software AG

Data Archiving for Adabas

Data Archiving for Adabas Installation

Version 1.6

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Table of Contents

1   Data Archiving for Adabas Installation

Data Archiving for Adabas is a fully portable technology. It runs on all primary Unix systems, Windows and on z/OS. There is only one code base, rather than one code base for open systems and another for mainframe.

⚠️ **Important:** Software AG strongly recommends that you read the installation instructions carefully before performing the installation. Also, there are often things mentioned in the readme file of the product that have come to light after this documentation is frozen, so please also be sure to read that before starting the installation.

Software AG Installer

Installation Prerequisites

Installation Planning and Preparation

Installation Procedure Overview

Installation Procedure for Windows and Unix

Installation Procedure for z/OS

Verifying the Installation

Applying the Latest Maintenance

Deactivating and Uninstalling

Migration Utility

2 Software AG Installer

> **Note:** For more information on using the Software AG Installer refer to the chapter *Using the Software AG Installer* in the Software AG documentation, found on Software AG's **Empower** web site.

Overview

Data Archiving for Adabas is installed using the Software AG Installer from the Software AG download center. The Software AG Installer is sensitive to the products for which you are licensed. When you log on to it, you see all the products that you are able to install.

You select the appropriate Data Archiving for Adabas components for your current installation requirements and the Software AG Installer will automatically select all other Product and Infrastructure component dependencies.

The installer will do the following under your direction:

- Download the install files to the computer location you request (or will arrange to ship a CD, DVD, etc.).
- Copy the files to the install location that you choose.
- Define the required local service (Windows only).
- Launch (or make available to launch) the product-specific activation component to finish off the installation.

Component Installation

The component installation for Data Archiving for Adabas consists of the following steps:

- Log onto the Software AG Installer
- Select the Installation Directory Location
- Select Product Component(s) to be Installed

- Confirm the Installer Should Proceed

Log onto the Software AG Installer

On the Software AG welcome screen identify yourself to the Installer by logging in with your credentials (user name and password). The Installer will then acquire information about a) all the products for which you are licensed, and b) those products which are able to be installed using the Installer.

Select the Installation Directory Location

Next, once the Installer has acquired all licensing information for your site, it shows the default installation directory. You can alter this if you wish.

> **Note:** Depending on your choice of installation directory, you may subsequently see the following warning dialog from the Software AG Installer. This can arise if you already have Data Archiving for Adabas or its related components (e.g. System Management Hub) installed in the selected directory. Please ensure you have selected the correct directory before continuing.
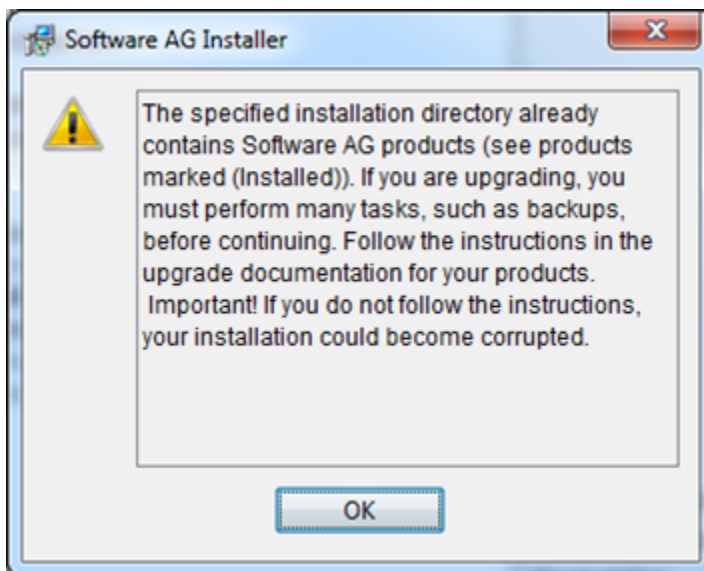
Select Product Component(s) to be Installed

Next, once the installation directory has been identified, you can now choose the Data Archiving for Adabas components that you wish to install. Selecting the Data Archiving for Adabas node will automatically select the default installation components or, alternatively, you can select the individual components manually.

The following screenshot shows the component selection for the default installation. These are the required components for a typical installation on a Windows, Linux, or Unix platform in order to (a) perform Administration, and (b) implement Archiving Services.

Note: Adabas System Coordinator dependent components will automatically be selected based on your chosen Data Archiving for Adabas components.
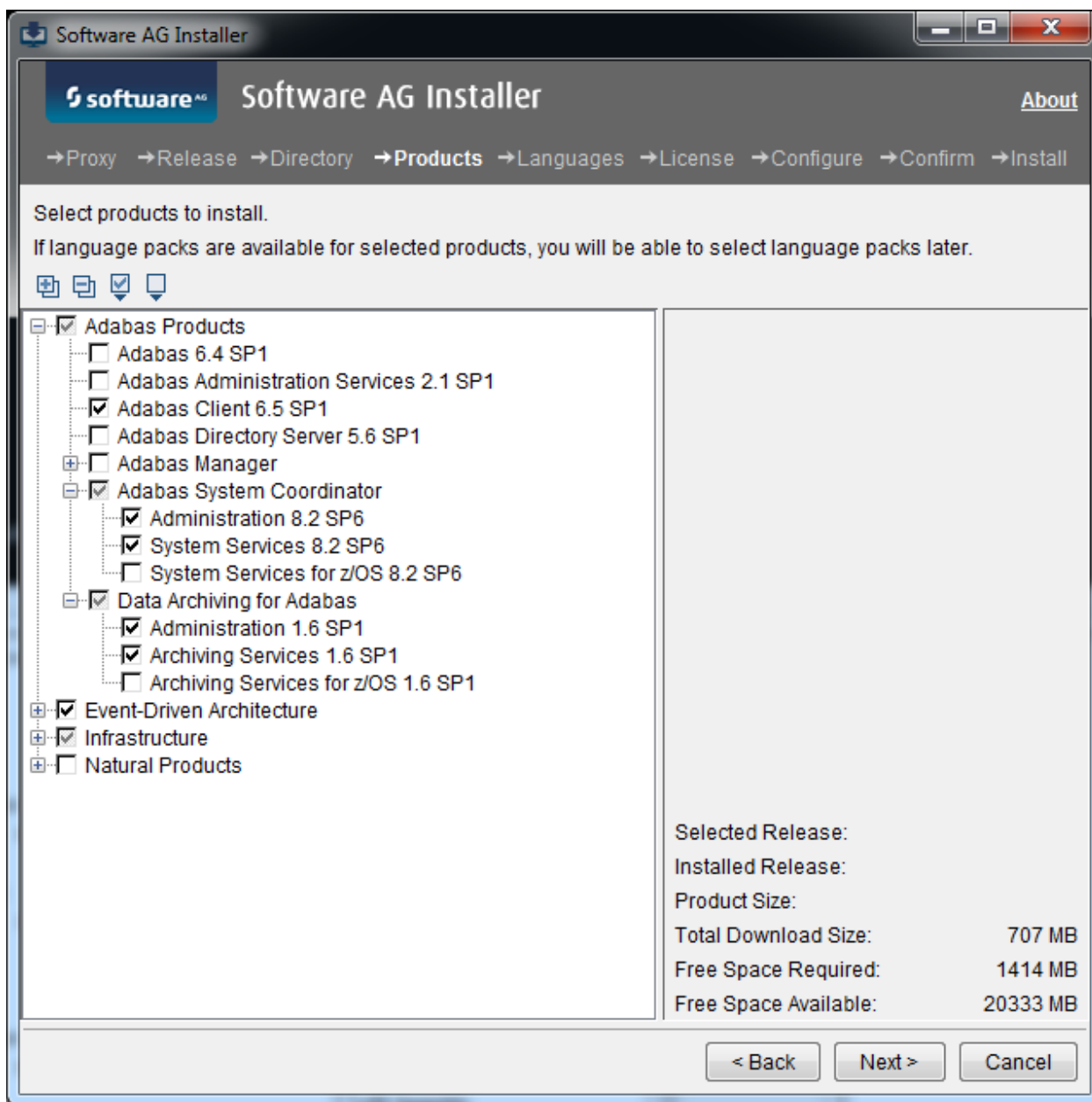
For other types of installation, the individual Data Archiving for Adabas components must be selected manually.

Component	Description
Data Archiving for Adabas	
Administration	Select this if you wish to administer Data Archiving for Adabas from this installation platform.
Archiving Services	Select this if you wish to implement Archiving Services on this installation platform.

Component	Description
Archiving Services for z/OS	Select this if you wish to implement Archiving Services on z/OS from this installation platform.
Adabas System Coordinator	*The following components will be selected automatically based on the above Data Archiving for Adabas component selection.*
Administration	Selected only if the Data Archiving for Adabas Administration component is selected.
Archiving Services	Selected only if the Data Archiving for Adabas Archiving Services component is selected.
Archiving Services for z/OS	Selected only if the Data Archiving for Adabas Archiving Services for z/OS component is selected.

For example, the following screenshot shows the required components for an installation on z/OS in order to (a) perform Administration on the installation platform, and (b) implement Archiving Services on a z/OS platform:

Confirm the Installer Should Proceed

Finally, a list of the selected products and their components are shown for confirmation before installation begins into the specified installation directory.

> **Note:** If the Administration component was selected then installation will also include the following:

■ Platform Manager

Platform Manager is an agent that allows remote administration of one or more selected products from Command Central. This is not a prerequisite for Data Archiving for Adabas therefore choose Install as Application in order to conserve system resources. However, if you do plan to use this capability for a different product in this installation then choose Install as Service.

■ System Management Hub

System Management Hub is a prerequisite for administering Data Archiving for Adabas. During installation of the System Management Hub several interactive screens will be presented to you where the defaults can be taken. If you wish to alter these defaults, please refer to the System Management Hub documentation available from the Software AG Documentation Web site.

3 Installation Prerequisites

Operating Systems

Data Archiving for Adabas is compatible with the following platforms:

- Windows
- Linux
- Solaris
- HP-UX
- AIX
- z/OS

Adabas

Data Archiving for Adabas can be used with any supported level of Adabas Version 6.1.9 or above in open systems and Adabas Version 8.1 or above in mainframe z/OS. Adabas must be UES enabled.

Adabas Client Library (OS)

For sites using Adabas 6.2, the client library ACL 6.2.1.61 (or above) is required.

Adabas System Coordinator Version

Adabas System Coordinator Version 8.2 or above is required when using Data Archiving for Adabas.

The installation kit for Data Archiving for Adabas includes and will also install Adabas System Coordinator 8.2.

System Management Hub

System Management Hub Version 9.0 or above is required and is used as the user interface for all interaction with Data Archiving for Adabas.

A web browser supported by SMH must be available.

Natural

To use the supplied Natural API, Natural Version 6.3 or above in open systems and Natural version 4.2 or above in mainframe z/OS is required.

Predict

To use file mappings from Predict files then Predict must be installed.

Check Empower for Latest Maintenance

Check Software AG's **Empower** web site for the latest available maintenance for this version of Data Archiving for Adabas. If maintenance is available plan to apply it after successfully verifying the installation.

4   Installation Planning and Preparation

Planning and Preparation

It is very important to plan the overall implementation of your archiving infrastructure from the beginning. If you intend to limit the whole implementation to be completely within a single computer, then the planning is straightforward since there is a network of one computer, which is clearly the simplest model. Other enterprises have many computers, so must consider:

- The databases you intend to extract data from and the computers where these databases run. Data Archiving for Adabas must be installed on all these computers in order to run extractors.

- The computers you intend to run accumulators on, to write archive data. Accumulators can be run on different computers to extractors, so Data Archiving for Adabas must be installed on all the accumulator computers to:

    - spread processing load and

    - run accumulators on cheaper hardware.

Once you have an overview of all the computers involved, you now must decide where the Adabas file used for storing the configuration data is to be loaded and run. Software AG strongly recommends a single file is shared by all computers. To accommodate file sharing, we have provided an in-built mechanism - so you do not need to acquire our Entire Net-Work product simply for configuration. By sharing the file, all connectivity configuration is automatic, which completely frees you from the chores of reciprocally matching up numerous settings across all computers. This automated configuration is a major feature.

The file usually runs on one of the primary computers out of all involved, but the choice is yours. One apparent concern is that a single file introduces a single point of failure. However, we take measures in the software to make sure outages of the file do not interrupt 24*7 operations. Put simply, the archive management service in each computer acquires a copy of its configuration on first use, and keeps a copy of it locally thereafter. Consequently, outages of the shared file are tolerated. In addition, each service periodically checks for changes to the configuration and automatically reflects these changes locally

In summary, implementation planning involves:

- Try to use all installation defaults; it is always simpler. Especially where port numbers are concerned.

- Decide all the computers where extractors will run.

- Decide all the computers where accumulators will run.

- Decide which computer is to host the file for the configuration data. The specific installation sections for each platform cover the choice between sharing or establishing the file.

- Install on the computer that hosts this file first. Instruct the installer to establish the file for first use.

- Determine the hostname of the computer hosting the file. You need this as a reference point when doing subsequent installs. See below for information on determining hostname in various systems.

    - for z/OS (USS), use the *nslookup* command to show the "name" (hostname) of the computer

    - for Unix, use the *nslookup* command to show the "name" (hostname) of the computer

    - for Windows, go to the Control panel, select System and then select the Computer name tab. This will show the full computer name (hostname).

- In all subsequent installs on other computers, make sure you use the shared file option, do not establish additional files.

- Make sure ports are enabled where firewalls are used. Where Data Archiving for Adabas is used across multiple computers, there may be the need to adjust firewall settings. The User Interface doesn't usually need any adjustments because communications by the User Interface are outbound. However, the runtime receives communications so it must be enabled as follows:

    - The following program in the Data Archiving for Adabas directory structure must be added as an exception:

      ```
      adrdrv
      adrdrv2
      ```

    - The following programs in the Adabas System Coordinator directory structure must be added as exceptions:

      ```
      corlc
      cord
      ```

5 Installation Procedure Overview

This section provides an overview of the procedure for installing Data Archiving for Adabas:

Overview

There are three components to a Data Archiving for Adabas installation:

- Archiving Services
- Administration
- The Repository

The Archiving Services component requires the System Services component of Adabas System Coordinator and the Adabas Client Libraries to be installed. The Administration component requires the Administration component of Adabas System Coordinator and the System Management Hub to be installed.

The Software AG Installer will automatically select the Adabas System Coordinator components and the System Management Hub as required, depending on which Data Archiving for Adabas components are being installed.

The computer that will host the Repository must have the System Services components of Adabas System Coordinator installed and access to an Adabas database. The database may be local or accessible via Entire Net-Work.

Archiving Services

The Archiving Services component is comprised of two parts, the Archive Service and the Extractor/Accumulator.

The Archive Service is a plug-in to Adabas System Coordinator and runs as a task within the Adabas System Coordinator Daemon. The Extractor/Accumulator is a separate process, instances of which are launched by the Archive Service to carry out each archive, transfer or recall operation.

Administration

The Administration component is a plug-in to System Management Hub. All configuration, operation and monitoring is performed through the System Management Hub. There is no need to install the Administration component on every computer running Archiving Services, one computer running the Administration component can be used to remotely manage any instance of Archiving Services.

The Repository

The Repository is an Adabas file used for storing configuration data. It will normally be shared by every computer running Archiving Services. It is not necessary to have Entire Net-Work installed in order to share the same Repository; the Adabas System Coordinator infrastructure enables remote access to a Repository hosted by another computer.

6   Installation Procedure for Windows and Unix

⚠ **Important:** Before beginning to install the ADR package, you must ensure that all the latest operating system updates have been applied.

Installation

The components of Data Archiving for Adabas are installed using the Software AG Installer from the Software AG download center. Please refer to the Data Archiving for Adabas Software AG Installer section **Component Installation** for information on how to perform this part of the installation.

License Key Requirements

During the **Activation** process you will be prompted for the location of a license key file.

For Unix the availability of a license key is mandatory.

For Windows it is not mandatory and the installation can be performed without a license key. Refer to *Using Data Archiving for Adabas without a License Key* for more information.

Activation

Once the Software AG Installer has prepared the install download image or you have copied the downloaded install image to the computer where the installation is required you must finally activate the software before it can be used.

Once you start the activation process, you will be required to provide configuration information within a number of activation tabs but before you start make sure:

1. Your license key is in a file that is available to the installation activation unless you are going to use the software without a license (see **License Key Requirements**).

2. You can identify the location of the Repository. Please refer to the section **Installation Planning and Preparation** for information on how to manage that part of the installation.

Starting the Activation

For Unix

Run the activation script ./activation.sh from the installation library $SAG/cor/v*vrs*/INSTALL where *vrs* is the product version.

> **Note:** In Unix, if the activation detects that a User Interface is not available then it will automatically use the console mode. Refer to **Activation in Unix from the Console**.

For Windows

The Installer creates a Start Menu entry for activation (and deactivation); an example screen shot follows:
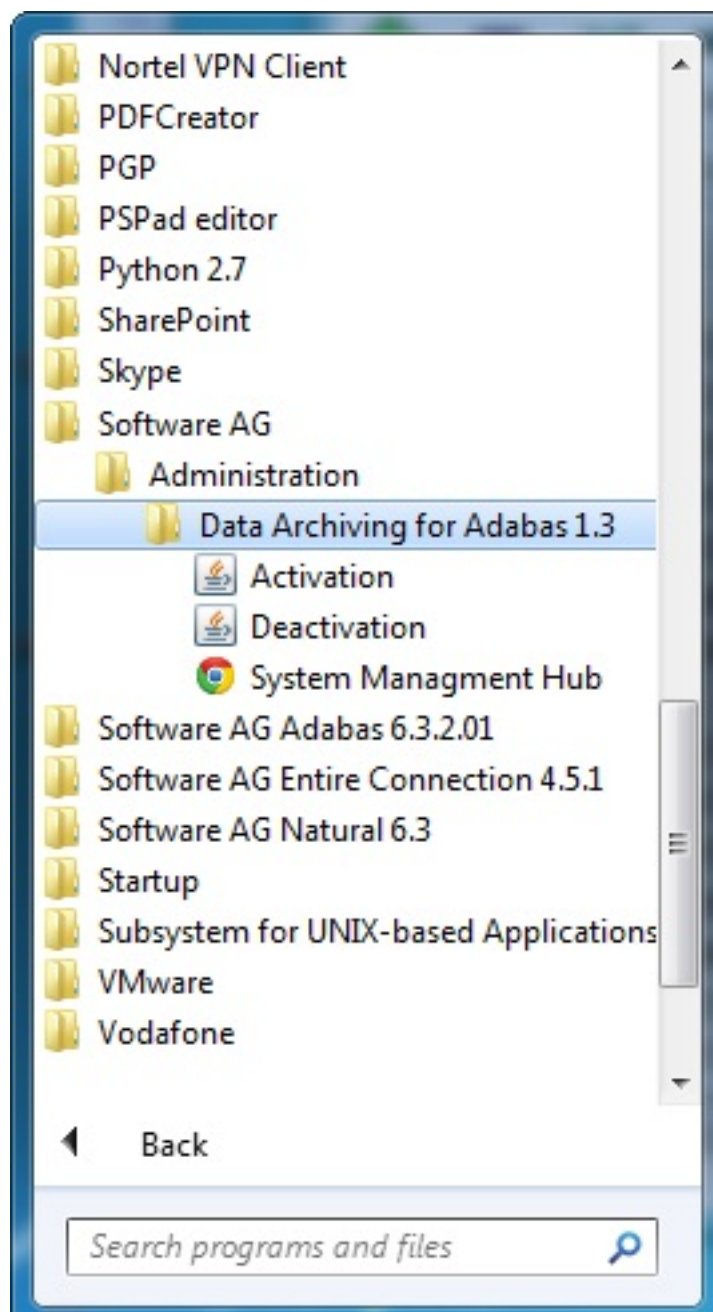
> **Note:** Windows Vista, 7, 8 and Server 2008, 2012 requires that you start the activation using *right-click and run as administrator*.

Once you start the activation process, you are required to progress through a number of activation tabs:

- Products
- COR (Adabas System Coordinator)
- ADR (Data Archiving for Adabas)

- Activate

Products

The first tab in the activation requires that you select the platform that you are activating and the products too.

The following screenshot shows the tab for the Windows platform (Unix is similar):
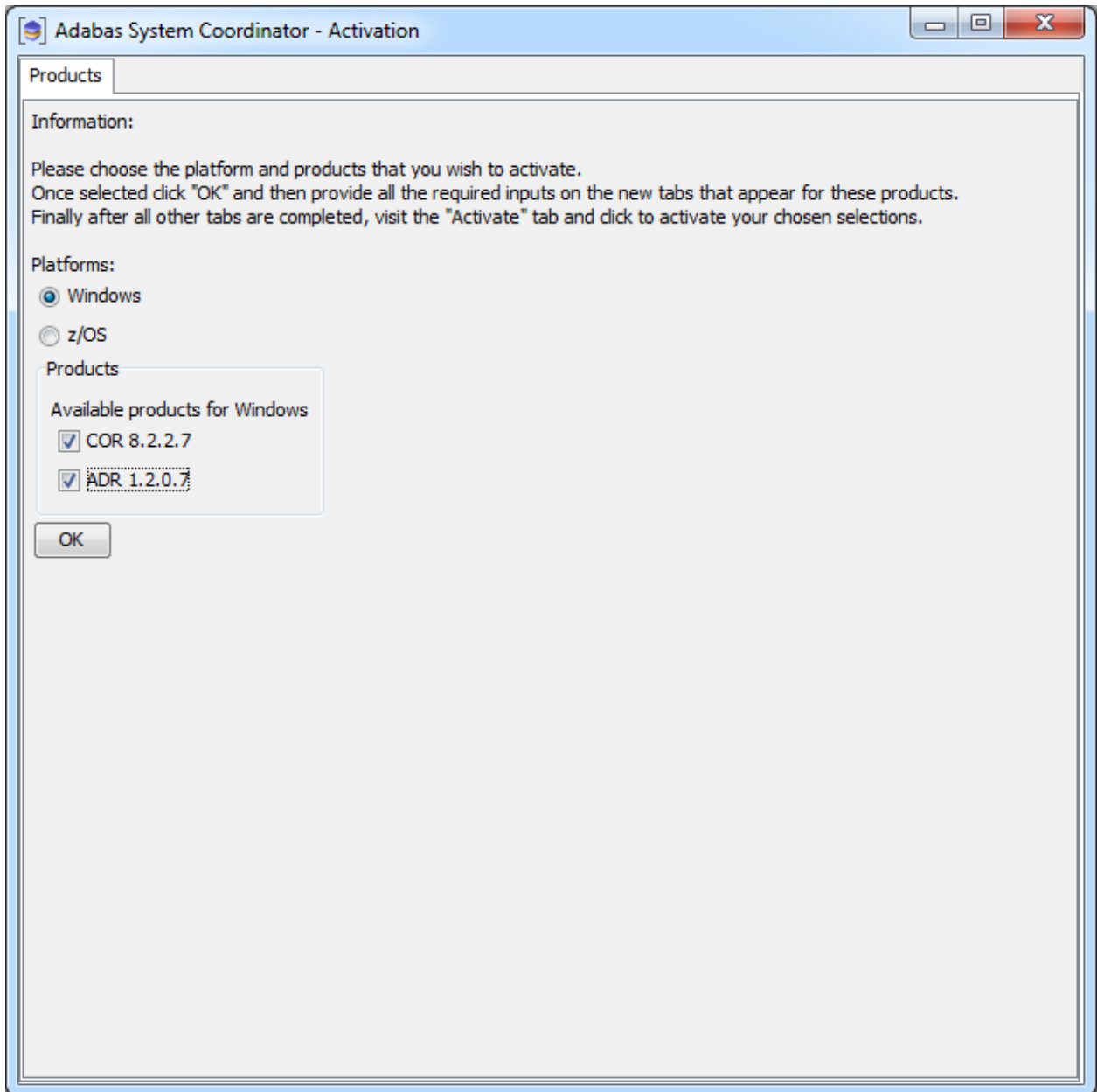
COR (Adabas System Coordinator)

The COR tab requires you to provide information about port numbers, computer names and Repository location.

The following screenshot shows the COR tab:
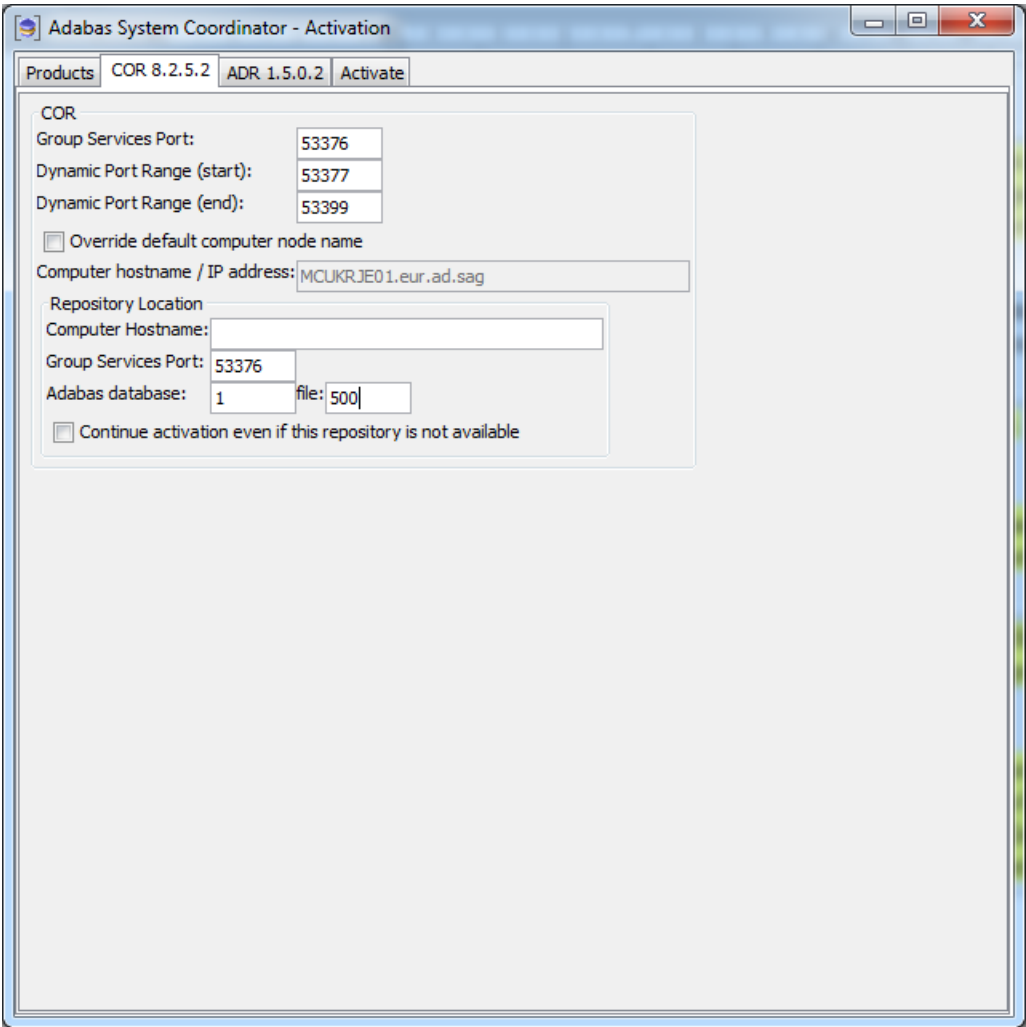
Enter the following information (or accept the defaults):

Field	Description
Group Services Port	System Coordinator uses ports for communication between components. This setting defines the port number to be used for communicating with the System Coordinator daemon residing on the computer defined in the "Computer hostname / IP address" field below. Normally the default setting is used.

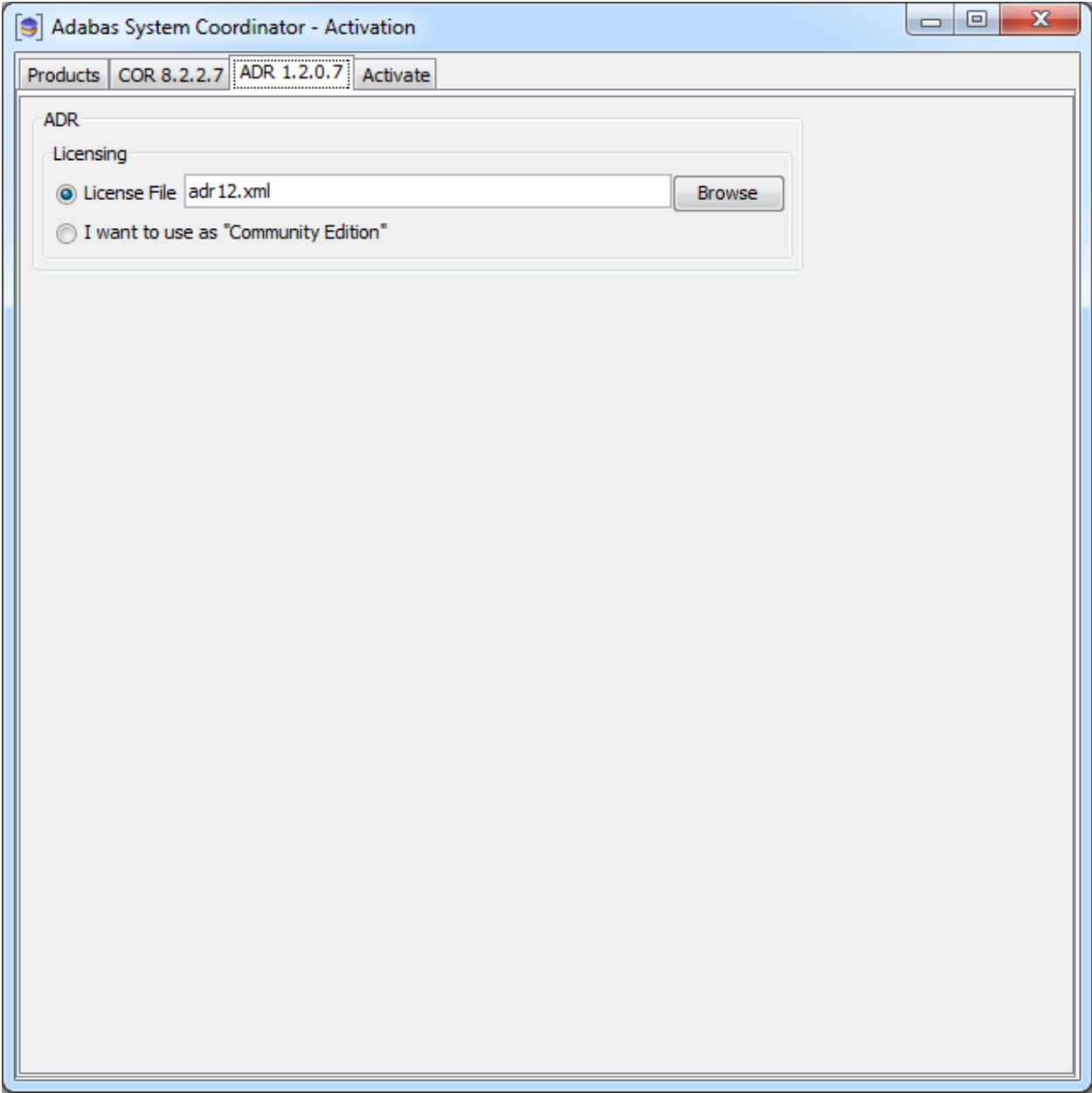| Field	Description
Dynamic Port Range start/end	System Coordinator also uses dynamic ports for communication between components. Normally the default settings are used.
Override default computer name	Sometimes a machine is configured in such a way that the automatically detected computer hostname does not match the one that needs to be used (e.g. multiple network interfaces or multiple IP stacks). In this case you can override the detected computer hostname with a user defined hostname or IP address to be used at runtime. To do this, select the checkbox and enter the value to be used in the (now enabled) "Computer hostname / IP address" field.
Computer hostname / IP address	This is the automatically detected hostname. This is display only unless the "Override default computer node name" checkbox has been selected in which case it can be overridden. The "Group Services Port" number defined above is used to communicate to the System Coordinator daemon residing on the computer name shown here.
Repository Location	
Computer hostname	This is the computer hostname where the Repository is already located or, if this is the first installation, where the Repository is to be located (in which case it should be defined to be the local computer hostname).
Group Services Port	This setting defines the port number to be used for communicating with the System Coordinator daemon residing on the computer defined in the "Computer hostname" field above.
Adabas database / file	This is the database and file number of the Repository. **Note:** The database must exist and be active in order for the activation to be successful. If the file already exists it will be used, if not, it will be automatically created.
Continue activation even if this daemon is not active	By default, when leaving this COR tab, a connection check will be performed using the above Repository location "Computer hostname" and "Group Services Port". When this option is selected, the connection check is not done, enabling the activation to continue without the System Coordinator daemon (residing on the "Computer hostname" and "Group Services Port" defined above), used to access the Repository, being active.

ADR (Data Archiving for Adabas)

Licensing has to be identified in the ADR tab.

The following screenshot shows the ADR tab for the Windows platform:

Enter the following information:
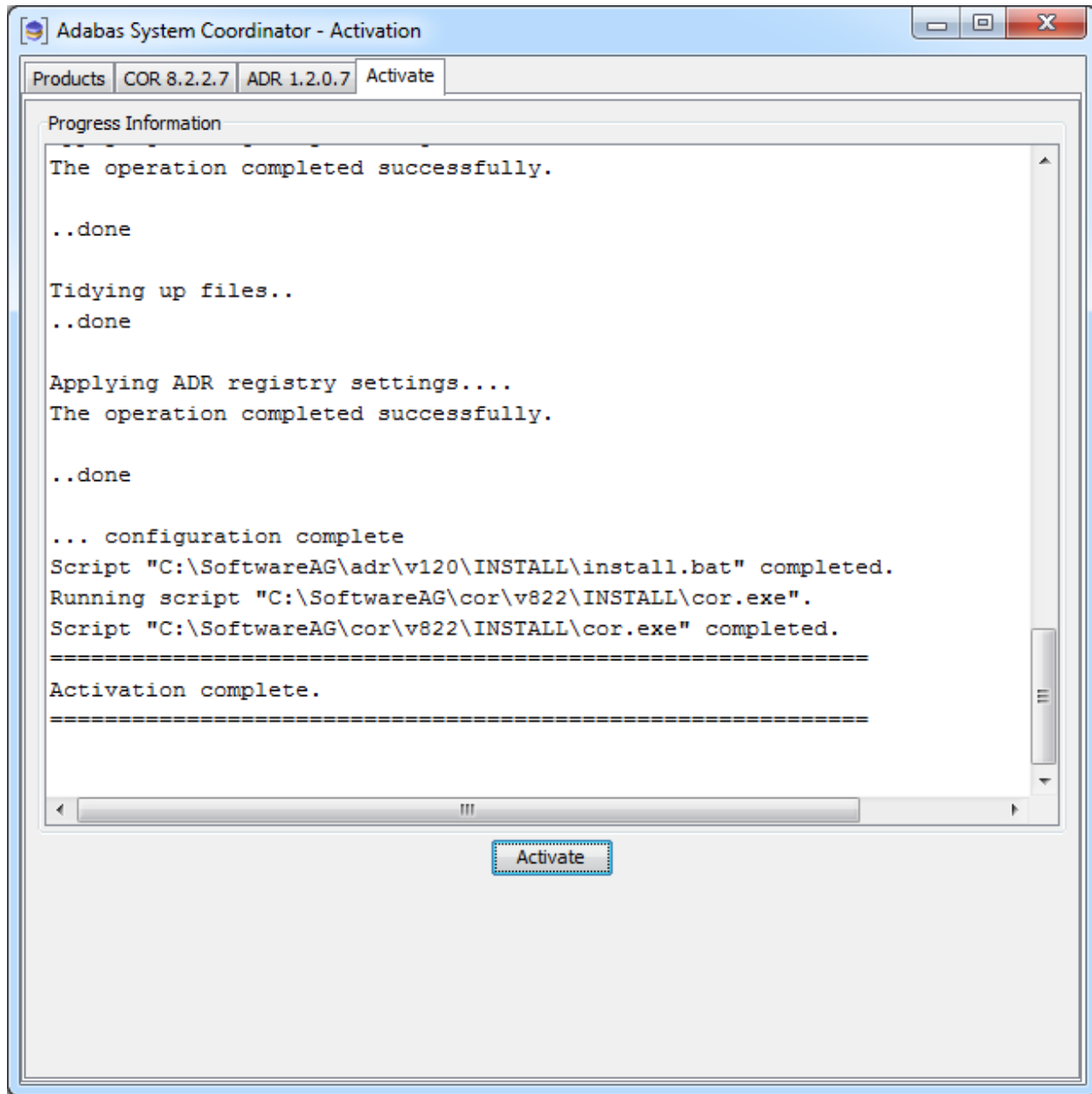
Field	Description
License File	Specify the location of the license key file.
I want to use as "Community Edition"	For Windows only, you can use the software without a license by selecting this option (see *Using Data Archiving for Adabas without a License Key*).

Activate

Once all options have been selected the activate tab shows the empty activation log screen. Start the activation by clicking the Activate button below.
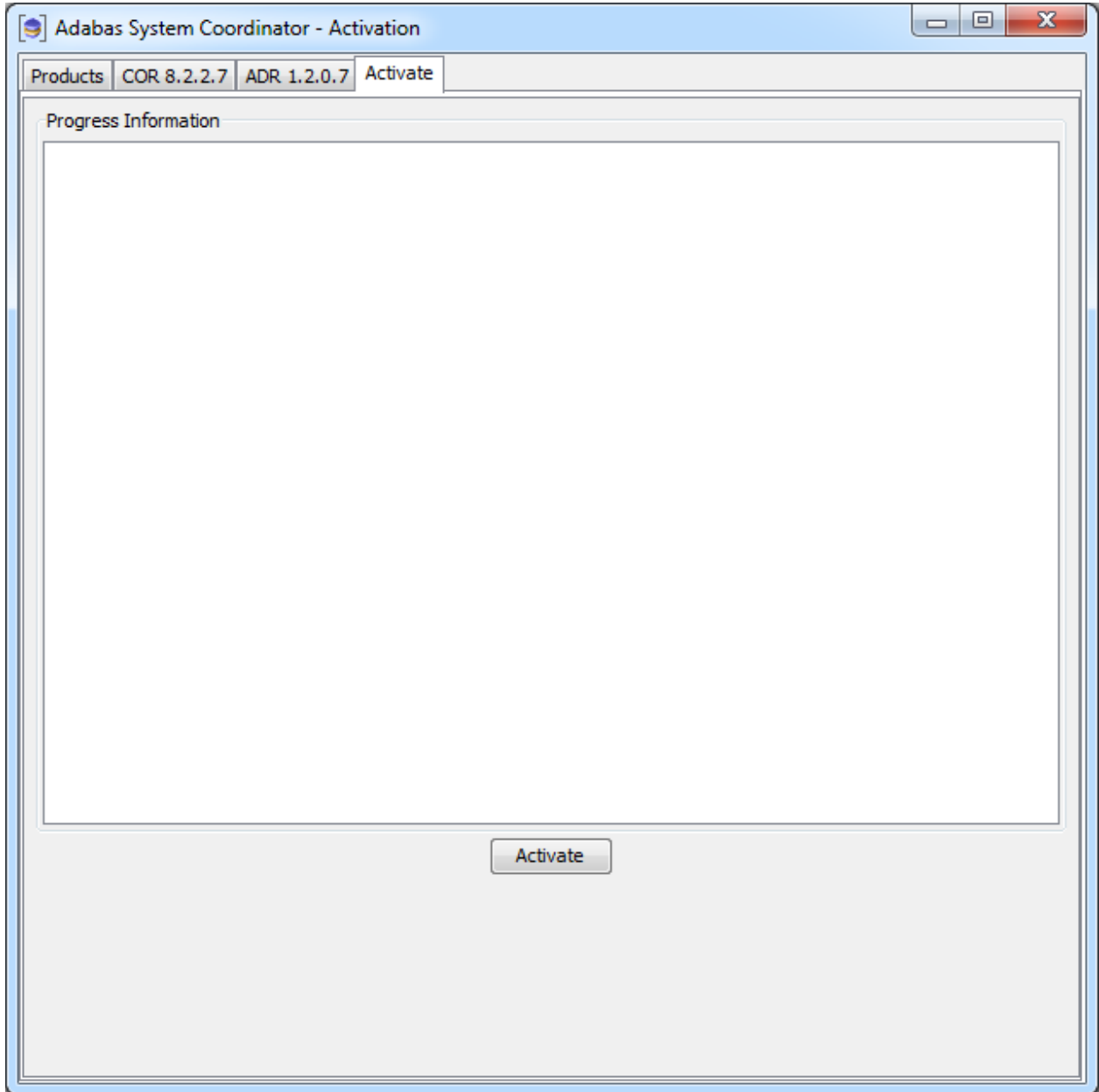
The activation log screen shows progress during execution which may contain important information if a problem occurs (such as permissions failure). Here is a successful activation execution completion:
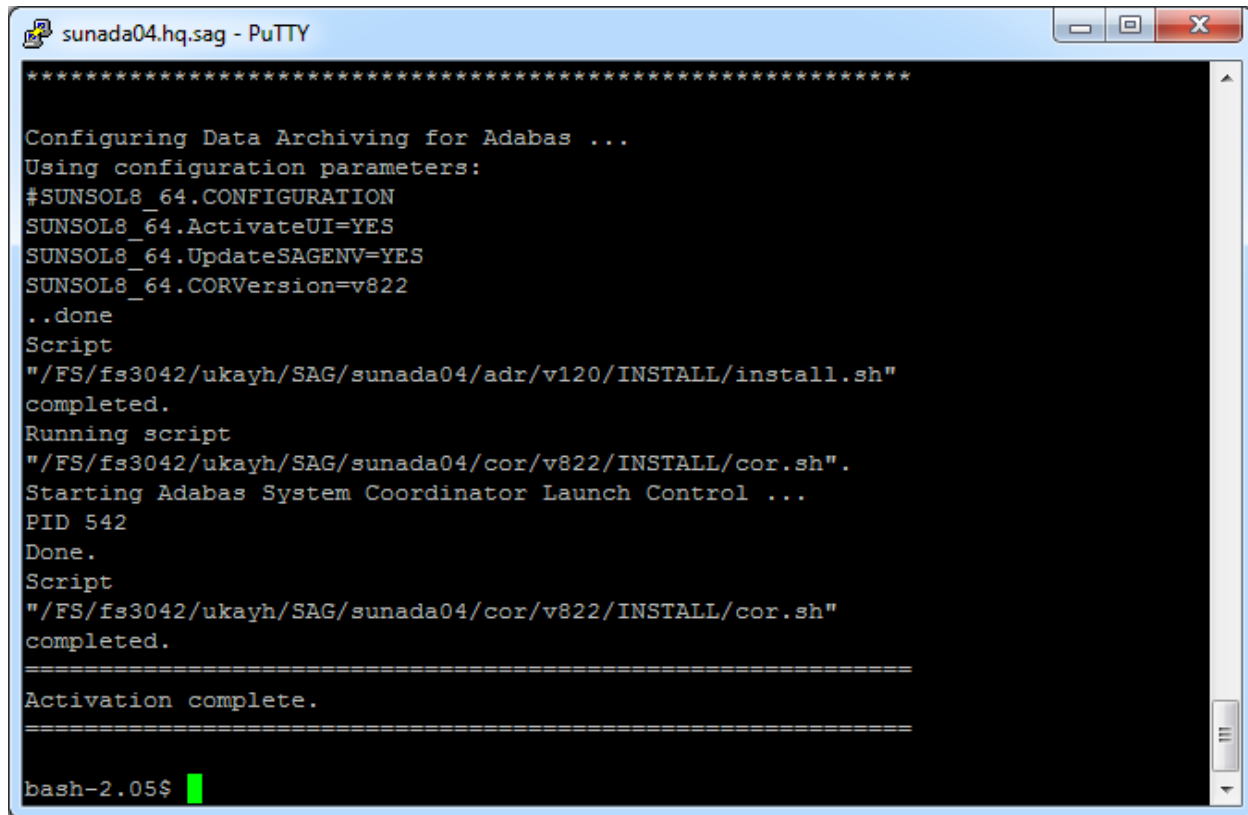
Activation in Unix from the Console

The activation detects when a GUI is unavailable and will use the console mode automatically.

The full activation process is shown in this screenshot:

Starting to Use the Software

≫ **To use the software**

1   Restart the System Management Hub services (for Windows) or daemons (for Unix) in order to detect the newly activated products.

For Windows

■ Restart the "Software AG System Management Hub" and "Software AG Runtime" services:
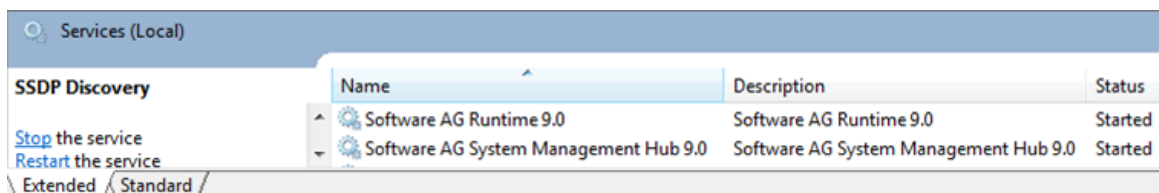
For Unix

- Restart the CTP and InstanceManager daemons by running the following scripts:

  - $SAG/InstanceManager/bin/shutdown.sh

  - $SAG/profiles/CTP/bin/restart.sh

  - $SAG/InstanceManager/bin/startup.sh

For more information on how to do this, refer to the System Management Hub documentation available from the Software AG Documentation Web site.

2   If System Management Hub is available on your local machine, the install process creates a Start Menu entry; an example screen shot follows:
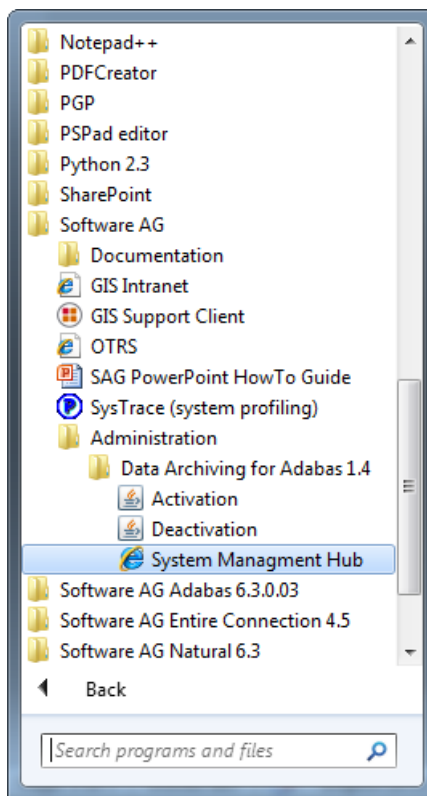
If no Start Menu entry is available, go to your browser and use *http://localhost:10010/smh* (assuming defaults have been used for the System Management Hub install) or use your normal entry to the System Management Hub.

3   Within System Management Hub, expand the tree and select the *Data Archiving for Adabas* node.

4   If only the Administration component was installed, you will be directed immediately to the Add Perspectives window where you will need to define the access path to an appropriate Repository (refer to *Perspectives* for more information).

5   Select the *Services by (group:computer:daemon)* node within the Data Archiving for Adabas navigation tree.

6   You should see an Archiving Service designated by group:computer:daemon where computer is the name of the computer where Data Archiving for Adabas has just been installed. This Archiving Service should show a green traffic light which indicates that the service is active.

This is a screenshot of an example tree structure:
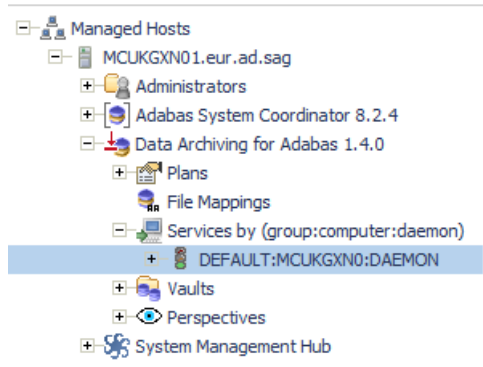
7   Select an Archiving Service and the Archiving Service window will appear. In the example screenshot above there is only a single Archiving Service designated by
DEFAULT:MCUKGXN0:DAEMON

The Archiving Service window displays the following information:

Field	Description
Group Computer Daemon	The name of the Group, Computer and Daemon corresponding to the selected Archiving Service.
Service Status Information	
Status	The run status of the selected Archiving Service.
Install Path	The installed location of the selected Archiving Service.
Version	The version of the selected Archiving Service.
Repository	The location information for the Repository used by the selected Archiving Service.
License Information	
File	The location of the selected Archiving Service's license file.
Status	The status of the selected Archiving Service's license.
Expires	The expiry date of the selected Archiving Service's license.

Verify:

- The green traffic light described earlier should correspond to an Archiving Service status of "Started".

- The License Information status should be "Valid", or, if you are using Data Archiving for Adabas without a license key, "Community Edition".

The installation is now complete. You can begin using Data Archiving for Adabas. See the section Getting Started for further information.

7 Installation Procedure for z/OS

Important Information

The Software AG Installer (download center) has limited support for z/OS at present. However, the installation (and activation) of the z/OS software is downloaded along with all other platforms. Here are some useful points to help you understand the process overall:

- The install image must be downloaded to one of the other supported platforms (Windows or Unix for example).
- There is a special z/OS activation step that has to run in this download platform. This activation step FTPs the z/OS software from the download platform into the z/OS system.

Overview

Data Archiving for Adabas is a fully portable technology. It runs in all primary Unix systems, Windows and z/OS and has only one code-base.

IBM's z/OS has embedded Unix System Services (USS) within it. This is part of the ongoing modernization that has been happening to the operating system in recent years. This means z/OS is able to embrace modern technologies that in the past were considered only for off-host (outside the mainframe).

Data Archiving for Adabas runs within a USS process within z/OS accessing normal z/OS Adabas databases.

Actions Required Before Starting the Install

During the install you must identify the database and file number for the Repository. Please refer to the section **Installation Planning and Preparation** for information on how to manage that part of the installation.

Before the installation you must:

- Create Data Set for ADR Load Library
- Create Site-Based Adabas Link Routine (ADALNKR)

- Some Useful Information about USS (OMVS)

Create Data Set for ADR Load Library

The ADR install requires that you construct a load library with the following specific attributes:

```
DCB=(BLKSIZE=23200,RECFM=U)
```

Example dataset name: *SAG.ADRvrs.LOAD*, where *vrs* is the product version.

Create Site-Based Adabas Link Routine (ADALNKR)

Make a site-based ADALNKR with the appropriate SVC number for your site. Make it available in the z/OS dataset mentioned above. LNKGBLS must be linked in with your ADALNKR in this library.

Make sure ADALNKR is fully maintained.

Here is some example JCL…

```
//LNKRGBLS JOB CLASS=G,MSGCLASS=X
//* ---------------------------------------------------------------- *
//* Assemble LNKGBLS - reentrant                                  - *
//* ---------------------------------------------------------------- *
//GBLSWLS EXEC ASMACL,
//       PARM.C='ASA,NODECK,OBJECT,XREF(SHORT),TERM',
//       PARM.L='XREF,LIST(ALL),LET,MAP,NCAL'
//C.SYSLIB     DD DISP=SHR,DSN=SAG.ADAvrs.SRCE
//            DD DSN=SYS1.MACLIB,DISP=SHR
//            DD DSN=SYS1.MODGEN,DISP=SHR
//C.SYSPRINT   DD SYSOUT=*
//C.SYSTERM    DD SYSOUT=*
//C.SYSIN      DD *
*
*      Global definitions for the Adabas link routine
*      for Batch/TSO.
*      Modify this sample for your site.
*      Then assemble and link it and include the
*      resulting module with ADALNK8 to create the ADALNKR
*      for use with ADR in z/OS.
*
        LGBLSET LOGID=1,         DEFAULT ADABAS DBID             X
              SVCNO=252,         DEFAULT ADABAS SVC NUMBER       X
              OPSYS=ZOS,         Operating system                X
              COR=NO,            Activate System Coordinator     X
              TPMON=BAT,         Batch/TSO                       X
              RENT=YES,          Non-reentrant for Batch/TSO     X
              GEN=CSECT,         Generate CSECT for load module  X
              GBLNAME=LNKGBLS,   DEFAULT GLOBALS MODULE NAME     X
```

```
                USERX1=NO,          Link user exit 1 YES/NO          X
                LX1NAME=UEXITB,     User exit 1 module name          X
                USERX2=NO,          Link user exit 2 YES/NO          X
                LX2NAME=UEXITA,     User exit 2 module name          X
                UES=YES             Enable UES
*
         END
//L.SYSPRINT   DD SYSOUT=*
//L.SYSLMOD    DD DISP=SHR,DSN=SAG.ADR111.LOAD
//L.SYSIN    DD  *
 MODE AMODE(31),RMODE(ANY)
 ENTRY LNKGBLS                 Default entry name
 NAME LNKGBLS(R)               DEFAULT TABLE NAME
//*
//* ---------------------------------------------------------------- *
//* LINK ADALNKR with LNKGBLS                                      - *
//* ---------------------------------------------------------------- *
//LINKA8Y EXEC PGM=IEWL,
//       PARM='LET,LIST(ALL),MAP,XREF,REUS=RENT',REGION=4M
//SYSPRINT     DD  SYSOUT=*
//SYSUT1       DD  DSN=&&SYSUT1,SPACE=(1024,(120,120),,,ROUND),UNIT=VIO
//ADALIB       DD  DISP=SHR,DSN=SAG.ADAvrs.LOAD
//SYSLMOD      DD  DISP=SHR,DSN=SAG.ADRvrs.LOAD
//SYSLIN       DD  *
  MODE AMODE(31),RMODE(ANY)
  INCLUDE ADALIB(ADALNKR8)              /* V8 LINK ROUTINE */
  INCLUDE SYSLMOD(LNKGBLS)
  INCLUDE ADALIB(LNKUES)
  INCLUDE ADALIB(ASC2EBC)
  INCLUDE ADALIB(EBC2ASC)
  ENTRY ADABAS
  NAME ADALNKR(R)
/*
//
```

Some Useful Information about USS (OMVS)

- Activating OMVS (USS: Unix System Services) in z/OS
- Getting into OMVS via TSO
- Getting into OMVS via Telnet

- Entering Unix Commands

Activating OMVS (USS: Unix System Services) in z/OS

OMVS is usually available within z/OS by default because many other software components from other vendors (including IBM) use it. If it is not available, you can use the following information to make it available:

- When z/OS is first installed and configured a RACF (or equivalent) basic user called IBMUSER is defined. The IBMUSER is automatically defined with an OMVS segment. It is an OMVS segment that enables a user to use OMVS (USS).

- Therefore, your RACF or equivalent systems such as ACF2, TOP SECRET etc. (please consult the appropriate documentation of these other systems for similar information) administrator needs to add an OMVS segment to all users who are to use OMVS, including the person who will be doing the ADR install.

- An OMVS segment contains the following:
  - UID.

    A numeric UID like in any other Unix system. This UID represents one sharable Unix that one or more userids may be able to use. There may be many more OMVS systems (UID) defined for your system.

  - Home directory.

    Something like /u/nat/xyz

  - A shell program.

    This is essentially Unix (the korn shell), often called "ksh" in the Unix community. An example of this may be: /bin/sh

  - Maximum size.

    This is akin to address-space size. It may be allowed to default. It is not unusual for a Unix OMVS to be 128-512 meg.

- In RACF the command to add such a segment would be…

```
ALU <userid>  OMVS (UID(1234) HOME ('/u/nat/xyz') PROGRAM ('/bin/sh') ↵
```

This command needs to be entered using a tool that supports mixed case (such as TSO IS-PF/PDF/Option 6).

- Next, a Unix group should be assigned to the <userid>. Again, this is a numeric and is referred to as "GID". A normal RACF "connect" command can be used to do this.
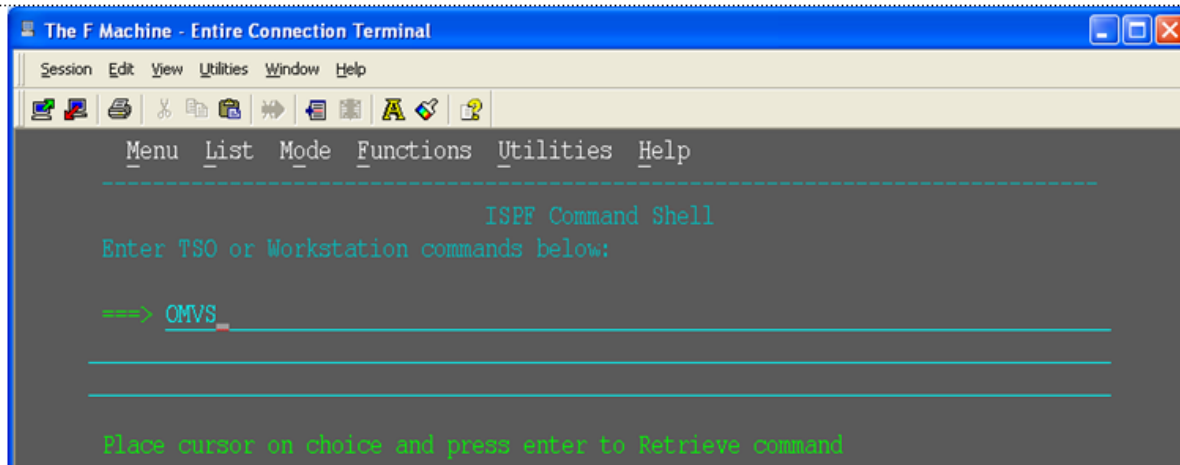
  A GID can be assigned to a RACF group with…

```
ALG <group> OMVS(GID(nn))
```

■ The home directory needs to be created in the filesystem (HFS, ZFS etc).

Getting into OMVS via TSO

Once the permissions, home directory etc. are acquired, there are two typical ways to get into OMVS. One is through TSO. Get into TSO and issue the OMVS command and press Enter.

Getting into OMVS via Telnet

You can get to OMVS like any other Unix system from outside z/OS using telnet. Enter the following at your workstation:

```
telnet <computer> <port>
```

This will enable access into the OMVS Unix at the same point as entering "OMVS" in TSO.

Entering Unix Commands

Once in OMVS, you will be able to use all the usual Unix directives:

Directive	Description
cd	Change directory
mkdir	Make directory
chmod	Set protection
chown	Set owner
chgrp	Change group
ls -la	Display directory contents

Installation Preparation Checklist

There are a number of things that need to be done prior to installing. These have been covered in the preceding sections and are summarized here as a checklist to help you ensure the installation is successful:

Step	Description	Notes

1	Check the system name and hostname of the z/OS machine where the software is being installed:
	
	■ the system name and hostname must be the same
	
	■ the hostname must resolve to the correct IP address
		Use the `uname` command to acquire the system name:
		
		`da3f:saguser> uname -a`
		`OS/390 DA3F 20.00 03 2098`
		
		Use the `onslookup` command with the system name to acquire the hostname and IP address:
		
		`da3f:saguser> onslookup DA3F`
		`Defaulting to nslookup version 4`
		`Starting nslookup version 4`
		`Server:  daedns.ad.sag`
		`Address:  10.20.xxx.xxx`
		
		`Name:    DA3F.hq.sag`
		`Address:  10.20.xxx.xxx`

2	Check the amount of free disk space available in the directory in the USS filesystem where the software is being installed.	Use the `df` command to see the amount of free space available:

Step	Description	Notes
	Minimum disk space: 300 MB	```da3f:saguser> df -k ↵ /opt/softwareag```
3	Check the amount of memory (region size) available to a process running in the USS environment. **Note:** If you use USS via TSO (OMVS) then the size of your TSO session governs the size of the USS session. Minimum memory: 64 MB	Minimum memory: 64 MB
4	User ID and password for the USS account that will be used to install and run the software. Make sure that the account has read/write and execute permissions to the installation directory in the USS filesystem (from Step 2 above).	```User ID: saguser Password: ******** Permissions:```
5	Check that the USS account (from Step 4 above) has the correct z/OS security permissions for the dataset where the ADALNKR/LNKGBLS were prepared earlier. **Note:** The load library dataset must not be in use by any other process.	```Dataset: SAG.ADRvr1.LOAD Permissions:```

6	Adabas database and file number for the Repository.
	
	This can be a file that will be created or replaced as part of the installation, or it can be an existing file shared by another computer already running Data Archiving for Adabas.
	
	If the file is being shared by another computer, the hostname of the computer and its Group Services port number will be required (default 53376).
		```Database: 10 File number: 120```
		
		Choose one of:
		
		■ create
		
		■ replace
		
		■ share
		
		When choosing share you will be prompted for:
		
		```Hostname: sunpcc10.hq.sag Portnumber: 53376```

Step	Description	Notes
7	Download location. This is the non-z/OS computer where you either download directly or placed the software distribution image. **Note:** Installations are much faster if you use a local disk on the download computer.	Example: `C:\SoftwareAG\Temp`

8	Details for the FTP upload of the z/OS software because the software must be uploaded to z/OS. The following information is needed:
	
	■ Hostname of z/OS (from 1 above)
	
	■ User ID (from 4 above)
	
	■ Password (from 4 above)
	
	■ Temporary target upload directory
	
	Software AG recommends the target directory for the upload is different to the location where the software will finally be installed, since the FTP is only a temporary step. Typically, this is a temporary directory in the user's home directory.
	
	Check the amount of free disk space available in the target directory.
	
	Minimum upload disk space: 30MB
		`Hostname: da3f.hq.sag`
		`User ID: saguser`
		`Password: ********`
		`Directory: /u/saguser/tmp`
		
		The `df` command shows the amount of free space available:
		
		`da3f:saguser> df -k ↵`
		`/u/saguser/tmp`

Installation

The components of Data Archiving for Adabas are installed using the Software AG Installer from the Software AG download center. Please refer to the Data Archiving for Adabas Software AG Installer section **Component Installation** for information on how to perform this part of the installation.

Activation

Once the Software AG Installer has prepared the install download image, or you have copied the download install image to the computer where the activation will be performed, you must now perform the z/OS activation. For information on how to start the activation on your chosen off-host platform (Windows or Unix), refer to *Starting the Activation* in the *Activation* section of the *Installation Procedure for Windows and Unix*.
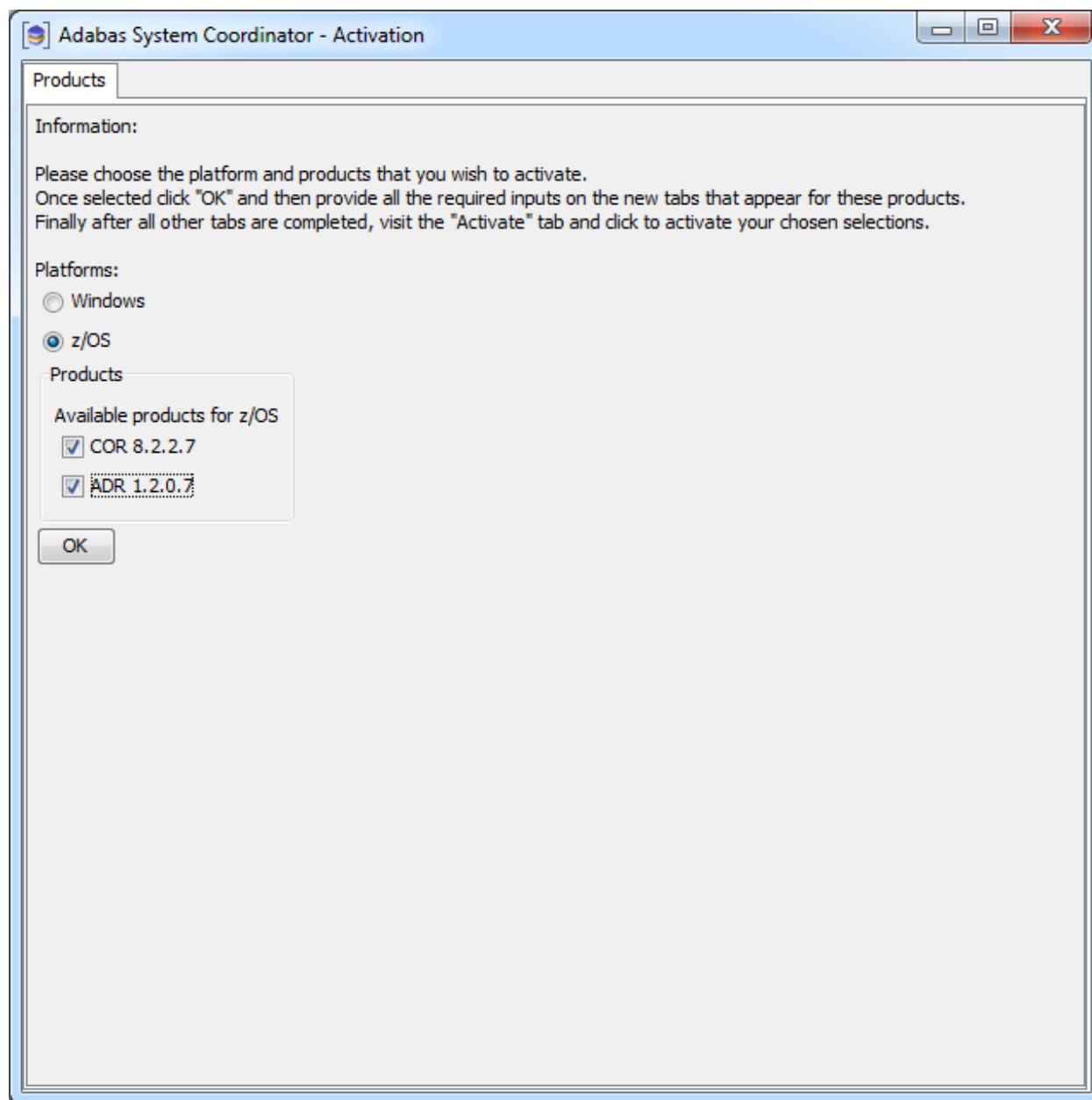
> **Note:** Windows Server editions may require that you disable the windows firewall to perform the z/OS FTP install. This is because popup notifications are disabled by default so you do not get the dialog asking if you want to allow activation network access that you would see on other Windows platforms.

Once you start the activation process, you are required to progress through a number of activation tabs:

- Products
- COR (Adabas System Coordinator)
- ADR (Data Archiving for Adabas)
- FTP Parameters
- Activate

Products

The first tab in the activation requires that you select the platform that you are activating and the products too. Select z/OS as the platform and COR and ADR as the products:

COR (Adabas System Coordinator)

The COR tab requires you to provide information about port numbers, computer names and Repository location.

The following screenshot shows an example of the COR tab:

Field	Description
Group Services Port	System Coordinator uses ports for communication between components. This setting defines the port number to be used for communicating with the System Coordinator daemon residing on the computer defined in the "Computer hostname / IP address" field below. Normally the default setting is used.
Dynamic Port Range start/end	System Coordinator also uses dynamic ports for communication between components. Normally the default settings are used.

Field	Description
Override default computer node name	Sometimes a machine is configured in such a way that the automatically detected computer hostname does not match the one that needs to be used (e.g. multiple network interfaces or multiple IP stacks). In this case you can override the detected computer hostname with a user defined hostname or IP address to be used at runtime. To do this, select the checkbox and enter the value to be used in the (now enabled) "Computer hostname / IP address" field.
Computer hostname / IP address	This is the automatically detected hostname. This is display only unless the "Override default computer node name" checkbox has been selected in which case it can be overridden. The "Group Services Port" number defined above is used to communicate to the System Coordinator daemon residing on the computer name shown here.
Repository Location	
Computer Hostname	This is the computer hostname where the Repository is already located or, if this is the first installation, where the Repository is to be located (in which case it should be defined to be the local computer hostname).
Group Services Port	This setting defines the port number to be used for communicating with the System Coordinator daemon residing on the computer defined in the "Computer hostname" field above.
Adabas database / file	This is the database and file number of the Repository. **Note:** The database must exist and be active in order for the activation to be successful. If the file already exists it will be used, if not, it will be automatically created.
Continue activation even if this daemon is not active	By default, when leaving this COR tab, a connection check will be performed using the above Repository location "Computer hostname" and "Group Services Port". When this option is selected, the connection check is not done, enabling the activation to continue without the System Coordinator daemon (residing on the"Computer hostname" and "Group Services Port" defined above), used to access the Repository, being active.
Dataset where prepared ADALNKR (etc) resides	You must identify the z/OS dataset where you previously created your site-based Adabas link routine ADALNKR earlier. Refer to *Create Data Set for ADR Load Library*.
JCL (for dynamic activation submission)	You must edit the model JCL so that it is valid for your site, but do not modify the <USER_PLACEHOLDER> or <COMMAND_PLACEHOLDER> because this is dynamically replaced at runtime.

ADR (Data Archiving for Adabas)

The ADR tab requires you to adjust the dynamic submission JCL to run correctly at your site, but do not modify the <USER_PLACEHOLDER> or <COMMAND_PLACEHOLDER> because this is dynamically replaced at runtime.
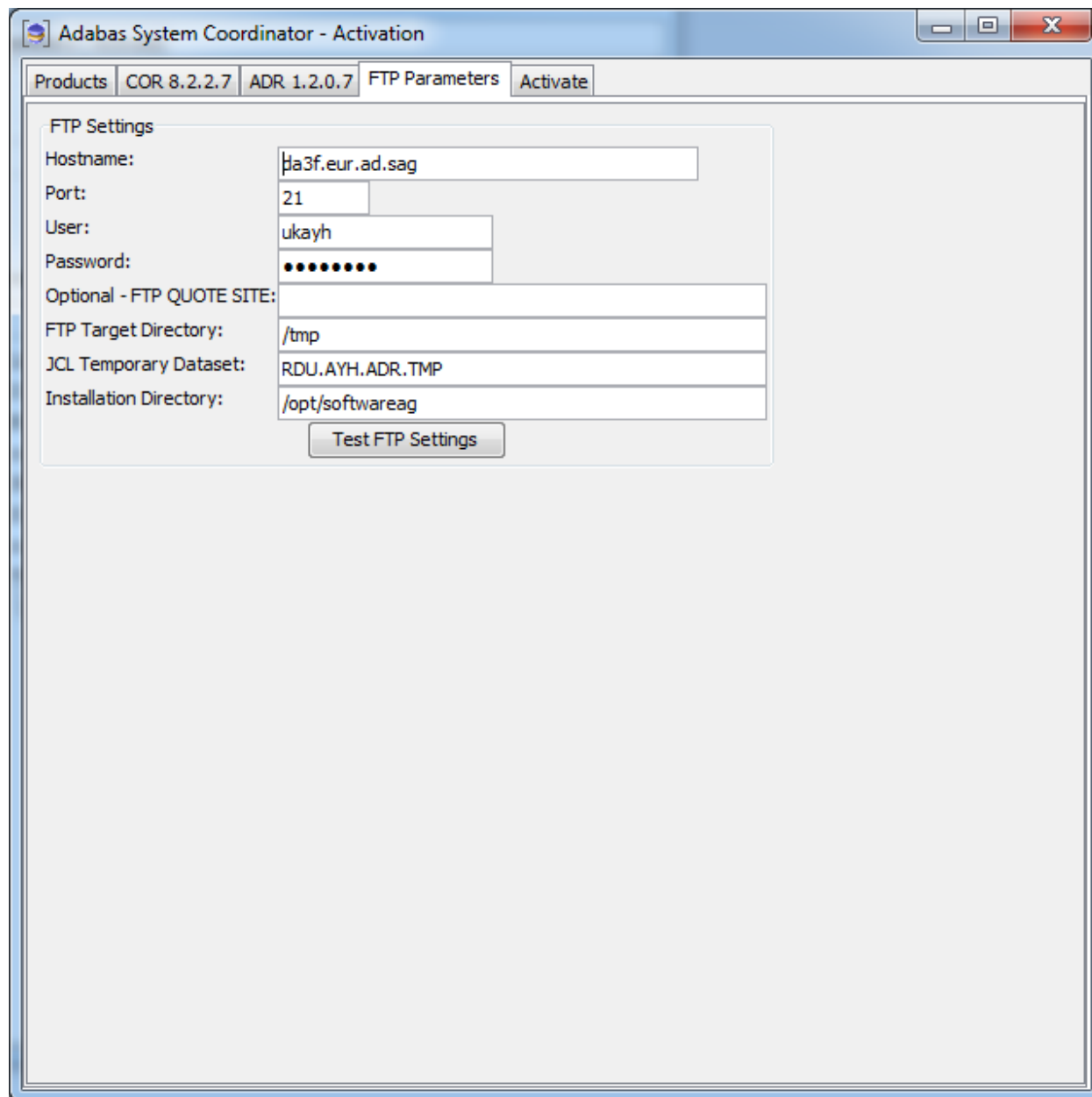
The following screenshot shows an example of the ADR tab:
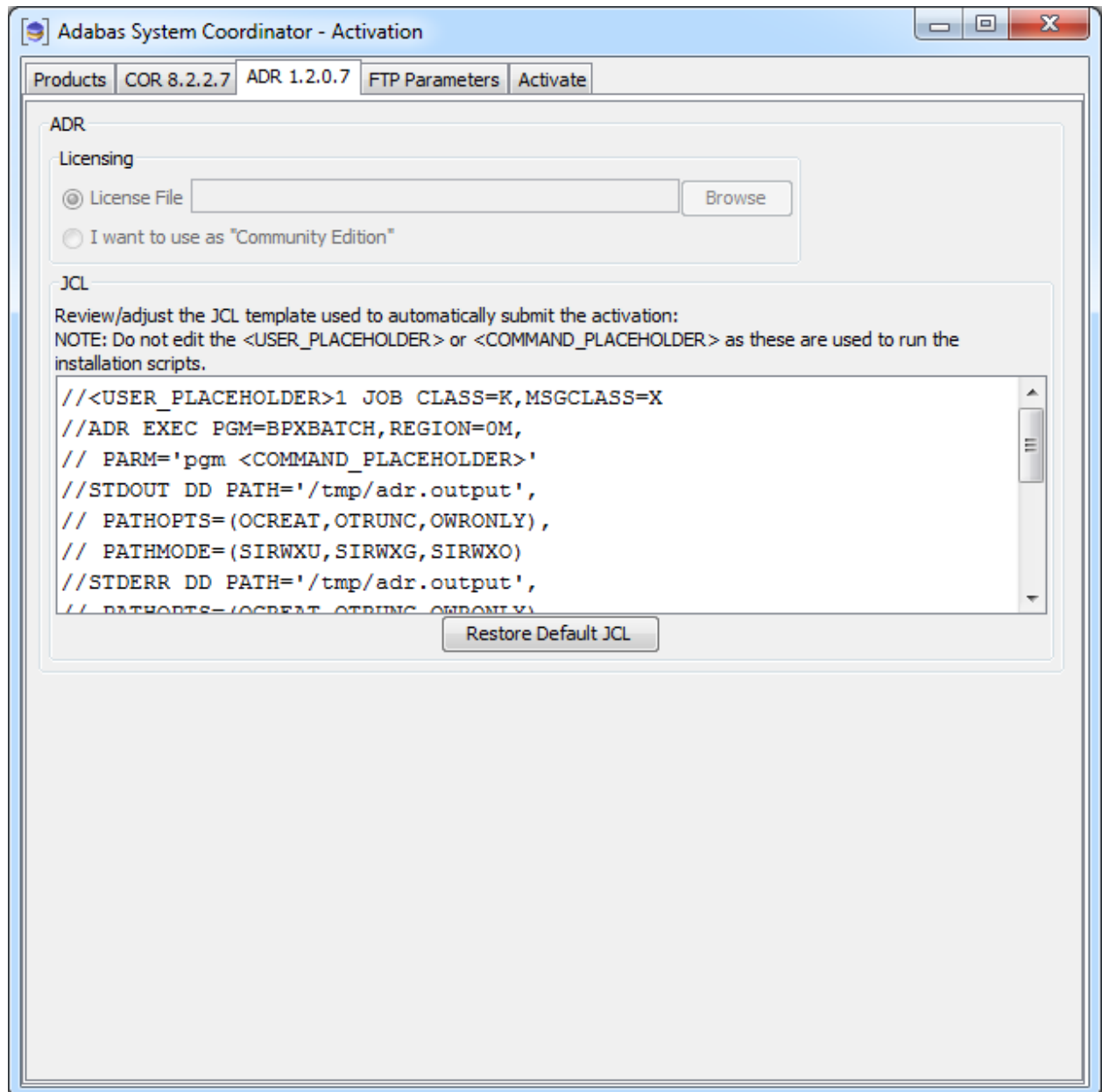
FTP Parameters

TThe FTP Parameters tab requires you to define your FTP information:

The following screenshot shows an example of the FTP Parameters tab:

Field	Description
Hostname	This is the name of the z/OS system where the activation is to take place.
Port	This is the z/OS FTP port number, usually 21.
User	This is the z/OS logon id for RACF, ACF2, or TOP Secret (as appropriate) to be used.
Password	This is the password corresponding to the logon id specified for 'User' above.
Optional - FTP QUOTE SITE	Here you can (optionally) specify any extra commands that your FTP server configuration may require. For example, you may need to stop automatic translation by specifying your systems encodings e.g. "ENCODING=SBCS SBDATACONN (IBM-1047, IBM-1252)". In most cases this is not required.
FTP Target Directory	The directory location where you wish to initially load the install files. **Note:** This is an intermediate destination. The final installation location is determined by the Installation Directory below.
JCL Temporary dataset	A temporary z/OS dataset is required to dynamically construct the activation JCL. This must be a file that the logon id specified for 'User' above has modify permissions.
Installation Directory	The final location where the software will reside and run from.
Test FTP Settings	This button will perform only basic checking of the information supplied.

Activate

Once all options have been selected the next thing to do is to select the activate tab so the activation log screen appears. Start the activation by clicking the Activate button below.
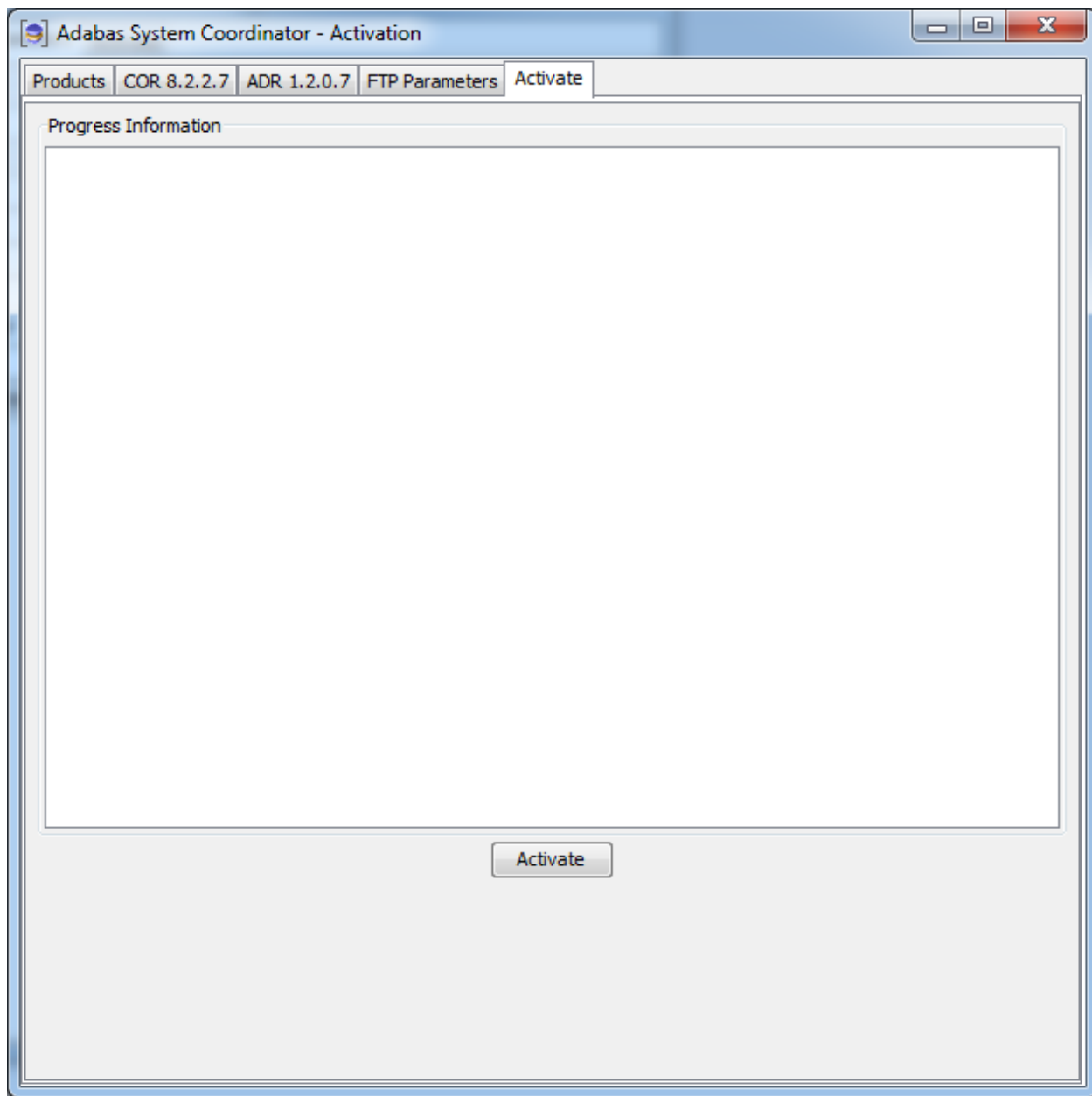
The activation log screen shows progress during execution which may contain important information if a problem occurs (such as permissions failure). Here is a successful activation execution completion:
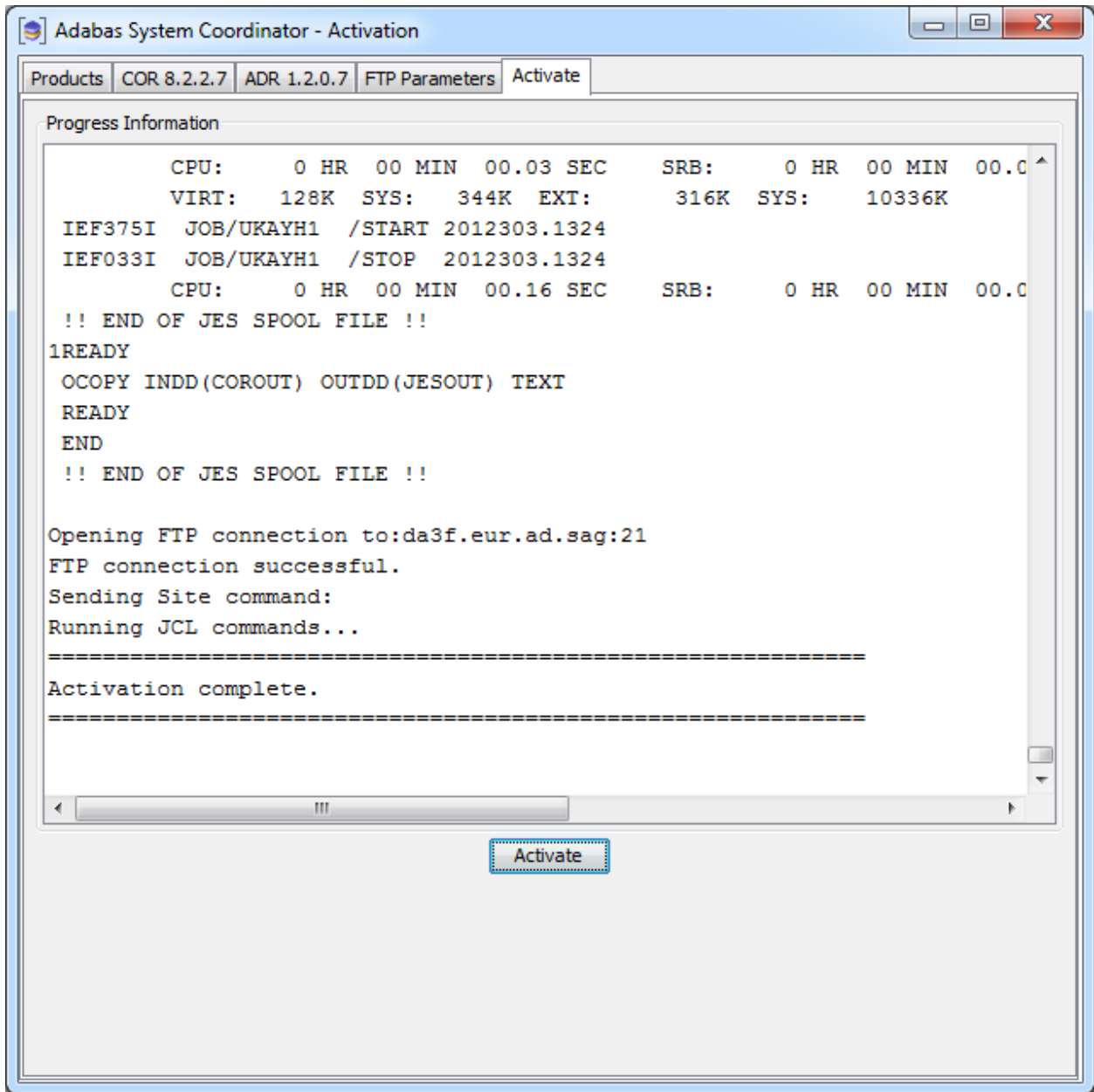
Workload Management

This section describes the default job name prefixes used for the various components of Data Archiving for Adabas and Adabas System Coordinator. This information may be useful for controlling the processing resources of these jobs.

The _BPX_JOBNAME environment variable is used to control the job name prefix used for the Data Archiving for Adabas and Adabas System Coordinator tasks. By default, the job name prefix will be set to match the program name.

For Adabas System Coordinator:

Launch Control:	CORLC*
Daemon:	CORD*

For Data Archiving for Adabas:

Extractor/Accumulator:	ADRDRV*

The job name prefix can be changed by setting the `_BPX_JOBNAME` environment variable in the Unix System Services environment before starting Adabas System Coordinator, for example by modifying the `$SAG/cor/v826/INSTALL/corenv` script to include the following lines:

```
_BPX_JOBNAME=ABC
  export _BPX_JOBNAME
```

This will set the job name prefix for all the above tasks (Launch Control, Daemon and Extractor/Accumulator) to ABC*.

When starting Adabas System Coordinator in batch, the JCL can set the `_BPX_JOBNAME` environment variable in the `PARM=` parameter or `STDENV DD` card statement:

PARM= example:

```
//COR826 JOB CLASS=K,MSGCLASS=X
//RUNCOR EXEC PGM=BPXBATCH,REGION=0M,
//       PARM=('pgm /opt/softwareag/sag/cor/v826/INSTALL/cor.sh start' ↵
'ENVAR("_BPX_JOBNAME=ABC"'))
//STDOUT DD PATH='/opt/softwareag/sag/cor/v826/bin/stdout',
// PATHOPTS=(OCREAT,OAPPEND,OWRONLY),
// PATHMODE=(SIRUSR,SIWUSR,SIRGRP,SIROTH)
//STDERR DD PATH='/opt/softwareag/sag/cor/v826/bin/stderr',
// PATHOPTS=(OCREAT,OAPPEND,OWRONLY),
// PATHMODE=(SIRUSR,SIWUSR,SIRGRP,SIROTH)
//STDIN  DD PATH='/dev/null',
// PATHOPTS=(ORDONLY)
//STDENV DD *
//
```

STDENV example:

```
//COR826 JOB CLASS=K,MSGCLASS=X
//RUNCOR EXEC PGM=BPXBATCH,REGION=0M,
//        PARM=('pgm /opt/softwareag/sag/cor/v826/INSTALL/cor.sh start')
//STDOUT DD PATH='/opt/softwareag/sag/cor/v826/bin/stdout',
// PATHOPTS=(OCREAT,OAPPEND,OWRONLY),
// PATHMODE=(SIRUSR,SIWUSR,SIRGRP,SIROTH)
//STDERR DD PATH='/opt/softwareag/sag/cor/v826/bin/stderr',
// PATHOPTS=(OCREAT,OAPPEND,OWRONLY),
// PATHMODE=(SIRUSR,SIWUSR,SIRGRP,SIROTH)
//STDIN  DD PATH='/dev/null',
// PATHOPTS=(ORDONLY)
//STDENV DD *
_BPX_JOBNAME=ABC
/*
//
```

Administration

Data Archiving for Adabas is administered using Software AG's cross-product and cross-platform product management framework System Management Hub (SMH).

In order to do this, the Administration component of Data Archiving for Adabas must be installed on a Windows or Unix machine (this does not have to be the same machine which performed the z/OS activation).

Refer to *Installation Procedure for Windows and Unix* for instructions on how to perform the Administration component installation. At the end of this installation process, the section *Starting to Use the Software* describes how to sign on to the System Management Hub and check that the installation is complete.

You can now begin using Data Archiving for Adabas. See the section *Getting Started* for further information.

8   Verifying the Installation

At the end of the installation process, you should verify that the installation has been successful.

Refer to **Starting to Use the Software** which describes this process of verification.

9 Applying the Latest Maintenance

After successfully verifying the installation, refer to Software AG's **Empower** web site and apply any available maintenance for this installed version of Data Archiving for Adabas.

10 Deactivating and Uninstalling

This chapter explains the deactivation process for shutting down or uninstalling the Data Archiving for Adabas components.

Shutdown

1   Start the shutdown deactivation process as follows:

   For Unix

   Run the deactivation script ./deactivation.sh from the installation library $SAG/cor/ v*vrs*/IN-STALL where *vrs* is the product version.
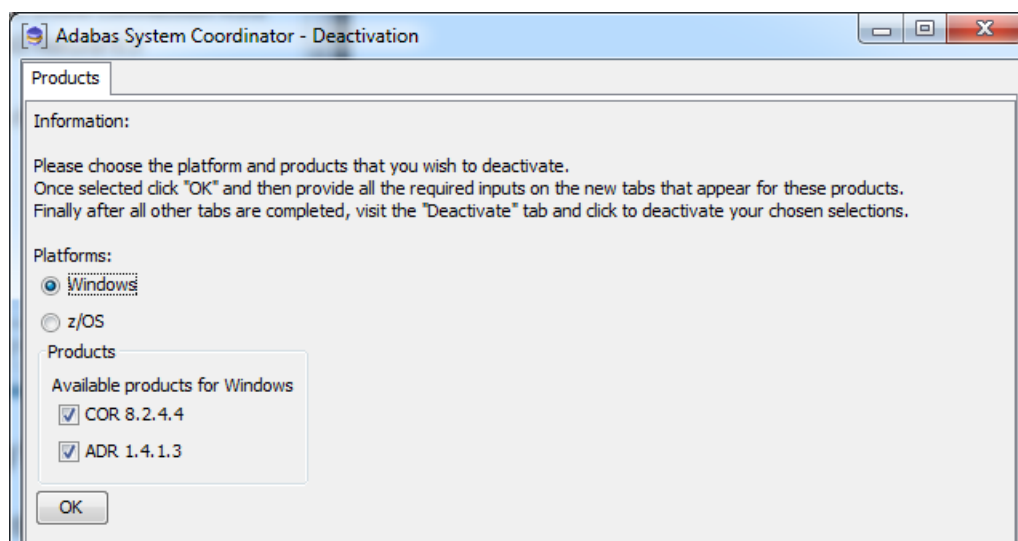
   > 📄   **Note:** In Unix, if the deactivation detects that a User Interface is not available, then it will automatically use the console mode. Refer to *Deactivating and Uninstalling from the Console in Unix*.

   For Windows

   The Installer creates a Start Menu entry for deactivation (as it does for activation). Refer to the *Activation* section of the *Installation Procedure for Windows and Unix* for an example screenshot.

2   Select the Platform and Products.

   Once started, the shutdown deactivation process will present a panel screen prompting you to select the platform and products; an example of the panel follows:

The above example indicates you wish to perform a deactivation process on your Windows platform for the Adabas System Coordinator (COR) and Data Archiving for Adabas (ADR) products (under normal situations both these products should be selected). Click OK to continue.

3   Progress through the shutdown deactivation panels.

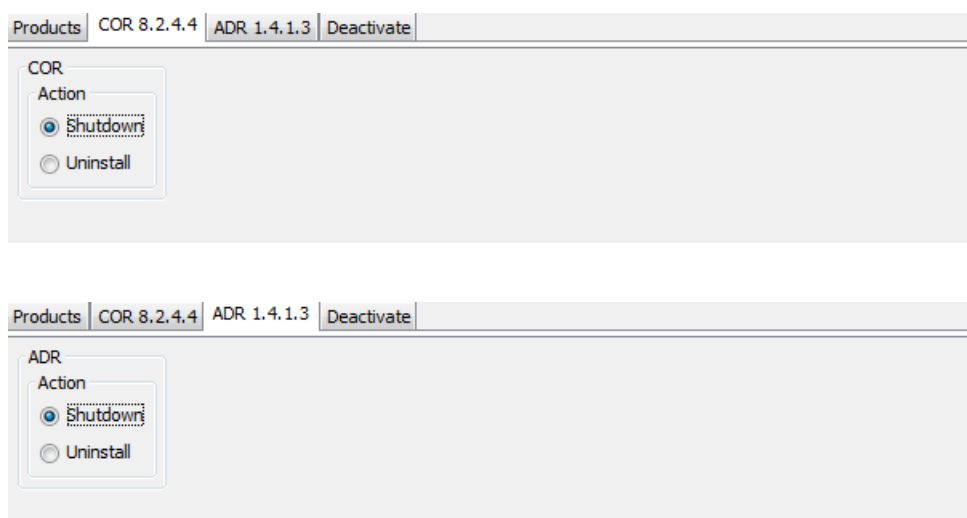Using the tabs at the top of each panel, you can progress through each panel. The following screens show the panel sequence for a shutdown deactivation process on a Windows platform for the Adabas System Coordinator (COR) and Data Archiving for Adabas (ADR) products.

Products	COR 8.2.4.4	ADR 1.4.1.3	Deactivate

COR
Action
⦿ Shutdown
◯ Uninstall

Products	COR 8.2.4.4	ADR 1.4.1.3	Deactivate

ADR
Action
⦿ Shutdown
◯ Uninstall

> **Note:** When progressing through the panels for a shutdown deactivation process on a z/OS platform, additional panels (and corresponding tabs) may be presented requesting additional information (for example, JCL and FTP parameters). This same information would have been requested at product Activation time, refer to the *Activation* section of the *Installation Procedure for z/OS* for an explanation regarding such information.

4   Confirm shutdown deactivation.

The final 'Deactivate' panel (not shown) allows you to confirm your deactivation request (by clicking on the Deactivation button) and then follow its progress in the panel window.

Uninstall

> **Note:** Any archived data written to Vault(s) within your installation directory will not be deleted during this uninstall process and will be preserved even if you subsequently reinstall into the same directory. However, we do recommend that your archived data should be maintained in Vaults outside of the installation directory.

≫ **To uninstall Data Archiving for Adabas**

1   Start the uninstall deactivation process as follows:

   For Unix

   Run the deactivation script ./deactivation.sh from the installation library $SAG/cor/*vvrs*/IN-STALL where *vrs* is the product version.

   > **Note:** In Unix, if the deactivation detects that a User Interface is not available then it will automatically use the console mode. Refer to *Deactivating and Uninstalling from the Console in Unix* and then continue to complete the uninstall using the Software AG Uninstaller (see below).

   For Windows

   The Installer creates a Start Menu entry for deactivation (as it does for activation). Refer to the *Activation* section of the *Installation Procedure for Windows and Unix* for an example screenshot.

2   Select the Platform and Products.

   Once started, the uninstall deactivation process will present a panel screen prompting you to select the platform and products; an example of the panel follows:
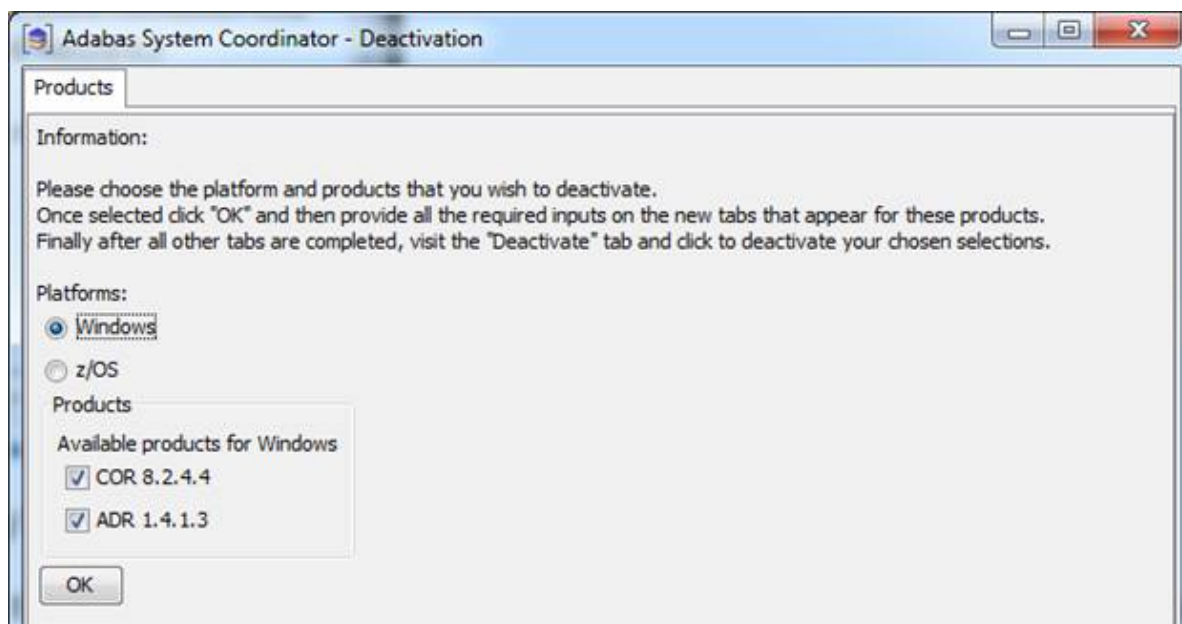
The above example indicates you wish to perform a deactivation process on your Windows platform for the Adabas System Coordinator (COR) and Data Archiving for Adabas (ADR) products (under normal situations both these products should be selected). Click OK to continue.

3   Progress through the uninstall deactivation panels.

Using the tabs at the top of each panel, you can progress through each panel. The following screens show the panel sequence for an uninstall deactivation process on a Windows platform for the Adabas System Coordinator (COR) and Data Archiving for Adabas (ADR) products.
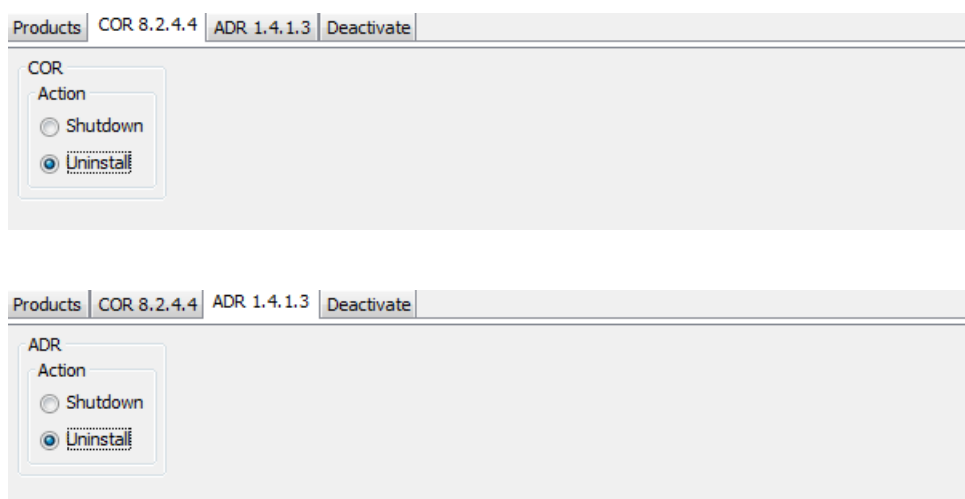
> **Note:** When progressing through the panels for an uninstall deactivation process on a z/OS platform, additional panels (and corresponding tabs) may be presented requesting additional information (for example, JCL and FTP parameters). This same information

would have been requested at product Activation time, refer to the *Activation* section of the *Installation Procedure for z/OS* for an explanation regarding such information.

4   Confirm uninstall deactivation.

The final 'Deactivate' panel (not shown) allows you to confirm your deactivation request (by clicking on the Deactivation button) and then follow its progress in the panel window.

5   Complete the uninstall using the Software AG Uninstaller.

For information on how to complete the uninstall of Data Archiving for Adabas (and its components) using the Software AG Uninstaller refer to the Uninstalling chapter of the document Using the Software AG Installer on the Software AG documentation web site.

> ⛔ **Caution:** The Software AG Uninstaller does not delete files that were created after the installation (for example, archived data), nor does it delete the directory structure that contains the files. However, it does suggest that if you are going to reinstall into the same directory, the product directories should be manually deleted or such files moved. *Do not delete the product directories if you wish any archived data maintained in Vaults within the installation directories to be preserved.*

Deactivating and Uninstalling from the Console in Unix

In Unix, if the deactivation detects that a User Interface is not available then it will automatically use the console mode.

Extracts of the console output for an example uninstall deactivation process are shown below.

```
COR Settings
-----------------------------------------------------------
Default values are shown in square brackets [ ] - press
Return to accept the default if one is shown.

Deactivate action (enter "S" for shutdown or "U" for
uninstall):u
```

```
ADR Settings
-----------------------------------------------------------
Default values are shown in square brackets [ ] - press
Return to accept the default if one is shown.

Deactivate action (enter "S" for shutdown or "U" for
uninstall):u
```

11 Migration Utility

The Migration Utility enables the migration of configuration data from a previous version of Data Archiving for Adabas to a newly installed version.

The installation kit for Data Archiving for Adabas includes and installs Adabas System Coordinator. The Migration Utility is part of Adabas System Coordinator and it is run using the `corlfile` executable located in the `bin` subdirectory underneath the Adabas System Coordinator installation directory.

For migration, the `corlfile` executable is run with the following parameters:

Parameters	Description
/m	The `/m` parameter causes `corlfile` to run in migration mode.
from-file=<db>,<fnr>	The `from-file` parameter specifies the database and file number of the Repository whose content is to be read and migrated.
to-file=<db>,<fnr>	The `to-file` parameter specifies the database and file number of the Repository into which the migrated content is to be written
/o	By default the migration process will not write to an existing file unless the file is empty. The optional `/o` parameter changes this behaviour and allows existing content to be overwritten by refreshing the file. **Caution:** Use of this parameter may cause data loss.

Windows

To use the utility on Windows, start a Command Prompt and change to to the `bin` directory underneath the new Adabas System Coordinator installation directory:

```
C:\>cd \SoftwareAG\cor\vvrs\bin
C:\SoftwareAG\cor\vvrs\bin>
```

where *vrs* is the newly installed Adabas System Coordinator version.

Then run the `corlfile` executable with the appropriate parameters:

```
C:\SoftwareAG\cor\vvrs\bin>corlfile /m from-file=1,500 to-file=1,501
```

Linux, Unix and z/OS (USS)

To use the utility on Linux, Unix and z/OS (USS), source the Adabas System Coordinator environment script and then change to the `bin` directory underneath the new Adabas System Coordinator installation directory:

```
ukrdu@dali166 => cd /opt/softwareag
ukrdu@dali166 => export ADABAS_ADDONS=yes
ukrdu@dali166 => . bin/sagenv.new
[Setting environment for Adabas System Coordinator]
[Enabling Adabas Add-On products]
[done]
[Setting environment for Adabas Data Archiving]
[done]
ukrdu@dali166 => cd $CORDIR/$CORVERS/bin
ukrdu@dali166 =>
```

Then run the `corlfile` executable with the appropriate parameters:

```
ukrdu@dali166 => corlfile /m from-file=1,500 to-file=1,501
```

Reactivation

After the utility has successfully completed the migration, Data Archiving for Adabas needs to be reactivated in order to use the new Repository:

1. Stop all Archiving Services. For more information refer to *Shutting down the Launch Controller*.

2. Re-run the Activation process specifying the newly migrated Repository in the COR tab. For more information refer to the Activation section in the *Installation* procedures for the relevant installation platform.