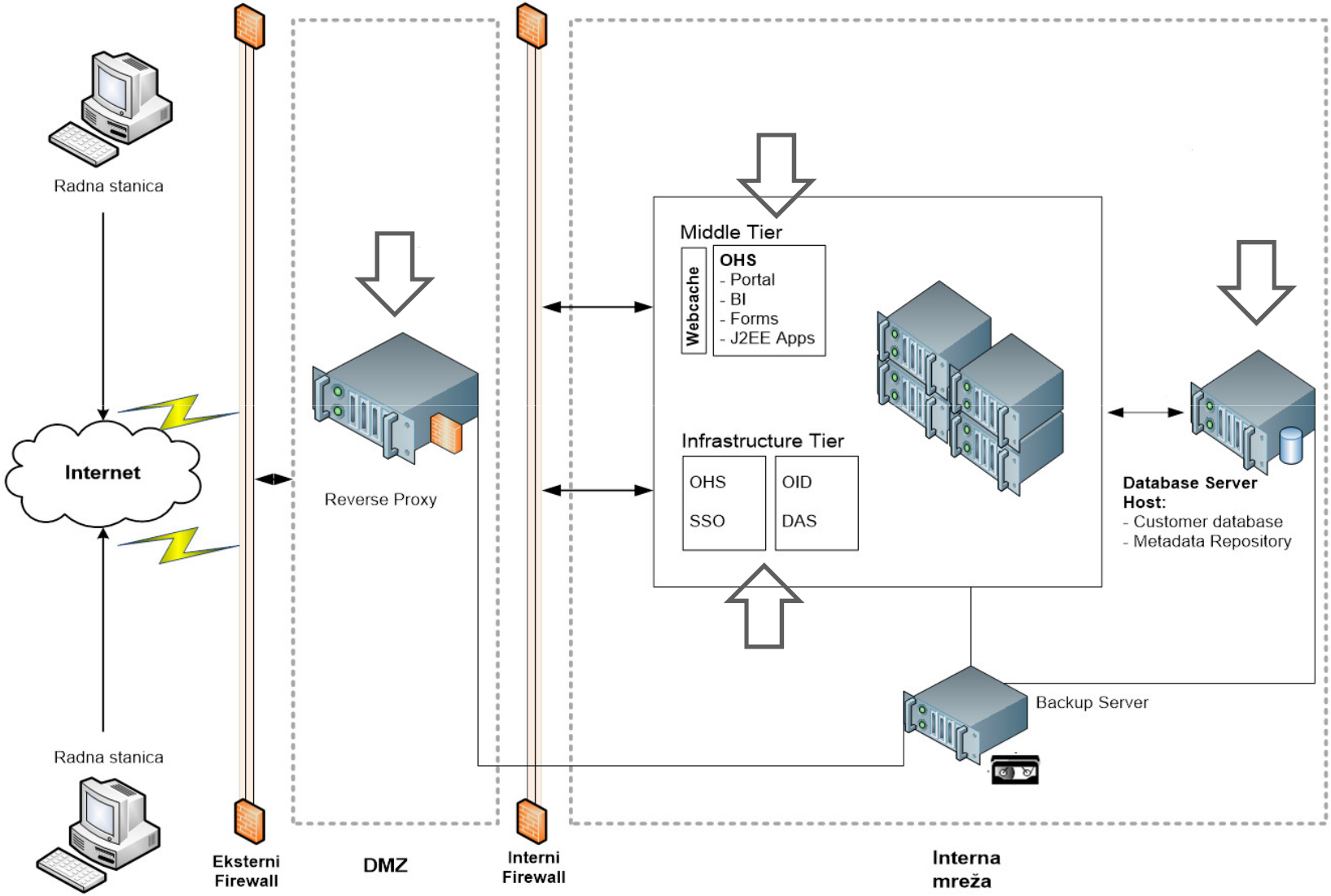
OHS, OID, DAS, SSO (custom login page), OC4J

Oracle Application Server 10g (10.1.2.3.0)

OHS, WebCache, Portal, Forms, Reports, Discoverer, OC4J

Oracle Enterprise RDBMS 11gR1 (11.1.1.7.0)

VPD, Apex


Radna stanica
Internet
Radna stanica
Reverse Proxy
Middle Tier
Webcache
OHS
- Portal
- BI
- Forms
- J2EE Apps
Infrastructure Tier
OHS
SSO
OID
DAS
Database Server
Host:
- Customer database
- Metadata Repository
Backup Server
Eksterni Firewall
DMZ
Interni Firewall
Interna mreža

Apache HTTP + mod_security (reverse proxy)

Upgrade na nove verzije

Oracle Identity Management 10g (10.1.4.2.0) - OHS, OID, DAS, SSO (custom login page)

Desupported

Upgrade na Oracle Identitiy Managemet 11g R1 (OID)

Upgrade na Oracle Access Management 11g R2 (SSO) (mod_osso ili WebGate)

DAS **(Patch 18328572)**

Oracle Application Server 10g (10.1.2.3.0) - OHS, WebCache, Portal, Forms, Reports, Discoverer, OC4J

Desupported

Verzija 11g R1 (Portal, Forms, Reports, Discoverer) – desupported

WebCache – end of life

Discoverer – end of life (zamjena Obiee 11g)

Upgrade na Forms & Reports 11g R2

Oracle Enterprise RDBMS 11g (11.1.1.7.0) - VPD, Apex

Upgrade na novu verziju 12c

Apex upgrade na novu verziju 5.0

Licence

http://docs.oracle.com/cd/E28280_01/doc.1111/e14860/toc.htm

Oracle Forms and Reports can be separately licensed, independent of any Oracle Internet Application Server edition.

When you license it independently, Oracle Forms and Reports includes:

- Oracle Forms
- Forms client applet
- Forms Runtime
- Oracle Reports
- WebLogic Server Basic
- Oracle Enterprise Manager Fusion Middleware Control

Restricted-Use Licenses

The following restricted-use licenses are included when you separately license Oracle Forms:

- Restricted Use: Oracle Single Sign-On and Oracle Access Manager Basic are provided for authentication services to users accessing Oracle Forms and Reports.
- Oracle Internet Directory is provided to provision, store, and manage Oracle Forms and Reports users and groups, their associated security credentials and privileges, to synchronize data with third party directory services, and to store other metadata specific to Oracle Forms and Reports.
- Oracle HTTP Server and its modules are provided for running Oracle Forms and Reports applications only.
- WebLogic Server Basic is provided for running Oracle Forms and Reports applications only.

Weblogic Server Basic

All editions of the products Oracle Internet Application Server and Oracle Forms and Reports Server include rights to WebLogic Server Basic. WebLogic Server Basic is only for running components provided within these products such as Forms, Reports, Discoverer and Portal. It can also be used for custom Java applications such as those developed for Oracle Containers for Java EE. Products outside of Oracle Internet Application Server and Oracle Forms and Reports that have licensing dependencies on any edition of Oracle Internet Application Server or Oracle Forms and Reports do not have the right to run those products on WebLogic Server Basic unless stated specifically within their licensing documentation.

Access Manager Basic

Oracle Access Manager Basic is only for providing single sign-on capabilities to Oracle Internet Application Server and for custom Java applications previously developed for Oracle Containers for Java EE (OC4J). Oracle Access Manager Basic license rights are also granted to Oracle Forms and Reports running on Weblogic Server for authentication services to users accessing Oracle Forms and Reports. The Oracle Access Manager Basic license includes Oracle Access Manager usage rights, with the limitations summarized below:

- No explicit usage of Access Manager SDK
- No explicit usage of Custom Plug-Ins
- LDAP limited to Oracle Internet Directory
- Application Server limited to Oracle Containers for Java EE (OC4J) or WebLogic Server
- Web Server limited to Oracle HTTP Server (OHS)
- No integration with Oracle Adaptive Access Manager permitted
- No integration with Oracle Identity Federation permitted

Certification Matrix

http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html

https://support.oracle.com (Certifications)

OHS

Oracle Web Tier - Statement of Direction (Doc ID 1576588.1)

Verzija 12c 12.1.2.3

- mod_plsql (zadnja verzija koja podržava)
- mod_osso (nije podržan u verziji 12c, WebGate)
- node manager zamijenio opmn

Verzija 11g R1 11.1.1.7.0

- podržava mod_osso i mod_plsql
- opmn

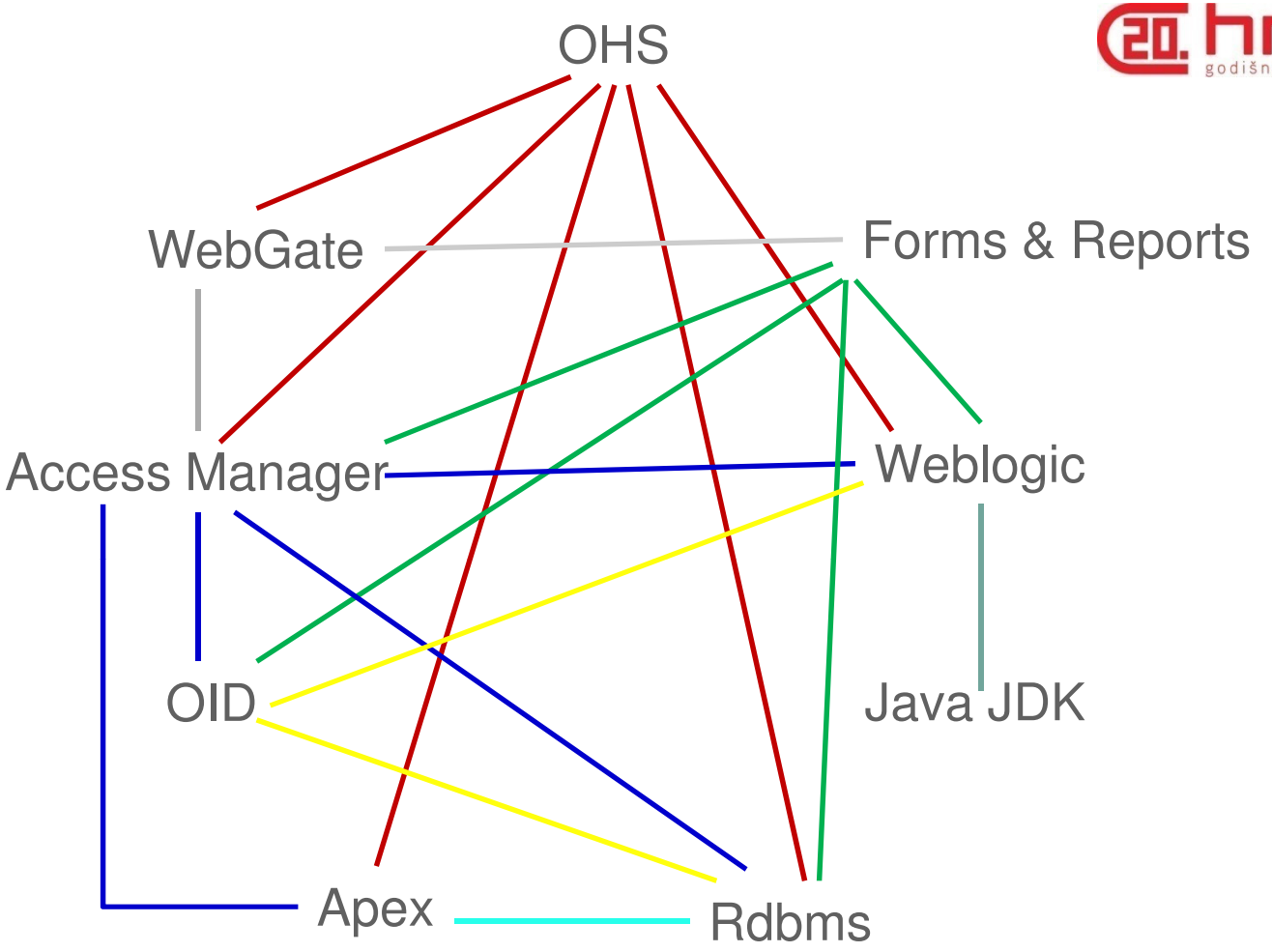
How to Integrate Forms 11gR2 with OAM/WebGate after an 11gR2 Forms/Reports Installation (Doc ID 1566779.1)

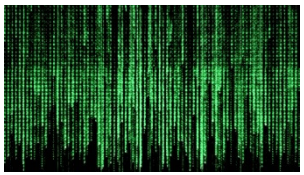
Note: The default OHS that comes with the 11gR2 Forms installation is not compatible with WebGate. The OHS that comes with a default installation of 11gR2 can only be used with mod_osso.

Apex

Master Note for Oracle Application Express (APEX) Authentication (Doc ID 1094413.1)

Ne podržava mod_osso ako se koristi Access Manager (samo WebGate)


OHS
WebGate
Forms & Reports
Access Manager
Weblogic
OID
Java JDK
Apex
Rdbms



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Migracija

software

LOGIN 20. hroug godišnja konferencija

Apache HTTP(s) + mod_security

Server version: Apache/2.4.10 (Unix)

ModSecurity 2.7.6

Terminate SSL

Reverse Proxy (IPv6 support)


```
ProxyRequests Off
ProxyPreserveHost On
RequestHeader set WL-Proxy-SSL true
ProxyPass /forms http://xxx.xxx.xxx.xxx:7777/forms
ProxyPassReverse /forms http://xxx.xxx.xxx.xxx:7777/forms
```

Configuring Oracle AS Portal For Usage Through A Apache 2.0 Reverse Proxy (Doc ID 422359.1)

How to Terminate SSL at LBR, Another HTTP Server, Web Cache or OHS 11g When Using WLS Plugin (mod_wl_ohs) (Doc ID 1569732.1)

software

Oracle rdbms 12c 12.1.0.1.0 SE

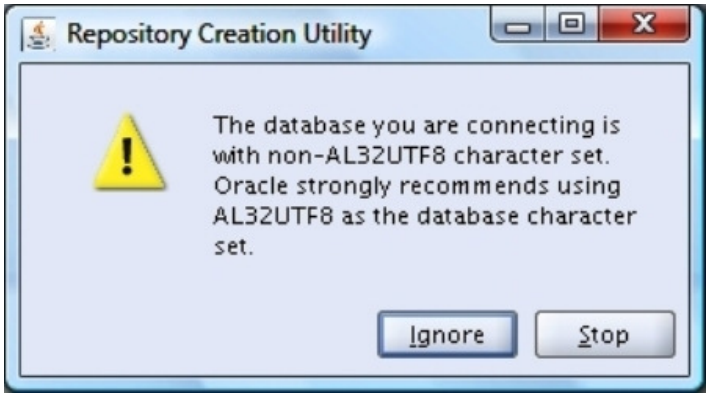
Customer database

- expdp, impdp za prijenos podataka
- simulirani VPD

Metadata Repository (OID, OAM)

RCU requirements

- Character set is AL32UTF8
- Oracle JVM enabled
- SGA_MAX_SIZE >= 147456KB
- DB_BLOCK_SIZE >= 8KB
- ODS: processes >= 500
- ODS: open_cursors >= 500



software

Oracle Identity Management 11g R1 (11.1.7.7.0)

RCU instalacija (ODS schema)

Java JDK 1.7.0_80

Weblogic Server 10.3.6 (PSU 10)

Only in the case that you are using WLS 10.3.6 and the targetJDK is using a certified version of JAVA 7 (version 1.7.0_x) , you will need to copy manually some jar files as follows:

Copy the following files from $MW_HOME/modules to the directory $JAVA_HOME/jre/lib/endorsed:

javax.annotation_1.0.0.0_1-0.jar, javax.xml.bind_2.1.1.jar, javax.xml.ws_2.1.1.jar

Setup

AdminServer

ODSM server (Oracle Directory Services Manager)

NodeManager

OID (Oracle Internet Directory)

Prijenos podataka (OID 10.1.4.2.0 na OID 11.1.7.7.0)

ldapsearch (izrada ldif datoteka za prijenos)

- izbaciti ias_admin, orcladmin,....

- izbaciti linije s authpassword i orclpassword

ldapadd (load ldif datoteka)

Command-Line Tools for Managing Entries and Attributes (Doc ID 554236.1)

OID bulkload Fails when LDIF File Includes authpassword or orclpassword Operational Attributes (Doc ID 401662.1)

Oracle Access Management 11g R2 (11.1.2.2.0)

RCU instalacija (OAM, OPSS, IAU, MDS)

Java JDK 1.7.0_80

Weblogic Server 10.3.6 (PSU 10)

Only in the case that you are using WLS 10.3.6 and the targetJDK is using a certified version of JAVA 7 (version 1.7.0_x) , you will need to copy manually some jar files as follows:

Copy the following files from $MW_HOME/modules to the directory $JAVA_HOME/jre/lib/endorsed:

javax.annotation_1.0.0.0_1-0.jar, javax.xml.bind_2.1.1.jar, javax.xml.ws_2.1.1.jar

Setup

AdminServer

WLS_OAM1 (Oracle Access Manager)

NodeManager

Prije pokretanja servera napraviti (http://docs.oracle.com/cd/E40329_01/install.1112/e49521/toc.htm):

- Section 3.2.9, Upgrading OPSS Schema using Patch Set Assistant
- Section 3.2.10, Configuring Database Security Store for an Oracle Identity and Access Management Domain

OAM 11g: Patched WLS Will Break Access to OAM Policy Store - "OAMSSA-06252: The policy store is not available;" (Doc ID 1572620.1)

OAM 11.1.2.2: "Coexistence Flag Status::false" Message Logged Repeatedly in the Server Logs. (Doc ID 1992523.1)

Integracija OID (Oracle Internet Directory) s OAM (Oracle Access Manager)

http://docs.oracle.com/cd/E27559_01/integration.1112/e27123/oim.htm#IDMIG31183

7.4.1 Extending Directory Schema for Access Manager

7.4.2 Creating Users and Groups for Access Manager

7.4.3 Creating Users and Groups for Oracle Identity Manager

7.4.4 Creating Users and Groups for Oracle WebLogic Server

http://docs.oracle.com/cd/E27559_01/integration.1112/e27123/oidoam.htm#IDMIG30891

5 Integrating Oracle Internet Directory with Access Manager

5.3 Registering Oracle Internet Directory With Access Manager

5.3.2 Registering a User Identity Store with Access Manager

5.3.3 Designating the System Store, Administrators, or the Default Store

5.4 Setting Up Authentication Providers with WebLogic Server

5.5 Configuring Authentication Between Access Manager and Your User Identity Store

5.5.2 Defining Authentication in Access Manager for Your User Identity Store

How to Install, Configure and Integrate Oracle Internet Directory (OID) and Oracle Access Manager (OAM) for FMW Single Sign-On (Doc ID 1395233.1)

Oracle Forms & Reports11g R2 (11.1.2.2.0)

Java JDK 1.7.0_80

Weblogic Server 10.3.6 (PSU 10)

Only in the case that you are using WLS 10.3.6 and the targetJDK is using a certified version of JAVA 7 (version 1.7.0_x) , you will need to copy manually some jar files as follows:

Copy the following files from $MW_HOME/modules to the directory $JAVA_HOME/jre/lib/endorsed:

javax.annotation_1.0.0.0_1-0.jar, javax.xml.bind_2.1.1.jar, javax.xml.ws_2.1.1.jar

Setup (bez OHS)

- AdminServer
- WLS_FORMS
- WLS_REPORTS
- OPMN
- NodeManager

Install and Configure Advisor: Oracle Fusion Middleware (FMW) Forms and Reports 11.1.2 (Doc ID 346.1)

How to Create Default Resource Access Descriptors (RADS) for Forms 11g (Doc ID 1390533.1)

How to Associate a Forms 11g Instance with a New OID Host (Doc ID 1282566.1)

How To Compile Forms As Non Oracle User On Unix Platforms (Doc ID 427548.1)

How to Integrate Forms 11gR2 with OAM/WebGate after an 11gR2 Forms/Reports Installation (Doc ID 1566779.1)

Release of JRE 8+, 1.7.0_25+ & 1.6.0_51+ and Impact on Oracle Forms (Doc ID 1563023.1)

How to Add Manifest Entries into Custom Jar Files Such as jacob.jar or Jar Files Containing Icons (Doc ID 1583119.1)

How Do You Create And Start Up A Standalone Reports Server In 11g R1 & R2 (Doc ID 961174.1)

How to Enable Random and Non-Sequential Job IDs for Reports Server 11g (Doc ID 852814.1)

Can't View 11.1.2.2 Report Jobs From Enterprise Manager (EM) (Doc ID 1914122.1) (**Patch 18533463**)

WebTier (OHS + WebGate)

A WebGate is a web-server plug-in for Oracle Access Manager (OAM) that intercepts HTTP requests and forwards them to the Access Server for authentication and authorization.

Oracle WebTier 11.1.7.7.0

Setup (without weblogic domain)

- OHS
- OPMN
- mod_wl_ohs.conf (forms, reports)
- forms.conf
- dads.conf

Oracle WebGate agent 11.1.2.2.0

Setup

Post installation steps

- *deployWebGateInstance.sh*
- *set LD_LIBRARY_PATH*
- *EditHttpConf*

Custom login page

Perl datoteke: login.pl, login-config.pl, logout.pl Templates: login, logout, pswd

Custom error messages (WebGate.xml):

<Message MsgTag="OAM-1">Neispravno Korisničko ime ili zaporka.</Message>

OHS 11.1.2.2 WebGate Constant Segmentation Fault or Crashes (Doc ID 1637095.1) (**Patch 18332791**)

software

Zašto WebGate?

- mod_osso se napušta
- DCC (Oracle preporuka)
- koristi OCAP za komunikaciju s OAM
- izolira OAM od vanjskog utjecaja
- OHS 12c dolazi s predinstaliranim WebGate agentom

ECC vs DCC

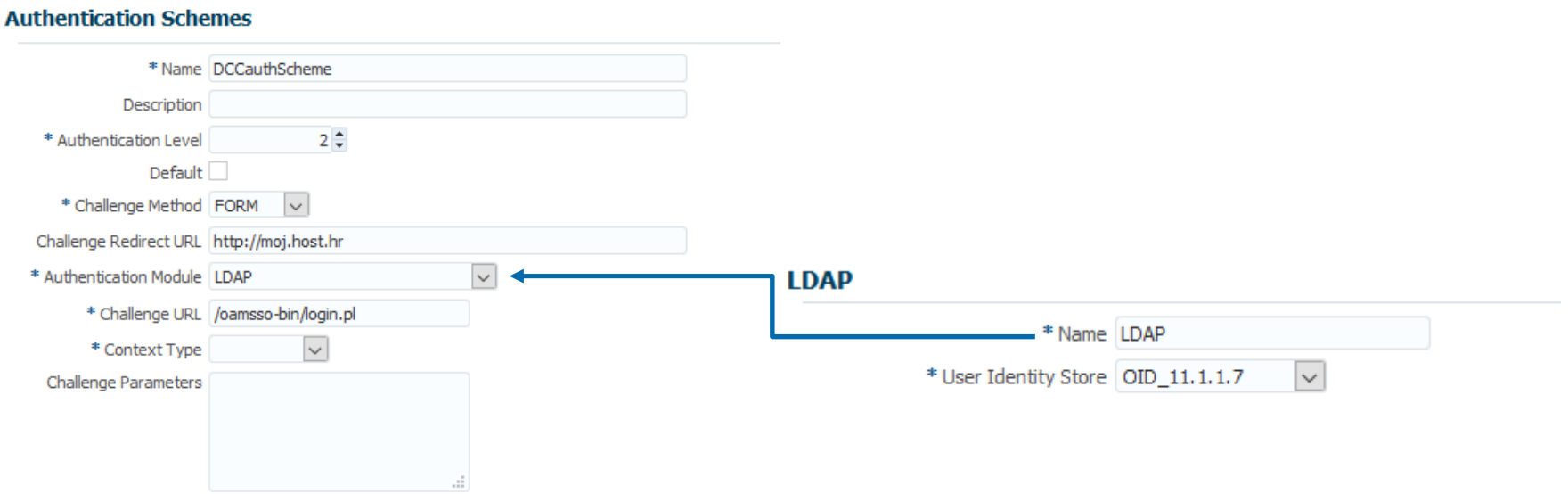
http://docs.oracle.com/cd/E27559_01/admin.1112/e27239/shared.htm#AIAAG6685

DCC	ECC
Stands alone (detached from the OAM Server and does not require an application server)	The Embedded Credential Collector is deployed with, and integral to, the OAM Server and part of the protocol binding layer.
DMZ Deployment	No
DCC login, error, and password pages (custom login page), perl scripts	JSP pages (no custom login page)
Password policy enforcement	Password policy enforcement
DCC supports all challenge methods	ECC supports all challenge methods
Custom Authentication Plug-ins and Challenge Methods	Custom Authentication Plug-ins and Challenge Methods
Single Step (Simple Form) Authentication	Single Step (Simple Form) Authentication
Multi-Step Authentication	Multi-Step Authentication
Logout Configuration	Logout Configuration

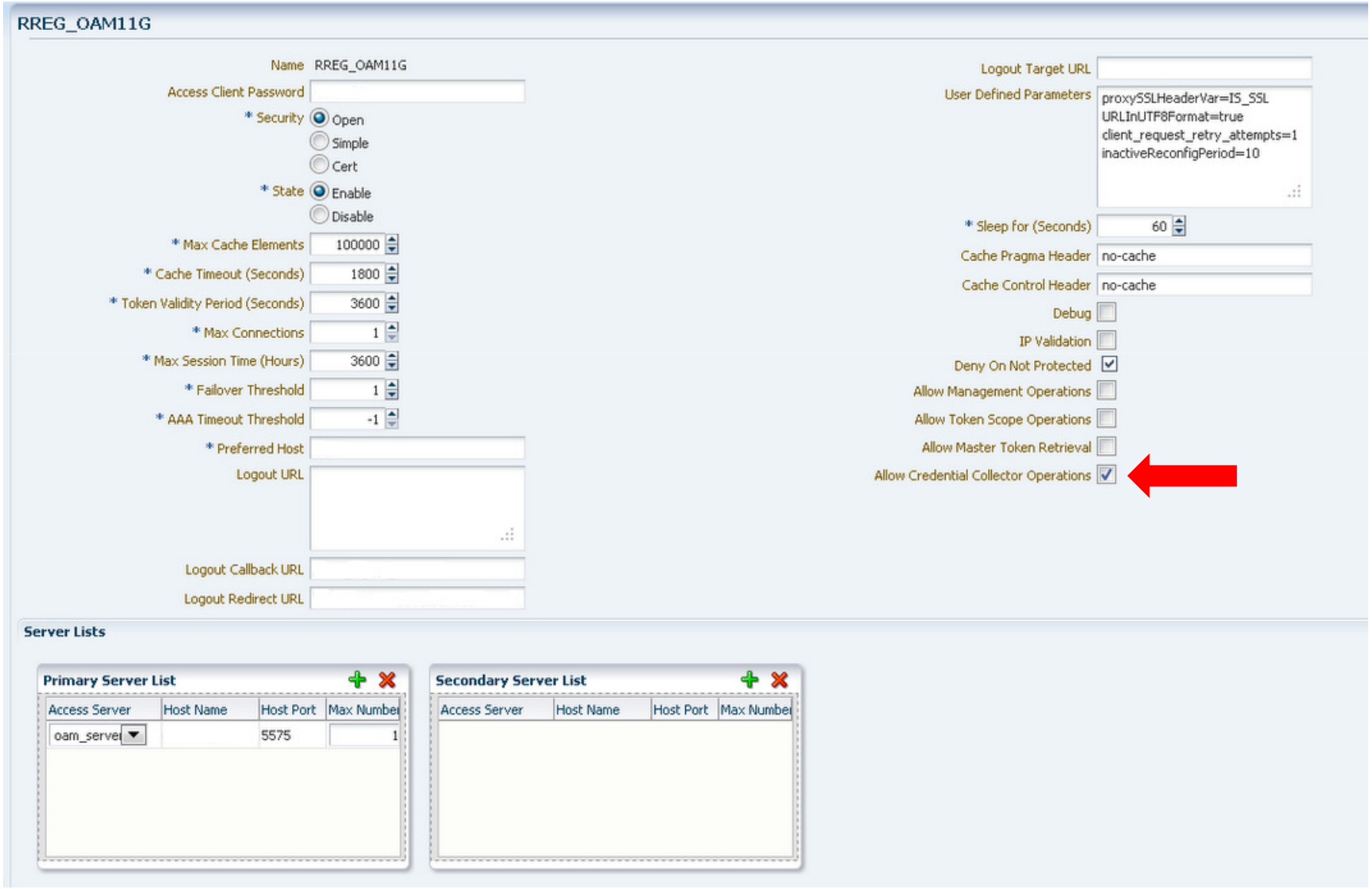
Napomena: obratiti pažnju kod konfiguracije, jer službena dokumentacija uglavnom koristi ECC u primjerima, dok za DCC vrijede sasvim druga pravila (primjer *persistent login*)

Konfiguracija OAM i registracija WebGate agenta

Konfiguracija i registracija preko http://<host_name:port>/oamconsole



Registracija WebGate agenta



Forms

Note: If using DCC (detached credential collector-enabled) as per OAM11gR2 : How To Setup And Test DCC WebGate in OAM 11.1.2.2 (Doc ID 1904627.1), ssoCookie=disablehttponly needs to be entered in the agent registration page, in the User Defined Parameters box.

Prilikom registracije WebGate agenta, automatski se popunjavaju slijedeće stavke:

Host Identifer

Aplication Domain

HTTP Protected resources /** i /.../*

Nakon registracije WebGate agenta na file sustavu u mapi $DOMAIN_HOME/output/<host_name>/ kreirane su dvije datoteke:

cwallet.sso

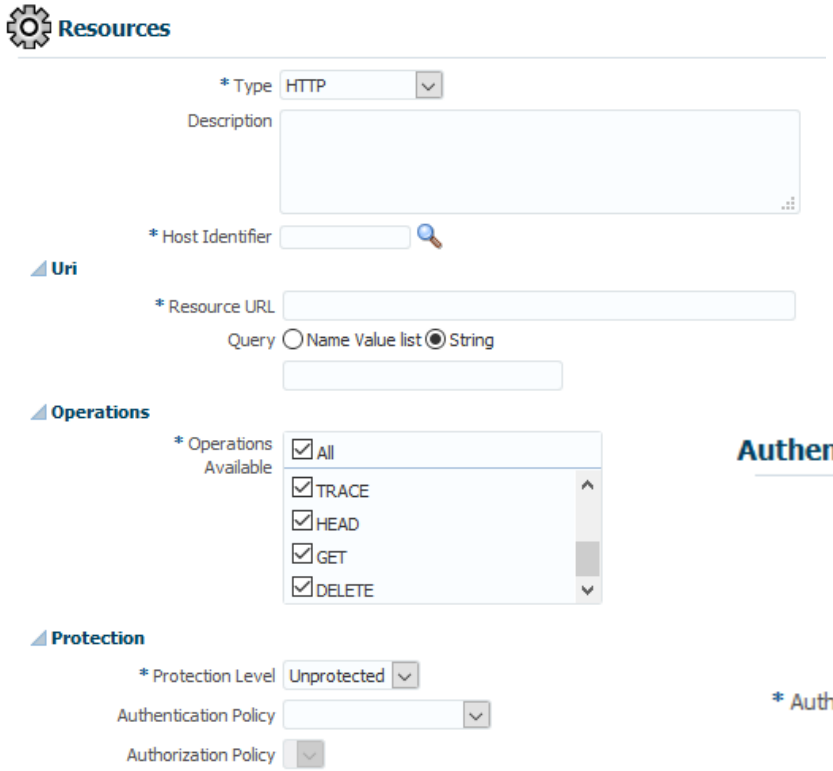
ObAccessClient.xml

koje je potrebno kopirati na WebTier instancu gdje se nalazi WebGate agent i to u mapu:

$ORACLE_INSTANCE/config/OHS/ohs1/WebGate/config

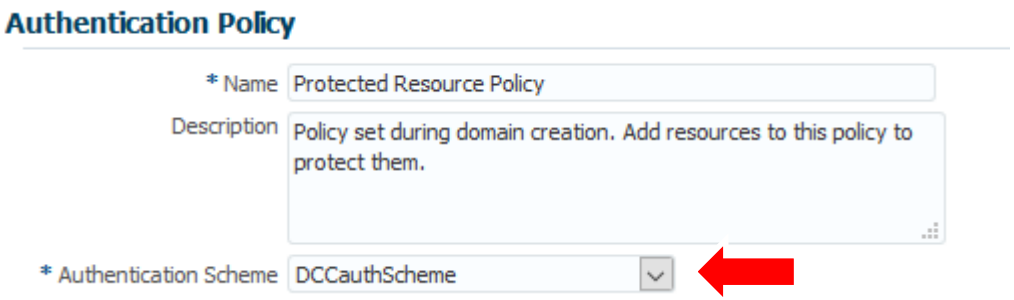
Nakon izmjene konfiguracije potrebno je napraviti restart OHS instance.

Kako zaštiti određeni izvor na OHS-u?



Protection Level (HTTP): Protected
Unprotected
Excluded

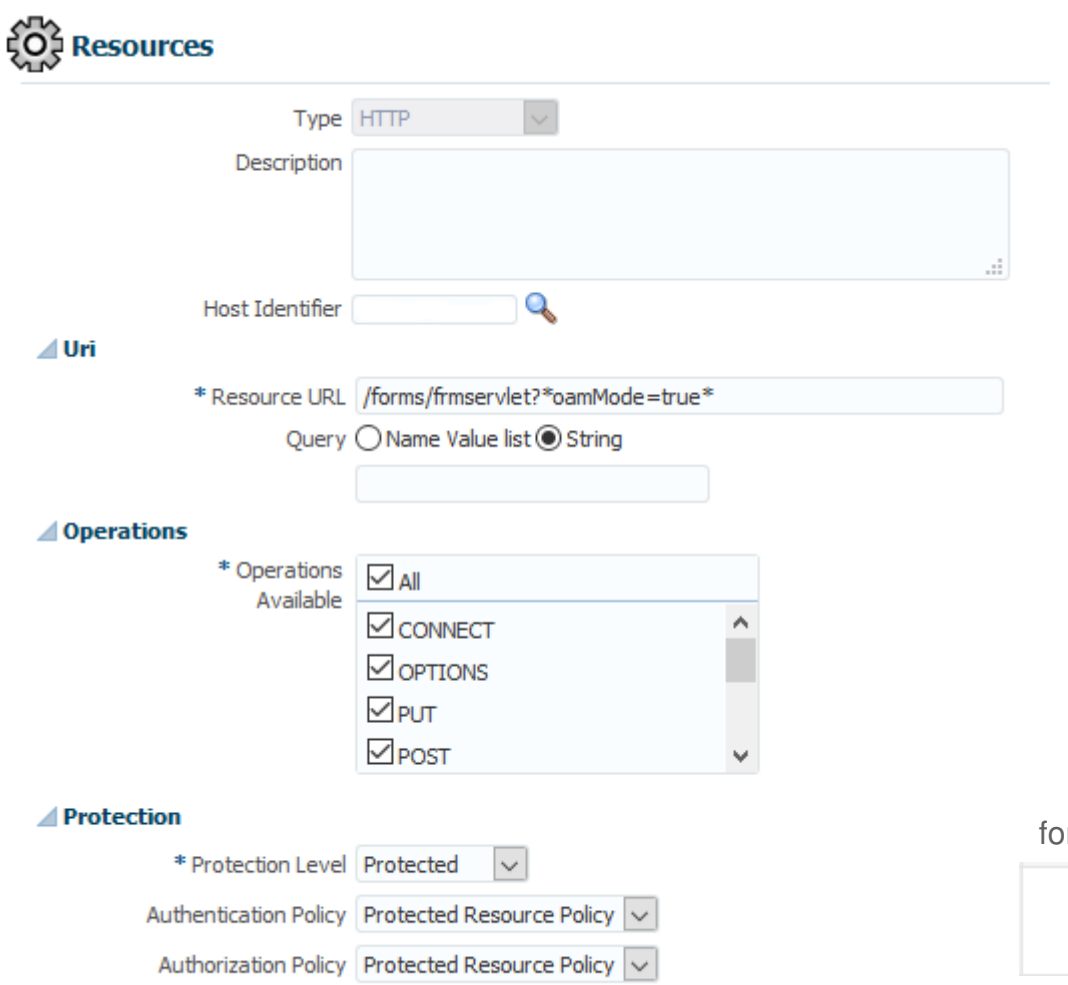
Authentication/Authorization policy: Protected
Public



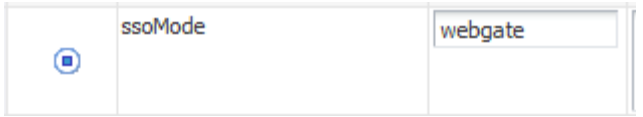
Preporuka

- kreirati ’public’ resource
- favicon.ico staviti public ili excluded
- index.html staviti public ili excluded (opmn ping)

Primjer: Forms

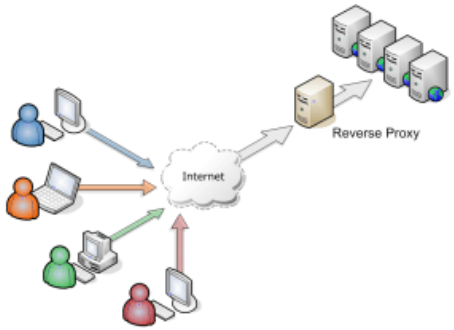


formsweb.cfg



How to Integrate Forms 11gR2 with OAM/WebGate after an 11gR2 Forms/Reports Installation (Doc ID 1566779.1)

Rekonfiguracija za reverse proxy



OHS (webtier)

httpd.conf

* *ServerName*
* *VirtualHost*

OAM (Access Manager)

Access Manager Settings - Load Balancing

* OAM Server Host
* OAM Server Port
* OAM Server protocol
* Server Error Mode

Authentication Schemes

* Challenge Redirect URL

WebGate agent

* Logout Callback URL

Session timeout

Access Manager – Common Settings

Session

* Session Lifetime (minutes) 480
* Idle Timeout (minutes) 480
* (Management) Maximum Search Results 100

* Maximum Number of Sessions per User 8

Database Persistence of Active Sessions Enabled ☑

WebGate agent settings

* Max Cache Elements 100000
* Cache Timeout (Seconds) 1800
* Token Validity Period (Seconds) 28800
* Max Connections 1
* Max Session Time 28800
* Failover Threshold 1
* AAA Timeout Threshold -1

After Certain Amount of Time, Active Working User Is Redirected to Fusion Home Page or Gets Connection Error, OAM Operation Error (Doc ID 1544624.1)

OAM Session Timeout (Doc ID 1628258.1)

15 minutes

Apex

Upgrade na verziju 5.0

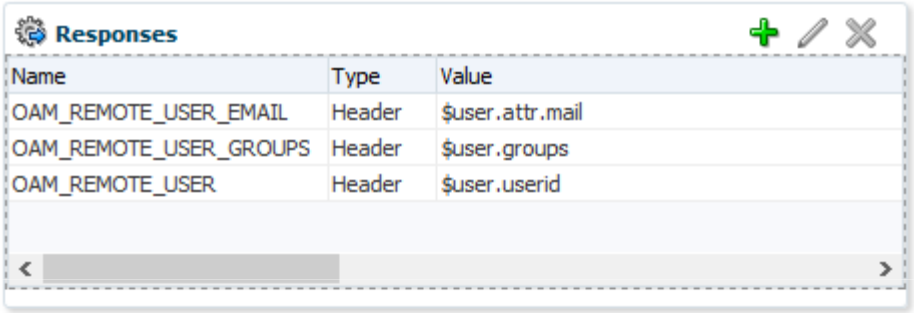
Novi parametri u konfiguracijskoj datoteci (OHS) *dads.conf*:

PlsqlPathAlias r

PlsqlPathAliasProcedure wwv_flow.resolve_friendly_url

Izmjena Access Manager

Authorization Policy (Responses)



Izmjena dads.conf (OHS):

PlsqlCGIEnvironmentList OAM_REMOTE_USER

PlsqlCGIEnvironmentList OAM_REMOTE_USER_GROUPS

PlsqlCGIEnvironmentList OAM_REMOTE_USER_EMAIL

Apex (Application Builder)

Shared Components – Authentication Schemes

** Scheme Type*	*HTTP Header Variable*
** HTTP Header Variable Name*	*OAM_REMOTE_USER*
** Action if Username is Empty*	*Redirect to Built-In URL*
** Verify Username*	*After Login*
** Logout URL of SSO Server*	*.../oamsso-bin/logout.pl?end_url=https://...*

Integrating APEX 4.1.1 with Oracle Access Manager 11g Using the Oracle HTTP Server (OHS) (Doc ID 1470258.1)

Apex white paper (http://www.oracle.com/technetwork/developer-tools/apex/learnmore/apex-oam-integration-1375333.pdf)

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Nakon migracije

software

Problem 1.

Unable to Compile Forms modules (e.g fmb, mmb, pll) Against 12c Database (DB) After Altering DB Objects (Doc ID 1986731.1) (**Patch 20404176**)

Problem 2.

Bug 21231684 : FOCUS DOES NOT RETURN TO MAIN FORM WHEN MOUSE CLICK (SR)

U međuvremenu...

Nove verzije: Webtier 11.1.1.9.0

Identity Management 11.1.1.9.0

Access Management 11.1.2.3.0

(Više ne postoji mogućnost za download verzije 11.1.2.2.0)

Oracle Forms 12c (release date end of year 2015)

New features:

- Forms builder productivity improvements
- New applet parameters
- New and improved security features
- New and improved JVM Controller features
- Record manager performance improvements that can significantly reduce memory usage
- New system events
- Improved SSO integration(not only OID, but also LDAP for SSO)
- Improved diagnostic features
- New client deployment options(stand alone Java client)
- New installation options(stand alone builder, without local WLS)

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Pitanja i Odgovori

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