

Raduga

Installation Guide

RadugaApps 1.07.0012

Table of Contents

General information.....	3
About Raduga.....	4
System Overview.....	5
Installation Requirements.....	6
The Server	6
The Reporting Database.....	6
The Client	7
Configuration Directories.....	9
Global Configuration Directory	9
Preferences Directory	9
Private Working Directory	9
Projects Directory	9
Licenses Directory	9
Windows Security	10
Defining the Raduga Staging Directory	10
Installing Raduga	13
Raduga Setup INI file.....	14
How the Raduga setup defines configurable parameters	14
Installing Raduga Administrator	16
Installing Raduga Client.....	20
Silent Installation	20
Raduga Registry.....	21
Upgrading Raduga Software	22
For Further Information.....	27

General information

Copyright

Copyright © 2015-2020 RadugaApps Ltd. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part of this software or its related documentation, in any form, or by any means. Reverse engineering, disassembly, or de-compilation of this software, unless required by law for interoperability, is prohibited.

Contacts

For any questions and support regarding this product, contact RadugaApps Ltd (tel +79185402272, service@RadugaApps.com).

Licensing

Raduga Free software can be used for free. It is restricted to 5 environments and 50 projects. Free edition has a limited technical support.

Raduga Pro software can be used for free during the trial period of 30 days. After the end of the trial period, you must install a private license for each user to continue using the software. Raduga Pro can manage an unlimited number of environments and projects and it has full technical support.

Contact RadugaApps Ltd (tel +79185402272, service@RadugaApps.com) to obtain Raduga licenses.

Disclaimer

Raduga allows deleting database and file system objects. In some cases the objects are replaced during the migration of development projects. Raduga users should carefully test all development projects in a test environment before implementing them in production. The RadugaApps Company accepts no liability for any damage caused by the Raduga application. Object transmission cannot be guaranteed to be secure or error-free, as migration rules can differ from one environment to other. The RadugaApps Company therefore does not accept liability for any errors or omissions in the contents of custom objects which might arise as a result of object transmission. Although The RadugaApps Company has taken reasonable precautions to ensure proper performance of Raduga software, the company cannot accept responsibility for any loss or damage arising from the use of Raduga.

About Raduga

Raduga is an application that helps you manage the development and deployment process. It is designed for Oracle applications; however, it can be used in any development environment. A user-friendly interface, easy navigation between applications and projects, various migration and deployment capabilities, version control and reporting make Raduga a useful tool for programmers, team leaders and project managers.

Raduga offers to users

- Object migration between environments
- Intuitive navigation between entities
- Object comparison
- Version control and deployment history
- Monitoring environment status
- Starting/stopping environments
- Data loading capabilities
- Easy customization
- Comprehensive reporting
- File transfer capabilities
- Enhanced security

System Overview

Raduga uses client/server architecture. It includes functionality for distributed development teams. Raduga Client is installed on Windows computers. The Windows computer should be connected to the corporate network. If there is a firewall between the Windows computer used for installation and UNIX/Linux servers, then open FTP and/or SFTP and Telnet and/or SSH ports in the firewall. Raduga software is not installed on the server; however after installation the system administrator must perform additional steps on the server side.

Installation Requirements

The Server

Raduga application works with UNIX-based environments. It was tested on the Oracle E-Business Suite versions 11.5.10 and 12.1.3 installed on an Oracle Enterprise Linux 5 platform.

Hardware requirements

There are no specific requirements for the server hardware.

Software requirements

bash, ksh or sh

rcs 5.7 or later

jad 1.5.8 or other java decompiler (if it is not installed Raduga will not be able to decompile java classes)

No Raduga software is installed on the server. However, Raduga uses a special staging directory on the server for placing its temporary files and for maintaining its version control system.

The system administrator needs to allow FTP and/or SFTP and Telnet and/or SSH access between servers and the Raduga client computer. UNIX/Linux servers must have FTP and/or SFTP and Telnet and/or SSH services activated so Raduga can access files and run commands on the servers.

In Linux you can use the following command to list existing services:

```
chkconfig --list
```

Use the following command to start the SFTP daemon on Linux:

```
service vsftpd start
```

Use the following command to start the SSH daemon on Linux:

```
service sshd start
```

Normally, starting these two services is enough for Raduga to be able to connect to the server.

Additionally, the system administrator should create a Raduga staging directory on the server (see “Defining Raduga Staging Directory”).

The Reporting Database

The reporting database is necessary for recording information about Raduga users, permissions and actions (see “Defining the Reporting Database” in the Raduga Administration Guide). Any Oracle database version 10.2 or later can be used as a reporting database. It is optional, but we recommend that you create a separate schema for Raduga in the reporting database:

```
sqlplus / as sysdba

create user raduga
identified by <password>
default tablespace <tablespace>
temporary tablespace temp
quota unlimited on <tablespace>;

grant connect, resource to raduga;
```

If the Reporting database is not configured or not available, all Raduga features except “Reporting” and “Approval History” will function as usual. However action history will not be saved. Raduga administrator can make the Reporting Database mandatory for specific environments.

The Client

Hardware requirements

Raduga requires a Windows XP/7/8 computer (32/64 bit) connected to the network, with at least 600M of free disk space available.

Raduga can spawn many parallel processes in order to get or send objects, therefore having multiple processors on the server can help it function faster.

We recommend using a Windows computer with 4 CPU cores and at least 2G of RAM.

Software requirements

Raduga requires the Microsoft .NET Framework 4.0.30319. You can download the framework from <http://www.microsoft.com/en-us/download/details.aspx?id=17851&ppud=4>

Security requirements

Raduga can be installed in two modes: administrator and client. Administrator mode will install Raduga software including the Raduga Notification service and Raduga Monitor service which require the "Log on as a service" right to be granted to the Windows account. Client mode installation does not require the "Log on as a service" right.

To add the "Log on as a service" right to an account on your local computer:

1. Open Local Security Policy - click Start, point to Control Panel, point to Administrative Tools, and then double-click Local Security Policy.
2. In the console tree, double-click Local Policies, and then click User Rights Assignment.
3. In the details pane, double-click Log on as a service.

4. Click Add User or Group, and then add the appropriate account to the list of accounts that possess the Log on as a service right.

To understand how to add the "Log on as a service" right to a domain account you can look at the Microsoft Technet documentation at [https://technet.microsoft.com/en-us/library/cc794944\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc794944(v=ws.10).aspx)

Client certification matrix

	Raduga Administrator	Raduga Client
Windows XP	Not certified	Certified
Windows 7	Certified	Certified
Windows 8	Certified	Certified

Configuration Directories

Raduga uses XML configuration files that need to be placed in a location accessible by the Raduga client installation. Place Raduga configuration files in a network directory accessible by all Raduga users.

Global Configuration Directory

The Global Configuration Directory holds Raduga's main configuration files. Configuration files contain predefined setup information crucial for Raduga's proper functioning. Place the directory in a network location accessible to all Raduga end users. Access to the directory must be read-only for all users except for the Raduga administrator, who should have write permission for this directory.

Example: \\FileServer\\Raduga\\config

Preferences Directory

The Preferences Directory contains private configuration files. Place the directory in a network location accessible to all Raduga end users. Users must have read-write access to this directory.

Example: \\FileServer\\Raduga\\users

Raduga puts each user's private configuration file in this location: \\FileServer\\Raduga\\users\\<username>\\pref

Private Working Directory

Each user has a Private Working Directory for private development. Create the directories in a network location accessible to all Raduga developers. Developers must have read-write access to their directory.

Example: \\FileServer\\Raduga\\users

Raduga saves private development files in this location: \\FileServer\\Raduga\\users\\<username>\\developments

Projects Directory

The Projects Directory contains Raduga Development Projects. Create the directory in a network location accessible to all Raduga developers. Developers must have read-write access to this directory.

Example: \\FileServer\\Raduga\\projects

Licenses Directory

The Licenses Directory contains Raduga license files. Create the directory in a network location accessible to all Raduga end users. Users must have read access to this directory.

Example: \\FileServer\\Raduga\\licenses

Windows Security

We recommend that you define for each Windows user, corresponding to a Raduga user, a special directory \\FileServer\Raduga\users\<username>. Restrict this directory by disabling other users from changing it.

Before installing Raduga, define the following Windows groups:

- **Raduga Administrators Group**
The Raduga Administrators group is for Windows users corresponding to the Raduga administrators. Users in this group have full access to all Raduga configuration directories.
- **Raduga Developers Group**
The Raduga Developers group is for Windows users corresponding to the Raduga developers. Users in this group have read access to all Raduga configuration directories and full access to the Raduga projects directory.
- **Raduga Implementers Group**
The Raduga Implementers group is for Windows users corresponding to the Raduga implementers. Users in this group have read access to all Raduga configuration directories and full access to the Raduga projects directory.
- **Raduga Users Group**
The Raduga Users group is for Windows users corresponding to the Raduga users. Users in this group have read access to all Raduga configuration directories and write access to the Raduga projects directory.

In the future, when you create Raduga users, add the Windows user corresponding to each Raduga user to one of these groups.

Assign the following permissions for Raduga configuration directories to the Raduga Windows groups:

Directory	Raduga Administrators	Raduga Developers Raduga Implementers	Raduga Users
\\FileServer\\Raduga\config	Full Control	Read	Read
\\FileServer\Raduga\projects	Full Control	Full Control	Read/write
\\FileServer\Raduga\licenses	Full Control	Read	Read
\\FileServer\Raduga\users	Full Control	Read/write for user's directory	Read/write for user's directory

Defining the Raduga Staging Directory

The Raduga staging directory is situated on the server and is necessary for saving Raduga temporary files and scripts and maintaining the RCS repository. We recommend that you create the directory on a disk separate from all application environments and accessible by environment OS users. However if no such disk exists, you can create the staging directory in the environment software tree. In this case the objects changes history is lost when the environment is refreshed. In any case Unix/Linux users must have read/write access to the staging directory.

Example:

The staging directory is: /stage. Directory permissions should be set to 1777:

```
mkdir /stage
chmod 1777 /stage
```

Raduga will create the following directories automatically (the system administrator does not need to create them):

Directory	Permissions	Purpose
/stage/Raduga	1777	Root stage directory All users can create directories in the root stage directory but cannot delete or modify them.
/stage/Raduga/<ENV> Example: /stage/Raduga/PROD	1777	Staging directory for the environment. All users can create directories in the environment directory but cannot delete or modify them.
/stage/Raduga/<ENV>/[<Server>]/<OS User> Example: /stage/Raduga/PROD/applprod	755	Staging directory for the application OS user. The optional server directory is created for the EBS environments that do not implement Shared APPS Tier architecture. Only applprod OS user has read/write access to this directory.
/stage/Raduga/<ENV>/<OS User>/<UserId> Example: /stage/Raduga/PROD/applprod/1	700	Staging directory for a Raduga user. Only applprod OS user has access to this directory. Raduga saves in this directory temporary scripts and objects for the Raduga User (with Id = 1).
/stage/Raduga/<ENV>/<OS User>/rcs Example:	755	RCS root directory for applprod OS user.

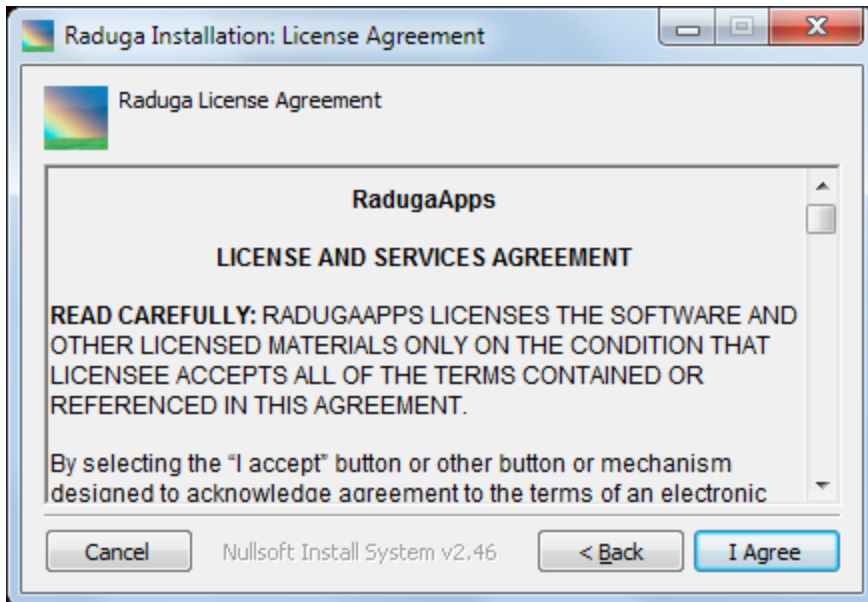
Directory	Permissions	Purpose
/stage/Raduga/PROD/applprod/rcs		
/stage/Raduga/<ENV>/<OS User>/rcs/<Entity>/<APP>/<LANG>/RCS Example: /stage/Raduga/PROD/applprod/rcs/ebs.Programs/PER/US/RCS	755	RCS directory for Raduga objects. Raduga saves in this directory versions of the objects transferred by Raduga.

Note: The location of the staging directory can affect behavior of the Raduga version control system. If the staging directory is separate from the environment, then the object versions are preserved after cloning the environment. If the staging directory is within the environment software tree, then after cloning all object versions are transferred from the source environment.

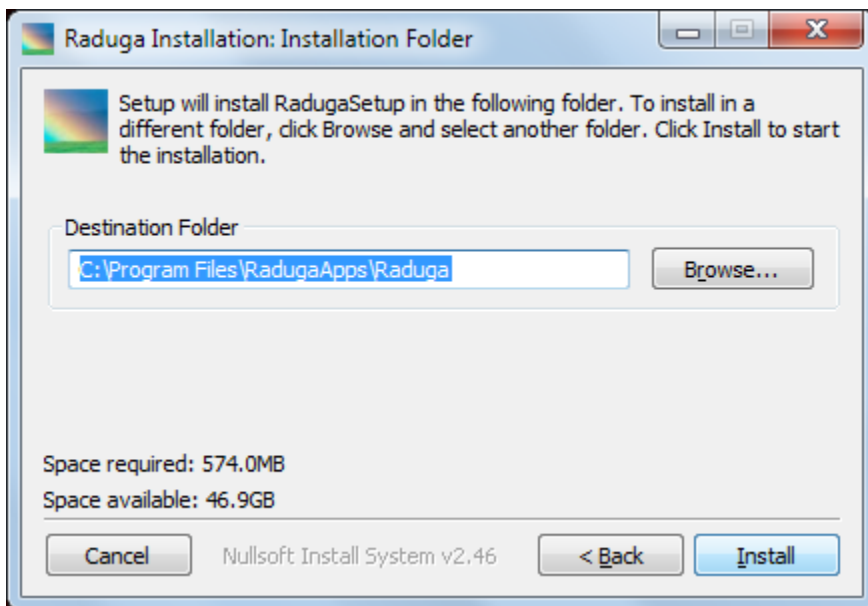
Installing Raduga

In order set up Raduga, run the RadugaSetup.exe file.

Accept the license agreement:



Choose the destination folder and press "Install":



During installation the following modules are installed in addition to the Raduga application software:

- Microsoft Visual C++ 2010 x86/x64 Redistributable 10.0.40219.1
- 32-bit/64-bit Oracle Data Access Components (ODAC) 12.1.0.1.0

Raduga Setup INI file

In order to define default values for setup variables, place the RadugaInstaller.ini file in the same directory as the RadugaSetup.exe file.

Here is an example of the RadugaInstaller.ini file:

```
[install]
Admin="Y"

[directories]
InstDir="C:\Program Files\RadugaApps\Raduga"
GlobalConfigDir="\\FileServer\Raduga\config"
PrivateConfigDir="\\FileServer\Raduga\users"
ODACDir="C:\oracle\12.1\odac"
PrivateWorkingDir="\\FileServer\Raduga\users"
ProjectsDir="\\FileServer\Raduga\projects"
LicensesDir="\\FileServer\Raduga\Licenses"
```

How the Raduga setup defines configurable parameters

Here is the algorithm for defining the parameters, with descending priority:

Installation Directory	Value entered by user HKLM\Software\Raduga6\InstallDir registry value (if Raduga is already installed) InstDir value in RadugaInstaller.ini C:\Program Files\RadugaApps\Raduga
Global Configuration Directory	Value entered by user HKLM\Software\Raduga6\ConfigDir registry value GlobalConfigDir value in RadugaInstaller.ini C:\Raduga\config
Preferences Directory	Value entered by user (in Administrator setup mode) PRIVATE_CONFIG_DIR constant in Raduga_Custom.xml file PrivateConfigDir value in RadugaInstaller.ini C:\Raduga\users
Private Working Directory	Value entered by user (in Administrator setup mode)

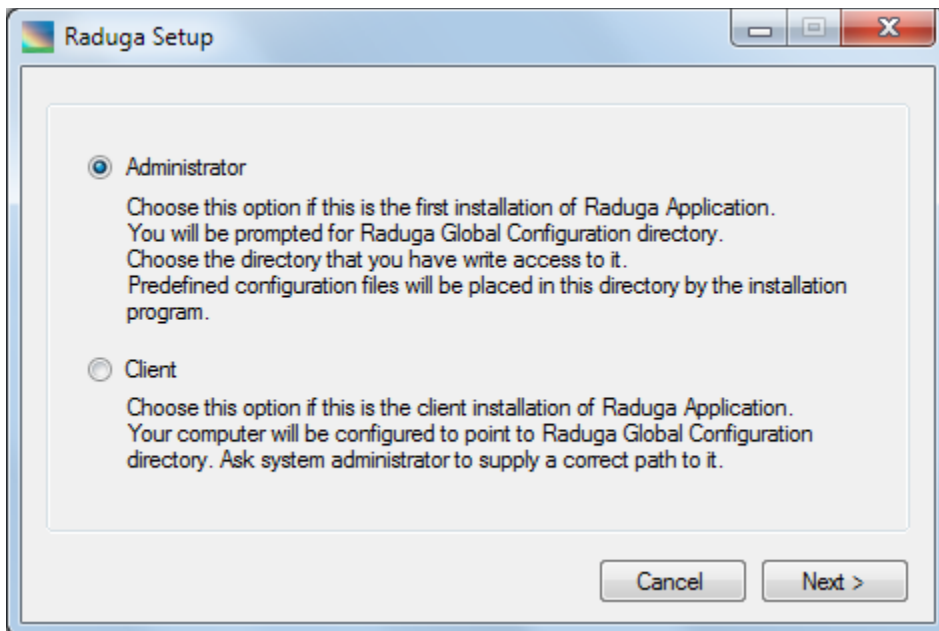
	<p>PRIVATE_WORKING_DIR constant in Raduga_Custom.xml file PrivateWorkingDir value in RadugaInstaller.ini C:\Raduga\users</p>
Projects Directory	<p>Value entered by user (in Administrator setup mode) PROJECTS_DIR constant in Raduga_Custom.xml file ProjectsDir value in RadugaInstaller.ini C:\Raduga\projects</p>
Licenses Directory	<p>Value entered by user (in Administrator setup mode) LICENSES_DIR constant in Raduga_Custom.xml file LicensesDir value in RadugaInstaller.ini C:\Raduga\licenses</p>
Raduga Log File	<p>Value entered by user HKCU\Software\Raduga6\LogFile registry value %LocalAppData%\Raduga\Raduga.log [Installation Directory]\log\Raduga.log</p>
Raduga Setup Log File	<p>[Installation Directory]\log\Raduga_install.log</p>

Installing Raduga Administrator

Raduga can be installed in two modes: administrator and client. The only difference is that using administrator mode will install Raduga software (including the Raduga Administrator utilities) and copy Raduga configuration files to the destination directory. Installing in client mode will install the Raduga software only.

In general, install Raduga Administrator only once (for the first install as well as for upgrades), on the computer that has write access to the Raduga configuration directories. During installations on all other computers, choose the “Client” option.

To install Raduga Administrator, choose the “Administrator” option in the Raduga Setup form and press “Next”:



Provide all Raduga configuration directory values in the “Configuration Directories” form, or accept the default values:

Raduga Setup - Configuration

Directories | Groups | Licensing

Global Configuration Directory
c:\Raduga\config ...
The Global Configuration Directory holds Raduga's main configuration files. Configuration files contain predefined setup information crucial for Raduga's proper functioning. Place the directory in a network location accessible to all Raduga end users. Access to the directory must be read-only for all users except for the Raduga administrator, who should have write permission for this directory. Example: \\FileServer\Raduga\config

Preferences Directory
c:\Raduga\users ...
*The Preferences Directory contains private configuration files. Place the directory in a network location accessible to all Raduga end users. Users must have read-write access to this directory. Example: \\FileServer\Raduga\users
Raduga puts each user's private configuration file in this location: \\FileServer\Raduga\users\<username>\pref*

Private Working Directory
c:\Raduga\users ...
*Each user has a Private Working Directory for private development. Create the directories in a network location accessible to all Raduga developers. Developers must have read-write access to their directory. Example: \\FileServer\Raduga\users
Raduga saves private development files in this location: \\FileServer\Raduga\users\<username>\developments*

Projects Directory
c:\Raduga\projects ...
The Projects Directory contains Raduga Development Projects. Create the directory in a network location accessible to all Raduga developers. Developers must have read-write access to this directory. Example: \\FileServer\Raduga\projects

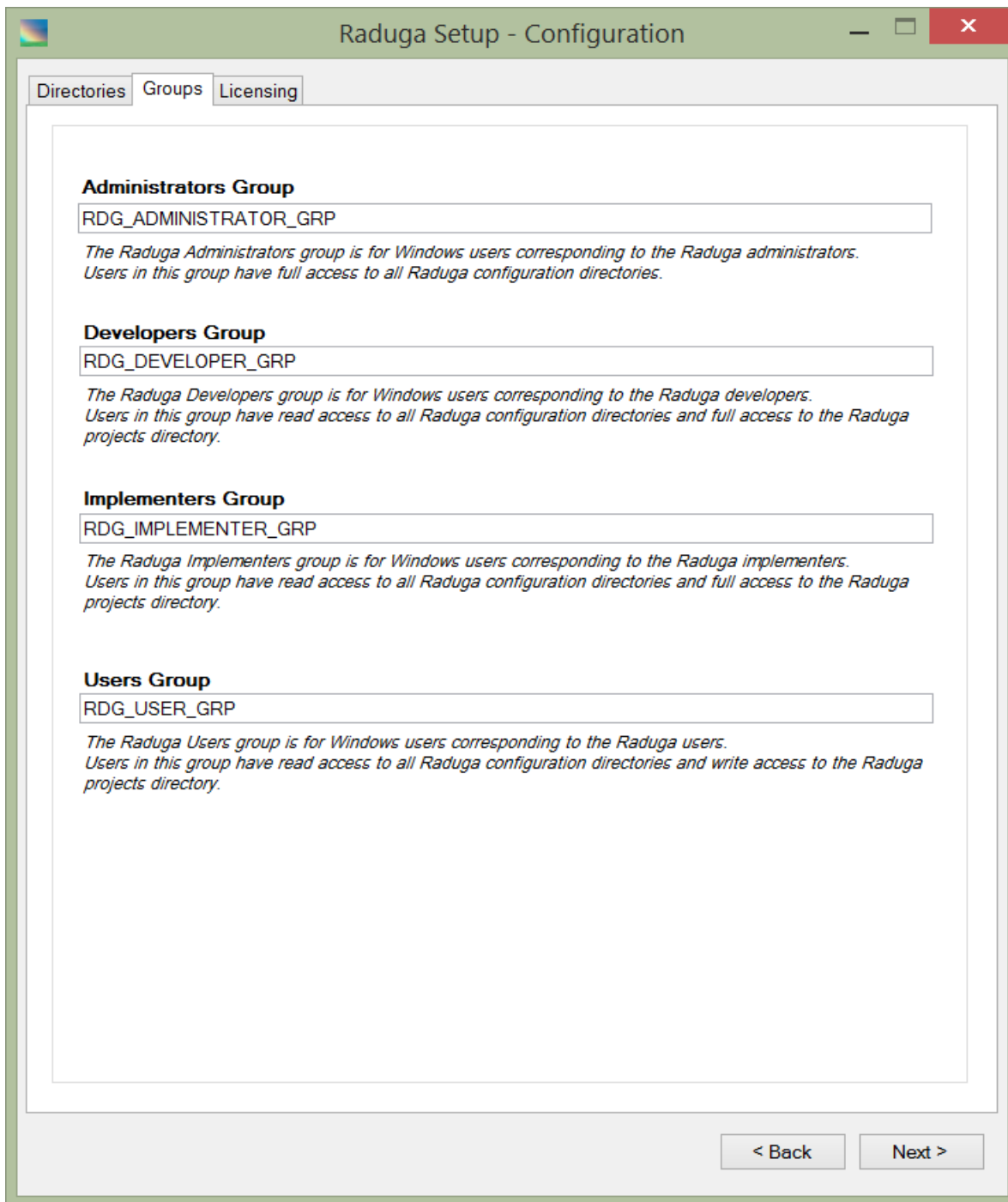
Licenses Directory
c:\Raduga\licenses ...
The Licenses Directory contains Raduga license files. Create the directory in a network location accessible to all Raduga end users. Users must have read access to this directory. Example: \\FileServer\Raduga\licenses

Log File
C:\Users\nk\AppData\Local\Raduga\Raduga.log ...
*Raduga Log File
It should be placed on a local drive.*

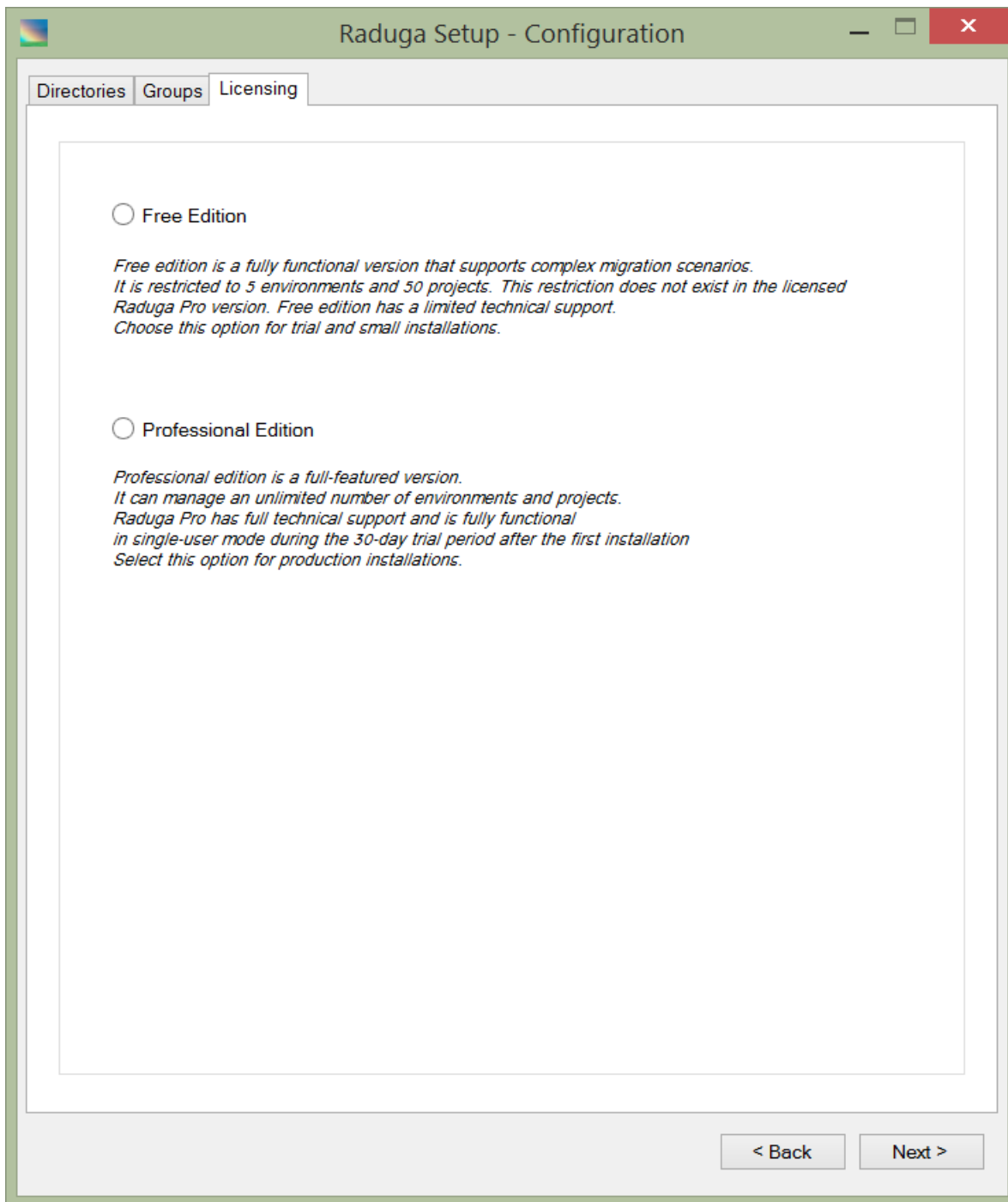
< Back Next >

Create all Raduga configuration directories in network locations accessible by all Raduga users. Placing configuration directories on the local drive is possible when Raduga is used in single user mode.

After specifying the configuration directories, select the “Groups” tab and provide Raduga Windows group names, or accept the default ones. Note: as mentioned earlier, the Windows groups should exist before you install Raduga.



After specifying the Windows groups, select the “Licensing” tab and choose the licensing model:



After specifying the licensing model, press “Next” and wait until the Raduga setup is complete.

Choosing “Administrator” mode during Raduga installation will install five programs:

- Raduga – main Raduga program.
- SetAdminPassword – utility for resetting the administrator’s password.
- ChangeConfigDir – utility for changing Raduga configuration directory.

- RadugaNotification - Windows service responsible for sending notifications and appointments and processing return mails
- RadugaMonitor - Windows service responsible for monitoring environments
- NotificationsConfig - utility for configuring Raduga Notification and Monitor services
- SyncRepDB - utility for synchronizing Raduga Reporting database

Installing Raduga Client

Install Raduga Client on all client computers. This option installs software only and does not change the configuration files. In the “Configuration Directories” form the only fields available for updating will be “Global Configuration Directory” and “Log File”.

Choosing “Client” mode during Raduga installation will install two programs:

- Raduga – main Raduga program.
- ChangeConfigDir – utility for changing Raduga configuration directory.

Silent Installation

In order to install Raduga silently start the installer with the /S flag:

RadugaSetup.exe /S

Silent installation will use default values or values taken from the RadugaInstaller.ini file

Raduga Registry

Raduga uses the following registry values:

Parameter	Meaning
HKLM\Software\Raduga6\InstallDir	Raduga Installation Directory
HKLM\Software\Raduga6\Admin	Administrator Flag. Valid Values: Y, N
HKLM\Software\Raduga6\ConfigDir	Raduga Configuration Directory
HKLM\Software\Raduga6\OdpPath	Oracle Data Provider installation paths. (Example: C:\oracle2\12.1\odac;C:\oracle2\12.1\odac\bin)
HKCU\Software\Raduga6\LogFile	Raduga log file (full path)
HKCU\Software\Raduga6\DebugLevel	(Optional) Raduga Log Level. Valid values: Debug, Info, Error. Default: Info Debug – Many debug messages will be printed in the console and log file Info – Informational and error messages are printed Error – Only error messages are printed
HKLM\Software\Raduga6\NotificationUser	Raduga user, used by the “RadugaNotification” service.
HKLM\Software\Raduga6\NotificationPassword	Raduga notification user’s password
HKLM\Software\Raduga6\TryAdditionalProtocol	(Optional) Raduga will try to use different connection protocols by default. If the value of this parameter is N, Raduga will use only the protocol defined in user options. Valid Values: Y, N. Default value: Y.
HKLM\Software\Raduga6\ConnectionTimeout	(Optional) Raduga connection timeout in seconds. Default value 10
HKLM\Software\Raduga6\CommandTimeout	(Optional) Raduga command timeout in seconds. Default value 0 (no timeout)
HKLM\Software\Raduga6\EnvStatusTimeout	(Optional) Raduga environment status timeout in seconds. Default value 600 sec
HKLM\Software\Raduga6\NotificationInterval	(Optional) Raduga notifications check interval in minutes. Default value 3 min
HKLM\Software\Raduga6\MonitorInterval	(Optional) Raduga environment status check interval in minutes. Default value 2 min

HKLM\Software\Raduga6\ServiceStatusCount	(Optional) Maximal number of service failures necessary for changing its status. Default value 2
HKLM\Software\Raduga6\MailTimeout	(Optional) Raduga mail server connection timeout in milliseconds. Default value 60000
HKLM\Software\Raduga6\CheckConflicts	(Optional) If 'N' Raduga will not check conflicts during deployment. Default value 'Y'
HKLM\Software\Raduga6\MaxLogLines	(Optional) Maximal number of server log file lines for "view log" operation. Default value 1000
HKLM\Software\Raduga6\CloudPageLines	(Optional) Maximal number of lines per page in cloud environments. Default value 100

Upgrading Raduga Software

Upgrade Raduga software in these three steps:

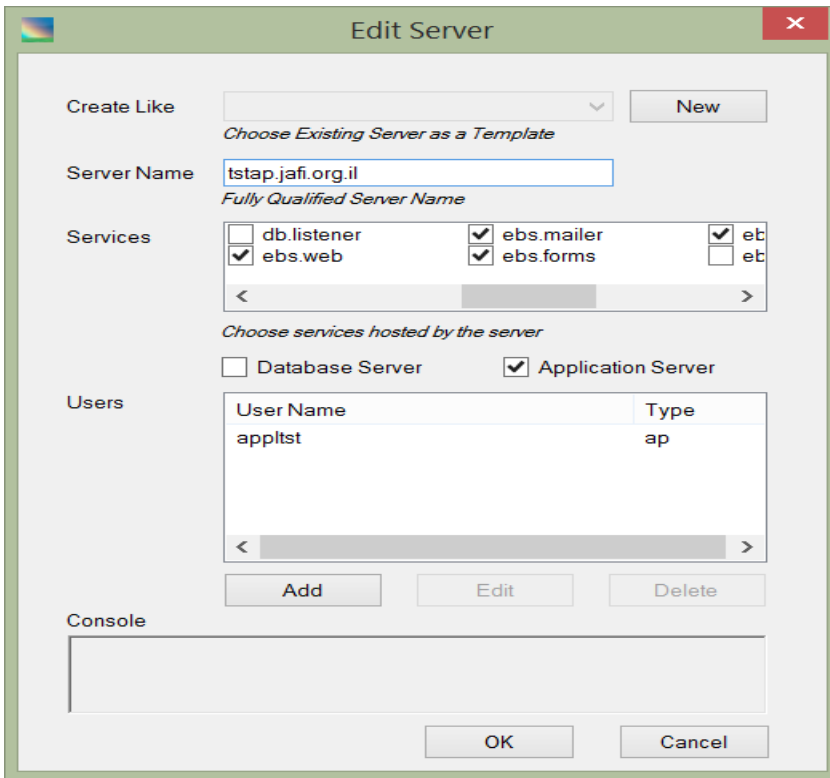
1. Upgrading Raduga Administrator.
Run RadugaSetup.exe on the computer with Raduga Administrator installed. This will install new Raduga configuration files and upgrade Raduga software.
2. Upgrading Raduga Clients
Run RadugaSetup.exe on all Raduga client computers.
3. If you are upgrading from the version 1.07.0009 or earlier and the Raduga stage directory is shared, run the following command as root user on the Unix/Linux server:

```
chmod 1777 /stage/Raduga/*
```

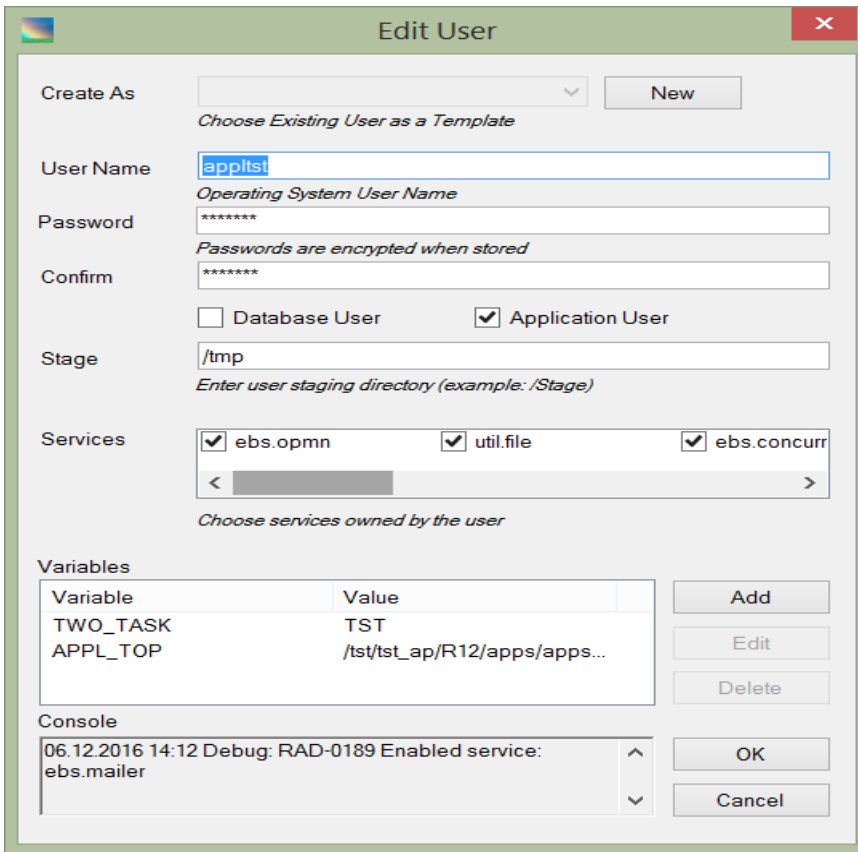
4. If you are upgrading from the version 1.07.0006 or earlier make the following changes to all configured environments:
 - Go to the "Global Configuration" - "Environments" - "Edit" and add the database LISTENER name to each environment

Database Server	Database Port	Listener Name	<input checked="" type="checkbox"/> Has Access to DBA Views
tstdb.jafi.org.il	1521	TST	
APPS User	APPS Password	SYSTEM Password	<input type="checkbox"/> SYSDBA
apps	****	****	

- Go to the "Global Configuration" - "Environments" - "Edit" - "Servers" - "Edit" and select all new services hosted by the server:

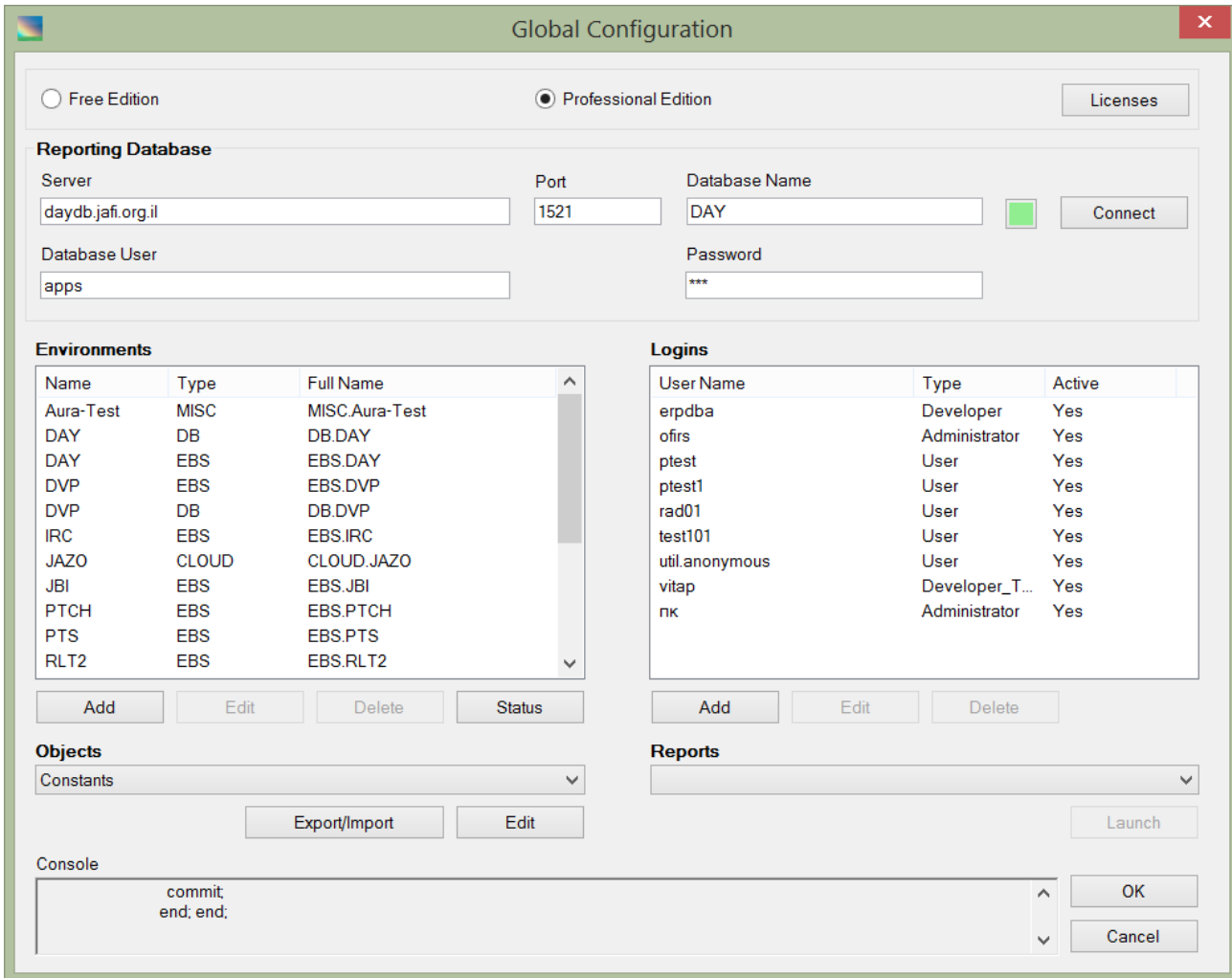


- Go to the “Global Configuration” - “Environments” - “Edit” - “Servers” - “Edit” - “Users” - “Edit” and select all new services hosted by the user:

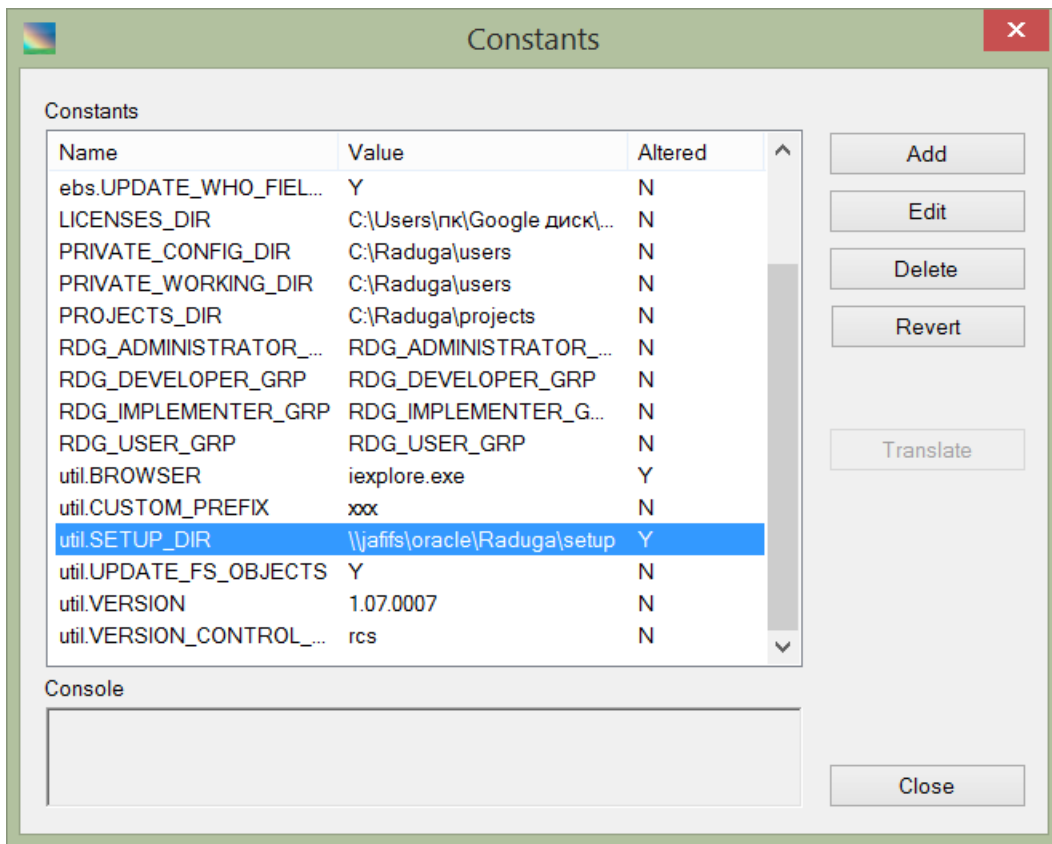


- You can define a util.SETUP_DIR custom constant that will cause an automatic upgrade of all Raduga clients once the new Raduga version is installed on the Raduga Administrator computer. util.SETUP_DIR must contain the full path to the directory where RadugaSetup.exe exists. Only a Raduga administrator can change Raduga constants.

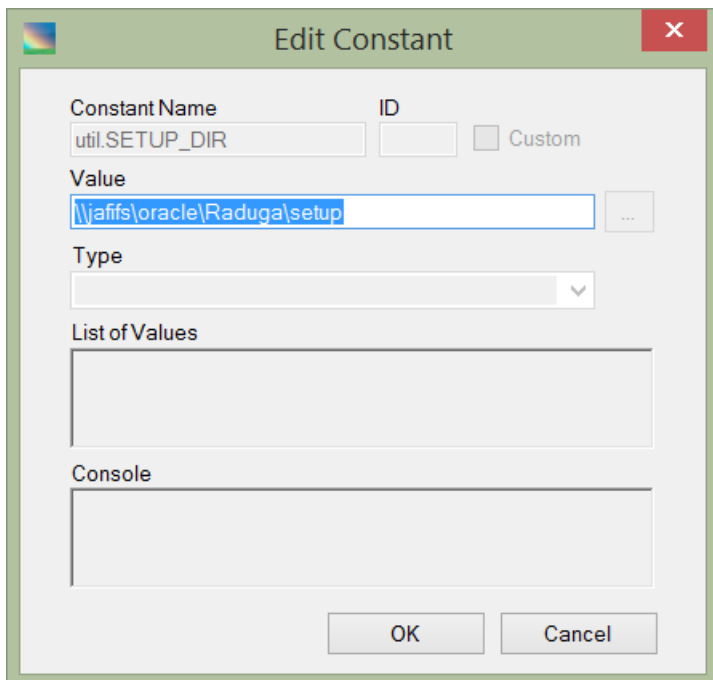
To define the util.SETUP_DIR constant, open the Raduga application and press the “Admin” button. In the “Private Configuration” form press “Global Configuration”. The “Global Configuration” form opens:



Choose “Constants” in the “Objects” drop down box and press “Edit”:



Double click on the util.SETUP_DIR constant and update its value:



In this example the RadugaSetup.exe file exists in the [\\jafifs\oracle\Raduga\setup](#) directory. After you define the util.SETUP_DIR constant, Raduga will automatically update all Raduga clients to the current Raduga version. The automatic upgrade occurs when the end user opens the Raduga application.

The current Raduga version is defined in the Raduga Custom configuration file in the constant util.VERSION. This constant is automatically updated by the setup process and should not be changed manually.

For Further Information

For any questions regarding this product, contact us at service@RadugaApps.com, tel +79185402272, or visit Raduga's web site: <http://www.RadugaApps.com>