Retek® Advanced Inventory Planning™ 11.4

Installation Guide

Customer Support

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Contact Method	Contact Information
E-mail	support@retek.com
Internet (ROCS)	rocs.retek.com Retek's secure client Web site to update and view issues
Phone	+1 612 587 5800

Toll free alternatives are also available in various regions of the world:

Australia	+1 800 555 923 (AU-Telstra) or +1 800 000 562 (AU-Optus)
France	0800 90 91 66
Hong Kong	800 96 4262
Korea	00 308 13 1342
United Kingdom	0800 917 2863
United States	+1 800 61 RETEK or 800 617 3835

Mail	Retek Customer Support Retek on the Mall 950 Nicollet Mall Minneapolis, MN 55403

When contacting Customer Support, please provide:

- Product version and program/module name.

- Functional and technical description of the problem (include business impact).

- Detailed step-by-step instructions to recreate.

- Exact error message received.

- Screen shots of each step you take.

Contents

Chapter 1 – Introduction

About the AIP installation process

This document provides instructions on installing Advanced Inventory Planning™ (hereafter referred to as AIP) version 11.4 GA. This release is being made available on the AIX, SunOS and HP-UX UNIX operating systems.

The process described in this document begins after the .zip files have been properly downloaded from http://edelivery.oracle.com. License keys for licensed products must be obtained prior to beginning the installation process.

Intended audience

This document is intended for an MIS administrator who will install the software.

About this document

This document provides detailed instructions for how to install an AIP 11.4 GA solution. There are two components to this installation.

The first is a component based on a Retek® Predictive Applications Server (hereafter referred to as RPAS) version 11.2 domain using a configuration established by Retek developers.

The second is an online component based on Java and Oracle.

Detailed instructions for how to unpack the software and install both the RPAS portion as well as the online portion of the AIP 11.4 GA solution are found in following chapters of this document.

Supplemental documentation is referenced in this document. The RPAS Installation Guide must be obtained prior to beginning the installation process.

Please read this document in its entirety before beginning the installation.

Chapter 2 – Preparing for installation

Package contents

A complete AIP 11.4 solution is delivered in several files, listed below.

     Note: "**<OS>**" refers to one of the three supported AIP Operating Systems: "aix" (AIX), "sun" (SunOS) and "hpux" (HP-UX).

The following files, from http://edelivery.oracle.com:

- AIP 11.0 Media Pack

- RPAS 11.0 Media Pack

Once all files are downloaded, unpack the **AIP Media Pack** which will in turn contain an AIP 11.4 zip file containing these files.

- AIP-11.4.overlay.aix.zip

- AIP-11.4.overlay.hp-ux.zip

- AIP-11.4.overlay.sunos.zip

- AIP-11.4.rpas-domain.zip

- AIP-11.4-online-appserver.zip

- AIP-11.4-online-dbserver.zip

- AIP-11.4-online-integration.zip

- aip11_transformations.zip

     Example: If the operating system where AIP is to be installed is SunOS, then the following files are required for the SunOS installation of AIP: RPAS-11.2.sun.zip, aip11_transformations.zip, AIP-11.4.overlay.sun.zip, AIP-11.4.rpas-domain.zip, AIP-11.4-online-appserver.zip, AIP-11.4-online-dbserver.zip, AIP-11.4-online-integration.zip, and aip_11.4_doc.zip.

Before beginning, ensure all files listed above are acquired.

Installation setup

Step 1: Prepare files on the Windows Workstation

Step 1.1

Ensure the following zip files are located on the Windows Workstation where the client will be run:

- aip_11.4_doc.zip – This ZIP file contains this AIP Installation Guide as well as other documentation to support AIP.

- RPAS-11.2.doc.zip – This ZIP file contains the RPAS documentation.

- RPAS-11.2.**<OS>**.zip – This ZIP file contains the client side RPAS files to be installed on Windows.

Step 1.2

Unpack the AIP-11.4-doc.zip documentation package.

Step 1.3

Unpack the RPAS-11.2.doc.zip documentation package. Refer to the RPAS documentation for full list of contents. The AIP installation will require only a subset of the RPAS documentation.

Step 2: Prepare files on the UNIX machine

Copy the following zip files to the UNIX machine that will house the server-side RPAS, Oracle and Java files.

- AIP-11.4.rpas-domain.zip – This ZIP file contains the server side AIP files for batch (RPAS)

- RPAS-11.2.**<OS>**.tar.Z – This compressed TAR file contains the RPAS installation

- AIP-11.4.overlay.<**OS**>.zip – This zip file contains the binaries, scripts, configuration text files, and other utilities that will be extracted into the `$RPAS_HOME/bin` directory

- AIP-11.4-online-appserver.zip – This zip file contains the AIP 11.4 Online ear file and binary license file for Online

- AIP-11.4-online-dbserver.zip – This zip file contains the AIP 11.4 Online Oracle schema database files

- AIP-11.4-online-integration.zip – This zip file contains the AIP 11.4 Online Integration files to exchange information between WIP/DM online and WIP/DM batch

Some of these files will be unpacked as part of the RPAS 11.2 installation instructions.

 Note: As the RPAS-11.2.**<OS>**.tar.Z file contains both client and server side files, it must be copied to both the Windows and UNIX machines.

Installation overview

To install AIP Online, follow the instructions in Chapters 3 through 6. To install AIP Batch, follow the instructions in Chapter 7.

 Note: The Online (Chapters 3 through 6) and Batch (Chapter 7) installations are mutually exclusive.

Chapter 3 – AIP online requirements

Hardware and software requirements

Retek Advanced Inventory Planning (AIP) Online is a web-based application. Its client side code runs in a Java Applet Container while its server side code runs in a Java Servlet Container and accesses an Oracle Database server.

Database server

General requirements for a database server capable of running AIP Online application include:

- UNIX based OS certified with Oracle 9i release 2 (v. 9.2.0.x) Enterprise Edition. Options are AIX 5.2, Solaris 9, and HP-UX 11.11

- Oracle 9i release 2 (v. 9.2.0.x) Enterprise Edition

Application server

General requirements for an application server capable of running AIP Online application include:

- UNIX based OS certified with WebSphere 5.1. Options are AIX 5.2, Solaris 9, and HP-UX 11.11

- IBM WebSphere Application Server version 5.1

Client PC and Web browser requirements

Client PC requirements

- Operating system is Windows 2000 or XP

- Display resolution is 1024x768 or higher;

- Processor is 1GHz or higher;

- Memory is 256MBytes or higher;

- Networking is intranet with at least 10Mbps data rate.

Browser requirements

- Microsoft Internet Explorer 5.5 or higher

- Sun JRE plugin 1.4.1+

Chapter 4 – AIP Online database server installation instructions

Create a UNIX user account for Oracle and Retek

1. Create the following UNIX group:

    -   dba (owns the Oracle RDBMS)

2. Create the following UNIX users, using ksh as the default shell:

    -   oracle – dba group

    -   retek – dev group

         Note: The oracle account will be used to create the Oracle 9i database. The retek account will own the AIP Online files on the UNIX server.

Create Staging Directory for AIP online database files

1. Log into the UNIX server as the newly created retek user and determine where the AIP Online database files will be installed. There should be a minimum of 1MB disk space available for the database installation files.

2. Copy the AIP-11.4-online-dbserver.zip file from the CD/Online directory to the newly created staging directory.

3. Change directories to the staging directory and extract the AIP-11.4-online-dbserver.zip file. This will be referred to as DBINSTALL_DIR

Create the Oracle 9i database

1. Install Oracle 9i release 2 with the oracle UNIX account and apply the latest patchset.

2. Create a 9i database. See Appendix A for a sample database creation script and sample init.ora files. These samples are also stored in DBINSTALL_DIR/AIPOnlineDBServer114/samplefiles. If these scripts are not used as a guide, the system tablespace is required to be 500MB for each installation of the AIP Online schema.

3. Create the retek_data tablespace and the retek_index tablespace. The size of these tablespaces will vary from client to client. For the initial install, 500MB each is recommended.

Create AIP Online Schema Owner

    📖   **Note:** A script called create_user.sql in DBINSTALL_DIR/AIPOnlineDBServer114/utility can be used to create the schema owner. The script will prompt for schema owner name, password and a temporary tablespace. This script should be run as sys.

1. Create the Oracle db user that will be used for the AIP Online application

   ▪ Log into sqlplus as the user sys and enter the following commands, replacing the text brackets <> with appropriate names

   ▪ SQL> create user <AIP Online Schema Owner> indentified by <password> default tablespace retek_data temporary tablespace <temporary tablespace name>;

2. The Oracle user <AIP Online Schema Owner> will serve as the owner of the database objects and should be granted the following permissions:

   ▪ Log into sqlplus as the user sys and enter the following commands

   ▪ SQL> grant connect, resource to <AIP Online Schema Owner>;

   ▪ SQL> alter user <AIP Online Schema Owner> quota unlimited on retek_data;

   ▪ SQL> alter user <AIP Online Schema Owner> quota unlimited on retek_index.

Create AIP Online tables

1. Change directories to DBINSTALL_DIR/AIPOnlineDBServer114/ddl.

2. Log into sqlplus as <AIP Online Schema Owner> and run the following scripts:

   ▪ SQL> @aip114.sql

3. Check the logfile aip114.log for errors.

Insert AIP Online database objects

1. Change directories to DBINSTALL_DIR/AIPOnlineDBServer114/aip.

2. Log into sqlplus as <AIP Online Schema Owner> and run the following scripts:

   ▪ SQL> @aip114dbo.sql

3. Check the logfile, aip114dbo.log for errors

Insert AIP Online seed data

1. Change directories to DBINSTALL_DIR/AIPOnlineDBServer114/sqlplus.

2. Log into sqlplus as <AIP Online Schema Owner> and run the following scripts:

   ▪ SQL> @aip114ctl.sql

3. Check the logfile, aip114ctl.log for errors.

Chapter 5 – AIP online application server installation instructions

AIP 11.4 is packaged as an EAR file – AIPOnlineApp.ear. Install the AIPOnlineApp.ear file in the J2EE application server according to the vendor's documentation.

The following are typical steps for deploying an ear file in WebSphere 5.1, assuming WebSphere Application Server 5.1 has already been installed.

   Note: In the event that AIP 11.1 or AIP 11.2 has already been installed on the WebSphere Application Server, the AIP 11.1 or AIP 11.2 application will need to be stopped and uninstalled prior to the installation of AIP 11.3. The existing data source and J2C Authentication Data Entry in WebSphere can be re-used for the AIP 11.3 install (assuming these values remain unchanged for the AIP schema). Any customizations made to AIP 11.1 or AIP 11.2 will need to be manually replicated in AIP 11.3.

   Note: The following AIP WebSphere installation configurations have been tested. It is required that one of these configurations is utilized for AIP deployment. Alternate configurations are not supported.

1. AIP Online and RIBforAIP installed on separate WebSphere instances on separate physical servers is a supported configuration.

2. AIP Online and RIBforAIP installed on separate WebSphere servers within a single WAS instance is a supported configuration.

RIBforAIP installation/configuration is required for integration of RMS 10.1.11 with AIP 11.4. For RIBforAIP installation and configuration instructions, refer to Chapter 6 in the Retek Integration Bus 11.1 Installation Guide (rib-111-ig).

UNIX (Sun Solaris/HPUX/AIX)

   Note: The JVM bundled with WebSphere 5.1 is supported for AIP Online.

   Note: The Oracle 9.2.0.3 (or higher) classes12.jar driver file is required for AIP 11.4. This file can be obtained from the Oracle Technology Network web site, and must be copied to a staging directory on the webserver where WebSphere 5.1 is installed. Alternatively, classes12.jar can be copied from the Oracle RDBMS 9i release 2 Enterprise Edition location on the database server ($ORACLE_HOME/jdbc/lib).

Configure WebSphere 5.1 application server for AIP online

    📖   **Note:** The following WAS configuration steps are not necessary if the AIP 11.1 or AIP 11.2 application has already been installed and the AIP Oracle schema has not changed. If this is the case, proceed directly to the 'Deploy AIP Online ear file in WebSphere Application Server 5.1' section.

1. Open the WebSphere Administrative Console that is to be used for administering the AIP 11.4 application – http://<server>:<port>/admin. If the administrative console url is unknown, consult WebSphere 5.1 documentation for the correct URL

    ▪ server = name or IP address of the server where WebSphere 5.1 is running

    ▪ admin_port = WebSphere Admin Console Port

        📖   **Example**: http://server:9090/admin

2. Click on Environment->Manage WebSphere Variables.

3. Under WebSphere Variables:

    ▪ Click ORACLE_JDBC_DRIVER_PATH and set the Value field to the directory containing the Oracle driver archive file classes12.jar (obtained from otn.oracle.com)

        📖   **Example:** /u00/websp/jdbc

    ▪ Click Apply

4. Click on Security->JAAS Configuration->J2C Authentication Data

5. Under J2C Authentication Data Entries, click New and enter the following information in the fields provided:

    ▪ Alias (alias for Authentication Data Entry)

    ▪ UserID (AIP database schema owner)

    ▪ Password (AIP database schema password)

    ▪ Click Apply

    ▪ Click OK

        📖   **Example:** Alias: AIPOnlineDBUser
                            User ID: aip11
                            Password: retek

6. Click on Resources->JDBC Providers.

7. Under JDBC Providers, click the server radial button and then click Apply.

8. Create a new JDBC Provider by clicking New.

    ▪ Select Oracle JDBC Driver (XA) from the JDBC Providers list of values and click Apply

9. In the General Properties section, set the Classpath field to the location of the Oracle driver archive file including the name of the file – classes12.jar. Click Apply.

        📖   **Example:** /u00/websp/jdbc/classes12.jar

10. Under Additional Properties, select Data Sources and then New, and enter the following information in the Configuration – General Properties fields:

    ▪ Name: AIPOnlineDB (must be this value and is case sensitive)

    ▪ JNDI Name: jdbc/AIPOnlineDB (must be this value and is case sensitive)

    ▪ Container managed persistence, check the (CMP) check box

    ▪ Component-managed Authentication Alias: from the drop-down, choose the J2C Authentication Alias that was created in step 5 above

    ▪ Container-managed Authentication Alias: from the drop-down, choose the J2C Authentication Alias that was created in step 5 above

    ▪ All other fields leave as default

    ▪ Click Apply

       📖   **Example:** Name: AIPOnlineDB
                             JNDI Name: jdbc/AIPOnlineDB
                             Component-managed Authentication Alias: AIPOnlineDBUser
                             Container-managed Authentication Alias: AIPOnoineDBUser

11. Under Additional Properties, click Custom Properties for the Data Source. Remove all properties except for URL and transactionBranchesLooselyCoupled by checking the check-box for each of these properties and then clicking the Delete button. Now click URL and enter the following information in the Value field:

    ▪ Value: jdbc:oracle:thin:@<DB Server IP address>:<DB Listener Port>:<Database_name>

       📖   **Example:** jdbc:oracle:thin:@dbserver:1521:prod_db1

    ▪ Click Apply and then OK

    ▪ Click transactionBranchesLooselyCoupled and set the Value field to true

    ▪ Click Apply and then OK

12. Save the configuration by clicking the <u>Save</u> link in the Message(s) section, and then by clicking the Save button in the Save to Master Configuration section.

13. Verify the configuration by using the "Test Connection" option in the Data Sources configuration section (Resources→JDBC Providers→Oracle JDBC Driver (XA)→Data Sources→Data Source Name→Test Connection button). A successful message in the Message(s) section should appear. In the case of an unsuccessful connection test, review all previous steps to ensure that the configuration thus far is accurate.

Deploy AIP Online ear file in WebSphere application server 5.1

    📖   **Note:** The following instructions assume the AIP Online application will be installed on the default WebSphere server *server1*. In the event that the AIP Online application is not installed on the default WebSphere server *server1* additional configuration steps may be required to successfully complete the installation.

1. Log into the UNIX webserver where WebSphere 5.1 is installed as the retek user and determine where the AIP Online application server file (AIP-11.4-online-appserver.zip) will be installed. There should be a minimum of 100 MB disk space available for the application installation files.

2. Copy the AIP-11.4-online-appserver.zip file located at CD/Online to a newly created staging directory on the UNIX server. This location will be referred to as INSTALL_DIR for the remainder of this chapter.

3. Change directories to INSTALL_DIR and extract the AIP-11.4-online-appserver.zip file.

4. Open the WebSphere Administration Console that is to be used for Administering the AIP Online application – http://<server>:<port>/admin.

5. Click on Applications➔Install New Application.

6. Under Preparing for the application installation, click the Server Path radial button and set this field to INSTALL_DIR/AIPOnlineAppServer114/AIPOnlineApp.ear file (from step 3 above), and then click Next.

    📖   **Example:** Server path:
/u00/websp/aip114/AIPOnlineAppServer114/AIPOnlineApp.ear

        Note: Do not enter any context root value. AIPOnlineApp.ear file has this value build into it which is 'aiponline'.

7. In the Generate Default Bindings window, leave all default settings and click Next.

    📖   **Note:** An Application Security Warning for the was.policy file may appear. This warning can be ignored as it does not affect the AIP Online application. Click Continue.

8. Under "Step 1: Provide options to perform the installation", set the Application Name field to the name of the AIP Online application being installed, and click Next.

    📖   **Example:** Application Name: AIPOnlineApp

9. Under "Step 2: Provide options to perform the EJB Deploy", select ORACLE_V9I for Deploy EJBs Option - Database Type, click Next.

10. Under "Step 3: Provide JNDI Names for Beans", enter OrderSender in the JNDI Name field for the EJB Module OrderSenderEJB; click the Next button, and click the Next button again to go to the next step.

    📖   **Example:** OrderSender

11. Under "Step 4: Map EJB references to beans"; enter the JNDI Name for the Reference Binding ejb/RIBMessagePublisherRemote. The JNDI name for the Reference Binding ejb/RIBMessagePublisherRemote will be constructed in the format corbaname:iiop:$ip:$port/$cell/nodes/$node/servers/$server/com/retek/rib/binding/publisher/ RIBMessagePublisher. The variable $ip represents the IP Address or host name of the server, $port represents the BOOTSTRAP_PORT (default value is 2810), $cell represents the cell name (default is the servername), $node represents the node name (default is the servername), and $server represents the server instance name (default is server1).

📖　　**Example:**
   corbaname:iiop:server_name:2810/cell/nodes/node/servers/server1/com/retek/rib/bin ding/publisher/RIBMessagePublisher

12. Enter the JNDI Name for Reference Binding ejb/OrderSender. The JNDI Name for Reference Binding ejb/OrderSender should be populated with the value OrderSender, click Next.

📖　　**Example:** OrderSender

13. Under "Step 5: Map resource references to resources";

   ▪ Select the AIP Online datasource that was created in the previous section from the dropdown Specify existing Resource JNDI name and click Apply

📖　　**Example:** node:jdbc/AIPOnlineDB

   ▪ Check module OrderSenderEJB

   ▪ Click Apply (this should populate the JNDI Name field to **jdbc/AIPOnlineDB**)

   ▪ Click Next

14. Under "Step 6: Map virtual hosts for web modules", leave all fields as default and click Next.

15. Under "Step 7: Map modules to application servers", leave all fields as default and click Next.

16. Under "Step 8: Ensure all unprotected 2.0 methods have the correct level of protection", leave all fields as default and click Next.

17. Under "Step 9: Summary", verify all installation information is correct and click Finish. This may take several minutes. Upon completion, the message "Application AIPOnline installed successfully" should appear.

18. Click the [Save to Master Configuration](#) link when it appears.

19. Click the Save button in the Save to Master Configuration section. Following a successful save, you will be re-directed to the WebSphere Application Server Administrative Console.

20. On the Enterprise Applications page, stop the newly created AIP Online application if it is running. Ensure that the status of this application is down (red x). To stop the AIP Online application, check the box next to the new application and click the Stop button.

21. On the Enterprise Applications page, start the newly created AIP Online application by checking the box next to this application and clicking the Start button. Ensure that the status of the new application is up (green arrow).

Configure the AIP online application

📖 **Note:** A setup page is used to configure the properties files for AIP online.

1. On the UNIX application server, create a /config and a /data directory in INSTALL_DIR that will be used for configuring AIP Online and loading data. These directories must be readable and write-able by the user that runs the WebSphere Application Server.

   📖 **Example:** /u00/websp/aip114/config

   /u00/websp/aip114/data

2. Load the new AIP Online application by entering the following URL in a browser: http://<server>:<http_port>/aiponline

   ▪ server = name or IP address of the server where WebSphere is running

   ▪ http_port = WAS HTTP port as defined by the HTTPTransport_1 value in the file WAS_HOME/config/cells/<cell>/nodes/<node>/servers/server1/server.xml

   📖 **Example:** http://server:9080/aiponline

3. A page displaying a link to the <u>setup page</u> will appear. Click on this link.

4. The Retek AIP Online Setup page is displayed. In the Directory structure section set the Configuration directory and Data directory to the respective directories created in step 1 above; leave the Data ZIP file field blank unless directed by Retek.

   ▪ Configuration directory = INSTALL_DIR/config

   📖 **Example:** Configuration Directory: /u00/websp/aip114/config

   ▪ Data directory = INSTALL_DIR/data

   📖 **Example:** Data Directory: /u00/websp/aip114/data

5. Under "Application Licensing"; set the License file field to the license-aip.bin file.

   ▪ License file = INSTALL_DIR/AIPOnlineAppServer/license-aip.bin

   📖 **Example:** /u00/websp/aip114/AIPOnlineAppServer/license-aip.bin

6. Under "Database setup", set the following values in the fields provided: Database type, Database name, Username and password, Network host, Port number, Schema name, Dump file name.

    ▪ Database type = Oracle

    ▪ Database name = Oracle database SID name

    📖 **Example:** prod_db1

    ▪ Username and password = Oracle AIP schema owner and password

    📖 **Example:** Username: aip11
            Password: retek

    ▪ Network host = IP address or name of server where the Oracle database is running

    📖 **Example:** dbserver

    ▪ Port Number = Oracle database port

    📖 Example: 1521

    ▪ Schema name = leave this field blank

    ▪ Dump file name = leave blank unless directed by Retek

5. Under "E-mail `setup", retain the default settings for the following fields as` this version of AIP Online does not provide E-mail functionality: External host name, E-mail from address, SMTP mail server, E-mail test address. The E-mail test address is the only non-required field. All other email fields must be populated.

    📖 **Example:** External Host Name: localhost:http_port
            E-mail From Address: admin@server.com
            SMTP Mail Server: localhost

6. Under "Integration", retain the default settings for all integration fields as this version of AIP Online does not provide Integration functionality.

7. Under "Security", set the following fields as appropriate: Administration hosts, SSL available, CA certificate, click Next.

    ▪ Administration hosts = comma-separated list of IP address/mask values to select the clients which are allowed to log in to perform system administration.

    📖 **Note:** If no Administration Hosts are entered, all hosts will be able to connect to the administration console. This configuration is not recommended.

    ▪ SSL available = This option may be selected if the application server is configured for SSL (https) access

    ▪ CA certificate = This option may be selected if the server certificate in use was obtained from a recognized Certificate Authority (such as Verisign).

8. The Retek AIP Online Setup: Part II: confirm settings page will be displayed if no configuration errors were encountered after clicking the Next button from step 9. Confirm that all settings are correct on this page. If any values are incorrect, click the back button in the browser to go to the previous page and make the proper adjustments. If/when the settings are correct, click Next.

9. The Retek AIP Online Setup: Part III: installing page will briefly appear, followed by the loading of Retek AIP Online: Part IV: status page. A message will be displayed stating the installation was successful and to restart the application server to continue configuring AIP online. Review the installation log to ensure that no errors were encountered during the installation process.

10. Bounce (stop/start) the WebSphere application server in order for the AIP Online configuration changes to be made effective.

11. If necessary start the AIP Online application through the WebSphere Administrative Console. On the Enterprise Applications page, start the AIP Online application by checking the box next to this application and then clicking the Start button; ensure that the status of the AIP Online application is now up (green arrow).

Create AIP online enterprise

    📖   **Note:** This section lists the steps necessary to create an AIP online enterprise. It also lists the steps necessary to create the initial administrator of the newly created enterprise.

1. Load the AIP Online application System Administration page by clicking the link in Retek AIP Online Setup: Part IV (step 11 above) of the AIP Online Setup step (Please restart your application server and then click here to enter system administration). In the event that the page has timed out or been closed enter the application url in a browser.

    📖   **Example:** http://server:9080/aiponline/phantasm

2. Enter the default system administrator user name and password of admin/admin to log into the System Administration page.

    📖   **Note:** A Warning – Security window may appear asking if the signed applet that is to run the Enterprise Administration window can be trusted or not. Click Yes.

3. The System Administration page is displayed. Click the Enterprises button in the Enterprise Data section.

4. The Enterprise Administration window is displayed; select the default Enterprise User J Sainsburys, click the Edit button.

5. On the Company Info tab edit the Enterprise code from aiponline to aiponline2.

6. Click Save.

7. Click the New button.

8. On the Company Info tab, enter the following information: Company name, Enterprise code, and Contact email. The Industry and Company type fields are not required.

   ▪ Company name = Company name

   ▪ Enterprise code = aiponline

   ▪ Contact email = AIP Administrator email account

    📖   **Example:** Company Name: Retek
                        Enterprise Code: aiponline
                         Contact Email: admin@server.com

9. On the initial Admin tab, enter the following information: First Name, Last Name, Username, New Password, Retype New Password.

   ▪ First Name = AIP Administrator's first name

   ▪ Last Name = AIP Administrator's last name

   ▪ Username = AIP Administrator's user name used for AIP Online login

   ▪ New Password = AIP Administrator's AIP Online password

   📖 **Note:** There a number of password restrictions :

   ✦ Minimum 6 characters; maximum 128 characters

   ✦ At least 5 different characters

   ✦ Must not be simple pattern of characters (ie: ABCDEF or ABCXYZ)

   ✦ Must not be easily derivable from user name or full name

   ✦ Must not be easily derivable from previous password

   ✦ Must not be derivable from a dictionary entry

   ✦ Case sensitive

   ▪ Retype New Password = retype above password for confirmation

   📖 **Example:** First Name: John
   Last Name: Doe
   Username: doejohn
   New Password: aip114online
   Retype New Password: aip114online

10. Navigate to the Services tab. Two services are displayed: Core Administration and AIP Online. Click the Enabled cell of Core Administration and then double-click the User Limit cell of Core Administration; input an integer value here. This integer value represents the number of users that can be created per Application; if an exact number of users is not known at first, enter a large number such as 100. This number can be changed at a later time by the system admin user. Press the Enter key to end the input.

11. On the Services tab, Click the Enabled cell of AIP Online and then double-click the User Limit cell of AIP Online; input an integer value here. This integer value represents the number of users that can be created per Application; if an exact number of users is not known at first, enter a large number such as 100. This number can be changed at a later time by the system admin user. Press the Enter key to end the input.

12. On the Enterprise Administration window, click the Save button. Close the Enterprise Administration window after successful save.

13. On the System Administrator page, click the LOG OUT link on the top right of this page.

Create AIP online users

    📖   **Note:** This section lists the steps necessary to create AIP online users. New users should be created using the administrator created in the previous step.

1. Load the application url in a browser to access the AIP Online login page.

    📖   **Example:** http://server:9080/aiponline/index.jsp

2. Input administrator username and password, click LOG IN.

3. The Applications page is displayed. Click Core Administration link.

4. The Administration page is displayed. Click the Users button in the Application Setup section.

5. The Core Administration: User Administration window is displayed. Select the Users tab and click New.

6. A user information template form is displayed. In the Details tab, enter all relevant user information into the template.

    📖   **Example:**   First Name: John
    Last Name: Doe
    Email: jdoe@company.com
    Username: doejohn
    New Password: aip112online
    Retype New Password: aip112online
    Password Status: Normal

7. Click on Permissions tab.

8. A user permissions template form is displayed. Select the Enabled cell of the AIP Online service.

9. Available Types selection box is populated with data. Scroll through Available Types and select All AIP Permissions. Click the '>' button to move this permission type to the Selected Types data box. Click Save.

10. Close the Core Administration: User Administration window.

11. Click the LOG OUT link in the Administration page to exit the application.

Chapter 6 – Integration component installation instructions

In order to exchange information between WIP/DM online and WIP/DM batch, the interface portion of the AIP online suite must be installed. There are four main steps to this process:

1. Install RETL (Retek Extract Transform and Load)

2. Extract AIP Integration/DB Files

3. Environment Configuration

Install RETL 11.2.2

Reference the Retek Extract Transform and Load (RETL) 11.2.2 Programmer's Guide for detailed installation instructions for this product. Following the successful installation of RETL 11.2.2, test the application to verify the environment was set up properly and the RETL binary was installed correctly.

  Note: It is recommended that the AIP integration files be extracted on the database server where the RMS 10.1.11 schema exists if network traffic is limited.

1. Log into the UNIX server as the rfx user. At the UNIX prompt, enter rfx. A command-line error will be returned if all environment variables are setup properly.

  Example: /u00/retl> rfx
      Error : Flow file argument ('-f') required!

2. Verify that the RETL binary is installed properly and the Database environment variables are correct by executing the "verify_retl" script. This script runs a series of validation steps and displays a confirmation message if the environment is set up correctly. Upon confirmation, the RETL environment is now ready for configuration.

  Example: /u00/retl> verify_retl –doracle
      Checking RETL Environment...found ORACLE environment...passed!
      Checking RETL binary...passed!
      Running samples...passed!

      ===
      Congratulations! Your RETL environment and installation passed all tests
      See the programmer's guide for more information about how to further test
      your database installation (if applicable).

      ===
      Exiting...saving output in /tmp/verifyretl-1843208.log

  Note: The database parameter passed with the verify_retl script varies depending on the type of database to which RETL is configured. See the RETL 11.2.2 Programmer's Guide for the specific parameters permitted in this script.

Extract RETL transformation files

The AIP RETL transformation files need to be extracted into the same directory as the RMS RETL transformation files; this will be known as RMSRETL_HOME. The RMS RETL transformation files should be located in INSTALL_DIR/rmsetl/rfx from the RMS 10.1.11 database install.

1. Log into the UNIX server as the rfx (or retek) user.

2. Copy the aip11_transformations.zip file to the RMSRETL_HOME directory and unzip. This will extract the AIP RETL transformation files into the RMSRETL_HOME/rfx/schema and RMSRETL_HOME/rfx/src directories.

Extract AIP integration files

The integration files contain the necessary RETL flow and schema files that describe the integration process. The Integration files must be extracted on the same server as RETL; it is recommended that RETL and the integration files reside on the database server. Note that RETL may save very large data extracts to the file system depending on the quantity of data in the database. In addition to the integration files, several batch shell scripts are required for transferring data between WIP/DM. These batch shell scripts are contained within the AIP-11.4-online-dbserver.zip file; this file should be copied to the same directory where the AIP integration files are extracted. Either the rfx UNIX user or retek UNIX user can be used for running the integration/DB scripts.

1. Log into the UNIX server as the rfx (or retek) user and determine where the AIP integration files will be installed. There should be a minimum of 4 MB disk space available for the integration files.

2. Copy the AIP-11.4-online-integration.zip file from the CD/Online directory to a newly created staging directory.

3. Change directories to the staging directory and extract AIP-11.4-online-integration.zip (this will extract multiple files and directories under a parent AIPOnlineIntegration114/ directory).

4. Copy the AIP-11.4-online-dbserver.zip file from the CD/dbserverunix directory into the same staging directory from step 2 above.

5. Change directories to the staging directory and extract AIP-11.4-online-dbserver.zip (this will extract multiple files and directories under a parent AIPOnlineDBServer114/ directory).

Environment configuration

Also located under the newly extracted AIPOnlineIntegration114/ directory are three configuration files that will need modifying:

AIPOnlineIntegration114/

config.xml   *RETL configuration file*

cron_import.sh   *Script to be run by scheduler to perform data import*

cron_export.sh   *Script to be run byscheduler to perform data export*

Configure config.xml

This configuration file contains the database connect information for RETL for both import and export. See RETL documentation for detailed descriptions of element definitions. Essentially, the 'oraread' section describes the database for the export and 'orawrite' for the import; both would normally be the same. Databases can be local or remote, but if they are remote they must be reachable by normal means (i.e. should be an entry in tnsnames and reachable by SQLPlus).

The Oracle export "arraysize" needs to be set dynamically in the config.xml file depending on the server's capabilities. The "arraysize" is currently set to 2000. Setting the value too high can cause an out of memory error. The value can be set up to 10,000 to maximize performance based on server capability. Since having the buffer set too high may cause memory errors and having it set too low will impact performance, it should be set based on the customer's specific setup.

Edit cron_export.sh and cron_import.sh

All editable properties are stored in the top section of these scripts, before the 'END CONFIGURATION SECTION' comment. The parameters to be set should be explanatory. Points to note are:

- The source call to load the profile is to setup RFX_HOME and appropriate database environment variables to enable programs to function correctly (for instance; setting ORACLE_HOME and paths so that sqlldr will function)

- The location of 'integration_base' is the path to the integration directory extracted earlier (that these shell scripts reside in)

- The location of 'integration_db' is the path to the integration database directory extracted earlier (that the batch shell scripts reside in)

- The import process performs an FTP to fetch the compressed data files from the batch server. There is a basic form of retrying if the FTP fails to find the files (because they are not ready yet) and the number of retries and the timeout are configurable

    Note: A batch scheduler should be set up to run cron_export.sh and/or cron_import.sh.

Chapter 7 – AIP batch installation

Installation overview

The following is an overview of the steps involved in the installation of all the software components required for a typical AIP product installation on the RPAS / Batch side. The subsequent sections go into deeper detail for each of the following:

1. Verify RPAS Client and Server zip file needed for installation

2. Install Acumate and the RPAS 11.2 server and client software

3. Start the RPAS DomainDaemon

4. Verify AIP zip file needed for installation

5. Install AIP Solution files

6. Configure the AIP solution using RPAS configuration tools

7. Replace hierarchy files with customer data

8. Build the AIP family of Domains

9. Configure the RPAS Client to use the domain

Steps 1, 2, 3 and 7 overlap with the installation instructions of other Retek Applications. After the above steps are completed, the RPAS domains will be ready for loading measure data.

Detailed installation instructions

Installation notes

For the purposes of this document, '/' will be used to delineate directories and files in paths. Users in a Windows Command Prompt environment will need to either use '\' as the delineation character or use double quotes around paths.

    Note: Paths on Windows are *not* case-sensitive. On UNIX, paths *are* case-sensitive.

Step 1: Verify RPAS client and server zip file needed for installation

The RPAS Client and Server software are provided to you in a tar'd and compress'd format. Prior to beginning this process you must have downloaded:

```
RPAS-11.2.<OS>.tar.Z
```

where <OS> is one of "hpux", "sun" or "aix". You must have also obtained a proper license key from Retek for the use of this software.

Step 2: Install Acumate and the RPAS server and client software

This step will install the database-access software, Acumate, and the RPAS software for both client and server sides. All steps are required for a successful installation.

Note: The previous versions of AIP (version 11.1, 11.2 and 11.3 GA) included instructions to install Acumate. The Acumate software has not been changed between AIP 11.1 GA and AIP 11.4 GA. Therefore, if the previous installation of Acumate is accessible, it may be used again without reinstallation. Keep in mind that Acumate must be installed on every machine where the RPAS and AIP install will be located.

Step 2.1

Please refer to the Retek Predictive Application Server 11.2 Installation Guide for instructions on installing Acumate on the UNIX server (Ch. 3), installing the RPAS software on the UNIX server (Ch. 4) and on a workstation (Ch. 5). During these installation steps, a directory will be created to store the RPAS software. This directory will be referred to later in this document as `$RPAS_HOME`.

Step 2.2

After completing the RPAS software installation, edit the .profile for the login that will be used to create the domains (the acusys account, as instructed by the RPAS installation guide) to set up two additional environment variables needed by AIP to interface with RPAS. The `$RPAS_APP_BIN` and `$RPAS_APPLIB` environment variables, which are used by some AIP scripts to locate the AIP binaries and libraries that are stored within the RPAS framework, must be instantiated. To accomplish this, place the following commands in the login profile (e.g., the ".profile" file), after the call to ". `$RPAS_HOME/rpaslogin.ksh`". (See Chapter 5 of RPAS Installation Guide, entitled "**Edit the acusys profile**".) Note, until the user logs out and back in again, the new variables in the .profile will not be activated.

```
RPAS_APP_BIN=$RPAS_HOME/bin

RPAS_APPLIB=$RPAS_HOME/applib

export RPAS_APP_BIN

export RPAS_APPLIB
```

Step 3: Start the RPAS DomainDaemon

The RPAS DomainDaemon process runs on the server. It allows a user to access any domain on the server using the RPAS client installed on a local machine.

Please refer to the Retek Predictive Application Server 11.2 Administrator's Guide, Chapter 2 – Domain Administration for instructions on how to start the DomainDaemon.

Note: You will need to record the port number that is used to start the process. It will be needed to install and configure each RPAS client that is installed.

Step 4: Verify AIP zip files needed for installation

The AIP software is provided to you in ZIP file format. For the AIP RPAS component of this installation, there are two ZIP files required. The first contains the code needed for the AIP domain building.

- `AIP-11.4.rpas-domain.zip`

The second file is required on the AIP RPAS environment and contains files that are to be overlaid into the `$RPAS_HOME` directory.

- `AIP-11.4.overlay.<OS>.zip`

Step 5: Install AIP solution files

This step will install the AIP files on the server side. All steps are required for a successful installation.

Step 5.1: Create AIP_INSTALL

On the server where the domain is to be installed, create a directory to store the AIP installation code. This installation guide will use a directory off the root (`/`) named `aip_install`. Create an environmental variable named `AIP_INSTALL` and set it to the newly created directory. Henceforth we will reference this directory as `$AIP_INSTALL`.

- mkdir /aip_install

- AIP_INSTALL=/aip_install

- export AIP_ INSTALL

Step 5.2: Unpack Domain solution files

Copy the `AIP-11.4.rpas-domain.zip` file into `$AIP_INSTALL`, and unpack it using the following commands:

- cd $AIP_INSTALL

- unzip AIP-11.4.rpas-domain.zip

With the above commands, the following files will be extracted from the `AIP-11.4.rpas-domain.zip` file directly into $AIP_INSTALL:

```
configuration.tar.Z
domain.build.tar.Z
input.tar.Z
```

Each of the three compressed archives listed above serves a specific purpose for building the AIP domains and must be expanded before beginning the domain build process. Expand each of these files in the $AIP_INSTALL directory by using the following commands:

- `cd $AIP_INSTALL`

- `uncompress -c configuration.tar.Z | tar -xvf -`

- `uncompress -c domain.build.tar.Z | tar -xvf -`

- `uncompress -c input.tar.Z | tar -xvf -`

It is now acceptable to remove the archive files:

- `rm *.tar.Z`

The $AIP_INSTALL directory should now contain the following subdirectories:

```
configuration
domain_build
input
```

The contents of each install directory will be visited later in this chapter for configuration purposes.

Step 5.3: Unpack AIP RPAS overlay files

Copy the `AIP-11.4.overlay.<OS>.zip` file into `$RPAS_HOME`, and unpack it using the following commands. Substitute `<OS>` with aix, sun or hpux, depending on your Operating System.

- cp AIP-11.4.overlay.<OS>.zip $RPAS_HOME

- cd $RPAS_HOME

- unzip –a AIP-11.4.overlay.<OS>.zip

This will extract binaries, scripts, configuration text files, and other utilities, into the `$RPAS_HOME/bin` directory. This command will also extract libraries into the `$RPAS_HOME/applib` directory. Make sure to use the –a flag with the unzip utility. Once you have unpacked, change the permissions of the contents of the AIP overlay files to be readable and executable by the 'group' and 'world' UNIX users (chmod 7**55**), and readable, writeable and executable by the 'owner' user (chmod **7**55).

- cd $RPAS_HOME

- chmod –R 755 *

    Note: On the AIX operating system, the files in RPAS_HOME/applib should *not* be world-readable as the OS will try to cache libraries in a way that corrupts the AIP system. To turn off the read permissions on the world/other category, issue the command: '`chmod o-r $RPAS_HOME/applib/*`'.

Step 6: Configure AIP domains with RPAS Configuration Tools

    Note: This section requires that the RPAS Configuration Tools are installed and working properly on your Windows workstation. For more information on installation and troubleshooting of the RPAS Configuration Tools, see the RPAS installation guide.

AIP is packaged with a default configuration that all implementations should use as a starting point for configuration. This default configuration is stored in various files and directories in the $AIP_INSTALL/configuration directory that was unpacked in Step 5 above. Because the RPAS Configuration Tools must run on a Windows workstation, the $AIP_INSTALL/configuration directory must be accessible by your Windows PC on a local or network drive. If necessary, the $AIP_INSTALL/configuration directory may be copied to a local drive and then copied back to the $AIP_INSTALL directory once configuration is complete.

- Launch the RPAS Configuration Tools by double-clicking on the RpasConfigTools.exe file in your RPAS Tools installation directory.

- The AIP 11.4 solution consists of two separate domain structures: AIP and WIP. Any configuration changes to common elements such as hierarchies must be made identical in each configuration location.

- Select Open … from the File menu, and navigate to the configuration directory on your local or network drive

- Navigate into the configuration/AIP directory and select the AIP.xml file to open the AIP domain configuration.

- Perform any configuration tasks that are necessary, Save and then Close the AIP configuration.

- Repeat for WIP by opening the configuration/WIP/WIP.xml configuration file.

- Once you are satisfied with the configuration, copy the configuration directory back to $AIP_INSTALL before proceeding.

    Note: The AIP.xml and WIP.xml files include the <attribute name="GlobalDomain"> tag. The value of this flag must be true for global domains. Note that this tag in the WIP.xml must always be false. This tag may be true or false for AIP domains.

Step 7: Replace input files with hierarchy data

The $AIP_INSTALL/input directory contains the initial hierarchy data files that will be loaded into AIP and WIP domains during the domain build. **Initial hierarchies are required for a successful build.**

These sample hierarchy data files contain positions along each dimension in each hierarchy and are suitable for use in creating new RPAS domains. These hierarchy data files are described in the following table.

Hierarchy Data File	Description
bcsk.dat	Baseline/Contingency Stock
dsp.dat	Destination Stocking Point
hdgr.dat	Delivery Group
hnvp.dat	Number of Vehicles and Preference Level
hseq.dat	Sequence Number
hsht.dat	Shift
hslt.dat	Slot
hspl.dat	Supplier
intv.dat	Interval Hierarchy
loc.dat	Location
ntwg.dat	Network Group
odm.dat	Order Multiple

Hierarchy Data File	Description
`oltc.dat`	Order Lead Time
`ordg.dat`	Order Group
`pqy.dat`	Pack Quantity
`proc.dat`	Profile Order Cycle
`prod.dat`	Product
`prof.dat`	Profile
`rms.dat`	RMS sku
`ssp.dat`	Source Stocking Point
`whse.dat`	Warehouse

Replace the initial hierarchy data files in $AIP_INSTALL/input with hierarchy data for your business. If you do not yet have hierarchy data in RPAS loadable format, you may use the data provided in $AIP_INSTALL/input for the initial domain build. Afterwards, you must reconfigure your domain using the reconfigGlobalDomainPartitions RPAS utility. Read the RPAS 11.2 Administration Guide for details.

If you will be loading a calendar hierarchy from a load file, instead of using the RPAS calendar generator, also copy the clnd.dat file here.

Step 8: Build the AIP family of domains

Step 8.1: Prepare Domain Configuration and Hierarchy Data for Domains

This version of AIP allows for two kinds of RPAS domains. The first is an RPAS simple domain, where all the hierarchy and measure data is contained in one set of databases. The second is an RPAS global domain, where the hierarchy and measure data are partitioned across several sets of databases. In a global domain set, there is one master domain and one or more local domains (or subdomains). This version of AIP supports RPAS simple domains for AIP domains and WIP domains. However, only AIP domains can be constructed as RPAS global domains. WIP is currently only available as an RPAS simple domain.

The $AIP_INSTALL/domain_build directory contains files necessary to instruct the build programs how and where to build domains, as well as partitioning information for global domains. Within $AIP_INSTALL/domain_build, there are two directories, AIP and WIP, corresponding to the build instructions for each respective domain set. Within the AIP and WIP directories is a config directory which contains files that must be edited at the time of installation.

The config directory within $AIP_INSTALL/domain_build/AIP and $AIP_INSTALL/domain_build/WIP must contain **exactly two** files.

- **calendar.xml** – The calendar.xml file instructs the RPAS calendar generator to generate the calendar hierarchy. If you choose to manually load a calendar hierarchy, this file should be replaced with a 0-byte file. Follow these steps to replace the `calendar.xml` file only if a `clnd.dat` file will be loaded in the $AIP_INSTALL/input directory:

      cd $AIP_INSTALL/domain_build/[AIP|WIP]/config

      rm calendar.xml

      touch calendar.xml

- **globaldomainconfig.xml OR simpledomainconfig.cfg** – One of these two files must exist, depending upon the desired domain configuration. By default, AIP contains a globaldomainconfig.xml. WIP may only contain simpledomainconfig.cfg, because WIP is designed for simple domains only. The config directory must only contain ONE of these two files to avoid build errors. The next section will discuss best practices for modifying these files.

Step 8.2: Edit globaldomainconfig.xml (global domains only)

Inside each globaldomainconfig.xml file are XML tags read by the RPAS domain build programs that specify the name, location, and partitioning information of each domain in a global domain structure.

The default settings provided with this installation specify a global domain set with one master domain and two local domains. The default partitioning dimension is subclass (SCLS) and the default partitioning dimensions are set to match the subclasses contained in the sample data files provided in the `input.tar.Z` file. All of these can be customized according to the needs of the application.

The default globaldomainconfig.xml for AIP is similar to this example:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<rpas>
    <globaldomain>
        <path>DOMAIN_PATH</path>
        <partitiondim>SCLS</partitiondim>
        <subdomain>
            <subpath>DOMAIN_PATH/ldom0</subpath>
<subpositions>1414_1000_1000,25_110_1204,25_116_438,25_116_439,25_116_440,25_11
6_442,25_119_692,3_564_984,43_813_1458,43_813_516,44_602_1212,44_602_1214,44_60
2_1215,48_264_683,48_906_803</subpositions>
        </subdomain>
        <subdomain>
            <subpath>DOMAIN_PATH/ldom1</subpath>

<subpositions>48_906_804,48_906_805,5_503_1401,5_503_1503,5_503_1504,5_530_246,
5_531_658,5_699_817,66_213_482,66_214_553,66_223_394,66_224_1117,71_710_112,71_
710_113,71_710_1497,7_562_1108</subpositions>
        </subdomain>
    </globaldomain>
</rpas>
```

If the desired global domain solution for the AIP module contains more than two local domains, copy the `<subdomain>` … `</subdomain>` tag-set as many times as needed, then customize each new copy of the tag-set.

    📖   **Tip:** Each sub-domain (*i.e.* local domain) must contain at least one position along the partitioning dimension (e.g., SCLS) in the data set, namely, prod.dat. In addition, all the positions along the partitioning dimension in the data set (prod.dat), must be listed in one of the local domains. Otherwise the domain creation will fail. An error will be reported in the build log but the domain build process will not trap it. See below on how to check the domain build log.

The `<path>` … `</path>` and `<subpath>` … `</subpath>` tags in the globaldomainconfig.xml files must be modified as they specify the *absolute path* to each component of each global domain. This xml file currently contains DOMAINPATH as a placeholder, which you must replace with the actual domain path components.

    📖   **Tip:** If the globaldomainconfig.xml file refers to domain directories that already exist, the domain build process below will *not* overwrite these domains. Rather, they will be skipped. It is essential that the <path> and <subpath> tags contain paths that do NOT exist.

    📖   **Example:** <path>/u01/acusys/rpas/Domains/aip</path>
<subpath>/u01/acusys/rpas/Domains/aip/ldom0</subpath>
<subpath>/u01/acusys/rpas/Domains/aip/ldom1</subpath>
where /u01/acusys/rpas/Domains/aip does NOT currently exist.

Step 8.3: Edit simpledomainconfig.cfg

The simpledomainconfig.cfg file is used by the RPAS build programs to specify the location and name of the simple domain directory. The default simpledomainconfig.cfg file looks similar to this:

```
domain_location=/vol.nas/u13/argos/nate_sandbox/test_build2/domains
domain_name=WIP000
```

Edit the "domain_location" field to specify the absolute path to the directory that will contain the newly built simple domain.

Edit the "domain_name" field to specify the name of the new simple domain directory.

Step 8.4: Run domain build script

Once the various configuration files and hierarchy files are customized, invoke the `build_aip_domains.ksh` script to begin the AIP domain build process. This script is located in the `$RPAS_HOME/bin` directory, which is also `$RPAS_APP_BIN`. This directory should be in the PATH of the UNIX account running the batch.

The `build_aip_domains.ksh` requires several command line options:

Option	Option Description	Argument Value
-m	Module	'AIP' or 'WIP' to specify which module to build
-d	Domain source	$AIP_INSTALL/domain_build
-c	Configuration	$AIP_INSTALL/configuration
-i	Input	$AIP_INSTALL/input
-l	Log file	< any path and filename to an output log file >

Example execution command:

- ```
  build_aip_domains.ksh -m AIP -d $AIP_INSTALL/domain_build -c
  $AIP_INSTALL/configuration -i $AIP_INSTALL/input -l
  $AIP_INSTALL/aip_build.log
  ```

If the shell reports that this script is not found, ensure that `$RPAS_HOME/bin` is in the PATH and try again.

The build_aip_domains.ksh script will have to be executed twice in order to build both the AIP and WIP domain sets.

The build script internally calls the appropriate RPAS installation programs to:

1. Create domains in the paths/locations specified by the configuration files. If domains already exist in the specified location, they will not be overwritten.

2. All measures, templates and rules that were created using the RPAS configuration tools will be registered in the domain as well.

3. For global domains, the partitioning mapping will be set up according to the partitioning information specified in the globaldomainconfig.xml file.

4. The domain build will check itself for errors after the installation programs are complete. If no errors are found, a post-domain procedure will run to prepare the domains for first use. In the event that errors occurred in the domain build, the user will be prompted and should check the log files to determine the source of the error.

   The log file may be scanned for errors by using any text editor or UNIX text search commands. If an error occurs most likely it will contain the word 'error', so the following command might be useful for detecting if there are any build errors:

   ```
   grep -i error $AIP_INSTALL/build_logs/*.log
   ```

Other keywords to search for are "<E", "not found", and "exception".

    Note: When viewing or searching through the build log, please consult the Release Notes (`aip-114-rn.pdf`) for this product. The Release Notes contain all known issues associated with this release. The following Acumate warnings are normal and can be ignored:

```
WARNING: DATABASE_NOT_OPEN
WARNING: DATABASE_NOT_FOUND
WARNING: CANNOT_DELETE
```

    Note: Once the domain build has successfully completed, you must preserve the $AIP_INSTALL directory. The domain configuration files are automatically copied inside the domain after a successful build. However, the $AIP_INSTALL directory will be used for AIP 11.4 patches.

Step 8.5: Moving RPAS domains (optional)

After the AIP and WIP domains are created, you may move them to a different location. However, the following process must be followed:

Simple domains (AIP or WIP):

1. To move or copy an RPAS Simple domain, use the 'cp -r' or 'mv' UNIX utilities. The domain first may be packed using tar or compress or other utility if desired, then copied or moved, and then unpacked after the move/copy operation.

Global domains (AIP only):

RPAS Global domains contain internal pointers that specify the location on disk of the master and sub domains. The master domain must know where the sub domains exist on disk. The sub domains must each know where the master domain exists. For this reason, the following process must be followed to copy or move the domain components in order to update the newly copied/moved domain component directories.

If the sub domain directories are subdirectories of the master domain:

1. Use the RPAS `copyDomain` utility. Read the RPAS 11.2 Administration Guide for details. This utility will update the internal pointers between master and sub domains.

If the sub domain directories are *not* subdirectories of the master domain:

1. Use the 'cp -r' or 'mv' UNIX utilities to move each domain component one at a time to the new desired location.

2. Run the `updateGlobalPointers` AIP utility. It has the following syntax below. Answer the questions it asks for the (potentially) new location of each sub domain.

   ▪ `updateGlobalPointers –d <path to master domain directory>`

Step 8.6: Set the domain path locations between domains

The AIP and WIP domains must know where each other are located on UNIX disk. Once the domains are built, and possibly moved, then the following utility must be run to establish the internal pointers between AIP and WIP domains.

```
set_dompath_arrays.ksh -c <configuration file>
```

The configuration file must be pre-edited to have the following format:

```
AIPG=<path to AIP global domain's master domain, or "-" if none>

AIP=<path to AIP simple domain, or "-" if none>

WIPG=-

WIP=<path to WIP simple domain>
```

Since at this time, the WIP domain must be simple, then the WIPG variable will always be set to "-". Also, an installation of AIP will only have one AIP domain, either global or simple. Therefore, either AIPG or AIP will have value of "-"; both may not be populated with a domain path. For example:

```
AIPG=/files1/domains/AIPglobal

AIP=-

WIPG=-

WIP=/files2/domains/WIPsimple
```

After running `set_dompath_arrays.ksh`, the two domains will have internal arrays containing each other's directory paths.

Step 9: Configure the RPAS client to use the domain

The RPAS client must be configured to point to one of the newly created domains.

See the RPAS Installation Guide, Chapter 6, for instructions on how to attach the domains to the client. The program utilized is EConfigure.exe.

Post installation instructions

The domains are not usable for business application until measure data is loaded into the domains. That task is out of scope for this installation guide. Consult the admin and user guides for information on loading data into the domains and for practical use of the AIP batch domains.

Appendix A – Sample Oracle 9.2.0.x database creation script

Script: crdb1.sql

Execute as: sysdba

Note: Modify file paths and "SID" for your environment. Adjust redo logs, TEMP and UNDO sizes accordingly.

```
spool SID.log

startup nomount pfile=${ORACLE_HOME}/dbs/initSID.ora

create database "SID"

        maxdatafiles 1000

        character set UTF8

    DATAFILE

        '/u00/oradata/SID/system01.dbf' SIZE 500M

          AUTOEXTEND ON NEXT 10M MAXSIZE 2000M

    LOGFILE

      group 1 ('/u00/oradata/SID/redo1a.log') size 1000M,

      group 2 ('/u00/oradata/SID/redo2a.log') size 1000M,

      group 3 ('/u00/oradata/SID/redo3a.log') size 1000M

DEFAULT TEMPORARY TABLESPACE TEMP

        TEMPFILE '/u01/oradata/SID/temp01.dbf' SIZE 5000M

        EXTENT MANAGEMENT LOCAL UNIFORM SIZE 1M

undo tablespace UNDO_TS

        DATAFILE '/u00/oradata/SID/undo_ts01.dbf' SIZE 5000M

;


spool off

exit
```

Script: crdb2.sql

Execute as: sysdba

Note: This script installs the data dictionary views

```
spool crdb2.log


REM # install data dictionary views:
PROMPT Running catalog.sql
@$ORACLE_HOME/rdbms/admin/catalog.sql
PROMPT Running catproc.sql
@$ORACLE_HOME/rdbms/admin/catproc.sql
PROMPT Running catblock.sql
@$ORACLE_HOME/rdbms/admin/catblock.sql
create user oracle identified externally;
grant dba to oracle;


REM * These privs needed for users to run proper grant code when
creating users.
grant select on dba_jobs to public with grant option;
grant select on dba_roles to public with grant option;
grant select on dba_role_privs to public with grant option;
grant execute on dbms_rls to public with grant option;


REM * These privs needed to be granted to all due to 9i security
changes.
grant select_catalog_role to public;
grant execute_catalog_role to public;
grant execute on dbms_lock to public;
grant execute on dbms_rls to public;


REM * query rewrite privilege needed to create function-based
indexes
grant query rewrite to public;


REM * dbms_system is needed for tracing
grant execute on sys.dbms_system to public;


connect system/manager
PROMPT Running pupbld.sql
```

```
@$ORACLE_HOME/sqlplus/admin/pupbld.sql


PROMPT Creating PLAN table owned by SYSTEM
@$ORACLE_HOME/rdbms/admin/utlxplan.sql
PROMPT Creating public synonyn for the plan table
create public synonym PLAN_TABLE for SYSTEM.PLAN_TABLE;


disconnect


exit
```

Script: crdb3.sql

Execute as: sysdba

Note: This script installs java and xml components

```
spool crdb3.log


REM *  Install XDK and XSU
PROMPT altering system to set _system_trig_enabled to false
ALTER SYSTEM SET "_system_trig_enabled"=FALSE SCOPE=MEMORY;


PROMPT Running initjvm.sql to install Java objects
@$ORACLE_HOME/javavm/install/initjvm.sql


PROMPT Running initxml.sql to install XML and XSU
@$ORACLE_HOME/rdbms/admin/initxml.sql


PROMPT Running xmlja.sql to install NCOMP'ed XML Parser
@$ORACLE_HOME/xdk/admin/xmlja.sql


PROMPT Running catjava.sql to install catalog scripts for Java
@$ORACLE_HOME/rdbms/admin/catjava.sql


PROMPT Creating public synonyms and grants
CREATE PUBLIC SYNONYM XMLQUERY for SYS.DBMS_XMLQUERY;
GRANT EXECUTE ON XMLQUERY TO PUBLIC;


GRANT EXECUTE ON XMLPARSER TO PUBLIC;
GRANT EXECUTE ON XMLDOM TO PUBLIC;
```

```
CREATE PUBLIC SYNONYM XSLPROCESSOR for SYS.XSLPROCESSOR;

GRANT EXECUTE ON XSLPROCESSOR TO PUBLIC;


PROMPT Revaliding invalid objects

@$ORACLE_HOME/rdbms/admin/utlrp.sql


spool off
```

Sample Database init.ora

```
##################################################################
###########
# Oracle 9.2.0.x Parameter file
#
# NOTES:
# 1.  Change all file directory paths as necessary for your
environment.
# 2.  Search and replace the string "SID" with your database name.
Do not change SID in $ORACLE_SID.
# 3.  Search and replace "SID" in SID_01 and SID_02 with your
database name.
# 4.  Modify parameters as necessary for your development, test,
#     and production environments.
#
# -------------------------------------------------------------------
------
# MAINTENANCE LOG
#
# Date     By          Parameter           Old/New        Notes
# +------+ +---------+ +----------------+ +-------------+ +--------
-----+
# 07/01/04 Retek      NA                   NA
creation
#
```

```
################################################################
###########


# ----------------------------------------------------------------------
-------------
# The following SGA parameters are CRITICAL to the performance of
the
# database. The following settings are based off 1GB of allotted
memory.
# Adjust these parameters for your environment.
# The SGA is composed of:
#    db_cache_size, log_buffer,java_pool_size, large_pool_size,
shared_pool_size
# ----------------------------------------------------------------------
-------------
db_cache_size               = 256M
java_pool_size              = 24M                     #150M or
higher for applying oracle patchsets; 70M if using RMAN
log_buffer                  = 10485760
shared_pool_size            = 150M


# ----------------------------------------------------------------------
--------------
# The following parameters do not affect SGA size and should be
adjusted for
# your environment.
# ----------------------------------------------------------------------
--------------
background_dump_dest         =
$ORACLE_BASE/admin/$ORACLE_SID/bdump
compatible                  = 9.2.0
control_files               = (/u01/oradata/SID/SID_01.ctl
                                ,/u01/oradata/SID/SID_02.ctl)
core_dump_dest              =
$ORACLE_BASE/admin/$ORACLE_SID/cdump
db_block_size               = 8192                # default is
2k; adjust before db creation, cannot change after db is created
db_files                    = 999                # default is
200; set to max number of database files
db_file_multiblock_read_count = 16                        # (max io
size)/(block size); adjust as needed; platform specific
```

```
db_name                       = SID

db_writer_processes           = 4

job_queue_processes           = 9              # Retek
required; number of cpu's +1

local_listener                =
"(ADDRESS=(PROTOCOL=TCP)(HOST=localhost)(PORT=1521))"

nls_date_format               = DD-MON-RR      # Retek
required

nls_calendar                  = GREGORIAN

nls_language                  = AMERICAN       # default

nls_territory                 = AMERICA        # default

open_cursors                  = 900           # Retek
required (minimum=900); default is 50

optimizer_features_enable     = 9.2.0

optimizer_mode                = CHOOSE         # Retek
required

processes                     = 500           # max number
of os processes that can connect to oracle

query_rewrite_enabled         = TRUE          # fct based
indexes

sessions                      = 1500          #
~(3*processes);

session_cached_cursors        = 100           # default is
0

undo_management               = AUTO

undo_tablespace               = undo_ts       # match with
tablespace name used in your creation script

undo_retention                = 1800          # currently
set for 30 minutes; set to avg length of transactions in secs

user_dump_dest                =
$ORACLE_BASE/admin/$ORACLE_SID/udump

utl_file_dir                  = $ORACLE_BASE/utl_file


# ***  Archive Logging, set if needed  ***

#log_archive_dest             =
'location=$ORACLE_BASE/admin/$ORACLE_SID/arch/'

#log_archive_format           = $ORACLE_SIDarch%s.log

#log_archive_min_succeed_dest = 1

#log_archive_start            = TRUE

#log_checkpoint_interval      = 9999999999
```

Sample tablespace creation scripts

The following tablespaces are required. Retek recommends the use of locally managed tablespaces with manual segment space management. These tablespaces are not sized for a production environment!

Script: create_aip_tablespaces.sql

Execute as: sysdba

Note: Modify file paths and "ORACLE_SID" for your environment.

```
CREATE TABLESPACE RETEK_INDEX DATAFILE

    '/u01/oradata/$ORACLE_SID/retek_index01.dbf'  SIZE 500M

    AUTOEXTEND ON NEXT 100M MAXSIZE 2000M

    EXTENT MANAGEMENT LOCAL

    SEGMENT SPACE MANAGEMENT MANUAL

;

CREATE TABLESPACE RETEK_DATA DATAFILE

    '/u01/oradata/$ORACLE_SID/retek_data01.dbf'  SIZE 500M

    AUTOEXTEND ON NEXT 100M MAXSIZE 2000M

    EXTENT MANAGEMENT LOCAL

    SEGMENT SPACE MANAGEMENT MANUAL

;
```