Installation and Configuration Datasul 12.1.2

TOTVS S.A.

Sumário

1 Installation Datasul 12

1.1 Purpose

This guide aims at describing the necessary procedures to install Datasul 11 product, as well as, setting the product in the supported platforms. Installation media can also be used to update programs.

1.1.1 Target Audience

As it is a complex process of installation, it requires people that have knowledge of Datasul 11 product architecture, database (Progress/Oracle/SQL Server), Java, Flex, Jboss and net environment.

1.1.2 This Guide Organization

- ✓ **Introduction**

  This chapter displays a general view of the distributed architecture, installation types and examples of topologies in product use.

- ✓ **Requirements**

  This chapter displays the minimum requirements list of hardware and software demanded in installation and product configuration.

- ✓ **Installation**

  This chapter describes the procedures that must be run for product installation. It covers since the installation planning, that is, choosing the proper installation type, until necessary configuration for remote access.

- ✓ **Update**

  This chapter describes the product update procedure.

- ✓ **Reinstallation**

  This chapter describes the procedures to be run for re-installation of each Datasul 11 component, as well as, the necessary precautions for this routine run.

- ✓ **Uninstallation**

  This chapter describers the necessary procedures for Datasul 11 uninstallation.

1.1.3 Important Documents

- ✓ Progress Guides
  - ➢ Getting Started – Installation and Configuration;

- Getting Started – Preinstallation Checklist for Windows;
- Getting Started – Preinstallation Checklist for Unix;
- Getting Started – Database Essentials;
- Data Management – Database Administration;
- Application Server – Administration.

Get these and other documents in Progress site.

✓ Jboss Guides

- Installation Guide;
- Getting Started Guide;
- Server Configuration Guide.

Get these and other documents at Jboss AS Documentation and Jboss Wiki.

✓ Datasul Connection for Web (GoGlobal) Guides

- Administrator Guide;
- License Agreement;
- Quick Start Guide.

Get these and other documents in Graphon and GoGlobal.

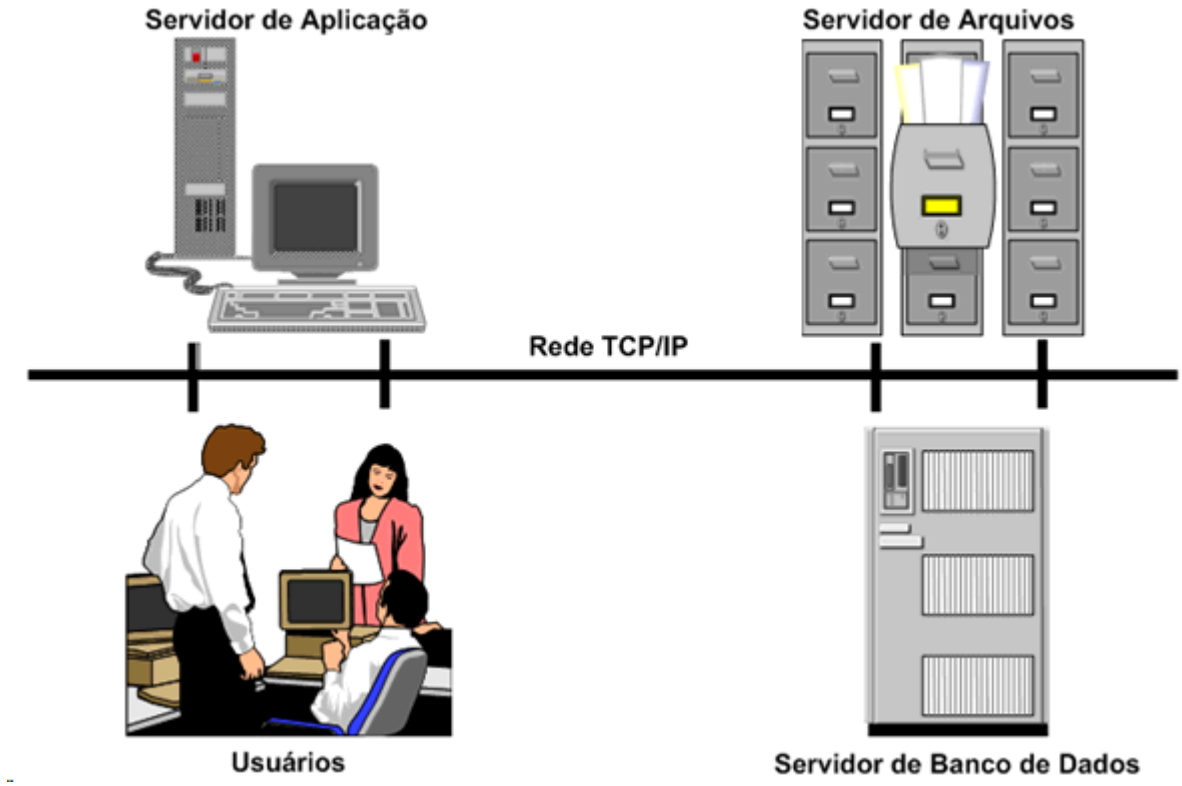
✓ Datasul 11 Guides, Upgrade/Update Guide.

1.2 Introdução

1.2.1 Product Distributed Architecture

Distributed architecture consists of separating the components in independent platforms that interact among them, enabling the resources to be shared while the maximum benefit of each device is obtained. It works as follows: the machines of the users are connected to serves through the net; each server provides different resources so the programs are run from the user machine.

The figure below displays the four basic components used by product.



1.2.2 Installation Types

For the product to work, run the installation of Programs, Database and Application Server:

- ✓ Programs

  It installs programs to use the product, as well as, other necessary files for its run.

- ✓ Database

  It installs and configures the database used by the product, as well as, the scripts to load and drop these databases.

- ✓ Application Server

  It installs and configures Jboss, as well as, the Datasul Interactive, and these components are essential for product work.

- ✓ Document

  It installs the product document guides.

NOTIFICATION: This media is prepared for installation of several instances of Datasul 11 product in the same server. This procedure consists of installing multiple copies of

Database, Application Server and Document options, following the maximum limit of six instances. Each installed instance is named based on the main port used by Jboss, following the sequence 8080, 8180, 8280, 8380, 8480 e 8580. The folders, scripts and services used in the first installation of the options mentioned are named after the identifier 8080. To install a second instance of these options, open the media installer and run these same options again. At each new run, a new copy is installed and named based on the sequence described above. The programs area is the same in the environment and shared by all instances.

1.2.2.1 Notification during installation

During Datasul products installation, a notification is displayed for customers using determining antivirus, accusing the virus identification in the “OCX” and “Interfac” directory files. It happens as files run routines that some antivirus identify as virus. However, they do not characterize instructions of this type. Therefore, the message displayed is disregarded.

1.3 Minimum Requirements

This chapter aims at promoting recommendation on the user of hardware and software related to Datasul 11 and some information on their configuration. These recommendations aims at helping the customers in the environment configuration, using it at its maximum, getting a better cost/benefit relation. However, it does not represent commitments with technologies or some supplier in special on the part of TOTVS. The decision on technology and supplier is responsibility of the customer, as well as, the service, security and reliability level, the customer desires from the environment. This guide positions are also changed due to the progress of technologies and our products;

Remember the Web environment used by Datasul 11 has greater complexity than an environment of standard client/server, as for instance, EMS 2, EMS 5, etc. The proper configuration and tuning of environment (servers, nets, clients, database, etc.) are important for Datasul 11 working, as in case part of the environment is improperly configured, the product performance as a whole is affected.

The recommendation and examples mentioned below only take in consideration the softwares related to Datasul 11 and generic use softwares, such as Office and e-mail. If other softwares are installed in the same environment, they must be be taken in consideration, wherein the requirements described are probably not enough for all routines run.

The Infra Structure (DMZ, net etc) and third party softwares (Operational Systems, Java etc)

configurations necessary for product work are responsibility of the customer. If you need the support of the Infra Structure team, contact **TOTVS Infra Services** through e-mail tis.comercial@totvs.com.br or contact through phone number 4003-0015 in the options 3, 4, 2 - TIS Scheduling Central.

1.3.1 General View of Requirements

Servidor	
30 users (whithout considering DCFW, Citrix and others)	
Hardware	
Disk	120 GB
Memory	4 GB
Processor	Intel Xeon Dual 2.00 GHz
Software	
Operational System [1]	Windows Server Linux
Java	JRE 1.6
OpenEdge	10.2B08
OpenEdge [2]	11.3.2.009

[1] The load and Jboss shutdown scripts are sent to the mentioned operational systems for customer convenience. For these scripts configuration in other operational systems, contact Jboss support in its location or access TOTVS phone consultancy for monitoring.

[2] From version 12.1.1, media is released for Progress 10.2B and another one for Progress 11.3.2, where the customer must download, as environment migration planning.

In Progress 11.3 was released the implementation of programs with 64-bit client (prowin.exe), but Datasul 12.1.1 is approved to run only with 32-bit client (prowin32.exe).

Client Station	
Windows	
Hardware	
Memory (Architecture 32-bit)	1 GB Minimum (2GB Recommended)
Memory (Architecture 64-bit)	2 GB Minimum

Processor	Intel Pentium IV 2.80 GHz (Pentium Dual-Core Recommended)
Screen Resolution	1024 x 768 or higher
Software	
Flash	Flash Player 10
Browsers	Internet Explorer 7 Internet Explorer 8 Internet Explorer 9 Firefox 3.5 e 7
Java	Latest JRE 1.7

1.3.2 Hardware Requirements

1.3.2.1 Customer Station Requirements

We do not recommend the usage of stations smaller than the minimum mentioned above, as the performance does not meet the user needs. If the company has several stations with less configurations than the minimum amount recommended, we suggest you use the Graphic Terminal Servers resources using the existing hardware.

The configuration recommended meets the majority of the users, but, for the most demanding users, maybe there is the need of a better configuration. We understand a 'most demanding user' as the one using heavier processes (the need of a better CPU and a faster network card and/or connected to a *switch* port dedicated to it) or a user with several simultaneous application (need of more memory to run process as Office, e-mail, CAD, EIS etc., at the same time).

We recommend the minimum configuration above mentioned for new equipment, if the company purchases new stations and want to use them for a long time without the need of upgrade and without becoming obsolete. Configurations the hardware suppliers are currently offering and that have a new relation cost/benefit are also taken in consideration.

For all cases, we recommend the update of network card of first line suppliers.

1.3.2.2 Requirements for Server

For other types of installations, such as Application Server, Database and Programs, we recommend the user of Dimensioning service that can be requested through the contacts below:

Complementary Hardware and Software - C&O - 2013					
Architect	**Flávia**	**Wiliam**	**Victor**	**Antonio**	**Alinne**
E-Mail	flavia.polido@totvs.com.br	wiliam.abreu@totvs.com.br	victor.janusz@totvs.com.br	antonio.rodrigues@totvs.com.br	alinne.ciancio@totvs.com.br
Landline phone	**11-2099-7520**	**11-2099-7307**	**11-2099-7188**	**11-2099-7398**	**11-2099-7870**
Mobile	**11-98853-1479**	**11-97677-4305**	**11-98899-4684**	**11-99953-8025**	**11-99198-2681**
Service	Acre	ABM	Argentina	Brasília	Amapá
	Centro-Oeste Paulista	Jurídica	Centro-Norte de Minas	Curitiba	Amazonas
	IP	São Paulo	Centro-Oeste de Minas	Goiás	Bahia
	Mato Grosso		Espírito Santo	Metropolitana	Ceará
	Mato Grosso do Sul		Leste de Minas	Paulistana	Maranhão
	Rio de Janeiro		México	Private	Para
	Roraima		Minas Gerais	Triah	Paraíba
	São José do Rio Preto		Nordeste	Vale do Paraíba	Paraná Central
	Sul Fluminense		Norte Fluminense		Piauí
	Tocantins		Sul de Minas		Rio Grande do Norte
			Triangulo Mineiro		Rio Grande do Sul
			Zona da Mata		Santa Catarina
					Sergipe

1.3.3 Software Requirements

1.3.3.1 Operational system

The station client must have Windows operational system installed, as Datasul 11 uses language Progress in architecture 32-bit (Win32). Additional information in relation to operational platforms and systems validated can be obtained in Progress site (Product Availability Guide).

1.3.3.2 Progress

The Progress licenses in Datasul 11 product are:

License	Operational System	Comment
Openedge Enterprise RDBMS	Windows Server Unix	It is installed in the database server for Progress base administration routines run.
Openedge DataServer for Oracle	Windows Server Unix	Only used with Oracle database. As it is installed in clients (DataServer Local) or in server (Remote DataServer)
OpenEdge DataServer for Microsoft SQL	Windows Server	Only used with SQL Server database. As it is installed in clients (DataServer Local) or in server (Remote DataServer)
Openedge Application Server Enterprise	Windows Unix	It is installed in application server for configuration of services as AppServer, Webspeed, WebServices etc.
Client Networking	Windows Unix	It is installed in *client* station or in files server (Shared Progress). It is also necessary in the database server for routines run through RPW.
Query / Results	Windows Server Unix	It is installed in *client* stations or in files server (Shared Progress) for reports run and compilation.

NOTIFICATION: Only one type of license related to database is released (Openedge Enterprise RDBMS, Openedge DataServer for Oracle or Openedge DataServer for Microsoft SQL) according to database managerial system used in its company.

1.3.3.3 Java

The JBOSS when configured in an Operational System 64-bit, install Java 64-bit (JRE) in the same version 6 available in the product installation media.

For workstations, use version 32-bit of JAVA 7.

1.3.3.4 Flash Player and Browser

To run Datasul 11 in *client* stations, you need the Flash Player. If it is not installed, the Flash Player can be downloaded from Adobe site (minimum version: 9r124).

1.3.3.5 Remote Access Tools

To run Progress programs through Internet, use third party remote access tools. Program Datasul 11 is validated and has remote access configurations for GoGlobal version 4, Citrix (Citrix Presentation Server Version 4.5) and Terminal Server. To use Server Terminal, the server must have an operational system Window 2008 or later, with service RemoteAPP enabled.

Further details, query remote access configuration.

1.3.3.6 Requirements for Oracle Databases

If you use an existing instance, the following recommendations must prevail against other non TOTVS products. To check the values of existing base parameters, proceed with the following queries and analyses the results:

```
select parameter, value
  from nls_database_parameters
  where parameter = 'NLS_CHARACTERSET'
```

NLS_LANGUAGE	AMERICAN
NLS_TERRITORY	AMERICA
NLS_CHARACTERSET	WE8ISO8859P1 OU WE8MSWIN1252
NLS_NCHAR_CHARACTERSET	AL16UTF16

```
Select name, value from v$parameter where name = 'db_block_size';
Select name, value from v$parameter where name = 'open_cursors';
```

CHARACTERSET: The database page code must have value WE8ISO8859P1 or WE8MSWIN1252. If this parameter value is not this one, the instance must be recreated. This parameter is only entered during creation of the database, so there is no way to change it without recreating the instance.

Block size of Oracle instance: If the database has block value smaller than 8k (8192 bytes) observed by initialization parameter (db_block_size), it must be recreated. If possible, create a new database for Datasul products

Cursors Availability: We recommend administrate a value higher than the instance installation standard in the initialization parameter (open_cursors) Start with value 32000 or higher.

Workstations: Install Oracle Net Service in each station. Never install this product with language other than English. The NLS_LANG must have the database CharacterSet (AMERICAN_AMERICA.WE8ISO8859P1 or AMERICAN_AMERICA.WE8MSWIN1252) in record keys (regedit) of the station or application servers. This configuration returns better performance to products with relationship Client/ Server.

1.3.3.7 Requirements for SQL Server databases

The product was validated to be run with SQL Server 2012 and the hardware and software requirements are queried in manufacturer site SQL Server 2012 Requirements.

Confirm the TCP/IP protocol is enabled for SQL Server instance used. SQl Server Express instances do not have this protocol enabled by standard.

For these workstations, install SQL Server Native Client 10.0, so access to Datasul 11 product is configured in the server.

1.3.4 User Requirements (Server)

We recommend you install Datasul products as "administrator" user, or as a user added in server administrator group.

1.4 Installation

1.4.1 Installation Media Details

The installation media of Datasul 11 is available in DVD through Totvs Support Portal in Downloads area.

In these media, you can find available:

- ✓ Product Installation Guide;
- ✓ Customer Support Guide;
- ✓ Java;
- ✓ Setup and files needed for product installation.

1.4.2 Planning the Installation

We will show some stages that must be followed for Datasul 11 configuration and installation, according to types of installation available in media (Programs, Database and Application Server).

- ✓ Define environment topology. In this stage, define where each component is installed. Choose hardware used as database server, files server, application server and the machines that are available to users as well. For each of theses components, check if hardware and software requirements are met;
- ✓ Install the programs in files server;
- ✓ Install database;
- ✓ Install application server;
- ✓ Load database using the scripts by Openedge Explorer application;
- ✓ Initialize the product by using the shortcut created in "Initialize > Programs > TOTVS Datasul > Administration > Product Initializer" during application server installation;
- ✓ Start Jboss through "TOTVS Datasul - <ID>" server through "Services" of Windows.

After the conclusion of these stages, the product is ready for use.

1.4.2.1 Industrial Multi-Company / Security by Site

Datasul 11 has the Security by Site functionality, aiming at defining whether each user can view information of a determined site.

This feature enables the Industrial databases to be used as Multi-Company with information separated by Sites. The Security by Site can be applied both in Unified Databases (Multi-Company) and separated.

This functionality has some features and rules that must be clarified and assessed before its application.

Further details on rules and programs, click here.

1.4.3 Installation

NOTIFICATION: If you receive media in DVD, before starting installation, copy all DVD2 content for DVD1. Without this, installation is interrupted in the middle of the process. When media download is performed through the Support Portal, all zip files must be unzipped in the same directory.

The stages below are common for all types of Datasul 11 installation:

- ✓ Enter ID screen for this installation

An identifier (ID) must be entered for this installation. As the product installation directory is default, this ID is

necessary to avoid overlapping of files when there is more than one product installation in the same server.

✓ User Record Screen

Enter the “User Name” and the “Company Name” using Datasul 11. Select “Next” to continue. Special characters are not allowed in this field, as errors may occur in product access.

✓ Drive Screen available

Drives available for product installation are displayed on this screen. Select a drive, then click Next. Remember only local drives are displayed (mapped units are not displayed).

After clicking Next, a screen indicating whether space in disk is enough for media installation is displayed. If there is space, only an information screen is displayed, indicating space is enough. If there is space, installation questions whether you want to select another drive. If negative, installation is not proceeded. In this case, release space in disk and start installer again.

✓ Installation type screen

Select the installation type run this moment. Remember the displayed order must be followed:

- Programs
- Database
- Application Server
- Document

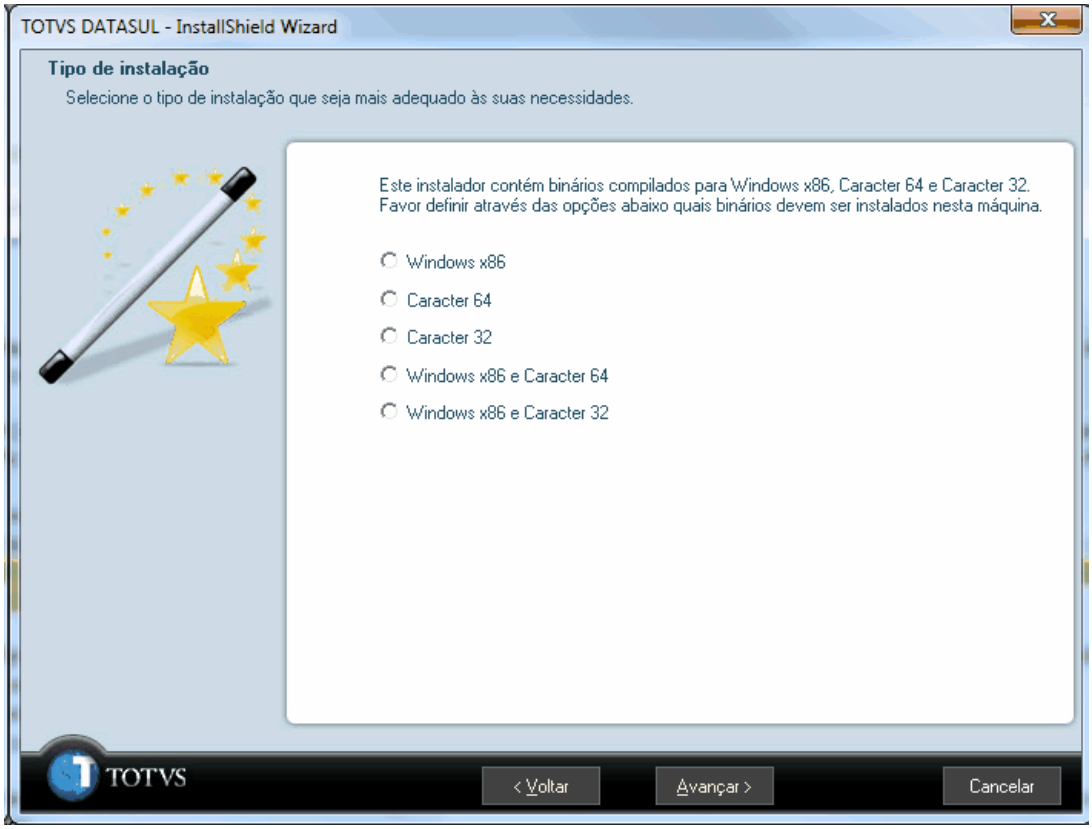
Select “Next” to continue.

Next chapters describe procedures that must be run for each installation type.

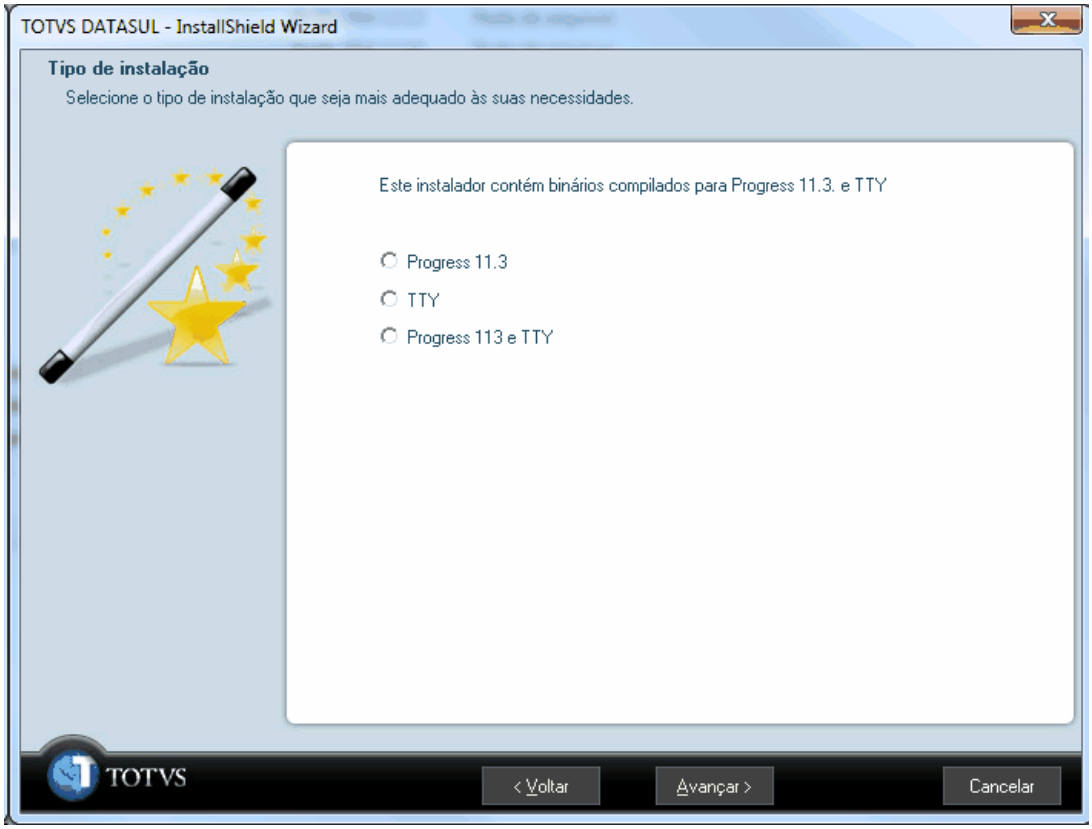
1.4.4 Programs Installation

When selecting option "Programs", Progress used by Datasul 11 are installed. Programs area are installed in structure <Drive>:\Totvs\Datasul\\<ID>\ERP. Directory “ERP” must be accessible to all users using Datasul 11, due to Progress programs run. Programs area installation is a requirement for installation of other installation media components.

Installer OpenEdege 10.2B has binaries compiled both for 32-bit and 64-bit. Define through menu options the binaries that are installed. If any option is selected for Character 32 or Character 64, a directory named "char32" or "char64" is created, respectively inside product directories.



Installer OpenEdege 11.3 has binaries compiled for both 32-bit and 64-bit. Select option "Progress 11.3" for environment using Windows or Linux, 32-bit or 64-bit. Option TTY serves for character environments and for Web, 32-bit or 64-bit applications.



To continue this process, select "Next". In this moment, programs start to be installed. At the end of the process, the installer returns to Installation Type selection screen.

1.4.5 Database Installation

When selecting option "Database", bases used by Datasul 11 are installed and configured.

1.4.6 Progress Database

✓ ID Selection Screen

If installation of Database is performed in the same server where programs area installation is, this screen is displayed. In this case, "Yes" to use ID previously created. If there is more than 1 ID registered, the ID you want to use is requested.

✓ Services change screen

Enter start number of TCP/IP port to be configured to load databases. TCP/IP ports are configured in a sequence. In this case, before entering the port start number, we recommend you to check whether the next subsequent 60 TCP/IP ports are free.

Select “Next” to continue.

✓ Progress Explorer Tool configuration screen

This screen defines if Progress “conmgr.properties” file is configured. This is a file responsible by the configuration of databases that are managed by Progress Explorer Tool.

- Enabling InstallShield to change conmgr.properties file

When selecting this option, “conmgr.properties” file below directory Progress installation “properties” is changed.

In this case, after starting the AdminService service, you can view the databases by Progress Explorer Tool.

With this installation, a “conmgr.properties” file is also created below the “scripts” directory of database installation with databases configuration used by Datasul 11.

- Save necessary changes for conmgr.properties.new file

When selecting this option, “conmgr.properties.new” file is created below “properties” directory of Progress installation and Progress original “conmgr.properties” is not changed.

In this case, before starting the AdminService service, rename “conmgr.properties.new” file for “conmgr.properties” and then, you can view databases by Progress Explorer Tool.

With this installation, a “conmgr.properties” file is also created below the “scripts” directory of database installation with bases configuration used by Datasul 11.

- Do not change

When selecting this option, “conmgr.properties” file is created below database installation “scripts” directory, with database configuration used by Datasul 11 and “conmgr.properties” file below Progress installation “properties” directory is not changed.

In this case, before starting the AdminService service, copy “conmgr.properties” file below “scripts” directory for Progress “properties” directory, and then, you can view databases by Progress Explorer Tool.

Select “Next” to continue.

✓ Screen for Installation Information

This screen has a summary of entered information on previous screen. If any information is incorrect, select option “Back” to perform proper corrections.

When selecting “Next”, databases are installed and configured.

1.4.6.1 Configuration of Progress Explorer Tool

Bases used by product are configured to be started by Progress Explorer Tool (proexp). This application Progress is a graphic tool enabling you to create, configure, start and stop services managed by local or remote AdminService as, for instance, database, Webspeed, AppServer, among others.

The administration of databases and services configured in Progress Explorer Tool can also be run through command line.

The configuration performed in Progress Explorer Tool during database installation is basic, that is, enough to start databases and run access test to product. After finalizing Datasul 11 installation and configuration, the parameterization of databases and sessions (.pf) must be revised, adjusting them according to resources available in database server and connections/processes volume with the purpose of meeting requirements with better performance.

The analysis of environment and adjustment of parameterization can be performed together to the Database consultancy by phone number 4003-0015, options "02" Software > "03" Technical Consultancy > "04" Datasul > "08" Technology > "03" Database. Additional information on this service can be obtained in phone support by phone number 4003-0015, options "02" Software > "02" Technical Support > "04" Datasul > "08" Technology > "03" Database.

1.4.6.2 Objects created in the installation of Progress Database

Seguem os objetos importantes para administração do ambiente, criados na instalação de banco de dados em ambiente Windows.

Localization	Object	Description
<Dir Instal Bancos>\scripts	ReparaBancos.bat	Script to adjust database structure.
<Dir Instal Bancos>\scripts	datasulDescargaBancos.bat	Script to drop databases manually started (proserve or _mprosrv) or started by script “datasulCargaBancos.bat”.
<Dir Instal Bancos>\scripts	datasulCargaBancos.bat	Script to start base. When starting database by this script, bases are not managed by Progress Explorer Tool.
<Dir Instal Bancos>\scripts	conmgr.properties	File responsible by the configuration of databases that are managed by Progress Explorer Tool.

1.4.6.3 Unix / Linux Operational Systems

Installation media does not automatically create database for these operational systems (Linux, AIX,

HP-UX, HP-UX Itanium, Solaris, etc.). Therefore, database media must be installed in Windows environment and the database must be manually created.

1.4.6.4 Base creation with SQL access

Bases “emsdev”, “emsfnd”, “payroll”, “finance”, “ems2sor”, “mdtfrw”, “mdmerge” and “mdtcrm” have SQL access and must be created according to procedures described below (for operational system that are not Windows or for databases manually created). Definitions (.df e .dfsql) can be obtained below from “<Dir Instal Bancos>\database\definitions” structure.

- ✓ Access database server console;
- ✓ Define Progress variable

  export DLC=<Dir Instal Progress>

  export PATH=<Dir Instal Progress>/Bin:$PATH
- ✓ Create database

  prodb <database name> <Dir Instal Progress>/empty8
- ✓ Access the Data Administration from Progress by connecting the database in user mono mode

  pro -Mm 4096 -cpstream ibm850 -d dmy -E -rx -db <database> -1 -p _admin.p

  Run definitions (.df) load by “Admin > Load Data and Definitions > Data Definitions (.df file)” for databases “emsfnd” and “ems2uni”;

Create “sysprogress” user, “sysprogress” password and “pub” user, “pub” password by “Admin > Security > Edit User List”;

- ✓ Close session Progress and load database with broker SQL

  proserve <database> -S <port> -N TCP -H <database server name> <parameters>

  proserve <database> -S <port> -N TCP -H <database server name> -m3 –ServerType SQL <parameters>
- ✓ Access a client Windows with installed Progress;
- ✓ Access the “proenv” from Progress in “Start > Programs > Progress > Proenv”;
- ✓ Run load of definition (.dfsql) for databases “emsdev”, “finance” e “payroll”;

  sqlexp –user sysprogress –password sysprogress -url jdbc:datadirect:openedge://<database server name>:<port of broker SQL>;databaseName=<database> -infile <file.dfsql>

TIP: The broker port is the one defined for parameter "-Y" when loading the database with

parameter "-ServerType SQL".

✓ Connect through SQL Explorer the "mdtfrw" database and give permissions of DBA for "pub" user, through commands below:

sqlexp –user sysprogress –password sysprogress -url jdbc:datadirect:openedge://<database server name>:<port of broker SQL>;databaseName=<database>

Grant dba to pub;

Commit;

After running these procedures, the databases used by Datasul 11 are installed and configured.

Important to check the document on conexão DataSource configuration for Progress database that must be performed according to quantity of users using Datasul 12.

1.4.7 Oracle Database

NOTIFICATION: For the use of product in Oracle, the value "NLS_LANG" must be configure according to CharacterSet used in database (AMERICAN_AMERICA.WE8ISO8859P1 or AMERICAN_AMERICA.WE8MSWIN1252).

✓ Oracle Instance Screen

Enter the name of Oracle instance used to store this installation objects.

✓ Configuration Screen of Oracle Server

Enter the name of the server and Listener port for this instance on this screen. This information is used to create the objects in Oracle database.

✓ Location Screen of Datafiles

Enter directory where you want to store the Datafiles of tablespaces that are used for Datasul 11 product.

✓ Screen for Installation Information

This screen has a summary of entered information on previous screen. If any information is incorrect, select option "Back" to perform proper corrections.

When selecting option "Next", the scripts for creation of objects in Oracle databases are created and the Schema Holder are copied.

1.4.7.1 Objects created in the installation of Oracle Database

Below, the files for creation of objects and administration of environment created for installation of Oracle database.

Localization	Object	Description
<Dir Instal Bancos>\scripts	criaObjetoOracle.sql	Script to create objects (tables, indexes etc.) in Oracle database.
<Dir Instal Bancos>\scripts	criaTablespaceOracle.sql	Script to create tablespaces for Datasul 11 product in Oracle database.
<Dir Instal Bancos>\scripts	criaUsuarioOracle.sql	Script to create tablespaces for Datasul 11 product in Oracle database.
<Dir Instal Bancos>\scripts	gerenciadorScripts.sql	Script that manages the call of other Oracle scripts. This file must be run so the objects are created in Oracle database.
<Dir Instal Bancos>\scripts	ReparaBancos.bat	Script to adjust Schema Holder database structure.

1.4.7.2 Creation of Objects in Oracle Database

The installation media does not automatically create objects in Oracle database. To create these objects, the "gerenciadorScripts.sql" script must be manually run according to procedures below:

- ✓ Access the Sql Plus with the "System" user in instance where the objects are created;
- ✓ Run the command "@<Dir Instal Bancos>\scripts\gerenciadorScripts.sql";
- ✓ Check whether errors were created in log files at the end of the process in "<Dir Instal Bancos>\spool" directory.

1.4.8 SQL Server Database

- ✓ SQL Server Configurations Screen

Enter user of SQL Serverdatas database.

- ✓ Password Screen

Enter user password.

- ✓ SQL Server Configurations Screen

Enter server name and the SQL Server instance and the location for Database datafiles, directory in SQL Server server.

- ✓ Screen for Installation Information

This screen has a summary of entered information on previous screen. If any information is incorrect, select option "Back" to perform proper corrections.

When selecting option "Next", the scripts for creation of objects in SQL Server database and Schema Holder are also copied.

1.4.8.1 Objects created in the installation of SQL Server Database

Below, the files for creation of objects and administration of environment created for installation of SQL Server database.

Localization	Object	Description
<Dir Instal Bancos>\scripts	criaObjetoSQLServer.bat	Script to create the objects (tables, indexes etc.) in SQL Server database.
<Dir Instal Bancos>\scripts	criaDatabaseSQLServer.sql	Script to create databases for Datasul 11 product in SQL Server..
<Dir Instal Bancos>\scripts	criaUsuarioSQLServer.sql	Script to create user and associate to databases in SQL Server.
<Dir Instal Bancos>\scripts	gerenciadorScripts.bat	Script that manages the call of other SQL Server scripts. This file must be run so the objects are created in SQL Server database..
<Dir Instal Bancos>\scripts	ReparaBancos.bat	Script to adjust Schema Holder database structure.

1.4.8.2 Creation of Objects in SQL Server Database

The installation media does not automatically created the objects in SQL Server database. To create these objects, the “gerenciadorScripts.bat” script must be manually run according to procedures below:

- ✓ Enter directory “<*Dir Instal Bancos*>\script”;
- ✓ Run the script “gerenciadorScripts.bat”;
- ✓ Check whether errors were created in log files at the end of the process in “<Dir Instal Bancos>\spool” directory.

1.4.8.3 SQL Server Connection

The new connection with SQL Server database does not need to be performed in each station, ensuring information to be centralized in configuration file.

In this case, the better method is to enter all connection parameters in the command line or in parameters file (file .pf), method also know as DSN-less.

A DN-less (Data Source Name-less, or connection without database) enabling the application to specify all parameters directly in the connection line to the database, without the need to configure a ODBC data source.

A line for DSN-less connection with SQL Server driver is:

Driver={<driver>}; Server=<server>; DatabaseName=<database>; Uid=<user>; Pwd=<password>;

1.4.9 Installation of Application Server

When selecting option “Application Server”, Jboss and Datasul Interactive services are installed and configured for Datasul 11 run.

Below, stages to run this process:

✓ Target Local screen

Enter the directory where the Application Server is installed in the server. We recommend the *default* directory suggested by installation media.

✓ Integration Screen with ECM

Enter whether the product is integrated with ECM. In case of questions, select the option “No”, as this information can be changed at any moment through the configuration file.

✓ Screen of remote run

If remote connections are performed for Datasul 11 access through Datasul Connection for Web (GoGlobal), Citrix or Terminal Server, option “Yes” must be selected. Otherwise, option “No” must be selected to proceed with the installation. When selecting option “Yes”, the selection screen of remote access type is displayed. Select the installation type and fill out as requested:

- Datasul Connection for Web
  - ✓ URL: URL that has libs of Datasul Connection for Web (GoGlobal);
  - ✓ Server: Enter the server where the Datasul Connection for Web is installed;
  - ✓ Port: Enter a port available in server for communication between the Jboss and Datasul Connection for Web.

- Terminal Server
  - ✓ Port: Enter a port available in server for communication between the Jboss and Terminal Server;
  - ✓ Server: Enter the server where the application published in Terminal Server;
  - ✓ Metaframe Port: Enter port used by Terminal Server.

- Citrix
  - ✓ URL: URL in which the DatasulCtxWI is published (check configuration Citrix in this

Guide);

- ✓ Server: Enter server where application is published in Citrix;
- ✓ Port: Enter a port available in server for communication between the Jboss and Citrix.

Select "Next" to continue.

✓ Machine name screen

Enter server name where database are installed of Datasul 11 product. Select "Next" to continue.

✓ Single Sign On Screen

The Single Sign On (Josso) is installed and configured in the Jboss. Therefore, enter the *hostname* of the application server where the Jboss is installed and the communication port with Jboss.

Select "Next" to continue.

✓ Nameserver Screen

Enter the machine name and Nameserver port number of Progress. If not changed, standard port is 5162. This information is used for connection with AppServer created during installation. Select "Next" to continue.

TIP: This information can be obtained in "ubroker.properties" file located below of Progress "properties" directory. Parameter defining the communication port with Nameserver is the "portNumber", below the structure [Nameserver] or [Nameserver.XXX]. As default, the Nameserver used is the NS1 with port UDP 5162.

✓ Configurations Screen of Jboss

Enter the access port number to Jboss. We recommend using the default port (8080)

✓ Progress Explorer Tool configuration screen

This screen defines how the "ubroker.properties" file is configured. This is the file responsible by the configuration of AppServer "Datasul" server that is managed by Progress Explorer Tool.

➢ Enabling InstallShield change the ubroker.properties file

When selecting this option, "ubroker.properties" file below directory Progress installation "properties" is changed.

In this case, after starting the AdminService service, you can view the bases by Progress Explorer

Tool.

➢ Save necessary changes for ubroker.properties.new file

When selecting this option, “ubroker.properties.new” file is created below “properties” directory of Progress installation and Progress original “ubroker.properties.new” is not changed.

In this case, before starting the AdminService service, rename “ubroker.properties.new” file for “ubroker.properties” and then, you can view “Datasul” AppServer by Progress Explorer Tool.

➢ Do not change

When selecting this option, “ubroker.properties” file is created below database installation “scripts” directory, with AppServer service configuration used by product and “ubroker.properties” file below Progress installation “properties” directory is not changed.

In this case, before starting the AdminService service, copy “ubroker.properties” file below “scripts” directory for Progress “properties” directory, and then, you can view AppServer services by Progress Explorer Tool.

✓ Screen of License Server Configuration

Enter the License Server and port.

✓ Information screen of installation

This screen has a summary of entered information on previous screen. If any information is incorrect, select option “Back” to perform proper corrections.

When selecting option “Next”, the services are installed and configured.

When finalizing the configurations, a question on whether you want to enter LDAP configurations is displayed. This information is used for product integrated login. Without this configuration, even if the SO user is properly entered with external access type, you are not able to access product by using integrated login. If option “yes” is chosen, a user and net password is required for configuration with Active Directory (AD). After configuration with Active Directory, a screen of the conclusion of Application Server installation is displayed.

NOTIFICATION: The user password entered cannot have character "&", wherein it causes failure in Jboss initialization. Enter user and password valid in AD without domain and extension, otherwise, you cannot configure the authentication file used by Josso.

1.4.9.1 Objects created in the installation of the Application Server

These are important objects for management of environment, created in the application server installation.

Localization	Object	Description
<Dir Instal Programs>\scripts-[instance]	config.xml	File responsible for configuration of product access shortcut.
<Dir Instal Programs>\scripts-[instance]	datasul-progress.ini	Session initialization file with environment configurations, such as, sources, colors, PROPATH, others.
<Dir Instal Programs>\scripts-[instance]	datasul-configxml-alias.p	Script of alias used for product access.
<Dir Instal Programs>\scripts-[instance]	datasul-appserver-alias.p	Script of alias used by "datasul" AppServer service.
<Dir Instal Programs>\scripts-[instance]	datasul-aliasIni.p	Program used for product initialization.
<Dir Instal Programs>\scripts-[instance]	datasul.pf	File with session parameters and connection parameters with databases.
<Dir Instal Programs>\scripts-[instance]	ubroker.properties	File responsible by the configuration of AppServer “datasul” server that is managed by Progress Explorer Tool.

1.4.10 Document Installation

When selecting option “Document”, technical guidelines, functional differences guidelines and Release Notes are installed. When selecting this option, a question on whether the installation directory of application server is the one indicated on screen is displayed. If positive, select YES. If negative, select NO and change this directory.

1.4.11 Initializing Datasul 12

During the Application Server installation, a shortcut for product initialization is created > “Start > Programs > TOTVS Datasul > Administration > Product Initialization”. In this stage, databases must be loaded.

Below, stages to run this routine:

✓ Screen for company configuration, country and language

Enter the company name using Datasul 11, CNPJ (only numbers), the country and state of company

location, as well as the language for use. Select u to continue.

✓ Screen of *strings*, messages and literais

Enter external strings files location (<Dir Instal Programs>\univdata\pt.d), messages (<Dir Instal Programs>\univdata\msg.d) and literais (<Dir Instal Programs>\univdata\liter.d). Select u to continue.

✓ Initialization screen of "emsdev" database

On this screen, enter parameters file location (<Dir Instal Programs>\fnd\men\importer\parameters-[instance].properties), according to the instance being initialized. Enter location directory ".jar" files (<Dir Instal Programs>\fnd\men). Select u to continue.

✓ Configuration Screen Database X Company

Database displayed on screen are the same ones configured for ".pf" file connection below the structure "<Dir Instal Programs>\scripts". Select "Start" to continue. This screen is only informative, and you cannot change connection data through it.

✓ Performance Optimizer

This function improves the environment performance to which the dictionary triggers refers. With this program run, the triggers with codes are enabled, and triggers not being used are disabled. We recommend the performance optimizer run in initialization (option "Yes").

In this moment, the product initialization is run.

The last initialization process stage is the database import for "emsdev" database. During this stage, the initialization screen is locked. At the end, "btb907za.txt" file is displayed on screen generated below the programs installation root directory. This file is a run procedures log. The initialization screen is released after closing log file.

After checking the generated log, close file and select  finishing the process.

ATENÇÃO: Verifique a existência NOTIFICATION: Check the existence of "StringTable" table records. If table is empty, run through the Command Prompt, the "importacaoByYou.bat" script below the root directory of programs installation. After running this script, check the number of records on screen again.

After product initialization, you must configure business so information is displayed according to desired in Datasul 12 desktop.

1.4.12 Access to Datasul 12

During the Application Server installation, a shortcut is created > “Start > Programs > TOTVS Datasul”.

But, before accessing the product, the following procedures must be run:

- ✓ Start database;

You can start the Progress database through OpenEdge Explorer or script “datasulCargaBancos. bat”.

- ✓ Start AppServer “datasul-[ID]-[instance]” service;

You can start the AppServer through OpenEdge Explorer or through the command line by “asbman”.

- ✓ Start Jboss “TOTVS Datasul” in “Control Panel > Management Tools > Services”;
- ✓ Start TOTVS License Server service;

1.4.13 Remote Access

Datasul 11 can have a remote access by using the Datasul Connection for Web (GoGlobal), Citrix Metaframe or Terminal Server (all with installation media separated from product).

1.4.14 Adjust after Installation

The adjusts in this chapter are needed after Datasul 11 installation.

1.4.14.1 Sequences Permission

When the databases automatically created by installation media are not used, you must permit *select* and *update* for user *pub* in sequences *seq_configur and seq_propried*. This permission directly affects the user configuration persistence. If there are no permissions for Sequences, no user configuration is saved with several errors on screen.

- ✓ Access the SQL Explorer through the Proenv, connecting the emsfnd database;

  Sqlexp –db emsfnd –H <hostname> -S <service> -user sysprogress –password sysprogress

- ✓ Use the commands below for permissions in the sequence:

  Grant select, update on sequence pub.seq_configur to pub;

  Grant select, update on sequence pub.seq_propried to pub;

  Commit;

1.4.14.2 Configuration for Progress programs access

At the end of installation, Progress programs are available for access only through server where installation is made. For the access to these programs to be available to all net stations, follow the procedures listed below:

- ✓ Share “ERP” directory, attributing reading permission to all users accessing the product.

  E.g. \\servidor\ERP

- ✓ Edit “ERP\scripts-8x80\datasul-progress.ini” file by changing all Propath input for previously created sharing;

  E.g. PROPATH=\\servidor\ERP, \\servidor\ERP\ems2, \\servidor\ERP\ems5, etc

- ✓ Edit “ERP\scripts-8x80\config.xml” file, changing “.ini”, “.pf” and alias files address for previously created sharing.

1.4.14.3 Configuration for Plan Management access

If Plans Management is used, create a shortcut specifically to access it in the product. In this case, the steps below must be followed:

- ✓ Create a shortcut in config.xml, pointing to a .INI file where the v6Keys value is = Yes. The Plan Management programs must be run at this shortcut;
- ✓ Create a shortcut in config.xml, pointing to .INI file where the v6Keys value is = No. This shortcut is used to run programs of EMS 2/ EMS 5/ HCM.

1.4.14.4 Delivery configuration of authentication e-mail

When the customer e-mail server demands authentication for e-mail delivery, create an e-mail specific account for Datasul product and configure it in mail-service.xml file in Jboss.

Check if in mail-service.xml file (located in <Jboss>\server\<instance>\deploy), there is a configuration below to allow e-mail messages to be sent to external e-mails with user authentication:
<property name="mail.smtp.auth" value="true"/>

If positive, it is configure to use authentication of user, so whenever an e-mail is sent, the recipient is the one defined in mail-service.xml file. The a-mail used in "replyTo", that is, for e-mail answer, it will also be the one configured in mail-service.xml.

Removing the mail.smtp.auth configuration, when trying to send an e-mail for external recipient, if the e-mail server is configured to demand authentication for e-mail delivery is not possible to continue this process. If it is sent to internal e-mail, the sender on the e-mail must be the one entered, and not the one

configured in mail-service.xml.

1.4.14.5 Translation Matrix in EMS 5

After a new installation of Datasul 11 product, a Translation Matrix is created for External Organization in EMS 5 (**prgint/utb/utb118aa**), if it does not exist.

The matrix is used to identify the organizational unit of EMS 5 corresponding to organizational unit of EMS 2 related to the user. It is also used when the user changes company in Datasul system (procedure "Exchange Company User").

There must be at least one relationship record between the company of EMS 2 with company of EMS 5.

The External Organization Translation Matrix must have the name "EMS2" and the "Organization Origin" must be EMS. If there already is a matrix called "EMS2", it is the official used in the integration between EMS 2 and EMS 5.

In the matrix, all companies and sites used in EMS 2 must be registered as below:

- Organizational Unit Type: company/site used in EMS2.
- External Organizational Unit: EMS 2 Organizational Unit.
- Organizational Unit: EMS 5 Organizational Unit.

Other information (accounts matrix, cost center matrix and others) do not need to be identified in this moment.

1.4.14.6 Installation of Plug-in CRM Outlook

To install the plugin, copy the 2 files located in the folder 'crm-outlook' of Datasul 11 product installation media for a temporary folder in user station.

Run file 'setup.exe', then follow the installation steps. To use the plugin, you must have the Microsoft Outlook 2010 installed in the station.

1.4.14.7 Checking environment after installation

A check-list of the environment enabling the installation and detection of installation failures is available.

Below the environment check-list:

- ✓ Check if the items displayed in the requirements chapter were met;
- ✓ Check if AdminService service is started;

- ✓ Check if database are loaded
- ✓ Check if ports used in database load are the same ones defined for their connection;
- ✓ Check if AdminService service is started;
- ✓ Check if the Jboss service started without errors in log;
- ✓ Check if "config.xml" file located below in the structure "<Dir Instal Programs>\scripts-8080" is properly configured wherein it is the responsible for Progress programs run. If there is any empty tab, it must be commented or removed;
- ✓ *Check if datasources ("progress-ds.xml" or "oracle-ds.xml" or "mssql-ds.xml") located in "deploy" directory of Jboss instance wherein it is responsible for the communication with database. For Progress environments, this file must point to the ports corresponding to SQL brokers;*
- ✓ Check the existence of "datasul_framework.properties" file located below the structure "jboss_home\server\instance-8080\conf\datasul" wherein it is responsible for the run of integrated services with Jboss such as AppServer, Totvs License Server, Flex, among others;
- ✓ Check if "di.properties" file located below the structure "jboss_home\server\instance-8080 \conf\datasul" is properly configure wherein it is the responsible for the location of "config.xml" file;

Check if "hcm.properties" file located below the structure "jboss_home\server\instance-8080\deploy\ datasul-byyou-XX.X.X-SNAPSHOT.ear\payroll-config-X.X.X.jar" is properly configure wherein "hcmpayroll. appserverconnection" parameter must be pointed to AppServer service;

1.5 Update

The product update process is performed through the Update Console. The Update Console Guidelines are available in "D@ - CAT" Community Documents area in Fluig.

1.6 Reinstallation

Reinstallation is run for any of the product components (programs, database and application server), running the installation media *setup* again. But, before running this process, some verification must be performed.

NOTIFICATION: It is extremely important to backup current environment before the reinstallation of any component.

- ✓ Programs

If the product is operational, select a different programs area from the one used by production

environment. Reinstallation can be used to install programs compiled in Character 32-bit or Character 64-bit environment for example.

✓ Database

If the product is operational, select a different database server or area from the one used by production environment. If the same area is entered for reinstallation, all data added until present time are deleted. Only overlap files if you are sure about your needs. Besides, when reinstalling database, run initialization run of product again. In Oracle and SQL Server environment, it is recommendable a backup of Schema Holder before reinstallation to avoid synchronism problems.

✓ Application Server

In Application Server reinstallation, not existing objects are created and existing objects are substituted. Installation media perform all configurations again.

1.7 Uninstallation

Run uninstallation process only when you do not need components installed in each server wherein this routine must be run from the server where each component is installed.

To uninstall product in Window environment, select option “delete” from “Datasul 11” in “Start > Configurations > Control Panel > Add or Delete Programs”. During this process, a deletion confirmation is requested and a screen of process conclusion is displayed.

This procedure does not delete all files created in the installation process as logs and temporary files. In this case, check the directories used for installation of components and delete the remaining objects as necessary.

2 Datasul 12 Configuration

2.1 Purpose

The purpose of this Guide is to describe Datasul 12 product configurations displaying the file where each configuration is performed. Additional information can be located in chapter “Important Documents”.

2.1.1 Target Audience

The process complexity requires professionals with knowledge of Datasul 11, Progress, Java,

Flex, Jboss and net environment product architecture.

2.1.2 Important Documents

✓ **Jboss Guides**

- Installation Guide;
- Getting Started Guide;
- Server Configuration Guide.

Get these and other documents at Jboss AS Documentation and Jboss Wiki.

✓ **Totvs Guides**

- Installation Datasul 12.1.2;

✓ **Entity and Relationship Model (M.E.R)**

The Datasul_11-MER.zip file has artifacts for Datasul 11 product M.E.R query. Document "Datasul 11 - MER.docx" explains how all relationship structure from database to each of the attributes and indexes are queried.

✓ **APIs Programs**

In Datasul_11-APIs.zip you can find procedures to use API programs released along with Datasul 11 product and procedures on how to generate Weberservices WSDL.

2.1.3 How to use this guide

Configurations in this guide are capitulated by functionality. Throughout this guide, only the file name where the configuration is performed is mentioned. In the chapter “Files Localization”, the paths for files location are listed.

2.2 Configuration file

In this chapter, files and configuration for Datasul 12 product are mentioned.

2.2.1 Database

Database “emsdev”, “emsfnd”, “mdmerge”, “mdtfrw”, “finance”, “payroll”, “ems2sor” and “ems2cad” are directly accessed by Jboss. For this access, datasources are created through progress-ds.xml file (Progress environment) or oracle-ds.xml (Oracle environment).

List the most important attributes and respective functions:

jndi-name: Datasource Name (You cannot change it);

username: User for connection to database;

password: Password for connection to database;

connection-url: String of JDBC connection to database. E.g.

jdbc:datadirect:openedge://JAGUARIBE:23618;databaseName=emsdev

min-pool-size: Minimum number of active connections to database;

max-pool-size: Maximum number of active connections to database;

There may be more than one connection for the same database, but with different JNDI. If you need to change the file, be careful about changes in correct place and for all necessary datasources.

For Progress environment, username must be “PUB”, as tables are created below this user.

2.2.2 AppServer

AppServer configuration is performed in datasul_framework.properties file.

progress.server.name=JAGUARIBE
progress.server.port=5162
progress.server.application=datasul-1151-progress-8080
progress.server.maxconnections=5

Description:

progress.server.name: Server where broker AppServer is configured;
progress.server.port: NameServer Port;
progress.server.application: Broker AppServer Name;
progress.server.maxconnections: Maximum quantity of agents that Jboss uses.

If message “Error connecting” during Flex program run, check if AppServer broker configured in this file is active and properly configured. AppServer broker log file also helps in problems correction.

Proprieties described below can be configured for AppServer Progress. Check the configuration that better suits production scenario. As default, all proprieties are disabled and the system works as state-reset.

progress.server.mode=1
progress.server.statereset.controlpoolcompanyid=false
progress.server.statereset.numberreqconnsclear=-1

progress.server.statereset.evictionthreadrun=120000
progress.server.statereset.mintimeidleobjects=180000

Description:

Propriety	Definition	Default value	Comment
progress.server.mode	Integer {1,2}	1 (state-reset/ state-aware)	AppServer broker must be configure with the same operational mode for proper work (stateless, state-reset or state-aware).
progress.server.statereset. controlpoolcompanyid	Logic {true,false}	false	Controls the impact of company change generating the database connect and disconnect in VM Java pool. (Use only with state-rest and state-aware)
progress.server.statereset. numberreqconnsclear	Integer {-1-200}	-1	Used to indicate to VM Java pool the number of times a connection with AppServer can be reused. Reaching the limit, it is invalidated and Pool creates a new one. (Use only with state-rest and state-aware)
progress.server.statereset. evictionthreadrun	Milliseconds	120000ms (2minutes)	Controls Thread start time for Idle objects cleanse in Pool Java. Applying -1 in propriety ignores work. (Use only with state-rest and state-aware)
progress.server.statereset. mintimeidleobjects	Milliseconds	180000ms (3minutes)	If propriety evictionthreadrun > 0, defines time an object remains in Idle status in the VM Java. (Use only with state-rest and state-aware)

2.2.3 Log

In JBoss, logs generation is controlled by “jboss-log4j.xml” file. This file defines a group of "appenders" basically are log output. As default, JBoss is configured with output for console and log file (server.log).

The log level to be configured depends on the type of information you need. Datasul 11 product is configured with log for "ERROR" which means only error messages are displayed in file. This is the proper configuration for a production environment, so informative messages are not saved in log, making the file bigger and difficult to be read.

There are six log levels: TRACE, DEBUG, INFO, WARN, ERROR and FATAL. When one of these levels is defined in the file, all messages above the chosen level are also registered. That is, if level "INFO" is chosen, all equal messages or superior to this level are written in log (INFO, WARN, ERROR and FATAL).

The example below is of an appender with output for file, configured as "INFO":

```
<appender name="FILE" class="org.jboss.logging.appender.DailyRollingFileAppender">
  <errorHandler class="org.jboss.logging.util.OnlyOnceErrorHandler"/>
  <param name="File" value="${jboss.server.log.dir}/server.log"/>
  <param name="Append" value="false"/>
  <param name="Threshold" value="INFO"/>
  <param name="DatePattern" value="'.'yyyy-MM-dd-HH"/>
  <layout class="org.apache.log4j.PatternLayout">
    <param name="ConversionPattern" value="%d %-5p [%c] %m%n"/>
  </layout>
</appender>
```

To change the log level, change “Threshold” from "INFO" to desired value. After changing, you do not need to restart the instance. The jboss-log4j.xml is the only configuration file of JBoss that does not demand instance restart. The change becomes effective in 60 seconds maximum after saving the file.

In standard configuration of product, the log rotate is performed at each hour. At the beginning of each hour, the log current log is renamed and log is generated in another file with the same name. Configure log according to its need, aiming at not generating huge size files. You can configure a log rotate by: month, week, day, midday, hour and minute. To change it, edit the value of option “DatePattern” as table below:

DatePattern	Period

'.'yyyy-MM	Rotates log at each month
'.'yyyy-ww	Rotates log at each week
'.'yyyy-MM-dd	Rotates log at each day
'.'yyyy-MM-dd-a	Rotates log at midnight and midday at each day
'.'yyyy-MM-dd-HH	Rotates log at each hour
'.'yyyy-MM-dd-HH-mm	Rotates log at each minute

Besides Appenders, you can create categories The categories have specific configuration for determined applications. For example, you can keep the log level as “INFO” and configure another category for messages of determined application as “WARN”. The example below is of a category of component “org.jgroups” (cluster) configured as “WARN”:

```
<category name="org.jgroups">
    <priority value="WARN"/>
</category>
```

Therefore, for all applications, only the messages with “ERROR” level are displayed, but “org.jgroups” application messages with “WARN” log level.

Get information on log levels here.

2.2.4 License Server

License Server (LS) configuration is performed in “datasul_framework.properties” file in parameters below:

license.server=calixto
license.port=7777
license.timeout=20
license.showlog=none

Description:
license.server: IP address or LS name;
license.port: Port configured for LS (default 5555);
license.timeout: Time (seconds) for connection with LS. If this time is reached without receiving LS answer, the emergency key is requested;
license.showlog: Log level for LS messages. Types allowed are: none, all, error, debug, info (default: none).

If there is no communication with LS or license is expired, the emergency key is requested.

2.2.4.1 License File Adjust

From Datasul 12.1.1, the validation of product licenses were modified to improve control and

ensure proper use of licenses. This configuration is valid for an installation and updating (Update) of Datasul 12.1.1 where basically it consists of automatic copy of file for work stations.

In this case, when Datasul 12.1.1 is accessed by a work station, it automatically copies the dll for directory c:\windows\, it if does not try to copy for another directory defined in Window PATH variable due to lack of permission.

When user is not allowed to make copies in any of the directories defined in Window PATH variable, the administrator must make a manual copy or map the server directory to add the Windows PATH.

1st suggestion:

- Copy file **license_client.dll** of directory...\ERP\fnd\config\
- Glue in directory c:\windows of each work station accessing the Datasul 11

2nd suggestion:

- Map the path \\servidor\dts12\ERP\fnd\ as t:\
- Add directory t:\config\ in the environment variable of Windows PATH.

Important:

If you use remote access (Citrix, GoGlobal, TS), the license_client.dll file must be copied for directory c: \windows of tools server.

2.2.5 Jboss Service Configuration

The service “TOTVS Datasul - <ID> - 8x80”, responsible by Jboss load, is created in product standard installation (Windows environment). When the service starts, the “service-8x80.bat” is run. It manages the service, besides calling Jboss run line.

In “run.bat” file, the variable “JAVA_OPTS” is configured. This is the standard environment variable for Java parameters configuration. Noting “service-8x80.bat” and “run.bat” files, we can check this variable is defined several times, generally concatenating the former value and adding other parameters and values. If you need to add a new parameter, you can add one of these files in any one. The basic difference is that “run.bat” file is used for all instances wherein the parameters defined in this file are the same for all instances. The “service-8x80.bat” file is used by instance, enabling yo to defined different values for each of the instances.

2.2.5.1 Linux

Jboss is installed through the media only for Windows environment. For environments where Jboss is configured in a Linux server, the Jboss load is performed through the “run.sh” script wherein the configurations of JAVA_OPTS variable must be performed in “run.conf” file.

For Jboss configuration in Linux server, we recommend you read this kbase.

2.2.5.2 JBOSS Security

Consoles “jmx-console” and “web-console” are used for administrative tasks. All users with access to the environment also access these consoles and get administrative access in the process of Datasul 11 product JBOSS.

Some instructions below to configure the authentication for these two JBoss monitors:

1) In ..\deploy\management\console-mgr.sar\web-console.war\WEB-INF\jboss-web.xml file, enable a security domains removing the tag “<security-domain>” comments as example below:

```
<?xml version='1.0' encoding='UTF-8' ?>
<jboss-web>
<!-- Uncomment the security-domain to enable security. You willneed to edit the htmladaptor login configuration to setup the
login modules used to authentication users. -->

<security-domain>java:/jaas/jmx-console</security-domain>

<!-- The war depends on the -->
<depends>jboss.admin:service=PluginManager</depends>
</jboss-web>
```

2) In ..\deploy\management\console-mgr.sar\web-console.war\WEB-INF\web.xml file, enabling a security restriction, removing the tag “<security-constraint>” comments, changing the tag “<real-name>” for “jmx-console”, changing the tags “<role-name>” for “*” as well, as example below:

```
<security-constraint>

<web-resource-collection>
<web-resource-name>HtmlAdaptor</web-resource-name>
<description>An example security config that only allows users with the role JBossAdmin to access the HTML JMX console web application </description>
<url-pattern>/*</url-pattern>
</web-resource-collection>
```

<auth-constraint>
<role-name></role-name>*
</auth-constraint>

</security-constraint>

<login-config>
<auth-method>BASIC</auth-method>
<realm-name>jmx-console</realm-name>
</login-config>

<security-role>
<role-name></role-name>*
</security-role>

3) In ..\deploy\jmx-console.war\WEB-INF\jboss-web.xml file, enable a security domain, removing the tag "<security-domain>" comments as example below:

<?xml version='1.0' encoding='UTF-8' ?>

<jboss-web>

<!-- Uncomment the security-domain to enable security. You will need to edit the htmladaptor login configuration to setup the
login modules used to authentication users. -->

<security-domain>java:/jaas/jmx-console</security-domain>

</jboss-web>

4) In ..\deploy\jmx-console.war\WEB-INF\web.xml file, enable a security restriction, removing the tag "<security-constraint>" comments, changing the tag "<real-name>" for "jmx-console", changing tags "<role-name>" for "*" as well, as example below:

<security-constraint>

<web-resource-collection>
<web-resource-name>HtmlAdaptor</web-resource-name>
<description>An example security config that only allows users with the role JBossAdmin to access the HTML JMX console web application</description>
<url-pattern>/</url-pattern>*
</web-resource-collection>

<auth-constraint>
<role-name></role-name>*

```
</auth-constraint>

</security-constraint>

<login-config>
<auth-method>BASIC</auth-method>
<realm-name>jmx-console</realm-name>
</login-config>

<security-role>
<role-name>*</role-name>
</security-role>
```

5) Create the files ..\deploy\management\console-mgr.sar\web-console.war\WEB-INF\context.xml and ..\deploy\jmx-console.war\WEB-INF\context.xml as example below:

```
<Context>
<Realm className="org.apache.catalina.realm.JAASRealm"
appName="jmx-console"
allRolesMode="authOnly"
debug="1" />
</Context>
```

6) Change the user password admin in the file ..\conf\props\ jmx-console-users.properties, that are effective for two monitors as example below:

```
admin=novasenha
```

7) In ...\deploy\http-invoker.sar\invoker.war\WEB-INF\web.xml file, add JNDIFactory, EJBInvokerServlet and JMXInvokerServlet in security domain as example below:

```
<security-constraint>
<web-resource-collection>
<web-resource-name>HttpInvokers</web-resource-name>
<description>An example security config that only allows users with the role HttpInvoker to access the HTTP invoker servlets </description>
<url-pattern>/restricted/*</url-pattern>
<url-pattern>/JNDIFactory/*</url-pattern>
<url-pattern>/EJBInvokerServlet/*</url-pattern>
<url-pattern>/JMXInvokerServlet/*</url-pattern>
<http-method>GET</http-method>
<http-method>POST</http-method>
</web-resource-collection>
<auth-constraint>
```

<role-name>HttpInvoker</role-name>
</auth-constraint>
</security-constraint>

8) In the same file ...\deploy\http-invoker.sar\invoker.war\WEB-INF\web.xml define the security domains by adding the rows below:

<jboss-web>
<security-domain>java:/jaas/jmx-console</security-domain>
</jboss-web>

9) For JBoss instance that was adjusted.

10) Delete directories date, farm, log, tmp and work of path ...\ServidorAplicacao\jboss-4.2.3.GA\server\instance-xxxx\

11) Start JBoss and test access to monitors “jmx-console” and “web-console”.

2.2.6 Memory Parameters

To have the ideal performance in the use of this product, properly configure the JVM memory parameters. These configurations are defined in variable “JAVA_OPTS” previously mentioned. In the standard installed by the media, the memory parameters are defined in “run.bat” indicating the values changed are for all instances. We recommend you remove this file configuration and put it in “service-8x80.bat” (according to instance), so the memory configuration is different for each instance.

Below, a row example with Java memory parameters (installation media standard):

set JAVA_OPTS=%JAVA_OPTS% -Xms128m -Xmx768m -Xss128k -XX:MaxPermSize=512m -XX:+UseParallelGC -XX:ParallelGCThreads=10

Below, a brief description of each of these parameters:

Xms: Memory parameter defining the minimum of memory for application;
Xmx: Memory parameter defining the maximum of memory for application;
Xss: Size of pile reserved for each thread;
XX:MaxPermSize: Maximum size of permanent objects area in memory;
-XX:+UseParallelGC: Enables the Garbage Collector to open several thread and act in parallel;
-XX:ParallelGCThreads: Number of thread opened for GC. By default, a Thread is opened for each processor.

In a production environment, the ideal is the Xms and Xmx equal value. Upon this configuration, the Garbage Collector is run with less frequency. To get the ideal value of memory, you need a JVM

monitoring.

2.2.7 Time Out Flex

The Time Out Flex configuration that, until the earlier versions, had only action on flex routines, from release 11.5.7, acquires the same functionality on progress routines. The configuration is performed through the “datasul_framework.properties” file, according to standard configurations below:

session.timeout=30
session.timeout.message=2

Description:

session.timeout: Time (minutes) the Web session is active without any user interaction with the system. If time provided is 0 (zero), the Time Out is turned off.

session.timeout.message: Indicates how long (minutes) before the session.timeout the user message about session being about to expire is displayed.

The users related to the exception group related to “btb927aa” (TimeOut Basic Parameters) are NOT disconnected even if these users idleness time exceeds period determined in parameter “session. timeout”. To disable the TimeOut, change the “session.timeout” parameter value to “0” (zero).

Important: For Progress database, adjust load parameters by adding the following parameters: -basetable 1 –tablerangesize 2500. Time Out Flex is available for Progress and Oracle environment.

2.2.8 Josso

Josso, or Java Open Single Sign-On, is an opensource infrastructure providing a centralized solution of authentication and authorization of users. It is a component used for users login in Datasul 11 product.

Connection information to Josso are in “josso-agent-config.xml” file. In this file, three inputs are found with server and port name. If you need to change the server name, this input must be changed.

The authentication configurations are in “josso-gateway-config.xml” file in Ldap. Upon editing the file, the user to locate information in Ldap is used as well as the password in clear text. If the password is changed, you can edit the file and manually change it. You can also run the “Domain.vbs” script requesting information on screen and generating a file (LogDomain.txt) with necessary information to be added in the file.

2.2.8.1 Configuration of external access

The configurations below can be used when you need to access Datasul 11 product through an external IP (out of local net).

Change in “josso-agent-config.xml” file the tags “gatewayLoginUrl” and “gatewayLogoutUrl”, indicating the external IP address, according to example:

<gatewayLoginUrl>**http://189.100.100.100:8080/josso/signon/login.do**</gatewayLoginUrl>
<gatewayLogoutUrl>**http://189.100.100.100:8080/josso/signon/logout.do**</gatewayLogoutUrl>

For this configuration to work properly, parameter “-b” (run.bat file) has “0.0.0.0” value indicating the instance answers the requirements of all IP address that are configured for server.

2.2.9 Ports

The group of ports to be used by instance in “Jboss-service.xml” file. In example below, the “ServerName” attribute is pointing to group of ports “ports-8080”:

```
<mbean code="org.jboss.services.binding.ServiceBindingManager" name="jboss.system:
service=ServiceBindingManager">
   <attribute name="ServerName">ports-8080</attribute>
   <attribute name="StoreURL">${jboss.home.url}/binding/ports-bindings.xml</attribute>
         <attribute name="StoreFactoryClassName">org.jboss.services.binding.
XMLServicesStoreFactory</attribute>
 </mbean>
```

The “StoreURL” attribute points to “ports-bindings.xml” file that is the file where the group of ports to be used are found. By the standard installed by media, there are six groups of ports defined in the file: ports-8080, ports-8180, ports-8280, ports-8380, ports-8480 and ports-8580. The recommendation is to change these configurations only for Linux environment (as media does not configure the instance for Linux) and in case you need more instances than the ports configured in “ports-bindings.xml” allow.

If you need to change any port, check if there also is any reference to this same port in the “datasul_framework.properties” and “jboss-service.xml” files as if there are some ports configured in these files. The logic is to sum 100 ports for instance 8180, 200 for instance 8280 etc.

2.2.10 Progress Session

In the first run of a Progress program in Datasul 11 in each station, the "Access Configuration" screen is displayed. In the "Run Shortcut" field, you can select the shortcut to run Progress programs. Information on this screen is stored in “config.xml” file. In this file, you can change the standard shortcut or

even create other shortcuts (for clientlog run, for instance).

To create a new tag <Shortcut>, inside tag <LocalShortcuts>. Change some desired information in the new line created (Description, Ini, Pf and Alias) and save file. After the change, restart Jboss so the change works.

In this file, information for remote access to product (Citrix, GoGlobal or Terminal Server) is located. Further information on this configuration, check Installation Guide, chapter "Remote Access".

The reference for “config.xml” file location is in “di.properties” file. Upon opening the file, “config. path” attribute is located. It has as value the full path for “config.xml” file location.

In case of slowness in Progress programs load, you can pre load Progress during Datasul 11 initialization. To activate resource to user, select option "Pre load Progress in Initialization". Note: This resource works only for stations with progress locally installed.

The access preferences can be defined in global level it the user does not know how to configure or if configuration is not needed, there some tags in "datasul_framework.properties" that serve as "standard" for all users. These standard values only are ignored when the user defines the own access preferences.

# indicates the "description" of progress shortcut that must be used as default to load the progress

this "description" is defined in the file "config.xml" menu.default.shortcut=c:\\dlc102b

# indicates the type of access to progress used, local=false or remote=true menu.default. remoteaccess=false

2.2.11 Menu

In case of slowness in the programs load in product menu, use the menu consolidation solution. Enter in datasul_framework.properties the propriety "use.menu.key=true". This propriety is not dispatched in media standard and is not recommended for environment in which slowness is not identified, as to reflect changes performed in menu structure (program, module, security group, new users), run the update program in user menu (mer010aa). If menu structure was changed, but this program is not run, accesses remain the same.

2.2.12 RFI – Quotation Portal

Datasul Quotation Portal enables the Supplier to enter quotation directly in the system; therefore, external access must be allowed for proper work. For further security, parameters below have been

created in datasul_framework.properties file where a server and a port allowing external access are allowed. This server and port make the link that is sent through e-mail to Supplier when Purchaser requests quotation.

Configurations of RFI - Request for Information - are also used in other functionalities needing to request information to external users.

rfi.server=moitas
rfi.port=8080

2.2.12.1 Mail Service

Enter e-mail account of company server (Exchange, Lotus) to enable e-mail delivery through functions such as Quotation Request used by Purchaser. This account is not used to receive e-mails, only for delivery.

Example:
<attribute name="User">purchases_company</attribute>
<attribute name="Password">s3nh4_3m4i1</attribute>

2.2.13 Files Location

Ports-bindings.xml*	Jboss_home\binding\ports-bindings.xml
Service-8x80.bat*	Jboss_home\bin\service-8x80.bat
Run.bat*	Jboss_home\bin\run.bat
Run.sh*	Jboss_home\bin\run.sh
Run.conf*	Jboss_home\bin\run.conf
Jboss-log4j.xml	Jboss_home\server\instance-8x80\conf\jboss-log4j.xml
Jboss-service.xml*	Jboss_home\server\instance-8x80\conf\jboss-service.xml
Josso-agent-config.xml*	Jboss_home\server\instance-8x80\conf\josso-agent-config.xml
Josso-gateway-config.xml*	Jboss_home\server\instance-8x80\conf\josso-gateway-config.xml
Datasul_framework. properties*	Jboss_home\server\instance-8x80\conf\datasul\datasul_framework. properties
Di.properties*	Jboss_home\server\instance-8x80\conf\datasul\di.properties
Progress-ds.xml*	Jboss_home\server\instance-8x80\deploy\progress-ds.xml
Oracle-ds.xml*	Jboss_home\server\instance-8x80\deploy\oracle-ds.xml
Mail-service.xml*	Jboss_home\server\instance-8x80\deploy\mail-service.xml
Config.xml*	<Dir installation>\ERP\scripts-8x80\config.xml

* You must restart Jboss so changes work.

2.3 DataSource Progress Connection

Datasul 12 media for Progress database by standard configures some databases with JBDC access where this configuration involves load script (.bat) and JDBC connection script (.xml).

The load script is assembled based on information provided on screen during Datasul 12 installation with media, when database need to connect JDBC, two rows are added as example below:

```
call  C:\dlc102b\bin\proserve  "C:\datasul\ERP\database-8x80\emsfnd"  -B
1000 -spin 4000 -L 200000 -Mm 4096 -N tcp -S 27620 -n 101 -Ma 15 -Mn 9 -
Mpb 4
call  C:\dlc102b\bin\proserve  "C:\datasul\ERP\database-8x80\emsfnd"  -
ServerType SQL -m3  -S 27621 -Ma 10 -Mpb 4
```

The first row loads the broker 4GL by using a port defined by parameter -S and other start parameters, this port is used by Progress programs

The second row loads the broker SQL by using another port defined by parameter -S, defines parameter **-ServerType SQL** and other start parameters, this port is used by JAVA programs.

Below, a Progress database list that, as default, is configured with JDBC access in script progress-ds.xml:

- emsdev
- emsfnd
- mdmerge
- finance
- ems2sor
- payroll
- mdtfrw
- ems2cad
- eai2

These databases by default are configured in progress-ds.xml file by using the port defined of parameter -S of load script row .

Example:

<connection-url>jdbc:datadirect:openedge://server:27621;databaseName=emsfnd</connection-url>

The Jboss service when started uses this file connect the databases opening a connection pool, so for some databases, there is more than a pool, as in case of EMSFND.

If the JBoss tries to open a connection and receives an error because the database rejected it, due to parameters configured, the user receives an error and something does not properly work in Datasul. Soon, it is important all JBoss pool connections are dimensioned in database load.

How this connection pool works?

When any program needs to access a database, it requires a "borrowed" connection for corresponding pool. If any connection is opened and nobody is using it, this connection is borrowed to program. If there is no connection opened and the pool has not reached the limit size (max-pool-size), the JBoss opens a new connection with database.

If the pool is in the limit, the program waits a while indicated by parameter "blocking-timeout-millis" in progress-ds.xml file. If a connection is released, the program takes this one borrowed and continues; otherwise, the program receives an error.

After the program used and released the connection, it returns to pool to be reused.

How many connections are needed?

It depends on the number of users, the users activity, the programs each user runs, the order and how long each program remains with the "borrowed" connection before returning it to pool.

In order to follow and dimension this number, use /jmx-console, as article How to define the value of field <max-pool-size> in progress-ds.xml.

What is the minimum configuration recommended for Datasul 12 to work?

In progress-ds.xml file, the max-pool-size parameters comes with standard value 30 measured for environment with 300 users, because the following calculation is used: 1 connection for 10 users. This number used as calculation is an average calculation, it may vary according to environment.

This parameter can be adjusted by defining a value corresponding to the number of users using Datasul 12. EMSFND database needs the minimum of 6 connections to start JBoss, find below the values that must be used for file configuration.

emsFnd
<min-pool-size>1</min-pool-size>
<max-pool-size>1</max-pool-size>

no_tx_emsFnd
<min-pool-size>1</min-pool-size>
<max-pool-size>1</max-pool-size>

ems_josso
<min-pool-size>4</min-pool-size>
<max-pool-size>4</max-pool-size>

It is important to highlight the parameters above are about the minimum connection to be configured in EMSFND, where for each configured database in file progress-ds.xml, a monitoring of connections to identify the max-pool-size parameter ideal configuration.

Further details of max-pool-size parameter configuration can be viewed in article How to define the value of field <max-pool-size> in progress-ds.xml.

2.4 Configuration of Datasul 12 with HTTPS

Information for configuration of Datasul 11 product with HTTPS are described in this document (HTTPS Configuration).

3 HTTPS Configuration

3.1 Introduction

This document aims at documenting the installation and configuration of apache in HTTP on SSL for jboss-4.2.3-GA of Datasul product to work. Despite similar configurations, we follow the scope limited to Windows 32bits.

To end, there is a topic on Apache Turning configurations to improve performance in requests treatment. This article is based on 2.2.xx version for windows; therefore, the configurations are similar to other SOx in which the Server-pool apache is available.

3.2 HTTPS Configuration with FrontEnd Apache – Windows 32Bits

This configuration is valid for FrontEnd Apache with Windows 32bits operational system.

3.2.1 Apache HTTP Server

Documentation was performed with .msi of installation for Windows, but all configurations can be reused but item "b" below.

a. It is highly recommended to download apache version 2.2 or later (document based on 2.2.XX) with several improvements and corrections for proper work with TomCat product available with JBOSS.

b. Download files to configure the environment:

Apache	
Documentation	Link
Installer	Link
File	httpd-2.2.25-win32-x86-openssl-0.9.8y.msi

3.2.2 Start Apache installation

a. Double click httpd-2.2.25-win32-x86-openssl-0.9.8y.msi

b. Choose Customized Installation (Custom)

c. Install all packages in local disk.

d. Define port 80 as apache standard. If the port is not available, define another now. Remember this port needs to be release in firewalls rules for proper work.

e. Finalize installation.

f. Check whether in the icons tray, beside the system clock, you can see the apache icon. If it is green, it is online; otherwise, click with left button and start service.

g. Open browser and enter http://<server>, the apache displays page with message "It works!"

3.2.3 Configure mod_jk for loadbalance

a. Stop apache.

b. Download mod_jk package:

TomCat Connector	
Instalador	Link

c. Unzip file and copy mod_jk.so file for APACHE_HOME\modules\ folder

d. Create APACHE_HOME\conf\extra\httpd-mod-jk.conf file and configure mod_jk.so module as displayed below:

d1. Add content below in file and save it.

```
# Configuration Example for mod_jk
# used in combination with Apache 2.2.x
# Change the path and file name of the module, in case
# you have installed it outside of httpd, or using
# a versioned file name.
LoadModule jk_module modules/mod_jk.so
<IfModule jk_module>
#copy configurations to all virtual hosts and servers
JkMountCopy All
# We need a workers file exactly once
# and in the global server
JkWorkersFile conf/workers.properties
# Our JK error log
# You can (and should) use rotatelogs here
JkLogFile logs/mod_jk.log
# Our JK log level (trace,debug,info,warn,error)
JkLogLevel info
# Our JK shared memory file
JkShmFile logs/mod_jk.shm
# Define a new log format you can use in any CustomLog in order
# to add mod_jk specific information to your access log.
# LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\" \"%{Cookie}i\" \"%
{Set-Cookie}o\" %{pid}P %{tid}P %{JK_LB_FIRST_NAME}n %{JK_LB_LAST_NAME}n ACC %
{JK_LB_LAST_ACCESSED}n ERR %{JK_LB_LAST_ERRORS}n BSY %{JK_LB_LAST_BUSY}n
%{JK_LB_LAST_STATE}n %D" extended_jk
# This option will reject all requests, which contain an
# encoded percent sign (%25) or backslash (%5C) in the URL
# If you are sure, that your webapp doesn't use such
# URLs, enable the option to prevent double encoding attacks.
# Since: 1.2.24
# JkOptions +RejectUnsafeURI
# After setting JkStripSession to "On", mod_jk will
# strip all ";jsessionid=..." from request URLs it
# does *not* forward to a backend.
# This is useful, if all links in a webapp use
# URLencoded session IDs and parts of the static
# content should be delivered directly by Apache.
# Of course you can also do it with mod_rewrite.
```

```
# Since: 1.2.21
# JkStripSession On
# Start a separate thread for internal tasks like
# idle connection probing, connection pool resizing
# and load value decay.
# Run these tasks every JkWatchdogInterval seconds.
# Since: 1.2.27
JkWatchdogInterval 60
# Configure access to jk-status and jk-manager
# If you want to make this available in a virtual host,
# either move this block into the virtual host
# or copy it logically there by including "JkMountCopy On"
# in the virtual host.
# Add an appropriate authentication method here!
#<Location /jk-status>
# Inside Location we can omit the URL in JkMount
#    JkMount jk-status
#    Order deny,allow
#    Deny from all
#    Allow from 127.0.0.1
#</Location>
#<Location /jk-manager>
#    # Inside Location we can omit the URL in JkMount
#    JkMount jk-manager
#    Order deny,allow
#    Deny from all
#    Allow from 127.0.0.1
#</Location>
# If you want to put all mounts into an external file
# that gets reloaded automatically after changes
# (with a default latency of 1 minute),
# you can define the name of the file here.
JkMountFile conf/uriworkermap.properties
# Example for Mounting a context to the worker "balancer"
# The URL syntax "a|b" instantiates two mounts at once,
# the first one is "a", the second one is "ab".
# JkMount /myapp|/* balancer
# Example for UnMounting requests for all workers
# using a simple URL pattern
# Since: 1.2.26
# JkUnMount /myapp/static/* *
# Example for UnMounting requests for a named worker
# JkUnMount /myapp/images/* balancer
# Example for UnMounting requests using regexps
# SetEnvIf REQUEST_URI "\.(htm|html|css|gif|jpg|js)$" no-jk
# Example for setting a reply timeout depending on the request URL
```

```
# Since: 1.2.27
# SetEnvIf Request_URI "/transactions/" JK_REPLY_TIMEOUT=600000
# Example for disabling reply timeouts for certain request URLs
# Since: 1.2.27
# SetEnvIf Request_URI "/reports/" JK_REPLY_TIMEOUT=0
# IMPORTANT: Mounts and virtual hosts
# If you are using VirtualHost elements, you
# - can put mounts only used in some virtual host into its VirtualHost element
# - can copy all global mounts to it using "JkMountCopy On" inside the VirtualHost
# - can copy all global mounts to all virtual hosts by putting
#   "JkMountCopy All" into the global server
# Since: 1.2.26
</IfModule>
```

d2. Open APACHE_HOME\conf\httpd.conf file and add, at the end of the file below, referring to file created in item "d1".

```
# Conf for mod_jk balance.
Include conf/extra/httpd-mod-jk.conf
```

e. Create file APACHE_HOME/conf/workers.properties

e1. Open file with your preference editor and insert content below.

```
# Licensed to the Apache Software Foundation (ASF) under one or more
# contributor license agreements.  See the NOTICE file distributed with
# this work for additional information regarding copyright ownership.
# The ASF licenses this file to You under the Apache License, Version 2.0
# (the "License"); you may not use this file except in compliance with
# the License.  You may obtain a copy of the License at
#
#     http://www.apache.org/licenses/LICENSE-2.0
#
# Unless required by applicable law or agreed to in writing, software
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.

# Note that the distributed version of this file requires modification
# before it is usable.
#
# Reference documentation: http://tomcat.apache.org/connectors-doc/reference/workers.html
#
# As a general note, the characters $( and ) are used internally to define
# macros. Do not use them in your own configuration!!!
```

```
#
# Whenever you see a set of lines such as:
# x=value
# y=$(x)\something
#
# the final value for y will be value\something

# Define two status worker:
# - jk-status for read-only use
# - jk-manager for read/write use
#worker.list=jk-status
#worker.jk-status.type=status
#worker.jk-status.read_only=true
#worker.list=jk-manager
#worker.jk-manager.type=status

# We define a load balancer worker
# with name "balancer"
worker.list=balancer
worker.balancer.type=lb
# error_escalation_time: seconds, default = recover_time/2 (=30)
# Determines, how fast a detected error should switch from
# local error state to global error state
# Since: 1.2.28
worker.balancer.error_escalation_time=0

# - max_reply_timeouts: number, default=0
#   If there are to many reply timeouts, a worker
#   is put into the error state, i.e. it will become
#   unavailable for all sessions residing on the respective
#   Tomcat. The number of tolerated reply timeouts is
#   configured with max_reply_timeouts. The number of
#   timeouts occuring is divided by 2 once a minute and the
#   resulting counter is compared against max_reply_timeouts.
#   If you set max_reply_timeouts to N and the errors are
#   occuring equally distributed over time, you will
#   tolerate N/2 errors per minute. If they occur in a burst
#   you will tolerate N errors.
#   Since: 1.2.24
worker.balancer.max_reply_timeouts=10

# Now we add members to the load balancer
# First member is "node1", most
# attributes are inherited from the
# template "worker.template".
worker.balancer.balance_workers=node1
```

```
worker.node1.reference=worker.template
worker.node1.host=10.80.18.123
worker.node1.port=8109
# Activation allows to configure
# whether this node should actually be used
# A: active (use node fully)
# D: disabled (only use, if sticky session needs this node)
# S: stopped (do not use)
#   Since: 1.2.19
worker.node1.activation=A

# Second member is "node2", most
# attributes are inherited from the
# template "worker.template".
worker.balancer.balance_workers=node2
worker.node2.reference=worker.template
worker.node2.host=10.80.18.88
worker.node2.port=8009
# Activation allows to configure
# whether this node should actually be used
# A: active (use node fully)
# D: disabled (only use, if sticky session needs this node)
# S: stopped (do not use)
#   Since: 1.2.19
worker.node2.activation=A

# Finally we put the parameters
# which should apply to all our ajp13
# workers into the referenced template
# - Type is ajp13
worker.template.type=ajp13

# - socket_connect_timeout: milliseconds, default=0
#   Since: 1.2.27
worker.template.socket_connect_timeout=5000

# - socket_keepalive: boolean, default=false
#   Should we send TCP keepalive packets
#   when connection is idle (socket option)?
worker.template.socket_keepalive=true

# - ping_mode: Character, default=none
#   When should we use cping/cpong connection probing?
#   C = directly after establishing a new connection
#   P = directly before sending each request
#   I = in regular intervals for idle connections
```

```
#      using the watchdog thread
#   A = all of the above
#   Since: 1.2.27
worker.template.ping_mode=A

# - ping_timeout: milliseconds, default=10000
#   Wait timeout for cpong after cping
#   Can be overwritten for modes C and P
#   Using connect_timeout and prepost_timeout.
#   Since: 1.2.27
worker.template.ping_timeout=10000

# - connection_pool_minsize: number, default=connection_pool_size
#   Lower pool size when shrinking pool due
#   to idle connections
#   We want all connections to be closed when
#   idle for a long time in order to prevent
#   firewall problems.
#   Since: 1.2.16
worker.template.connection_pool_minsize=0

# - connection_pool_timeout: seconds, default=0
#   Idle time, before a connection is eligible
#   for being closed (pool shrinking).
#   This should be the same value as connectionTimeout
#   in the Tomcat AJP connector, but there it is
#   milliseconds, here seconds.
worker.template.connection_pool_timeout=600

# - reply_timeout: milliseconds, default=0
#   Any pause longer than this timeout during waiting
#   for a part of the reply will abort handling the request
#   in mod_jk. The request will proceed running in
#   Tomcat, but the web server resources will be freed
#   and an error is send to the client.
#   For individual requests, the timeout can be overwritten
#   by the Apache environment variable JK_REPLY_TIMEOUT.
#   JK_REPLY_TIMEOUT since: 1.2.27
worker.template.reply_timeout=300000

# - recovery_options: number, default=0
#   Bit mask to configure, if a request, which was send
#   to a backend successfully, should be retried on another backend
#   in case there's a problem with the response.
#   Value "3" disables retries, whenever a part of the request was
#   successfully send to the backend.
```

worker.template.recovery_options=3

e2. Configure proprieties that identify the nodes(jboss) that participate on the balance.
So, find a configuration block displayed below and change it according to your needs.

```
# Now we add members to the load balancer
# First member is "node1", most
# attributes are inherited from the
# template "worker.template".
worker.balancer.balance_workers=<nome do node>
worker.<nome do node>.reference=worker.template
worker.<nome do node>.host=<ip aonde está rodando o jboss>
worker.<nome do node>.port=<porta do connector ajp13, não é a porta da url do produto>
# Activation allows to configure
# whether this node should actually be used
# A: active (use node fully)
# D: disabled (only use, if sticky session needs this node)
# S: stopped (do not use)
#   Since: 1.2.19
worker.<nome do node>.activation=A
```

e3. Configure the nodes (jboss instances) for jvmRoute in order to restrain the session of user to a single node.

- Access JBOSS_HOME/server/<customer instance>/deploy/jboss-web.deployer/server.xml

- Locate tag below:
<Engine name="jboss.web" defaultHost="localhost">

- Add attribute leaving configuration as displayed below
<Engine name="jboss.web" defaultHost="localhost" jvmRoute="<nome do node>">

e4. Configure "e3" for all nodes (JBOSS) that participate of balance.

f. Create APACHE_HOME/conf/uriworkermap.properties file

f1. open file created and add content below:

```
# Licensed to the Apache Software Foundation (ASF) under one or more
# contributor license agreements.  See the NOTICE file distributed with
# this work for additional information regarding copyright ownership.
# The ASF licenses this file to You under the Apache License, Version 2.0
# (the "License"); you may not use this file except in compliance with
# the License.  You may obtain a copy of the License at
#
#     http://www.apache.org/licenses/LICENSE-2.0
#
# Unless required by applicable law or agreed to in writing, software
```

```
# distributed under the License is distributed on an "AS IS" BASIS,
# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
# See the License for the specific language governing permissions and
# limitations under the License.

# uriworkermap.properties - IIS
#
# This file provides sample mappings for example wlb
# worker defined in workermap.properties.minimal
# The general syntax for this file is:
# [URL]=[Worker name]

/datasul=balancer
/datasul/*=balancer
/josso=balancer
/josso/*=balancer
/docs=balancer
/docs/*=balancer

# Optionally filter out all .jpeg files inside that context
# For no mapping the url has to start with exclamation (!)

#!/servlets-examples/*.jpeg=lb

#
# Mount jkstatus to /jkmanager
# For production servers you will need to
# secure the access to the /jkmanager url
#
#/jk-manager=jk-status
```

g. Start the nodes (JBOSS)

h. Start Apache

3.2.4 Configure SSL

a. Open APACHE_HOME/conf/httpd.conf file

b. Locate and remove comment from row #Include conf/extra/httpd-ssl.conf then save

c. Open APACHE_HOME/conf/extra/httpd-ssl.conf file and configure as displayed below:

c1. Comment the SSLSessionCache and SSLSessionCacheTimeout proprieties

c2. Create the APACHE_HOME/conf/data/cert folder and use it to keep certificates.

c3. Locate propriety SSLCertificateFile, point to .pem file with certificate, and own key. If private key is in another file, you can configure the certificate in SSLCertificateFile and the private key in propriety SSLCertificateKeyFile.

c4. To produce a "file.pem" from "file.jks", run the following command.

Primeiro jks para pkcs12
keytool -importkeystore -srckeystore keystore.jks -destkeystore intermediate.p12 -deststoretype PKCS12

Segundo pkcs12 para pem
openssl pkcs12 -in intermediate.p12 -out extracted.pem –nodes

d. change nodes(for https)

d1. open file JBOSS_HOME/server/<customer instance>/deploy/jboss-web.deployer/server.xml

d2. locate tag Connector do ajp13 and configure as below:

Connect must be as follows:

```
<Connector port="8009" address="${jboss.bind.address}" protocol="AJP/1.3"
 emptySessionPath="true" enableLookups="false" redirectPort="8443" />
```

Certificate configurations:

```
  <Connector port="8050" address="${jboss.bind.address}" protocol="AJP/1.3"
        emptySessionPath="true" enableLookups="false" redirectPort="8443"
        maxThreads="150"
        SSLEnabled="true"
        scheme="https" secure="true"
        clientAuth="false" sslProtocol="TLS"
        keystoreFile="<caminho para o certificado jks>"
        keyAlias="<alias do certificado>"
        keystorePass="<pwd do certificado>"/>
```

d3. configure d2 for all nodes(jboss) of balance.

e. Restart nodes (jboss)

f. Restart apache.

With these configurations, the system regularly runs, but remember the system fully works in HTTP on SSL with Flex compilation with endpoints in HTTPS. So, you must compile of sources with charged endpoints.

3.3 Tunning Apache

3.3.1 Operational System

The server apache has a compilation for each operational system and according to compilation. module serving the configurations is made available. To know the module serving SO, follow table below:

	Apache
BeOS	Link
Netware	Link
OS/2	Link
Unix	Link
Windows	Link

Table 1: modules available for SOs compilation

3.3.2 Configurations

The configurations described in this article are based on the version 2.2.xx of apache server, so in order to configure apache, open file $APACHE_HOME\conf\httpd.conf and find content below **remove comment from second row**:

From:

Server-pool management (MPM specific)

Include conf/extra/httpd-mpm.conf

To:

Server-pool management (MPM specific)
Include conf/extra/httpd-mpm.conf

Save and close file $APACHE_HOME\conf\extra\httpd-mpm.conf. In this file, there are all parameterizations by SO according to ***Table 1***. For this specific article, as previously mentioned, we will use the version available for Windows.

So, find the configuration below and configure it according to mpm_worker_module and the mpm_winnt_module:

From:

```
<IfModule mpm_worker_module>
   StartServers        2
   MaxClients        150
   MinSpareThreads     25
   MaxSpareThreads     75
   ThreadsPerChild     25
   MaxRequestsPerChild   0
</IfModule>
```

To:

```
<IfModule mpm_worker_module>
   StartServers       15
   MaxClients        300
   MinSpareThreads     50
   MaxSpareThreads    100
   ThreadsPerChild     50
   MaxRequestsPerChild 500
</IfModule>
```

From:

```
<IfModule mpm_winnt_module>
   ThreadsPerChild     150
   MaxRequestsPerChild    0
</IfModule>
```

To:

```
<IfModule mpm_winnt_module>
   ThreadsPerChild     600
   MaxRequestsPerChild  500
</IfModule>
```

To end, add configurations below to the start of the file:

```
#
# Timeout: The number of seconds before receives and sends time out.
#
Timeout 300

#
# KeepAlive: Whether or not to allow persistent connections (more than
# one request per connection). Set to "Off" to deactivate.
```

```
#
KeepAlive On

#
# MaxKeepAliveRequests: The maximum number of requests to allow
# during a persistent connection. Set to 0 to allow an unlimited amount.
# We recommend you leave this number high, for maximum performance.
#
MaxKeepAliveRequests 10000

#
# KeepAliveTimeout: Number of seconds to wait for the next request from the
# same client on the same connection.
#
KeepAliveTimeout 15
```

Save file and start apache. Therefore, apache is apt to run within a considerable limit of performance, but, if necessary, you can increase configurations.

Note: Be careful on resources used in server, not to fully consume SO leaving the system slower.

3.4 Environment Adjust

To use product with HTTPS, the index-flex-https.swf file (in WAR root: [..]\datasul-byyou-11.5.9-SNAPSHOT.ear\datasul-framework-ui.war) must be renamed to index-flex.swf, and file index-flex.swf original (corresponding to index for regular http) must be renamed with another name, so the .swf is considered for https.

4 Remote Access Configuration

4.1 Introduction

The purpose of this Guide is to describe Datasul 11 product configurations displaying the file where each configuration is performed.

Important:

- According to tools version, some screens can displayed in a different manner from what was displayed in the guide.
- The configuration and installation of GoGlobal, TS and Citrix is customer responsibility. In case of questions, contact manufacturer support.

4.2 Remote access with TS

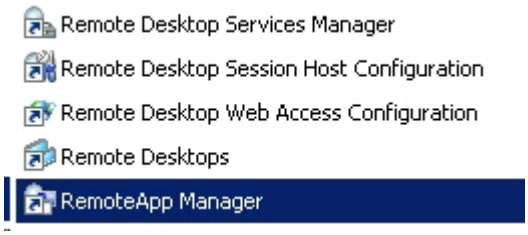
The Terminal Server is installed in the server where the remote access is performed.

Below, procedures to be performed for remote access through Terminal Server:

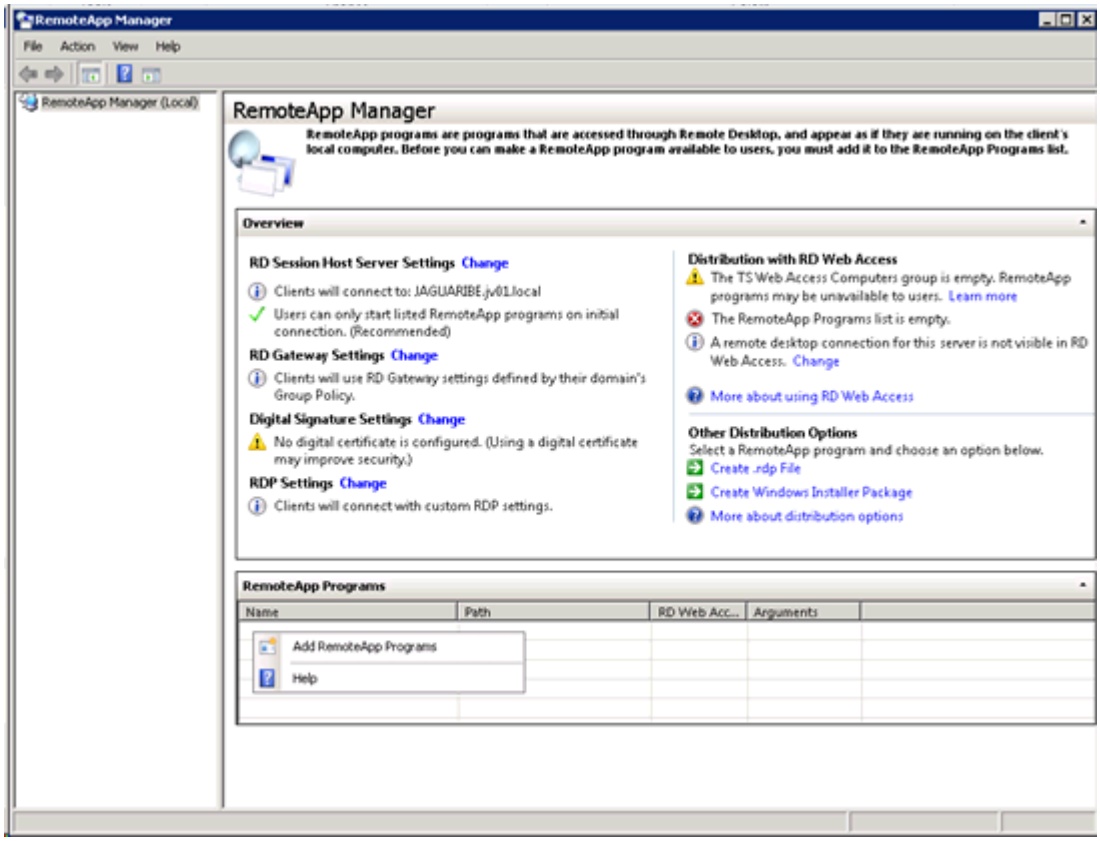
✓ Install Progress Client Networking license in Terminal Server.

✓ Install Java.

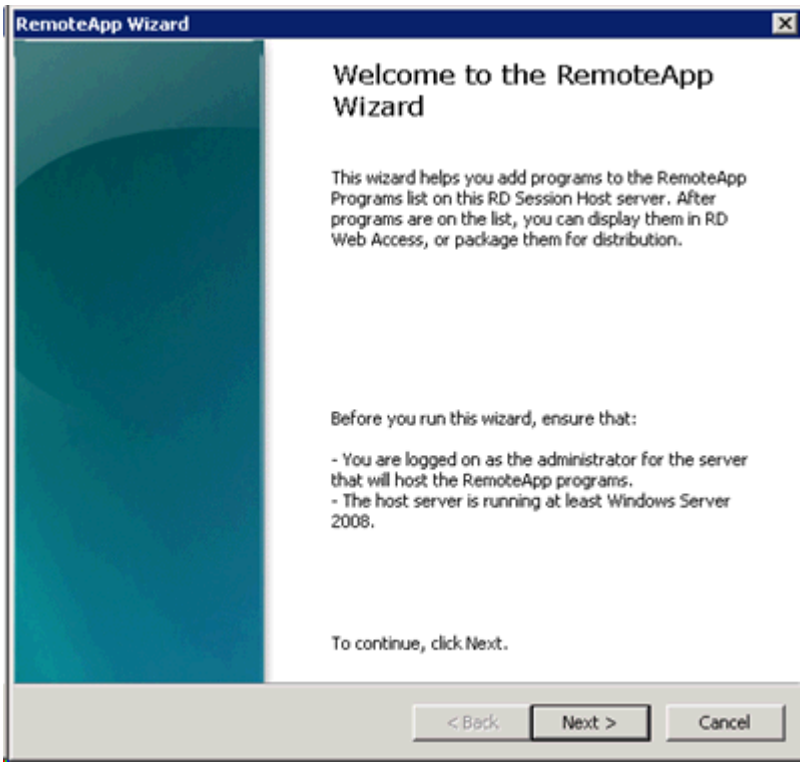
- Open the RemoteApp Manager of server in ...\Control Panel\Administrative Tools\Terminal Services\



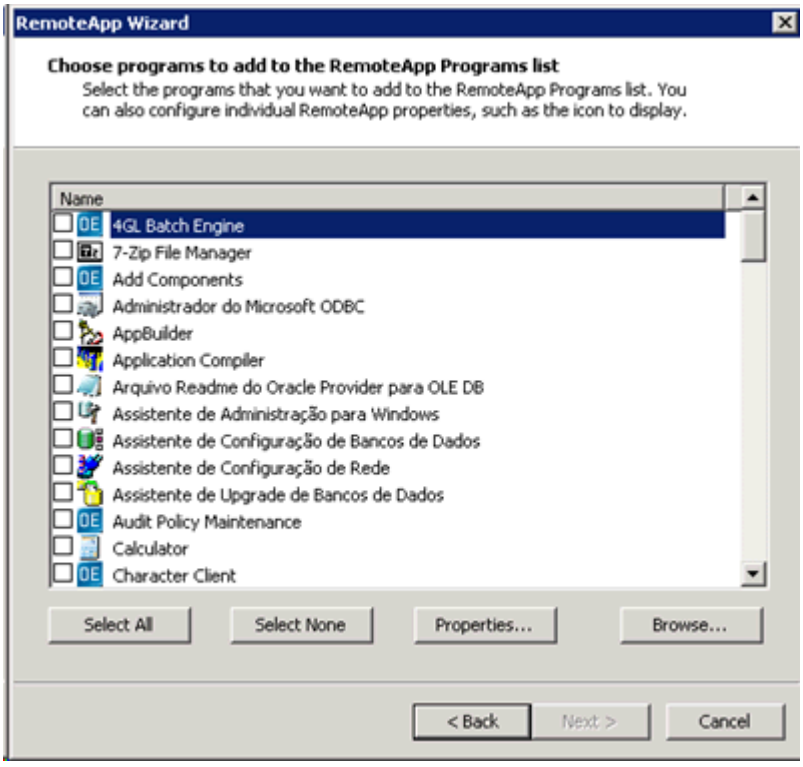
- In RemoteApp Programs, click the right button and add "Add RemoteApp Programs" program



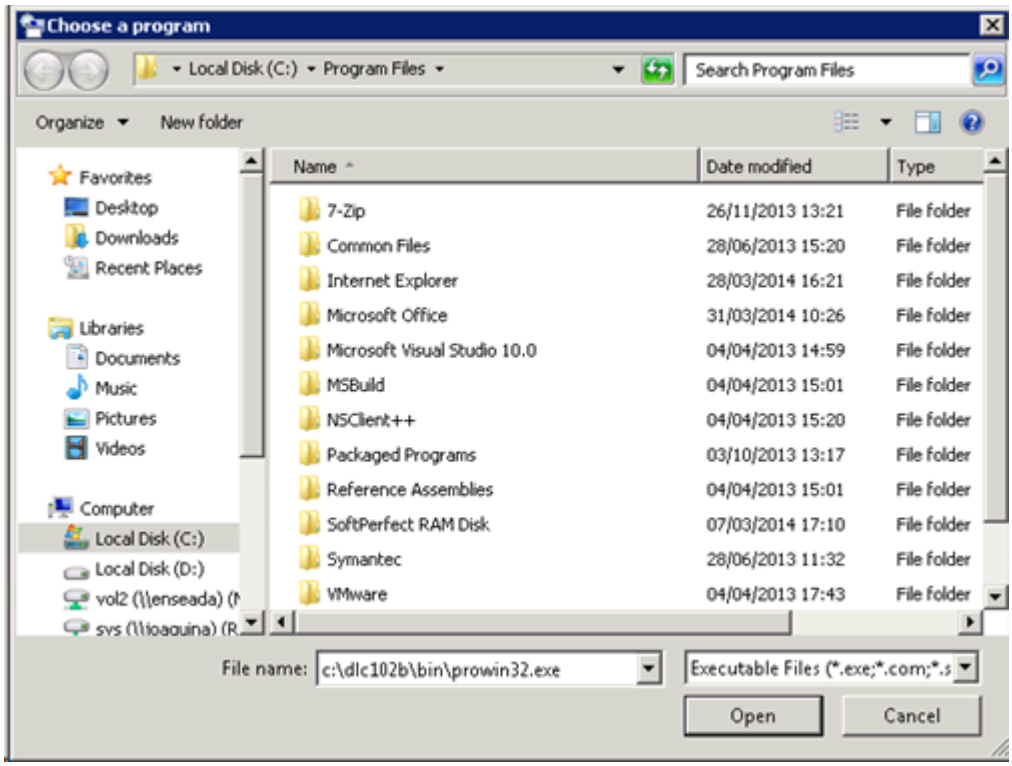
- Click “Next”



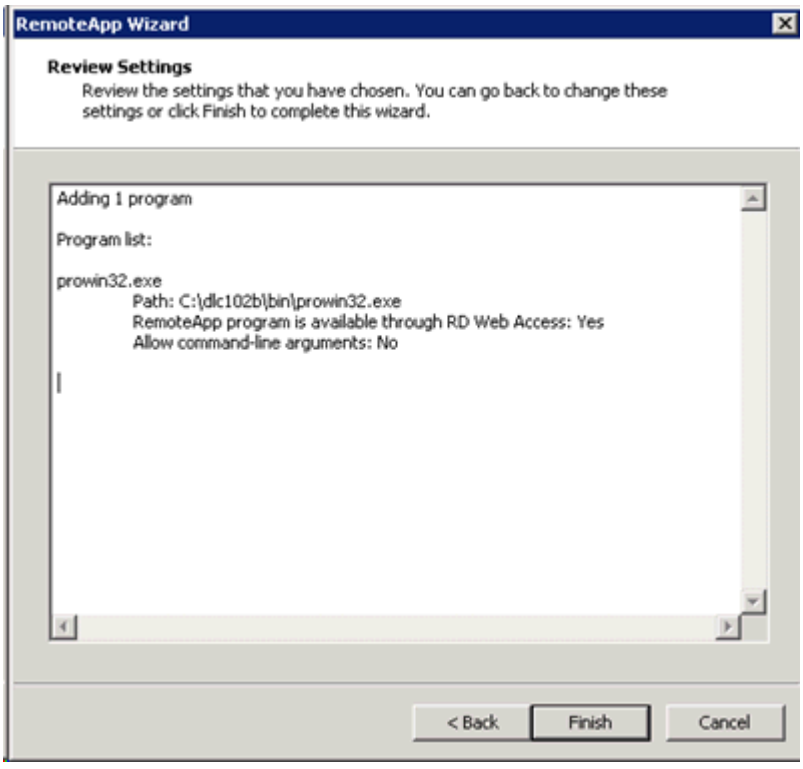
- Click “Browse...” to search Progress executable



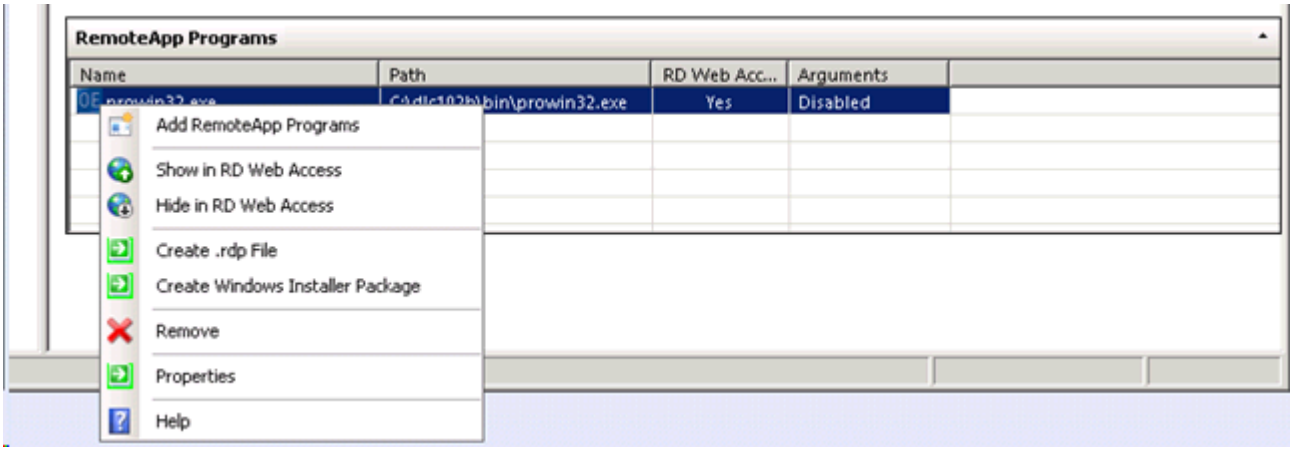
- Enter Progress\bin + prowin32.exe path



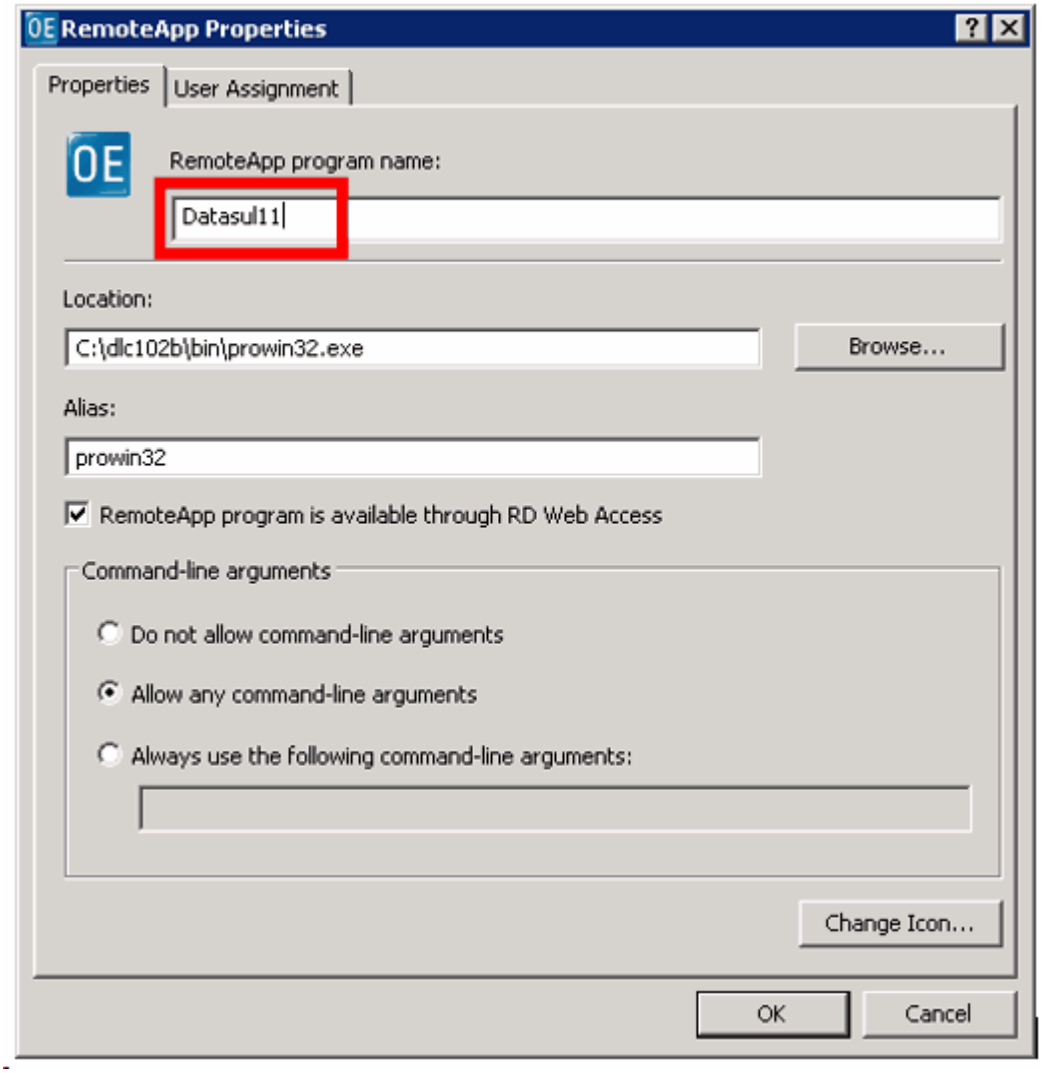
- Click “Finish” to finish creation



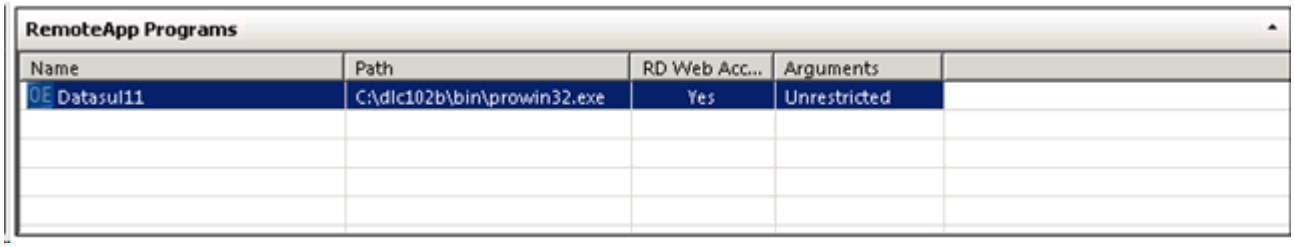
- Click with right button the row created, go to “Properties”



- Change name (RemoteApp program name:), in the example used in Datasul 11, but any name later used in config.xml file configuration is possible.



- Create program in TS server that must be with these proprieties



- After the creation, config.xml file of Datasul 11 is configured to access TS, **important backup file before changes**.
- Configure “config.xml” file below structure “<Dir Instal Programs>\scripts”. Below, items to be configured in this file, so tags not mentioned are not changed.

➢ RemoteConnectionType

Enter remote connection type (Terminal Server).

E.g. <RemoteConnectionType>**TerminalServer**</RemoteConnectionType>

- RemoteServerPort

Enter a port for communication between the Jboss and Terminal Server;

E.g. <RemoteServerPort>**8085**</RemoteServerPort>

- MetaframeServer

Enter IP of Terminal Server address or name.

E.g. <MetaframeServer>**jaguaribe**</MetaframeServer>

- MetaframeServerPort

Enter access port to Terminal Server.

E.g. <MetaframeServerPort>**3389**</MetaframeServerPort>

- MetaframeServerId

Enter application name created in TS server according to examples above.

E.g. <MetaframeServerId>**Datasul11**</MetaframeServerId>

- RemoteShortcut Description

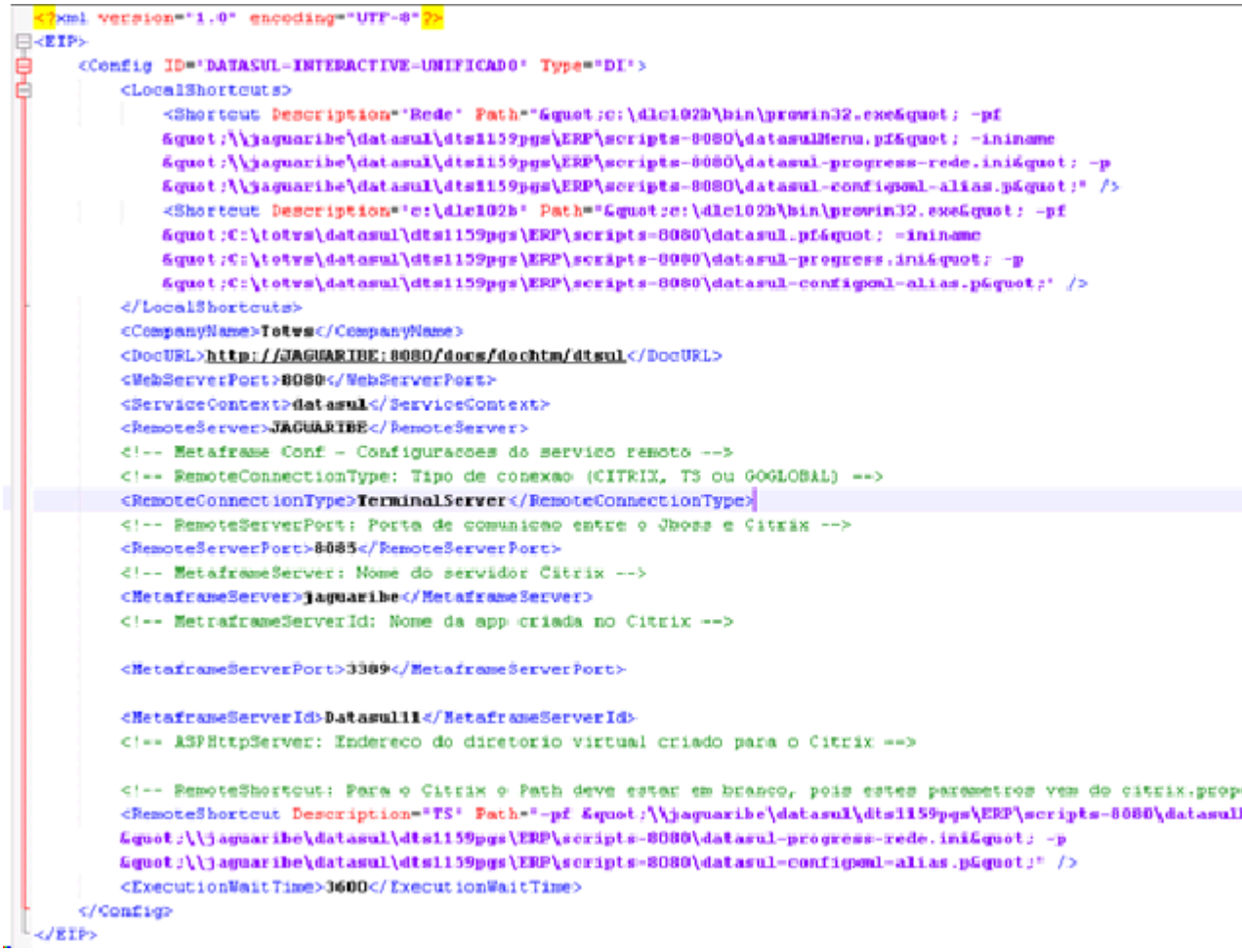
Enter parameters for Progress session run.

E.g. <RemoteShortcut Description="**TS**" Path=" **-pf "C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul.pf" -ininame "C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress.ini" -p "C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-configxml-alias.p"**" />

Comments:

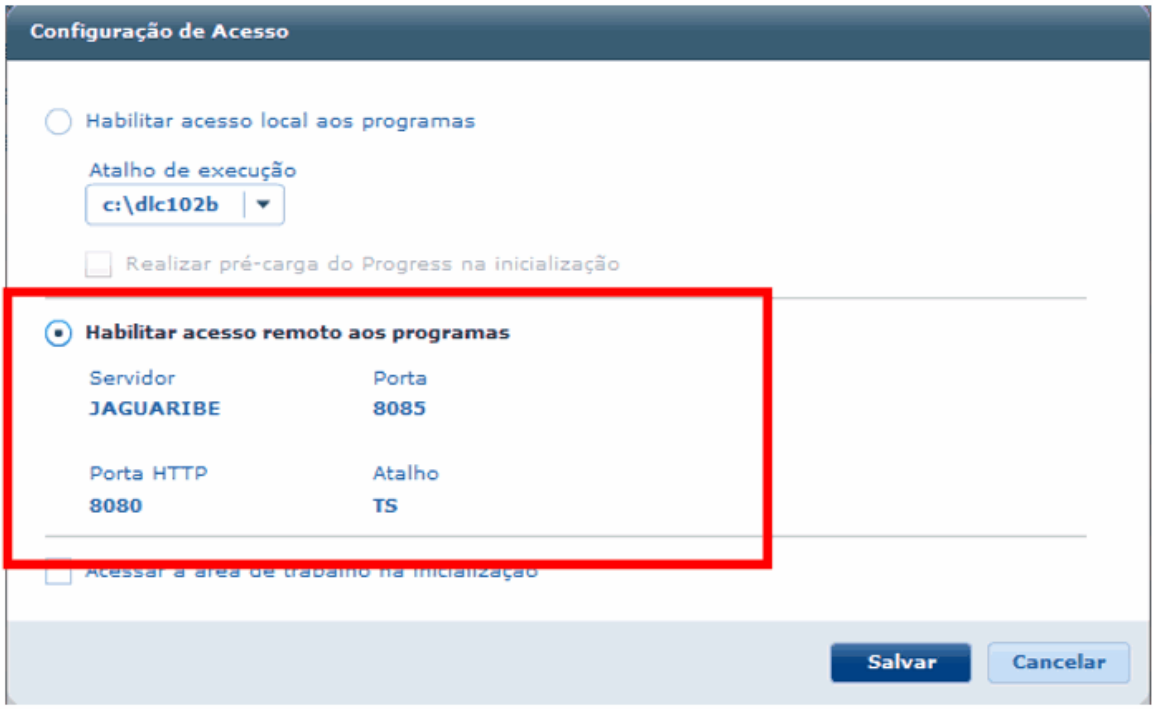
- After changing JBOSS file, restart it.
- In the example, the TS is installed in the same Datasul 11 serve, but it can be configured in another server available in the company. But, you must have Progress installed and updated with available services packs.

- Below, an example of file changed with information for access to TS.



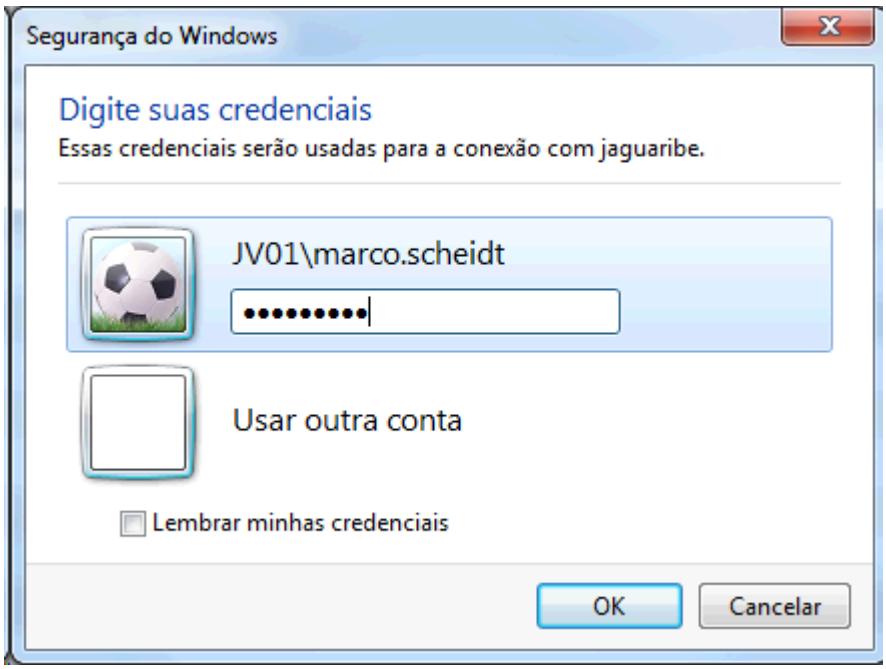
```
<?xml version="1.0" encoding="UTF-8"?>
<EIP>
    <Config ID='DATASUL-INTERACTIVE-UNIFICADO' Type="DI'>
        <LocalShortcuts>
            <Shortcut Description="Rede' Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasulMenu.pf&quot; -ininame
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress-rede.ini&quot; -p
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-configuml-alias.p&quot;' />
            <Shortcut Description="c:\dlc102b' Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul.pf&quot; -ininame
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress.ini&quot; -p
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-configuml-alias.p&quot;' />
        </LocalShortcuts>
        <CompanyName>Totvs</CompanyName>
        <DocURL>http://JAGUARIBE:8080/docs/dochtm/dtsul</DocURL>
        <WebServerPort>8080</WebServerPort>
        <ServiceContext>datasul</ServiceContext>
        <RemoteServer>JAGUARIBE</RemoteServer>
        <!-- Metaframe Conf - Configuracoes do servico remoto -->
        <!-- RemoteConnectionType: Tipo de conexao (CITRIX, TS ou GOGLOBAL) -->
        <RemoteConnectionType>TerminalServer</RemoteConnectionType>
        <!-- RemoteServerPort: Porta de comunicao entre o Jboss e Citrix -->
        <RemoteServerPort>8085</RemoteServerPort>
        <!-- MetaframeServer: Nome do servidor Citrix -->
        <MetaframeServer>jaguaribe</MetaframeServer>
        <!-- MetraframeServerId: Nome da app criada no Citrix -->

        <MetaframeServerPort>3389</MetaframeServerPort>

        <MetaframeServerId>Datasul11</MetaframeServerId>
        <!-- ASPHttpServer: Endereco do diretorio virtual criado para o Citrix -->

        <!-- RemoteShortcut: Para o Citrix o Path deve estar em branco, pois estes parametros vem do citrix.prop
        <RemoteShortcut Description="TS' Path="-pf &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul
        &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress-rede.ini&quot; -p
        &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-configuml-alias.p&quot;' />
        <ExecutionWaitTime>3600</ExecutionWaitTime>
    </Config>
</EIP>
```

- Upon accessing Datasul 11, go to Tools\Access Preferences. where information registered in config. xml file are displayed.



- Upon opening the Progress program, it requests TS server .rdp to be opened.

- After this, enter user and net password to validate access to server and open Datasul Interactive.



4.3 Remote access with Citrix

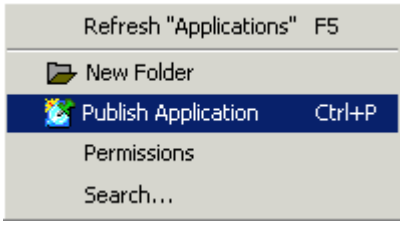
You must install the Citrix Interface Web for remote access by product.

Below, procedures to be run for remote access to be properly run:

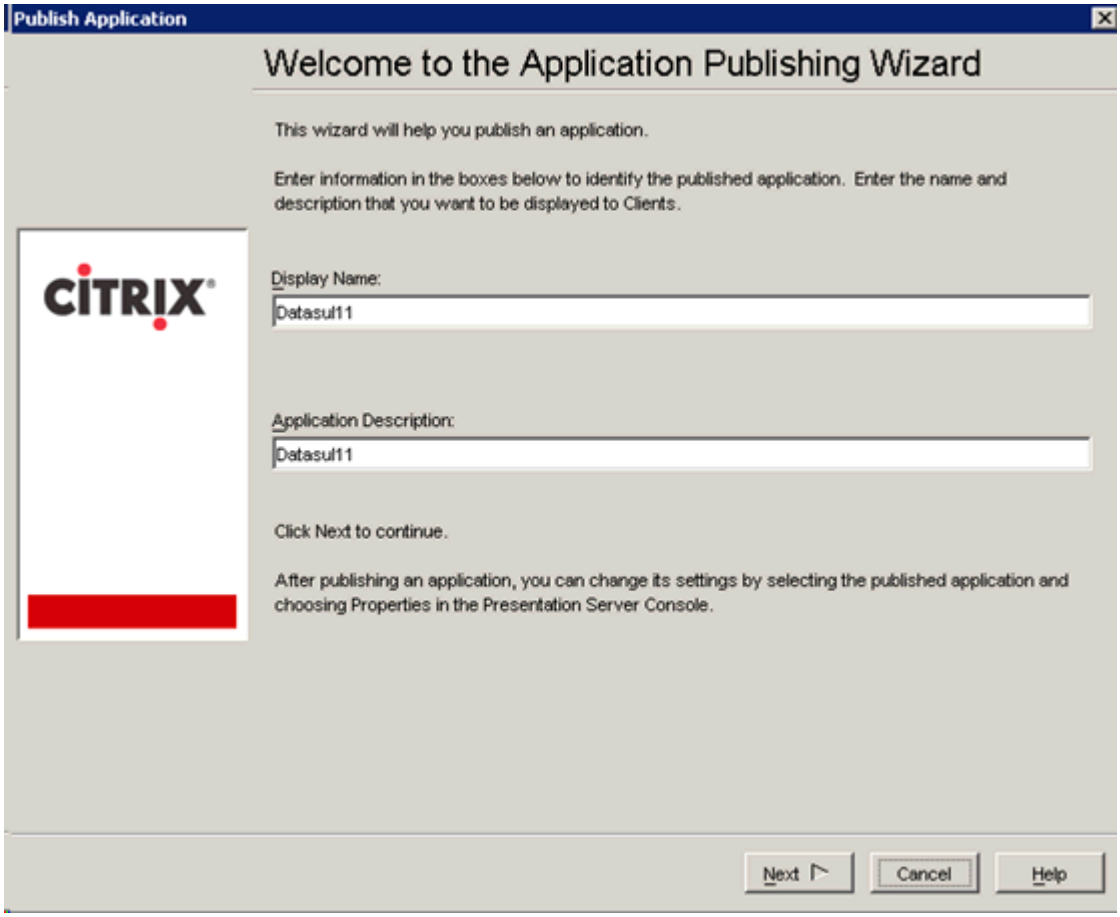
- ✓ Install Progress Client Networking license in Citrix server.
- ✓ Install Java.
- ✓ Copy citrix.properties, citrix.bat and datasul-framework-citrixproxy-java-1.0.2.jar files, in the scripts folder below the directory where the application server was installed for a folder in Citrix server.

  Note: check whether there is the variable of JAVA_HOME environment defined in Citrix server.

- ✓ Create an application in “Citrix Management Console” in “Presentation Server Console”, click with the right button Applications > Publish application (this application must be visible to users through Web Interface).



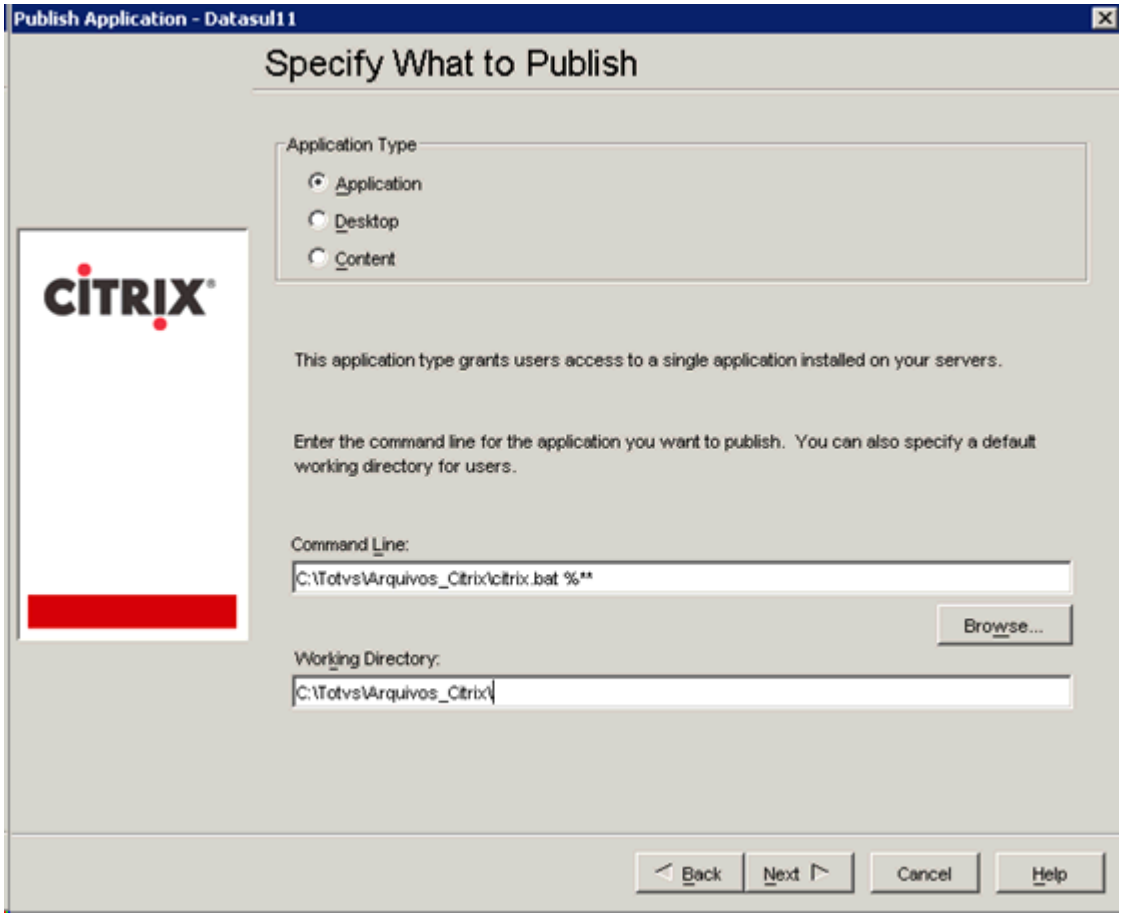
- Display Name – It is the name of the application to be run (in example, “Datasul11”);



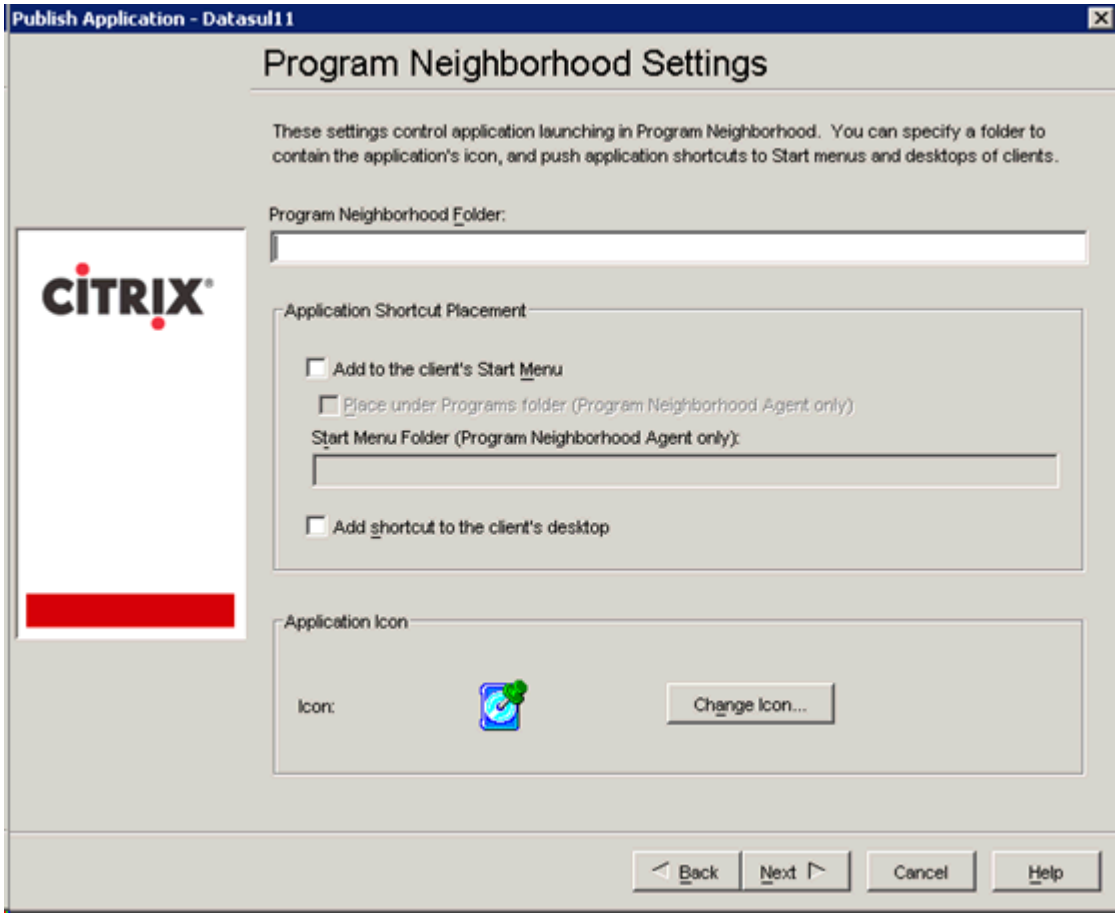
- Type – Installed application;
- Command line – It must point to citrix.bat file, followed by characters %*

  E.g. “C:\AtalhosDatasul11\citrix.bat" %*

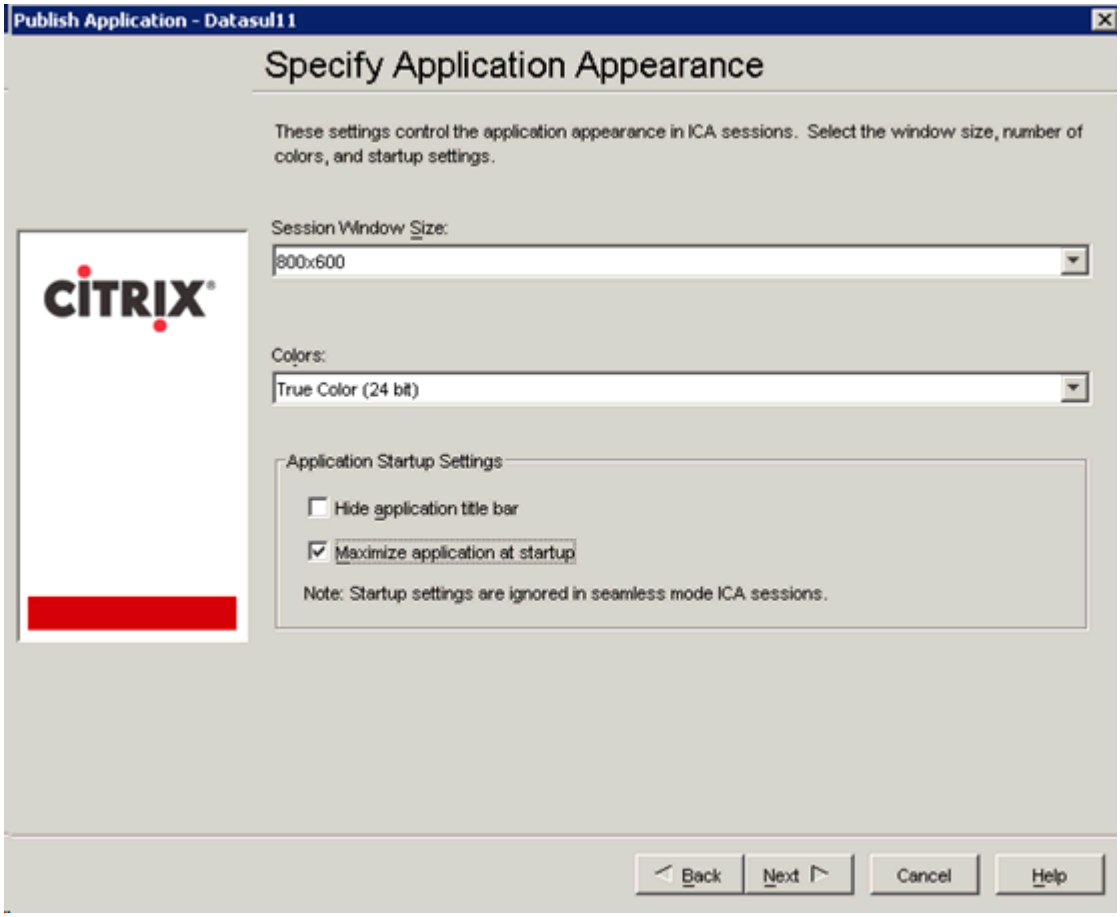
  After application of “Hotfix Rollup Pack 2” or later of Presentation Server, the Citrix server blocks parameters from client. In this case, instead of “%*” use “%**”.
- Working Directory – Point to a temporary directory for the session;



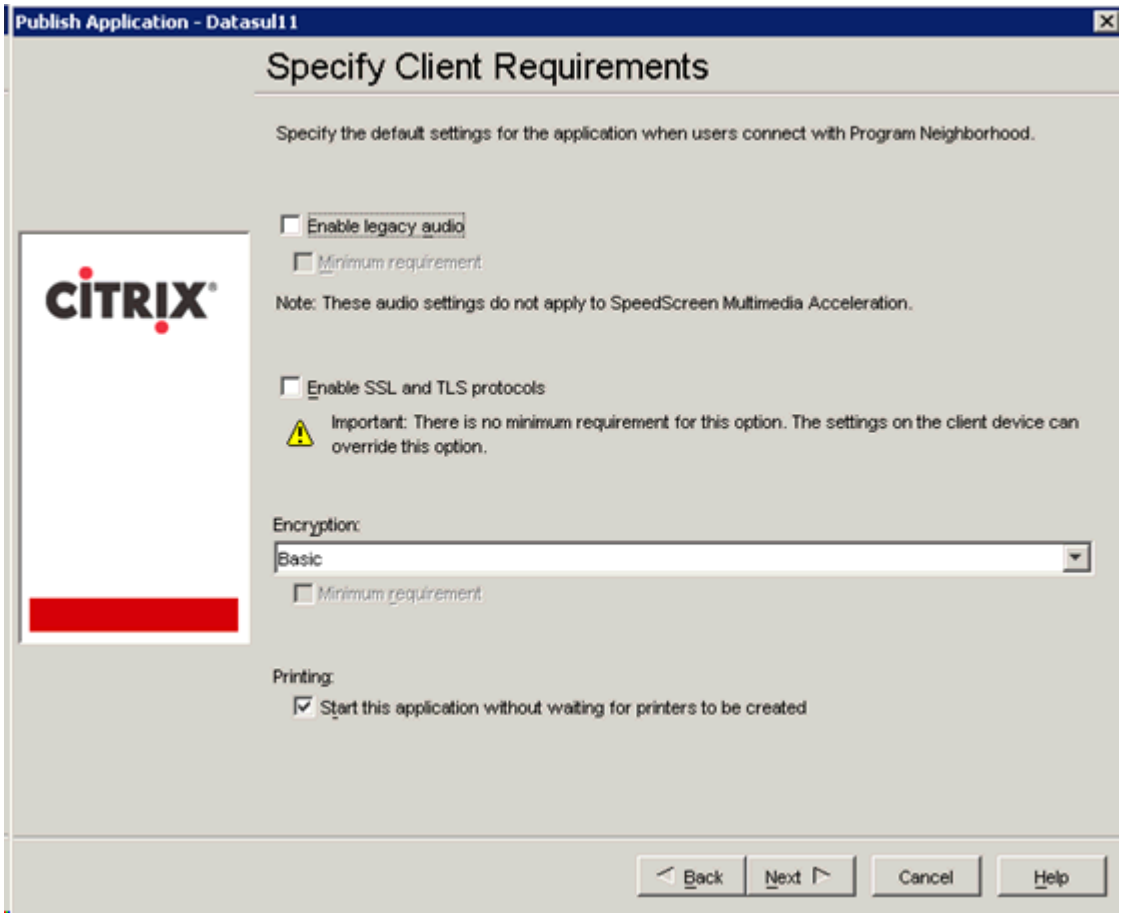
- Program Neighborhood Settings



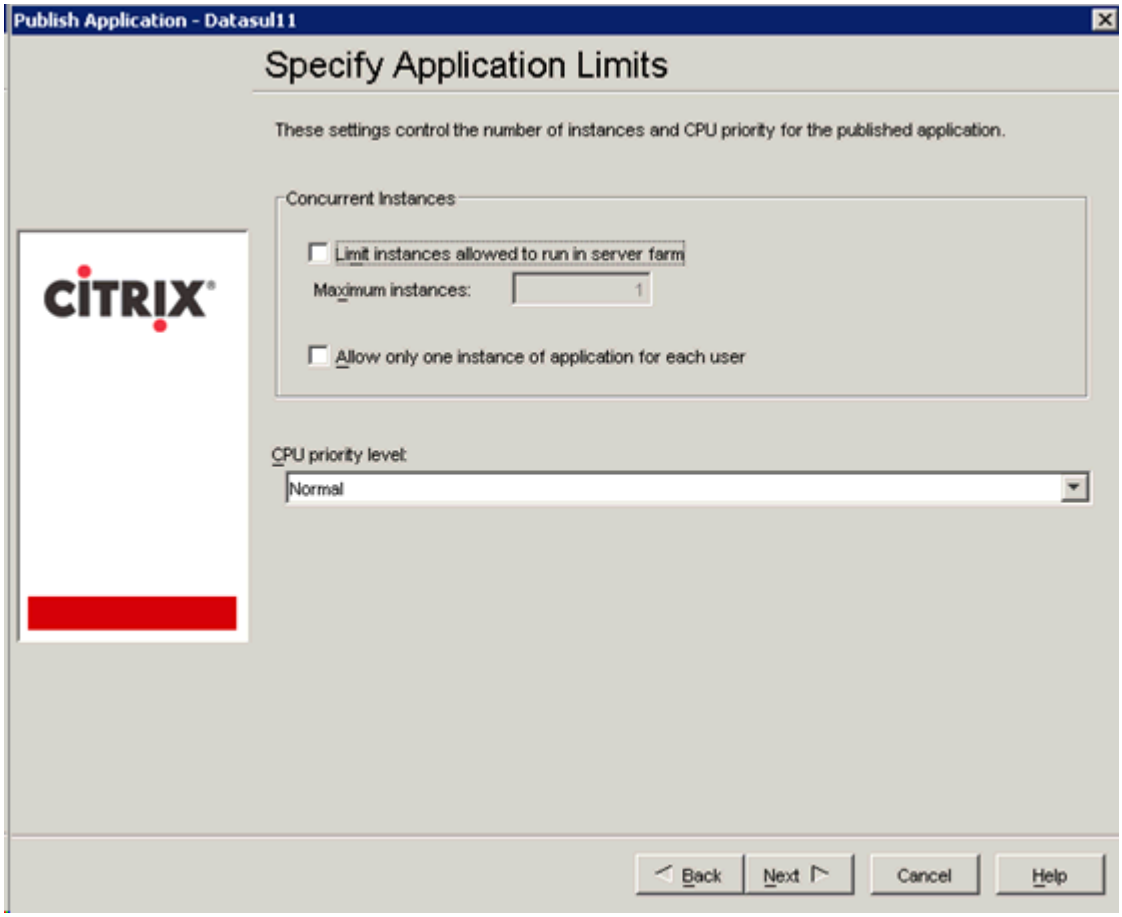
- Application Appearance



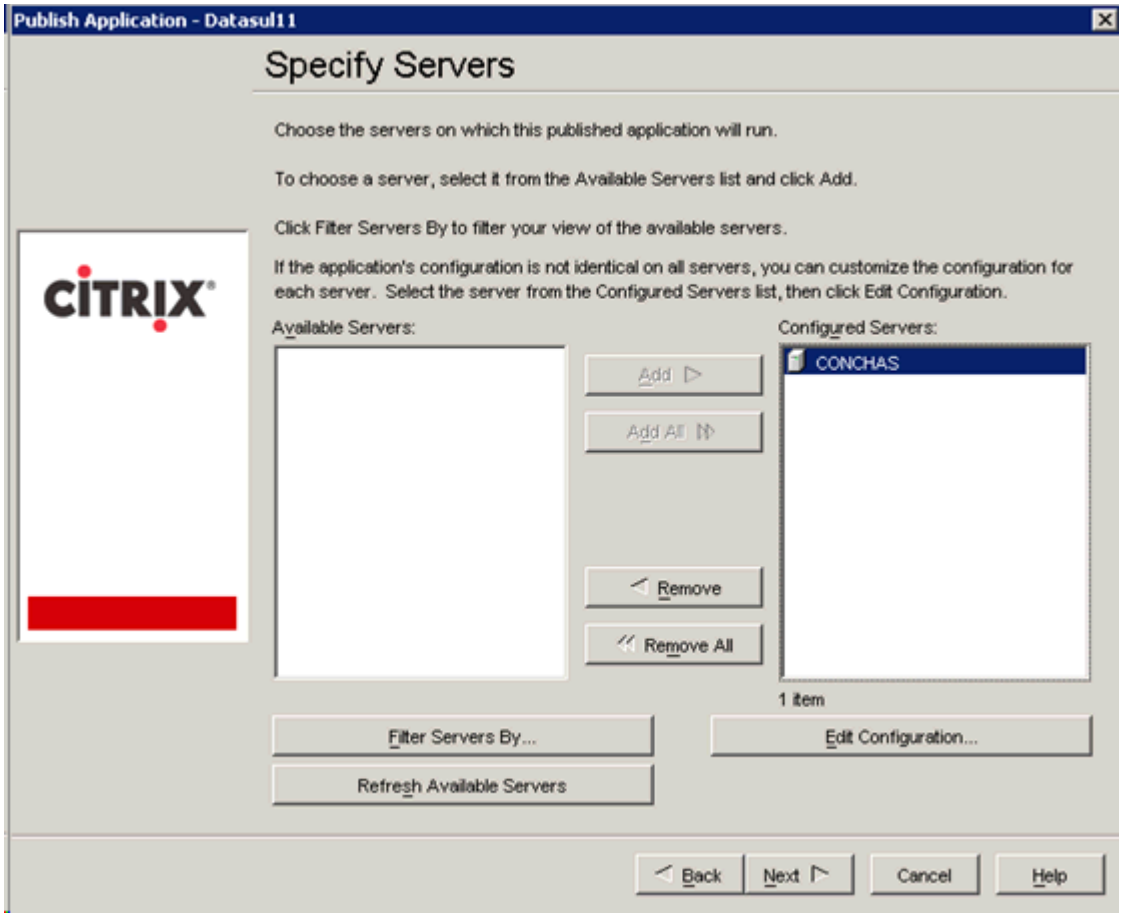
- Clients Requirements



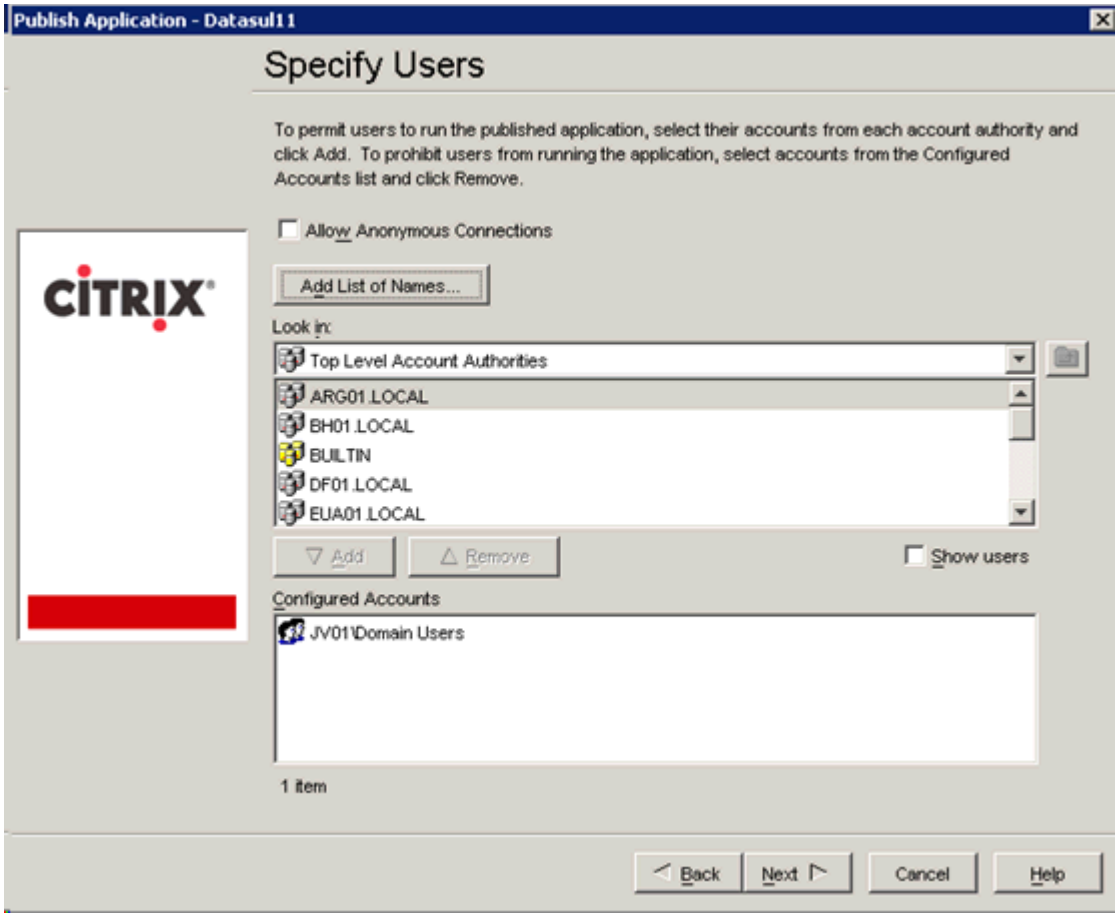
- Application Limits

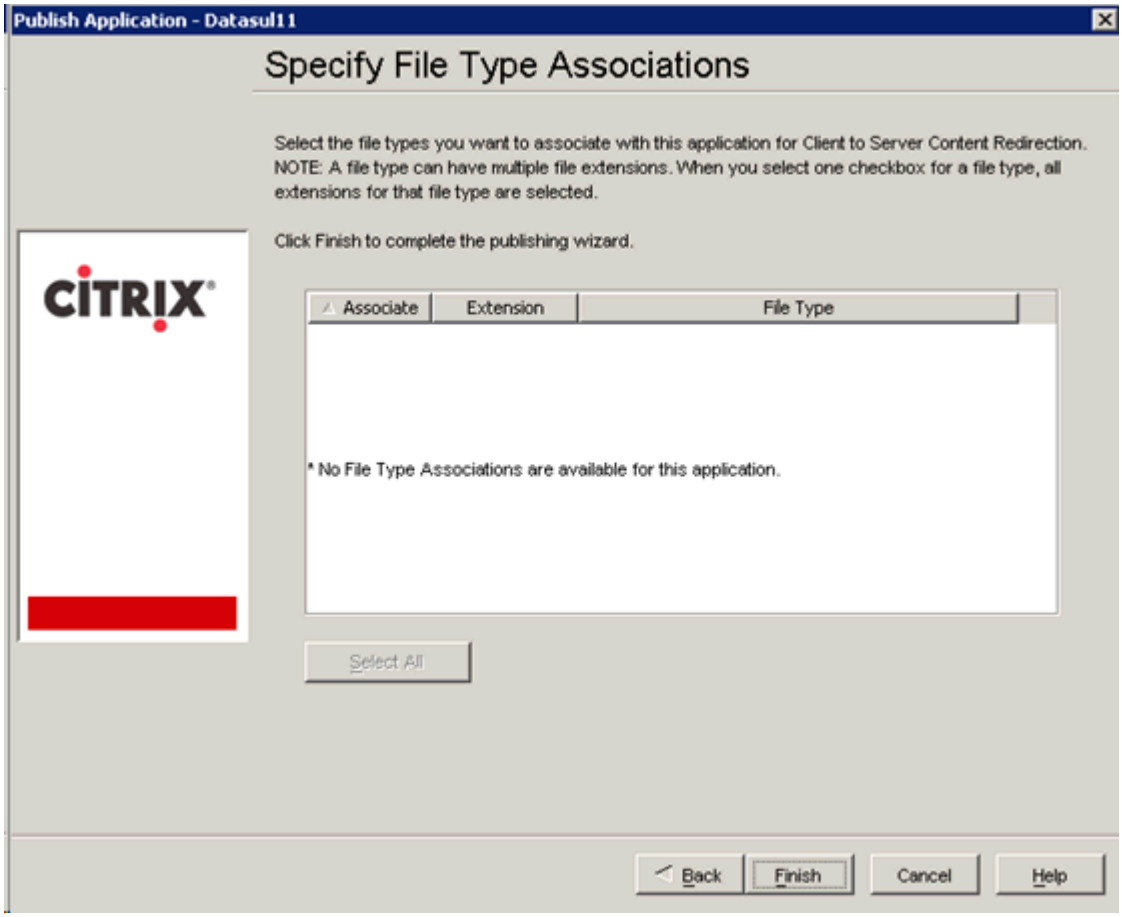


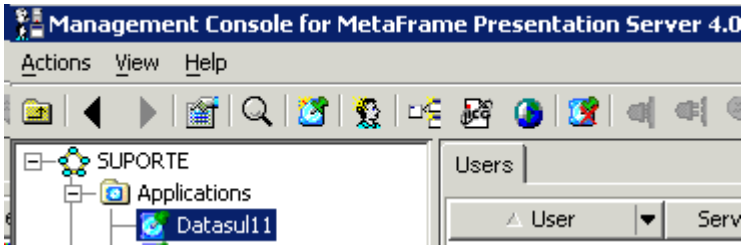
- Servers – Enter server where Progress session is run;



- Users – Allow only configured Users – Enter users that must have access to application through Citrix;

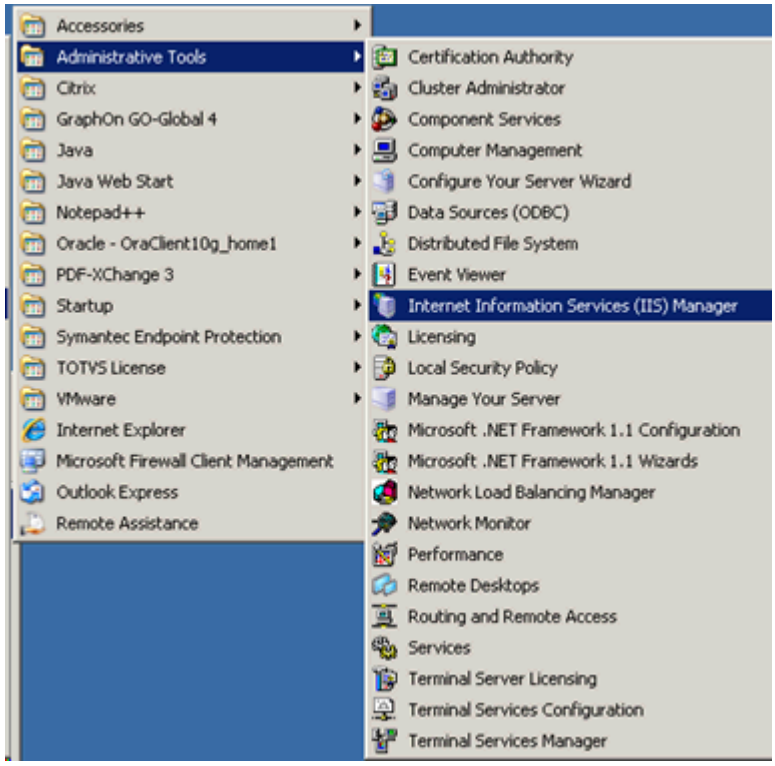

Publish Application - Datasul11
Specify Users
To permit users to run the published application, select their accounts from each account authority and click Add. To prohibit users from running the application, select accounts from the Configured Accounts list and click Remove.
Allow Anonymous Connections
Add List of Names...
Look in:
Top Level Account Authorities
ARG01.LOCAL
BH01.LOCAL
BUILTIN
DF01.LOCAL
EUA01.LOCAL
Add
Remove
Show users
Configured Accounts
JV01\Domain Users
1 item
Back
Next
Cancel
Help



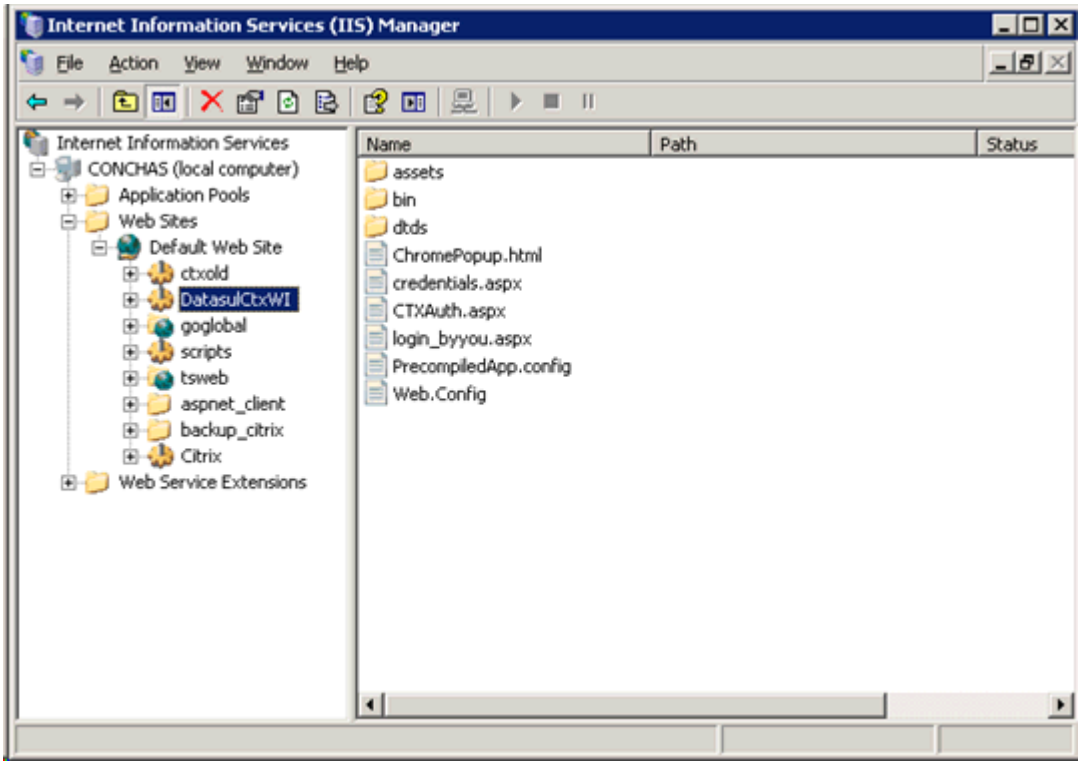


NOTIFICATION: All operational system users must have access and permission to directories and programs defined in PROPATH of the session, as well as, to files ".ini", ".pf", "datasul-framework-citrixproxy-java-1.0.2.jar", citrix.bat, citrix.properties and Progress.

- Open Internet Information Services (IIS)



- Publish in intranet a virtual directory (IIS) where remote access configuration files are located. The "Physical Path" must point to directory "jboss_home\DatasulCtxWl". This virtual directory must have permission to run .aspx (from .NET) files. In IIS7, convert this virtual directory for an application;
- The files of this folder DatasulCtxWl published are 32-bits. If the server where the virtual directory was published is 64-bits, configure IIS to run in mode 32-bits. From IIS7, you can create a new pool of application and only configure this pool to run in mode 32-bits, relating the folder created to it.



- After creating a virtual directory, configure “web.config” file below the DatasulCtxWI folder, according to instructions below:

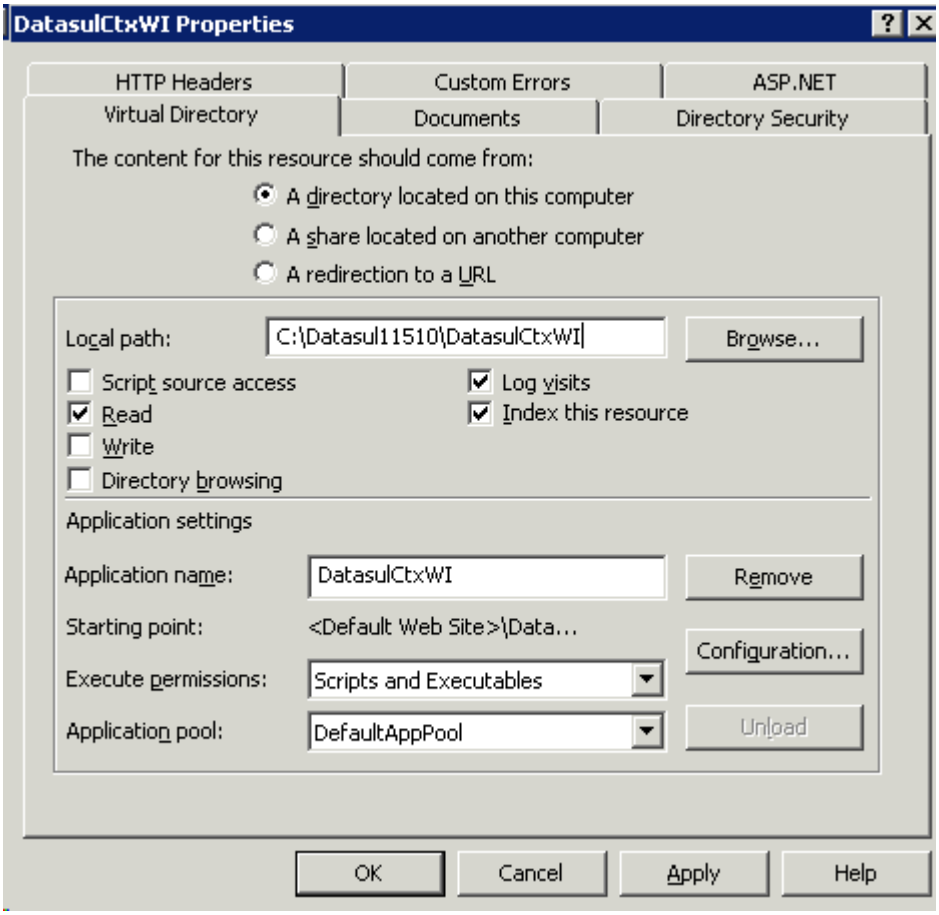
<add key=" CtxWIConfigFile" value="C:\caminhoWebinterface\WebInterface.conf"/>

- Enter the full patch of Citrix WebInterface.conf file. If virtual directory is in a IIS server different than WebInterface, the WebInterface.conf file can be copied for a local directory, as the folder DatasulCtxWI.

<add key=" CtxFarmName" value="SUPORTE"/>

Enter Citrix Farm name where the shortcut for citrix.bat file was published.

NOTIFICATION: In IIS server where the virtual directory was published, you must have the .NET Framework 3.5 installed, as well as, the visual J# 2.0 (Redistributable Package). Both can be located in Download Center of Microsoft.



- Edit citrix.properties file and configure according guidelines:

path=C:/dlc102b/bin/prowin32.exe

Enter progress executable path in citrix server.

pf=C:/totvs/datasul/11.5.9/ERP/scripts/datasul.pf

Enter .pf file path of environment used.

ini=C:/totvs/datasul/11.5.9/ERP/scripts/datasul-progress.ini

Enter .ini file path of environment used.

p=C:/totvs/datasul/11.5.9/ERP/scripts/datasul-configxml-alias.p

Enter alias file path of environment used.

- Edit "config.xml" file below structure "<Dir Instal Programs>\scripts". Below, items to be configured in this file, so tags not mentioned are not changed.

RemoteConnectionType

Enter remote connection type (CITRIX).

E.g. <RemoteConnectionType>**Citrix**</RemoteConnectionType>

RemoteServerPort

Enter a port for communication between the Jboss and Citrix.

E.g. <RemoteServerPort>**8085**</RemoteServerPort>

RemoteShortcut Description

Enter description for connection. The value Path item can be blank,

E.g. <RemoteShortcut Description="**Citrix**" Path="" />

- MetaframeServer

Enter Citrix server IP address or name.

E.g. <MetaframeServer>**citrixserver**</MetaframeServer>

- ASPHttpServer

Enter the URL for virtual directory previously published:

E.g. <ASPHttpServer>**http://citrixserver/DatasulCtxWl**</ASPHttpServer>

- MetaframeServerId

Enter application name created in Citrix server.

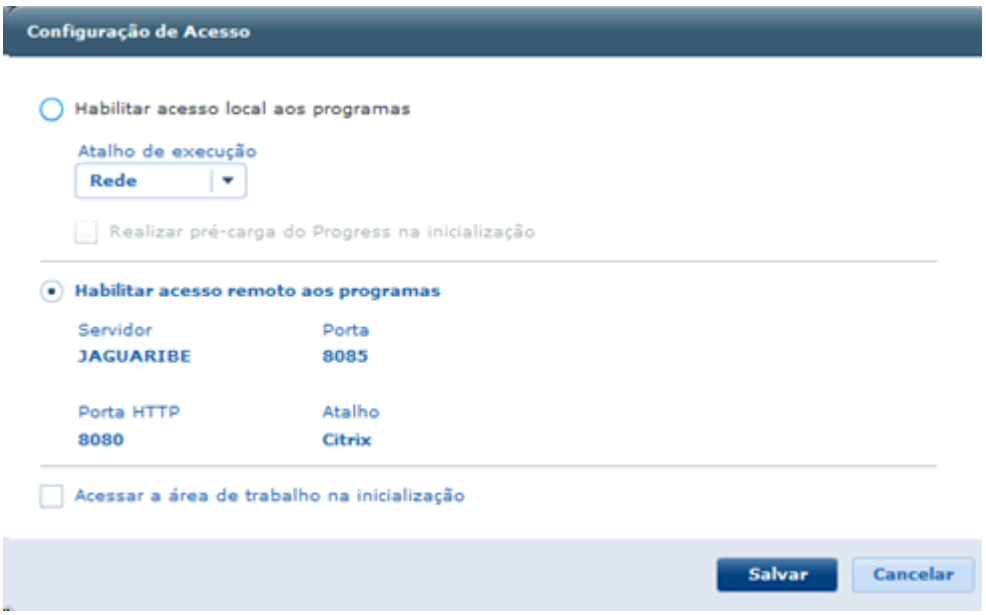
E.g. <MetaframeServerId>**Datasul11**</MetaframeServerId>

NOTIFICATION: If any of the parameters described above are not properly configured, the programs are not run. If there is any blank tab, we recommend it to be removed from file (previously backup file).

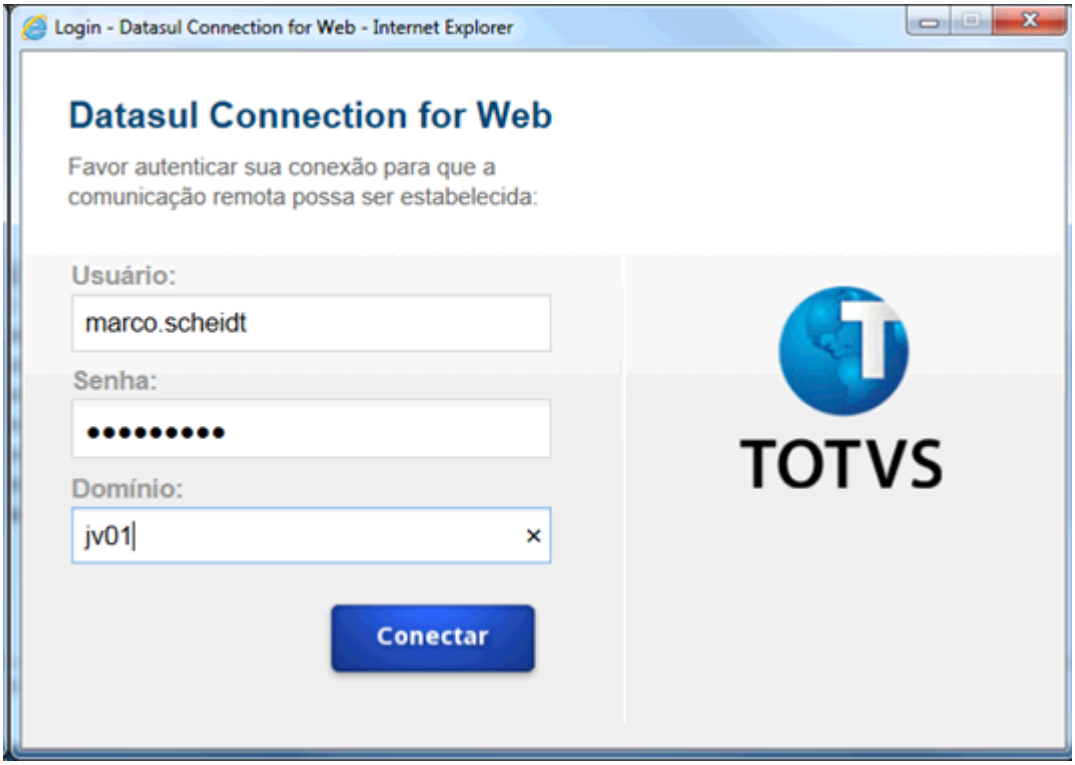
- Below an example of the file changed with information for access to Citrix.

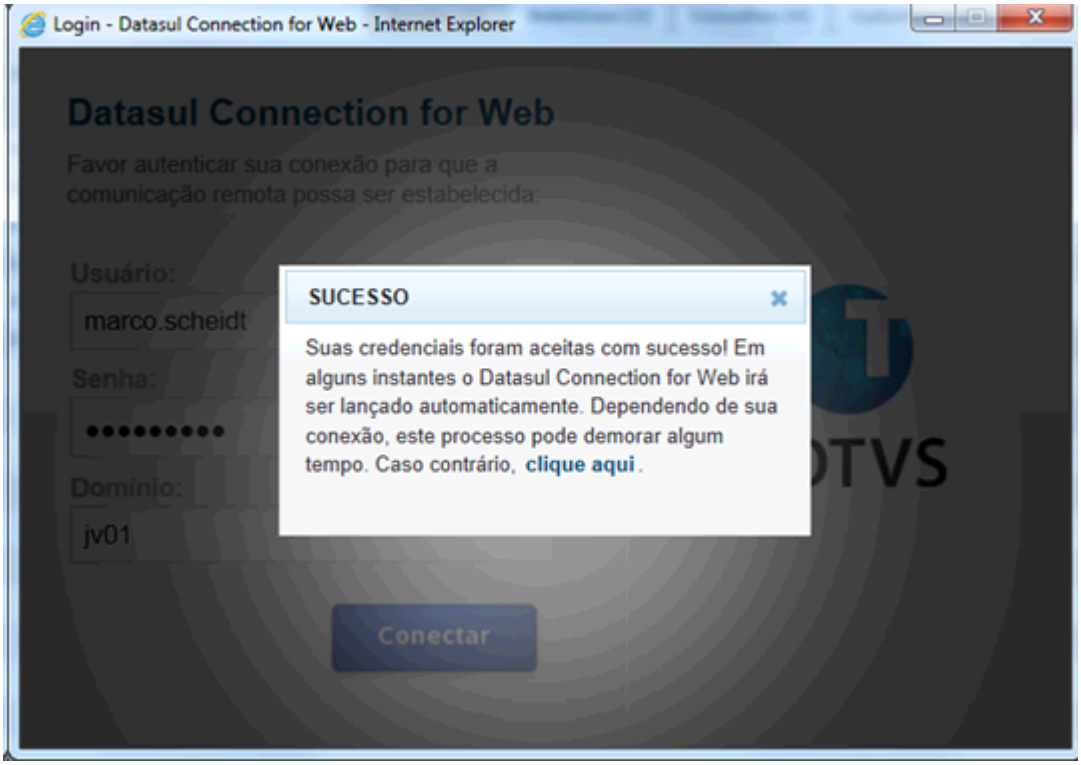
```
<?xml version="1.0" encoding="UTF-8"?>
<EIP>
    <Config ID="DATASUL-INTERACTIVE-UNIFICADO" Type="DI">
        <LocalShortcuts>
            <Shortcut Description="Rede" Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasulMenu.pf&quot; -ininame
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress-rede.ini&quot; -p
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-configxml-alias.p&quot;" />
            <Shortcut Description="c:\dlc102b" Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul.pf&quot; -ininame
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress.ini&quot; -p
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-configxml-alias.p&quot;" />
        </LocalShortcuts>
        <CompanyName>Totvs</CompanyName>
        <DocURL>http://JAGUARIBE:8080/docs/dochtm/dtsul</DocURL>
        <WebServerPort>8080</WebServerPort>
        <ServiceContext>datasul</ServiceContext>
        <RemoteServer>JAGUARIBE</RemoteServer>
        <!-- Metaframe Conf - Configuracoes do servico remoto -->
        <!-- RemoteConnectionType: Tipo de conexao (CITRIX, TS ou GOGLOBAL) -->
        <RemoteConnectionType>citrix</RemoteConnectionType>
        <!-- RemoteServerPort: Porta de comunicao entre o Jboss e Citrix -->
        <RemoteServerPort>8085</RemoteServerPort>
        <!-- MetaframeServer: Nome do servidor Citrix -->
        <MetaframeServer>conchas</MetaframeServer>
        <!-- MetraframeServerId: Nome da app criada no Citrix -->
        <MetaframeServerId>Datasul11</MetaframeServerId>
        <!-- ASPHttpServer: Endereco do diretorio virtual criado para o Citrix -->
        <ASPHttpServer>http://conchas/DatasulCtxWI</ASPHttpServer>
        <!-- RemoteShortcut: Para o Citrix o Path deve estar em branco, pois estes parametros vem do citr
        <RemoteShortcut Description="Citrix" Path=""/>
        <ExecutionWaitTime>3600</ExecutionWaitTime>
    </Config>
</EIP>
```

- Upon accessing Datasul 11, go to Tools\Access Preferences. where information registered in config.xml file are displayed.



- After this, enter user and net password to validate access to server and open Datasul Interactive.





4.3.1 Requirements for Citrix Receiver Installation

- ✓ Linux kernel 2.6.29 version or superior, with glibc 2.7 or later, gtk 2.12.0 or later, libcap1 or libcap2 and support for udev.
- ✓ OpenMotif 2.3.1 or later.
- ✓ 6M space in disk.
- ✓ Video display with 256 colors or later
- ✓ Firefox 3.6 or later

This configuration was tested in the following attributions: Ubuntu 10.4, Mint 11.

4.3.1.1 Download of Citrix Receiver

- Access address http://www.citrix.com/English/ss/downloads
- Click link for Citrix Receiver, then option Linux
- Download 12.0 version or later according to its Linux distribution (.deb or .rpm).

4.3.1.2 Installation of Citrix Receiver

- ✓ Open terminal (shell) window
- ✓ To run installation of RPM package:
  - ➢ sudo rpm -i pakagename.rpm
- ✓ To run installation of DEB package:
  - ➢ sudo dpkg -i packagename.deb

4.3.1.3 Running Progress Screen

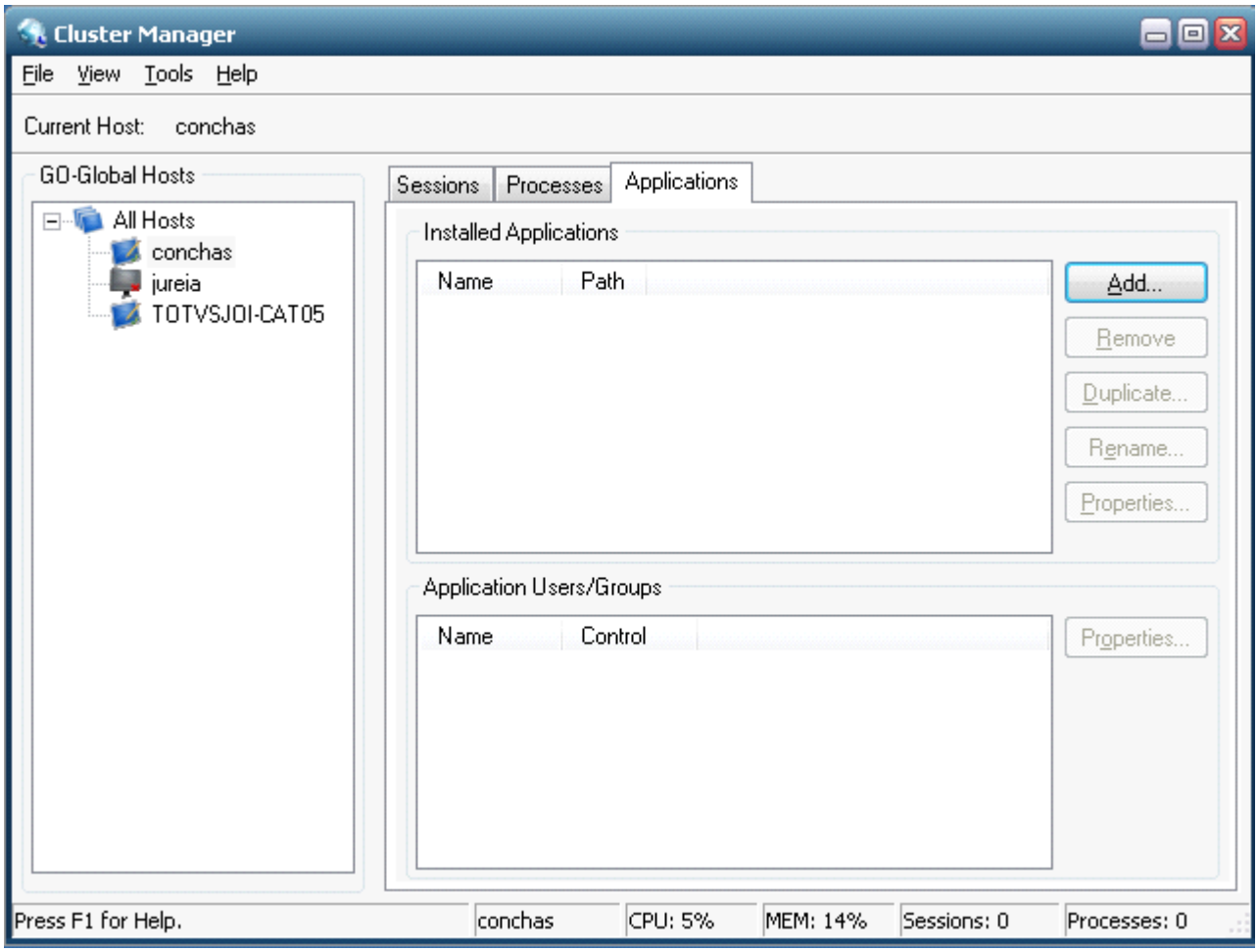
In the product menu, upon selecting an item running a Progress screen, a window for login in Datasul Connection for Web is displayed. After entering user/password and domain, the system runs corresponding Progress screen through the Citrix Receiver.

4.4 Remote access with GoGlobal

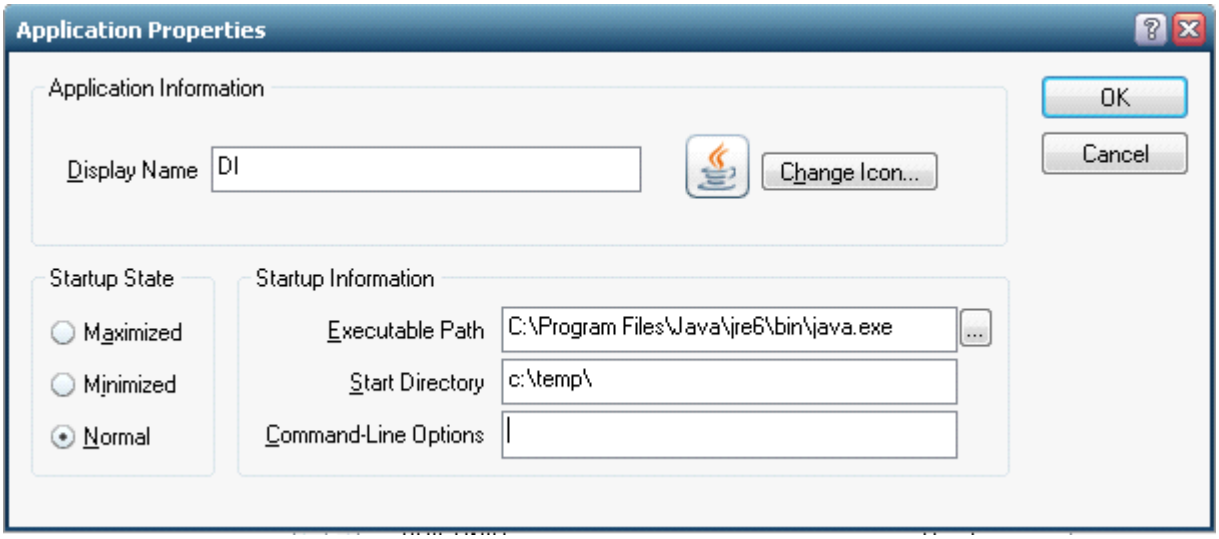
For Datasul Connection for Web (GoGlobal) to properly work, point path of ".jar" and ".cab", and scripts Java available in installation.

Below, procedures to be run for remote access to be properly run:

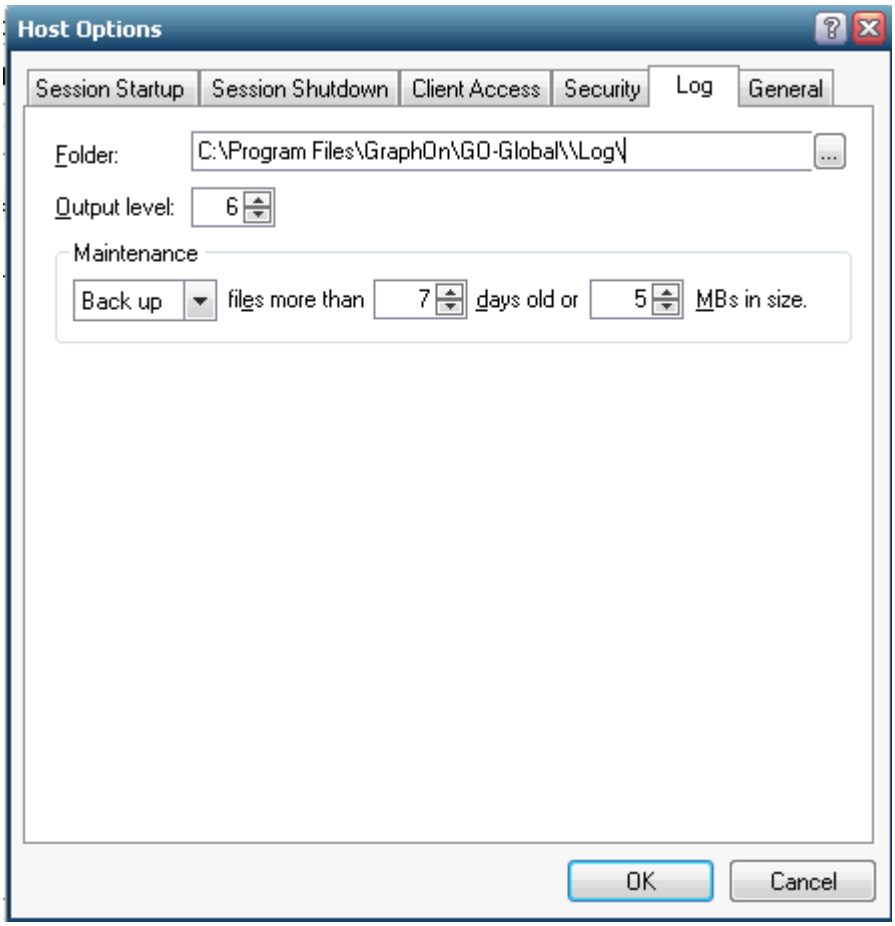
- ✓ Install Progress Client Networking license in Datasul Connection for Web (GoGlobal) server.
- ✓ Install Java.
- ✓ Create an application in "GoGlobal Cluster Manager > Applications > Add".



- Display Name – It is the name of the application is run (for this configuration to work properly, this field value must be “DI”);
- Executable Path – It must point to “java.exe”, below the structure “<Dir Instal Java>\ bin\java.exe”;
- Start Directory – Temporary directory for the session;
- Startup State – Regular.



- ✓ Configure log of "GoGlobal **3**" in "*Tools* > ***Server Options*** > *Log*". We recommend log level 6, so all events are displayed.
- ✓ Configure log of "GoGlobal **4**" in "*Tools* > ***Host Options*** > *Log*". We recommend log level 6, so all events are displayed.



NOTIFICATION: All operational system users must have access and permission to directories and programs defined in PROPATH of the session, as well as, to files ".ini", ".pf", "datasul-framework-citrixproxy-java-1.0.2.jar" and Progress. If the users are not allowed, access errors are registered in GoGlobal log.

- Configure "config.xml" file below structure "<Dir Instal Programs>\scripts". Below, items to be configured in this file, so tags not mentioned are not changed:

  - RemoteConnectionType

  Informar o tipo de conexão remota (GOGLOBAL).

  E.g. <RemoteConnectionType>**GOGLOBAL**</RemoteConnectionType>

  - RemoteServerPort

  Enter a communication port with Datasul Connection for Web (GoGlobal).

  E.g. <RemoteServerPort>**8085**</RemoteServerPort>

  - RemoteShortcut Description

  Enter parameters for Progress session run.

  E.g. < RemoteShortcut Description=" **GOGLOBAL**" Path="**-jar "C:\Datasul11\datasul-framework-citrixproxy-java-1.0.2.jar" "c:\dlc102b\bin\prowin32.exe" "C:\Datasul11\datasul.pf" "C:\Datasul11\datasul-progress.ini" "C:\Datasul11\datasul-alias.p"** " />

  Important: files entered above must be in server of ***GoGlobal***, in the example above, directory C:\Datasul was created in the server.

  - MetaframeServer

  Enter IP or name of GoGlobal server.

  E.g. <MetaframeServer>**legacy2**</MetaframeServer>

  - MetaframeServerLibURL

  Enter URL where the GoGlobal components (this virtual directory must be published in Web server).

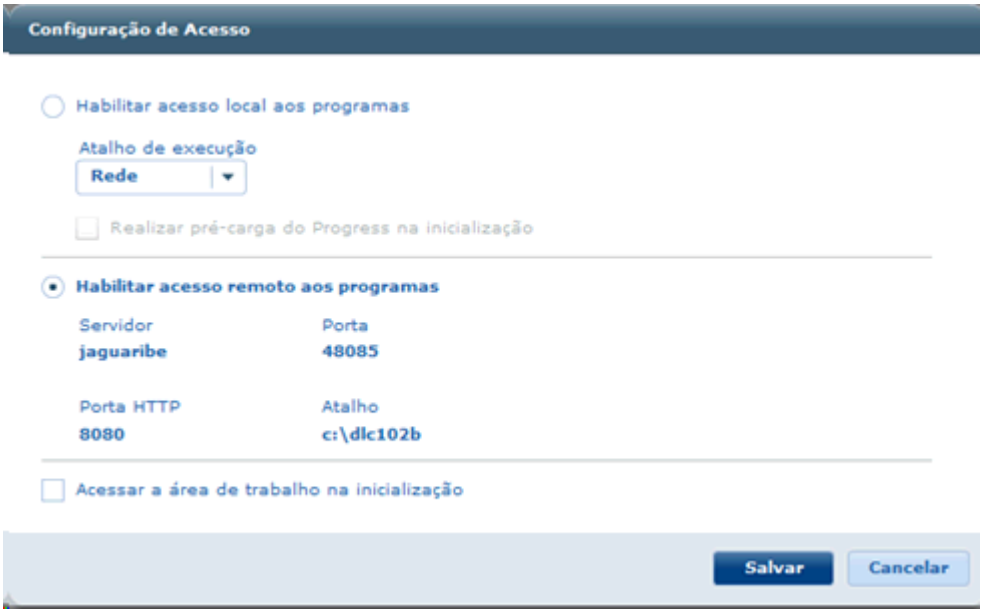
Ex:<MetaframeServerLibUrl>**http://legacy2/goglobal**</MetaframeServerLibUrl>

NOTIFICATION: If any of the parameters described above are not properly configured, the programs are not run. If there is any blank tab, we recommend it to be removed from file (previously backup file).

➢ Below, an example file changed with information for access to GoGlobal

```
<?xml version="1.0" encoding="UTF-8"?>
<EIP>
    <Config ID="DATASUL-INTERACTIVE-UNIFICADO" Type="DI">
        <MetaframeServerId>DI</MetaframeServerId>
        <LocalShortcuts>
            <Shortcut Description="Rede" Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasulMenu.pf&quot; -ininame
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress-rede.ini&quot; -p
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-configoml-alias.p&quot;" />
            <Shortcut Description="c:\dlc102b" Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul.pf&quot; -ininame
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress.ini&quot; -p
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-configoml-alias.p&quot;" />
        </LocalShortcuts>
        <CompanyName>Totvs</CompanyName>
        <DocURL>http://jaguaribe:8080/docs/dochtm/dtsul</DocURL>
        <!--
            RemoteConnectionType:
                - CITRIX
                - GOGLOBAL
                - TERMINALSERVER
        -->
        <!-- RemoteServer Conf - Configuracoes do servidor socket -->
        <RemoteConnectionType>GOGLOBAL#4,8,0,18673</RemoteConnectionType>
        <RemoteServer>jaguaribe</RemoteServer>
        <RemoteServerPort>48085</RemoteServerPort>

        <!-- Metaframe Conf - Configuracoes do servico remoto -->
        <MetaframeServerLibUrl>http://conchas/goglobal</MetaframeServerLibUrl>
        <MetaframeServer>conchas</MetaframeServer>

        <WebServerPort>8080</WebServerPort>
        <ServiceContext>datasul</ServiceContext>
        <RemoteShortcut Description="c:\dlc102b" Path="-jar &quot;C:\Datasul1159\datasul-framework-citrixproxy-java-1.0.2.jar&
        &quot;c:\dlc102b\bin\prowin32.exe&quot; &quot;C:\Datasul1159\datasul.pf&quot; &quot;C:\Datasul1159\datasul-progress.in
        &quot;C:\Datasul1159\datasul-alias.p&quot;" />
        <ExecutionWaitTime>3600</ExecutionWaitTime>
    </Config>
</EIP>
```

- Upon accessing Datasul 11, go to Tools\Access Preferences. where information registered in config.xml file are displayed.



- After this, enter user and net password to validate access to server and open Datasul Interactive.

4.4.1 GoGlobal 4 Adjusts

GoGlobal 4 becomes supported from Datasul 11.5.7. The adjusts are necessary so the connection with GoGlobal properly works.

➢ RemoteConnectionType

Enter the remote connection type and the full version of GOGLOBAL. The “version_full” can be located in GoGlobal installation release:

E.g. <RemoteConnectionType>**GOGLOBAL#4,7,0,17377**</RemoteConnectionType>

➢ RemoteServerPort

Enter a communication port with Datasul Connection for Web (GoGlobal). Add a free port in the

operational system to avoid ports conflict

E.g. <RemoteServerPort>**48085**</RemoteServerPort>

Upon installing GoGlobal, check if the machine has a valid domain of product execution, as it already automatically integrates to LDAP. After installed, configure the type of authentication for the GoGlobal to transfer user and password information indicated by Datasul product.

For proper work, we select option "Standard authentication" in "GoGlobal -> Host Options -> Secury", so GoGlobal requests user and password when opening a session (the user does not need to enter, as Datasul automatically enters GoGlobal).

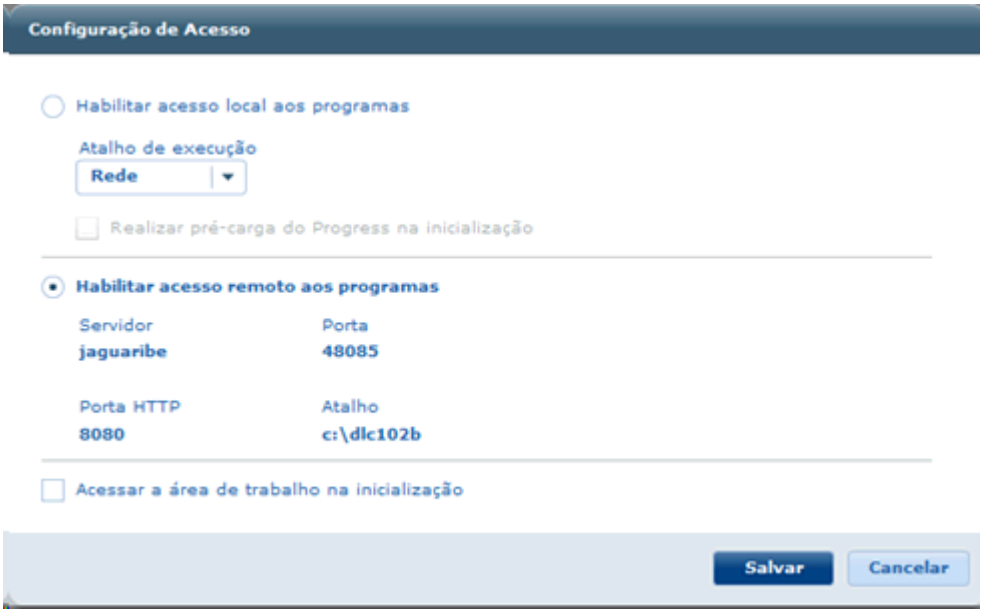
Details:

1. When activating the cache option, the user password is stored in cache for some time, however, when the user changes the password in the domain, the modification of cache in GoGlobal takes time generating errors (not recommended).
2. When activating "Integrated Windows Authentication", authentication to open session is not requested, automatically authenticating user logged in Windows. With this option activated, the server does not access net resources, not running mappings or scripts. GoGlobal (for the moment) does not transmit the desktop credentials for server through net. So, you cannot authenticate the user sessions out for the server (net or other users), disabling programs run.

   - Below, an example file changed with information for access to GoGlobal

```
<?xml version="1.0" encoding="UTF-8"?>
<EIP>
    <Config ID="DATASUL-INTERACTIVE-UNIFICADO" Type="DI">
        <MetaframeServerId>DI</MetaframeServerId>
        <LocalShortcuts>
            <Shortcut Description="Rede" Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasulMenu.pf&quot; -ininame
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress-rede.ini&quot; -p
            &quot;\\jaguaribe\datasul\dts1159pgs\ERP\scripts-8080\datasul-configxml-alias.p&quot;" />
            <Shortcut Description="c:\dlc102b" Path="&quot;c:\dlc102b\bin\prowin32.exe&quot; -pf
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul.pf&quot; -ininame
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-progress.ini&quot; -p
            &quot;C:\totvs\datasul\dts1159pgs\ERP\scripts-8080\datasul-configxml-alias.p&quot;" />
        </LocalShortcuts>
        <CompanyName>Totvs</CompanyName>
        <DocURL>http://jaguaribe:8080/docs/dochtm/dtsul</DocURL>
        <!--
            RemoteConnectionType:
                - CITRIX
                - GOGLOBAL
                - TERMINALSERVER
        -->
        <!-- RemoteServer Conf - Configuracoes do servidor socket -->
        <RemoteConnectionType>GOGLOBAL#4,8,0,18673</RemoteConnectionType>
        <RemoteServer>jaguaribe</RemoteServer>
        <RemoteServerPort>48085</RemoteServerPort>

        <!-- Metaframe Conf - Configuracoes do servico remoto -->
        <MetaframeServerLibUrl>http://conchas/goglobal</MetaframeServerLibUrl>
        <MetaframeServer>conchas</MetaframeServer>

        <WebServerPort>8080</WebServerPort>
        <ServiceContext>datasul</ServiceContext>
        <RemoteShortcut Description="c:\dlc102b" Path="-jar &quot;C:\Datasul1159\datasul-framework-citrixproxy-java-1.0.2.jar&
        &quot;c:\dlc102b\bin\prowin32.exe&quot; &quot;C:\Datasul1159\datasul.pf&quot; &quot;C:\Datasul1159\datasul-progress.in
        &quot;C:\Datasul1159\datasul-alias.p&quot;" />
        <ExecutionWaitTime>3600</ExecutionWaitTime>
    </Config>
</EIP>
```

- Upon accessing Datasul 11, go to Tools\Access Preferences. where information registered in config.xml file are displayed.



- After this, enter user and net password to validate access to server and open Datasul

Interactive.