

HP OpenView Configuration Analyzer Using Radia

Radia Configuration Analyzer Guide

Software Version: 4.0

for the Windows operating system



Manufacturing Part Number: T3424-90054

August 2004

© Copyright 2004 Hewlett-Packard Development Company, L.P.

Legal Notices

Warranty

Hewlett-Packard makes no warranty of any kind with regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

A copy of the specific warranty terms applicable to your Hewlett-Packard product can be obtained from your local Sales and Service Office.

Restricted Rights Legend

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013.

Hewlett-Packard Company
United States of America

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Copyright Notices

© Copyright 1998-2004 Hewlett-Packard Development Company, L.P.

No part of this document may be copied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard Company. The information contained in this material is subject to change without notice.

Trademark Notices

Linux is a registered trademark of Linus Torvalds.

OpenLDAP is a registered trademark of the OpenLDAP Foundation.

Acknowledgements

PREBOOT EXECUTION ENVIRONMENT (PXE) SERVER
Copyright © 1996-1999 Intel Corporation.

TFTP SERVER
Copyright © 1983, 1993
The Regents of the University of California.

OpenLDAP

Copyright 1999-2001 The OpenLDAP Foundation, Redwood City, California, USA.
Portions Copyright © 1992-1996 Regents of the University of Michigan.

OpenSSL License

Copyright © 1998-2001 The OpenSSLProject.

Original SSLeay License

Copyright © 1995-1998 Eric Young (eay@cryptsoft.com)

DHTML Calendar

Copyright Mihai Bazon, 2002, 2003

Technical Support

Please select Support & Services from the following web site:

<http://www.hp.com/managementsoftware/services>

There you will find contact information and details about the products, services, and support that HP OpenView offers.

The support site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information

About this Guide

The Radia Configuration Analyzer is a component of the Radia Extensions for Windows Installer product.

Who this Guide is for

The Radia Configuration Analyzer guide is for the administrator who would like to view and compare state information as well as generate reports based on this information.

Conventions

You should be aware of the following conventions used in this book.

Table P.1 ~ Styles

Element	Style	Example
References	<i>Italic</i>	See the <i>Publishing Applications and Content</i> chapter in this book.
Dialog boxes and windows	Bold	The Radia System Explorer Security Information dialog box opens.
Code	Andale Mono	radia_am.exe
Selections	Bold	Open the \Admin directory on the installation CD-ROM.

Table P.2 ~ Usage

Element	Style	Example
Drives (system, mapped, CD)	Italicized placeholder	<i>SystemDrive</i> :\Program Files\Novadigm might refer to C:\Program Files\Novadigm on your computer. <i>CDDrive</i> :\client\radia_am.exe might refer to D:\client\radia_am.exe on your computer.
Files (in the Radia Database)	All uppercase	PRIMARY
Domains (in the Radia Database)	All uppercase	PRIMARY.SOFTWARE May also be referred to as the SOFTWARE domain in the PRIMARY file.
Classes (in the Radia Database)	All uppercase	PRIMARY.SOFTWARE.ZSERVICE May also be referred to as the ZSERVICE class in the SOFTWARE domain in the PRIMARY file.

The table below describes terms that may be used interchangeably throughout this book.

Table P.3 ~ Terminology*

* Depends on the context. May not always be able to substitute.

Term	May also be called
Application	software, service
Client	Radia Application Manager and/or Radia Software Manager
Computer	workstation, server
NOVADIGM domain	PRDMAINT domain Note: As of the 4.0 release of the database, the NOVADIGM domain is being renamed the PRDMAINT domain. Therefore, if you are using an earlier version, you will see the NOVADIGM domain in the database.
Radia Configuration Server	Manager, Active Component Server
Radia Database	Radia Configuration Server Database

Contents

- Preface 5**
 - About this Guide5
 - Who this Guide is for5
 - Conventions6

- 1 Introduction 13**
 - The Radia Configuration Analyzer 14
 - Overview 14
 - Generating State Files 16
 - Starting the Radia Configuration Analyzer 16
 - Setting the App Login ID 17
 - Summary 19

- 2 Installing the Radia Configuration Analyzer 21**
 - System Requirements 22
 - Radia Configuration Analyzer System Requirements 22
 - Radia Application Knowledge Base Requirements 22
 - Installing the Radia Configuration Analyzer 22
 - Step 1: Installing the Radia Configuration Analyzer Database Schema 23
 - Step 2: Create an ODBC DSN Connection 28
 - Step 3: Installing the Radia Configuration Analyzer 29
 - Step 4 (optional): Installing the Radia State Generator 34
 - Defining a Radia Application Knowledge Base 39
 - Microsoft SQL Server 39
 - Oracle 40
 - Summary 42

3 Radia Configuration Analyzer Settings.....	43
Radia Configuration Analyzer Administrator Console.....	45
Setting Options	46
Display Tab Options	47
Comparison Tab Options.....	48
Managing Radia Application Knowledge Base Permissions.....	50
Default Radia Application Knowledge Base Access Rights and Structures	50
Creating Radia Application Knowledge Base User IDs	50
Choosing the Role, User ID, Workspace, and Workspace Owner.....	51
Enabling All Roles, Users, Workspaces, and Workspace Owner Access.....	51
Enabling Workspace Creation for a User	51
Access Rights of the Workspace Owner	52
Assigning Specific Access Rights to Users.....	52
Access Rights for Shared Objects	52
Sample Implementation Guidelines.....	52
Summary	54
4 Using the Radia Configuration Analyzer.....	55
Populating the Radia Application Knowledge Base.....	56
Creating a Workspace.....	56
Creating a Project.....	57
Importing a State	60
Viewing State Information	63
Analyzing State Files	66
Adding and Removing States from the Analysis	69
Saving and Loading an Analysis.....	71
Generating a Report.....	75
Summary	76
5 Generating State Files	77
Generating State Files with the Radia State Generator	78
Creating a Before State File	78
Creating an After and Delta State.....	86
Building Radia State Files with the System Explorer	93
State File Creation Process	95
Summary	100

Glossary..... 101

Lists 105

 Figures 105

 Tables 108

 Procedures..... 109

Index..... 111



Introduction

At the end of this chapter, you will:

- Understand the Radia Configuration Analyzer and its uses.

The Radia Configuration Analyzer

The Radia Configuration Analyzer allows you to view, store, and compare patches and application data. Application or Patch data is imported into the Radia Configuration Analyzer in the form of state files. State files represent the current state of an application, either before or after an installation or when any modifications to that application are made. These state files are contained within the Radia Application Knowledge Base, a database you configure using either Microsoft SQL Server or Oracle.

The Radia Configuration Analyzer Administrator console provides you with the tools you need to begin your analyses.

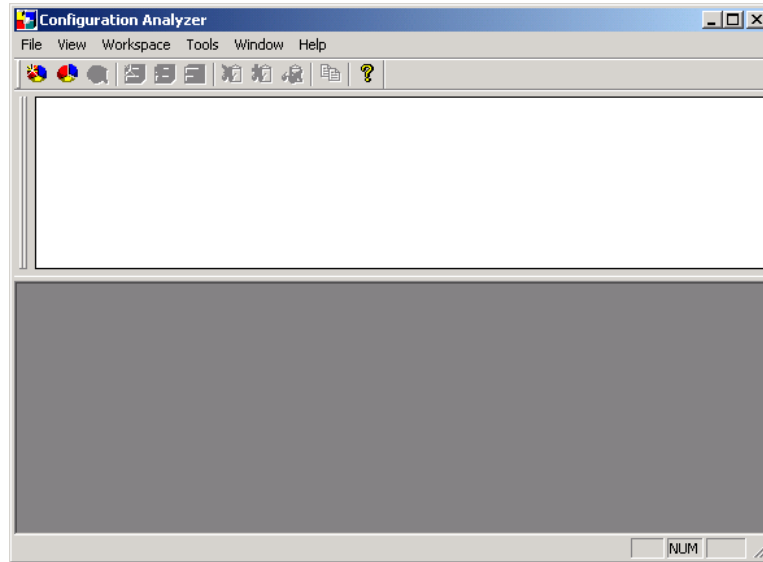


Figure 1.1 ~ Radia Configuration Analyzer administrator console.

Overview

The Radia Configuration Analyzer administrator console simplifies your view of application management. Backed by the Radia Application Knowledge Base database, imported state files keep a detailed history of all of the resources needed by an application to run successfully. With a click of the mouse, powerful features of the console identify conflicts between two or more applications. With this historical and complete set of information at your fingertips, you can easily determine the impact on your environment of:

- Deploying a new application.
- Upgrading an existing application.

- Adding or modifying modules, registry keys, and data files.

The Radia Configuration Analyzer performs integration and management analysis functions. Administrators can profile applications, initiate application comparisons or views, analyze applications, populate the Radia Application Knowledge Base, and establish and manage Radia Application Knowledge Base Permissions.

The Radia Configuration Analyzer is the focal point for viewing and analyzing application and machine state data in your environment. Some of the features are:

- Import of Knowledge Sources, including:
 - Machine Scan and Application Installation state files.
 - Application Execution Profile, Trace, Impact, Intersection, and Union state files.
 - Other Radia product sources.
- Radia Application Knowledge Base Management and Permissions:
 - Provides a facility for describing various workstation configurations. This allows the administrator to group applications to reflect different departmental requirements.
 - To minimize database security administration, all users have access to Radia Configuration Analyzer functions unless otherwise restricted by the Radia Application Knowledge Base administrator. The administrator may use the Permissions facility of the Radia Configuration Analyzer to establish Radia Application Knowledge Base permissions that limit access to Workspace Projects and States. Access rights are granted based on a Workspace name for the combination of database Role and User ID.
- Viewing of Application and Machine State Details:
 - View any state file type
 - Machine configuration components
 - Application execution processing
 - Application installation processing
 - Application component and resource profile state details containing all pertinent information about module files, data files, registry, and security settings
- Viewing of Application and Machine Analysis:
 - Obtain a comparative analysis for module files, data files, and registry settings.
 - View a color-coded conflicts display.
 - View the components and resources shared by two or more applications or desktop configurations.
 - View all potential and real conflicts between two or more applications or desktop configurations.
 - View the non-shared components between two or more applications or desktop configurations.
 - View desktop configurations that reference one or more specific resources and may be affected by the installation of a new application or a new version of an existing application.

- Search the database using built-in search functions with integrated Save and Print of generated reports.

Generating State Files

In order to analyze data with the Radia Configuration Analyzer, you must have data in the form of a state file. State files are generated by different Radia Products, including the Radia Packager for Windows Installer, Radia Usage Manager, Radia Patch Manager and the Radia System Explorer. Refer to the product specific guides for more information about how to create state files with that product.

Additionally, state files can be created using the Radia State Generator, which is shipped along with the Radia Configuration Analyzer. Use this component to create state files of your own applications without the use of any other Radia products. The process of creating state files with the Radia State Generator is explained in *Chapter 5: Generating State Files* starting on page 77.

Starting the Radia Configuration Analyzer

To log on to the Radia Configuration Analyzer

1. From the **Start** menu, select **Programs, Novadigm, Radia Configuration Analyzer** or double-click the Radia Configuration Analyzer icon on your desktop.

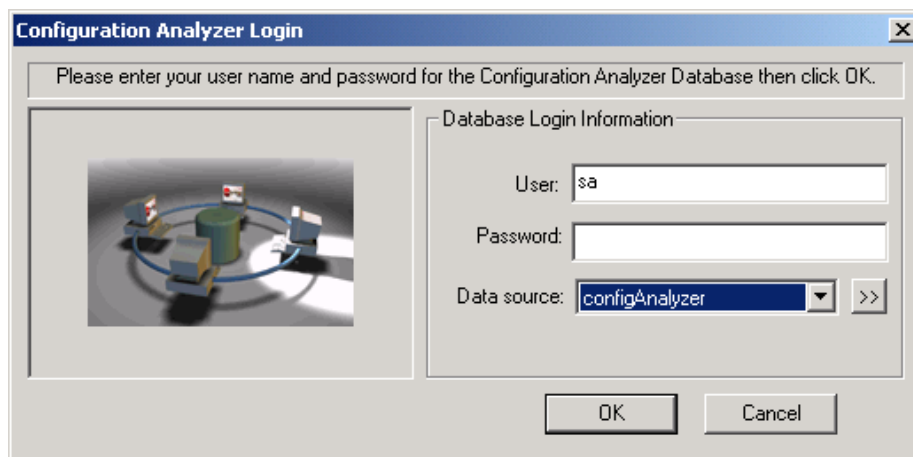


Figure 1.2 ~ Radia Configuration Analyzer Login.

2. In the **User** text box, type your user name.
3. In the **Password** text box, type your password.

4. In the **Data Source** drop-down list, select the appropriate Data Source Name you created.
5. Click **OK**.

The **Radia Configuration Analyzer** opens.

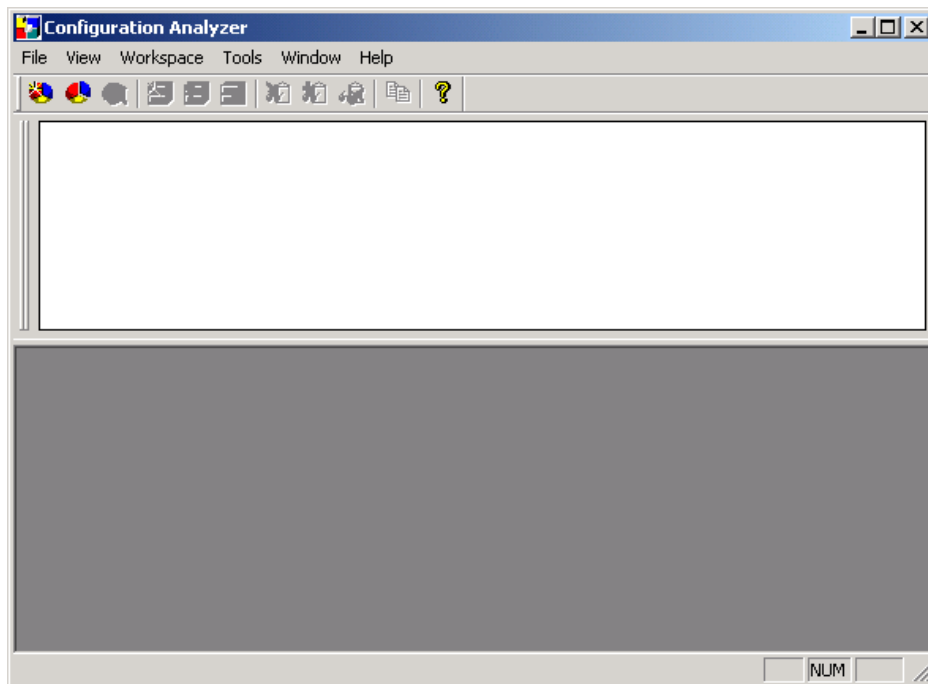


Figure 1.3 ~ Default Radia Configuration Analyzer Administrator console.

Setting the App Login ID

The first time you log in to the Radia Configuration Analyzer, you will be presented with a text box alerting you that no application login exists, as seen in the figure below.

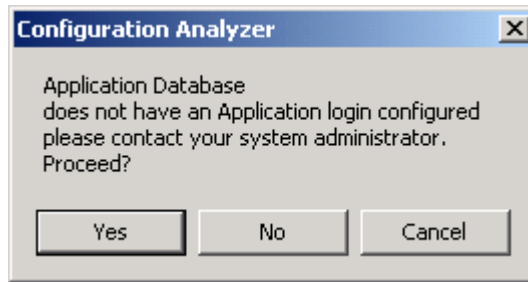


Figure 1.4 ~ No application login set text box.

The Radia Application Knowledge Base administrator must supply a login ID and password that all users of the database will use when connecting to the database. This ID must have full access rights to the database objects including table and stored procedures.

To set this ID, use the **File\Permissions** menu and click **Set Application Login**.

The ID used is typically the **sa** ID for SQL Server or **Radia** for Oracle. Clicking **Yes** updates the Application Knowledge Base table **AppLogin**, which defines an administrator ID and password that have full database owner authority. This does not have to be the **sa** ID.

The AppLogin ID is used for all access to the database, both by the Radia Configuration Analyzer apps and the Radia Knowledge Base Manager. A single AKBADMIN ID is all that is needed for definition in the database AppLogin table. Individual users can be given IDs that have limited authority since the privileged database work is done under the account defined in the AppLogin table.

Summary

- The Radia Configuration Analyzer allows you to view, store, and compare application data.
- The Radia Configuration Analyzer uses state files to access application data.

Installing the Radia Configuration Analyzer

At the end of this chapter, you will:

- Understand the Radia Configuration Analyzer system requirements.
- Be able to install and configure the Radia Configuration Analyzer.
- Be able to set up your Radia Application Knowledge Base.

System Requirements

Radia Configuration Analyzer System Requirements

- 128 MB RAM minimum, 256 MB or above preferred.
- Windows NT, 2000, 2003 Server.

Radia Application Knowledge Base Requirements

- Oracle 8i or 9i
- Microsoft SQL Server 7.0 or 2000

Installing the Radia Configuration Analyzer

The installation and configuration of the Radia Configuration Analyzer is comprised of three mandatory steps as well as one optional step. They are:

- 1.** Install the Radia Configuration Analyzer database schema.
- 2.** Create an ODBC DSN connection to your database.
- 3.** Install the Radia Configuration Analyzer.
- 4.** Install the Radia State Generator (Optional).

Step 1: Installing the Radia Configuration Analyzer Database Schema

The Radia Configuration Knowledge Base requires specific tables as part of its database schema. You can add these tables to an existing database, or define a new database (recommended).

To install the database schema

1. On the installation media, open the **Radia Configuration Analyzer Database Schema** folder.
2. Double-click **Package.msi**.

The **Welcome** dialog box opens.

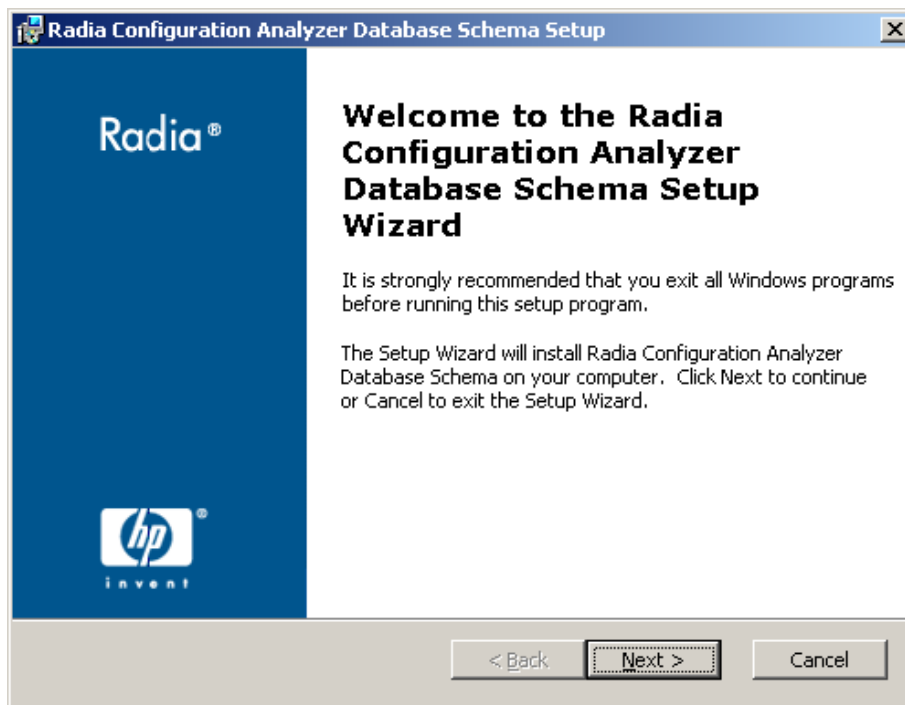


Figure 2.1 ~ Radia Configuration Analyzer Database Schema Welcome dialog box.

3. Click **Next**.
The **End-User License Agreement** window opens.

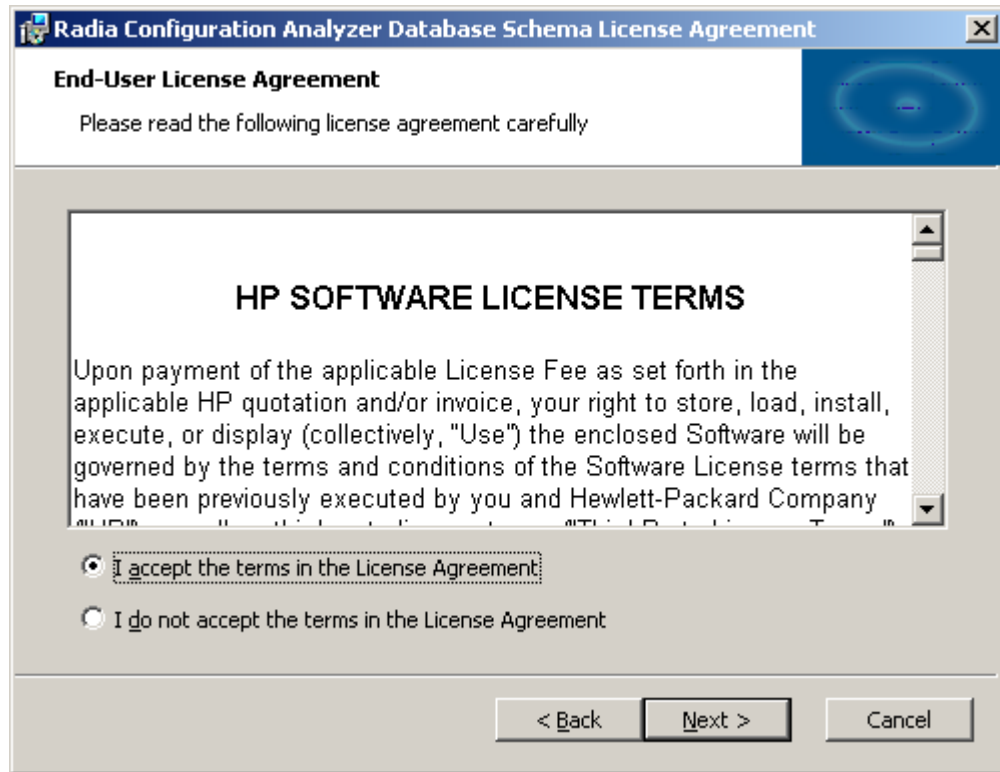


Figure 2.2 ~ HP End-User License Agreement window.

4. Read and accept the HP Software License Terms and click **Next**.

The **Install Location** dialog box opens.

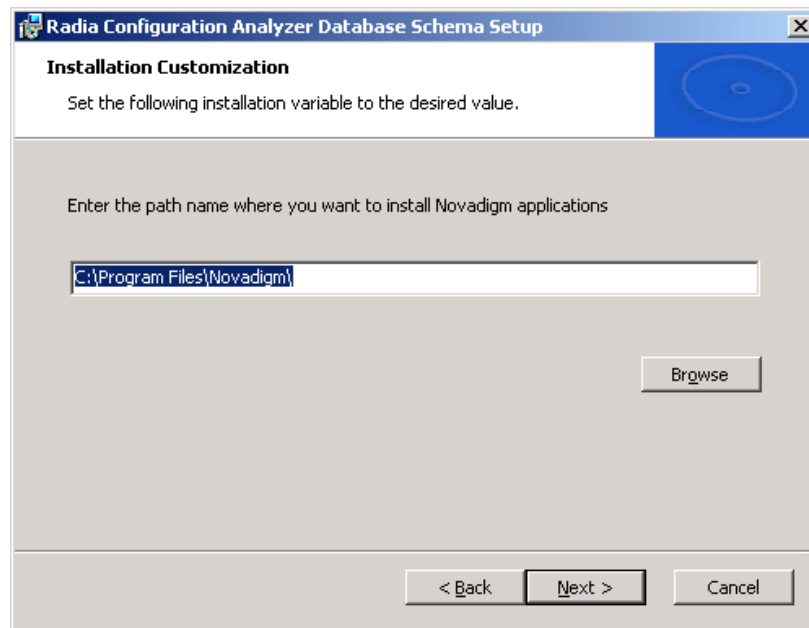


Figure 2.3 ~ Install Location dialog box.

By default, the database schema is installed to the **Program Files\Novadigm** directory. If this directory already exists, this step is skipped.

5. Click **Next**.

The **Serial Number** dialog box opens.

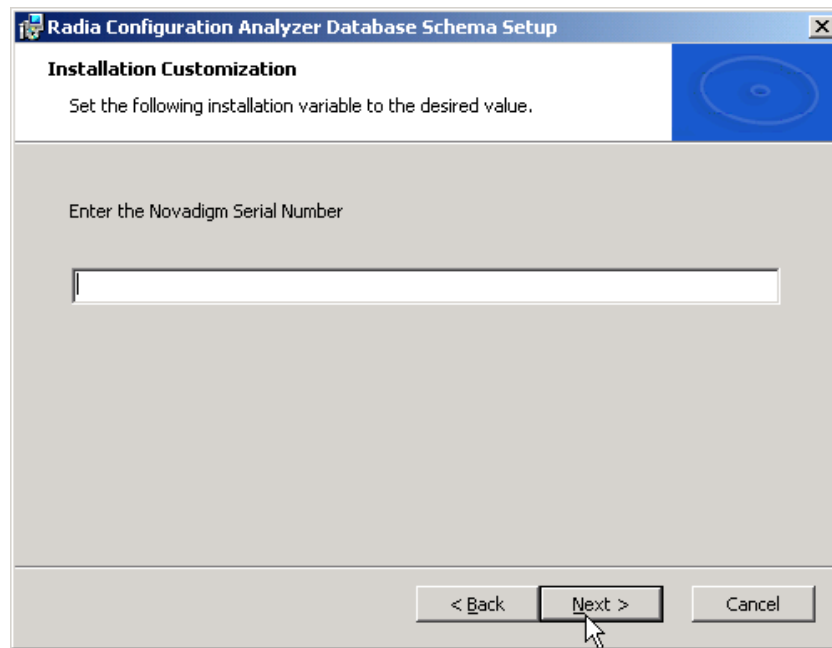


Figure 2.4 ~ Serial Number dialog box.

-
6. Enter your serial number, and click **Next**.

The **Ready to Install** dialog box opens.

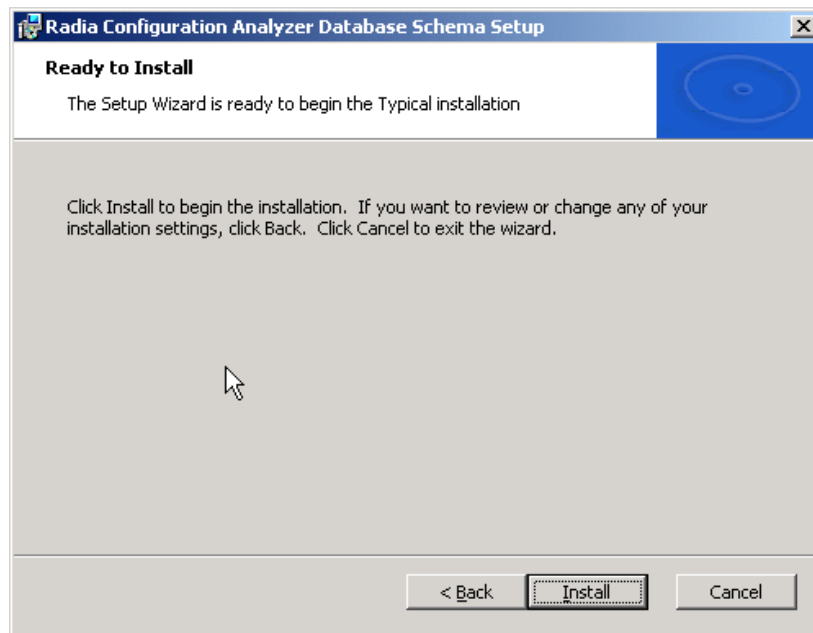


Figure 2.5 ~ Ready to Install dialog box.

7. Click **Install**.
8. When the installation is finished, click **Finish**.

The Radia Configuration Analyzer Database Schema setup is complete.

Step 2: Create an ODBC DSN Connection

An ODBC DSN connection to your Radia Application Knowledge Base database is required. Create this connection on the computer where you will install the Radia Configuration Analyzer. If you need assistance creating an ODBC DSN connection, see your database or system administrator.

To create an ODBC DSN connection for the Radia Configuration Analyzer

- In the Windows Control Panel, use the Administrative Tools option to create the connection. If you require assistance creating an ODBC DSN connection, see your system or database administrator. Make sure you test the connection when you are finished.
- The ODBC Data Source will be displayed in the ODBC Data Source Administrator list of System DSNs.

Make sure you create the correct connection type depending on the type of database you are using (SQL Server or Oracle).

Note

If you are creating an ODBC DSN connection for Oracle, the Oracle client must be installed on the computer you are using to make the connection.

Step 3: Installing the Radia Configuration Analyzer

To install the Radia Configuration Analyzer

1. On the Radia Configuration Analyzer media, double-click **Package.msi**.
The **Radia Configuration Analyzer Welcome** dialog box opens.

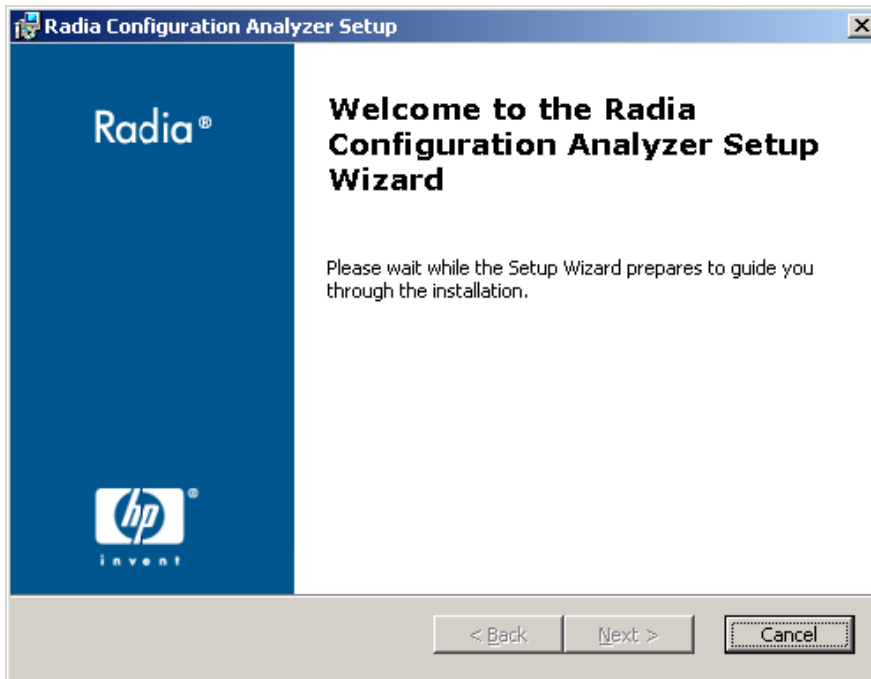


Figure 2.6 ~ Radia Configuration Analyzer Welcome dialog box.

2. Click **Next**.
The HP End-User license agreement window opens.

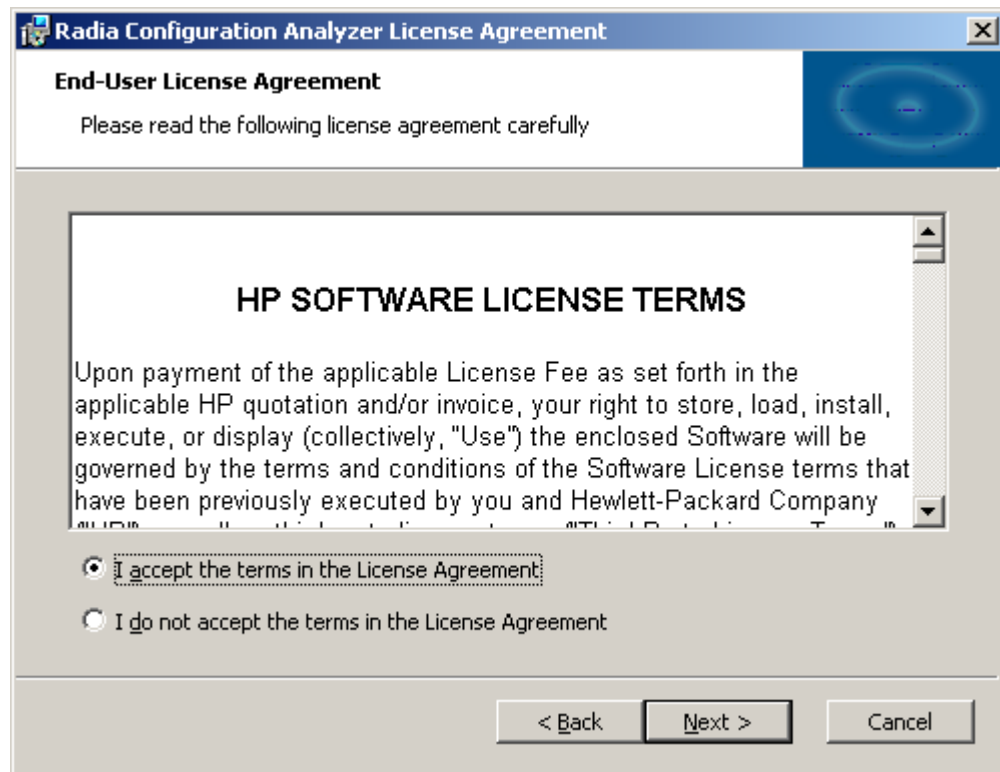


Figure 2.7 ~ End-user license agreement window.

3. Read and accept the HP Software License Terms and click **Next**.

The **Install Location** dialog box opens.

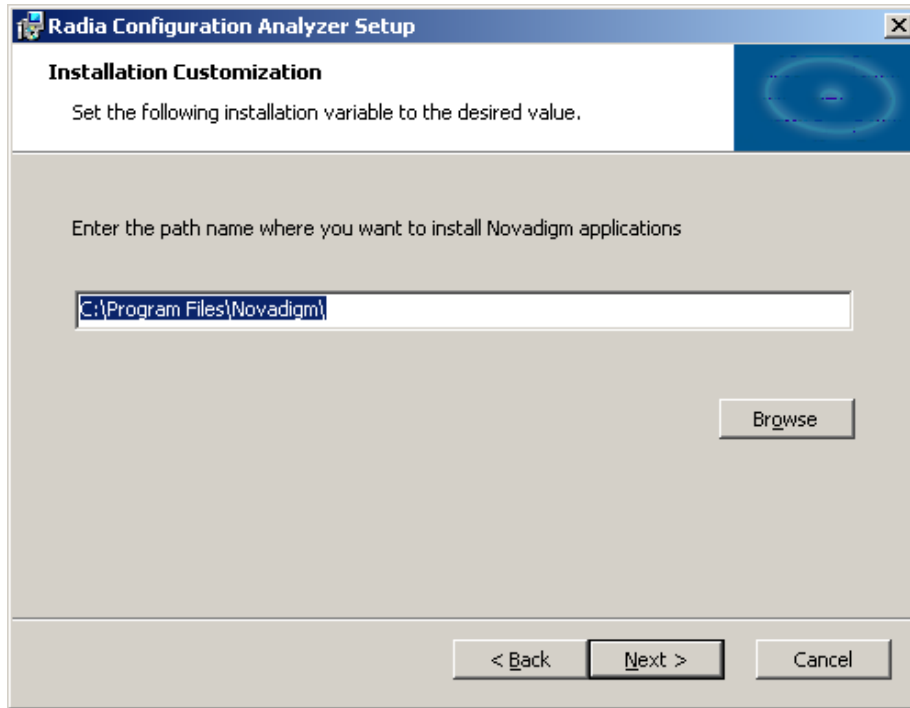


Figure 2.8 ~ The Install Location dialog box.

The Radia Configuration Analyzer must be installed to the Novadigm directory. If this directory already exists, this step will be skipped.

4. Click **Next**.

The **Serial Number** dialog box opens.

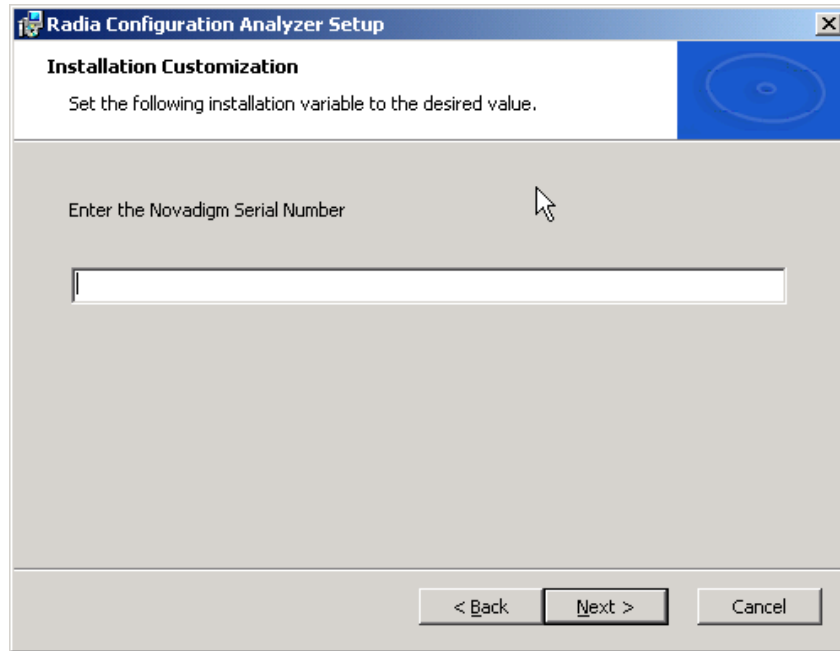


Figure 2.9 ~ Serial Number dialog box.

5. Enter your serial number and click **Next**.

The **Ready to Install** dialog box opens.

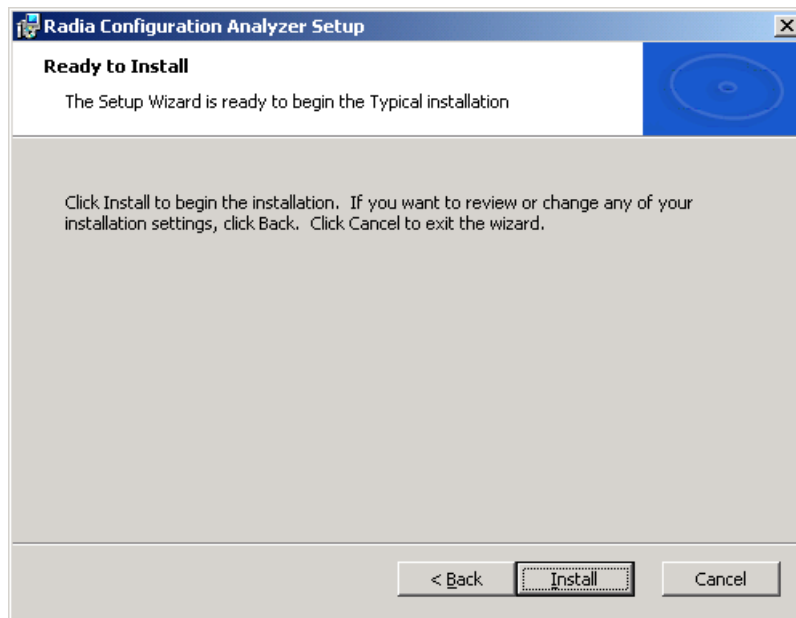


Figure 2.10 ~ Ready to Install dialog box.

6. Click **Install** to begin the installation.
7. When the installation is complete, click **Finish**.
The Radia Configuration Analyzer has been successfully installed.

Step 4 (optional): Installing the Radia State Generator

The Radia State Generator allows you to create state files without the use of another state file-generating Radia Product. Install the Radia State Generator on the computer you will be using to generate state files. See Chapter 5: *Generating State Files* starting on page 77 to find out how to use the Radia State Generator.

To install the Radia State Generator

1. On your Radia Configuration Analyzer media, navigate to the **Radia Configuration Analyzer State Generator** folder.
2. Double-click **Package.msi**.
The **Welcome** dialog box opens.

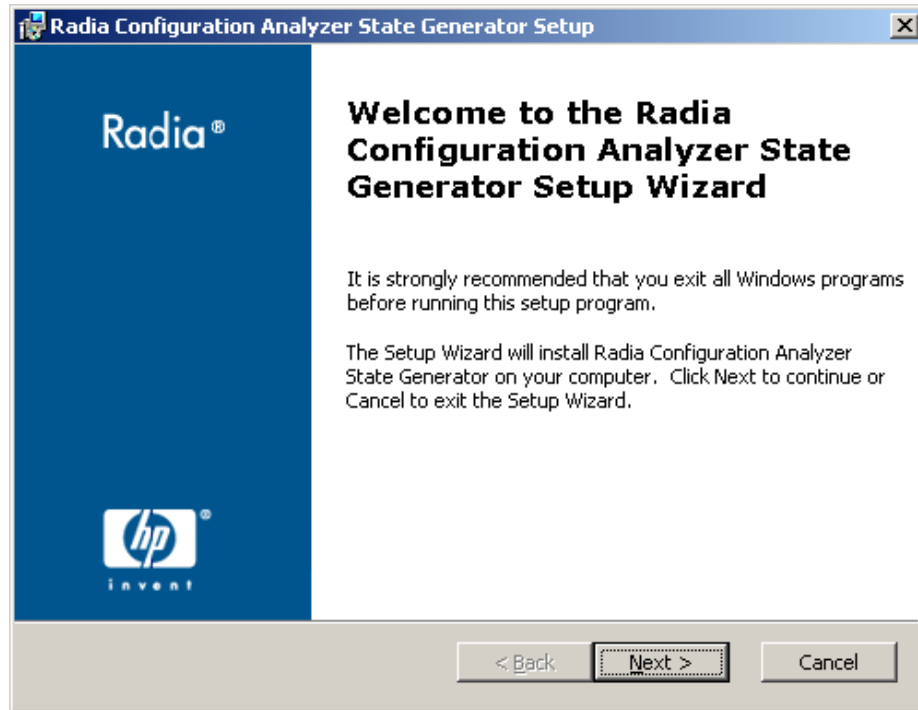


Figure 2.11 ~ Welcome dialog box.

3. Click **Next**.
The **End-User License Agreement** window opens.

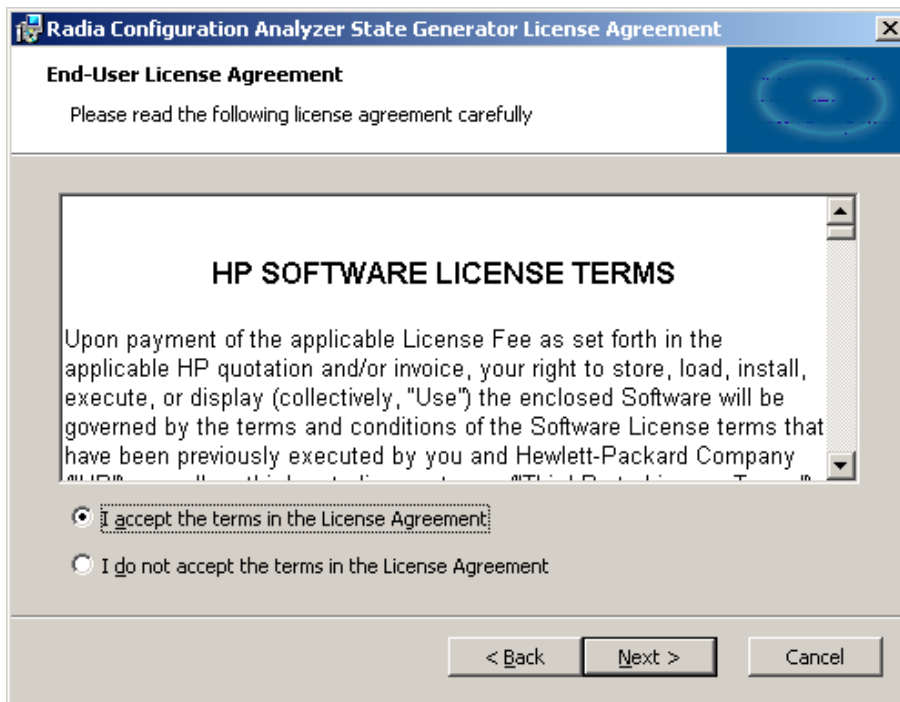


Figure 2.12 ~ HP End-User License Agreement widow.

4. Read and accept the HP Software License Terms and click **Next**.

The **Install Location** dialog box opens.

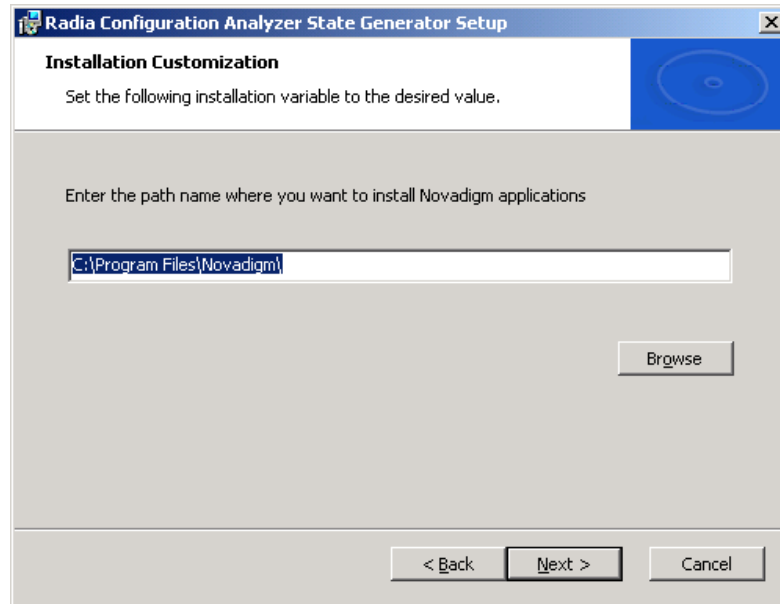


Figure 2.13 ~ Radia State Generator Install Location dialog box.

By default the Radia State Generator is installed to C:\Program Files\Novadigm,

5. If you want to install it to a different location, enter it here, or click **Browse** to navigate to it.
6. Click **Next**.

The **Serial Number** dialog box opens.

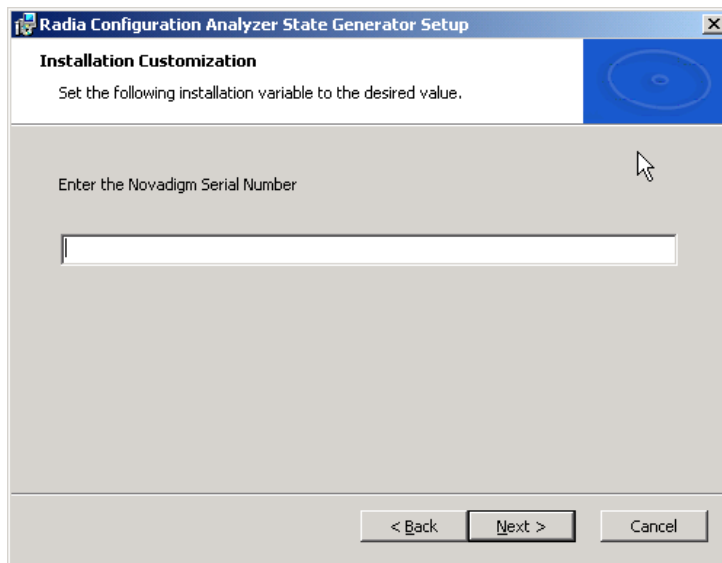


Figure 2.14 ~ Serial Number dialog box.

7. Enter your serial number, and click **Next**.

The **Ready to Install** dialog box opens.

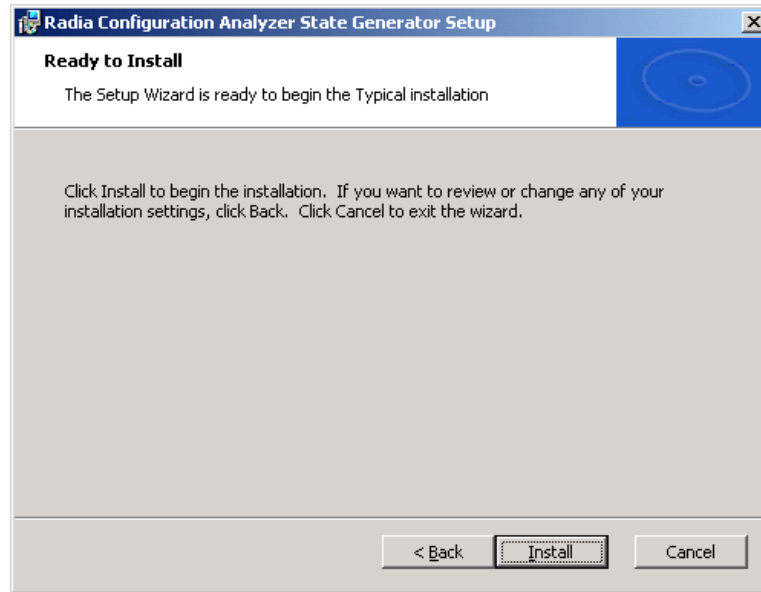


Figure 2.15 ~ Ready to Install dialog box.

8. Click **Install** to begin the installation.
9. When the installation is finished, click **Finish**.

The Radia Configuration Analyzer State Generator is installed and ready to use. Refer to *Chapter 5: Generating State Files* starting on page 77 for information about how to use this tool.

Defining a Radia Application Knowledge Base

The Radia Application Knowledge Base is the database that contains your state file information. Define this database using either the Oracle or Microsoft SQL Server. The following instructions will help you define your Radia Application Knowledge Base database.

Microsoft SQL Server

New Radia Application Knowledge Base databases are created using the SQL data definition language files referenced below. All required SQL is predefined in these files.

Use the following steps to create the Radia Application Knowledge Base for a Microsoft SQL Server database.

First, create the Radia Application Knowledge Base.

To create the Radia Application Knowledge Base

1. Open the SQL Server Enterprise Manager.
2. Right-click the **Database** folder for the selected server and select **New Database**. Complete the entries as follows:
3. Right-click the **Database** folder for the selected server and select **New Database**. Complete the entries as follows:
 - **General Tab**
 - ◆ **Name**
RadiaAKB (or a name of your choice excluding blanks and underscores)
 - **Data Files Tab**
 - ◆ **File Name**
RadiaAKB_Data (or name of your choice excluding spaces). Set the initial size to 100 MB.
 - ◆ Select **Automatically grow file** by 20%

Note

For improved performance, it is recommended the Radia Application Knowledge Base be created on a drive other than the drive used to create state files.

- **Transaction Log Tab**
 - ◆ **File Name**
RadiaAKB_Log (or a name of your choice excluding blanks). Set the log size to 250 MB.

4. Click **OK** to create the database and log files. The Radia Application Knowledge Base is now added to the **Databases** folder of your server, in the Server Manager.

When you are finished creating the database, create the database table schema.

To create the table schema for SQL Server

1. In the SQL Server Enterprise Manager, select the **Tools** menu, and then select **SQL Server Query Analyzer**.
2. Make sure the drop-down box displays the database you just created.
3. From within the Query Analyzer, open the directory where you installed the Radia Configuration Analyzer and navigate to **\Program Files\Novadigm\Radia Configuration Analyzer\Database\SQL Sever**.
4. Execute each SQL script in the directory in order (the scripts are named accordingly) beginning with Step 2:
 - Step2_Define_ConfigurationAnalyzer_Tables.sql
 - Step3_Define_Common_Tables.sql
 - Step4_Define_StoredProcedures.sql
 - Step5_Define_Common_Functions.sql
 - Step6a_Insert_Common_DefaultData.sql
 - Step6b_Insert_ConfigurationAnalyzer_DefaultData.sql
5. Use **Query Execute** or press **F5** to run each script.

At the end of the query execution you will see a series of messages displaying **sysdepends** dependency and several row insertions. This indicates a successful installation of the database definitions.
6. Close the SQL Query Analyzer.

Oracle

Configuring your database schema for Oracle requires the execution of five SQL script files that are provided with your Radia Usage Manager media in the **Oracle** directory. Copy these files to a location accessible by your Oracle administrator. Make sure to use the files located in the appropriate Oracle version directory.

To configure your Radia Application Knowledge Base database schema for Oracle

1. Define a system environment variable **Oracle_Home** on your administrator computer (Create Oracle_Home=C:\Oracle\Oradata). This allows the five .sql scripts you will run in the next few steps to locate your Oracle directory.
2. Use the Oracle DBA Studio application and login as **System / Manager**.
3. Execute the SQL scripts that were included with your Radia Usage Manager media in order, making sure to include the correct path to the script locations.

Note

Make sure to select the correct group of SQL files depending on the version of Oracle you are using.

- For Oracle 8i
 - ◆ Step1_Define_TableSpaces.sql
 - ◆ Step2_Define_RollbackSegments.sql
 - ◆ Step3_Define_Common_Roles.sql
 - ◆ Step4_Define_Common_Tables.sql
 - ◆ Step5_Define_ConfigurationAnalyzer_Tables.sql
 - ◆ Step6a_Insert_ConfigurationAnalyzer_DefaultData.sql
 - ◆ Step6b_Insert_Common_DefaultData.sql
- For Oracle 9i
 - ◆ Step1_Define_TableSpaces.sql
 - ◆ Step2_Define_Roles.sql
 - ◆ Step3_Define_Common_Tables.sql
 - ◆ Step4_Define_ConfigurationAnalyzer_Tables.sql
 - ◆ Step5a_Insert_ConfigurationAnalyzer_DefaultData.sql
 - ◆ Step5b_Insert_Common_DefaultData.sql

For example, if your SQL scripts are located in the directory \RadiaUsageManager\Oracle\Schema, you would execute the first script by typing:

```
SQL> @C:\RadiaUsageManager\Oracle\Schema\Step1_Define_TableSpaces.sql
```

followed by **ENTER**.

4. Make sure each script executes properly.

The schema is successfully imported.

Note

The .sql scripts preceded with Step99 and Step99a are used only for removing the Radia Usage Manager Database. They are not required here.

Summary

- Install the Radia Configuration Analyzer database schema and create an ODBC DSN connection to your database.
- Define the Radia Application Knowledge Base database using Microsoft SQL Server or Oracle.
- The Radia Configuration Analyzer is installed to your Novadigm directory by default.
- Install the Radia Configuration Analyzer State Generator to create state files without using another state generating product.

Radius Configuration Analyzer Settings

At the end of this chapter, you will:

- Understand the different Radius Configuration Analyzer settings.

Radia Configuration Analyzer Settings

The Radia Configuration Analyzer simplifies your view of the complicated environment of application management. In combination with the Radia Application Knowledge Base, the Radia Configuration Analyzer can

- provide you with complete information about an application
- allow you to compare multiple applications to determine where conflicts exist
- and generate reports based on this information.

Workspaces and Projects within the Radia Configuration Analyzer provide you with the means for organizing this information in a way that best suits your organization.

Radia Configuration Analyzer Administrator Console

The Radia Configuration Analyzer administrator console has two windows. The top window displays the available projects and workspaces containing any state files you imported, and the bottom window displays specific state files information and comparisons. Before you begin creating projects and workspaces, review the different options and settings available in the administrator console.

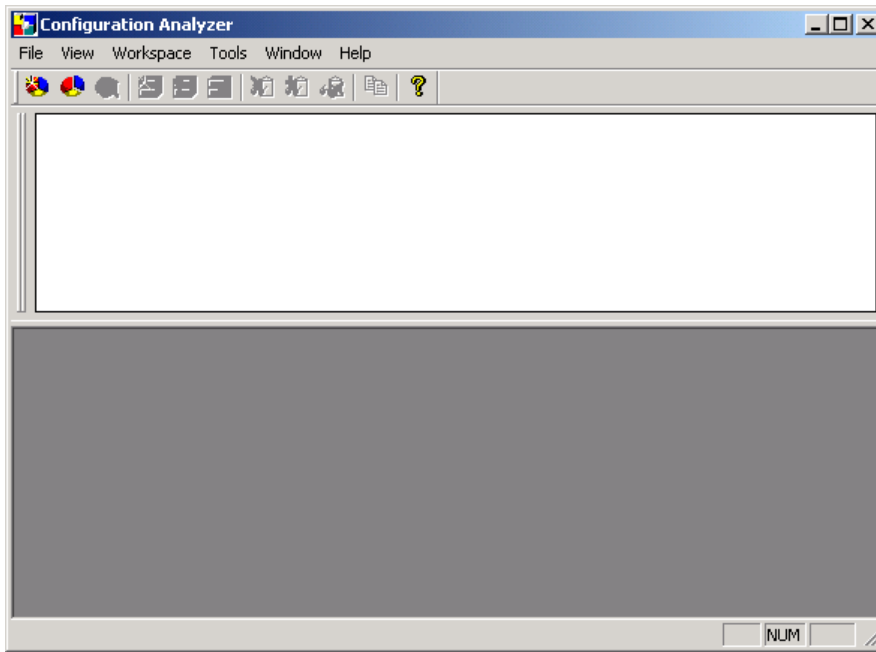


Figure 3.1 ~ Radia Configuration Analyzer Administrator Console.

Setting Options

To set Display and Comparison options, use the **Tools, Options** menu selection.

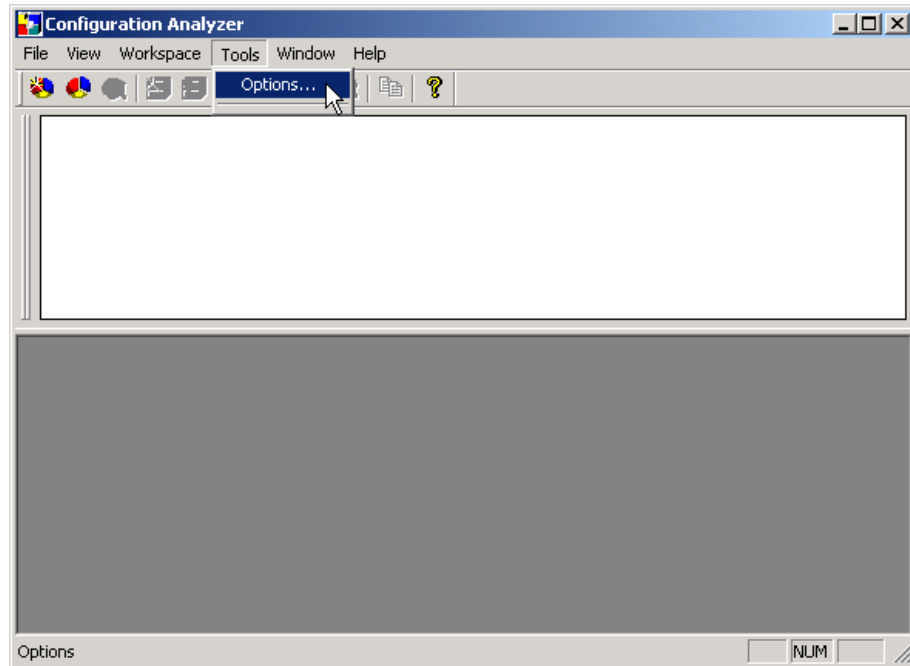


Figure 3.2 ~ Radia Configuration Analyzer Tools menu.

Display Tab Options

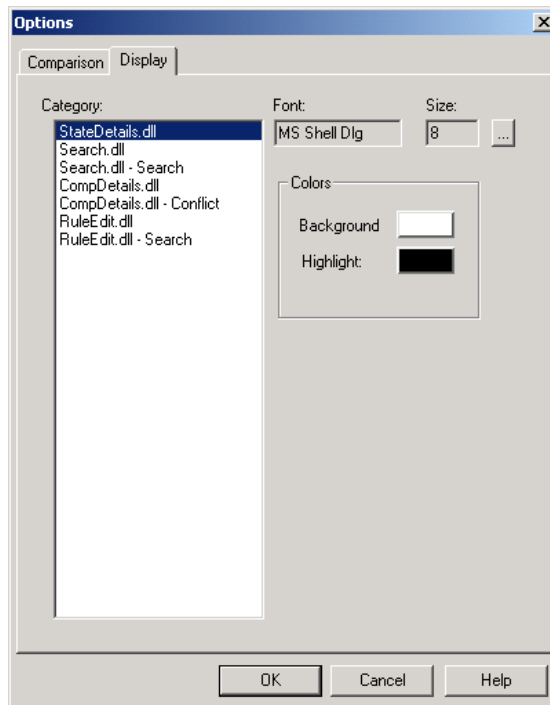


Figure 3.3 ~ Radia Configuration Analyzer Display tab.

1. Select the **Category** entry for which you want to set **Font** or **Color** options.
2. Double-click a color box to switch the **Background** or **Highlight** color for the selected category.
3. Click **OK** to save your format color selections.

The selected colors will be used to display the contents of the Comparison Details and Comparison Detail - Conflicts lists.

Comparison Tab Options

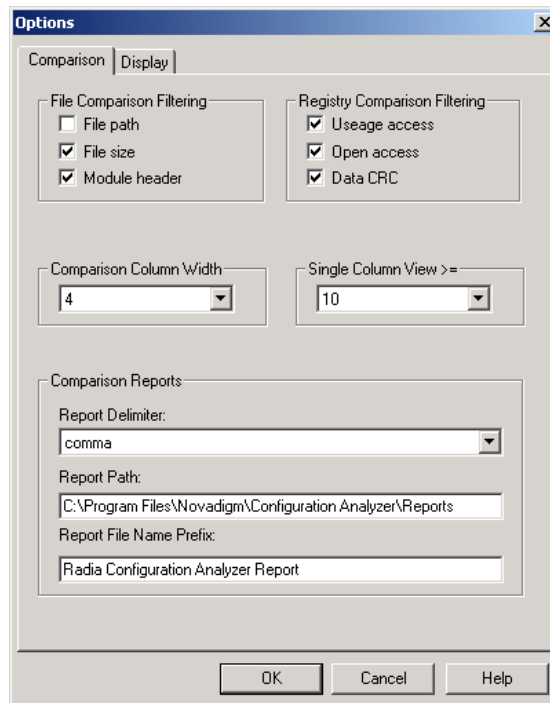


Figure 3.4 ~ Radia Configuration Analyzer Comparison tab.

File Comparison Filtering

- **File path**

Select whether the **Comparison** tab should include the file path in its comparison logic when determining whether files are identical. Selecting this box includes the file path in the comparison. If the only difference between two files is their respective paths, then they appear in the comparison summary as green check marks. However, double-clicking to display the comparison details will show them as being different.

- **File size**

Select whether the **Comparison** tab should include the file size in its comparison logic when determining whether files are identical. Selecting this box includes the file size in the comparison.

- **Module header**

Select whether the **Comparison** tab should include the module header information in its

comparison logic when determining whether files are identical. Selecting this check box includes the header information in the comparison. *This option is required for module comparisons.*

Registry Comparison Filtering

■ Usage access

Select whether the **Comparison** tab should include the registry usage access requests in its comparison logic when determining whether keys are identical. Selecting this box includes the usage access in the comparison.

Note

Usage access is only relevant for execution profiles and traces and should generally be turned off.

■ Open access

Select whether the **Comparison** tab should include the registry open access requests in its comparison logic when determining whether keys are identical. Selecting this box includes the open access in the comparison.

Note

Open access is only relevant for execution profiles and traces and should generally be turned off.

■ Data CRC

Select whether the **Comparison** tab should include the registry data value in its comparison logic when determining whether keys are identical. Selecting this box includes the data value in the comparison.

Note

Data values should always be turned on.

Column Data

■ Comparison Column Width

Comparison report column width.

■ Single Column View

Comparison Reports

- **Report Delimiter**
Select either comma or tab from the drop-down list to delimit the data within your report.
- **Report Path**
Type the default path to which Comparison Reports are saved.
- **Reports File Name Prefix**
Type the file name prefix to be pre-pended to the current date/time for the Comparison Report.

Managing Radia Application Knowledge Base Permissions

Use the Radia Configuration Analyzer to manage permissions that grant access to the Radia Application Knowledge Base database. Radia Application Knowledge Base permissions enable the administrator to control which users have access to objects within the database and the extent of that access. Access rights are set based on a database Role and User ID.

All rights are granted based on a Workspace name for the combination of database Role and User ID. This allows the administrator to govern access to Workspace, Projects, and States.

Default Radia Application Knowledge Base Access Rights and Structures

To minimize database security administration, all users have full access to Radia Configuration Analyzer functions unless otherwise restricted by the Radia Application Knowledge Base administrator. To do this he selects the **Enable Security** check box in the **File\Permissions** dialog box.

If security is enabled, the following access rights occur for SQL Server Radia Application Knowledge Base implementations at installation.

- By default, the User ID that creates a Workspace has complete control of the Workspace and may add, update, or delete any object related to the new Workspace.
- The special designation, **<all>**, may be set as the Role, User ID, or Workspace name when setting access rights. The **<all>** Role, User ID, or Workspace access right supercedes an access right set for a specific Role, User ID, or Workspace.
- In an Oracle server environment, only users having the Role of DBA or the User ID of **RADIA** may modify Radia Configuration Analyzer Permissions.
- In a SQL Server environment, only users having the Role of DB_OWNER or the User ID of **sa** may modify Radia Configuration Analyzer Permissions.

Creating Radia Application Knowledge Base User IDs

Users that are not Radia Application Knowledge Base administrators can be assigned to a single database role using the database server's methodology of adding a new user and assigning a role. These users require no special permissions to database objects.

Note

All database users must have only one role assigned to them. For example, the user can have the DB_OWNER or KB_Integrator role, but not both.

Choosing the Role, User ID, Workspace, and Workspace Owner

Specific rights are assigned to users through the **Permissions** dialog box, which is accessed through the Radia Configuration Analyzer **File** menu.

In the **Permissions** dialog box, you must choose a Role, User ID, Workspace, and Workspace Owner to grant rights to. Once a Role has been chosen, all users that have that Role assigned are now available in the Users list, as is a list of all Workspaces in the Radia Application Knowledge Base. Once a Workspace has been chosen, the owner of the Workspace is shown and may be modified.

Enabling All Roles, Users, Workspaces, and Workspace Owner Access

To simplify security administration, you may set the Role, User, Workspace, and Workspace owner name to <all>. The <all> setting allows the administrator to set access rights to all Roles, all Users, all Workspaces, and all Owners for specific access rights. The <all> setting supercedes specific settings.

To set View Objects access rights to everyone

To set View Objects access rights to everyone, access the **Permissions** dialog box from the Radia Configuration Analyzer **File** menu, and do the following:

1. Set the **Role** to <all>.
2. Set the **User ID** to <all>.
3. Set the **Workspace** to <all>.
4. By default, the **Owner** of the <all> Workspace is shown. Set the **Owner** to <none> to indicate that no user owns all of the Workspaces.
5. Select the **View Objects** access right and save its settings.

Enabling Workspace Creation for a User

Any user who is authorized to create a Workspace must be granted Workspace Create authority. This user who creates the Workspace is the Workspace Owner. The <new> pseudo Workspace entry governs whether the selected user may create a new Workspace in the Radia Application Knowledge Base. To enable Workspace creation for the user, select the **WORKSPACE CREATE** entry for the <new> Workspace and save the setting.

Otherwise, to disable Workspace creation capability, remove the selection for the entry and save the changes.

Access Rights of the Workspace Owner

The Workspace Owner has complete control over the contents of a Workspace and the Workspace itself. By default, the Workspace Owner is the user who created the Workspace. Workspace ownership access rights may be reassigned by the database administrator to a different user, no user, or all users.

Assigning Specific Access Rights to Users

To assign access rights, select and highlight the appropriate rights by clicking on them. If any changes are made, they are saved by clicking **Save** and confirming the save operation. To cancel your selections close the dialog box and click **No** when the save confirmation dialog box is presented.

When viewing Workspace access rights for a user, the rights that have been granted are selected.

The following access rights may be set by the administrator:

- **WORKSPACE CREATE**
Grants authority to create a Workspace.
- **WORKSPACE RENAME**
Grants authority to rename a Workspace.
- **WORKSPACE DELETE**
Grants authority to delete a Workspace.
- **ADD OBJECTS**
Grants authority to Import state files and to add existing Projects and state files to a Workspace.
- **RENAME OBJECTS**
Grants authority to rename Projects and state files in a Workspace.
- **DELETE OBJECTS**
Grants authority to delete Projects and state files from a Workspace.
- **VIEW OBJECTS**
Grants authority to view State details and to generate comparisons of Workspace objects.

Access Rights for Shared Objects

If an object, such as a state file, is shared between two or more Workspaces, the user requires access rights to all Workspaces containing the object. Otherwise, the user is not authorized to perform the requested operation.

Sample Implementation Guidelines

If groups of users with diverse needs are going to access the Radia Application Knowledge Base, you should create a unique database role for each group of users and manage their database rights using these roles.

Any roles should follow a naming standard, such as: *AKB_rolename*. For example, the following roles may be appropriate for your organization:

- **DB_OWNER/AKB_ADMIN**
Requires full access to all Workspaces and their objects.
- **AKB_Integrator**
Requires all access to a personalized Workspace used in validating installation packages and View Objects access to production "Gold" level Workspaces maintained by the Quality Assurance Team.
- **AKB_HelpDesk**
Requires View Objects access to production "Gold" application package information to view State Details and perform comparison reporting against traces or machine scans gathered from end users. Requires all access to a personalized or Help Desk level Workspace used in diagnosing end-user application problems.
- **AKB_QualityAssurance**
Requires all access to production "Gold" Workspace and View Objects access to all other Workspaces.
- **AKB_Developer**
Requires View Objects access to production "Gold" application package information to view State Details and perform comparison reporting against their internally developed applications before they are passed to the Integration Lab or Quality Assurance. Requires all access to a personalized or Developer level Workspace used for application analysis.

Summary

- Use the available menu items to customize the Radia Configuration Analyzer.

Using the Radia Configuration Analyzer

At the end of this chapter, you will:

- Be able to populate the Radia Configuration Knowledge Base.
- Be able to view state information.

Populating the Radia Application Knowledge Base

The **Workspace** is the main organizational structure in the Radia Configuration Analyzer that provides a user's view into the Radia Application Knowledge Base.

Creating a Workspace

The first step in populating the organizational Knowledge Base with your application information is to create a workspace.

To create a workspace

1. Click .

The **New Workspace** dialog box opens.

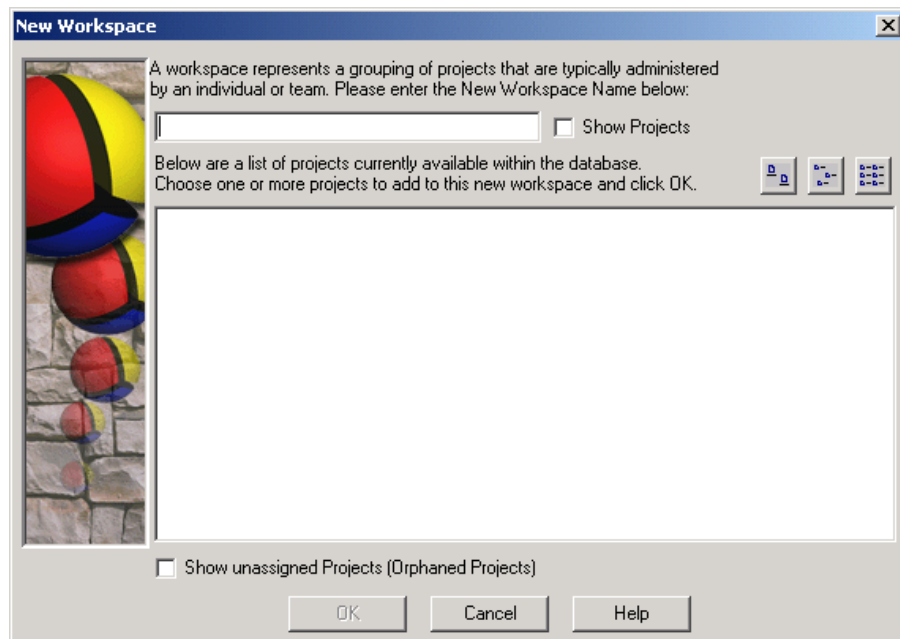


Figure 4.1 ~ New Workspace dialog box.

2. Type a name for your workspace, such as **Integration Corp.** If you created projects prior to this point, you can add any available projects to this workspace when it is created.
3. Click **OK**.

A new workspace appears in the Radia Configuration Analyzer.

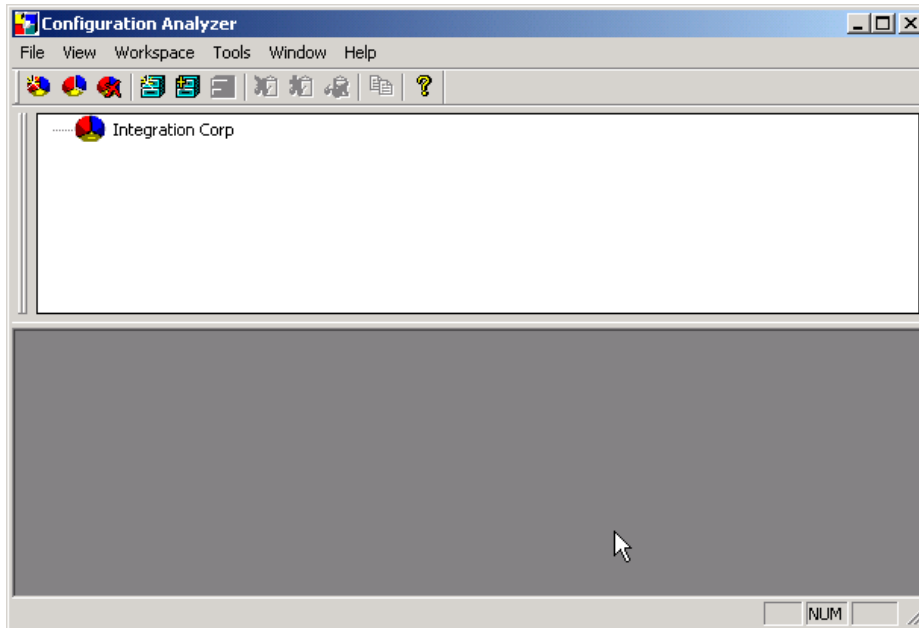


Figure 4.2 ~ Radia Configuration Analyzer – New Workspace.

Creating a Project

Before you can import states into your workspace, you need to create a project to contain your states. A project is a group of individual applications or machine states.

To create a project

1. In the Radia Configuration Analyzer, right-click a workspace, such as **Integration Corp**.

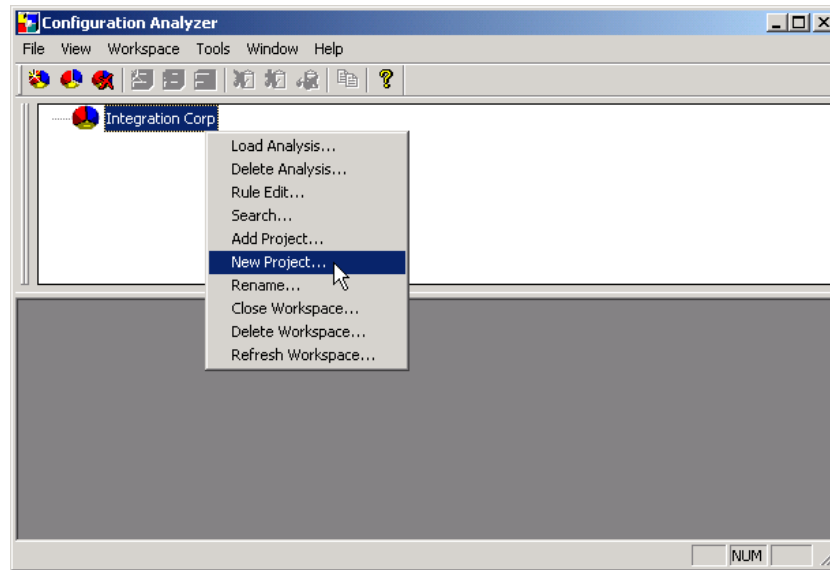


Figure 4.3 ~ Workspace shortcut menu.

2. Right-click your workspace and select **New Project**.

The **New Project** dialog box opens.

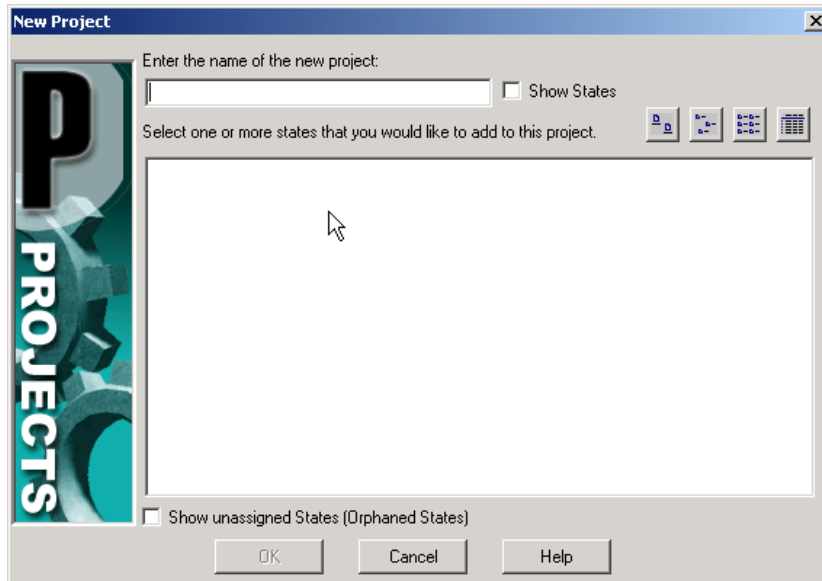


Figure 4.4 ~ *New Project dialog box.*

3. In the **Enter the name of the new project** text box, type a project name such as **Core Apps**.
4. If any states have been imported, select the states that you would like to include in this project.
5. Click **OK**.
6. Expand the branch of your workspace to see the new project.

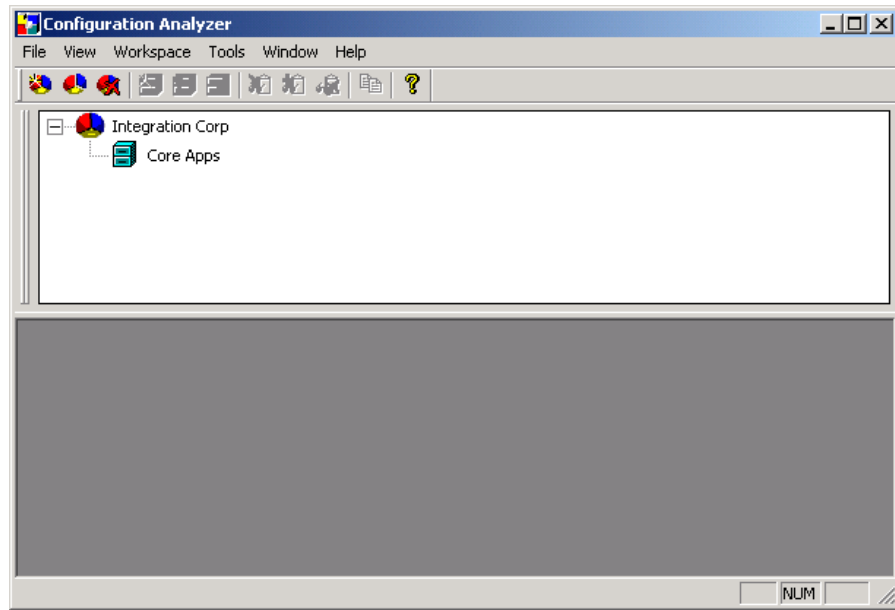


Figure 4.5 ~ Radia Configuration Analyzer – New Project in Workspace.

Importing a State

Now you can import your state files into your Radia Application Knowledge Base.

Note

Importing state files uses bulk loading. For Oracle databases, the administrator's computer must have the SQL loader installed.

To import a state

1. In the Radia Configuration Analyzer, right-click a project, such as **Core Apps**.

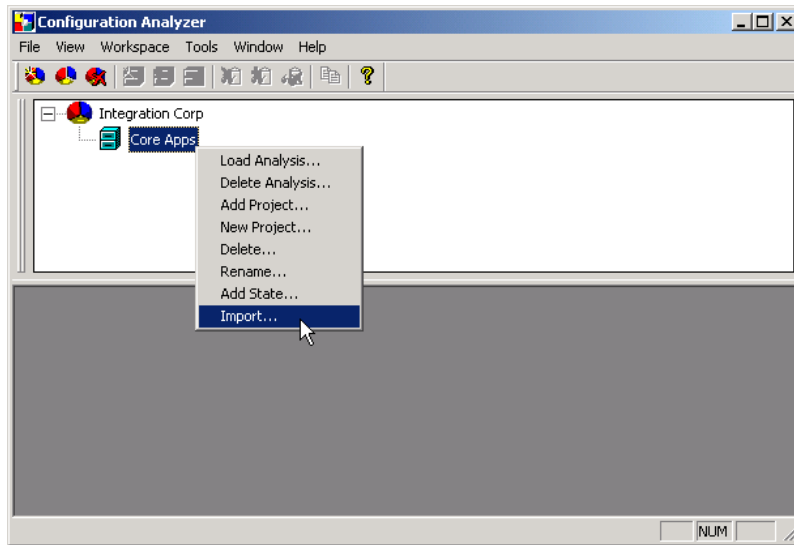


Figure 4.6 ~ Shortcut menu for a project.

2. Select **Import** from the shortcut menu.

The **Import** window opens.

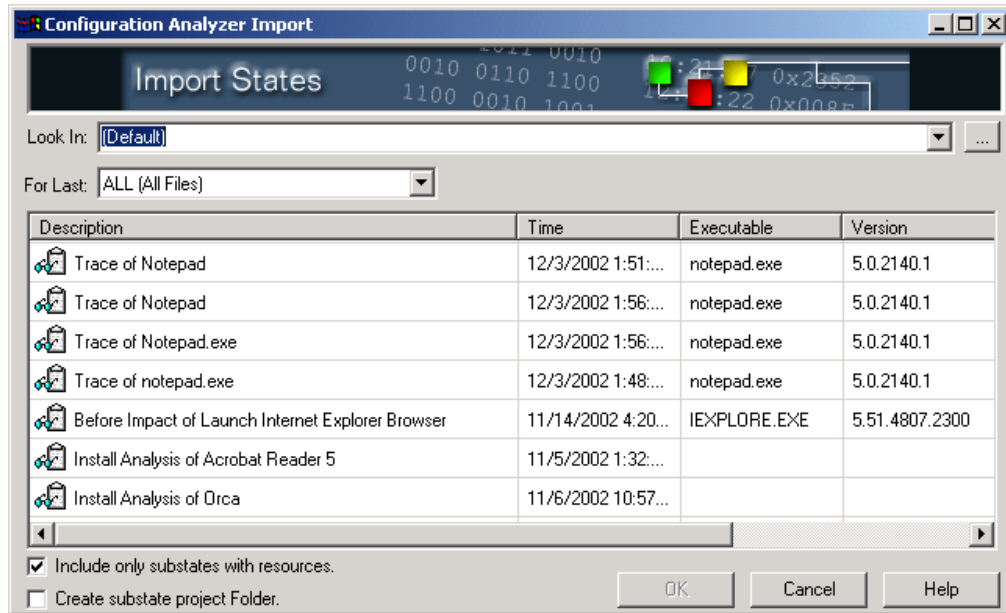


Figure 4.7 ~ Radia Configuration Analyzer Import window.

3. Select the states you would like to import into the Radia Application Knowledge Base.

Note

In order for state files to sort properly in the import window, regional settings must be in the format MM/DD/YYYY.

4. Each state file may contain multiple substates, for example: Before State, After State, and a Delta State. Select the substate option by selecting either check box in the bottom left corner of the **Import** dialog box.
 - **Include only substates with resources**
 - **Create substate project folder**
creates a separate project folder for each substate.
5. Click **OK**.

Your states are imported into the project in the Radia Application Knowledge Base. Expand the project to see the states.

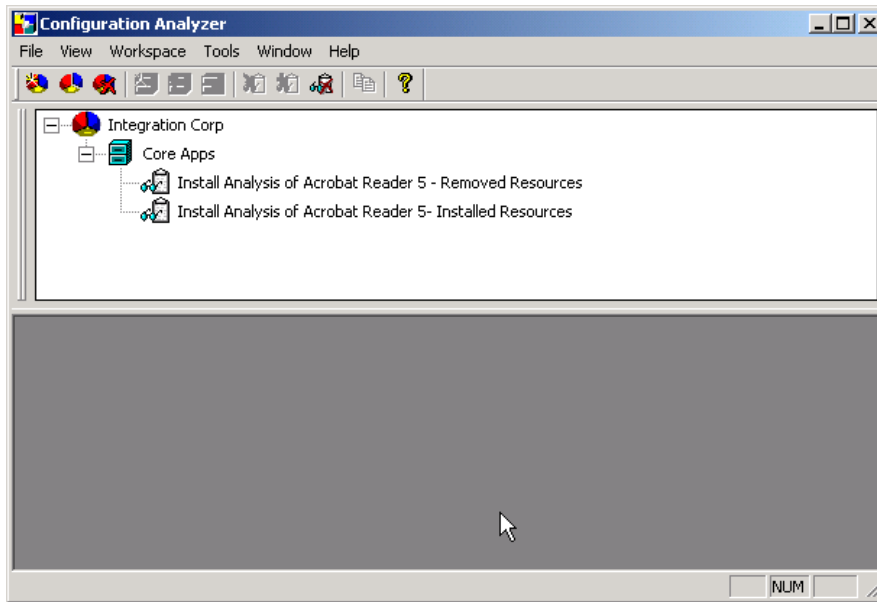


Figure 4.8 ~ Install states.

Notice that Install States are imported into Projects with two individual state files, **Removed Resources** and **Installed Resources**. The Removed Resources State contains information about resources that existed on the machine before the application was installed, but were changed or removed. The Installed Resources State details the resources that were added to the machine during installation and the resources that were changed during the installation.

Viewing State Information

Now that you have this information in the Radia Application Knowledge Base, what can you do with it? One of the many tasks you can perform with the Radia Configuration Analyzer is simply viewing all of the information contained in a state. This detailed information is now available to any licensed user with whom you share the Radia Application Knowledge Base.

To view the information in a state

1. In the Radia Configuration Analyzer, right-click the install state that you want to view.

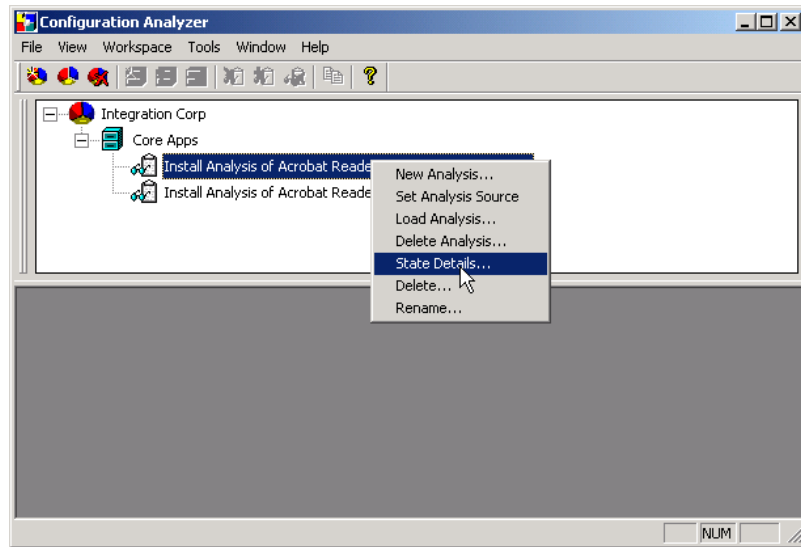


Figure 4.9 ~ Install states.

2. Select State Details.

The **State Detail** window opens.

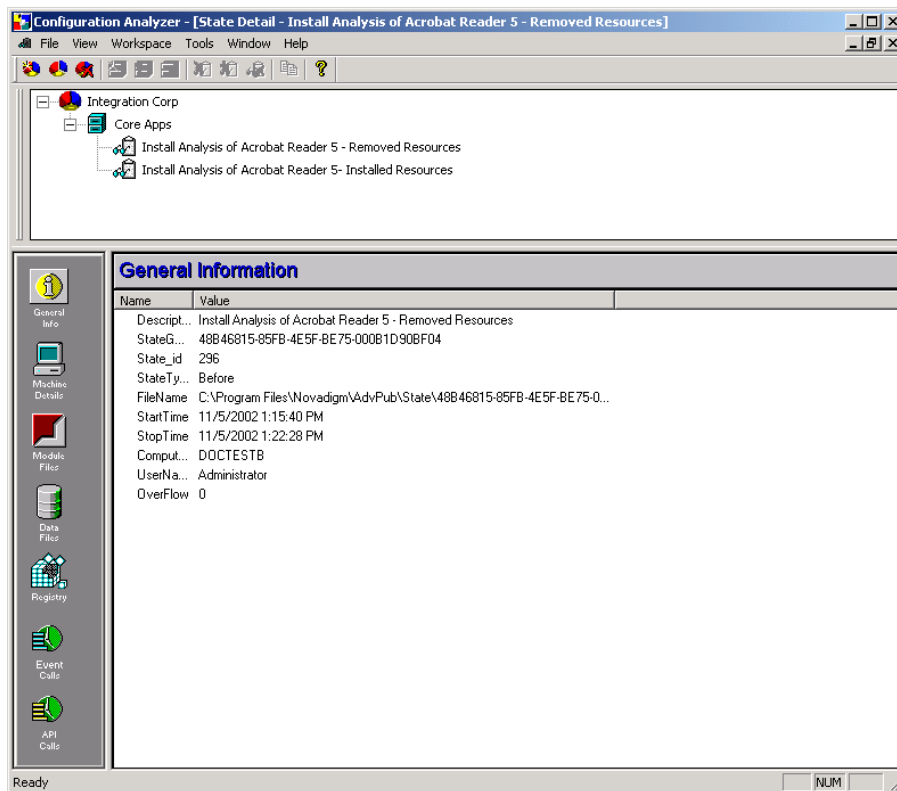


Figure 4.10 ~ State Detail window.

All of the information in the state is categorized. You can view:

- **General Info** about the state.
 - **Machine Details** for the computer on which the state file was created.
 - Specific information on **Module Files**.
 - Specific information on **Data Files**.
 - Specific information on **Registry Settings**.
 - **Event Calls** and **API Calls** are sections reserved for analyzing AppInsight Trace States.
3. Click **Module Files**, **Data Files**, or **Registry** (in the menu on the left side of Figure 4.10 above). Then, double-click a file to display specific resource details.

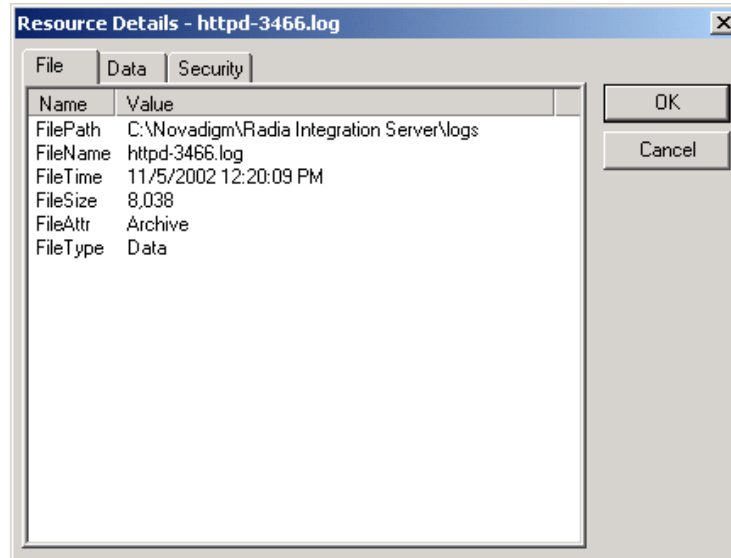


Figure 4.11 ~ Resource Details dialog box.

4. Click **OK** when you are finished viewing the information.

Analyzing State Files

When you are integrating an application, it is important to be able to find conflicts between applications. The Radia Configuration Analyzer provides the tools to quickly and easily analyze applications for conflicts.

To compare state files

1. In the Radia Configuration Analyzer, select the states that you want to compare. To do this, hold the **CTRL** key on your keyboard and click each of the states that you want to include in the analysis.

Note

You can add more states to the analysis later.
Optionally, you can right-click a Project or Workspace and select **New Analysis** from the shortcut menu to compare all states found below.

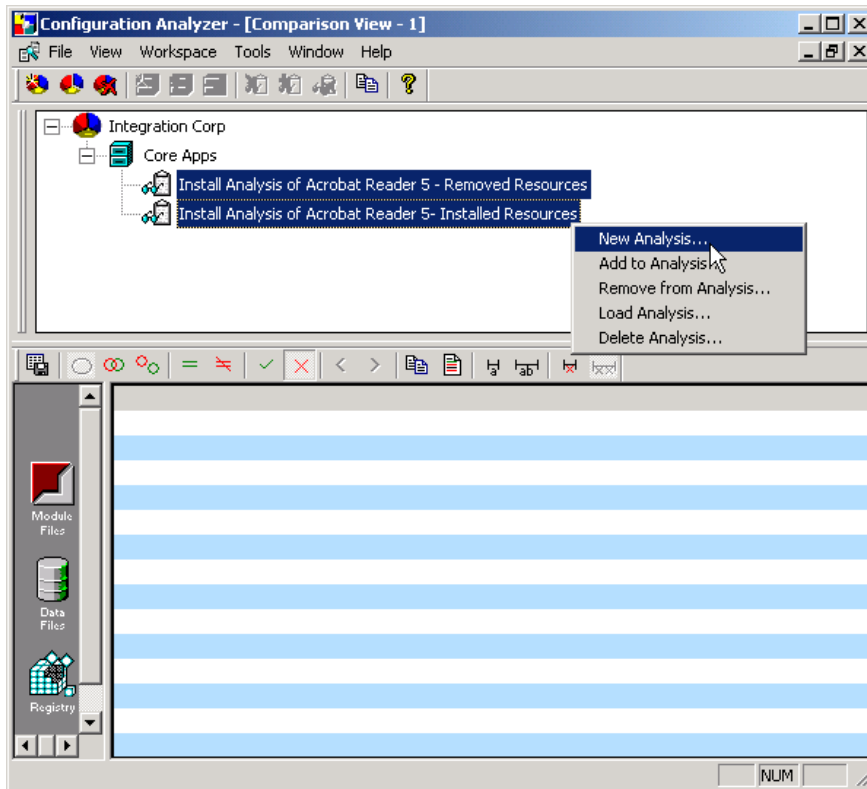
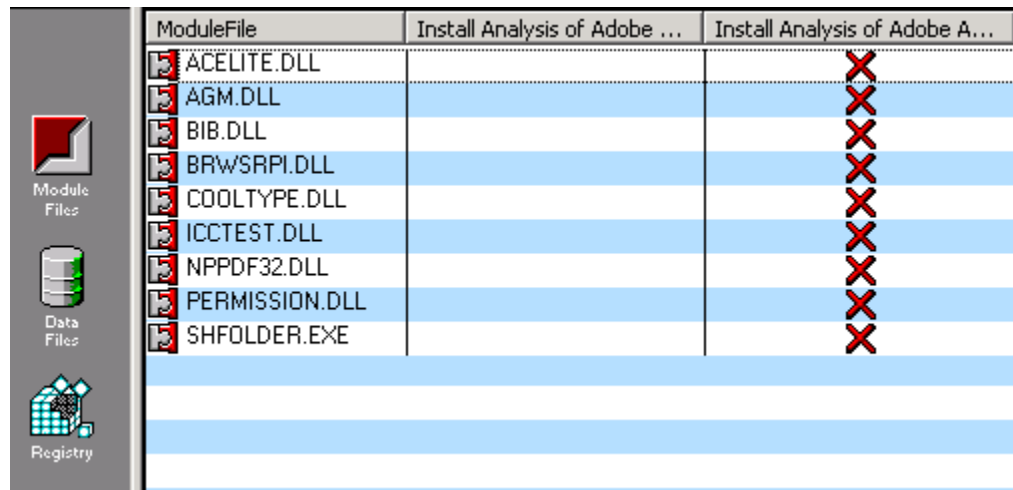


Figure 4.12 ~ New Analysis option.

2. Right-click one of the states and select **New Analysis**.

The **Analysis View** screen opens.



The screenshot shows the Analysis View screen with a table of files. The table has three columns: 'ModuleFile', 'Install Analysis of Adobe ...', and 'Install Analysis of Adobe A...'. The files listed are ACELITE.DLL, AGM.DLL, BIB.DLL, BRWSRPI.DLL, COOLTYPE.DLL, ICCTEST.DLL, NPPDF32.DLL, PERMISSION.DLL, and SHFOLDER.EXE. Each file has a red 'X' in the third column, indicating a conflict. On the left side, there are three icons: 'Module Files' (a red folder), 'Data Files' (a green cylinder), and 'Registry' (a blue cube).

ModuleFile	Install Analysis of Adobe ...	Install Analysis of Adobe A...
ACELITE.DLL		X
AGM.DLL		X
BIB.DLL		X
BRWSRPI.DLL		X
COOLTYPE.DLL		X
ICCTEST.DLL		X
NPPDF32.DLL		X
PERMISSION.DLL		X
SHFOLDER.EXE		X

Figure 4.13 ~ Analysis View screen.

A complete comparison of the resources opens, categorized by the type of resource.

✓ identifies resources with no conflicts.

✗ signifies a difference between the files that could cause problems.

3. Double-click a resource with a ✗ to see the details of the conflict.

The **Resource Conflict/Detail** window opens and the differences are highlighted in red.

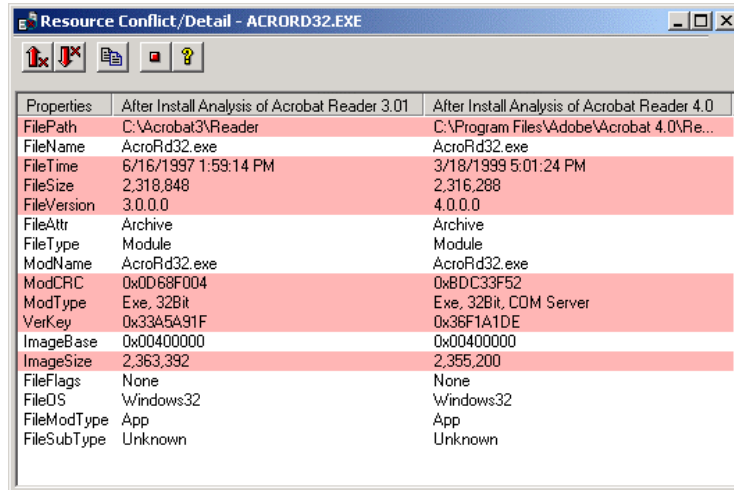


Figure 4.14 ~ Resource Conflict/Detail window.

Tip

If you want to find out what other states in the Radia Application Knowledge Base use a particular resource, right-click on the resource and select **Who Uses?** A list of all the other states that use that resource opens.

- Click the close button to close the **Resource Conflict/Detail** window.

Adding and Removing States from the Analysis

To add a state to the analysis

- Right-click the state file you would like to add to the comparison and select **Add to Analysis** from the shortcut menu.

The state file is added to the analysis.

To remove a state from the analysis

- Right-click the state file you would like to add to the comparison and select **Remove from Analysis** from the shortcut menu.

The state file is removed from the analysis.

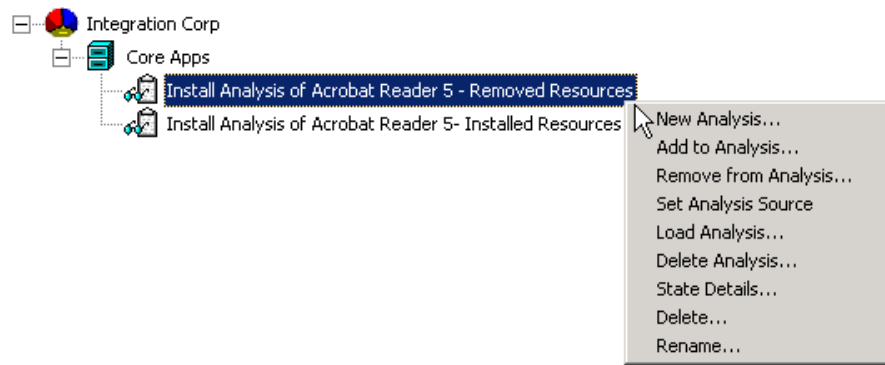


Figure 4.15 ~ State File shortcut menu.

Saving and Loading an Analysis

- Save an analysis for future viewing using the **Save Analysis** button.

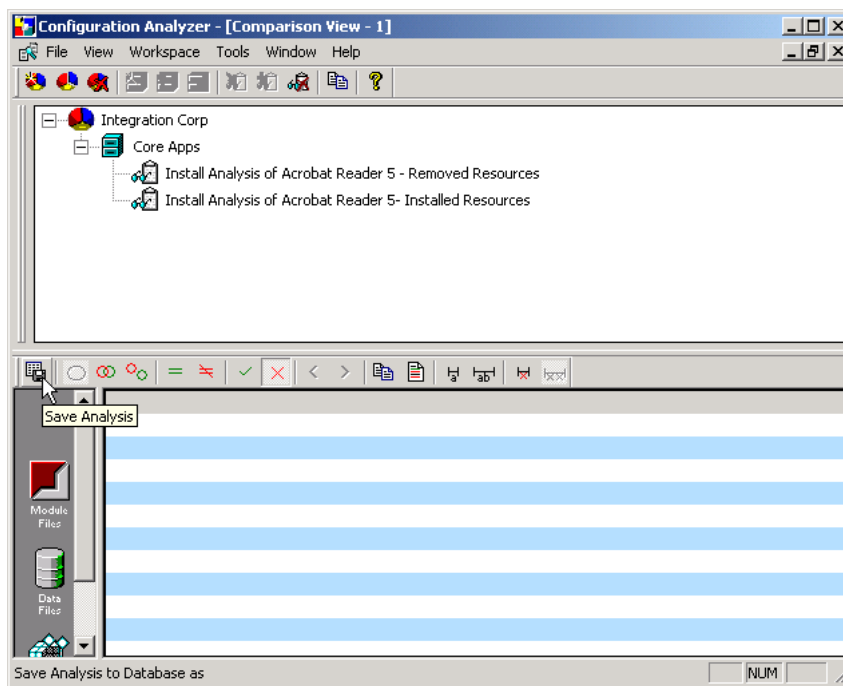


Figure 4.16 ~ Save an analysis.

- Load any saved analysis by right-clicking any of the states or project names in the tree-view window.

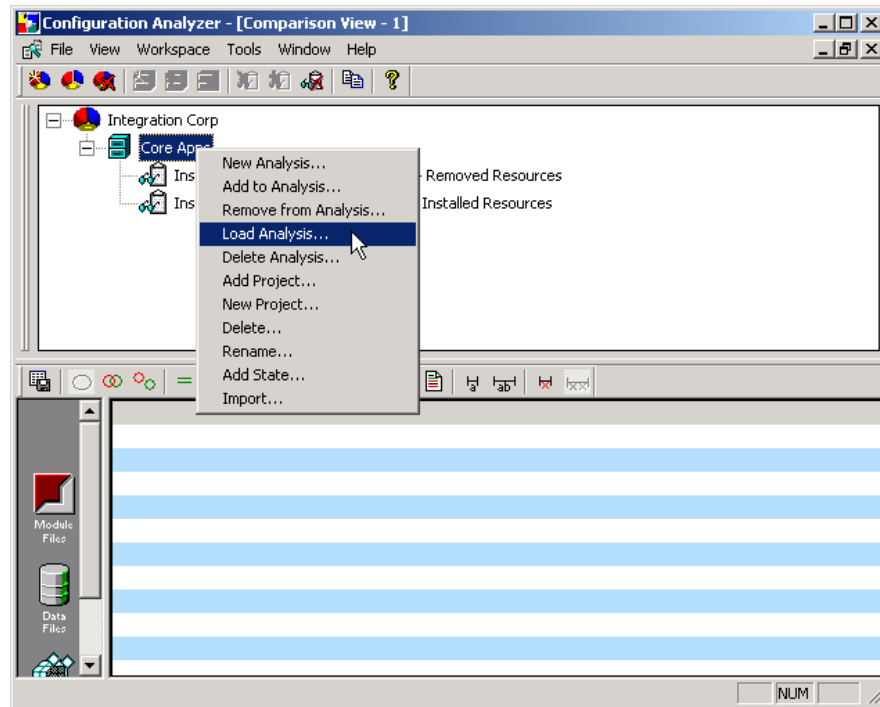


Figure 4.17 ~ Load an analysis.

- Select the analysis you would like to load from the **Load Analysis** list box and click **OK**.

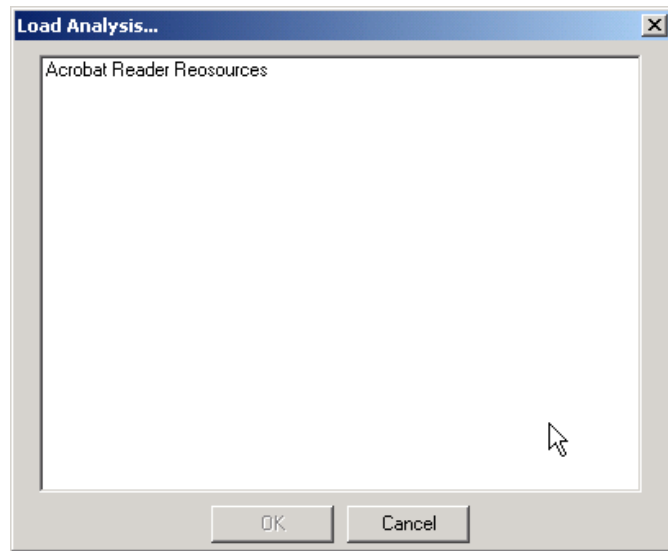


Figure 4.18 ~ Load Analysis list box.

The analysis is loaded and displayed at the bottom of the analysis window.

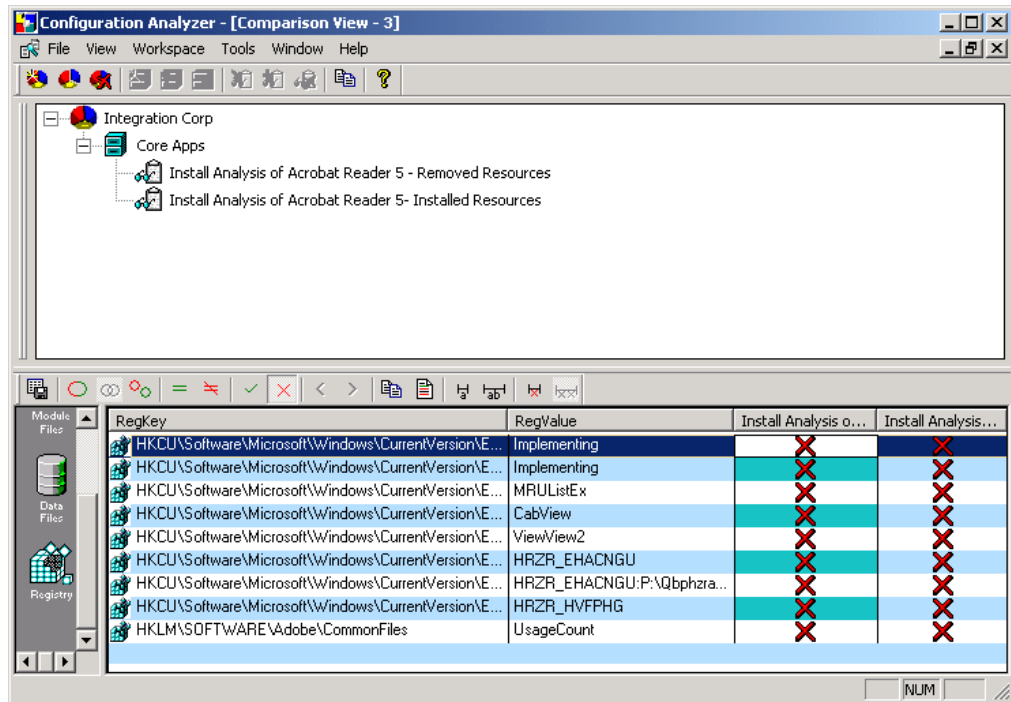



Figure 4.19 ~ Analysis loaded and displayed in the analysis window.

Generating a Report

You may want to generate a report of all the resources in an application or the conflicts between applications.

To generate a report

- To generate a report, click **Generate report** .

COMPARISON DETAIL REPORT

Summary						
Report Type: All Resources - Conflicts Only Resource Type: Module File Comparison States: 1: Install Analysis of Adobe Acrobat - Removed Resources 2: Install Analysis of Adobe Acrobat - Installed Resources						
ACELITE.DLL						
State	Path	Version	CRC	Size	Time	Attributes
Install Analysis of Adobe Acrobat-Installed Resources	C:\WINNT\system32\Adobe\SVG Viewer	1.2.0.1	0x3FFD2741	397,312	4/16/2001 4:39:02 PM	Archive
Install Analysis of Adobe Acrobat-Installed Resources	C:\Program Files\Adobe\Acrobat 5.0\Reader	1.2.0.1	0x3FFD2741	397,312	4/16/2001 4:39:02 PM	Archive, NotContentIndexed
AGM.DLL						
State	Path	Version	CRC	Size	Time	Attributes
Install Analysis of Adobe Acrobat-Installed Resources	C:\WINNT\system32\Adobe\SVG Viewer	4.4.26.1	0xBC92A652	1,138,688	9/5/2001 2:10:34 PM	Archive
Install Analysis of Adobe Acrobat-Installed Resources	C:\Program Files\Adobe\Acrobat 5.0\Reader	4.4.26.1	0xBC92A652	1,138,688	9/5/2001 2:10:34 PM	Archive, NotContentIndexed
BIB.DLL						
State	Path	Version	CRC	Size	Time	Attributes
Install Analysis of Adobe Acrobat-Installed Resources	C:\Program Files\Adobe\Acrobat 5.0\Reader	1.0.20.1	0x5D825C65	147,456	4/16/2001 4:39:02 PM	Archive, NotContentIndexed
Install Analysis of Adobe Acrobat-Installed Resources	C:\WINNT\system32\Adobe\SVG Viewer	1.0.20.1	0x5D825C65	147,456	4/16/2001 4:39:02 PM	Archive
BRWSRPI.DLL						
State	Path	Version	CRC	Size	Time	Attributes
Install Analysis of Adobe Acrobat-Installed Resources	C:\Documents and Settings\Administrator\Local Settings\Temp_ISTMP3.DIR_ISTMP0.DIR	5.0.5.0	0xC3F1E920	53,248	8/8/2001 9:22:42 PM	NotContentIndexed
Install Analysis of Adobe Acrobat-Installed Resources	C:\Documents and Settings\Administrator\Local Settings\Temp_ISTMP2.DIR_ISTMP0.DIR	5.0.5.0	0xC3F1E920	53,248	8/8/2001 9:22:42 PM	NotContentIndexed
Install Analysis of Adobe Acrobat-Installed Resources	C:\Documents and Settings\Administrator\Local Settings\Temp_ISTMP1.DIR_ISTMP0.DIR	5.0.5.0	0xC3F1E920	53,248	8/8/2001 9:22:42 PM	NotContentIndexed

Figure 4.20 ~ Comparison Detail Report.

Your report is created and saved in the **Program Files\Novadigm\Application Analyzer\Reports** directory.

Summary

- Use the Radia Configuration Analyzer to view and compare state files.
- Right-click the workspace, projects, or state files to reveal the available options.
- Generate and save Comparison Detail reports with the Radia Configuration Analyzer.
- Use the Radia System Explorer to export existing services as state files into the Radia Application Knowledge Base.

Generating State Files

At the end of this chapter, you will:

- Create state files using the Radia State Generator.
- Understand the process behind creating state files with the Radia System Explorer.

Generating State Files with the Radia State Generator

Use the Radia State Generator to create state files of applications you may want to analyze. This is useful when you would like to analyze any changes that may take place during an installation or after any other modifications have been made to an application.

State files represent the current state of an application. Therefore, there are different types of state files.

- A **Before State File** represents the state of a machine before the application has been installed.
- An **After State File** represents the installed state of an application.
- A **Delta State File** represents any changed state of an application.

Creating a Before State File

Use the Radia State Generator to create a state file of the machine before installing the application. This state file represents a comprehensive knowledge base of the resources that an application uses on a workstation.

To create a before installation state file

1. Double-click the Radia State Generator icon.

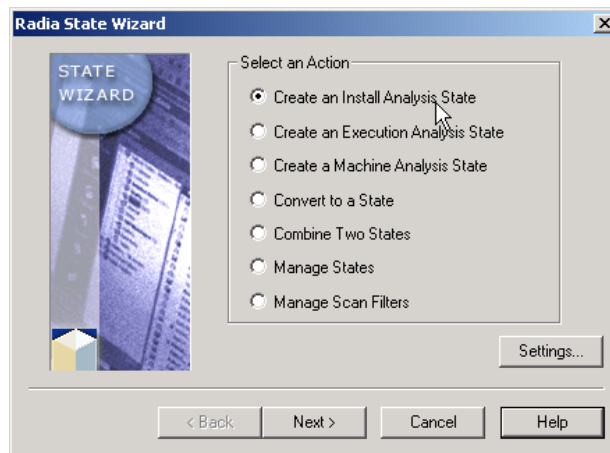


Figure 5.1 ~ Radia State Wizard – Select an Action.

2. Select **Create an Install Analysis State**.
3. Click **Next**.

The **Select the Installation Analysis Action** dialog box opens.

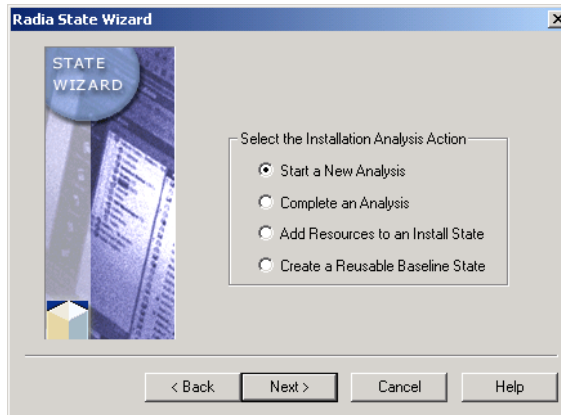


Figure 5.2 ~ Radia State Wizard – Select the Installation Analysis Action dialog box.

4. Select **Start a New Analysis**.
5. Click **Next**.

The **Select the Install State Creation Technique** dialog box opens.

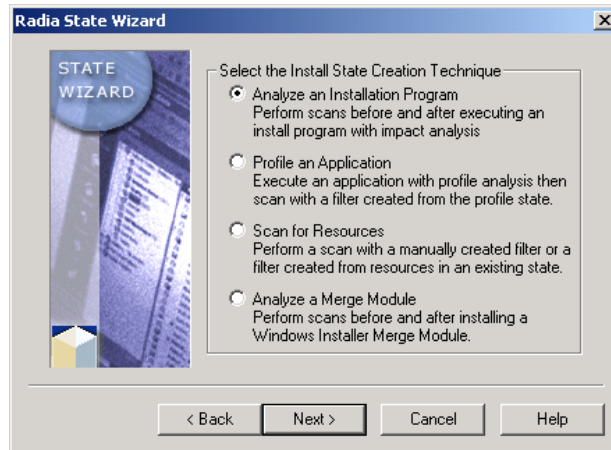


Figure 5.3 ~ Radia State Wizard – Select the Install State Creation Technique dialog box.

- 6.** Select **Analyze an Installation Program**.
- 7.** Click **Next**.

The **Select the Install Program Analysis Technique(s)** dialog box opens.

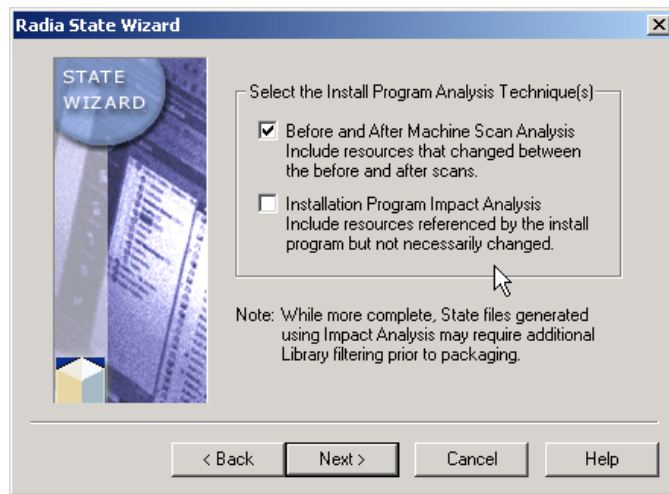


Figure 5.4 ~ Radia State Wizard – Select the Install Program Analysis Technique(s) dialog box.

8. Select **Before and After Machine Scan Analysis**.

9. Click **Next**.

The **Select the Paths, Files and Registry Entries to Scan** dialog box opens.

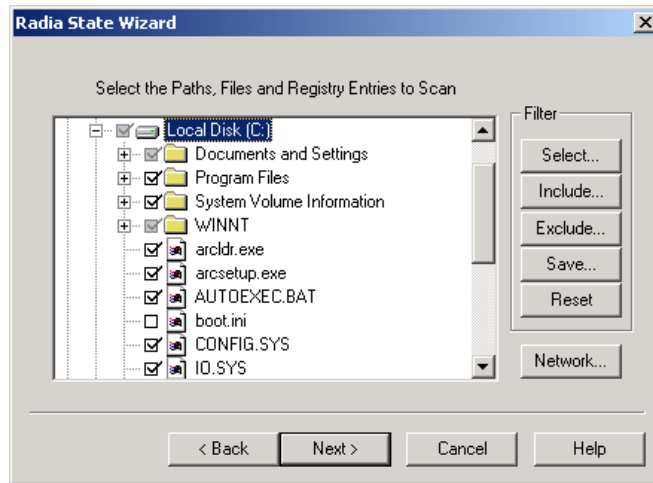


Figure 5.5 ~ Radia State Wizard — Select the Paths, Files and Registry Entries to Scan.

10. Select the files and registry information to include in your scan. For the purpose of this exercise, select the Local Disk (C:) drive only. Clear the check boxes for all other selected drives.

Note

Do not *over-filter* the initial scan. You may not realize that an application places files in various directories, and if you filter that directory out in the beginning stages, the changes will not be reflected in the final package. Additional detailed filtering can be done in the Radia Library Wizard.

See the *Radia Extensions for Windows Installer Guide* for more information.

Tip

Press the **F10** key on your keyboard if you want to expand a dialog box to full-size. To return to the Wizard, press **F10** again, or close the dialog box.

11. Click **Next**.

The **Install Analysis Description** dialog box opens.

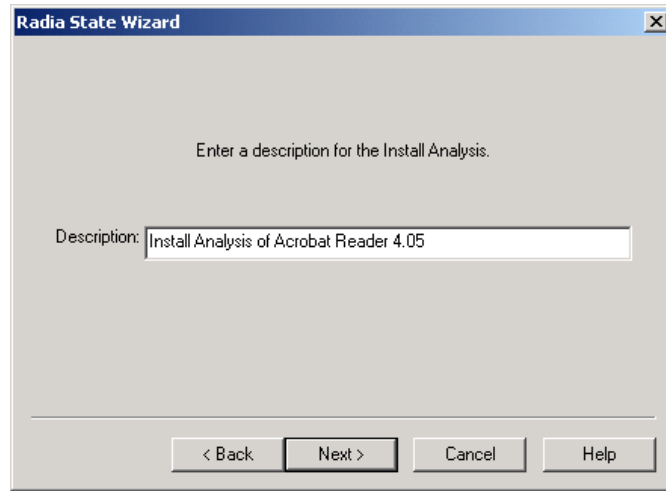


Figure 5.6 ~ Radia State Wizard – Install Analysis Description dialog box.

12. In the **Description** text box, type a description for the state you are creating.

13. Click **Next**.

The **Installation Analysis Completed** dialog box opens and performs the initial scan of the machine.

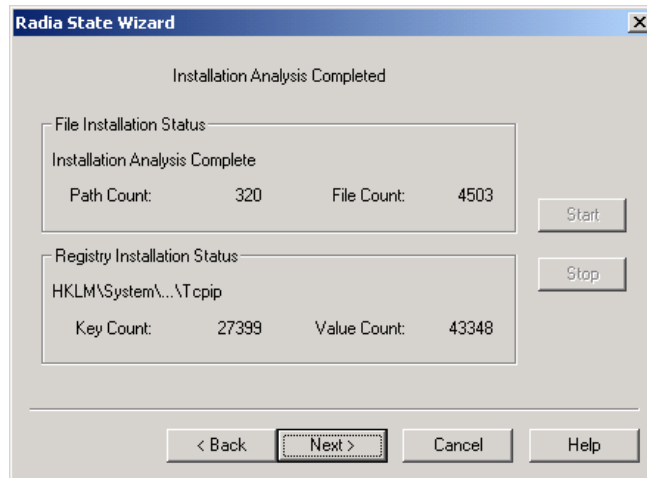


Figure 5.7 ~ Radia State Wizard – Installation Analysis Completed dialog box.

14. When the scan is finished, click **Next**.

The **State Data Collection Results** dialog box opens. This dialog box shows the results of the scan.

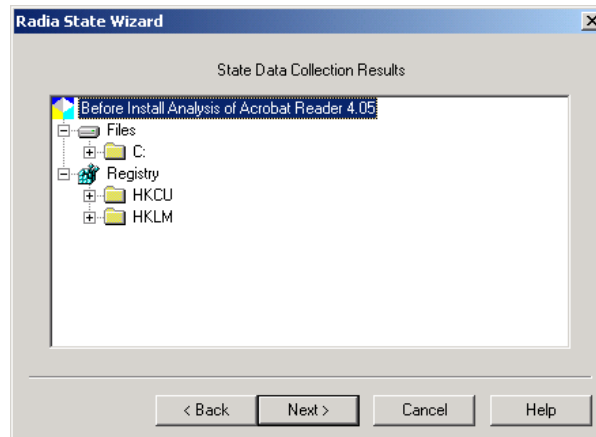


Figure 5.8 ~ Radia State Wizard – State Data Collection Results dialog box.

15. Click **Next**.

The **Before Image machine scan is complete** dialog box opens.

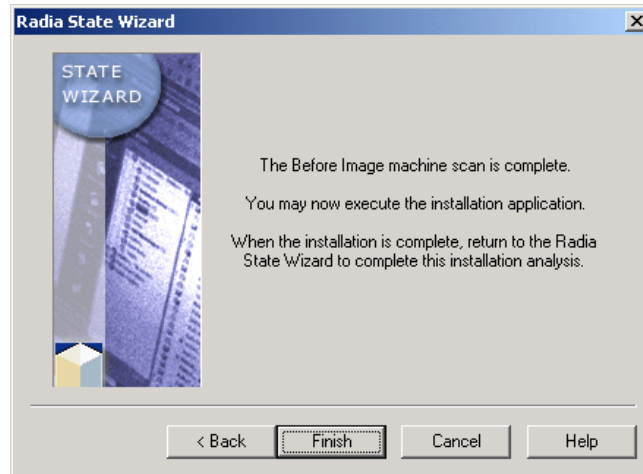


Figure 5.9 ~ Radia State Wizard – Before Image machine scan is complete dialog box.

16. Click Finish.

Now that the before scan is done, install your application. For this example, we are using Adobe Acrobat Reader, available at www.adobe.com.

Creating an After and Delta State

After you have created the before analysis and installed the application, you need to complete the analysis to obtain a full and accurate view of the resources required by the application. To do this, you will create after and delta installation state files.

To create After and Delta State Files

1. Double-click the Radia State Generator icon.

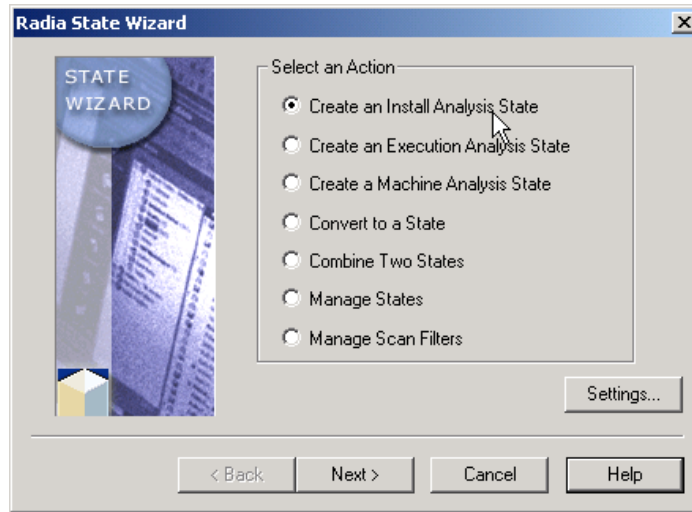


Figure 5.10 ~ Radia State Wizard – Select an Action dialog box.

2. Select the **Create an Install Analysis State** radio button.
3. Click **Next**.

The **Select the Installation Analysis Action** dialog box opens.

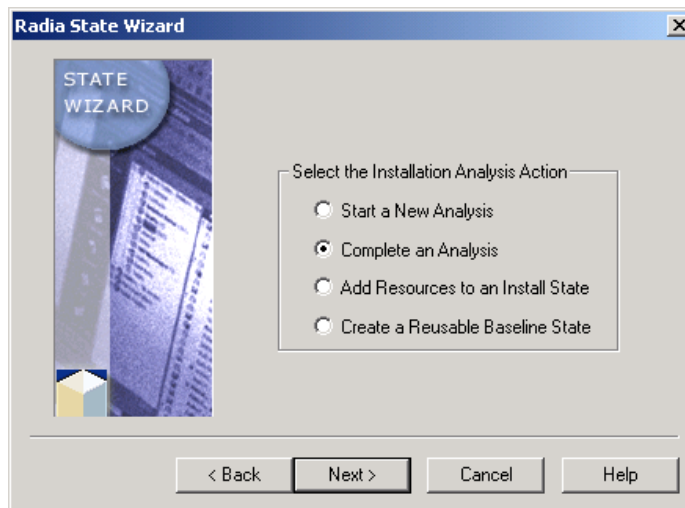


Figure 5.11 ~ Radia State Wizard – Select the Installation Analysis Action dialog box.

4. Select **Complete an Analysis**.
5. Click **Next**.

The **Select the Installation Analysis State to Complete** dialog box opens.

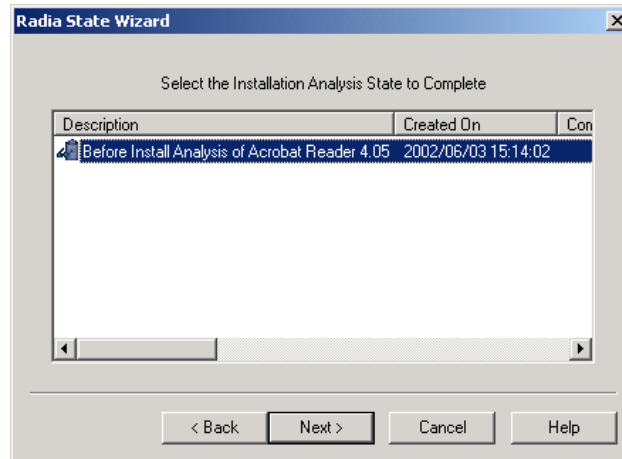


Figure 5.12 ~ Radia State Wizard – Select the Installation Analysis State to Complete dialog box.

6. Select the Installation Analysis State to complete. In this example, we selected **Before Install Analysis of Acrobat Reader 4.05**.
7. Click **Next**.

The **Select the Install Scan Options** dialog box opens.

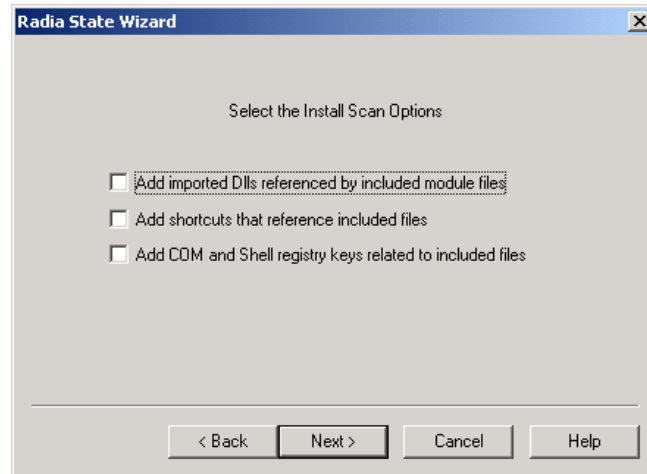


Figure 5.13 ~ Radia State Wizard – Select the Install Scan Options dialog box.

- **Add imported DLLs referenced by included module files**
Gathers information on the DLLs that are referred to by components in the application.
- **Add shortcuts that reference included files**
Gathers shortcuts that point to included files in the scan that may not have been discovered.
- **Add COM and Shell registry keys related to included files**
Gathers registry information that refers to files included in the scan that may not have been discovered.

These options will gather significantly more information about an application and should be used only when proper filtering guidelines are in place. Typically, you will not need to use these options when performing an installation analysis of an installation program. For the purpose of this exercise, do not select any of the check boxes.

8. Click **Next**.

The **Install Analysis Description** dialog box opens.

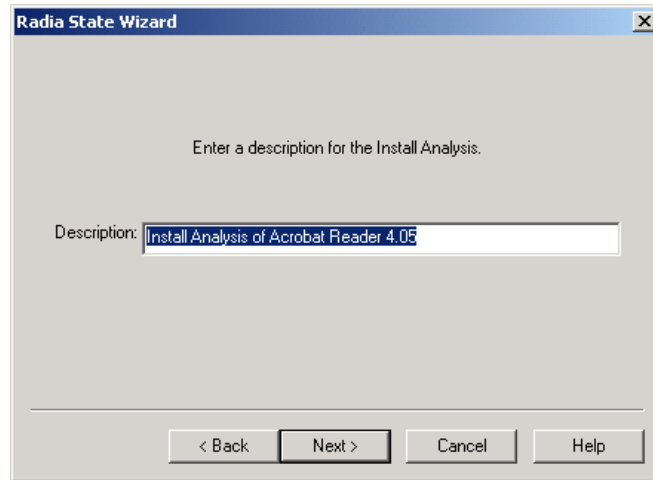


Figure 5.14 ~ Radia State Wizard – Install Analysis Description dialog box.

9. In the **Description** text box, you can change the description of your final state.

10. Click **Next**.

The scan of the machine runs and compares the before and after scans to create a Delta state containing the differences between the two.

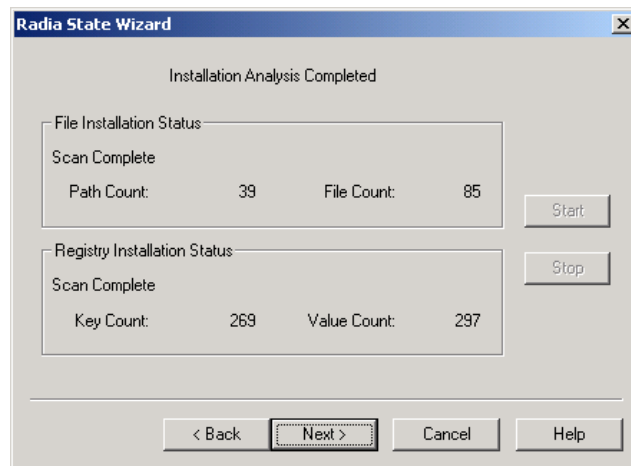


Figure 5.15 ~ Radia State Wizard – Installation Analysis Completed dialog box.

11. When the scan is finished, click **Next**.

The **State Data Collection Results** dialog box opens.

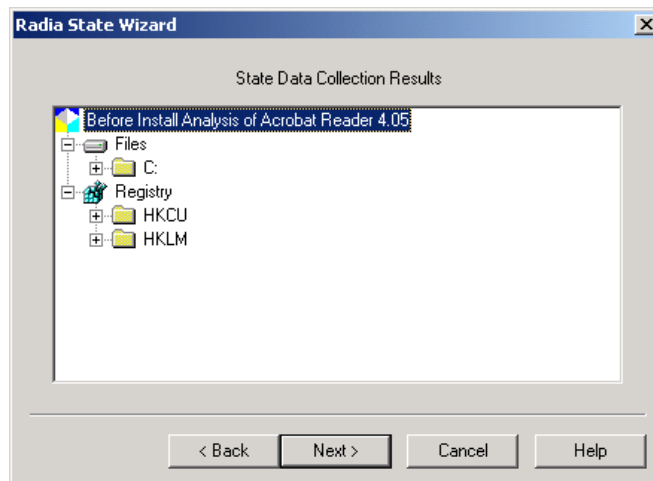


Figure 5.16 ~ Radia State Wizard – State Data Collection Results dialog box.

This dialog box shows the resources captured in the state file.

- ≠ signifies that this file has been changed between the before and after snapshot.
- = signifies that the file has been scanned, but there is no change between the snapshots. (This designator will not appear if you are only performing a Before and After analysis).
- + signifies that the file has been added and did not exist prior to application installation.
- signifies that the file has been removed and no longer exists on the system.

12. Click Next.

The **Installation Analysis is complete** dialog box opens.

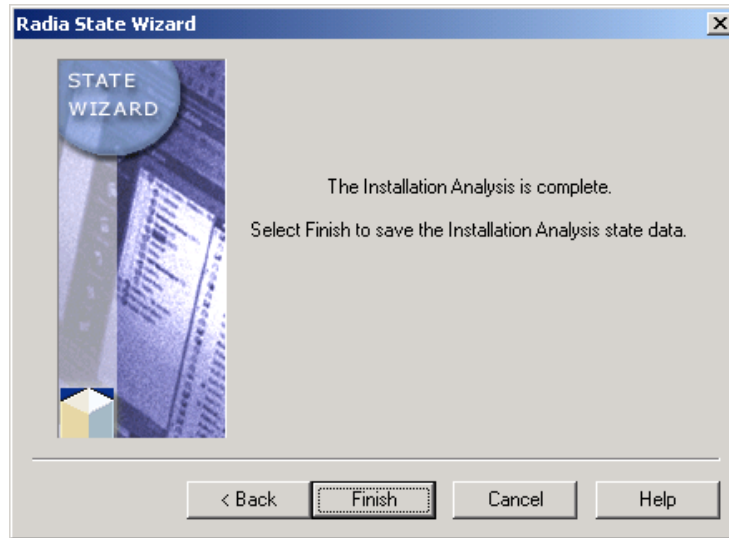


Figure 5.17 ~ Radia State Wizard – Installation Analysis is complete dialog box.

13. Click Finish.

Now use the Radia Configuration Analyzer to import, view, and analyze your data.

Building Radia State Files with the System Explorer

Use the Radia System Explorer, **Build State File** function to export an existing Radia Service as a set of state files into the Radia Application Knowledge Base.

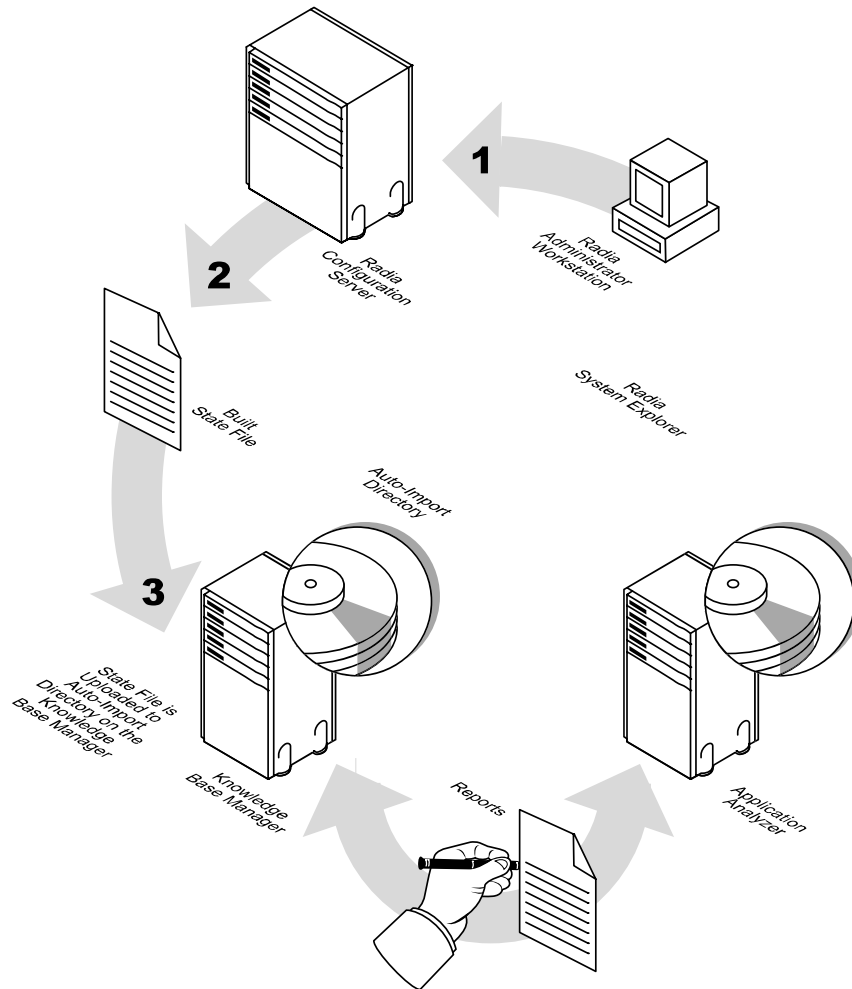


Figure 5.18 ~ State file export process.

Multiple state files can be built simultaneously. A separate state file is created in the Radia Application Knowledge Base for each combination of operating system and package connection that the application service supports.

Note

The Build state file function is designed for native Radia packages for Windows operating systems. If you attempt to export a non-Windows service, you will receive an error message.

Use the Radia System Explorer's **View, Options** menu, **KB AutoImport** tab, to define the Knowledge Base Manager default auto-import directory.

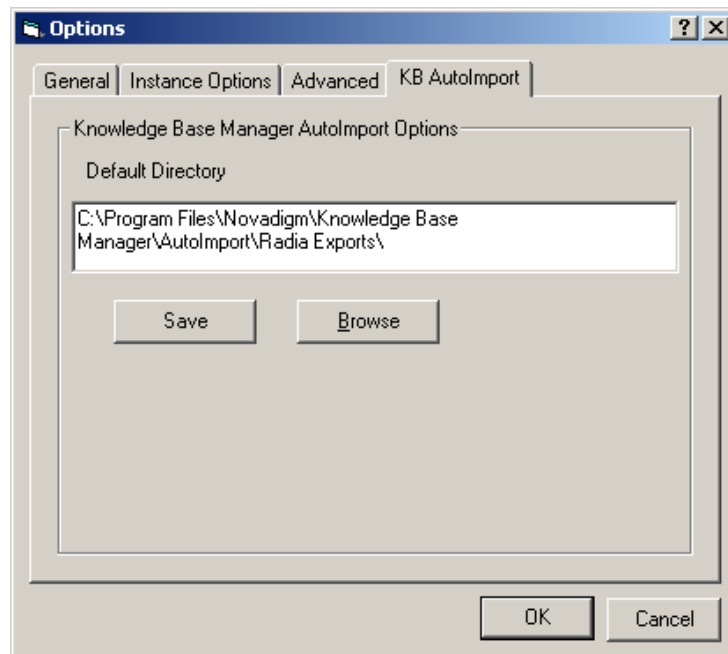


Figure 5.19 ~ Radia System Explorer – View, Options menu – KB AutoImport tab.

State File Creation Process

The state file creation process is accomplished in two phases; discovery and execution. During the discovery phase, temporary values are generated for any variables that are found within the package that are not defined in the operating system specific .ini file (this .ini file is located in the varsets subdirectory of the state file folder). During the build process, you are prompted to enter a more meaningful value for these variables.

As stated above, all variable values are defined within the associated operating system .ini file located within the varsets directory. When a value cannot be found during the discovery phase, a temporary variable is created, but in certain circumstances, the temporary variable may not be created in the context intended and the build process will fail. This occurs only when a specific value has been assigned to a variable present within a ZSTOP expression within your package, for example, resolving an expression based on a specific memory size. To ensure the build process completes successfully, add any special case variable values to the .ini file before creating the state file.

EXAMPLE:

An application contains a package level ZSTOP expression such as:

```
SPACE(TRANSLATE(WORD(EDMGETV(ZCONFIG,ZHDWMEM),1),","),0) < 131072000
```

In this case, the variable ZCONFIG.ZHDWMEM must be 128MB (131072000) or higher for the package to deploy. By adding the item ZHDWMEM to the ZCONFIG section of the operating system specific .ini file, the discovery process will continue correctly. The updated .ini file would contain the following:

```
[ZCONFIG]
ZHDWMEM = 131072001
```

Note

In the example above, the value added to the .ini file is one (1) larger so that the expression (as defined above) will fail allowing resolution to continue for this package.

To build a state file using the Radia System Explorer

1. Start the **Radia System Explorer**.
2. Double-click **Primary**.
3. Double-click **Software**.
4. Double-click **Application**.
5. Right-click the application, or select and right-click the applications for which you would like to build state files.

Note

You can select multiple applications by holding the **CTRL** key on your keyboard and clicking the names of the applications. Use the **SHIFT** key to select a group of applications.



Figure 5.20 ~ Application context menu – Build State File option.

6. Select **Build State File** from the shortcut menu.

The **Build State File(s)** window opens.

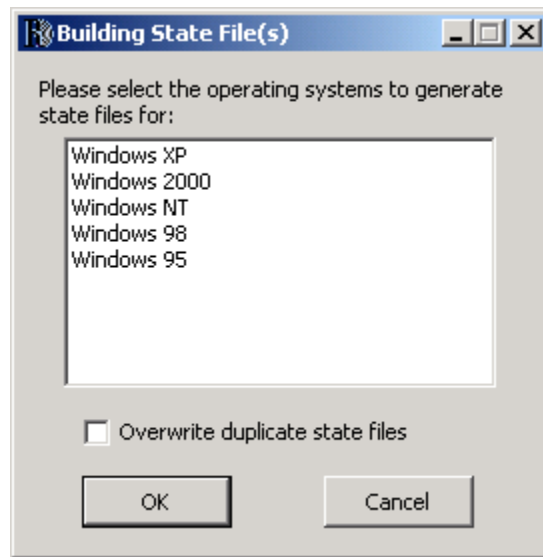


Figure 5.21 ~ Building State File(s) window.

-
7. Select the operating system for which you would like to generate the state file. If you want to overwrite existing state files with an updated version, select the check box.
 8. Click **OK**. The state file build process begins.

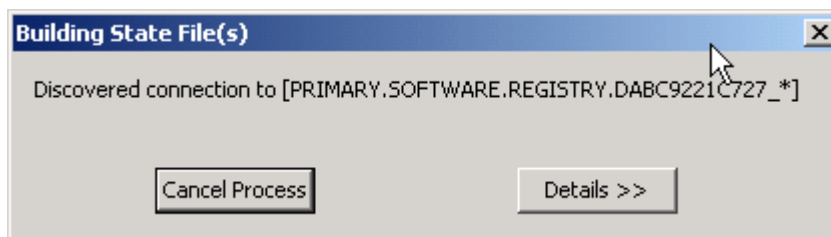


Figure 5.22 ~ Building Radia State file.

-
9. When the process is finished, a window will open displaying the any symbols that were discovered.

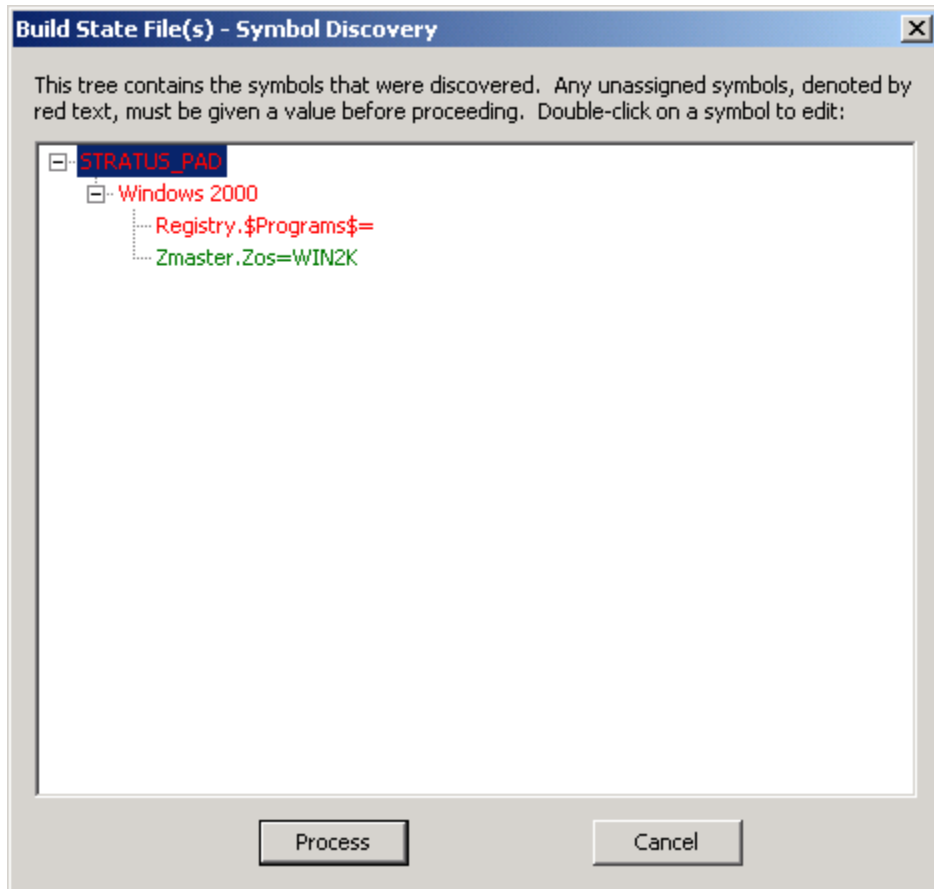


Figure 5.23 ~ Symbol Discovery dialog box.

10. Expand the tree view to display all the symbols that were discovered. Double-click each symbol displayed in red to assign an appropriate value before proceeding.

Any symbols that you define here are stored in an OS specific INI file in the **varsets** folder. For example, if any values were defined for a Windows 2000 state file, they would be stored in the varsets directory in a file called win2k.ini.

11. Click **Process** when finished. A processing window will open.
12. When the processing is complete click **OK**.

During the processing, a state file is built for the selected packages in the Radia Automated Import directory. If this directory is being monitored by the Radia Knowledge Base Manager service, then the state files and associated Radia Service entries are imported into the Radia Application Knowledge Base.

Use the **Radia Configuration Analyzer** to view the exported state file data.

Summary

- Use the Radia System Explorer to export existing services as state files into the Radia Application Knowledge Base.

Application Extension Framework (AXF)

AXF is an extendible framework that resides on each workstation or server to monitor, report on, and control selected applications.

Application Extensions

Application Extensions are loaded by the Application Extension Framework to control some aspect of application processing. Application Extensions may be simple or complex in nature and enhance the ability to manage the application, such as protecting an application from corruption.

AXF Log File

The Application Extension Framework maintains a log of all extensions that were loaded for each launch of an application. This is an audit file containing a history of the extensions and any extraordinary events produced for the Radia Packager for Windows Installer protected applications.

Comma-Separated-Value (.CSV) Formatted Files

CSV files are data files that have each record value separated by a comma. CSV files are created by Radia Packager for Windows Installer from a state file so the state file information can be used by other software applications.

configuration set

This contains the configuration information for an application extension. Each configuration set is given a user-allocated unique name.

custom actions

A type of state file that contains customized application processing to extend the functionality of the Windows Installer package. Custom action files include Installation Actions that execute a VBScript, Java Script, EXE, or DLL based on your defined conditions, and may use Custom Data.

Delta State File

A type of state file that contains a definitive list of the differences between any two state files that are compared.

filter state file

A type of state file that contains the filtering criteria used during a machine scan or other state file build process.

impact state file

A type of state file that contains all resources changed by an application program during its execution.

install state file

A type of Delta State File that combines a Machine Scan Delta State and a Radia Impact State to achieve the best of both techniques. Install states identify the resources needed for an install.

Radia Configuration Analyzer

A console for viewing, storing, and comparing application data. Backed by an SQL database, the Radia Configuration Analyzer allows you to import state files created by the Radia State Wizard or the Radia Package Wizard. This will allow you to compare application information for conflicts before creating packages for deployment and to compare these packages with applications that have been deployed.

Radia Configuration Analyzer Project

A Radia Configuration Analyzer project is a logical grouping comprised of the application and machine state files that have been exported to the Radia Application Knowledge Base.

intersection state file

A type of state file that contains a definitive list of all the resources shared by any two state files.

package difference transform

A package difference transform creates a transform containing the differences between two package files. The packages must not have any file, registry, or shortcut differences.

packaging

The act of identifying and gathering the components of an application.

permission state file

A type of state file that contains a set of Access Control Groups, each of which has been assigned one or more group or user types with corresponding rights. Library resources can be assigned to the permissions of a specific Access Control Group. The assigned permissions are implemented when the Windows Installer package is installed, thus providing control over user access authority at installation time.

profile state file

A type of state file that contains a definitive list of all resources needed by an application program to execute properly.

project tree

The diagram showing the hierarchy of Radia' workspaces and projects, which is displayed when IStudio is executed.

promoting

When you **promote** a package that was created with the Radia Publisher, you are storing the package in the Radia Database.

publishing

The act of promoting the result of packaging to the Radia Database.

Radia Packager for Windows Installer Menu

A single menu that offers a process view as well as quick access to the Radia Default Settings dialog box, all Radia Wizards, and the Radia Configuration Analyzer.

Radia Configuration Analyzer Workspace

A Radia Configuration Analyzer workspace is the user's view into the Radia Application Knowledge Base based on the user's authority. Workspaces contain projects.

Radia Application Knowledge Base

A historical database of application and machine state information.

Radia Insulation Wizard

A wizard that guides the user in insulating Radia Libraries and Applications.

Radia Library Wizard

A wizard that guides the user in building Radia libraries.

Radia Package Wizard

A wizard that builds Windows Installer package files (.MSI) and patch package files (.MSP).

Radia State Wizard

A wizard that guides the user in the creation of different state file types.

Radia/Insulate

This component of Radia insulates, protects, and ensures application reliability by providing a "wall" around an application, insulating and protecting it from other applications.

scan state file

A type of state file that contains selected directory, file, and registry information created by scanning a workstation.

self-registration

A task that adds a registry setting that indicates where to load the modules required for the component to execute properly.

state file

A highly-tuned file format that is used to store information about an application or workstation at a particular point in time. There are several different types of state files.

transform files

A user interface transform executes the package installation's user interface and saves all responses in a transform file. Although the product appears to be installed, it is not. A package difference transform creates a transform containing the differences between two package files. The packages must not have any file, registry, or shortcut differences.

union interface transform file

A user interface transform executes the package installation's user interface and saves all responses in a transform file. Although the product appears to be installed, it is not.

union state file

A type of state file that contains a definitive list of all the resources contained by adding each of the resources contained in any two state files.

ZSTOP

A ZSTOP expression is used to stop the resolution of an instance based on certain criteria. For example, create a ZSTOP expression to deploy a ZSERVICE instance only to client computers with a particular operations system.

Figures

Figure 1.1 ~ Radia Configuration Analyzer administrator console.....	14
Figure 1.2 ~ Radia Configuration Analyzer Login.	16
Figure 1.3 ~ Default Radia Configuration Analyzer Administrator console.....	17
Figure 1.4 ~ No application login set text box.	18
Figure 2.1 ~ Radia Configuration Analyzer Database Schema Welcome dialog box.	23
Figure 2.2 ~ HP End-User License Agreement window.....	24
Figure 2.3 ~ Install Location dialog box.....	25
Figure 2.4 ~ Serial Number dialog box.	26
Figure 2.5 ~ Ready to Install dialog box.	27
Figure 2.6 ~ Radia Configuration Analyzer Welcome dialog box.	29
Figure 2.7 ~ End-user license agreement window.....	30
Figure 2.8 ~ The Install Location dialog box.	31
Figure 2.9 ~ Serial Number dialog box.	32
Figure 2.10 ~ Ready to Install dialog box.	33
Figure 2.11 ~ Welcome dialog box.	34
Figure 2.12 ~ HP End-User License Agreement widow.....	35
Figure 2.13 ~ Radia State Generator Install Location dialog box.	36
Figure 2.14 ~ Serial Number dialog box.	37
Figure 2.15 ~ Ready to Install dialog box.	38
Figure 3.1 ~ Radia Configuration Analyzer Administrator Console.....	45
Figure 3.2 ~ Radia Configuration Analyzer Tools menu.....	46
Figure 3.3 ~ Radia Configuration Analyzer Display tab.....	47
Figure 3.4 ~ Radia Configuration Analyzer Comparison tab.	48
Figure 4.1 ~ New Workspace dialog box.	56
Figure 4.2 ~ Radia Configuration Analyzer – New Workspace.	57
Figure 4.3 ~ Workspace shortcut menu.	58

Figure 4.4 ~ New Project dialog box.....	59
Figure 4.5 ~ Radia Configuration Analyzer – New Project in Workspace.....	60
Figure 4.6 ~ Shortcut menu for a project.....	61
Figure 4.7 ~ Radia Configuration Analyzer Import window.	62
Figure 4.8 ~ Install states.....	63
Figure 4.9 ~ Install states.....	64
Figure 4.10 ~ State Detail window.....	65
Figure 4.11 ~ Resource Details dialog box.....	66
Figure 4.12 ~ New Analysis option.	67
Figure 4.13 ~ Analysis View screen.	68
Figure 4.14 ~ Resource Conflict/Detail window.	69
Figure 4.15 ~ State File shortcut menu.....	70
Figure 4.16 ~ Save an analysis.....	71
Figure 4.17 ~ Load an analysis.	72
Figure 4.18 ~ Load Analysis list box.....	73
Figure 4.19 ~ Analysis loaded and displayed in the analysis window.	74
Figure 4.20 ~ Comparison Detail Report.....	75
Figure 5.1 ~ Radia State Wizard – Select an Action.....	78
Figure 5.2 ~ Radia State Wizard – Select the Installation Analysis Action dialog box.....	79
Figure 5.3 ~ Radia State Wizard – Select the Install State Creation Technique dialog box.....	80
Figure 5.4 ~ Radia State Wizard – Select the Install Program Analysis Technique(s) dialog box.....	81
Figure 5.5 ~ Radia State Wizard – Select the Paths, Files and Registry Entries to Scan.....	82
Figure 5.6 ~ Radia State Wizard – Install Analysis Description dialog box.....	83
Figure 5.7 ~ Radia State Wizard – Installation Analysis Completed dialog box.....	84
Figure 5.8 ~ Radia State Wizard – State Data Collection Results dialog box.....	84
Figure 5.9 ~ Radia State Wizard – Before Image machine scan is complete dialog box.....	85
Figure 5.10 ~ Radia State Wizard – Select an Action dialog box.....	86
Figure 5.11 ~ Radia State Wizard – Select the Installation Analysis Action dialog box.....	87
Figure 5.12 ~ Radia State Wizard – Select the Installation Analysis State to Complete dialog box	88
Figure 5.13 ~ Radia State Wizard – Select the Install Scan Options dialog box.....	89
Figure 5.14 ~ Radia State Wizard – Install Analysis Description dialog box.....	90
Figure 5.15 ~ Radia State Wizard – Installation Analysis Completed dialog box.....	91
Figure 5.16 ~ Radia State Wizard – State Data Collection Results dialog box.....	91
Figure 5.17 ~ Radia State Wizard – Installation Analysis is complete dialog box.....	92

Figure 5.18 ~ State file export process.....93
Figure 5.19 ~ Radia System Explorer – View, Options menu – KB AutoImport tab.94
Figure 5.20 ~ Application context menu – Build State File option.96
Figure 5.21 ~ Building State File(s) window.97
Figure 5.22 ~ Building Radia State file.97
Figure 5.23 ~ Symbol Discovery dialog box.98

Tables

Table P.1 ~ Styles.....	6
Table P.2 ~ Usage.....	6
Table P.3 ~ Terminology*	7

Procedures

To log on to the Radia Configuration Analyzer	16
To install the database schema	23
To create an ODBC DSN connection for the Radia Configuration Analyzer	28
To install the Radia Configuration Analyzer	29
To install the Radia State Generator	34
To create the Radia Application Knowledge Base	39
To create the table schema for SQL Server	40
To configure Oracle, configure your Radia Application Knowledge Base database schema for Oracle	40
To set View Objects access rights to everyone	51
To create a workspace	56
To create a project	57
To import a state	60
To view the information in a state	63
To compare state files	66
To add a state to the analysis	69
To remove a state from the analysis	69
To generate a report	75
To create a before installation state file	78
To create After and Delta State Files	86
To build a state file using the Radia System Explorer	95

Index

A

access rights	
assigning	52
shared objects	52
View Object	51
Workspace Owner.....	52
ADD OBJECTS.....	52
adding	
COM keys.....	89
imported DLLs.....	89
keys	89
shell registry keys	89
shortcuts	89
state to state file analysis	69
administrator console.....	14
After State File	78
creating	86
description	78
AKB_Developer.....	53
AKB_HelpDesk	53
AKB_Integrator	53
AKB_QualityAssurance	53
analysis	
loading.....	72
saving	71
saving and loading.....	71
analysis of state files	
adding a state	69
removing a state	69
Analysis View screen.....	68
Analyze an Installation Program	80
Application Extension Framework, definition.....	101

Application Extensions, definition	101
authority to create workspace	51
AXF	101
AXF log file, definition	101

B

Before and After Machine Scan Analysis check box	81
Before Image Machine Scan dialog box	85
Before State File	
creating.....	78
description	78
Build State File	
function of Radia System Explorer	93
menu option.....	96
Building State File(s) window	97

C

COM keys, adding	89
comma-separated-value	<i>See</i> CSV
comparing state files	66
Comparison Column Width	49
Comparison Detail Report	75
Comparison Reports	
Report Delimiter	50
Report Path	50
Reports File Name Prefix	50
Comparison tab	48
Complete an Analysis radio button.....	87
configuration set, definition.....	101
configuring	40
Create an Install Analysis State radia button	86
Create an Install Analysis State radio button	79
creating	

Lists

After State Files	86
Before State Files	78
Delta State Files	86
install analysis state	79, 86
project	57
state file	95
user IDs for Radia Application Knowledge Base	50
workspace	51, 56
CSV files	101
custom actions, definition	101
customer support	4

D

Database Schema	
Install Location dialog box	25
installing	23
Ready to Install dialog box	27
Serial Number dialog box	26
Welcome dialog box	23
DataCRC	49
DB_OWNER/AKB_ADMIN	53
DELETE OBJECTS	52
Delta State File	
creating	86
decription	78
definition	102
Display tab	47
DLLs, adding	89

E

exporting state files	93
-----------------------------	----

F

File Comparison Filtering	48
File path	48
File size	48
Module header	48
File path	48
File size	48
filter state file, definition	102
filtering	
file comparison	48

registry comparison	49
---------------------------	----

G

generating report	75
green check mark	68

I

impact state file, definition	102
imported DLLs, adding	89
importing state files	60
Install Analysis Description dialog box	83, 90
install analysis state, creating	79, 86
Install Program Analysis Technique(s)	81
Install Scan Options	89
Install State Creation Technique	80
install state file, definition	102
install states	63
installation analysis	
complete	92
describing	83, 90
summary	84, 91
Installation Analysis Completed dialog box	91
Installation Analysis State to Complete	88
installation program, analyzing	80
Installed Resources	63
intersection state file, definition	102

K

keys, adding	89
--------------------	----

L

Load Analysis list box	73
loading an analysis	72

M

Microsoft SQL Server	
Radia Application Knowledge Base	39
table schema, creating	40
Module Header	48

N

New Analysis option	67
---------------------------	----

new analysis, starting	79	login screen.....	16
New Project dialog box	59	New Workspace.....	57
New Workspace dialog box.....	56	permissions.....	50
O			
ODBC DSN connection, creating.....	28	Ready to Install dialog box	33
OpenAccess	49	serial number dialog box	32
Oracle database scheme, configuring	40	settings	43
Oracle DBA Studio	40	system requirements	22
P			
package difference transform.....	102	Tools menu	46
packaging	102	Welcome dialog box.....	29
permission state file, definition	103	Radia Configuration Analyzer Project	102
Permissions dialog box	51	Radia Configuration Analyzer Workspace.....	103
profile state file, definition.....	103	Radia Insulation Wizard.....	103
project tree, definition	103	Radia Knowledge Base Manager.....	98
project, creating	57	Radia Library Wizard	103
promoting, definition	103	Radia Package Wizard, definition.....	104
publishing, definition	103	Radia Packager for Windows Installer Menu.....	103
R			
Radia Application Knowledge Base		Radia State Generator	
access rights.....	50	creating state files.....	78
creating	39	description	34
defining	39	Install Location dialog box	36
Oracle	40	installing.....	34
populating	56	Ready to Install dialog box	38
security.....	50	serial number dialog box	37
SQL Server	39	Welcome dialog box.....	34
system requirements.....	22	Radia State Wizard	
user IDs, creating	50	Before Image Machine Scan.....	85
Radia Automated Import directory	98	definition	104
Radia Configuration Analyzer	102	install program analysis techniques.....	81
administrator console.....	14, 45	install state creation technique.....	80
Comparison tab	48	installation analysis	
description	14	complete	92
Display tab.....	47	description	83, 90
Import window.....	62	summary	84
Install Location dialog box.....	31	installation analysis state	88
installing.....	22, 29	installation analysis summary.....	91
logging on.....	16	installation scan options.....	89
		select an action.....	86
		select installation analysis action.....	87
		select paths, filters, and registry entries.....	82
		selecting	
		an action.....	78
		installation analysis action	79

Lists

state data collection results.....	84, 91
Radia System Explorer	93
Radia/Insulate	104
red X.....	68
Registry Comparison Filtering.....	49
Data CRC.....	49
Open access	49
Usage access.....	49
Removed Resources.....	63
removing state from state file analysis.....	69
RENAME OBJECTS.....	52
Report Delimiter	50
Report Path, registry comparison filtering.....	50
report, generating	75
Reports File Name Prefix, registry comparison filtering.....	50
Resource Conflict/Detail window	69
Resource Details dialog box.....	66

S

saving an analysis.....	71
scan state file, definition.....	104
security, Radia Application Knowledge Base	50
Select an Action dialog box	86
Select the Install Program Analysis Technique(s) dialog box	81
Select the Install Scan Options dialog box	89
Select the Install State Creation Technique dialog box.....	80
Select the Installation Analysis Action dialog box	79, 87
Select the Installation Analysis State to Complete dialog box	88
Select the Paths, Files and Registry Entries to Scan dialog box	82
selecting	
install program analysis techniques.....	81
install state creation technique.....	80
installation analysis action	79
paths, files, and registry entries	82
selecting an action, Radia State Wizard	78
self-registration, definition.....	104
shared objects, access rights.....	52
Shell registry keys, adding	89

shortcuts, adding	89
Single Column View	49
SQL Server	
Radia Application Knowledge Base.....	39
table schema, creating.....	40
SQL Server Enterprise Manager	39
Data Files tab	39
General tab	39
Transaction Log tab.....	39
Start a New Analysis.....	79
state	
adding to analysis.....	69
removing from analysis	69
State Data Collection Results dialog box	84, 91
State Detail window	65
state file	
building	95
creating	78, 95
definition	78, 104
delta.....	102
export process	93
filter.....	102
impact.....	102
intersection	102
permission.....	103
profile	103
scan.....	104
union.....	104
State File Generator	16
State File shortcut menu.....	70
state files	
analyzing.....	66
comparing.....	66
creating	86
description.....	14
exporting	93
importing.....	60
install	102
types	78
state information, viewing	63
substates.....	62
Symbol Discovery dialog box.....	98

T

table schema, SQL Server	40
technical support	4
transform file	
definition	104
union interface	104
transform, package differences	102

U

union state file, definition	104
UsageAccess	49

V

varsets subdirectory	95
VIEW OBJECTS	52
View Objects access rights	51
viewing, state information	63

W

wizards	
insulation	103
library	103
package	104
state	104
WORKSPACE CREATE	52
Workspace Create authority	51
WORKSPACE DELETE	52
Workspace Owner, access rights	52
WORKSPACE RENAME	52
Workspace shortcut menu	58
workspace, creating	51, 56

Z

ZCONFIG	95
ZHDWMEM	95
ZSTOP	104

