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RAD Server Implementación en Linux con Apache

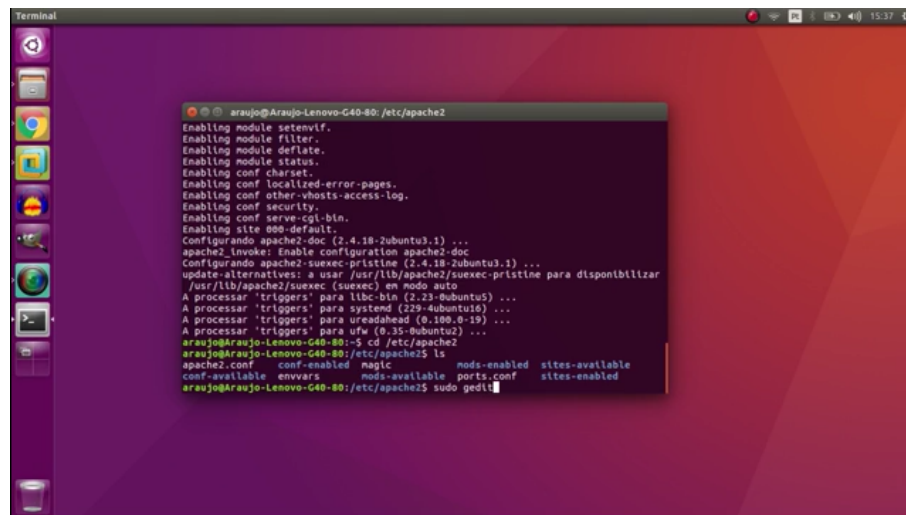
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AGENDA

- Requisitos de software
 - Instalación de Apache
 - Instalación de Interbase
- Configuración de RAD Server
- RAD Server Database
- Dependencias del proyecto
- Demos

INSTALACIÓN DE APACHE

- Apache versión 2.4.x
- Ubuntu
 - <https://www.youtube.com/watch?v=yaSO G7g9irA>
 - <https://www.digitalocean.com/community/tutorials/how-to-install-the-apache-web-server-on-ubuntu-16-04>
- Red Hat
 - <https://httpd.apache.org/docs/trunk/platform/rpm.html>



```
Terminal
araujo@Araujo-Lenovo-G40-80: /etc/apache2

Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Configurando apache2-doc (2.4.18-2ubuntu3.1) ...
apache2_invoke: Enable configuration apache2-doc
Configurando apache2-suexec-pristine (2.4.18-2ubuntu3.1) ...
update-alternatives: a usar /usr/lib/apache2/suexec-pristine para disponibilizar
/usr/lib/apache2/suexec (suexec) en modo auto
A processor 'triggers' para libc-bin (2.23-0ubuntu5) ...
A processor 'triggers' para systemd (229-4ubuntu16) ...
A processor 'triggers' para ureadahead (0.100.0-19) ...
A processor 'triggers' para ufw (0.35-0ubuntu2) ...
araujo@Araujo-Lenovo-G40-80:~$ cd /etc/apache2
araujo@Araujo-Lenovo-G40-80:~$ cd /etc/apache2
araujo@Araujo-Lenovo-G40-80:~$ ls
apache2.conf  conf-enabled  magic          mods-enabled  sites-available
conf-available  envvars      mdsd-available  ports.conf    sites-enabled
araujo@Araujo-Lenovo-G40-80:~$ sudo gedit
```

INSTALACIÓN DE APACHE

- Start/Stop/Restart de forma manual (como usuario root)
 - *sudo apachectl start*
 - *sudo apachectl stop*
 - *sudo apachectl restart*
- Inicio automático con el sistema (boot)
 - Ubuntu/Debian
 - *sudo update-rc.d apache2 defaults*
 - Red Hat Linux/Fedora/CentOS
 - *sudo chkconfig --add httpd*

INSTALACIÓN DE INTERBASE

- Durante la instalación entrará con su licencia de RAD Server
- Esta instancia Interbase se utilizará exclusivamente para la infraestructura de RAD Server, no para sus datos
- Si ya tiene una instancia de Interbase en la misma máquina, asegúrese de seleccionar un puerto diferente. También asegúrese de nombrar la instancia (uniquely identify) durante el proceso de instalación
- Siga estas instrucciones para instalar y configurar la base de datos de RAD Server (Interbase Server XE7)
 - http://altd.embarcadero.com/download/interbase/xe7/Update7/InterBase_XE7_EN.zip
 - <https://community.embarcadero.com/blogs/entry/installing-interbase-xe7-on-linux>
 - http://docwiki.embarcadero.com/RADStudio/Tokyo/en/Configuring_Your_EMS_Server_or_EMS_Console_Server_on_Linux

INSTALACIÓN DE INTERBASE

- Start/Stop de forma manual (como usuario root)
 - `sudo ./ibmgr`
 - `IBMGR> start`
 - ...
 - `IBMGR> password (password)`
 - `IBMGR> shut`
- Inicio automático con el sistema (boot)
 - http://docwiki.embarcadero.com/InterBase/XE7/en/Starting_and_Stopping_the_InterBase_Server_on_UNIX

CONFIGURACIÓN DE RAD SERVER

- RAD Server para Linux tiene un paquete de instalación
 - C:\Program Files (x86)\Embarcadero\Studio\19.0\EMSServer
 - LinuxEMSServer.tar (binários)
 - ems_install.sh (script de instalação)
- Dependiendo de los recursos utilizados en el desarrollo, su módulo puede requerir archivos adicionales. Para simplificar, utilice el Deployment Manager junto con el PAServer:
 - http://docwiki.embarcadero.com/RADStudio/Tokyo/en/Installing_the_Platform_Assistant_on_Linux

```
rizzato@localhost:/lib/ems$ ls -l
total 107328
-rwxrwxrwx. 1 root root 1784552 Mar 19 16:06 bpldbrt1250.so
-rwxrwxrwx. 1 root root 1793056 Mar 19 16:06 bplemsserverapi250.so
-rwxrwxrwx. 1 root root 3607528 Mar 19 16:06 bplFireDAC250.so
-rwxrwxrwx. 1 root root 2595808 Mar 19 16:06 bplFireDACCommon250.so
-rwxrwxrwx. 1 root root 1866240 Mar 19 16:06 bplFireDACCommonDriver250.so
-rwxrwxrwx. 1 root root 1055112 Mar 19 16:06 bplFireDACIBDriver250.so
-rwxrwxrwx. 1 root root 1952320 Mar 19 16:06 bplFireDACSqliteDriver250.so
-rwxrwxrwx. 1 root root 12501848 Mar 19 16:06 bplrtl250.so
-rwxrwxrwx. 1 root root 5933800 Mar 19 16:06 bplxmlrtl250.so
-rwxrwxrwx. 1 root root 19192744 Mar 19 16:06 EMSDevConsoleCommand
-rwxrwxrwx. 1 root root 6855408 Mar 19 16:06 EMSDevServerCommand
-rwxrwxrwx. 1 root root 7731280 Mar 19 16:06 EMSMultiTenantConsole
-rwxrwxrwx. 1 root root 1695744 Mar 19 16:07 emsserver.lib
-rwxrwxrwx. 1 root root 26256768 Mar 19 16:06 libmod_emssconsole.so
-rwxrwxrwx. 1 root root 15059848 Mar 19 16:06 libmod_emssserver.so
[rizzato@localhost ems]$
```

```
rizzato@localhost:/var$
resources/templates/rlxTotalClients.html'
'objrepos/webresources/templates/rlxTotalUsersAPICalls.html' -> '/etc/ems/objre
os/webresources/templates/rlxTotalUsersAPICalls.html'
'objrepos/webresources/templates/rlxUserAPICalls.html' -> '/etc/ems/objrepos/web
resources/templates/rlxUserAPICalls.html'
'objrepos/webresources/templates/rlxUsers.html' -> '/etc/ems/objrepos/webresour
es/templates/rlxUsers.html'
[ -runtime packages.. ]
'rtl/bpldbrt1250.so' -> '/usr/lib/ems/bpldbrt1250.so'
'rtl/bplemsserverapi250.so' -> '/usr/lib/ems/bplemsserverapi250.so'
'rtl/bplFireDAC250.so' -> '/usr/lib/ems/bplFireDAC250.so'
'rtl/bplFireDACCommon250.so' -> '/usr/lib/ems/bplFireDACCommon250.so'
'rtl/bplFireDACCommonDriver250.so' -> '/usr/lib/ems/bplFireDACCommonDriver250.so'
'rtl/bplFireDACIBDriver250.so' -> '/usr/lib/ems/bplFireDACIBDriver250.so'
'rtl/bplFireDACSqliteDriver250.so' -> '/usr/lib/ems/bplFireDACSqliteDriver250.so'
'rtl/bplrtl250.so' -> '/usr/lib/ems/bplrtl250.so'
'rtl/bplxmlrtl250.so' -> '/usr/lib/ems/bplxmlrtl250.so'
[ copy done. ]
[ Assign rights... ]
[ assign rights done. ]
[ EMS server has been installed. ]
[rizzato@localhost var]$
```

```
rizzato@localhost:/etc/ems/objrepos/webresources$ ls -l
total 12
-rwxrwxrwx. 1 root root 8620 Mar 19 16:29 emsserver.ini
drwxrwxrwx. 3 root root 131 Mar 19 16:06 objrepos
[rizzato@localhost ems]$ cd objrepos/
[rizzato@localhost objrepos]$ ls -l
total 2636
-rwxrwxrwx. 1 root root 970752 Mar 19 16:06 EMSMSERVER.IB
-rwxrwxrwx. 1 root root 208 Mar 19 16:06 EMSMSERVER.SQL
-rwxrwxrwx. 1 root root 1671168 Mar 19 16:06 emsserver.lib
-rwxrwxrwx. 1 root root 8912 Mar 19 16:06 emsserver.ini
-rwxrwxrwx. 1 root root 37384 Mar 19 16:06 emsserver.sql
drwxrwxrwx. 8 root root 79 Mar 19 16:06 webresources
[rizzato@localhost objrepos]$ cd webresources/
[rizzato@localhost webresources]$ ls -l
total 8
drwxrwxrwx. 3 root root 210 Mar 19 16:06 css
drwxrwxrwx. 3 root root 193 Mar 19 16:06 fonts
drwxrwxrwx. 2 root root 28 Mar 19 16:06 img
drwxrwxrwx. 2 root root 57 Mar 19 16:06 js
drwxrwxrwx. 4 root root 4096 Mar 19 16:06 js
drwxrwxrwx. 2 root root 4096 Mar 19 16:06 templates
[rizzato@localhost webresources]$
```


CONFIGURACIÓN DE RAD SERVER

■ httpd.conf

```
LoadModule emsserver_module /usr/lib/ems/libmod_emsserver.so  
LoadModule emsconsole_module /usr/lib/ems/module/libmod_emsconsole.so
```

```
<Location /ems-server>  
    SetHandler libmod_emsserver-handler  
</Location>
```

```
<Location /ems-console>  
    SetHandler libmod_emsconsole-handler  
</Location>
```

RAD SERVER DATABASE

- Usted necesitará crear un RAD Server Database utilizando su licencia de producción (esta base será encriptada)
- La forma más práctica de hacerlo es utilizar el propio EMSDevConsoleCommand
 - `/usr/lib/ems/EMSDevConsoleCommand -setup`
- http://docwiki.embarcadero.com/RADStudio/Tokyo/en/Configuring_Your_EMS_Server_or_EMS_Console_Server_on_Linux

```
rad@radubuntu: /opt/interbase/bin
rad@radubuntu: /opt/interbase/bin$ /usr/lib/ems/EMSDevServerCommand -setup
Commands:
- "start" to start the server
- "stop" to stop the server
- "set port" to change the default port
- "log" to show the log
- "log e" to enable the log
- "log d" to disable the log
- "clear" to clear the log
- "status" for Server status
- "help" to show commands
- "q" to quit

>start
```

```
rad@radubuntu: /opt/interbase/bin
rad@radubuntu: /opt/interbase/bin$ /usr/lib/ems/EMSDevServerCommand -setup
Commands:
- "start" to start the server
- "stop" to stop the server
- "set port" to change the default port
- "log" to show the log
- "log e" to enable the log
- "log d" to disable the log
- "clear" to clear the log
- "status" for Server status
- "help" to show commands
- "q" to quit

>start
Set up Options
Server Instance: gds_db
DB file name (emsserver.lb):
DB file directory (/opt/interbase/bin)? /etc/ems
Sample data(y/n)y
Console User (consoleuser)?
Console Password (consolepass)?
.....
Set up Options
Server Instance: gds_db
DB file name: emsserver.lb
DB file directory: /etc/ems
Sample data: True
Console User: consoleuser
Console Password: consolepass
DB file: /etc/ems/emsserver.lb
Configuration file: /etc/ems/emsserver.ini
.....
Change options?(y/n)n
```

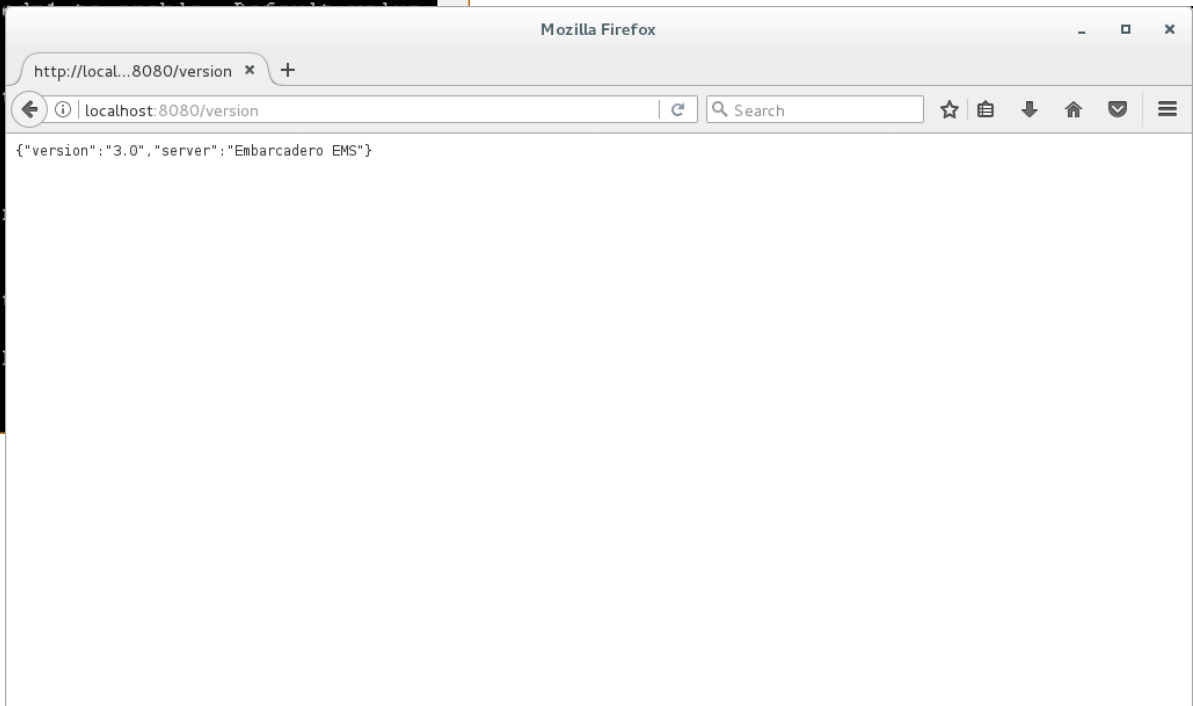
```
rad@radubuntu: /opt/interbase/bin
Set up Options
Server Instance: gds_db
DB file name: emsserver.lb
DB file directory: /etc/ems
Sample data: True
Console User: consoleuser
Console Password: consolepass
DB file: /etc/ems/emsserver.lb
Configuration file: /etc/ems/emsserver.ini
.....
Change options?(y/n)n
- The following files have been created:
/etc/ems/emsserver.ini

The following sample data has been added:
/etc/ems/emsserver.lb
/opt/interbase/EMHSERVER130.IDB
Tenant: Initial tenant, Secret: secret
User: test, Password: testpass
User group: testgroup, Users: test
```

```
[Data]
;# Interbase connection parameters
InstanceName=ems
Database=/usr/lib/ems/emsserver.ib
UserName=sysdba
Password=masterkey
SEPassword=
;# SEPassword connects to an encrypted database
Pooled=
;# Set Pooled=0 to disable connection pooled, Pooled=1 to enable
is 1.
PooledMax=
;# Set PooledMax=10 to limit maximum pooled connections

[Server.Limits]
MaxConnections=
;# Set MaxConnections=10 to limit maximum concurrent connections
32.
MaxUsers=
;# Set MaxUsers=3 to limit the number of users in the pool
is only used
;# when less than the maximum users permitted by the server

[Server.Keys]
```



DEMOS

RECURSOS ADICIONALES – VIDEOS/WEBINARS

- RAD Server e Beacon Fence no *Saitobaru Museum*
 - <https://www.youtube.com/watch?v=fdOt9-K8oTQ>
- **RAD Server**, The Perfect Back-end for your Apps
 - <https://youtu.be/HY0JRJPvjsU>
- **Beyond The Beacon Fence**
 - https://youtu.be/1_cWnDmvxJk
- **Beacon Fencing** con RAD Studio, Delphi y C++Builder
 - <https://youtu.be/bJG4UEjuMeM>
- **ThingConnect** Devices
 - <https://youtu.be/tQlYAlvfpPQ>

RECURSOS ADICIONALES – VIDEOS/WEBINARS

- **IoT en Acción:** Desarrollo de una Moderna Aplicación Médica para un Consultorio o Hospital
 - <https://youtu.be/TckVkaYaUh8>
- **RAD Server Webinars**
 - <https://goo.gl/oPujRg>
- Más información sobre **RAD Server**
 - https://www.youtube.com/results?search_query=rad+server+embarcadero

RECURSOS ADICIONALES – CONTENIDO TÉCNICO

- **REST** Endpoint Publishing:
 - <https://goo.gl/H8yM9l>
- **IoT** Edgeware:
 - <https://goo.gl/rO2528>
- **ThingConnect** IoT Device Components
 - http://docwiki.embarcadero.com/RADStudio/Tokyo/en/ThingPoints_Overview
 - <http://docwiki.embarcadero.com/IoT/en/ThingConnect>
 - http://docwiki.embarcadero.com/IoT/en/ThingConnect_Devices
- Para cada componente **IoT** instalado por **GetIt**, se puede encontrar ejemplos aquí

C:\Users\Public\Documents\Embarcadero\Studio\19.0\Samples\Internet of Things\Object Pascal\Thing Connect

RECURSOS ADICIONALES – CONTENIDO TÉCNICO

■ Location Tracking

- <http://docwiki.embarcadero.com/IoT/en/BeaconFence>
- [http://docwiki.embarcadero.com/IoT/en/Using BeaconFence](http://docwiki.embarcadero.com/IoT/en/Using_BeaconFence)
- <https://community.embarcadero.com/blogs/entry/beaconfence-and-beacons-tips-from-our-development-team>

- Después de instalar el paquete de componentes **BeaconFence** través **GetIt**, se puede encontrar ejemplos de proyectos aquí

C:\Users\Public\Documents\Embarcadero\Studio\19.0\Samples\Internet of Things\Object Pascal\Beacon Fence

GRACIAS!

Preguntas?

Me puedes encontrar en:

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Síguenos en

fb.com/EMBTLatAm