Installation Guide

ARCAD

Version 10.06.xx

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Prepared by the ARCAD Software Documentation Team

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Table 1: Contact ARCAD Software

ARCAD Software guarantees consultant support 24 hours a day, 5 days a week (24/5) to registered members. Calls received on the numbers for France, USA and Asia are redirected to a central system which, according to the hour, puts you in contact with a consultant in or near your timezone.

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Table 2: Contact the ARCAD Software support team

Contact an ARCAD Partner

arcadsoftware.com/company/partners/

ARCAD partners with leading-edge companies throughout the world to ensure you have the local support you need and best-of-breed contacts for all of your software management solutions. Our global partners are located strategically around the globe to offer full services, close to home. Visit our website to view the complete list of partners and their local contact information.

The ARCAD Customer Portal

The Customer Portal is intended for current and potential customers that have full or trial versions of ARCAD software. If you already use or are interested in using an ARCAD product, the portal lets you view all of your current licenses and generate your own temporary license keys for most ARCAD products. It grants you access to the ARCAD product knowledge base (FAQ, new releases, fixes, etc.) and ticketing system/Helpdesk as well as all of the Release Notes and current documentation for each of your products.

Preface

Document Purpose

This document is intended to guide you through any and all of the pre-installation, installation, post-installation and un-installation processes for:

- the core applications required to run ARCAD modules on an IBM i.
  - ARCAD-Home
  - ARCAD-Server
  - ARCAD Execution Agent
- ARCAD-Client, an independent RCP[1] pre-loaded with a number of ARCAD modules.
- the ARCAD modules available as RDi[2] plug-ins.
- the ARCAD modules available as RTC[3] plug-ins.
- the ARCAD modules available as standard Eclipse IDE[4] plug-ins.

Intended Audience

This document is intended for System Admins, ARCAD Administrators and/or the person in charge of installing ARCAD products.

About the Glossary Terms

Glossary terms are marked with orange text and defined in footers in this document. The definitions are truncated. For complete definitions of all of ARCAD's terminology, refer to the *ARCAD Glossary*.

Related Documentation

Related Documentation
ARCAD Release Notes
ARCAD-Glossary
ARCAD-Administration Console Documentation
ARCAD-Audit Documentation
ARCAD-Core Documentation

Table 3: Related Documentation

[1]Rich Client Platform

[2]Rational Developer for i

[3]Rational Team Concert

[4]Integrated Development Environment

Related Documentation
ARCAD-Data Changer Documentation
ARCAD-Deliver Documentation
ARCAD-Integrater Documentation
ARCAD-Observer Documentation
ARCAD-Server Configuration Guide
ARCAD-Skipper Documentation
ARCAD-Transformer DB Documentation
ARCAD-Transformer RPG Documentation
Profound Logic Documentation

Table 3: Related Documentation

Publication Record

Note: This document was created for v10.06.xx using content from multiple pre-existing documents, which are each removed from circulation and considered outdated:

- ARCAD-Server Installation Guide
- ARCAD-Home Installation Guide
- ARCAD-Client Installation Guide
- ARCAD-RDi Plug-ins Installation Guide
- ARCAD-RTC Plug-ins Installation Guide

Reference To refer to an older version of any of these documents, please Contact ARCAD Software.

Unless stated otherwise, this document is valid for the most current version of ARCAD listed as well as every subsequent version.

Product Version	Document Version	Publication Date	Update Record
≥ 10.06.xx	2.0	July, 2016	Initial publication after compilation

Table 4: ARCAD Installation Guide Publication Record

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1 Introduction to installing ARCAD applications

Software development organizations are facing increasing pressure to regularly deliver high-quality software aligned with continuously evolving business objectives. Teams need to adopt agile practices, but have difficulty because of several factors; they are often expected to deliver more applications with the same or even fewer resources; many teams are geographically dispersed, which can make collaboration challenging; and many organizations find it difficult to apply consistent processes and standards to disconnected and multi-technology projects and groups.

ARCAD Software helps address these factors and is designed to provide the essentials of an agile Application Life-cycle Management (ALM[1]) solution with integrated planning, task tracking, source control, build management and reporting.

Today, ARCAD technology is offered as a suite of modules (Eclipse plug-ins) which are equivalent in functionality to its historic 5250 interfaces. Depending on the module, the plug-ins can be installed on a number of Eclipse platforms including RDi[2], RTC[3] or any standard Eclipse IDE[4] that you may already use. In order to work independently from these industrial platforms, or if you aren't yet familiar with Eclipse, ARCAD also provides a dedicated RCP[5], called ARCAD-Client that is delivered with all of your modules pre-installed.

In addition to the Eclipse modules, the ARCAD-Server and the ARCAD-Home environment are also required for most applications to support your development environment.

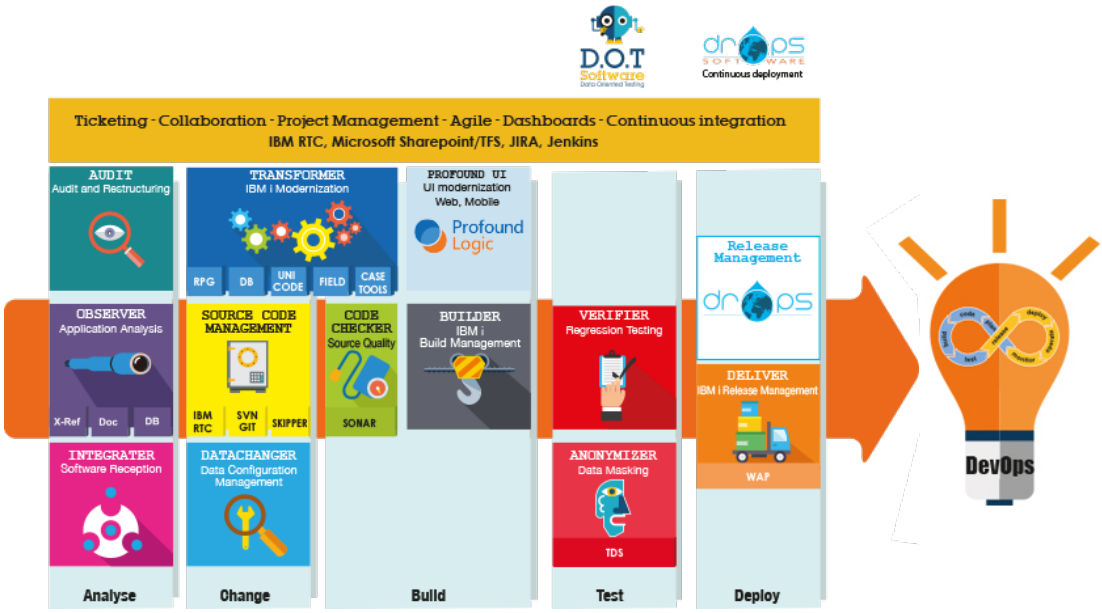

Figure 1: The ARCAD product suite

[1]Application Lifecycle Management
[2]Rational Developer for i
[3]Rational Team Concert
[4]Integrated Development Environment
[5]Rich Client Platform

> ***Reference*** For more information about each of the ARCAD modules listed below and any module not listed below, refer to its individual documentation.
>
> ARCAD technical documentation can be accessed by logging into the Customer Portal on our website.

1.1 About ARCAD-Core

ARCAD-Core is the heart of all ARCAD products that run on an IBM i. It contains all the programs necessary for a module or stand-alone studio to operate.

The following entities make up the ARCAD-Core and are often referred to individually:

- The ARCAD-Server
- The Open Repository
  - The Event Manager
  - The Macro Maker
- ARCAD-Home
- The ARCAD Execution Agent

1.1.1 About the ARCAD-Server

The following ARCAD modules are installed with the ARCAD-Server and manipulated only from a 5250 emulator:

- Open Repository
  - Macro Maker
- ARCAD-Data Changer
- ARCAD-Transformer Field

The following ARCAD modules require a connection to the ARCAD-Server and are accessed via an Eclipse IDE (which as RDi or RTC, etc):

- ARCAD-Administration Console
- ARCAD-Audit
- ARCAD-Core
  - Event Manager
- ARCAD-Deliver
- ARCAD-Integrater
- ARCAD-Observer
  - Documenter
- ARCAD-Skipper

1.1.2 About ARCAD-Home

ARCAD-Home is a directory that contains files shared by most ARCAD products. It is the core for the java on which each product is built. Each product looks for and uses files in this folder because it contains a collection of shared and shareable libraries that many products rely on at their core. The environment variable[1] sets the full path to the Home folder automatically which ensures constant connection for ARCAD modules.

The following products require ARCAD-Home:

- ARCAD-Administration Console
- ARCAD-Audit
- ARCAD-Core
  - Open Repository
  - Event Manager
  - Macro Maker
- ARCAD-Deliver
- ARCAD-Observer
  - Documenter
- ARCAD-Skipper
- ARCAD-Verifier
- The ARCAD Execution Agent

1.1.3 About the ARCAD Execution Agent

The ARCAD Execution Agent relies on the ARCAD-Server and is configured to listen to an IBM i's service provider and perform any necessary deployment actions.

1.2 About ARCAD-Client

ARCAD-Client is an Eclipse-based RCP that contains a number of ARCAD modules already installed. Each module performs different tasks involved in the application life-cycle management process and each require separate activation keys in order to use them on the ARCAD-Client platform.

The ARCAD-Client platform is available with the following ARCAD modules pre-loaded:

- ARCAD-Administration Console
- ARCAD-Audit
- ARCAD-Core
  - Event Manager
- ARCAD-Deliver

[1]A variable that provides values for each type of environment in which a process will run.

- ARCAD-Integrater
- ARCAD-Observer
  - Documenter

1.3 About the ARCAD-RDi plug-ins

Rational Developer for i (RDi) is an IDE designed for creating and maintaining applications on IBM i systems and supports development in both host-connected and disconnected modes. A range of ARCAD's innovative applications have been adapted to integrate seamlessly into the RDi platform in order to increase developer productivity.

The ARCAD modules available in the standard RDi plug-in package are:

- ARCAD-Administration Console
- ARCAD-Audit
- ARCAD-Core
  - Event Manager
- ARCAD-Deliver
- ARCAD-Observer
  - Documenter
- ARCAD-Skipper
  - The Profound Logic Extension
- ARCAD-Transformer DB

ARCAD-Transformer RPG is also an RDi plug-in but it is not included in the standard plug-in package. The installation instructions are the same for that module but described in another document.

> ***Reference*** For more information about installing ARCAD-Transformer RPG, refer to the *ARCAD-Transformer RPG Installation Guide*.

1.4 About the ARCAD-RTC plug-ins

RTC is an IDE designed to increase individual and team productivity and is an effective tool to use when beginning the transition to agile development. It supports traditional practices and runs on a wide range of servers and server operating systems, including Microsoft Windows, Linux, Intel and the operating systems for IBM Power Systems and IBM System z. A range of ARCAD's innovative applications have been adapted to integrate seamlessly into the RTC platform in order to increase developer productivity.

The ARCAD modules available as RTC plug-ins are:

- ARCAD-Deliver
- ARCAD-Observer
  - Documenter

1.5 About ARCAD's standard Eclipse IDE plug-ins

The majority of ARCAD's plug-ins can be installed on any standard Eclipse IDE, such as Zend studio. Most of the ARCAD modules are bundled together in a default installation package. This is the package called when installing the plug-ins in RDi but it can also be used for any Eclipse platform. The modules that are only compatible with RDi need simply be unselected during the installation process to install all or some of ARCAD's modules.

The ARCAD modules compatible with any standard Eclipse IDE are:

- ARCAD-Administration Console
- ARCAD-Audit
- ARCAD-Core
  - Event Manager
- ARCAD-Deliver
- ARCAD-Observer
  - Documenter
- ARCAD-Transformer DB

THE ARCAD-SERVER

2 ARCAD-Server Prerequisites

To install the ARCAD-Server on your IBM i (System i or iSeries), the system must meet the following requirements:

1. Uses V5R4 IBM i version as a minimum. The product is compatible with OS V6R1 to V7R2.
   - Required PTF:
     - With V6R1: SI35430: **OSP-DB-OTHER-F/QDBSIGEX-T/QDBSIGEX-MSGMCH0601 SQLRPGLE SETLL** (available since 2009)
     - With V5R4: SI36133: **OSP-DB-OTHER-INCORROUT UCS2 DATA IN OPNQRYF CREATED WITH CCS** (available since 2009)
2. Contains a minimum of 3GB of disk space. The total amount of disk space required depends on:
   - the number of components to be loaded in the ARCAD repository,
   - the selected options for ARCAD Repository loading.
3. The CCSID[1] of the job that will run the installation MUST NOT be 65535.

As an estimation, an application with 5,000 components, with all available ARCAD Repository loading options selected, will require about 3-5 GB.

> ***Reference*** For more information about product evolution and requirements for ARCAD products, refer to the *ARCAD Release Notes*

[1]Coded Character Set Identifier

3 Preparing to install the ARCAD-Server

Chapter Summary

There are three possible ways to install the ARCAD-Server on your IBM i.

1. From the installation DVD in the IBM i server optical device (DVD reader).
2. From the installation DVD's **ISO**[1] Image, downloaded from the ARCAD FTP site to a **virtual optical device**[2].
3. Through the LAN, using the **IFS**[3].

For any of these methods, if your IBM i server includes iASPs, you can choose where to install the ARCAD-Server. The most common location is on the System **ASP**[4] (*SYSBAS) but you can also choose one of the iASPs.

> ***Warning!*** Installing ARCAD on an **iASP**[5] is very restrictive. In this case, ARCAD can only manage libraries located on the same iASP it is installed on.

> ***Reference*** For more information about the server, refer to About the ARCAD-Server on page 13.
>
> For more information about configuring the server, refer to the *ARCAD-Server Configuration Guide*.

3.1 Installing from the DVD Drive

Follow the subsequent steps to prepare the installation:

Step 1 Load the installation disk into the DVD drive.

Step 2 Open a 5250 emulator session, then log on as **Security Officer** (QSECOFR) or the equivalent.

Step 3 Secure your session environment.

1An archive file of an optical disc.

2A virtual CD/DVD reader that supports virtual optical images.

3Integrated File System

4Application Service Provider

5Independent Auxiliary Storage Pool

If iASP are available on the IBM i server, you have two options:

1. If you want to install on the base ASP (*SYSBAS), verify that there is no default ASP group attached to your session. Secure your environment issuing the following command: `SETASPGRP *NONE`.
2. If you want to install on an iASP, verify that the corresponding ASP group is attached to your session. Secure your session environment issuing the following command: `SETASPGRP Your_ ASP_group`.

Step 4 Run the following command: `LODRUN DEV(*OPT)`.

Result The **Installation** screen displays. To complete the installation, refer to the steps in the Installing the ARCAD-Server on page 25.

Step 5 Sign off of the QSECOFR session.

3.2 Installing from a DVD Iso image

This installation option requires you to load the DVD's ISO image provided to a pre-configured virtual optical device.

Follow the subsequent steps to prepare the installation:

> **Important!** You may have to do only certain part(s) of this procedure as you may already have a virtual optical device and an image catalog[1] configured.

Step 1 Open a 5250 emulator session, then log on as **Security Officer** (QSECOFR) or the equivalent.

Step 2 Check for a virtual optical device.

Determine whether a virtual optical device exists by entering the following command used to access the **Work with Device Description** screen: `WRKDEVD DEVD(*OPT)`.

If you do not have one, create one. Refer to Create a virtual optical device. below.

If you do, create an image catalog. Refer to Create an image catalog. on the facing page.

Step 3 Create a virtual optical device.

The following command (CRTDEVOPT) creates a virtual optical device:

```
CRTDEVOPT DEVD(OPTVRT01) RSRCNAME(*VRT) ONLINE(*YES) TEXT('Virtual
Optical Device 01')
```

Result A virtual optical device is indicated by a device type of 632B.

To ensure that the device is active, press F14 (**Work with configuration status**) from the **Work with Device Description** screen.

[1] An object on the system that contains image catalog entries.

If the device is inactive, press 1 to vary on[1]. When the device is active, create an image catalog.

Step 4 Create an image catalog.

The following Create Image Catalog (`CRTIMGCLG`) command associates an image catalog with a target directory where the images are loaded:

```
CRTIMGCLG IMGCLG(ARCINST) DIR('/ARCADInstall') CRTDIR(*YES) TEXT
('Image Catalog for ARCAD')
```

> **Note:** A directory can only be associated with one image catalog.

When the image catalog is ready, add an image catalog entry[2].

Step 5 Add an image catalog.entry.

Add an image catalog entry of the DVD ISO that you downloaded from the ARCAD FTP site to an IFS directory (in this example we assume you put the .iso file in the */temp* directory.

Add the directory into an image catalog by running either of the following commands:

- Copy the .iso file to the image catalog directory declared in the previous step: `ADDIMGCLGE IMGCLG(ARCINST) FROMFILE(/temp/MASTER…xxxxxx….iso),`
- `TOFILE(MSTxxxxxx.iso).`

Step 6 Load the image catalog.

This step associates the virtual optical device to the image catalog. Only one image catalog can be associated with a specific virtual optical device. Type the following command to load the image catalog:

```
LODIMGCLG IMGCLG(ARCINST) DEV(OPTVRT01) OPTION(*LOAD)
```

Step 7 Start the Installation.

1. If iASP are available on the IBM i server, you have two options:
   - If you want to install ARCAD on the base ASP (*SYSBAS), verify that there is no default ASP group attached to your session. Secure your environment issuing the following command: `SETASPGRP *NONE`.
   - If you want to install on an iASP, verify that the corresponding ASP group is attached to your session. Secure your session environment issuing the following command: `SETASPGRP` *Your_ASP_group*.
2. Type the following command in a command line: `LODRUN DEV(OPTVRT01)`.

Result The **Installation** screen displays. To complete the installation, refer to the steps in the Installing the ARCAD-Server on page 25.

---

[1]To make an independent disk pool available for its normal, intended use.

[2]A position within an image catalog that contains information about an optical image file.

Step 8 Delete images from the image catalog.

After successfully installing the product, remove the images from the catalog with the Remove Image Catalog Entries command (`RMVIMGCLGE`).

Step 9 Sign off of the QSECOFR session.

3.3 Installing from a PC on the LAN

Follow the subsequent steps to prepare the installation:

Step 1 Load the installation disk into the drive on the PC.

Step 2 Open a 5250 emulator session, then log on as **Security Officer**(QSECOFR) or the equivalent.

Step 3 Connect to the IFS on the IBM i server, using the network connections for example, and create a temporary directory.

Step 4 Copy the appropriate files below to the temporary directory in the IBM i server IFS. These files are located in the root directory on the *Installation* disk.

- For a new installation: *ARCINST.dta* and *MSTARC xx.xx.xx VyRyMy Master FRA.dta*.
- If you are installing a cumulative version: *CUMARC xxxxxxxx.dta*.

Step 5 Copy the file *ARCINST (*SAVF)* to an IBM i library in order to run and use the `RSTLIB` command. This step assumes you copied the files to a */tmp* IFS directory.

In IFS the file type is STMF, so use the `CPYFRMSTMF` command to copy the *ARCINST *SAVF* to the library **QTEMP**. Your screen should look like this:

```
                    Copy From Stream File (CPYFRMSTMF)

Type choices, press Enter.

From stream file . . . . . > '/tmp/arcinst.dta'
To file member or save file  . . > '/qsys.lib/qtemp.lib/arcinst.file'
Member option  . . . . . *NONE      *NONE, *ADD, *REPLACE
Data conversion options  . . . . > *NONE      *AUTO, *TBL, *NONE
Stream file code page  . . . . .  *STMF      1-32767, *STMF, *PCASCII
Database file CCSID  . . . . . .  *FILE      1-65533, *FILE
Conversion table . . . . . .
End of line characters . . . . .  *ALL       *ALL, *CRLF, *LF, *CR...
Tab character expansion  . . . .  *YES       *YES, *NO
                                                                  Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

*Figure 2: Copy the ARCINST *SAVF to the library QTEMP*

> **Note:** The **Data conversion options** parameter should be set to ***NONE** to avoid any attempt at data conversion during the copy.

> **Important!** If it exists from prior installations of ARCAD, you must delete the ARCINST library before proceeding with the next step. Use the command `DLTLIB ARCINST`.

Step 6 Restore the installation **ARCINST** library.

Use the following command to restore the library from the **SAVF* to the IBM i server:

```
RSTLIB SAVLIB(ARCINST) DEV(*SAVF) SAVF(QTEMP/ARCINST) MBROPT(*ALL)
ALWOBJDIF(*ALL)
```

Step 7 Secure your session environment.

If iASP are available on the IBM i server, you have two options:

1. If you want to install on the base ASP (*SYSBAS), verify that there is no default ASP group attached to your session. Secure your environment issuing the following command: `SETASPGRP *NONE`.
2. If you want to install on an iASP, verify that the corresponding ASP group is attached to your session. Secure your session environment issuing the following command: `SETASPGRP Your_ ASP_group`.

Step 8 Launch the installation.

To launch the installation enter the following command, then press F4:

```
ARCINST/ARCINST
```

When prompted for an IFS Object Name, enter the following command:

```
'/YourTemporaryDirectory/MSTARC.... .dta '
```

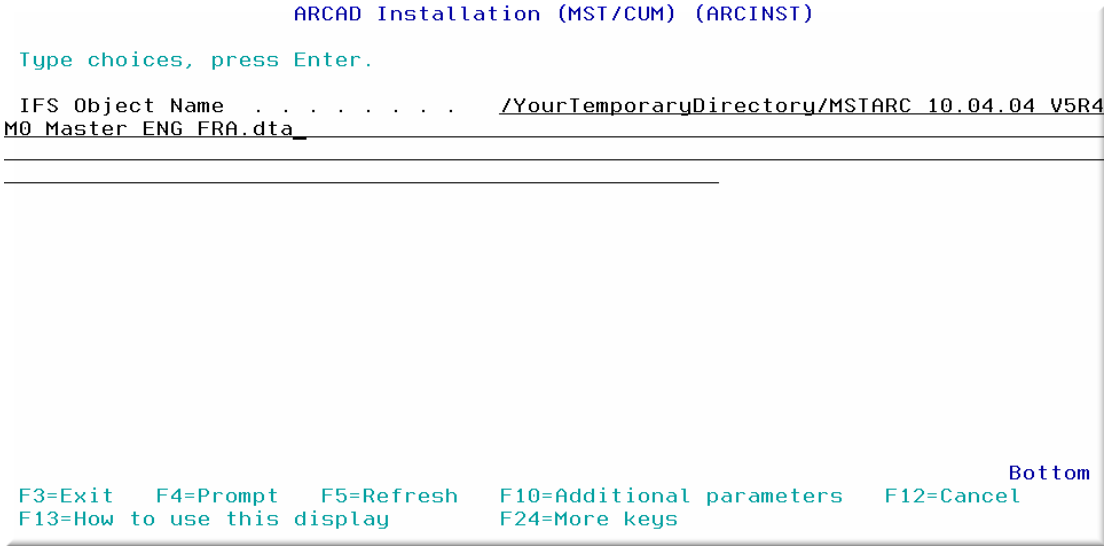

Figure 3: Enter IFS Object Name

> **Note:** There is an additional parameter field displayed if you press F10. This field is used if you are submitting the command from a command line. There is no need to enter any additional parameters as the process described here will allow you to select them as you proceed.

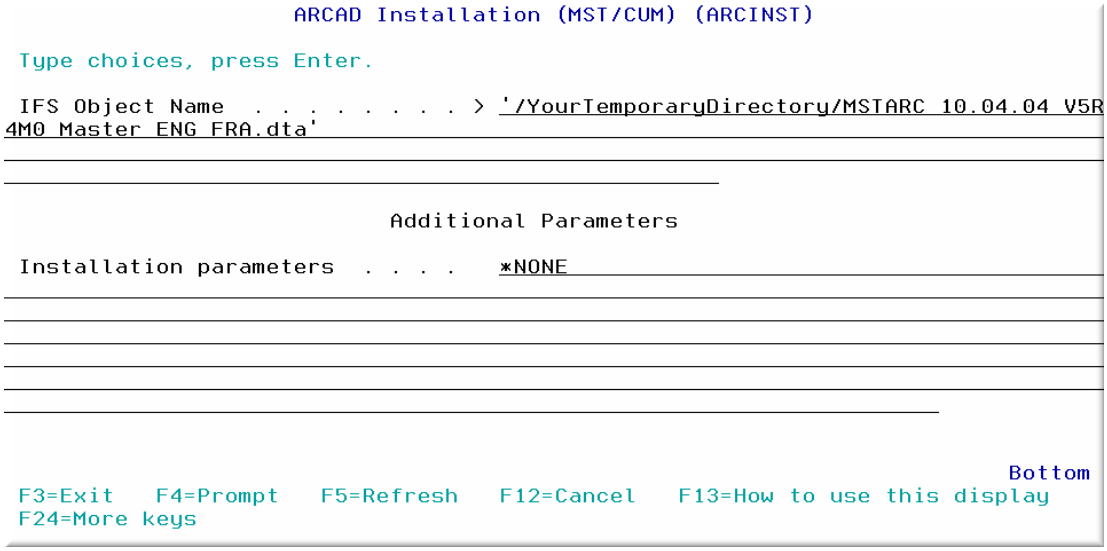

Figure 4: Additional parameter field

Result The **Installation** screen displays. To complete the installation, refer to the steps in the Installing the ARCAD-Server on page 25.

Step 9 Sign off of the QSECOFR session.

4 Installing the ARCAD-Server

Chapter Summary

Installing the ARCAD-Server on an IBM i can take anywhere from 15 minutes to two hours, depending on the speed of your system and the system's current workload.

The previous chapter describes the different types of interactive, pre-installation processes which each consist of copying files, then launching the installation. The **Arcad product installation** screen displays automatically when the installation is launched.

```
            Arcad product installation                    30/01/15 16:16:15
                                                                  ARCAD05D
            Version to install:    10.04.04

Installation Configuration:
  - Installation of new instance XX (Library ARCXX_PRD).
  - Main language: ENG (Library ARCXX_ENG)
  - No secondary language
  - Installation on the base ASP
  - Installation of the demo set (ARCXX_SMP* libraries, SXX app.)

Choose one of the following options:
    _     1. Submit the installation in batch
          2. Execute the installation interactively

          4. Modify the name of the instance to be installed
          5. Modify the language(s) to install
          6. Modify the installation ASP
          7. Remove the installation of the demo set (if runtime on a site)

          9. Cancel the installation

F3=Exit      F8=Change the language for this menu
```

Figure 5: Arcad Product Installation menu

The current installation configuration is summarized under the title **Installation Configuration**.

To confirm the configuration and execute the installation or to modify the configuration, use the options listed under the title **Choose one of the following options:**

4.1 Modifying the Installation Options

The following options are available to modify the installation (refer to Figure 5: Arcad Product Installation menu).

Selecting option **4. Modify the name of the instance to be installed** enables you to change the instance to install. An ARCAD instance is a data set. ARCAD can be installed in multiple instances. By default, the product installs the AD instance. In the example above, the instance to install is **XX**.

The screen will reflect your choice after you enter a 2-character instance code.

> **Important!** If you do not require several ARCAD instances on your system, it is recommended you accept the default AD. The libraries created will match other ARCAD documentation if you leave the default AD as the instance.

If you enter an instance that already exists, the following warning screen displays:

```
            Arcad product installation                          30/01/15 16:15:38
                                                                        ARCAD05D

            Version to install:    10.04.04

Installation Configuration:
  - Installation in Cancel & Replace, instance AD (Library ARCAD_PRD).
  - Main language: ENG (Library ARCAD_ENG)
  - No secondary language
  - Installation on the base ASP
  - No installation of the demo set

Choose one of the following options:
    _     1. Submit the installation in batch
          2. Execute the installation interactively

          4. Modify the name of the instance to be installed
          5. Modify the language(s) to install
          6. Modify the installation ASP


          9. Cancel the installation

F3=Exit      F8=Change the language for this menu
```

Figure 6: Replace existing instance warning

> ***Warning!*** If the instance already exists on your machine, proceed with caution! If you continue with the process after receiving this warning screen, the installation will attempt to install the new version of ARCAD keeping your old data and retrieving your old macros. If you encounter this special situation, please contact ARCAD support before proceeding.

Selecting option **5. Modify the language(s) to install** enables you to change language of the installation determined by your profile, or install multiple languages. At present ARCAD is available in English and French. The default language will be determined using your profile.

Selecting option **6. Modify the installation ASP** enables you to modify the ASP[1] if needed. ARCAD can be installed on the ASP of your choice.

Selecting option **8. Change the language for this menu** enables you to change the language of the **Arcad Product Installation** menu from English to French and back.

Selecting option **9. Cancel the installation** aborts the installation.

[1]Application Service Provider

4.2 Executing the Installation

When you have confirmed the instance and selected the language(s) to install (see Modifying the Installation Options on page 25), choose the mode of installation: option **1. Submit the installation in batch** or option **2. Execute the installation interactively**.

It is highly suggested to submit the job in batch[1]. The installation process may run for some time depending on your machine. Doing this in batch will not tie up your session.

If you choose to install in batch, the following screen displays:

```
                              Submit Job (SBMJOB)

 Type choices, press Enter.

 Command to run . . . . . > ARCINST/ARCINST IFSOBJ('/home/cohl/MSTARC 10
.04.04 V5R4M0 Master ENG FRA.dta') PARMS('LANG1(ENG) LANG2(   ) INSTANCE(XX) ASP
(1) DEMO(*YES) MSGLANG(0) SAVF(ARCINST/ARC_100404)')

 Job name . . . . . > ARCINST___    Name, *JOBD
 Job description  . . . . . *USRPRF___    Name, *USRPRF
   Library  . . . . . __________  Name, *LIBL, *CURLIB
 Job queue  . . . . . *JOBD_____    Name, *JOBD
   Library  . . . . . __________  Name, *LIBL, *CURLIB
 Job priority (on JOBQ) . . . . *JOBD          1-9, *JOBD
 Output priority (on OUTQ)  . . *JOBD          1-9, *JOBD
 Print device . . . . . *CURRENT__    Name, *CURRENT, *USRPRF...
 Output queue . . . . . *CURRENT__    Name, *CURRENT, *USRPRF...
   Library  . . . . . __________  Name, *LIBL, *CURLIB

                                                                    More...
 F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
 F13=How to use this display        F24=More keys
```

Figure 7: Submit Job (batch installation) – page 1

The **Command to run** field is filled in using the selection you made on the installation menu.

In the example above, a single language (English) is installed in the XX instance. No secondary language is selected.

By default, the **Job Name** is **ARCINST**. Change the job name to find it easier, if needed.

Page down to see the second page.

[1] IBM term meaning that something runs in the background.

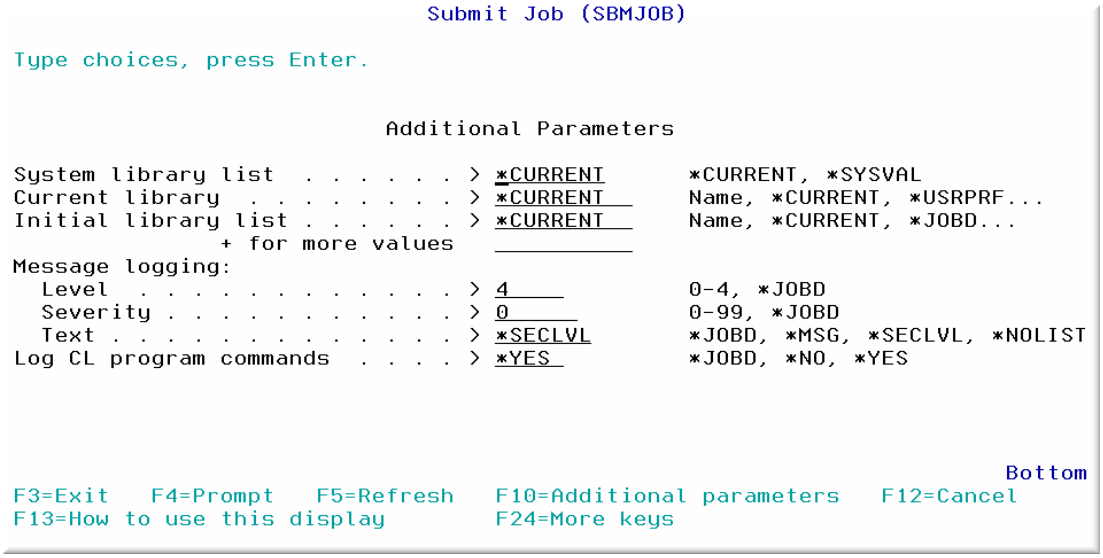

Figure 8: Submit Job (batch installation) – page 2

By default, the process changes the logging level for the installation job to capture as much information as possible. These logs can be used by you and ARCAD to troubleshoot if anything goes wrong during the installation process.

In most cases, all other parameters should be left at their default value.

Press Enter to submit the installation job.

4.3 What Happens During Installation?

This section gives you details on the operations performed during the ARCAD-Server installation.

4.3.1 ARCAD-Home is installed

ARCAD-Home is automatically included in the server installation. When complete, ARCAD-Home in installed on the IBM i.

> ***Reference*** For more information about ARCAD-Home, refer to About ARCAD-Home on page 14

4.3.2 Profiles and Authorization Lists are created

Before restoring the product libraries, the system creates two profiles and authorization lists which are used for security management support. This is why you should be signed on as **Security Officer** (or equivalent) to install the product. The profiles and lists are:

- A profile called **ARCAD**.
- A profile called **ARCxx_NET** where "xx" is the instance name.
- An authorization list called **ARCAD**.
- An authorization list called **ARCxx_ADM** where "xx" is the instance name.

The **ARCAD** profile is the owner of the product objects and has special authorizations. Therefore, it should not be used for interactive sessions. This is why its status is set to ***DISABLED** when created by the ARCAD post installation procedure.

The **ARCxx_NET** profile is the profile used by the inter-system robot, a job that listens for the intersystem operations and routes them. It should not be used for interactive sessions, and is therefore disabled at profile creation time, too.

> **Note:** The **ARCAD** and the **ARCxx_NET** profiles are created with the following special authorizations: ***ALLOBJ**, ***SECADM** and ***SERVICE**. These special authorizations are important for setting up ARCAD solutions.

The **ARCAD** authorization list is used to manage data security in the ARCAD database. By default, its assigned authorizations are ***PUBLIC** and ***USE**. This means that ARCAD users can only read data in an ARCAD database when they are not using an ARCAD product. Data cannot be updated in this case.

The **ARCxx_ADM** authorization list is created to manage modification authorizations in the standard macros delivered as part as the ARCAD product. It is automatically managed through the ARCAD profile management function (in the ARCAD setup menu).

4.3.3 Libraries are Restored

The installation procedure restores three libraries from the installation package: **ARCxx_ENG**, **ARCxx_PRD** and **ARCxx_SYS** where "xx" is the instance name chosen during install.

- The **ARCxx_ENG** library contains all of the access points for the product (commands, menus, etc.) as well as all of the language-dependent objects.
- The **ARCxx_PRD** library contains the database and programs.
- The **ARCxx_SYS** library includes the ARCAD sub-system, and also the job queue (*JOBQ) and the output queue (*OUTQ).

> **Note:** If you install the French version, then **ARCxx_ENG** library is replaced by **ARCxx_FRA** library. If you choose both languages, both libraries are available.

4.3.4 The ARCAD_PGMR Profile is Created

The ARCAD_PGMR profile is created during installation and is automatically authorized to access ARCAD products. Use this profile to access the product(s) for the first time.

> **Note:** The password after installation is **quadra**. It is recommended to change the password after signing in with this profile for the first time.

> ***Reference*** For more information about using this profile and other important configuration tasks, refer to the *ARCAD-Server Configuration Guide*.

4.3.5 Temporary Keys are Activated

Once the installation process has completed, the product is available for a trial period of 15 days. Temporary keys are provided and activated during installation to be used during the evaluation period. If you wish to extend this period, please contact our technical support service.

4.3.6 Jobs and Sub-Systems are Started

The installation procedure starts the ARCAD sub-system as well as the inter-system robot listener job. To start the robot manually, select option 5 in the **Administration** menu.

5 ARCAD-Server post -installation procedures

Chapter Summary

There are a few mandatory configuration and administration procedures to carry out after installation.

5.1 Launch the INITARCAD Macro-Command

A set of additional procedures is automatically executed after the installation of the product. They are all included in a macro-command called `INITARCAD`. You can browse its contents by typing the command: `ADSPMACCMD INITARCAD`.

5.2 Schedule a Daily Clean-Up Procedure

The macro-command `ARCLNUP` is configured in the IBM i scheduler to execute a clean-up procedure for the ARCAD configuration daily at 1:00am (01:00).

The cleanup command is: `ARCLNUP TFRLOGDAYS(99) TMPDAYS(10)`.

To reschedule the ARCAD cleanup procedure in the IBM i scheduler, use the command `WRKJOBSCDE`.

> ***Reference*** Refer to the integrated help (press F1) of `ARCLNUP` macro-command for more details about this procedure and its parameter.

5.2.1 Launch Additional Product Evaluation Process

In order to offer a quick and easy evaluation of the product, an additional procedure called `INIDEMO` is launched, followed by another additional macro-command, `INITSKIP`.

You can review the `INITDEMO` contents by issuing the command `ADSPMACCMD INITDEMO`. It performs the following tasks:

- Loads a small demo application called **SAM** in the following libraries and IFS[1] directories.
  - **ARCAD_SMPL** for the application references.
  - **ARCAD_SMPT** for the application test environment.
  - **SAMD1_00_B** for a first closed version.
  - **SAMD1_00_C** for a second version, opened and integrated.
  - **SAMD1_05_A** for a third version, under development.
  - **/ArcadSmpl** directory is created as a root IFS directory for the application.

> **Note:** The above names are used if the instance is AD. If you alter the instance the sample application is called Sxx, and the libraries are called **ARCxx_SMPL**, **ARCxx_SMPT**, **SxxD1_00_B**, **SxxD1_00_C**, and **SxxD1_05_A**, where "xx" is the instance code.

> ***Reference*** For more information about changing instances, refer to Modifying the Installation Options on page 25.

- Loads an ARCAD-Verifier Test scenario example for the SAM application that creates the following libraries:
  - **VBASooooo2** for the context based on the reference environment[2].
  - **VBRYooooo1** reference "Replay" of the scenario.
  - **VBRYooooo2** replay for the test version.
- Initializes the demo data base (`INITDEMDB` macro-command).

You can also review **INITSKIP** content, with the same command: `ADSPMACCMD INITSKIP`. It performs the following tasks:

- Duplicates the command for access to the sources in the **ARCxx_ENG** library.
- Creates a **Journal** file with an automatically managed receiver and journals files; the version management uses the validation control.

5.3 Remove Temporary Data

Once the installation in complete, there are two objects on the system that can be removed to recover disk space. Each of these objects is a little over 1 GB:

- If you installed from a PC on the LAN and used the IFS, the IFS object[3] */.../mstarc....dta* of the type STMF is no longer required and may be removed from the system.
- During installation, a temporary save file named **ARC_o9nnnn** was created in the **ARCINST** library. This save file is not required and may be removed from the system.

---

[1] Integrated File System

[2] Corresponds to the environment with the entire application.

[3] An IBMi component.

5.4 Configure the Server

Open a session using the profile **ARCAD_PGMR** (the password after installation is **quadra**). This profile is only for administration purposes. You must grant access to other existing profiles in order to use ARCAD products. You must also configure the various settings in the server that affect different ARCAD products.

Once you are logged in, enter the following command to load the product into the session's memory: `ARCxx_ENG/ARCAD` (where "xx" is the instance name you chose during installation [the default is "AD"]). If you installed a French version, use `ARCxx_FRA/ARCAD`.

This provides access to the product's main menu and enables you can call the `I_ARCAD` command, which opens the administration menu and enables you to configure the server.

> ***Reference*** For more information about configuring the server, refer to the *ARCAD-Server Configuration Guide*.

6 Uninstalling the ARCAD-Server

Follow the subsequent steps to uninstall the ARCAD-Server.

Step 1 Stop any active ARCAD processes.

The command `ENDSBS ARCAD OPTION(*IMMED)` stops the ARCAD subsystem if active.

Step 2 Remove ARCAD language library from the job's current system library list.

Use the command `CHGSYSLIBL ARCAD_ENG *REMOVE`.

> **Important!** Check if **ARCAD_*** is in the SYSLIBL by DSPSYSVAL QSYSLIBL. If it is, remove it using the commands `WRKSYSVAL` and `QSYSLIBL`.
>
> You will likely have system jobs which lock the ARCAD_* library. Perform an IPL.

Step 3 End all scheduled tasks.

Use the command `WRKJOBSCDE` to find and remove any ARCAD processes (like ARCLNUP for example).

Step 4 Delete Objects.

1. Delete the **ARCAD*** authorization list in QSYS using the `DLTAUTL` command. If ARCAD_* library is not in the SYSLIBL, then it is inserted in the system library list[1] by a program associated with the profile. Remove it from the library list however necessary.
2. Check that all the libraries on the machine that start with the following prefixes were not created externally but are Arcad's. This is to ensure that non-Arcad libraries are not removed with the wildcard command (described blow)
   - ARC*
   - ARRPLOBJ
   - ARRPLSRC
   - SAM*
   - VBAS*
   - VRPY*
   - VDCX*
3. Run the `DLTLIB` command on **ARC*** libraries which should delete the following:
   - ARCAD_SYS, ARCAD_PRD, ARCAD_ENG, for the ARCAD product itself,
   - ARCAD_SMPL, ARCAD_SMPT, for sample demo application,
   - ARCAD_NET, ARRPLOBJ, ARRPLSRC if exist, for temporary/working library
   - ARC_xxxLST for each xxx application you have declared into ARCAD)

[1] A list that indicates which libraries are to be searched and the order in which they are to be searched.

4. Run the `DLTLIB` on **SAM*** libraries which should delete libraries such as SAMD1_00_B.
5. Run the `DLTLIB` command for all **VBAS***, **VDCX*** and **VRPY*** libraries which should delete all ARCAD-Verifier temporary working libraries.
6. Delete the **ARCAD*** authorization list in QSYS using the `DLTAUTL` command. If ARCAD_* library is not in the SYSLIBL, then it is inserted in the system library list by a program associated with the profile. Remove it from the library list however necessary.
7. Check that all the libraries on the machine that start with the following prefixes were not created externally but are Arcad's. This is to ensure that non-Arcad libraries are not removed with the wildcard command (described blow)
   - ARC*
   - ARRPLOBJ
   - ARRPLSRC
   - SAM*
   - VBAS*
   - VRPY*
   - VDCX*
8. Run the `DLTLIB` command on **ARC*** libraries which should delete the following:
   - ARCAD_SYS, ARCAD_PRD, ARCAD_ENG, for the ARCAD product itself,
   - ARCAD_SMPL, ARCAD_SMPT, for sample demo application,
   - ARCAD_NET, ARRPLOBJ, ARRPLSRC if exist, for temporary/working library
   - ARC_xxxLST for each xxx application you have declared into ARCAD)
9. Run the `DLTLIB` on **SAM*** libraries which should delete libraries such as SAMD1_00_B.
10. Run the `DLTLIB` command for all **VBAS***, **VDCX*** and **VRPY*** libraries which should delete all ARCAD-Verifier temporary working libraries.

Step 5 Remove User Profiles.

To fully uninstall, delete the **ARCAD**, **ARCAD_PGMR** and **ARCAD_NET** user profiles with the `DLTUSRPRF` command using the parameter `OWNOBJOPT(*DLT)`.

ARCAD-HOME

7 Installing ARCAD-Home on Windows

7.1 Prerequisites

The minimum PC requirements are:

- Hardware:
  - 2 GHz Pentium® IV Processor
  - 1 Gb of RAM
  - 350+ MB of available disk space
  - [optional] CD-ROM drive for installation
- Software:
  - Microsoft Windows XP/7/8
  - Java JRE/JDK[1] version 7 maximum
  - ARCAD-Server (Refer to The ARCAD-Server on page 17)

> ***Reference*** For more information about this directory, refer to About ARCAD-Home on page 14.

7.2 Installation process

The installation process takes approximately 5 minutes. It is a simple procedure similar to most other Windows applications. For trouble-free installation, it is recommended that you close all active Windows applications before beginning the installation.

Follow the subsequent steps to install ARCAD-Home.

Step 1 Launch the setup wizard.

Execute the **ARCADCoreSetup.exe** (<*dvd root*>*apps**core**win*). Your windows profile must have administer status to run the execution file.

Depending on your computer's security settings, your web browser might issue warning messages at this step:

- To ask you whether you want to run the installation program now, or save it on your PC. To launch the setup program immediately, click **Run**. If you decide to save it, you must then locate the saved program and double-click on it to continue.
- To inform you that the software is not signed by a publisher. Click **Run**.

Step 2 Select a language.

[1]Java Development Kit

From the **Select Setup Language** window, select the language for the installation wizard, then click **OK**.

Step 3 Begin the setup wizard.

The **Welcome** screen displays the version of the product that will be installed and gives you the option to cancel the installation.

Click **Next >** to continue.

Step 4 Review and accept the license agreement.

The **License Agreement** page presents the ARCAD Software license agreement for you to review. Please read it carefully.

When you have reviewed the agreement, select **I accept the agreement**.

Click **Next >** to continue.

Step 5 Confirm the installation location.

The **Select Destination Location** screen displays the default location where ARCAD Software elements will be installed. If you prefer to install the software elements in a different location, either type in the location, or click **Browse...** to navigate to and select the alternate location.

The default locations is: `C:\Program files\ARCAD Solutions\ARCAD-Home`

Step 6 Confirm the program group name and location.

The **Select Start Menu Folder** screen displays the default location where a shortcut will be created in your computer's Start menu. If you prefer to install the shortcut under a different group, either type the location here, or click **Browse...** to navigate to and select the alternate location.

The default locations is: `ARCAD Solutions\ARCAD-Home`.

Click **Next >** to continue.

Step 7 Install.

The **Ready to Install** screen enables you to review and change or confirm the setup parameters provided and to launch the installation.

To change a setup parameter, click **< Back** and return to the necessary screen.

If you agree with the installation parameters displayed, click **Install** to start the copy phase of the installation process.

As the installation proceeds, a status bar displays its progress. Each element copied appears above the status bar. Click **Cancel** to interrupt the installation.

After the copy phase of the install process ends, the wizard closes automatically.

Result ARCAD-Home is installed and available for use.

8 Installing ARCAD-Home on IBM i

Important! ARCAD-Home is installed on IBM i automatically when the ARCAD-Server is installed. If you already use or have installed the ARCAD-Server, you do not need to install ARCAD-Home separately.

Reference For more information about that installation, refer to ARCAD-Server Prerequisites on page 18.

Follow the subsequent steps to manually install ARCAD-Home if ARCAD-Server is not installed.

8.1 Prerequisites

To install the ARCAD-Home on your IBM i, the system must meet the following requirements:

- Java v.1.05_xx or higher

To check what the current version of active java you are using, run the following command: `RUNJVA *VERSION`.

To declare the required version of java as default:

1. Go to the IFS[1] directory */qibm/UserData/Java400*
2. If it don't exist, create a file called *SystemDefault.properties*
3. Edit this file and add the following line: `java.version=1.5"`

Reference For more information about this directory, refer to About ARCAD-Home on page 14.

8.2 Installation process

Step 1 Create an IFS installation folder.

Step 2 Copy the content of the IBM i install folder from your installation media into this newly crated folder (<*dvd root*>*apps**core**ibmi*).

Step 3 Declare an environment variable.

Run the `ADDENVVAR` command with LEVEL types equal to *SYS and *JOB as follows:

```
ADDENVVAR ENVVAR(ARCAD_HOME)

VALUE('/ArcadIfsPrd/arcad_home') (the chosen Installation Directory)
```

[1] Integrated File System

```
LEVEL(*SYSor*JOB)
```

> ***Reference*** For more information about environment variables, refer to Managing the ARCAD-Home Environment Variable on page 42.

9 Installing ARCAD-Home on Linux, Solaris, or Unix

Follow the subsequent steps to install ARCAD-Home on Linux, Solaris or Unix.

Step 1 Create the Arcad Home Directory (*/opt/arcad/***Arcad Home**).

Step 2 Copy the content of the associated install folder from your installation media (<*dvd root*>*apps**core*\<*corresponding OS*>) into the **Arcad Home** directory.

Step 3 Declare an environment variable named **ARCAD_HOME** pointing to that directory.

> ***Reference*** For more information about environment variables, refer to Managing the ARCAD-Home Environment Variable on page 42.

10 Managing the ARCAD-Home Environment Variable

At the end of the installation, if it doesn't already exist, the setup program automatically creates the **ARCAD_HOME** environment variable[1]. This variable identifies the installation location defined.

However, if it does already exist, and if it refers to a directory that does not match the installation location defined, this warning appears:

> ***Warning!*** Your chosen installation location must match the ARCAD_HOME environment variable. Please adjust the variable contents accordingly.

The only reason this warning would appear is if you are re-installing ARCAD-Home in a different location. In this case, manually adjust the contents of the environment variable to match the new installation location.

Follow the subsequent steps to to remap the variable to a new location:

Step 1 Open the control panel.

Step 2 Select **System** to open the **System Properties** dialog.

Step 3 Select **Advanced systems settings** in the left panel.

Step 4 Click the **Environment Variables** button.

Step 5 Locate and edit the value of the **ARCAD_HOME** variable in both the **User variables** and **System variables** panes.

[1] A variable that provides values for each type of environment in which a process will run.

THE ARCAD EXECUTION AGENT

11 Installing the ARCAD Execution Agent on Windows

11.1 Prerequisites

The minimum PC requirements are:

- Hardware:
  - 2 GHz Pentium® IV Processor
  - 1 Gb of RAM
  - 350+ MB of available disk space
  - [optional] CD-ROM drive for installation
- Software:
  - Microsoft Windows XP/7/8
  - Java JRE/JDK[1] version 7 maximum
  - ARCAD-Home (Refer to ARCAD-Home on page 36)

11.2 Installation process

11.2.1 Running the Installation Wizard

The installation process takes approximately 5 minutes. It is a simple procedure similar to most other Windows applications. For trouble-free installation, it is recommended that you close all active Windows applications before beginning the installation.

Follow the subsequent steps to install the ARCAD Execution Agent.

Step 1 Launch the setup wizard.

Execute either the **AEASecuredServerSetup.exe** or the **AEAServerSetup.exe** depending on your data requirements (*<dvd root>\apps\deliver\opensys*).

A non-secure installation will run the server using non-secure sockets and there will be no data encryption. A secure server uses secure sockets based on SSL[2]

> **Note:** Your windows profile must have administer status to run the execution file.

[1]Java Development Kit

[2]Secure Socket Layer

Depending on your computer's security settings, your web browser might issue warning messages at this step:

- To ask you whether you want to run the installation program now, or save it on your PC. To launch the setup program immediately, click **Run**. If you decide to save it, you must then locate the saved program and double-click on it to continue.
- To inform you that the software is not signed by a publisher. Click **Run**.

Step 2 Select a language.

From the **Select Setup Language** window, select the language for the installation wizard, then click **OK**.

Step 3 Confirm correct installation of ARCAD-Home.

To function properly, the ARCAD Execution Agent must be able to access a configuration folder called *exec_agent* located in the ARCAD-Home folder.

During installation, the setup program looks for the **ARCAD_HOME** environment variable[1] to locate the ARCAD-Home folder.

- If this variable and the directory it references both exist, the setup program installs the configuration folder and the installation wizard advances to Step 4.
- If the **ARCAD_HOME** environment variable does not exist, or if it references a directory that does not exist, then the setup program looks for the ARCAD-Home Directory Setup Program in the same directory as the execution file (*<dvd root>\apps\deliver\opensys\ARCADCoreSetup.exe*).

  Click **Yes** to launch the ARCAD-Home installation. When that installation completes, return to this point and continue with the installation.

Step 4 Begin the setup wizard.

The **Welcome** screen displays the version of the product that will be installed and gives you the option to cancel the installation.

Click **Next >** to continue.

Step 5 Review and accept the license agreement.

The **License Agreement** page presents the ARCAD Software license agreement for you to review. Please read it carefully.

When you have reviewed the agreement, select **I accept the agreement**.

Click **Next >** to continue.

Step 6 Confirm the installation location.

[1] A variable that provides values for each type of environment in which a process will run.

The **Select Destination Location** screen displays the default location where ARCAD Software elements will be installed. If you prefer to install the software elements in a different location, either type in the location, or click **Browse...** to navigate to and select the alternate location.

The default location is: `C:\Program files\ARCAD Solutions\ARCAD-Deliver\Open Systems`

Step 7 Confirm the program group name and location.

The **Select Start Menu Folder** screen displays the default location where a shortcut will be created in your computer's Start menu. If you prefer to install the shortcut under a different group, either type the location here, or click **Browse...** to navigate to and select the alternate location.

The default locations is: `ARCAD Solutions\ARCAD-Deliver\Open Systems.`

Click **Next >** to continue.

Step 8 Install.

The **Ready to Install** screen enables you to review and change or confirm the setup parameters provided and to launch the installation.

To change a setup parameter, click **< Back** and return to the necessary screen.

If you agree with the installation parameters displayed, click **Install** to start the copy phase of the installation process.

As the installation proceeds, a status bar displays its progress. Each element copied appears above the status bar. Click **Cancel** to interrupt the installation.

Step 9 Complete the setup process.

The final page of the wizard displays confirmation that the setup was a success.

Click **Finish** to close the setup wizard.

Result the ARCAD Execution Agent is installed and available for use.

11.2.2 Configuring the ARCAD Execution Agent

Before starting ARCAD Execution Agent server, you must set it up.

> ⚠ **Important!** Modification of the following file is mandatory after every new installation.

A configuration file named *ea-security-settings.xml* can be found at this path: <*arcad_home*>*exec_agent*. It defines how the AEA[1] is going to log itself on the system. It is a Windows-specific configuration. The following is the list of properties to configure:

- **domainName**: The domain name must contain the name of the Windows' domain that the user used to log into the system belongs. If the user does not belong to a domain, enter the name of the computer or its IP address. By default, it is set to **[domain_name]**.

  > **Important!** This value must be modified before doing anything with the Execution Agent!

- **logonType**: The possible values are:
  - **LOGON32_LOGON_SERVICE** (default): The AEA will log in as a service, therefore, the user profile used by the execution agent will have to be able to log in as a service also (see the Windows Security Policy). This is the preferred value as the execution agent's user will likely be a powerful profile (like an administrator[2]). Preventing the profile from logging in like a standard user, and as a service instead, preserves the system's security.
  - **LOGON32_LOGON_BATCH**: The AEA will log in as a standard user.

Follow the subsequent steps to authorize a user profile to log in as a service.

Step 1 Open the **Configuration Panel**, then select **Administrative Tools**.

Step 2 Open the **Local Security Policy** window.

Step 3 In the left panel, expand **Local Policies**, then open **User Rights Assignment**.

Step 4 In the right panel, locate then open the **Log on as a service** item.

Step 5 In the **Log on as a service Properties** window, add the user profile which will be used by the AEA.

[1] Arcad Execution Agent

[2] A user role. The user responsible for configuration.

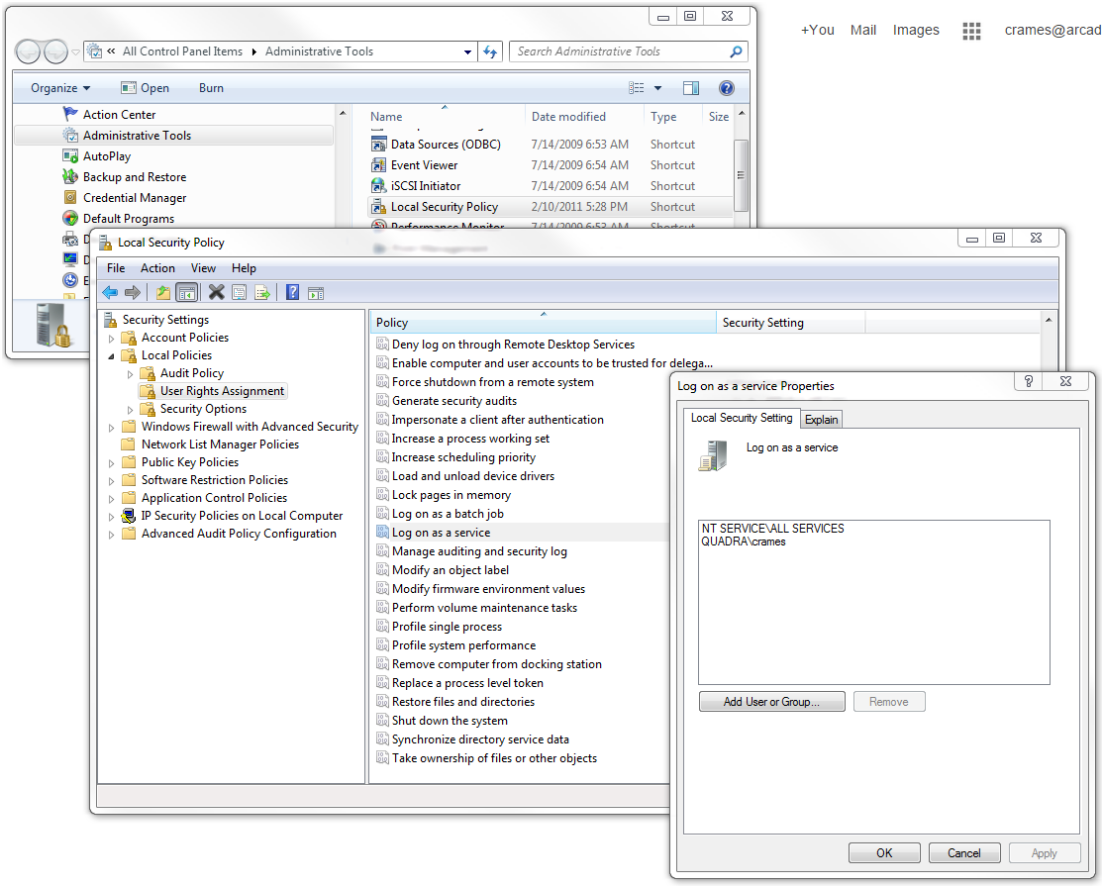

Figure 9: Log on as a Service Properties

11.2.3 Declaring the server as a Windows Service

The Execution Agent is a windows service[1] The service is not launched automatically so you must do it manually.

It is recommended that you ensure everything is configured correctly using the *Start_console.bat*. When the test phase is over, install the AEA as a service. The file used to test the AEA and install it as a service are found in the *bin* subdirectory (*C:\Program Files (x86)\ARCAD Solutions\ARCAD-Deliver\Open Systems\bin*).

- **Start_console.bat**: Launches the AEA in a console window. Useful for testing purposes.
- **install_service.bat**: Installs the AEA as a windows service.
- **remove_service.bat**: removes the AEA from the windows service.
- **Start/Stop_service.bat**: starts/stops the AEA service.

[1]A long-running executable application that does not show any user interface.

Access the **Services** window to verify that it is running. A service called **ARCAD-Execution Agent** must appear in the list of services.

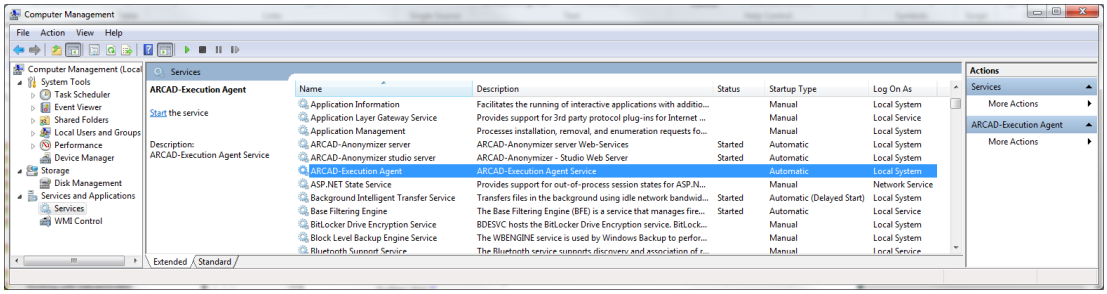

Figure 10: ARCAD Execution Agent Windows Service

12 Installing the ARCAD Execution Agent on Linux

12.1 Prerequisites

The minimum PC requirements are:

- Hardware:
  - 2 GHz Pentium® IV Processor
  - 1 Gb of RAM
  - 350+ MB of available disk space
  - [optional] CD-ROM drive for installation
- Software:
  - Microsoft Windows XP/7/8
  - Java JRE/JDK[1] version 7 maximum
  - ARCAD-Home (Refer to ARCAD-Home on page 36)

12.2 Installation process

12.2.1 Execute the Installation Process

Step 1 Copy the content of the associated install folder from your installation media (<*dvd root*>*apps**deliver**opensys**linux*) into the **arcad_home** directory (*/opt/arcad/arcad_home*).

Step 2 Give the correct authorization to the installation script *chmod u+x /opt/arcad/arcad_home/install.sh* by executing the following commands into a shell command line:

```
cd /opt/arcad/arcad_home

chmod u+x ./install.sh
```

Step 3 Open the file */opt/arcad/arcad_home/aea-server/arcad-ae-path.sh* to ensure the **JAVA_HOME, ARCAD_HOME** and **ARCAD_AEA_HOME** variables point to the correct paths.

1. Define your JDK implementation

   ```
   !/bin/bash

   JAVA_HOME="/usr/lib/jvm/java-6-openjdk"

   export JAVA_HOME
   ```

[1]Java Development Kit

PATH="$PATH:$JAVA_HOME/bin"

export PATH

2. The ARCAD_HOME variable must point the ARCAD HOME Directory

   ARCAD_HOME="/opt/arcad/arcad_home"

3. The ARCAD_AEA[1]_HOME variable must point the server

   ARCAD_AEA_HOME="/opt/arcad/arcad_home/aea-server/bin"

Step 4 Run the run the following command in a Shell Command Line to execute the installation process

```
install.sh /opt/arcad/arcad_home/aea-server
```

12.2.2 Configuring the ARCAD Execution Agent

To start the ARCAD Execution Agent use the following command. It will launch it and make it run as a background process: `/opt/arcad/arcad_home/aea-server/arcad-execution-agent start &`.

To check its execution status using the following command: `/opt/arcad/arcad_home/aea-server/arcad-execution-agent status`.

To stop its execution use the following command: `/opt/arcad/arcad_home/aea-server/arcad-execution-agent stop &`.

12.2.3 Activating SSH authentication

Because it is more convenient to setup than JPAM, it is advised to use the SSH authentication with the ARCAD Execution Agent under Lunix. These steps require the use of the **root** login:

Step 1 Make sure the SSH server is up and running.

Check using either of the following commands. If they return something, it's ok:

```
ps aux | grep /sshd
```

```
netstat -plant | grep 22 | grep LISTEN
```

Step 2 Retrieve and copy the server's RSA key fingerprint with this command:

```
ssh-keygen -lf /etc/ssh/ssh_host_rsa_key.pub.
```

The fingerprint is a 16-byte value separated by colons (:). The following is an example of an output of this command, with the fingerprint highlighted in red:

[1]Arcad Execution Agent

```
2048 d3:30:08:33:d2:9f:47:da:88:ac:40:01:4c:8e:d9:6b root@rdrm-drops-
linux (RSA)
```

Step 3 Open the *arcad_home/exec_agent/ea-security-settings.xml* and do the following:

1. Set the **class** value of the **AuthentificationValider** bean to **com.arcadsoftware.arx.server.security.SSHJaasAuthentifier**.
2. Set the value of the **loginModuleName** property to **SSHUnixLogin**.
3. Add a new property tag after the **loginModuleName,** and use the server's fingerprint as its value.

The following is a valid example of an *ea-security-settings.xml* prepared for SSH authentication (changed values are bold):

```
<beans>
   <bean id="AuthentificationValider" class="com.arcadsoftware.arx.server.security.SSHJaasAuthentifier" singleton="false">
      <property name="loginModuleName">
         <value>SSHUnixLogin</value>
      </property>
      <property name="fingerprint">
         <value>d3:30:08:33:d2:9f:47:da:88:ac:40:01:4c:8e:d9:6b</value>
      </property>
   </bean>
</beans>
```

13 Troubleshooting the ARCAD Execution Agent installation

13.1 Caveats

Any Open System

1. Check the <*arcad_home*>*/exec_agent/server-settings.xml* file:
   - Change the **port** if the default 8230 is not open and reachable on this machine.
   - Ensure the directory defined as the **temporaryPath** is fully accessible (read & write) by the Execution Agent user profile.
2. Check the <*arcad_home*>*/exec_agent/message-settings.xml* file:
   - Ensure the file defined in the filename property is fully accessible (read & write) by the Execution Agent user profile.

Windows

1. Ensure the *ARCAD_HOME* environment variable[1] is correctly set (Refer to the *Managing the ARCAD-Home Environment Variable on page 42*).
2. Check the <*path to Program Files*>*\ARCAD Solutions\ARCAD-Deliver\Open Systems\conf\wrapper.conf* file:
   - Set the correct socket type to use (secure or not secure).
   - Make sure the **java** command as it is set on the **wrapper.java.command** parameter is useable (check using a MS-Dos command).
3. Open and modify the <*arcad_home*>*\exec_agent\ea-security-settings.xml* file:
   - Set the correct **domainName** (either a domain name or the machine name if a local user profile will be used).
   - Change the **logonType** if the profile can't be configured to log in as a service.
4. Check the user profile and make sure it has the correct rights on every directory implied in the D4OS process.

IBM i (Client-Side)

1. Check the <*arcad_home*>*/exec_agent/client-settings.xml*:
   - Ensure the **communicationClient.id** uses the correct class.

   Example
   If the remote Execution Agent runs in a secure mode, use the secure socket class.

[1] A variable that provides values for each type of environment in which a process will run.

2. Check if every required application/site variables are set:
   - Application variables: **DELIVER4OS/TYPE** and **DELIVER4OS/TRANSFERT_IFS**.
   - Site variables (for each implied environment): **OPEN_SITE, OPEN_ROOT** and **OPEN_SCRIPT_DIR**.

13.2 The Execution Agent won't start

1. Is Java installed and reachable? Is it the version 5 or above?
2. Does **wrapper.java.command** in the **wrapper.conf** file point to the correct java command?
3. Start it using *startConsole.bat* and check for error messages.

13.3 The log file is empty

1. Is it correctly set in the *message-settings.xml* file?
2. Is the file accessible by the profile running the ARCAD Execution Agent? Check for the access rights.

13.4 The AEXCSRVPVR command can't reach the Execution Agent (stuck, no error messages)

1. Is the **OPEN_SITE** site variable correctly set?
2. Is the site set in the **OPEN_SITE** variable correctly described?
3. Are you trying to reach a secure or non secure Execution Agent?
   - On the IBM i, make sure the *client-settings.xml* is set to use the correct connection method.
   - On the Open Site, check if you are running in a secure or non secure mode.
4. Is the IBM i able to reach the remote site? Try the PING command to check.

13.5 aeaCopyFile/aeaPutFile runs with no error on the IBM i, but files aren't copied on the open site

Check if the profile used by the Execution Agent can read/write in the temporary directory set in the *server-settings.xml* file.

ARCAD-CLIENT

14 ARCAD-Client prerequisites

The minimum PC requirements are:

- Hardware:
  - 2 GHz Pentium® IV Processor
  - 1 Gb of RAM
  - 350+ MB of available disk space
  - [optional] CD-ROM drive for installation
- Software:
  - Microsoft Windows XP/7/8
  - Java JRE/JDK[1] version 7 maximum
  - ARCAD-Server (Refer to The ARCAD-Server on page 17)
  - ARCAD-Home (Refer to ARCAD-Home on page 36)

[1]Java Development Kit

15 Installing ARCAD-Client

The installation process takes approximately 5 minutes. It is a simple procedure similar to most other Windows applications. For trouble-free installation, it is recommended that you close all active Windows applications before beginning the installation.

Follow the subsequent steps to install ARCAD-Client.

Step 1 Launch the setup wizard.

Execute the **Setup.exe** (<*root*>*apps**arcad client*).

> **Note:** Your windows profile must have administer status to run the execution file.

Depending on your computer's security settings, your web browser might issue warning messages at this step:

- To ask you whether you want to run the installation program now, or save it on your PC. To launch the setup program immediately, click **Run**. If you decide to save it, you must then locate the saved program and double-click on it to continue.
- To inform you that the software is not signed by a publisher. Click **Run**.

Step 2 Select a language.

From the **Select Setup Language** window, select the language for the installation wizard, then click **OK**.

Step 3 Begin the setup wizard.

The **Welcome** screen displays the version of the product that will be installed and gives you the option to cancel the installation.

Click **Next >** to continue.

Step 4 Review and accept the license agreement.

The **License Agreement** page presents the ARCAD Software license agreement for you to review. Please read it carefully.

When you have reviewed the agreement, select **I accept the agreement**.

Click **Next >** to continue.

Step 5 Confirm the installation location.

The **Select Destination Location** screen displays the default location where ARCAD Software elements will be installed. If you prefer to install the software elements in a different location, either type in the location, or click **Browse...** to navigate to and select the alternate location.

The default location is: `C:\Program files\ARCAD Solutions\ARCAD-Client`

Step 6 Confirm the program group name and location.

The **Select Start Menu Folder** screen displays the default location where a shortcut will be created in your computer's Start menu. If you prefer to install the shortcut under a different group, either type the location here, or click **Browse...** to navigate to and select the alternate location.

The default locations is: `ARCAD Solutions\ARCAD-Client`

Click **Next >** to continue.

Step 7 Create a desktop shortcut.

From the **Select Additional Tasks** screen, select whether or not you want to create an application shortcut on your desktop.

To create an application shortcut on your desktop, check the **Create a desktop icon** checkbox.

To omit this shortcut, leave the box unchecked.

Click **Next >** to continue.

Step 8 Install.

The **Ready to Install** screen enables you to review and change or confirm the setup parameters provided and to launch the installation.

To change a setup parameter, click **< Back** and return to the necessary screen.

If you agree with the installation parameters displayed, click **Install** to start the copy phase of the installation process.

As the installation proceeds, a status bar displays its progress. Each element copied appears above the status bar. Click **Cancel** to interrupt the installation.

Step 9 Complete the setup process.

The final page of the wizard displays confirmation that the setup was a success.

Check or uncheck the **Launch ARCAD-Client** check box as required.

Click **Finish** to close the setup wizard.

Result ARCAD-Client is installed and available for use.

ARCAD PLUG-INS

16 ARCAD plug-ins prerequisites

General prerequisites for ARCAD modules:

For the complete list of prerequisites required for each ARCAD module, refer to its individual documentation.

For RDi

- RDi[1] version 9.0.x.

For RTC

- RDi version 9.0.x.
- Rational Team Concert (RTC[2]) Client version 4.0.x.

For a standard Eclipse IDE

- An Eclipse IDE[3] ≥v3.7

1Rational Developer for i
2Rational Team Concert
3Integrated Development Environment

17 Preparing to install ARCAD plug-ins

Before installing Eclipse plug-ins, create a location in which to save the installation files. Follow the subsequent steps to prepare this *Local Site Folder*.

Step 1 Create a new folder anywhere on your disk.

> **Note:** After installation, it is recommend that you keep this folder. Eclipse will continue to recognize it, so when updates are available, copy them into this folder.

Step 2 Copy the installation package folder and all of its contents from your installation media to this newly created folder. The installation files can be found in the following locations on the installation media - be sure to copy the correct set of plugins depending on your Eclipse environment:

- for RDi[1] and any standard Eclipse IDE[2]: *<root>\plugins\plugins std*
- for RTC[3]: *<root>\apps\ext4rtc*

Result Two sub-directories, *plugins* and *features* and one file, *site.xml* are available.

[1]Rational Developer for i

[2]Integrated Development Environment

[3]Rational Team Concert

18 Installing ARCAD plug-ins

Step 1 From the **Help** menu of the Eclipse IDE, select **Install New Software**.

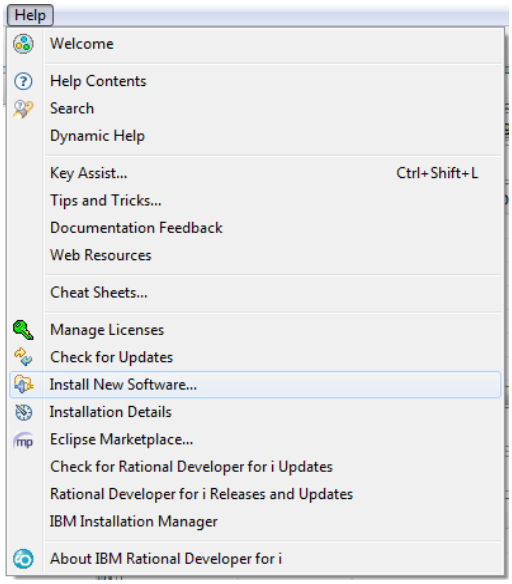

Figure 11: Help menu > Install New Software

Step 2 From the **Install** dialog, click the **Add** button.

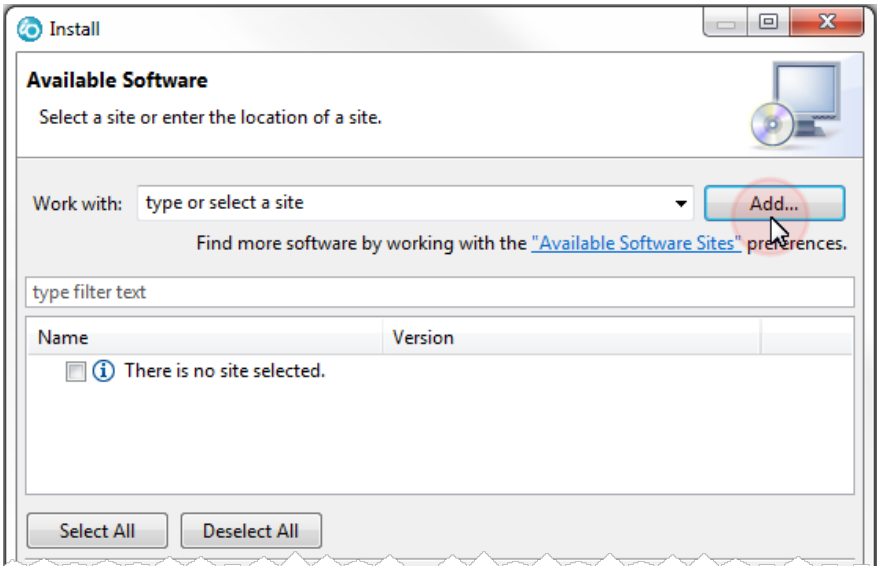

Figure 12: Click the Add button in the Install dialog

Step 3 In the **Add Repository** dialog, enter a name, then click **Local...**.

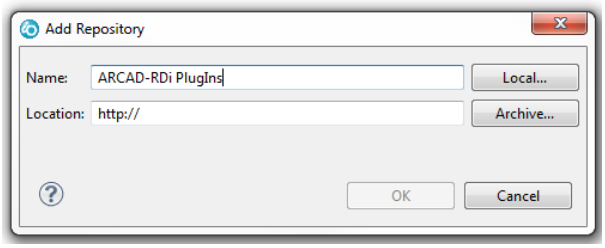

Figure 13: Add Repository dialog

Step 4 Select the *Local Site Folder* created previously from the **Browse for Folder** dialog to point to the correct installation files. Click **OK**.

Result The **Location** field in the **Add Repository** dialog is set to the local site folder.

Click **OK**.

Step 5 Select all of the ARCAD plug-ins that you wish to install and that are compatible with your Eclipse IDE.

For RDi

All of the modules included in the *<root>\plugins\plugins std* distribution package are compatible with RDi[1]. Separate keys are required for each module to activate them after installation. You can still install any of the modules included in the standard plug-ins package even if you don't have the activation key for all of them.

[1]Rational Developer for i

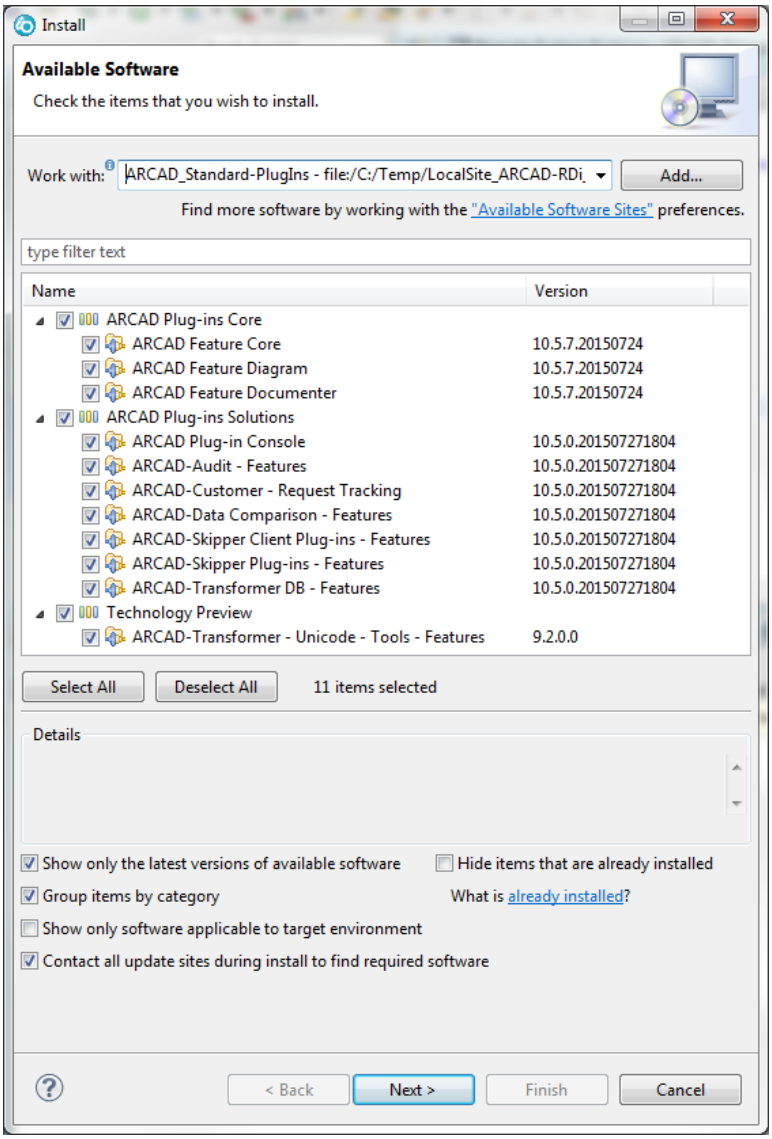

Figure 14: The ARCAD-RDi plug-ins

> ***Reference*** For a list of the ARCAD modules compatible with RDi, refer to About the ARCAD-RDi plug-ins on page 15.

For RTC

All of the modules included in the *<root>\apps\ext4rtc* distribution package are compatible with RTC[1]. Any module not included in this package is not compatible with RTC.

[1]Rational Team Concert

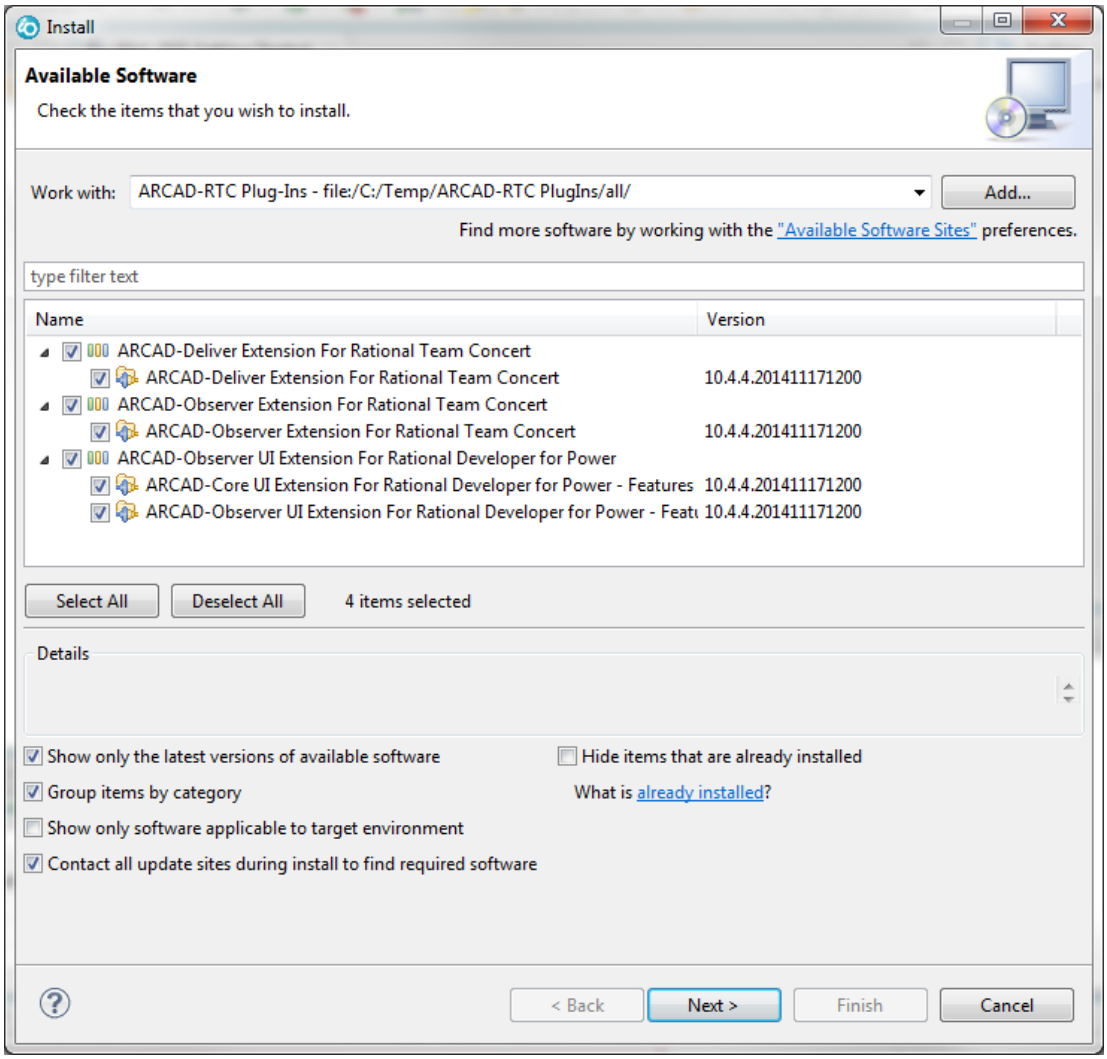

Figure 15: The ARCAD-RTC plug-ins

> ***Reference*** For a list of the ARCAD modules compatible with RTC, refer to About the ARCAD-RTC plug-ins on page 15.

For a standard Eclipse IDE

All of the modules included in the *<root>\plugins\plugins std* distribution package except ARCAD-Skipper are compatible with standard Eclipse IDEs. ARCAD-Skipper is dependent on the RSE (Remote Systems Explorer) found in Rational eclipse-based IDEs like WDSC, Rdi or RDP.

If any incompatible module is selected an error message is displayed that indicates which plugins should be unchecked in order to continue. Unchecking the incompatible plug-ins activates the **Next** button.

Separate keys are required for each module to activate them after installation. You can still install any of the modules that are compatible with standard IDEs even if you don't have the activation key for all of them.

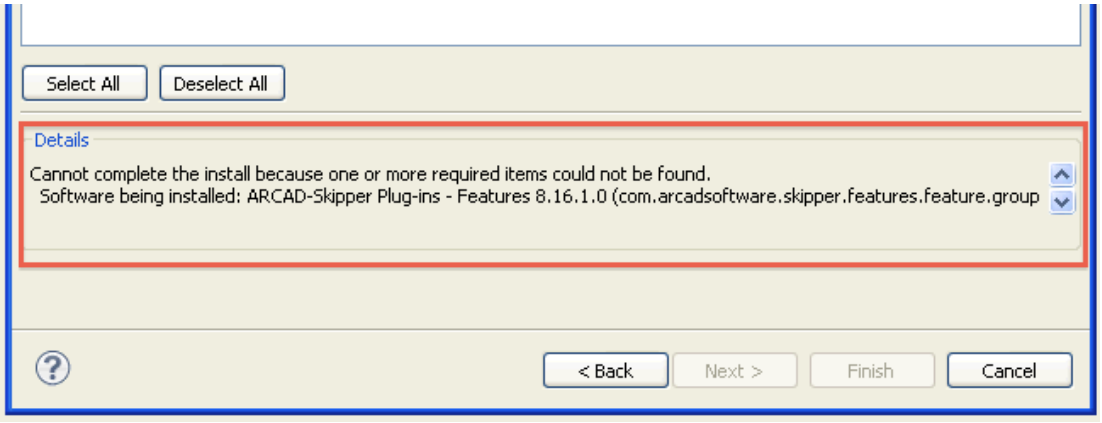

Figure 16: Warning message when including incompatible plug-ins for standard Eclipse IDEs

> ***Reference*** For a list of the ARCAD modules compatible with any standard IDE[1], refer to About ARCAD's standard Eclipse IDE plug-ins on page 16.

Click **Next >** to continue.

Step 6 Review the selected features in the **Install Details** dialog.

Click **Next >** to continue.

Step 7 Review and accept the license agreement

The **License Agreement** page presents the ARCAD Software license agreement for you to review. Please read it carefully.

When you have reviewed the agreement, select **I accept the terms of the license agreements**.

Click the **Finish** button to launch the installation.

Step 8 Confirm the installation should proceed.

The **Security Warning** dialog informs you that the selected ARCAD plug-ins are an unsigned feature.

Click **OK**.

Step 9 Restart the workbench. Click **Yes** to restart.

Result The ARCAD modules selected during step 5 are installed and available for use.

[1]Integrated Development Environment

19 Post-installation procedures for RTC

Follow the subsequent steps to ensure that the RTC[1] workbench parameters are in line with the ARCAD-RTC plug-ins requirements.

Step 1 Select **Preferences** from the workbench **Window** menu.

Step 2 Expand the **General** section, then select **Capabilities**.

Step 3 In the list of available capabilities on the right, select **Team**.

Step 4 Click **Apply**.

Step 5 Click **OK**. to exit the **Preference** window.

[1]Rational Team Concert

20 Upgrading ARCAD plug-ins

Upgrading any group of or individual plug-in is similar to the original installation process. The prerequisites are the same and you must already have a previous version of the plug-in installed.

20.1 Prepare the Upgrade

Before installing an upgraded plug-in, download and unzip the upgrade package in the same *Local Site Folder* as the original installation package.

Two sub-directories, *plugins* and *features* and one file, *site.xml* are available.

20.2 Upgrade Process

> **Note:** The examples below are taken from RDi[1] v9.0.x but the upgrade process is the same for any Eclipse IDE[2].

You must be logged in as an administrator[3].

Step 1 From the **Help** menu of the Eclipse IDE, select **Install New Software**.

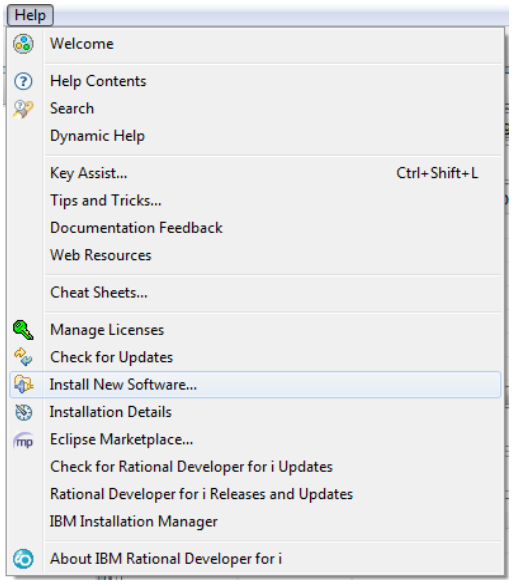

Figure 17: Help menu > Install New Software

Step 2 From the **Install** dialog, click the **Add** button.

---

[1]Rational Developer for i

[2]Integrated Development Environment

[3]A user role. The user responsible for configuration.

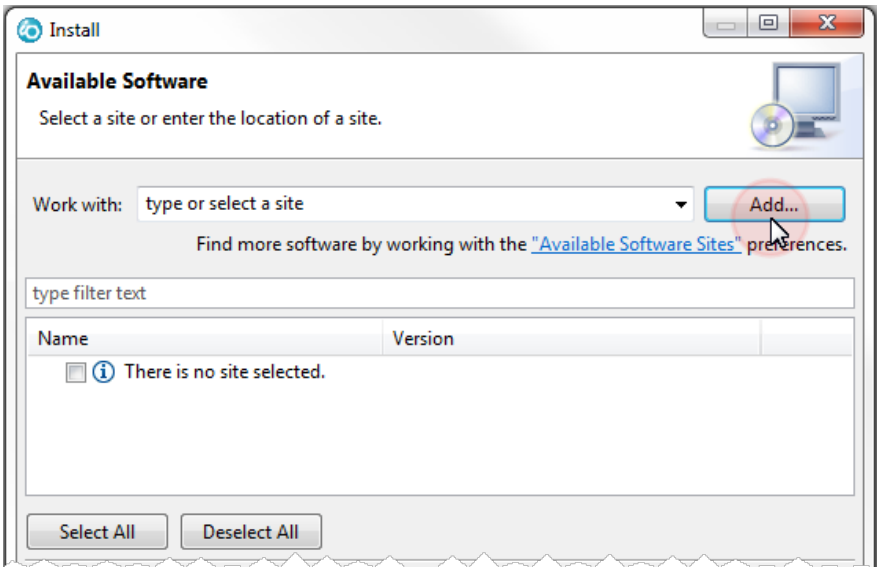

Figure 18: Click the Add button in the Install dialog

Step 3 In the **Add Repository** dialog, enter a name, then click **Local...**.

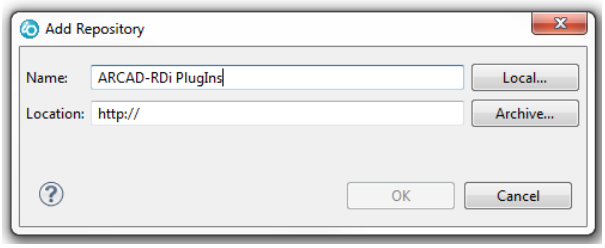

Figure 19: Add Repository dialog

Step 4 Select the *Local Site Folder* created previously from the **Browse for Folder** dialog to point to the correct installation files. Click **OK**.

Result The **Location** field in the **Add Repository** dialog is set to the local site folder.

Click **OK**.

Step 5 Select all of the ARCAD plug-ins available in the list to ensure everything is installed.

The **Details** section should display a message saying that an install can not be performed, and that an upgrade will be performed instead.

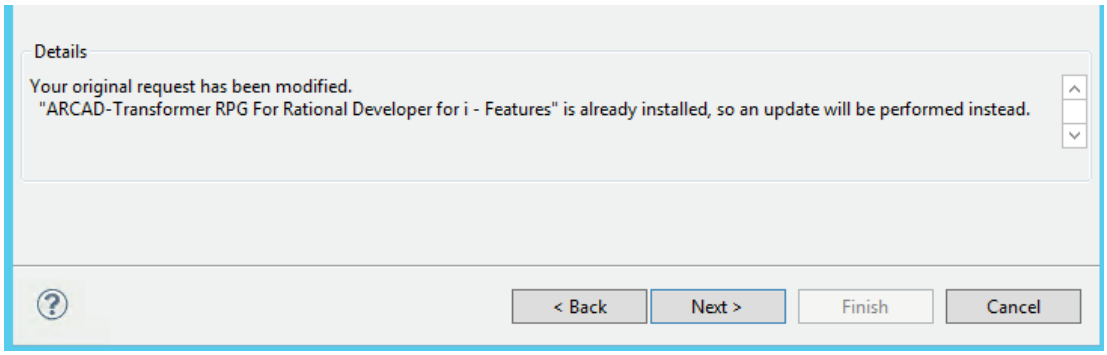

Figure 20: Example of the message displayed when updating Eclipse plug-ins

Note: If you are using RDi; once the upgrade is completed, the system i must be upgraded as well. Each user must upgrade their plug-ins, however the upgrade to the server is only performed once.

21 Uninstalling ARCAD plug-ins

When there is a major upgrade (as opposed to a simple cumulative patch) or a name change in one of the ARCAD plug-ins, then it is recommended to uninstall the current plug-ins and restart your platform before installing the new plugins. Upgraded ARCAD plug-ins only work correctly when their names have not changed.

Follow the subsequent steps to uninstall ARCAD plug-ins.

Step 1 From the **Help** menu of the Eclipse IDE, select **Install New Software**.

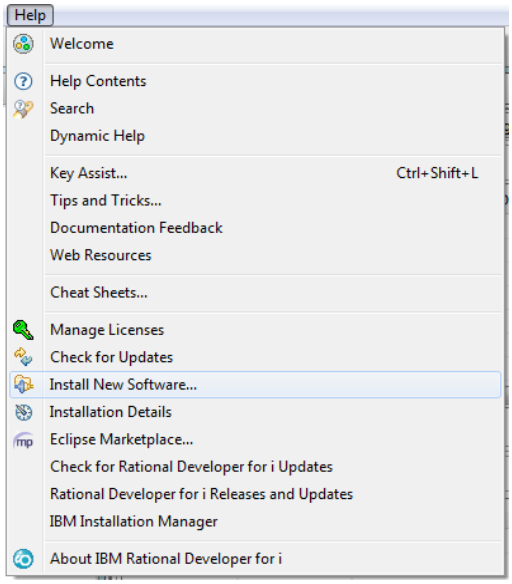

Figure 21: Help menu > Install New Software

Step 2 Click the **What is already installed** link in the lower right-hand corner of the **Install** dialog.

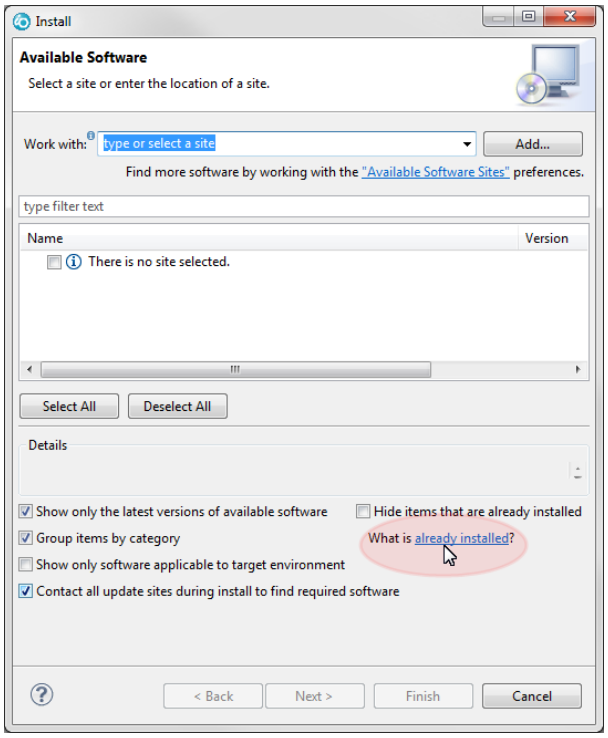

Figure 22: Already installed plug-ins

Step 3 Select all the ARCAD plug-ins to delete from the list and click the **Uninstall** button.

Step 4 Click Finish to confirm.

Step 5 Restart the workbench. Click **Yes** to restart.

Result The selected plug-ins are uninstalled.