

TIBCO Foresight® Transaction Insight®

Installation of Portal Applications

*Software Release 5.2
September 2017*

Two-Second Advantage®



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1 Introduction

Intended Audience

This document is intended for the technical team that is installing and configuring TIBCO Foresight® Transaction Insight® and associated TI Portal applications.

To use this guide, you should have:

- Basic knowledge of EDI
- Basic knowledge of Windows system administration
- Basic knowledge of Unix administration if you are installing parts on Unix
- Basic knowledge of databases or access to a database administrator.

Related documents:

- To learn about functions performed when logged in to the portal as an administrator, see **TIB_transactioninsight_ *version*_commonadmin.pdf**.
- If you use TIBCO Foresight® Operational Monitor, see **TIB_operationalmonitor_ *version*_adminguide.pdf**.
- If you use TIBCO Foresight® Archive and Retrieval System, see **TIB_fsp_archive_ *version*_archiveadmin.pdf**.

System Requirements

See **TIB_transactioninsight_<n.n>_readme.txt** for information about system requirements.

TIBCO Documentation

All TIBCO documentation is available on the TIBCO Documentation site, which can be found here:

<https://docs.tibco.com/>

Validation Requirements

EDI imported into Transaction Insight® needs certain information in the validation detail file. The following settings will create a detail file that is suitable for importing.

This is the set of APF records that must be set to 1:

STRT	END	ENDS	DTL	EMSG	EDAT	ESEG
VER	SVRTY	ETYPE	SVRTS	ETYPS	GEN	ZREC
STRUS	STRUE	SVALU	UID			

See **Data_Types_and_TI.pdf** for requirements for the various data types handled by TI. This chart just shows general requirements.

	\$Dir.ini/fsdir.ini	APF
Transaction Insight Standard Edition	ShowVersion=1	APF records listed above must be set to 1. If using TIMatcher, Custom User ID, or ScenarioDetector: IDENT=1
Transaction Insight Healthcare Edition (Imports HIPAA data)	ShowVersion=1	APF records listed above must be set to 1. If using TIMatcher, Custom User ID, or ScenarioDetector: IDENT=1
Foresight® Archive and Retrieval System	CreateDocumentID=1	APF records listed above must be set to 1. IDENT=1
Foresight® Operational Monitor	CreateDocumentID=1	

Make these changes to TIBCO Foresight® Instream®:

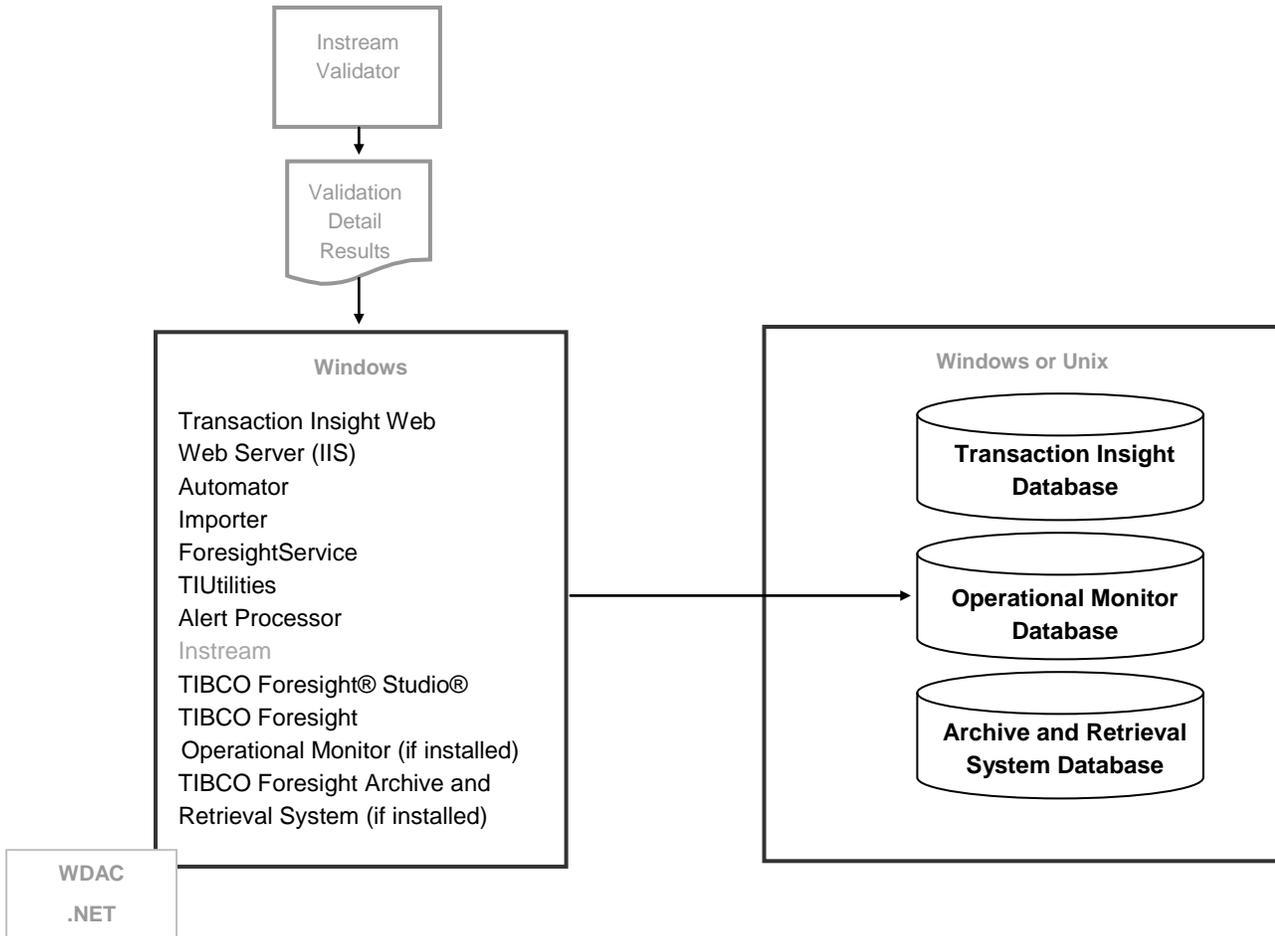
- Set up partner automation or add a specific guideline to the Instream® properties in the workflows.
- Set up your validation APF and \$dir.ini or fsdir.ini to meet the requirements above.

Sample Implementations

Since portal applications are highly configurable, your implementation can be different from these.

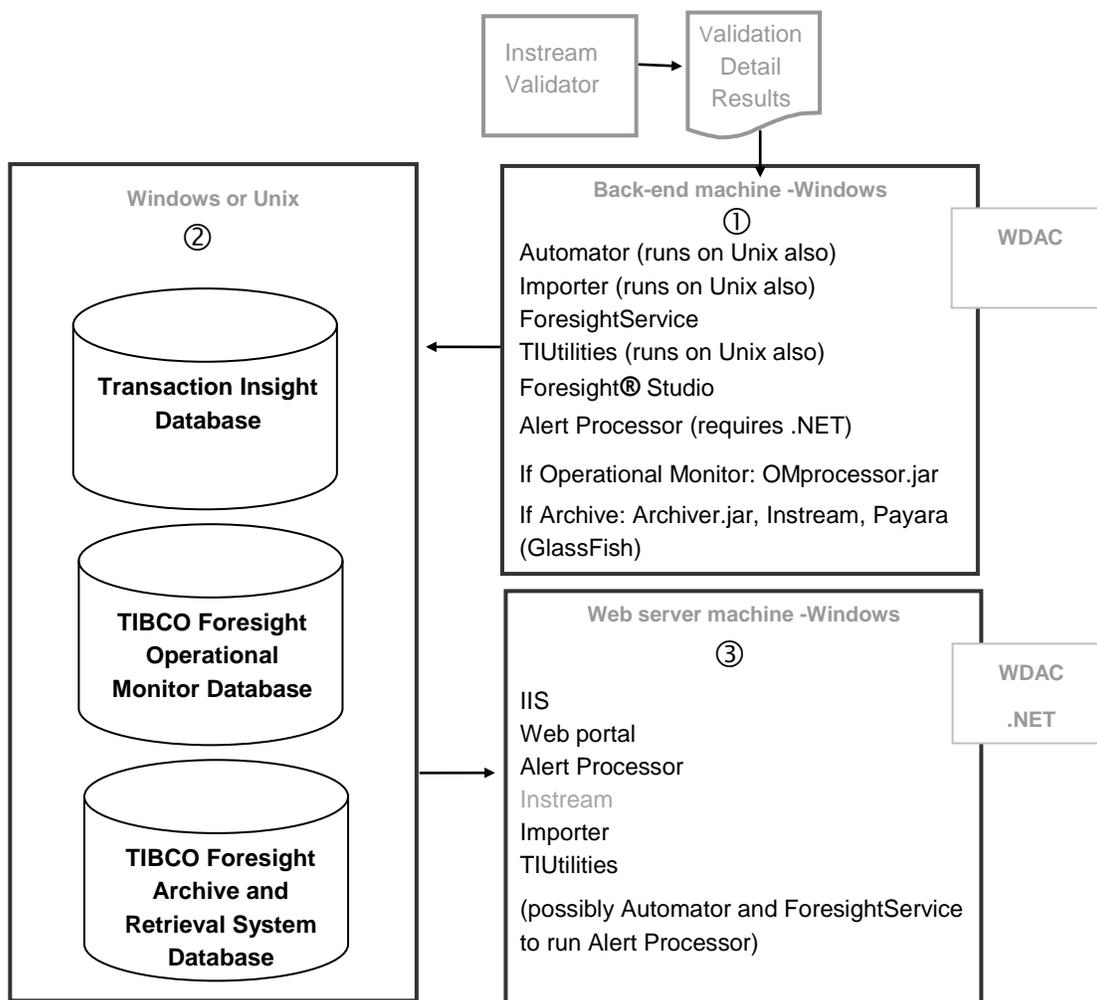
Example Two-Machine Implementation

For development or QA, you might set up a two-machine system like the one below. One machine is a database server and the other contains all portal and back end components. The gray areas are necessary but are not part of the Transaction Insight installation program.



Example Three-Machine Implementation

You should always set up the databases on their own machine. In this example there are three machines: a database server, a web server, and a "back-end" machine.



The gray areas above are necessary but are not part of the Transaction Insight installation program.

- ① ForesightService starts Automator when the computer is turned on. Automator lets you run workflows containing programs such as Importer and TIUtilities.
- ② Databases are on your SQL Server or Oracle database machine.
- ③ The portal is a website that shows reports about what is in the databases.

Importer is needed on the web machine for Transaction Insight revalidation.

You can run Alert Processor on this machine also, since it requires .NET. As an alternative, you can run Alert Processor on machine ① if you install .NET on it. See AlertProcessor on page 61 for more setup information.

Instream is needed for revalidation after a document is corrected on a web form.

Overview of Portal-Related Programs

Application Name/ Executable file name/ Configuration file	Used by ... T=TI A=Archive O=OpMon	Default Location	Purpose
AlertProcessor AlertProcessor.exe AlertProcessor.exe.config	T	TI's \version\Environments\ <i>envname</i> \bin directory	Proactively monitors the system for events and sends e-mail when an event occurs. See AlertProcessor on page 61.
Automator ForesightAutomator.exe	A, O, T (run workflows)	ForesightAutomator's \version\bin directory	Runs a workflow. Example: moves EDI files to an input directory and then runs validation. Creates Foresight Operational Monitor PGN files. See Automator on page 58 and Automator.pdf .
ForesightService ForesightService.exe FSService.ini	A, O, T	ForesightService's \version\bin directory	Runs Automator as a service so that it can automatically start on system startup. See ForesightService on page 63 and ForesightService.pdf .
Importer Importer.exe Importer.ini	A, T	TI's \version\Environments\ <i>envname</i> \bin directory	Parses a validation detail results file and populates the Transaction Insight database with its values, errors, and statistics. See Importer on page 64 and Importer.pdf .
TIMatcher TIMatcher.jar	T	TI's \version\Environments\ <i>envname</i> \java directory	Lists information about related documents at the bottom of the Document Summary page, including a link to each document. See TIMatcher.pdf .
TIWeb No executable filename Web.config	A, O, T	TI's \version\Environments\ <i>envname</i> \TIWeb directory	Portal user interface. It displays web pages, queries and updates the portal databases based on user action. See TIWeb on page 65.

Application Name/ Executable file name/ Configuration file	Used by ... T=TI A=Archive O=OpMon	Default Location	Purpose
TIUtilities TIUtilities.exe TIUtilities.ini	T	TI's \version\Environments\ envname\bin directory	Processes each transmission after it is populated into the database. The processes it can carry out are: Populating summarized statistical tables. Creating new tasks. Deleting expired data. Generating filter values and automatically assigning them to partners. See TIUtilities on page 66 and TIUtilities.pdf .
Instream HVInStream.exe DocSplitter.exe (and other Instream programs) \$dir.ini or fsdir.ini	A, O, T	Instream's bin directory	HVInStream.exe: Validates data, creates detail results file for importing into Transaction Insight, Foresight Operational Monitor, and Foresight Archive and Retrieval System. Revalidates data that has been corrected in Transaction Insight. DocSplitter.exe: Splits an application document from a file for Foresight Archive and Retrieval System transmission view and form view.
TIBCO Foresight® Studio® Foresight.Studio.IDE.exe Foresight.Studio.IDE.exe.config	A, O, T (workflows)	Foresight® Studio®'s \version directory	Creates Automator workflows. See ForesightStudio.pdf
Archive Archiver.jar archiver.properties	A	Archive's \version\Java	Puts files into the Foresight Archive and Retrieval System repository and information about them in the Foresight Archive and Retrieval System database. See TIB_fsp_archive_<version>_archiveadmin.pdf .
OperationalMonitor OMprocessor.jar	O	OperationalMonitor's \version\java directory	Puts PGN files information from Automator into the Foresight Operational Monitor database. See TIB_operationalmonitor_<n.n>_adminguide.pdf .

2 Preparation before Installing

Staff Skills Needed

Before and during installation, you will need access to:

- an EDI business analyst
- an experienced database administrator
- a network administrator with administrative privileges on all machines.

Ensuring a Smooth Installation

For everyone

- Read through the instructions well ahead of time and follow them on upgrade day.
- Do not edit scripts, except as noted in documentation, without checking with a TIBCO Foresight representative first.
- Have enough temporary space in the database. How much will vary from client to client. Discuss this with TIBCO Foresight.
- Seek advice from TIBCO Foresight if you have any concerns.
- Talk with your TIBCO Foresight account executive about purchasing upgrade services or after-hours assistance.
- Keep all logs associated with installations and upgrades.
- Keep notes of all configurations.

For upgrades

- Never skip recommended backups.
- Upgrade a test system first.
- Check your upgrade plan and schedule with TIBCO Foresight a week ahead of time. Have TIBCO Foresight check for custom procedures that your company might have, and see if they need to be updated and/or run for the new release. Confirm the order in which your custom scripts should be run.
- Identify the best time to upgrade, since your current installation will be unavailable to its users during the upgrade. This will include considerations like:
 - Which day or night has the lightest processing load?
 - When are your portal applications needed for reports and other time-sensitive business needs?
 - When can the appropriate people be available?
 - How long can you be out of production?
- Notify your users and management well ahead of time.
- If possible, use the same environment name, portal URL, and database as the previous version. If starting with a new database, back up the old one and use the same name if possible.

Planning Databases

The Transaction Insight 5.0.0 and later database utilizes partitioning. This is a change from older versions of Transaction Insight. Partitioning allows you to manage the size of your database more consistently and should improve portal performance in most environments.

Although you can upgrade from Transaction Insight 5.0.0 and later to newer versions, there is no upgrade path from previous versions to Transaction Insight 5.0.0 and later. You must use a new environment with a new database.

For example:

4.2.0 → 5.2.0 = no upgrade available

5.1.0 → 5.2.0 = upgrade available

Transaction Insight 5.2.0 includes a recommended partitioning schema. Refer to **TIB_transactioninsight_5.2.0_DB.pdf**.

Who Creates Databases

SQL Server

You have two choices:

- The **database administrator** can use the scripts as described in Appendix G: Database Scripts on page 93.
- The **person running the installation program** can create and configure the database when running the front-end installation.

In this case, before installation day, the database administrator should instruct the person who will run the installation program:

- What database name(s) to use and on what server(s).
- Whether to check the “Create new database” option if given a choice during installation.

SQL Server or Oracle

The installation provides scripts to create and configure the databases. See Appendix G: Database Scripts on page 93 for details on running scripts created by the installation program.

Oracle Instant Client

This section describes how to set up Oracle Instant Client and Oracle Data Provider for .NET for use with Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor.

If you are using an Oracle database, you will need the Oracle Instant Client driver on all machines that access the Oracle database. This does not include machines used by those who simply log in to the portal. Any servers hosting the web portal (using IIS and .NET) will also require the Oracle Data Provider for .NET (ODP.NET).

IMPORTANT INFORMATION FOR IBM AIX PLATFORMS: Oracle Instant Client specifies additional OS requirements for IBM AIX platforms. Review the information at https://docs.oracle.com/database/121/AXCLI/pre_install.htm#AXCLI1281 before proceeding with the installation.

Oracle Instant Client Compatibility

Transaction Insight supports Oracle Instant Client version 12.1, where 12 is the "major database release number" and 1 is the "database maintenance release number." Transaction Insight is **NOT** compatible with any other combination of "major" and "maintenance" release numbers. You should, however, use the latest available version that begins with 12.1.

At this writing, the latest available version of the 12.1 Oracle Instant Client is 12.1.0.2.0. The following information and examples use this version but apply to any release that begins with 12.1.

Download Oracle Instant Client

There are two available packages of the Oracle Instant Client: Basic and Basic Lite. The Basic Lite package is smaller but includes only English error messages and Unicode, ASCII, and Western European character set support. Either package is supported but we recommend the Basic Lite package.

Download the appropriate package for your operating system from www.oracle.com:

Platform	Package
Microsoft Windows (x64)	instantclient-basiclite-windows.x64-12.1.0.2.0.zip
AIX5L (64-bit)	instantclient-basiclite-aix.ppc64-12.1.0.2.0.zip

The package contains a single directory named "instantclient_12_1". Extract this package into a location of your choice. We will use "C:\oracle" on Windows and "/home/oracle" on UNIX-like platforms in our examples.

Install and Configure Oracle Instant Client

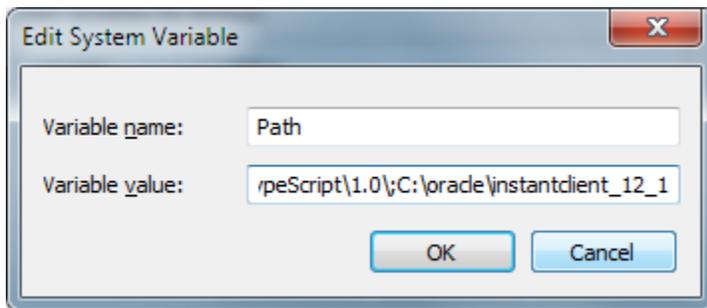
Once the package is extracted, it needs to be referenced in one or more environment variables and some files need to be copied to directories within the Transaction Insight home.

WINDOWS

This section assumes that Oracle Instant Client package has been extracted into the "C:\oracle" directory, the TIBCO products have been installed into "C:\tibco\<product dir>" and that Payara (GlassFish) has been installed into "C:\payara41". Follow the steps below to configure the Oracle Instant Client for use with Transaction Insight®.

1. Update PATH

Add "C:\oracle\instantclient_12_1" to the system PATH. If you have any other version of the Oracle Client in your PATH, remove it. There should only be one version of the Oracle Client in your system PATH.



2. Copy JDBC files

Copy the file "ojdbc7.jar" from the Instant Client directory into the following locations based on which products are installed.

Product	Location
Foresight Archive and Retrieval System	C:\tibco\Archiver\version\Java\lib C:\payara41\glassfish\lib\endorsed
Foresight Operational Monitor	C:\tibco\OperationalMonitor\version\java\lib
Transaction Insight	C:\tibco\TransactionInsight\version\environment\java\lib

3. Copy runtime files

Copy all of the files from the "C:\oracle\instantclient_12_1\vc12" directory into the parent directory ("C:\oracle\instantclient_12_1"), replacing the existing files.

UNIX

This section assumes that the Oracle Instant Client package has been extracted into the "/home/oracle" directory, the TIBCO products have been installed into "/home/tibco/<product dir>" and that Payara (GlassFish) has been installed into "/home/payara41". Follow the steps below to configure the Oracle Instant Client for use with Transaction Insight.

1. Update shared library path

Add "/home/oracle/instantclient_12_1" to the shared library path (LIBPATH on AIX, LD_LIBRARY_PATH on Linux). You can do this in your login script (e.g., .profile) so that it is in effect all the time or at the top of any script that executes Importer or TIUtilities. This example sets the shared library path for AIX under ksh:

```
export LIBPATH=/home/oracle/instantclient_12_1
```

If you have any other version of the Oracle Client in your shared library, remove it. There should only be one version of the Oracle Client in your shared library path.

2. Copy JDBC files

Copy the file "ojdbc7.jar" from the Instant Client directory into the following locations based on which products are installed.

Product	Location
Foresight Archive and Retrieval System	/home/tibco/Archiver/version/Java/lib /home/payara41/lib/endorsed
Foresight Operational Monitor	/home/tibco/OperationalMonitor/version/Java/lib
Transaction Insight	/home/tibco/TransactionInsight/version/java/lib

3. (Linux only) Create the following links in the Oracle Instant Client home directory:

```
ln -s libclntsh.so.<version> libclntsh.so
```

```
ln -s libocci.so.<version> libocci.so
```

where **<version>** = the first two segments of the Oracle Instant Client version (e.g., libclntsh.so.12.0 libocci.so.12.0).

Oracle Data Provider for .NET

Oracle Data Provider for .NET (ODP.NET) is required when connecting to an Oracle database for both

- TI Portal
- back end components such as Importer and TIUtilities.

Like the Oracle Instant Client, TI Portal supports ODP.NET 12.1, where 12 is the "major database release number" and 1 is the "database maintenance release number." Transaction Insight is NOT compatible with any other combination of "major" and "maintenance" release numbers at this time. You should however use the latest available version that begins with 12.1.

At this writing, the latest available version of the 12.1 ODP.NET driver is 12.1.0.2.1. The following information and examples use this version but apply to any release that begins with 12.1.

Download Oracle Data Provider for .NET

There are three available packages of the Oracle Data Provider for .NET version 12.1.0.2.1. For simplicity we recommend the **Managed Driver xcopy only** package which is named **ODP.NET_Managed121020.zip**. The package contains multiple directories. We will use C:\temp\ODAC in our examples.

1. The package name is "64-bit ODAC 12c Release 3 (12.1.0.2.1) Xcopy for Windows x64. Download the zip file "ODP.NET_Managed121020.zip" from this link:
<http://www.oracle.com/technetwork/database/windows/downloads/index-090165.html>
2. Extract this package into a temporary location of your choice.

Install Oracle Data Provider for .NET

1. Within the extracted files, locate ODAC\odp.net\managed\common\Oracle.ManagedDataAccess.dll.
2. Copy the dll to the following directories:

<Environments>\<env name>\bin, such as:

C:\tibco\TransactionInsight\version\Environments\env name\bin

<Environments>\<env name>\TIWeb\bin, such as:

C:\tibco\TransactionInsight\version\Environments\env name\TIWeb\bin

Important: Use the following instructions. **Do NOT** run the .bat install files that come with the ODP.NET zip file. These will make modifications to your server which may break TI Portal.

If you download a version of ODP.NET that is newer than 12.1.0.2.1, you **must** change the web.config file located in Environments\<env name>\TIWeb. Find the following section:

```
<!--Update this section if your Oracle.ManagedDataAccess.dll version is greater than
4.121.2.0-->
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentity name="Oracle.ManagedDataAccess"
publicKeyToken="89b483f429c47342" culture="neutral" />
      <bindingRedirect oldVersion="0.0.0.0-4.121.2.0" newVersion="4.121.2.0" />
    </dependentAssembly>
  </assemblyBinding>
</runtime>
```

Update the highlighted portions with your ODP.NET version number.

Setting up tnsnames.ora

(Oracle only, Windows and Unix)

The tnsnames.ora file is a way of specifying a shortcut for an Oracle connection. Instead of using one of the connection string formats (such as the EZ-connect syntax) directly in configuration files, you can put all that information in your tnsnames.ora file and give it a shortcut name like **TIdb**.

If you are using a tnsnames.ora file to connect to your database, follow these steps on all portal product machines:

1. Set up a **tnsnames.ora** file containing information needed to connect to your Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor databases. Your Oracle database manager can supply this, or you can copy it from another machine that connects to the same databases. See the example below.
2. Create a new environment variable to tell Oracle where to find **tnsnames.ora**:
 - a. Click **New** under the **Control Panel | System | Advanced | Environment Variables | System variables** pane.
 - b. For Variable Name, type **TNS_ADMIN**.
 - c. For **Variable Value**, type the directory path to **tnsnames.ora**. This is the directory path only. Do not include the filename.
 - d. Click **OK** until you return to your desktop.
 - e. Restart your machine

Example simple tnsnames.ora file

This example shows a single Net Service Name (ora12_testbox) which points to an Oracle server on machine at IP address **192.168.1.40** with a SID of **ora12**. You should be able to connect to the machine of your choice by changing the HOST= and SID= entries to suit your local environment.

```
# tnsnames.ora Network Configuration File: C:\oracleinstantclient\tnsnames.ora

ora12_testbox =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = 192.168.1.40) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SID = ora12)
      (SERVER = DEDICATED)
    )
  )
```

Database Sizes

These are general guidelines and your size requirements will vary.

Transaction Insight Database

Plan on more space if you have:

- Large documents
- Transaction filters, especially ones that are summarized or have repeating values.
- Additional document fields chosen under **Settings | Document Fields**.

As a rough estimate:

- Transaction Insight averages about 2.5 KB of disk space per "application document" (a CLM for 837s, an ST for 835s – see **ApplicationDocTables.pdf**). This is about 2.5.GB of disk space per million documents.
- Saving good data quadruples the database size. When saving both good and bad data, the average size would be about 10 GB/million documents.

Examples

Average disk space needed for one year at 50K transactions per day.

Importing only bad data	$DocsPerDay * Days * 2.5GB = \text{disk space in GB}$ $(50k \text{ docs / day}) * (365 \text{ days}) * (2.5 \text{ GB} / 1,000,000 \text{ docs}) = \text{about } 46 \text{ GB}$
Importing good and bad data	$(50k \text{ docs / day}) * (365 \text{ days}) * ((2.5*4) \text{ GB} / 1,000,000 \text{ docs}) = \text{about } 182 \text{ GB}$

Foresight Operational Monitor Database

Unlike Transaction Insight, which scales based on the amount of EDI data you're saving and the guidelines you're running, Foresight Operational Monitor scales based on the number of Automator workflows you have reporting, the size and complexity of those workflows, and the amount of data going through them per day. Contact TIBCO Foresight Support to discuss your own plans.

Foresight Archive and Retrieval System Database

The size of the Foresight Archive and Retrieval System database (as opposed to the repository) will depend on how many filters you set up and how many files you archive.

Archiving one EDI and DTL fileset, with 0 filter entries, takes about 3.5KB. Each item filtered (that is, each piece of data captured by the filter) adds 100-300 bytes to the filter tables. The big item in this table is the actual data being filtered, which can be 1-200 bytes each.

Foresight Archive and Retrieval System Repository Size and Location

The *repository* is the set of folders where the archived files will be stored.

It will require sufficient disk space to handle the data load. When planning for how much storage to allocate for the Repository, a rule of thumb is that Foresight Archive and Retrieval System compresses text files (EDI and DTL files) 80%. Image files, such as JPEG files, are not compressed.

You can have multiple repositories.

The location of the repositories, and which one is currently being used, is specified during the Windows installation program and is controlled in the Foresight Archive and Retrieval System portal under **Admin | Root Folders**.

Information to Collect

Before running the installation program, collect this information. Keep it with your important portal notes for reference during installation and later.

Look through the prompts shown in Installation Day on page 21 and collect all the information that you will need.

Item	Get this information from ...
Network name of each machine involved.	Network administrator
Environment name for portal (goes in web URL for portal)	Discuss with web server administrator
The “from” e-mail address for portal alerts	Discuss with network administrator
SMTP server name	Network administrator
If using Oracle databases	
User ID and Password for Oracle access	Database manager
System identifier (SID)	Oracle database manager
One of these: <ul style="list-style-type: none"> - Name of database machine, port, and Oracle instances for Transaction Insight, Foresight Archive and Retrieval System, and/or Foresight Operational Monitor - or TNS_ADMIN environment variable and corresponding TNSnames.ora file that contains connection information for the databases 	Oracle database manager
If using SQL Server databases	
Network name of the SQL Server machine	SQL Server database manager
Name of existing or new databases for Transaction Insight, Foresight Archive and Retrieval System, and/or Foresight Operational Monitor	SQL Server database manager
User ID and Password for SQL Server	Database manager
Whether to “create” a new database, or “use” one already created by the database manager	SQL Server database manager

If using Foresight Archive and Retrieval System	
Payara (GlassFish) information: Payara Home (top Payra directory) Payara admin username Payara admin password Payara domain name	Payara (GlassFish) administrator or network administrator
Root folder for repository	Network administrator
If using EDIFACT	
Determine whether EDIFACT document viewing will be used	If so, install Foresight Archive and Retrieval System and an associated database (required).

Maintain a Configuration Plan

It will be helpful if you maintain an updated diagram of your intended configuration, similar to the Sample Implementations shown on pages 3 and 4. This will help you when running the installation program.

Look at the component choices you will have during installation and determine which combinations you will be installing on each server. See **Appendix A: Component Choices at Installation** on page 69.

Contact TIBCO Foresight Support and discuss your intended configuration before installing for the first time, or before changing an existing configuration.

Ensure Installation of ASP.NET Components

Failure to install necessary ASP.NET components means critical IIS features are missing. This results in errors such as the following:

```

HTTP Error 500.19 - Internal Server Error

The requested page cannot be accessed because the related configuration data for the page is invalid.

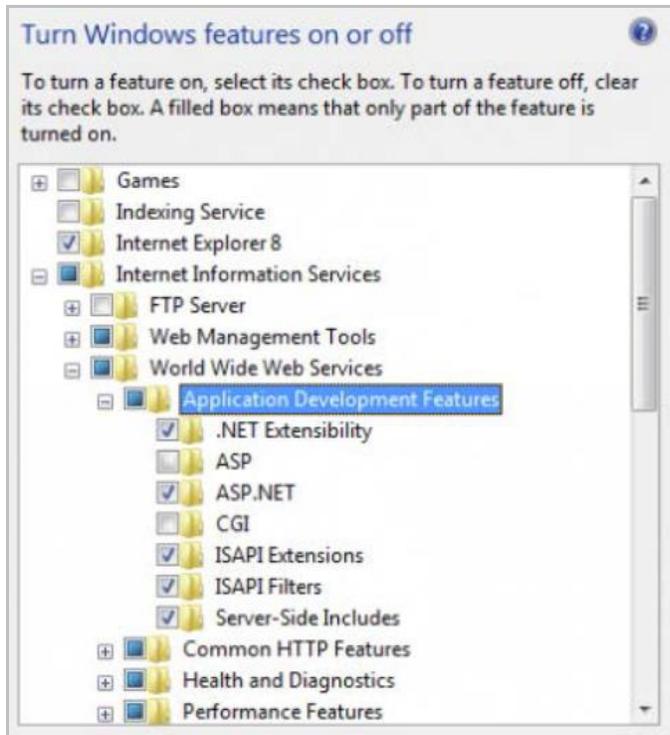
Error Code 0x80070021
Config Error This configuration section cannot be used at this path. This happens when the section is locked at a parent level.

```

To avoid this problem, verify your ASP.NET settings before installation.

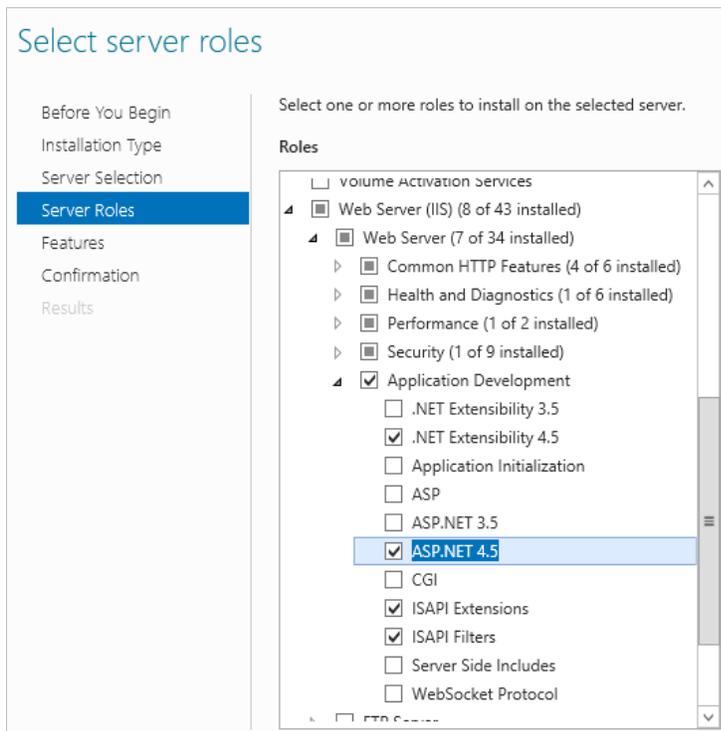
For Windows 2008 platforms:

1. Select Control Panel → Programs and Features.
2. Click on "Turn Windows features on or off."
3. Under IIS → World Wide Web Services → Application Development Features, check all boxes except ASP and CGI.
4. Click OK.



For Windows 2012 platforms:

1. Select Server Manager → Manage → Add Roles and Features → Server Roles.
2. Under Web Server (IIS) → Web Server → Application Development, ensure ASP.NET 4.5 is checked.
3. Click Install. You will be prompted about automatically adding other features required to support ASP.NET 4.5.



Versions of Existing TIBCO Foresight Products

Transaction Insight Version

On Windows, you can find Transaction Insight's current version in INSTALL.LOG in Transaction Insight's *<version>* directory. Open this log file and search for the most recent instance of "Installation Started" to see the latest version of the code.

On Windows or Unix, you can run Importer or TIUtilities with no parameters to see the version at the top of the help text.

Instream Version

It is not necessary to update Instream when you update Transaction Insight. However, check the version of Instream you will be using. You can do this with the Version script in Instream's Scripts directory.

You will need to be sure the text of the error messages in Transaction Insight's database match those being used by the Instream version you are using. You do this with a script called `TI_ErrorUpdate_For_Instream_<version>_MSSQL.sql` or `TI_ErrorUpdate_For_Instream_<version>_ORACLE.sql`. Look in Instream's Scripts\TI directory for these scripts.

For details, see [Synchronizing_TI_and_Instream.pdf](#).

Instream Considerations

Be sure you have Instream configured to insert FSUIDs (Foresight Unique IDs) in one or both of these locations in the validation detail (DTL) file:

- At the top of the file in a GEN record with error number 11005 - this is necessary for Foresight and Retrieval System users and recommended for all users .
- At each application document (a claim, for example) in an IDENT record - this is used by Foresight and Retrieval System and also by Transaction Insight for specific features such as matching.
- Importer needs to know the Instream version that created the detail file. It picks this information from the validation detail file if you have Version=1 set in the original Instream's DIR.INI file.

Please refer to [Data_Types_and_TI.pdf](#) and [FSUID_and_AppDocs.pdf](#) for further information on which guidelines to use with each portal application so that these records are inserted into the detail file when they are needed. Also see Appendix H: Instream and Transaction Insight on page [99](#).

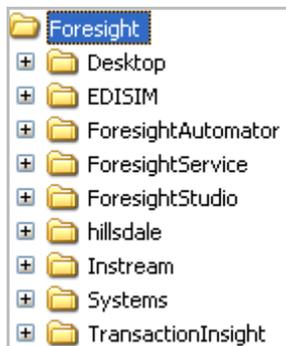
Transaction Insight will need access to Instream to perform revalidations. For convenience, install Instream first. You can then point to it while installing Transaction Insight so that the configuration files will have accurate Instream information. If that is not feasible, you can still install Transaction Insight and add Instream later.

Backing up Current Directories

This is an important step. Do not skip it to save time. You may need to use settings in some of these files after you complete your upgrade.

If you already have TIBCO Foresight products installed, back up existing directories:

- **On Windows**, back up the whole high-level directory containing TIBCO Foresight products. This is Foresight or tibco/tibco64 by default.



- **On UNIX**, back up the TransactionInsight directory and any Automator workflows.

You will need a copy of any .ini and .config files, especially any previous version's Web.config from TransactionInsight's Environments*environment*\TIWeb directory.

Backing up Transaction Insight-related Databases

If this is an upgrade, back up your Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor databases. Do not skip this step. It can lead to serious consequences.

3 Installation Day

Shutting down Transaction Insight Components

If this is an upgrade:

1. Have all users log out of all portal applications. The next step will disconnect them.
2. Shut down or disable **IIS** on all servers that host TransactionInsight Web (type `iisreset /stop` at the command prompt).
3. Shut down or disable any **Importer** instances.
4. Shut down or disable any **TIUtilities** instances.
5. Stop the flow of documents into **Automator**.
6. Stop **Automator** workflows that affect portal applications.
7. Shut down **ForesightService**.

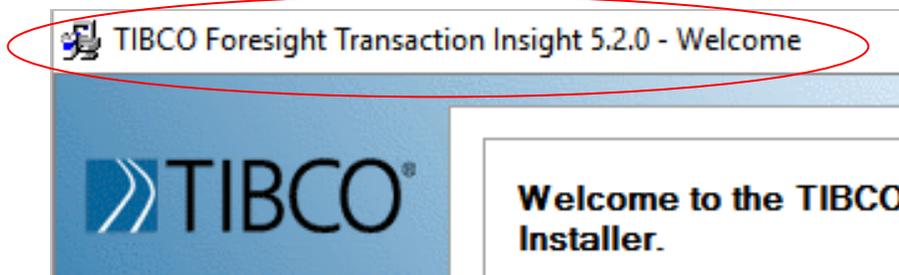
Running the Windows Installation Program

You will need to run the installer on all Windows machines that are to contain portal application components. The only exception is the database machine.

1. Have your necessary people (see Staff Skills Needed on page 7), list of necessary information (see Information to Collect on page 15), and configuration plan (see Maintain a Configuration Plan on page 16) ready.
2. Turn off IIS on the web server (`iisreset /stop` at the command prompt).
3. Turn off ForesightService (under Control Panel's Services).
4. Execute the installation program on each machine.
5. You will be asked to make many of the same types of decisions that installation programs typically require.

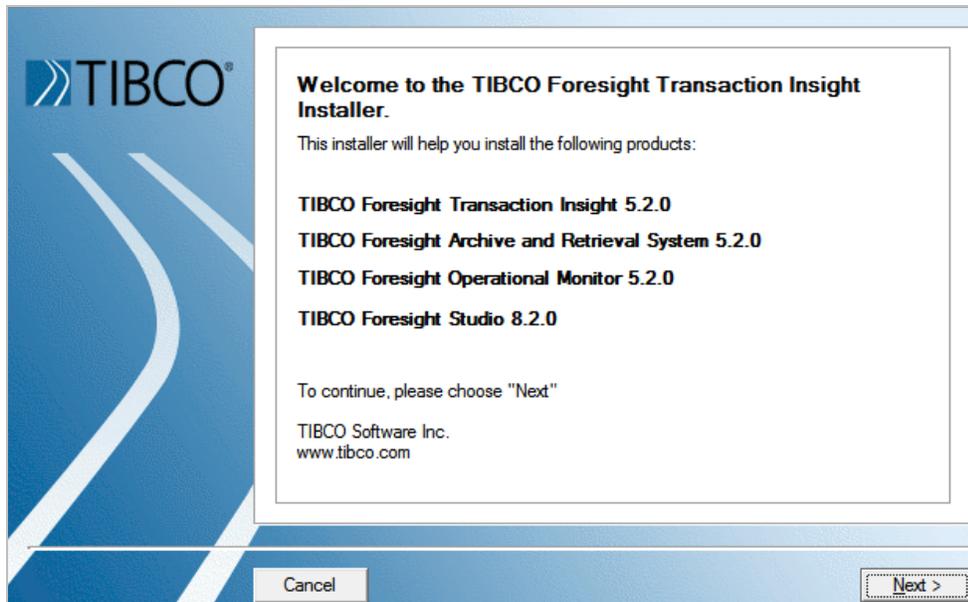
Before Starting the Installation Program

When installing portal applications, always look at the title bar of the dialog box to verify the specific application and activity, since many dialog boxes look similar:



Welcome Screen

On the Welcome screen and all subsequent screens, clicking the **Next** button advances you to the next screen and clicking the **Cancel** button exits the installation.

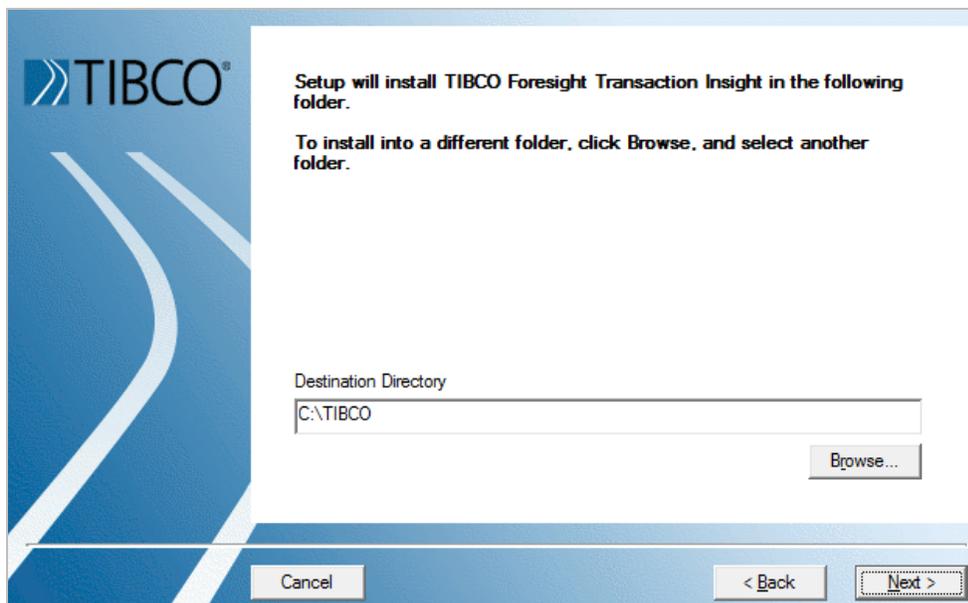


License Agreement Screen

Read the license agreement and click **Accept**. If you click Decline, the installation exits.

Choose Destination Directory

The TransactionInsight directory will go below the directory you specify.



In this example, your Transaction Insight directory will be C:\TIBCO\TransactionInsight\5.2.0

Select Components

When you get to the panel where you select components, choose the components that go on this machine.

See Sample Implementations on page 3 and Appendix A: Component Choices at Installation on page 69.

Choose Transaction Insight components

- Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
- Front End - Web Portal and AlertProcessor

TIBCO Foresight Studio

- Studio / Automator / Windows® Service

TIBCO Foresight Archive and Retrieval System

- Client - imports data into the Archive
- Server - requires Back End, Automator and Payara (GlassFish)
- Front End - Web Portal - requires TI Front End

TIBCO Foresight Operational Monitor

- OMProcessor - processes client events
- Server - requires OMProcessor and Payara (GlassFish)
- Front End - Web Portal - requires TI Front End

Back End

AlertProcessor - see page 61

Importer - see page 64 and **Importer.pdf**

TIICDAnnotator

TIMatcher - see page 65 and **TIMatcher.pdf**

TIUtilities - see page 67 and **TIUtilities.pdf**

ScenarioDetector

Front End

TIWeb - see page 65

AlertProcessor - see page 61

TIBCO Foresight Studio

Foresight Studio - see page 64 and **ForesightStudio.pdf**

Automator - see page 63 and **Automator.pdf**

ForesightService - see page 63 and **ForesightService.pdf**

Foresight Archive and Retrieval System

See page 49 and **TIB_fsp_archive_<version>_archivesystems.pdf** and

TIB_fsp_archive_<n.n>_archiveadmin.pdf

Foresight Operational Monitor

See **TIB_operationalmonitor_<n.n>_adminguide.pdf**

Identify the Automator Location

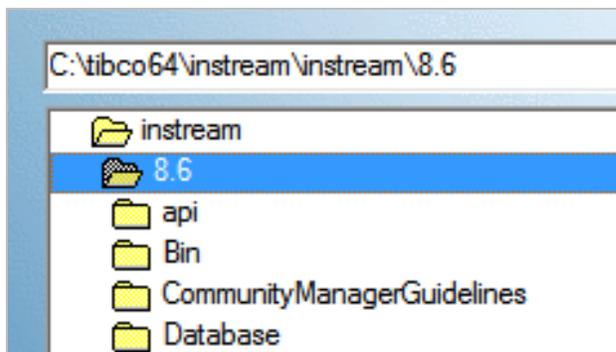
If the installation finds an existing copy of Automator, it will ask if you want to use it. Unless you need features of a new version, consider using your existing version to minimize modifications you will need to your existing workflows.

Identify the Instream Location

The installer looks for the Instream location so that it can update the Web.config. It looks in the registry and also lets you browse for it. The location is placed into the Web.config. You can always update the Web.config file later no matter what you choose during the install.

If you browse, select the directory that is the immediate parent to Instream's Bin directory.

Example:



Be sure the intended path is showing correctly before continuing:

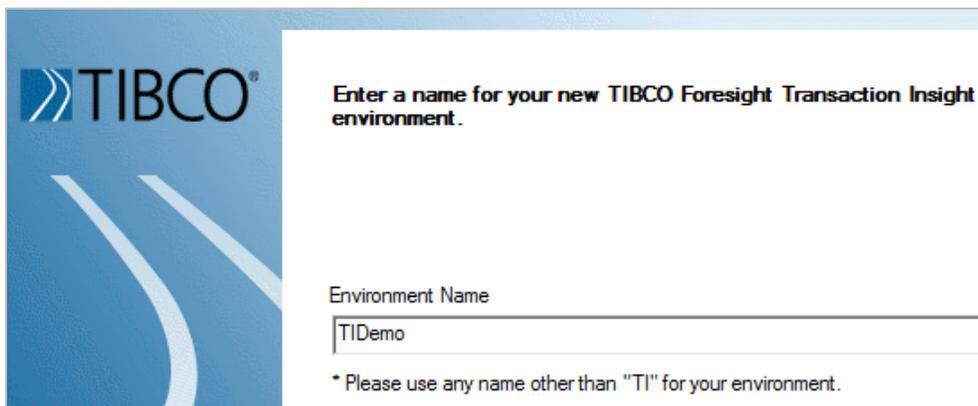


If you would like to install Instream and configure Transaction Insight at later time, check the box and continue:

If Instream is not installed and/or you would like to configure TI for use with Instream at a later time, check the box below and click "Next".

I will install Instream and update the Web.config file at a later time.

Choose a Name for this Environment



The screenshot shows a dialog box with the TIBCO logo on the left. The main text reads: "Enter a name for your new TIBCO Foresight Transaction Insight environment." Below this is a text input field labeled "Environment Name" containing the text "TIDemo". A note at the bottom states: "* Please use any name other than 'TI' for your environment."

The name will be part of the directory structure and the names of some of the batch files that start Automator.

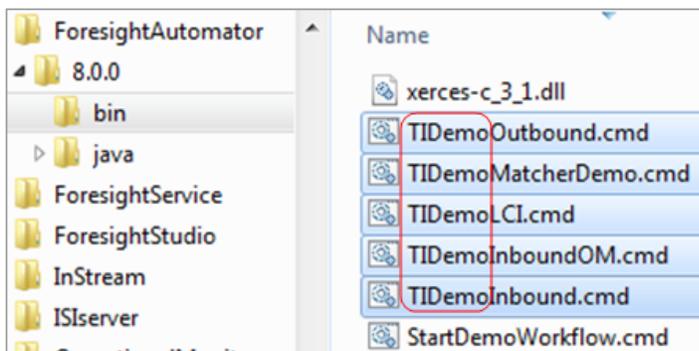
Do not use **TI** for the environment name.

Avoid version numbers in the name since this will continue to be the name through future upgrades.

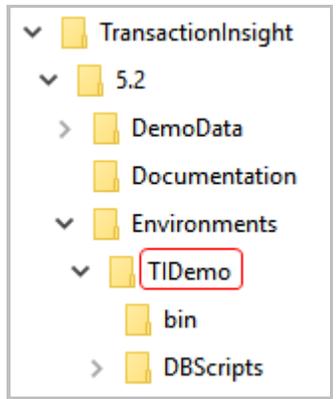
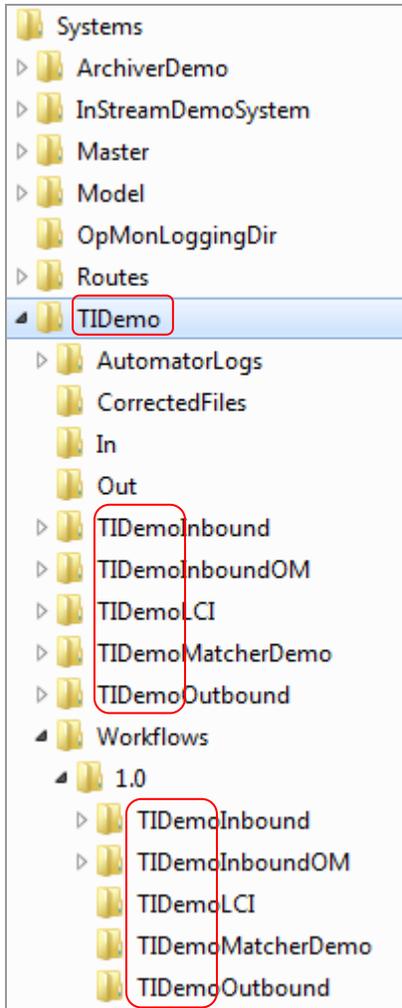
The environment name affects some directory names and filenames.

Example

If you called your environment TIDemo, many Automator batch files will start with the environment name you are specifying:



... and these directory paths are affected too:

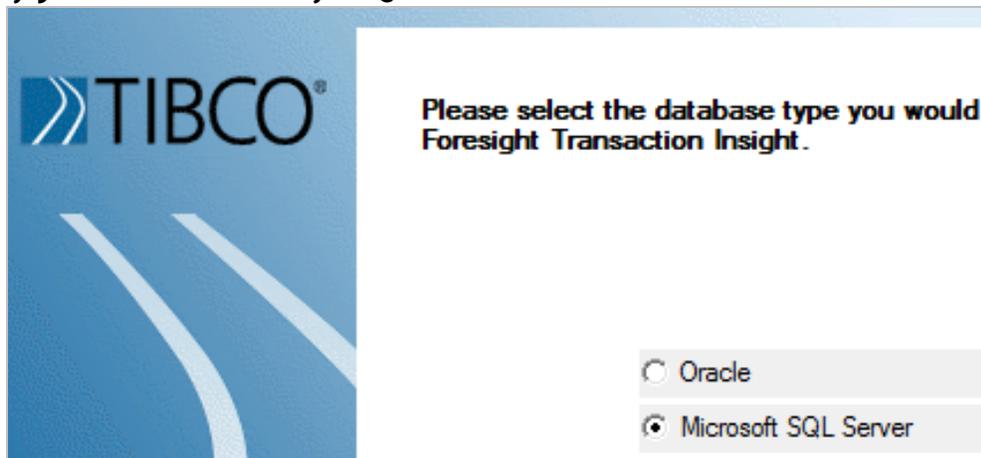


Each environment has its own web portal, set of directories, and configuration.

Specify a Transaction Insight Database

When you get to the Select Database Type dialog box, choose the type of database that you intend to use:

If you Chose Microsoft SQL Server



When you get to the SQL Server Database Information box, make these selections:

Server Name Choose or type the Server (machine) where the database is located. (`local`) means the current machine.

If you want to connect to the database using a SQL Server user ID and password, fill in these:

User ID Type the login ID (`sa`, for example) for SQL Server on the machine where your database will reside. This is the ID that will be in effect at runtime.

Password Type the corresponding SQL Server password. This is the password that will be in effect at runtime.

Show Password This displays the undisguised password in the Password field on this panel.

If you want to connect to the database using a Windows user ID and password:

Use Windows authentication

If using this method, applications requiring a database connection must be run using an account which can access the database. Keep in mind that Transaction Insight will stop working if the password expires.

Database name This will be a permanent database, even after you upgrade to new versions of Transaction Insight. Therefore, don't include the version as part of the name. Also, mixed-case names can cause confusion so all uppercase or lowercase is a good idea.

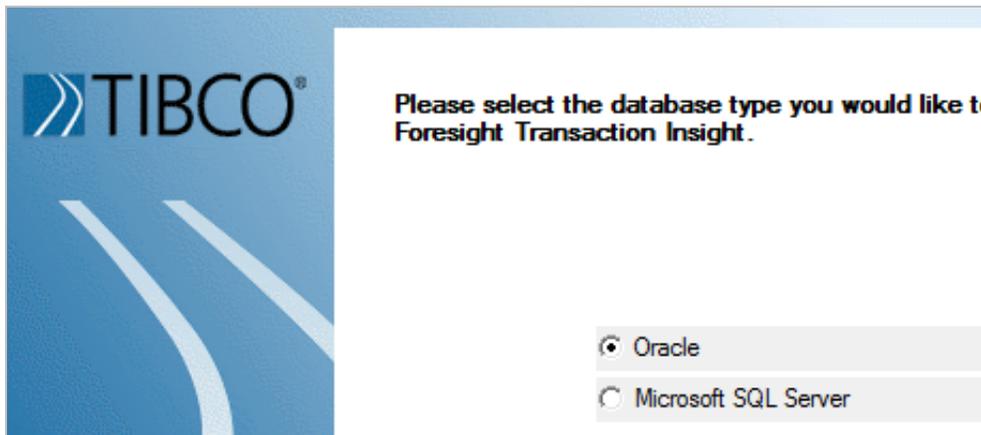
Example good name: `tidemo`

Example bad name: `TI51Demo`

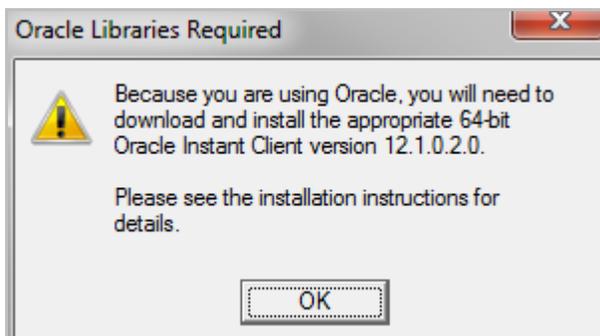
Do not use spaces or special characters.

Create new database If you want the installation program to create and configure a new database, select this option. Otherwise, after finishing the installation, give your database administrator the information and scripts described in Appendix G: Database Scripts on page [93](#).

If you Chose Oracle



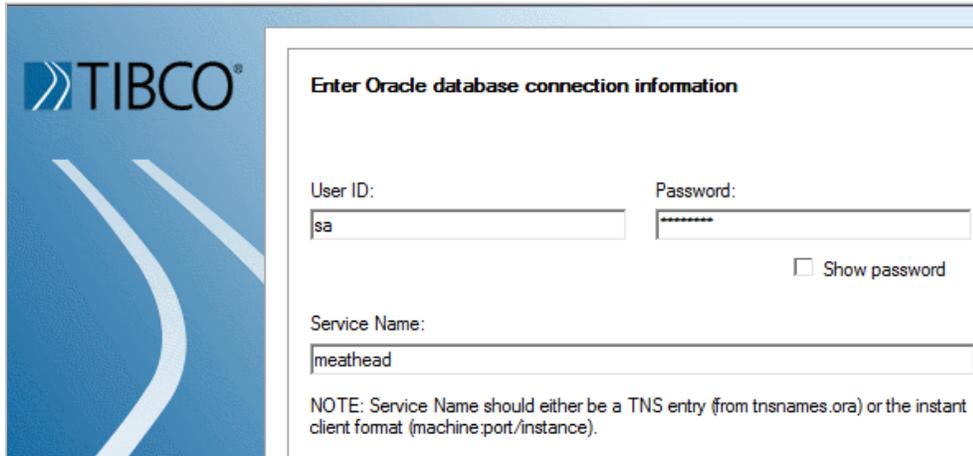
If you see a notice that you need Oracle Instant Client, you can click **OK** and continue installing Transaction Insight. You must then install Instant Client before using Transaction Insight.



Fill in the dialog box about the Oracle **Transaction Insight** database:

- | | |
|----------------------|---|
| User ID | User ID for the database (from DBA). |
| Password | Password for the database (from DBA). |
| Service Name | This is the Instant Client format or a TNS Name from the tnsnames.ora file that is to be used when Transaction Insight connects to the database. |
| Show password | This displays the undisguised password in the Password field. |

Example using TNS name for Service Name:



The screenshot shows a TIBCO logo on the left and a form titled "Enter Oracle database connection information". The form contains the following fields and options:

- User ID:** A text box containing "sa".
- Password:** A text box containing "*****".
- Show password
- Service Name:** A text box containing "meathead".

NOTE: Service Name should either be a TNS entry (from tnsnames.ora) or the instant client format (machine:port/instance).

Example using Instant Client Service Name:



The screenshot shows a TIBCO logo on the left and a form titled "Enter Oracle database connection information". The form contains the following fields and options:

- User ID:** A text box containing "Tladmin".
- Password:** A text box containing "*****".
- Show password
- Service Name:** A text box containing "meathead:1521/or10".

NOTE: Service Name should either be a TNS entry (from tnsnames.ora) or the instant client format (machine:port/instance).

You have database scripts to run to complete your Oracle Transaction Insight database. See Appendix G: Database Scripts on page 93.

Set up TIWeb

The Web Configure dialog prompts for:

Please enter the following information to configure the TIBCO Foresight Transaction Insight Web component.

Virtual Directory Name:

SMTP Server:

E-mail Address:
* E-mail sent by programs like TIUtilities will be "from" this address.

Web URL :
*The Web URL tells a client who receives email how to find the server. This will probably include a domain name or IP address if the client is outside your firewall.

Virtual Directory Name

The logical name for the directory containing the web portal for the environment you are installing. Avoid using the portal version as part of the name, since this will probably be used in future upgrades.

Smtp Server

Name of the server that is to route and send outgoing e-mail containing portal alerts. Be sure that this server is configured to permit external emailing.

E-mail

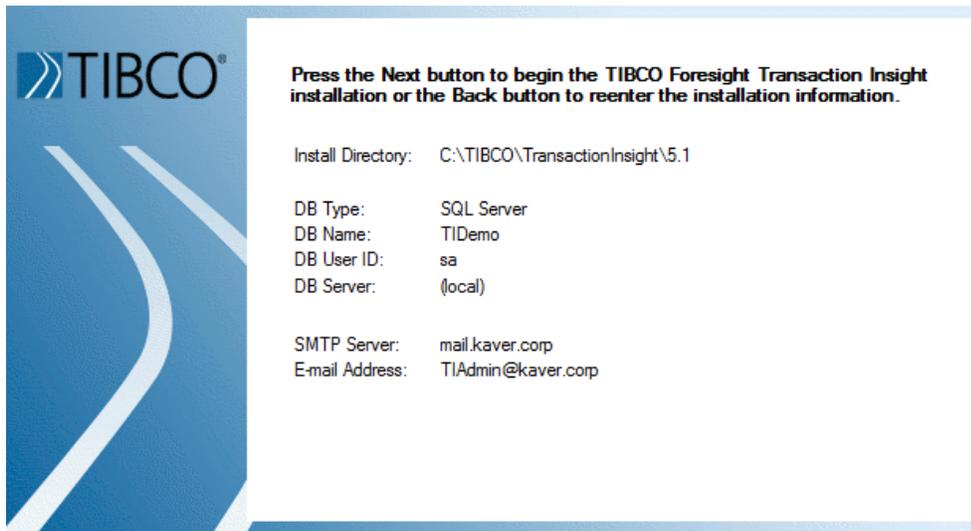
The "from" e-mail address from which portal alerts are sent.

Web URL

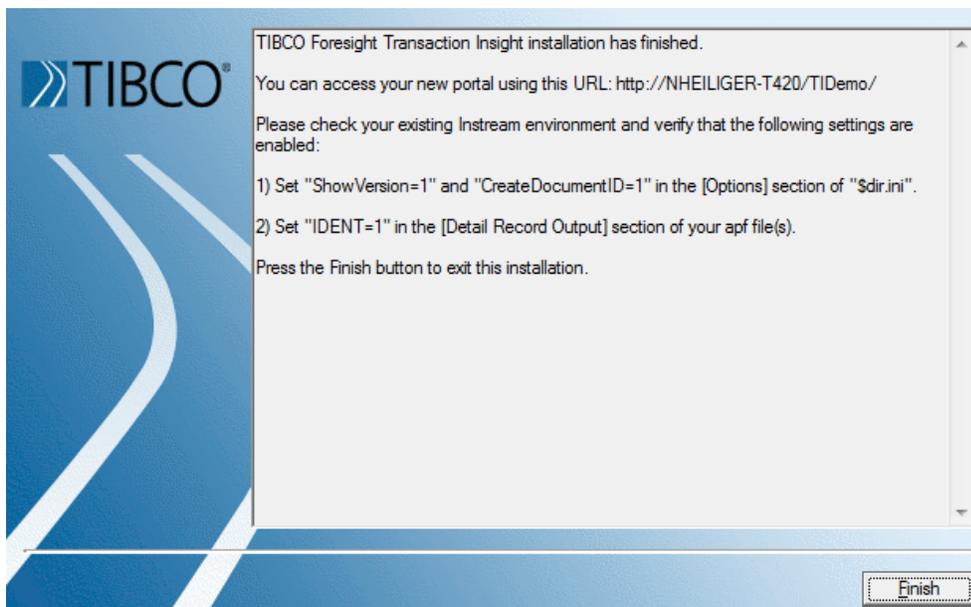
The URL for the portal. Write down this address. You will need it later to access the portal's login screen, and you will need to give it to Transaction Insight users. Depending on how your web server is configured, your users may have to add **Default.aspx** to the end of the URL. In this example, users would log on at:

<http://NHEILIGER-T420/TIDemo/Default.aspx>

You receive a confirmation screen.



The final screen appears. Click the Finish button.



If you Chose Foresight Archive and Retrieval System

Note: You may be prompted to install the Java Development kit before beginning. Follow the instructions to install Java.

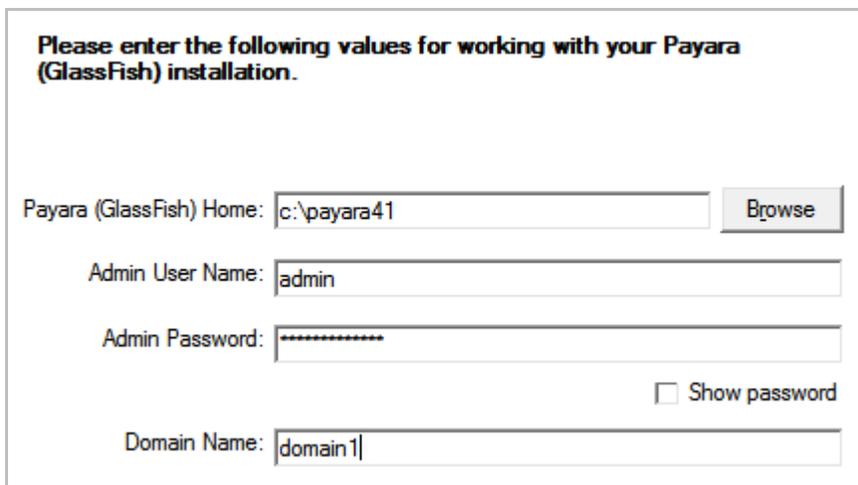
You will see this entrance into Foresight Archive and Retrieval System's portion of the installation program:



Payara (GlassFish) Settings

Be sure you have already installed the correct version of Payara (GlassFish). See Appendix F: Payara (GlassFish) on page 91.

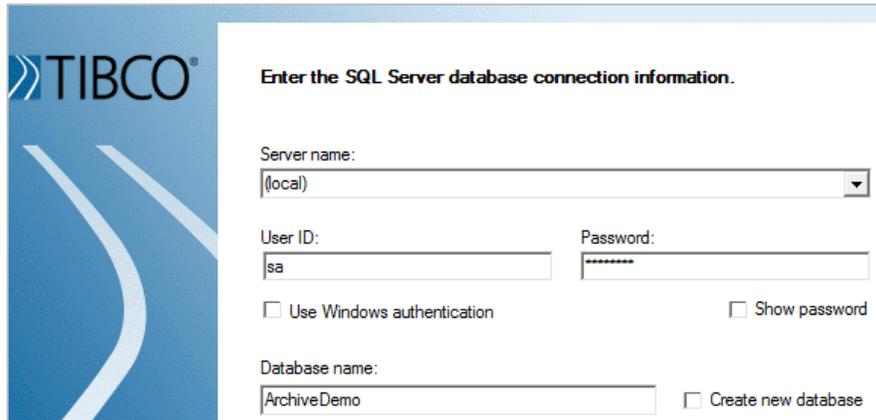
Fill out the settings for your Payara implementation. This will be on the Foresight Archive and Retrieval System Server machine (where the web services workflows run). After identifying the high-level Payara directory, you can normally accept the defaults and just click **Next**.

The image shows a screenshot of the Payara (GlassFish) settings form. The title is "Please enter the following values for working with your Payara (GlassFish) installation." The form contains the following fields: "Payara (GlassFish) Home:" with a text box containing "c:\payara41" and a "Browse" button; "Admin User Name:" with a text box containing "admin"; "Admin Password:" with a text box containing "*****" and a "Show password" checkbox; and "Domain Name:" with a text box containing "domain1".

Foresight Archive and Retrieval System Database Information

Enter information about your **Foresight Archive and Retrieval System** database:

- If you are using **Oracle**, this dialog looks like the one for Transaction Insight database (see page 29).
- If you are using **SQL Server**, select **Create new database** if instructed to do so by your database administrator.



The screenshot shows a dialog box titled "Enter the SQL Server database connection information." with the TIBCO logo on the left. The fields are: Server name: (local); User ID: sa; Password: (masked with asterisks); Database name: ArchiveDemo. There are checkboxes for "Use Windows authentication", "Show password", and "Create new database".

If you Chose Foresight Operational Monitor

Note: You may be prompted to install the Java Development kit before beginning. Follow the instructions to install Java.

Enter information about your Foresight Operational Monitor database.

- If you are using Oracle, this dialog looks like the one for the Transaction Insight database (see page 29).
- If you are using SQL Server, select **Create new database** only if instructed to do so by your database administrator.



The screenshot shows a dialog box titled "Enter the SQL Server database connection information." with the following fields: Server name: (local); User ID: sa; Password: (masked with asterisks); Database name: OpMonDemo. There are checkboxes for "Use Windows authentication", "Show password", and "Create new database".

Tell Foresight Operational Monitor how to send emails. The “To” address should be one or more working email addresses, separated by semi-colons, where critical events will be reported.

Enter your email information.

Smtip Server:

Smtip Port:

From Address:

To Address(es):

* The "To Address(es)" field should contain one or more working email addresses, separated by semi-colons, where critical TIBCO Foresight Operational Monitor events will be reported.

If you are installing Foresight Operational Monitor Server, you will be asked to enter Payara (GlassFish) information:

Please enter the following values for working with your Payara (GlassFish) installation.

Payara (GlassFish) Home:

Admin User Name:

Admin Password:

Show password

Domain Name:

After selecting the Payara high-level directory, you can typically accept the defaults for the rest of the fields.

Running the Unix Installation

Parts that can be Installed on Unix

Transaction Insight installation:

- Oracle database scripts for Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor - in download package
- Programs:
 - Importer
 - TIUtilities
 - TIICDAnnotator
 - TIMatcher
 - Scenario Detector
 - FSSendMail

Archive installation:

- Oracle database scripts for Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor - in download package
- Foresight Archive and Retrieval System Client and Server

Foresight Operational Monitor installation:

- Oracle database scripts for Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor - in download package
- Foresight Operational Monitor OMPprocessor

Installing Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor on Unix

For database setup, see Appendix G: Database Scripts on page 93.

Installing Transaction Insight on UNIX

1. Read Preparation before Installing on page 7.
2. On your Unix machine, create a directory for TIBCO Foresight programs, if you don't already have one.

Example:

```
mkdir tibco
cd tibco
```

3. Download/copy TIB_fsp_transactioninsight_<n.n.n>_aix_power_64.zip to that directory on your AIX machine, where <n.n.n> is the Transaction Insight version and build.

Example:

TIB_fsp_transactioninsight_5.2.0_aix_power_64.zip is version 5.2.0.

4. Extract the archive. This will create a directory of the form:

```
TransactionInsight/<n.n.n>/bin  
/java
```

Example extract commands:

```
unzip <archive name>.zip
```

5. Set up or update the Transaction Insight database with the UNIX scripts created by the Windows installation program. Follow the instructions carefully in Appendix G: Database Scripts on page 93.
6. Install or update Instream, if needed on UNIX and if it has not been installed already. This is a separate installation archive.
7. Install Automator on UNIX, if you are going to run an Automator workflow on UNIX and it has not been installed already. This is a separate installation archive. See **Automator.pdf**.

Configuring Importer

1. Go to the bin directory and copy "Importer.ini.example" to "Importer.ini". Edit "Importer.ini" to your liking. For example, change this line in the [Database] section:

```
connectstring=UID=myuid;PWD=myspw;DATABASE=host:1521/instname
```

Details are available in **Importer.pdf**.

2. To run Importer you will need to set up the environment variables LIBPATH and FSIMPORTERINI to point to TI's bin directory.

This example Bourne Shell script shows how to set up the environment and run Importer. In this example, a user named "ti" has extracted the archive into their home directory.

```
#!/usr/bin/sh

export LIBPATH=/home/ti/TransactionInsight/<version>/bin
export FSIMPORTERINI=/home/ti/TransactionInsight/<version>/bin
/home/ti/TransactionInsight/<version>/bin/Importer \
-i \
-e /home/ti/TransactionInsight/<version>/DemoData/Tutorial-A.edi \
-r /home/ti/TransactionInsight/<version>/DemoData/Tutorial-A.dtl \
-l /home/ti/TransactionInsight/<version>/DemoData/Tutorial-A.log
```

Configuring TIUtilities

1. Script "FSSendMail.sh" in Transaction Insight's bin directory is used by TIUtilities to send e-mail. You may need to modify this script if:

- a) Your sh interpreter is not in the /user/bin directory. If this is the case, change the top line of this script to point to the location of sh on your system.
- b) You prefer to use a different mail program than mailx. The arguments supplied to mailx are documented in the script.

2. To run TIUtilities, you will need to set up the environment variables LIBPATH and FSTIUTILITIESINI to point to Transaction Insight's bin directory.

This example Bourne Shell script shows how to set up the environment and run TIUtilities. In this example, a user named "ti" has extracted the archive into their home directory.

```
#!/usr/bin/sh

export LIBPATH=/home/ti/TransactionInsight/<version>/bin
export FSTIUTILITIESINI=/home/ti/TransactionInsight/<version>/bin
/home/ti/TransactionInsight/<version>/bin/TIUtilities \
-dbtype "oracle" \
-db "DATABASE=db-server:1521/instance-name;UID=TIDEV;PWD=TIDEV" \
```

```
-t \  
-url "http://webserver/TIDEV/" \  
-smtp "smtp-server.mydomain.com" \  
-from ti@mydomain.com
```

Details are available in **TIUtilities.pdf**.

Configuring TIMatcher

1. In TI's bin directory, copy "TIMatcher.config.example" to "TIMatcher.config". Edit the copy to your liking. For example, add a line to set the database connection information:
2. db=jdbc:oracle:thin:username/password@//dbserver:port/instance

Details are available in **TIMatcher.pdf**.

3. Be sure that the "java" command is in your path.
4. To run TIMatcher, use the TIMatcher.sh script provided in the bin directory or use this as a guide to write your own. To execute TIMatcher.sh, you must either change to the bin directory first or pass the full path to TIMatcher.jar as the first argument to the script. All other arguments are passed on to the TIMatcher program.

Configuring ScenarioDetector

1. In TI's bin directory, copy "ScenarioDetector.config.example" to "ScenarioDetector.config". Edit this file to your liking.

For example, add a line to set the database connection information:

```
db=jdbc:oracle:thin:username/password@//dbserver:port/instance
```

Details are available in **ScenarioDetector.pdf**.

2. Be sure that the "java" command is in your path.
3. To run ScenarioDetector, use the ScenarioDetector.sh script provided in the bin directory or use this as a guide to write your own. To execute ScenarioDetector.sh, you must either change to the bin directory first or pass the full path to ScenarioDetector.jar as the first argument to the script. All other arguments are passed on to the ScenarioDetector program.

Configuring OMProcessor

1. IN TI's bin directory, copy "OMProcessor.props.example" to "OMProcessor.props". Edit this file to your liking. Details are available in **TIB_operationalmonitor_ version_adminguide.pdf**.
2. Be sure that the "java" command is in your path.
3. To run OMProcessor use the OMProcessor.sh script provided in the bin directory, or use this as a guide to write your own. To execute OMProcessor.sh, you must either change to the bin directory first or pass the full path to OMProcessor.jar as the first argument to the script. All other arguments are passed on to the OMProcessor program.

Enabling Asynchronous I/O

Asynchronous I/O completion ports (IOCP) must be enabled for Oracle Instant Client to function on Importer, TIUtilities, and other components of TI. Asynchronous I/O is available by default on IBM AIX on POWER Systems and should not have to be enabled manually.

Please refer to the following link for information about Enabling I/O Completion Ports:

https://docs.oracle.com/database/121/AXDBI/pre_install.htm#AXDBI8086

Installing Foresight Archive and Retrieval System

For information about Payara (GlassFish), see Appendix F: Payara (GlassFish) on page 91.

You must have permissions to create directories to install Foresight Archive and Retrieval System.

To configure Foresight Archive and Retrieval System and Payara your logon account needs to own both installations. Otherwise the configure.sh script will not allow you to perform certain tasks. You can logon later using an account that does have the permissions for either Foresight Archive and Retrieval System and Payara and run configure.sh in tasks mode to finish the job.

Recommendation: Each of the tasks checks if the admin owns the root folder where the work will be done. The ideal scenario is that the admin has installed both Foresight Archive and Retrieval System and Payara. For Payara operations it is not simple to determine exactly what permissions are needed, so the admin should also be the user who installed Payara. That will ensure the necessary permissions have been set.

1. Download/copy TIB_fsp_archive_<n.n.n>_unix.tar.gz to where you would like to install Foresight Archive and Retrieval System on your AIX machine.
2. Unpack TIB_fsp_archive_n.n.n_unix.zip

Example:

```
unzip TIB_fsp_archive_5.2.0_unix.zip
```

You should now see the following directory structure:

Archiver

```
|   - n.n
|
|   |
|   |   - Bin
|   |   - log
|   |
|   |   - Java
|   |   - lib
|   |
|   |   - WebServices
```

```

|
|   - Scripts
|
| - Data
|
|   - Repository

```

3. Collect the following data before proceeding:

- Oracle Archiver Database Username
- Oracle Archiver Database Password
- Oracle Archiver Database Service Name in the form of <machine>:<port>/<instance>
- Payara (GlassFish) Home Directory
- Payara Username
- Payara Password File Path
- Payara Domain to be used with Foresight Archive and Retrieval System

4. Copy ojdbc7.jar from your Oracle Instant Client files to < PayaraRoot>/lib/endorsed.

5. Configure Foresight Archive and Retrieval System and Payara (GlassFish):

- a. Be sure you are using the bash shell.
- b. Change your directory to Foresight Archive and Retrieval System's Scripts directory:

```
cd Archiver/n.n.n/Scripts
```

Example: `cd Archiver/5.2.0/Scripts`

- c. Open `configure.sh` for editing and follow the directions at the top of the file on how to edit the variables in the file.
- d. Run the configure script:

```
./configure
```

This must be run from the Scripts directory. `configure.sh` will walk through each of the tasks needed to get Foresight Archive and Retrieval System and Payara (GlassFish) set up. Each task will display a status message indicating Success or Failure. If there is an error, it will also display a diagnostic message if one is available.

The tasks are:

1. Set Foresight Archive and Retrieval System Properties.
2. Set Payara Properties.

For this step, you will need to logon to the Payara admin console to add a system property to Payara This is not an automated step.

3. Deploy Foresight Archive and Retrieval System Web Service.

4. Deploy File Import Web Service.
5. Stop Payara.
6. Start Payara.

If there are errors, please correct the environmental issues and then run `configure.sh` in tasks mode as described next.

Running `configure.sh` in tasks mode

If there are errors when you run `configure.sh` or if you need to make a change to the configuration, you can run `configure.sh` in tasks mode:

`configure.sh -tasks`

You can select the specific task from a menu and can complete it there.

Task	Description	Implemented By
Set Foresight Archive and Retrieval System properties	Adds database connectivity information to the file <code>archiver.properties</code> . Permissions: Own Foresight Archive and Retrieval System	<code>updateArchiverProperties.sh</code>
Set Payara (GlassFish) properties	Describes the manual tasks the user must perform to get the <code>com.foresightcorp.archiver.config</code> system property defined in Payara (GlassFish). Permissions: None	<code>updateGlassfishProperties.sh</code>
Deploy Foresight Archive and Retrieval System Web Service Deploy File Import Web Service	Deploys the named web service to Payara (GlassFish). Permissions: Own Foresight Archive and Retrieval System and Payara	<code>deployWebService.sh</code>
Stop Payara Start Payara	Stops and starts Payara (GlassFish). Permissions: Own Payara	<code>glassfishServer.sh</code>
Show values for configuring Foresight Archive and Retrieval System and Payara (GlassFish)	Shows the values from <code>configure.sh</code> that will be used.	

Click "Save" and then Logout of the Payara console.

Restart Payara.

Installing Foresight Operational Monitor

For information about Payara (GlassFish), see Appendix F: Payara (GlassFish) on page 91 or see [Webservices_At_Foresight.pdf](#).

You must have permissions to create directories to install Foresight Operational Monitor.

To configure Foresight Operational Monitor and Payara, your logon account needs to own both the Foresight Operational Monitor and Payara installations. Otherwise the `configure.sh` script will not allow you to perform certain tasks. You can logon later using an account that does have the permissions for either Foresight Operational Monitor or Payara and run `configure.sh` in tasks mode to finish the job.

Recommendation: Each of the tasks checks if the admin owns the root folder where the work will be done. The ideal scenario is that the admin has installed both Foresight Operational Monitor and Payara.

For Payara (GlassFish) operations it is not simple to determine exactly what permissions are needed, so the admin should also be the user who installed Payara. That will ensure the necessary permissions have been set.

1. Download/copy `TIB_fsp_opmon_<n.n.n>_unix.tar.gz` to where you would like to install Foresight Operational Monitor on your AIX machine.
2. Unpack the .zip file:

```
unzip TIB_fsp_opmon_5.2.0_unix.zip
```

You should now see the following directory structure:

```
OperationalMonitor
```

```
|   - n.n
      |
      |   - Bin
      |
      |   - Java
      |       - lib
      |
      |   - WebServices
      |
      |
      |   - Scripts
```

3. Collect the following data before proceeding:
 - Oracle Foresight Operational Monitor Database Username
 - Oracle Foresight Operational Monitor Database Password
 - Oracle Foresight Operational Monitor Database Service Name in the form of `<machine>:<port>/<instance>`
 - Payara (GlassFish) Home Directory

- Payara Username
 - Payara Password File Path
 - Payara Domain to be used with OpMon
4. Copy ojdbc7.jar from your Oracle Instant Client files to <PayaraRoot>/lib/endorsed. For more information see Oracle Instant Client on page 9.
 5. Configure Foresight Operational Monitor and Payara (GlassFish):
 - a. Be sure you are using the bash shell.
 - b. Change your directory to Foresight Operational Monitor's Scripts directory:
`cd OperationalMonitor/<n.n>/Scripts`

 Example: `cd OperationalMonitor/5.2/Scripts`
 - c. Open configure.sh for editing and follow the directions at the top of the file on how to edit the variables in the file.
 - d. Run the configure script:
`./configure.sh`

This must be run from the Scripts directory. configure.sh will walk through each of the tasks needed to get Foresight Operational Monitor and Payara (GlassFish) set up. Each task will display a status message indicating Success or Failure. If there is an error, it will also display a diagnostic message if one is available.

The tasks are:

- Set Foresight Operational Monitor Properties
- Set Payara Properties

For this step, you will need to logon to the Payara (GlassFish) admin console to add a system property to Payara. This is not an automated step.

- Deploy Foresight Operational Monitor Web Service
- Stop Payara.
- Start Payara.

If there are errors, please correct the environmental issues and then run configure.sh in tasks mode as described next.

- e. Click "Save" and then logout of the Payara console.
- f. Restart Payara.

Installing Instream on Unix

1. Read **Versions of Existing TIBCO Foresight Products** on page 18 and **Instream Considerations** on page 18.
2. Download **TIB_instream_version_platform.zip** from the TIBCO download site.
3. Follow the directions in **TIB_instream_<n.n>_installation.pdf** for installing on Unix.

Installing Automator on Unix

1. Download **TIB_fore sightstudio_ *version* _automator_ *platform* .tar.gz** from the TIBCO download site.
2. Follow the directions in **TIB_fore sightstudio_ <*n.n*> _automator_ installation_ *platform* .txt** in the download package.

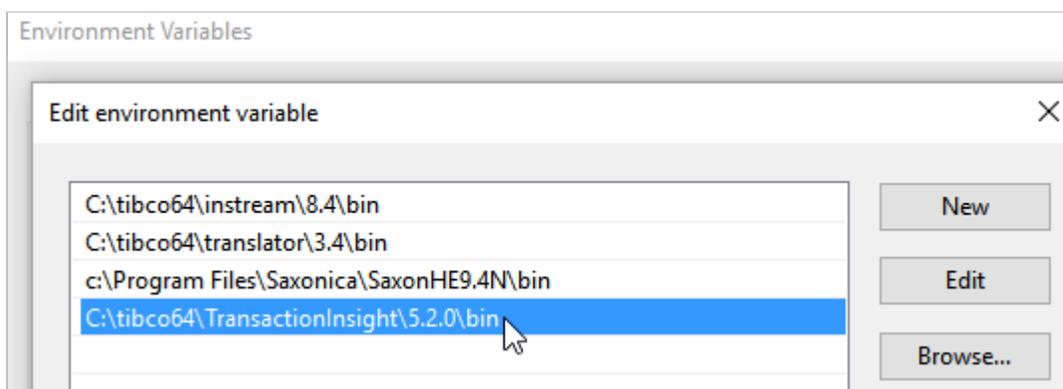
4 General Configuration after Installation

Running Database Scripts

Unless you are using a SQL Server database and chose **Create new database** during installation, your database administrator will need to run scripts before you can use your portal applications. See Appendix G: Database Scripts on page [93](#).

Updating your System Path in Windows

Go to your Environment Variables and put your Transaction Insight environment's **Bin** directory in the System path:



File and Directory Permissions

Your permission needs will vary, depending on your specific implementation.

- The user running a workflow needs permissions to all folders that the workflow accesses.
- Recommendation: Keep it local for a workflow. For security, simplicity, and speed, keep all folders and applications on the server where the workflow is running.
- The Oracle or SQL Server user in the connection string (tiuser, for instance) needs permission to create schema/database, create tables, views, stored procedures, read, update.
- The Foresight Archive and Retrieval System client needs read/write permission for the repository.
- The Foresight Operational Monitor user needs read/write permission for the PGN files.

ASP.NET Permissions

The IIS worker process must have access to these directories:

- Read and Write access to the SubmitDirectory folder as identified in Web.config.
- Read access to the InStreamDirectory as identified in Web.config.
- Read and Write access to the system TEMP directory as identified in the machine's environment variables.
- It should already have access to the directories it needs under the Transaction Insight environment's TIWeb directory.

The default account used by the worker process is:

IIS 7.0	NETWORKSERVICE
IIS 7.5	ApplicationPoolIdentity

Example IIS 7.0 – granting permission

The **ApplicationPoolIdentity** by default is part of the **Users** group and the **IIS_IUSR** group.

Therefore, to give the directory or file permission:

1. From Windows Explorer, right-click on the directory and choose **Properties**.
2. On the Security tab, see if Users or IIS_IUSR is listed.
If not, click **Edit | Add**.
3. Click **Locations** and select your machine.
4. Type **Users** and click **Check Names**.
5. Click **OK**.
6. Adjust the permissions for that account.

5 Foresight Archive and Retrieval System Configuration

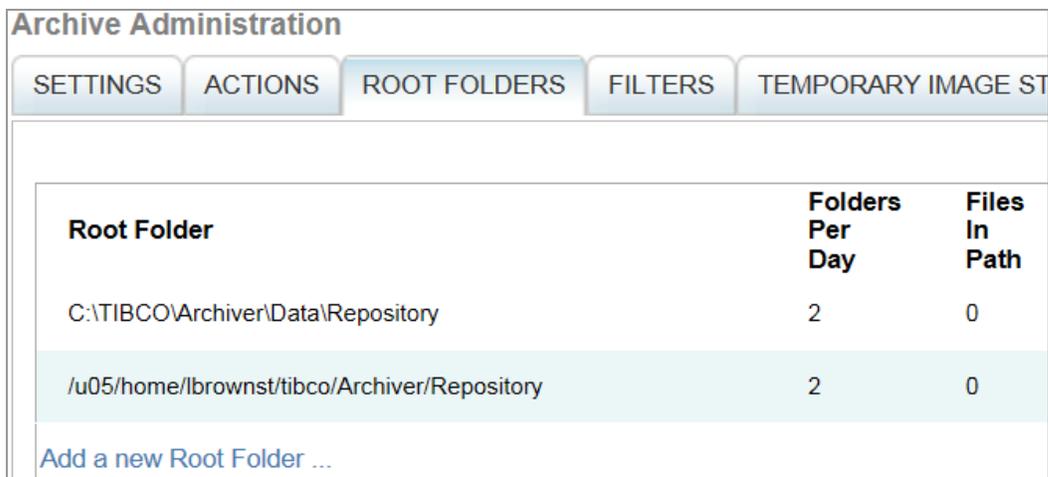
Setting Repository Location

Set the root folder for the Foresight Archive and Retrieval System repository files:

1. Log on to the Foresight Archive and Retrieval System portal.
2. Choose **Archive | Admin | ROOT FOLDERS**.
3. Click **Add a new Root Folder** to specify the root folder for the Repository.

This is the local path to the repository on the server that has Foresight Archive and Retrieval System and Payara (GlassFish) installed.

In this example, the portal is on a Windows server (as it must be) and the repository, Payara, and Foresight Archive and Retrieval System are on a Unix server. No network path to the Unix server is needed - just the local path on the Unix server.



The screenshot shows the 'Archive Administration' interface with the 'ROOT FOLDERS' tab selected. It displays a table with the following data:

Root Folder	Folders Per Day	Files In Path
C:\TIBCO\Archiver\Data\Repository	2	0
/u05/home/lbrownst/tibco/Archiver/Repository	2	0

Below the table is a link: [Add a new Root Folder ...](#)

4. Select the one to be used and click **Change Active Root Folder** to choose the one to use now.



If the Repository will be hosted on a system other than where the Foresight Archive and Retrieval System client and/or Payara (GlassFish) are running, then the Repository server will need to be configured so that the Foresight Archive and Retrieval System client and Payara can access the repository directories.

Setting Foresight Archive and Retrieval System Action Directories

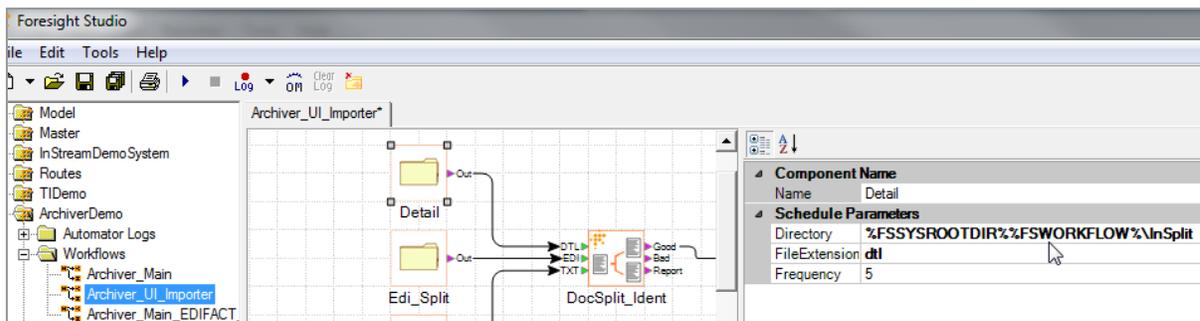
Specify which directories will be used with Actions that the portal user can take.

1. Log on the Foresight Archive and Retrieval System portal and click **Archive | Admin | ACTIONS**.
2. Check and revise the settings for each action by clicking on the pencil in its Edit column. These paths are relative to the server that has Payara (GlassFish).

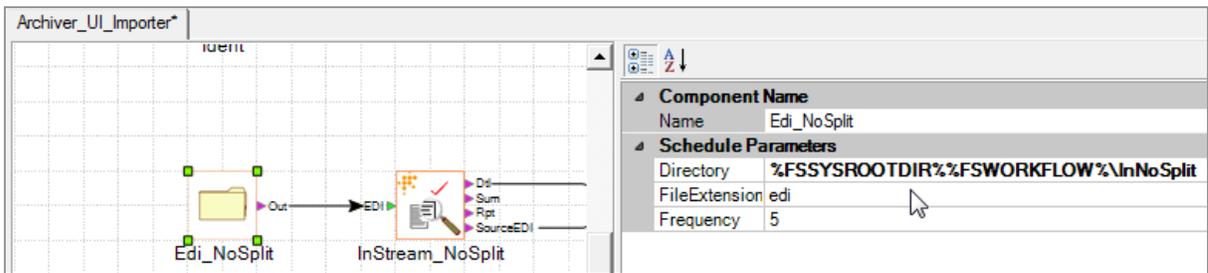
ID	Action Name	Description	Workflow Directory	File Action	Document Action	Input	Edit	Delete
1	View Transmission (File)	Import File	C:\TIBCO-FPPv500\System\ArchiverDemo\Archiver_UI_Importer\InNoSplit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PRIMARY (1);		
2	View Transmission (Document)	Import Document	C:\TIBCO-FPPv500\System\ArchiverDemo\Archiver_UI_Importer\InSplit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PRIMARY (1);		
3	Start Validation Highlighter	Start Generating VH report	C:\TIBCO-FPPv500\System\ArchiverDemo\Archiver_UI_Importer\InVH	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PRIMARY (1);		
4	Get Validation Highlighter	Retrieves VH Result	C:\TIBCO-FPPv500\System\ArchiverDemo\Archiver_UI_Importer\OutVH	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PRIMARY (1);		

[Add New Action ...](#)

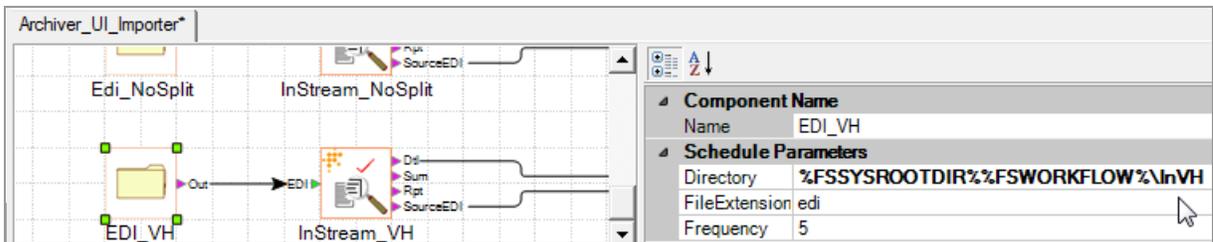
For **View Transmission (Document)**, this will need to map to the **InSplit** directory that the Archiver_UI_Importer workflow is expecting under the ArchiverDemo sys



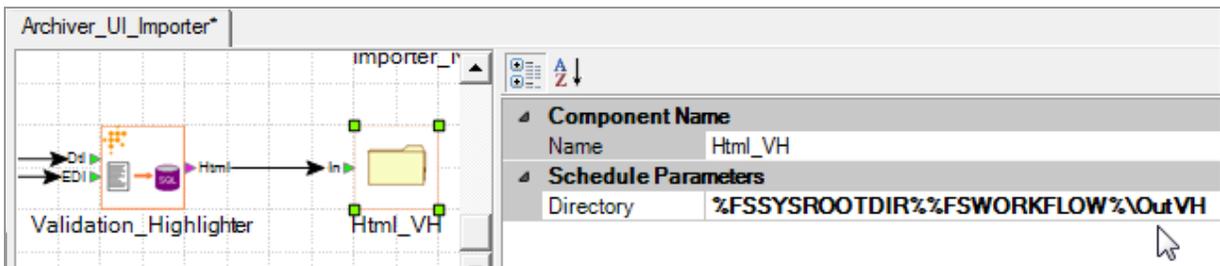
For **View Transmission (File)**, this will need to map to the **InNoSplit** directory that the Archiver_UI_Importer workflow is expecting under the ArchiverDemo system.



For **Start Validation Highlighter**, this will need to map to the **InVH** directory that the Archiver_UI_Importer workflow is expecting under the ArchiverDemo system.



For **Get Validation Highlighter**, this will need to map to the **OutVH** directory that the Archiver_UI_Importer workflow is expecting under the ArchiverDemo system.



Example

If your workflows are rooted in **/home/Foresight/Systems**, then the paths for these folders become:

- /home/Foresight/Systems/Archiver_UI_Importer/InSplit for View Transmission (Document)
- /home/Foresight/Systems/Archiver_UI_Importer/InNoSplit for View Transmission (File)
- /home/Foresight/Systems/Archiver_UI_Importer/InVH for Get Validation Highlighter
- /home/Foresight/Systems/Archiver_UI_Importer/OutVH for Start Validation Highlighter

For details about adding more actions, see **Creating an Action in TIB_fsp_archive_<n.n>_archiveadmin.pdf**.

Setting Foresight Archive and Retrieval System Web Service URL

See Appendix F: Payara (GlassFish) on page 91 and [Webservices_at_Foresight.pdf](#) for complete information about Payara (GlassFish).

To identify the server where Payara is running:

1. Start Payara.
2. In the Foresight Archive and Retrieval System Portal, click on **Archive | Admin | SETTINGS** and look at the server in the Value column:

Name	Value
Archive Web Service URL (?)	http://FCDOC01:8080

3. If it is not the server where Payara is running, click the pencil in its Edit column, correct it and save.
4. Be sure that these ports are available for Payara:
HTTP Ports 4848, 8181, 8080
IIOP Ports 3820, 3700, 3920
5. Click **Ping** and check the status column in the report at the bottom of the screen.

Getting Files into Foresight Archive and Retrieval System

Regardless of the method of inserting the file, the main steps are:

1. Instream processes an EDI file using a guideline plus (see **ForesightHIPAAguidelinelist.pdf**) or a guideline merged with one.
2. Instream hands off the EDI and Detail files to Archiver.jar.
The Detail file must have document-level FSUIDs (IDENT records).
It needs a file-level FSUID (GEN record 11005) if you are using the JobID for Foresight Archive and Retrieval System, and it is a good idea to have it included as a backup in any case. See **FSUID_and_AppDocs.pdf**.
3. Archiver.jar processes the Detail file, adds the data it extracts from it to the database, and copies the EDI and Detail files to the Repository.
4. When a user asks to view data, the portal calls a Payara (GlassFish) web service which returns the actual data.
5. When a user requests an action that will display the transmissions view or Validation Highlighter, the portal calls Payara to use the Archive_UI_Importer workflow and return the information to the portal. This workflow must be running when the portal is being used.

Contact TIBCO Foresight technical support when considering options for accomplishing this.

Workflows

Default Workflows

As installed on Windows, you have two Foresight Archive and Retrieval System workflows in Foresight Studio:

Archiver_Main This demo workflow shows how to validate and archive an EDI file. The input EDI file goes in TIBCO Foresight's Systems\ArchiverDemo\Archiver_Main\InInstream directory.

Archiver_UI_Importer Automatically runs to create the transmission view when a Foresight Archive and Retrieval System user requests an Action. Never change or delete this workflow unless told to do so by TIBCO Foresight. This should be installed on the system with Payara (GlassFish). You will need to migrate this to Unix if you are using Foresight Archive and Retrieval System there.

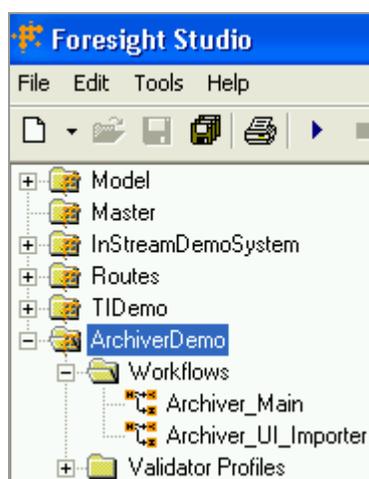
Automator runs workflows. See **Automator.pdf** and in particular the section on running Automator on Unix to learn how to run Automator.

You can start it from within Foresight Studio (Windows), from the batch file Archiver_Main.cmd (Windows) in Automator's **bin** directory, or from the command line.

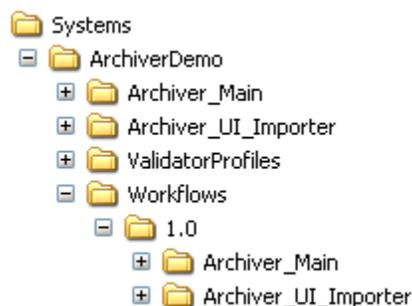
A sample command line invocation of Automator for testing the workflow Archiver_Main might look like this:

```
/home/joeUser/Foresight/ForesightAutomator/8.0.0/bin/ ForesightAutomator\  
-d -l \  
-f"/home/joeUser/Foresight"\  
-a" ForesightAutomator/8.0.0/bin"\  
-s" ArchiverDemo\  
-w" Workflows/1.0/Archiver_Main"
```

To get these two default Foresight Studio workflows, run the Windows installer and choose the option for Foresight Automator/Studio/Foresight Service. In Foresight Studio, they appear like this:



The files are stored under TIBCO Foresight's Systems directory:

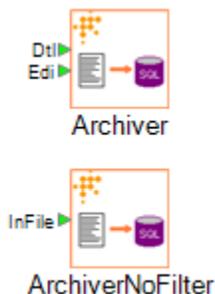


See the Tutorial section of **TIB_fsp_archive_ version_archiveuser.pdf** to test Archiver_Main, which loads files into Foresight Archive and Retrieval System.

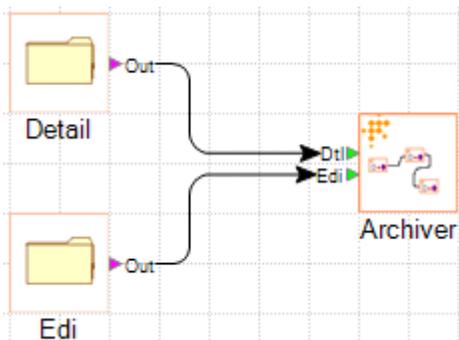
To create your own workflow that archives and does other tasks needed by your organization, see **ForesightStudio.pdf**. For information on moving your workflows to AIX, see **MovingWorkflows.pdf**.

Foresight Archive and Retrieval System Workflow Components

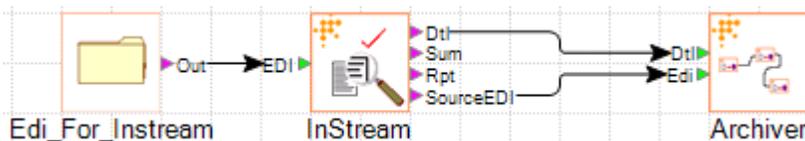
The Foresight Archive and Retrieval System workflow components are used in a Foresight Studio workflow to archive files that are passed into it. They are named Archiver and ArchiverNoFilter.



For Archiver, you must provide it with an EDI file source and a detail file. These can come from input folders, like this:



Or, the files can come directly from Instream:



For ArchiverNoFilter, you can feed it any kind of file.

Properties

The **Description** property is optional.

ConfigDir

The ConfigDir property specifies the folder where Foresight Archive and Retrieval System configuration files are stored. This is normally Foresight Archive and Retrieval System's bin directory, and it can be the FSARCHIVERCONFIGDIR system global variable, defined in Foresight Studio under **File | Edit Globals**.

Component Name	
Name	Archiver_1
Schedule Parameters	
Description	
LoggingDir	#FSARCHIVERCONFIGBINDIR#logs
ConfigDir	#FSARCHIVERCONFIGDIR#
ImportDocuments	Yes

It can also be a path:

Component Name	
Name	Archiver_1
Schedule Parameters	
Description	
LoggingDir	#FSARCHIVERCONFIGBINDIR#logs
ConfigDir	C:\TIBCO\Archiver\5.0.0\Bin
ImportDocuments	Yes

LoggingDir

This is the location for the Foresight Archive and Retrieval System log files. It is normally Foresight Archive and Retrieval System's Bin\log directory and it can be the FSARCHIVERBINDIR system global variable, defined in Foresight Studio under **File | Edit Globals**.

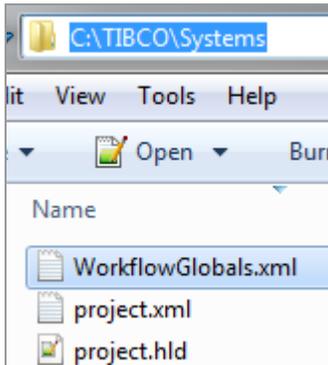
ImportDocuments

Set to **Yes** for EDIFACT documents and **No** or **Ignore** for all others.

Archive WorkflowGlobals

Edit your workflow globals in one of two ways:

- Go to the Systems directory and edit **WorkflowGlobals.xml**.



- Go into Foresight Studio and choose **File | Edit Globals**.

Modify the following properties so that they will conform to your installation. See **Variables_for_Workflows.pdf** for details.

Property	Value
FSARCHIVERROOTDIR	path to version directory beneath Foresight Archive and Retrieval System install root
FSARCHIVERBINDIR	path to Foresight Archive and Retrieval System bin directory with a trailing slash
FSARCHIVERJAVADIR	path to Foresight Archive and Retrieval System java directory with a trailing slash
FSARCHIVERCONFIGDIR	path to Foresight Archive and Retrieval System bin directory without a trailing slash
FSARCHIVER_IMPORTER_DBCONN	connection string to Foresight Archive and Retrieval System's database
FS_OSD_ARCHVRBAT	#FS_OSD_ARCHVRBAT_U# (for Unix) or #FS_OSD_ARCHVRBAT_W# (for Windows)

Checking the Foresight Archive and Retrieval System Installation

Logging in to the Portal

The URL for the TI Portal is the name that you entered during installation, followed by **Default.aspx**:

Please enter the following information to configure the Transaction Insight Web component.

Virtual Directory Name:

SMTP Server:

E-mail Address:
* E-mail sent by programs like TIUtilities will be "from" this address.

Web URL:

*The Web URL tells a client who receives email how to find the server. This will probably include a domain name or IP address if the client is outside your firewall.

In this example, the portal URL would be:

`http://kaverTlserver1/TIDemo/Default.aspx`

The format is:

`http://machine/environment/Default.aspx`

... where *machine* is either the web machine's IP address or network name and *environment* is the Transaction Insight environment name.

To logon:

Open a browser and type the web portal's name in the Address field, with `Default.aspx` added to the end of the link.

There will be a significant delay the first time each page loads.

If the login screen appears, you have set up the web portal correctly.

If it doesn't, see **Appendix I: Troubleshooting** on page [101](#).

Starting a Sample Workflow with Automator

You can use Foresight Studio to create workflows.

Try the sample Archiver_Main workflow:

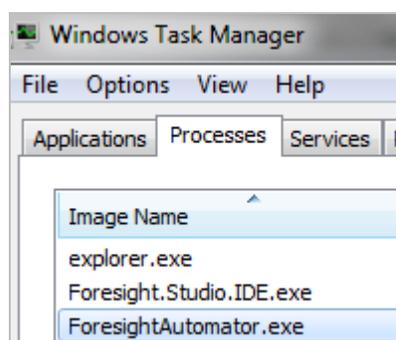
1. Check \$dir.ini or fsdir.ini in Instream's Bin directory. If the PARTNERAUTOMATION line has a colon in front of it, remove the colon.

Change the PARTNERAUTOMATION line to point to TI_demo.csv in Instream's Bin directory. This has many guidelines configured.

Save and close the file.

If TI_demo.csv is not present in Instream's Bin directory, copy it from TI's DemoData directory.

2. On the machine where Archiver.jar is installed, go to Automator's bin directory and execute **Archiver_Main.cmd**.
3. To confirm that Automator is running, look for an Automator command prompt display or check for **ForesightAutomator** under **Windows Task Manager | Processes**:



Sending in a File

Copy Tutorial_5010_850_A.edi:

From TransactionInsight*version*\DemoData directory

To Systems\ArchiverDemo\Archiver_Main\InInstream directory

By default, it should disappear within 15 seconds. This time interval is configurable.

After Archiver_1 completes:

1. Log on to the TI Portal as root or an administrator with access to Foresight Archive and Retrieval System.
2. Under Foresight Archive and Retrieval System, choose **Search | File Search** and search for **Tutorial-A.edi**.

It should appear at the bottom under File Search Results.

Archive Search

FILTER SEARCH FILE SEARCH SEARCH PREFERENCES QUICK SEARCH (FILESET/FSUID)

File Name like (Use ** as the wild card.)

File Size = bytes

Archived Date Start: End:

Last Modified Date Start: End:

File Search Results

File Name	Archived Date	Last Modified Date	File Size
Tutorial-A.edi	05/17/2011 11:58:42 AM	05/17/2011 11:58:39 AM	9429

If the file does not show up, check:

- Foresight Archive and Retrieval System's **Bin** directory for archive.log
- Foresight Archive and Retrieval System's **Bin\log** directory for Tutorial-A.log
- Foresight Archive and Retrieval System's ArchiverDemo\Workflows\1.0\Archiver_Main\Logs directory

6 Configuring other TIBCO Foresight Programs

AlertProcessor

Executable AlertProcessor.exe

Purpose Proactively monitors the system for events and sends e-mail when an event occurs.

Configuration file AlertProcessor.exe.config

This is a standard .NET XML-based application configuration file.

Keep AlertProcessor.exe and AlertProcessor.exe.config in the same directory.

Default location Front-end or back-end machine. It is an ASP.Net application which will only run on Windows:

C:\Foresight\TransactionInsight*version* \Environments*envname*\bin

Where:

version Transaction Insight version number such as 5.2.0.

envname User-supplied name of the environment set up during installation.

Configuring AlertProcessor.exe.config	
Setting	Explanation
DBType:TransactionInsight	SqlServer or Oracle
DB:TransactionInsight	<p>Application Name TIWebGUI server (local) or name of server where DB is located.</p> <p>Database or initial catalog Name of database from installation.</p> <p>UID SQL or Oracle user ID.</p> <p>PWD Corresponding password.</p> <p>For details about using Windows Integrated Security instead of a UID and PWD here, see Appendix B: Windows Integrated Security on page 81.</p>
SmtptServer	The SMTP server the application uses to send e-mail notifications.
FromAddress	The "From:" address in e-mails sent by Transaction Insight.
WebApplicationUrl	The URL of the web application root. This is used to include URLs (links) in e-mails sent by the application.
smtp deliveryMethod	<p>Uncomment this section if you want to have AlertProcessor send email alert notifications using the IIS SMTP component. With this method, email alerts are queued locally, preventing the loss of information if the target server is unavailable. Consult your web server administrator before using this method, since you need a local IIS server with the SMTP option. To uncomment, remove <!-- and --></p> <p>Default: AlertProcessor sends notification emails directly using SMTP.</p>
TurnOnLogging	Enables/disables logging to a file for Alert Processor. The log file is created in the user's "temp" directory on the webserver. Default is False. (E.g., C:\Documents and Settings\ <user>\Local Settings\Temp\ or C:\Users\user1\AppData\Local\Temp.)</user>
LogFileName	The name of the .txt file that is created by the logger. The default name is TransactionInsightLogger.
LogFileSizeInBytes	When the size of the log file reaches this number of bytes, the system renames the log file (appending a date/time value) and starts a new file with the original filename. Default is 10,000,000.)

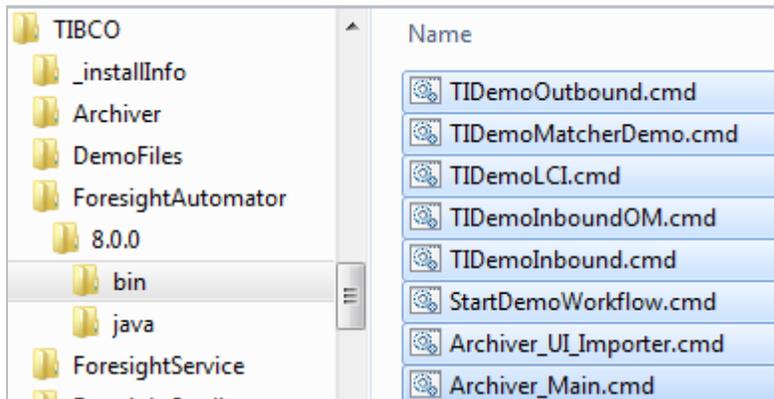
Example Alert Processor appSettings entries

```
<add key="DBType:TransactionInsight" value="SqlServer" />
<add key="DB:TransactionInsight" value="Application
Name=TIWebGUI;server=FCDOC01;Database=Demo;UID=sa;PWD=a1s2d3f4;"></add>
<add key="SmtptServer" value="relay.foresightcorp.com"></add>
<add key="FromAddress" value="TImanager@foresightcorp.com"></add>
<add key="WebApplicationUrl" value="http://FCDOC01/Demo/" />
<add key="TurnOnLogging" value="false"/>
<add key="LogFileName" value="TransactionInsightLogger"/>
<add key="LogFileSizeInBytes" value="10000000"/>
```

Automator

Executable	ForesightAutomator.exe
Purpose	Runs a workflow.
Configuration file	Various XML files in workflows under Foresight\System\workflow\Workflows\version\Automator.
Default location	On Automator/Studio/Windows Service (ForesightService) machine: C:\Foresight\ForesightAutomator\version\bin Where: version Automator version.
Documentation	Automator.pdf

Automator's bin directory contains files to start the workflows that are automatically installed. The Transaction Insight workflow filenames start with the environment name. In this example, the environment is **TIDemo**:



ForesightService

Executable	ForesightService.exe
Purpose	Lets you run Automator when you are logged out. Recommended method to run Foresight Archive and Retrieval System workflows. Look for ForesightService under Control Panel Administrative Tools Services .
Configuration file	FSService.ini. Keep this in the same directory as ForesightService.exe.
Default location	C:\Foresight\ForesightService\version\bin on machines with Automator. Where: version Transaction Insight version number such as 5.2.0.
Documentation	ForesightService.pdf

Foresight Studio

Installs with the Automator/Foresight Studio and Windows Service checkbox.

Executable	Foresight.Studio.IDE.exe (Windows only)
Purpose	Creates, modifies, and runs Automator workflows.
Configuration file	None
Default location	C:\Foresight\ForesightStudio\ <i>version</i> \bin Where: <i>version</i> Foresight Studio/Instream version such as 8.6.0.
Documentation	ForesightStudio.pdf in Foresight Studio's Doc directory.

Importer

For revalidation, this also installs with TransactionInsight Web.

Executable	Importer.exe
Purpose	Import EDI data and statistics into the Transaction Insight database. This Windows executable uses information from the Instream validation results file and (optionally) from an EDI file.
Configuration file	Importer.ini Determines how Importer connects to the Transaction Insight database. Keep Importer.ini and Importer.exe in the same directory.
Default location	C:\Foresight\TransactionInsight\ <i>version</i> \Environments\ <i>envname</i> \bin Where: <i>version</i> Transaction Insight version number such as 5.2.0. <i>envname</i> User-supplied name of the environment set up during installation.
Documentation	Importer.pdf

Settings in Importer.ini

Inside Importer.ini, customize **connectstring** under **[Database]** as explained in the file. This will be preconfigured from the information you entered during installation and it also appears in Web.config. For details, see **Importer.pdf**.

Examples

Oracle connectstring=DATABASE=OR10_MEATHEAD; UID= QAadmin1;PWD= w2e3r4t5

SQL Server connectstring=DRIVER={SQL
Server};SERVER=FCDOC01;DATABASE=Demo;UID=QAadmin1;PWD= w2e3r4t5

or

connectstring=DRIVER={SQL Server}; SERVER=FCDOC01;DATABASE=Demo;
Trusted_Connection= yes

Instream

See Appendix H: Instream and Transaction Insight on page 99 for details.

TIMatcher

Executable	TIMatcher.jar (run by TIMatcher.bat)
Purpose	Matches related documents in the Transaction Insight database. When the portal user displays a Document Summary page, a list of matching documents appears at the bottom with links. To make the list appear, use web.config setting: <add key="Matching" value="true"></add>
Configuration file	TIMatcher.config.
Default location	The Transaction Insight environment's bin directory.
Documentation	TIMatcher.pdf

Web.config settings

See Appendix K: Web.config Settings on page 107.

TIWeb

Executable	None
Purpose	Web application that lets users view statistics, correct EDI errors, and administer application level security. It uses information in the Transaction Insight database.
Configuration file	Web.config. This file may contain a username and password to the database and must be protected from access via the web.
Other configuration	ASPNet User must have full read/write access to all folders in the TIWeb directory. This includes any folders created during Transaction Insight execution (for example, TIWeb's Temp directory).
Default location	Web.config is found in the virtual directory of the web application. By default, this is: C:\Foresight\TransactionInsight\ <i>version</i> \Environments\ <i>envname</i> \TIWeb Where: <i>version</i> Transaction Insight version number such as 5.2.0 <i>envname</i> User-supplied name of the Transaction Insight environment specified during installation
Documentation	TIB_transactioninsight_ <i>version</i>_commonadmin.pdf TIB_transactioninsight_ <i>version</i>_usersguide.pdf.

Web.config settings

See Appendix K: Web.config Settings on page [107](#).

TIUtilities

Installs with TIWeb. There is no separate TIUtilities installation program.

Executable	TIUtilities.exe
Purpose	After Importer.exe imports a transmission into the Transaction Insight database, TIUtilities.exe processes it by: <ul style="list-style-type: none">▪ Populating summarized statistical database tables.▪ Creating new tasks for each application document that has errors.▪ Deleting data from the Transaction Insight database after certain administrator-specified conditions are met (see Expiring data below).▪ Generating filter values and automatically assigning them to partners using the information given on the Filters page. See TIB_transactioninsight_ <i>version</i>_commonadmin.pdf for details.
Configuration file	Any XML file that runs TIUtilities in Systems\ <i>systemname</i> \Workflows\1.0\ <i>workflow</i>
Default location	C:\Foresight\TransactionInsight\ <i>version</i> \Environments\ <i>envname</i> \bin Where: <i>version</i> Transaction Insight version number such as 5.2.0. <i>envname</i> User-supplied name of the environment (or site) where Transaction Insight was installed
Documentation	TIUtilities.pdf

Settings in TIUtilities XML files

For details, see **TIUtilities.pdf**.

Expiring data

The Transaction Insight 5.0.0 and later database is partitioned so large-scale data removal is now handled by your database administrator.

Protecting your Database

- Back up your database frequently and be sure the backups can be used to restore.
- **Never, ever, make manual changes to your Transaction Insight database.** Manually changing your database can irrevocably damage it, and TIBCO Foresight may not be able to help you recover.
- Set up permissions that protect it against such changes from others at your company.
- Use TIBCO Foresight-provided scripts, and call TIBCO Foresight if you have database issues or questions.

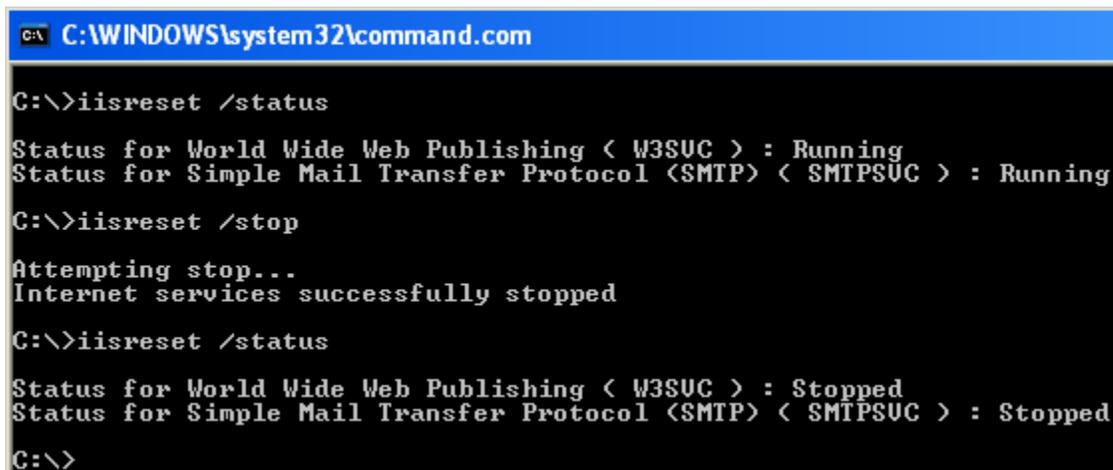
Starting and Stopping IIS

To start or stop Internet Information Services, go to the command line on the portal machine and type one of these:

```
iisreset /start  
iisreset /stop  
iisreset /status
```

Example

This example checks the status of IIS (World Wide Web Publishing) and finds it running. It then stops it and checks the status again.



```
C:\WINDOWS\system32\command.com  
  
C:\>iisreset /status  
Status for World Wide Web Publishing < W3SUC > : Running  
Status for Simple Mail Transfer Protocol <SMTP> < SMTPSUC > : Running  
C:\>iisreset /stop  
Attempting stop...  
Internet services successfully stopped  
C:\>iisreset /status  
Status for World Wide Web Publishing < W3SUC > : Stopped  
Status for Simple Mail Transfer Protocol <SMTP> < SMTPSUC > : Stopped  
C:\>
```

7 Appendix A: Component Choices at Installation

Transaction Insight Components

Back End

Used when importing, summarizing, and matching data in Transaction Insight. This should be used on a machine that is separate from the web server.

<input checked="" type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector. <input type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive <input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish) <input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events <input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish) <input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Name of server.
2. Database information.

If using SQL Server:

Server name:	
lbrownst-T410	
User ID:	Password:
sa	*****
<input type="checkbox"/> Use Windows authentication	
Database name:	
TIDemo	

If using Oracle:

User ID:	Password:
TidbAdmin	*****
Service Name:	
TIDemo	

3. TIUtilities information:

SMTP Server:	mail.tibco.com
E-mail Address:	TIAdmin_Do_Not_Reply@jtibco.com
* E-mail sent by TIUtilities will be "from" this address.	
Web URL:	http://LBROWNST-T410/TIDemo/
*The Web URL tells a client who receives email how to find the server. This will probably include a domain name or IP address if the client is outside your firewall.	

What was installed:

Transaction Insight's bin directory contains:

- AlertProcessor
- Importer
- TIICDAnnotator
- TIMatcher
- TIUtilities
- ScenarioDetector

Transaction Insight database – Created if you selected SQL Server and “Create new database”

Front End

This is the web portal (or GUI) used when interacting with Transaction Insight. Your web browser connects to this server to perform Transaction Insight operations such as viewing documents, transmissions, and statistics.

You will automatically get Back End also.

<input checked="" type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input checked="" type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events
<input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Name of server.
2. Information about the Transaction Insight database.

If using SQL Server:

Server name:	
lbrownst-T410	
User ID:	Password:
sa	*****
<input type="checkbox"/> Use Windows authentication	
Database name:	
TIDemo	

If using Oracle:

User ID:	Password:
TldbAdmin	*****
Service Name:	
TIDemo	

3. Information for the web portal:

Virtual Directory Name:	<input type="text" value="TIDemo"/>
SMTP Server:	<input type="text" value="mail.tibco.com"/>
E-mail Address:	<input type="text" value="TIAdmin_do_not_reply@tibco.com"/> * E-mail sent by programs like TIUtilities will be "from" this address.
Web URL :	<input type="text" value="http://LBROWNST-T410/TIDemo/"/> *The Web URL tells a client who receives email how to find the server. This will probably include a domain name or IP address if the client is outside your firewall.

What was installed

TI's bin directory contains:

- AlertProcessor
- Importer
- ScenarioDetector
- TIICDAnnotator
- TIMatcher
- TIUtilities

Transaction Insight database – Created if you selected SQL Server and “Create new database”

Automator/Foresight Studio and Windows Service Components

These components orchestrate the daily operations of Transaction Insight. Windows Service (or Foresight Service) runs Automator which runs a workflow containing the various Transaction Insight components.

Where to install:

- Put these components on your back end machine to run Importer, TIUtilities, TIMatcher, AlertProcessor, and other programs and on your front end machine (optional) to help with miscellaneous tasks such as moving corrected EDI data files across your network.
- These components are required when installing the Foresight Archive and Retrieval System server and recommended for the Foresight Archive and Retrieval System client.

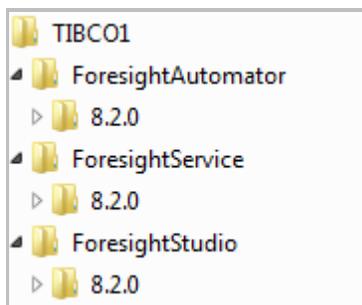
<input type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input checked="" type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events
<input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

- Name for environment.
- Whether to install a new Automator or re-use an existing one.

What was installed

Directories:



Databases

- None

Foresight Archive and Retrieval System Components

Foresight Archive and Retrieval System stores your files in a repository so that they can be accessed easily through the Foresight Archive and Retrieval System portal.

Where to install:

- The client piece may be used anywhere in your enterprise to import files into the archive. For simplicity, consider installing the client and server pieces on the same server.
- The server exposes import and retrieval capabilities through web services using Payara (GlassFish). (Automator is required to orchestrate the processes that are used to do this.)
- The front end plugs into your Transaction Insight web server and uses web services to search the archive and view the files that have been retrieved.

During Foresight Archive and Retrieval System installation, you will be asked for information about the Transaction Insight database and the Foresight Archive and Retrieval System database. Please read the title of the dialog boxes to see which database is being described.

Foresight Archive and Retrieval System Client

TIBCO Foresight Studio is recommended, but not required, when you install Foresight Archive and Retrieval System Client.

<input type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input checked="" type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events
<input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Name of server.
2. Information about the **Foresight Archive and Retrieval System** database:

If database is SQL Server:

Server name:	
Lbrownst_T410	
User ID:	Password:
sa	*****
<input type="checkbox"/> Use Windows authentication	<input type="checkbox"/> Show password
Database name:	
ArchiveDemo	<input type="checkbox"/> Create new database

If database is Oracle:

User ID:	Password:
Tladmin	*****
<input type="checkbox"/> Show password	
Service name:	
ArchiveDemo	

What was installed

Foresight Archive and Retrieval System database – Created if you selected SQL Server and “Create new database.” Foresight Archive and Retrieval System’s DBScripts directory contains scripts to create the Foresight Archive and Retrieval System database.

Foresight Archive and Retrieval System’s Java directory contains Archiver.jar.

Foresight Archive and Retrieval System Server

When you select Foresight Archive and Retrieval System Server, you will automatically get:

- Transaction Insight Back End
- Automator, Foresight Studio, and Foresight Service - needed for the workflows used by the server’s web services.

<input checked="" type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector. <input type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input checked="" type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive <input checked="" type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish) <input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events <input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish) <input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Whether to install a new Automator or re-use an existing one.
2. Location of Instream.
3. Name for environment.
4. Information about the **Transaction Insight** database (Foresight Archive and Retrieval System database information will be collected later).
5. Information for TIUtilities.
6. Information about your existing Payara (GlassFish) implementation.
Values are pre-set to Payara defaults.
7. Information about the Foresight Archive and Retrieval System database (not the Transaction Insight database).

What was installed

Transaction Insight and Foresight Archive and Retrieval System databases – Created if you selected SQL Server and “Create new database”

Transaction Insight’s bin directory contains:

- AlertProcessor
- Importer
- TIICDAnnotator
- TIMatcher
- TIUtilities
- ScenarioDetector

Foresight Archive and Retrieval System’s Java directory contains Archiver.jar.

Foresight Archive and Retrieval System Front End

When you select Foresight Archive and Retrieval System Front End – Web Portal, you will automatically get:

- Transaction Insight Back End
- Transaction Insight Front End

<input checked="" type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input checked="" type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input checked="" type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input checked="" type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events
<input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Location of existing Instream or location for new installation of Instream.
2. Name for environment.
3. Information about the **Transaction Insight** database (you will enter information about the Foresight Archive and Retrieval System database later).
4. Information for the portal.
5. Information about the **Foresight Archive and Retrieval System** database.

What was installed

Transaction Insight's bin directory contains:

- AlertProcessor
- Importer
- TIICDAnnotator
- TIMatcher
- TIUtilities
- ScenarioDetector
- Foresight Archive and Retrieval System database – Created if you selected SQL Server and “Create new database.” Foresight Archive and Retrieval System's DBScripts directory contains scripts to create the Foresight Archive and Retrieval System database.

Foresight Operational Monitor Components

Foresight Operational Monitor tracks events at a series of collection points distributed throughout your enterprise.

Where to install:

- Foresight Operational Monitor functions are built into Automator so include Automator and the OMPProcessor anywhere that you plan to collect events.
- Front End goes on the same server as Transaction Insight's front end. It installs the Foresight Operational Monitor portal pages.

OMPProcessor

<input type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input checked="" type="checkbox"/> OMPProcessor - processes client events
<input type="checkbox"/> Server - requires OMPProcessor and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Name for environment.
2. Information about the Foresight Operational Monitor database.
3. Information about the email settings for Foresight Operational Monitor.

What was installed

- Foresight OperationalMonitor's bin directory contains OMPProcessor.bat.
- Foresight Operational Monitor database – Created if you selected SQL Server and “Create new database.” Foresight Operational Monitor's DBScripts directory contains scripts to create the Foresight OperationalMonitor database.

Foresight Operational Monitor Server

When you select Foresight Operational Monitor's Front End - Server, you will automatically get:

- Foresight OperationalMonitor's OMPProcessor

<input type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input checked="" type="checkbox"/> OMPProcessor - processes client events
<input checked="" type="checkbox"/> Server - requires OMPProcessor and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Name for environment.
2. Information about the Foresight Operational Monitor database.
3. Information about the email settings for Foresight Operational Monitor.
4. Information about the **Foresight Operational Monitor** database (not the Transaction Insight database).
5. Connection information.
6. Information about your existing Payara (GlassFish) implementation.
Values are pre-set to Payara defaults.

What was installed

- Foresight OperationalMonitor's bin directory contains OMPProcessor.bat.
- Foresight Operational Monitor database – Created if you selected SQL Server and “Create new database.” Foresight Operational Monitor's DBScripts directory contains scripts to create the Foresight OperationalMonitor database.

Foresight Operational Monitor Front End

When you select Foresight Operational Monitor's Front End - Web Portal, you will also get:

- Transaction Insight Back End
- Transaction Insight Front End

<input checked="" type="checkbox"/> Back End - AlertProcessor, Importer, TIICDAnnotator, TIMatcher, TIUtilities, ScenarioDetector.
<input checked="" type="checkbox"/> Front End - Web Portal and AlertProcessor
TIBCO Foresight Studio
<input type="checkbox"/> Studio / Automator / Windows® Service
TIBCO Foresight Archive and Retrieval System
<input type="checkbox"/> Client - imports data into the Archive
<input type="checkbox"/> Server - requires Back End, Automator and Payara (GlassFish)
<input type="checkbox"/> Front End - Web Portal - requires TI Front End
TIBCO Foresight Operational Monitor
<input type="checkbox"/> OMProcessor - processes client events
<input type="checkbox"/> Server - requires OMProcessor and Payara (GlassFish)
<input checked="" type="checkbox"/> Front End - Web Portal - requires TI Front End

Information to enter:

1. Name for environment.
2. Location of existing Instream or location for new installation of Instream.
3. Information about the **Transaction Insight** database (you will enter information about the Foresight Operational Monitor database later).
4. Information about the portal.
5. Information about the **Foresight Operational Monitor** database.
6. Information about the email settings for Foresight Operational Monitor.

What was installed

Transaction Insight's bin directory contains:

- AlertProcessor
- Importer
- ScenarioDetector
- TIICDAnnotator
- TIMatcher
- TIUtilities

Databases:

- Foresight Operational Monitor database or scripts

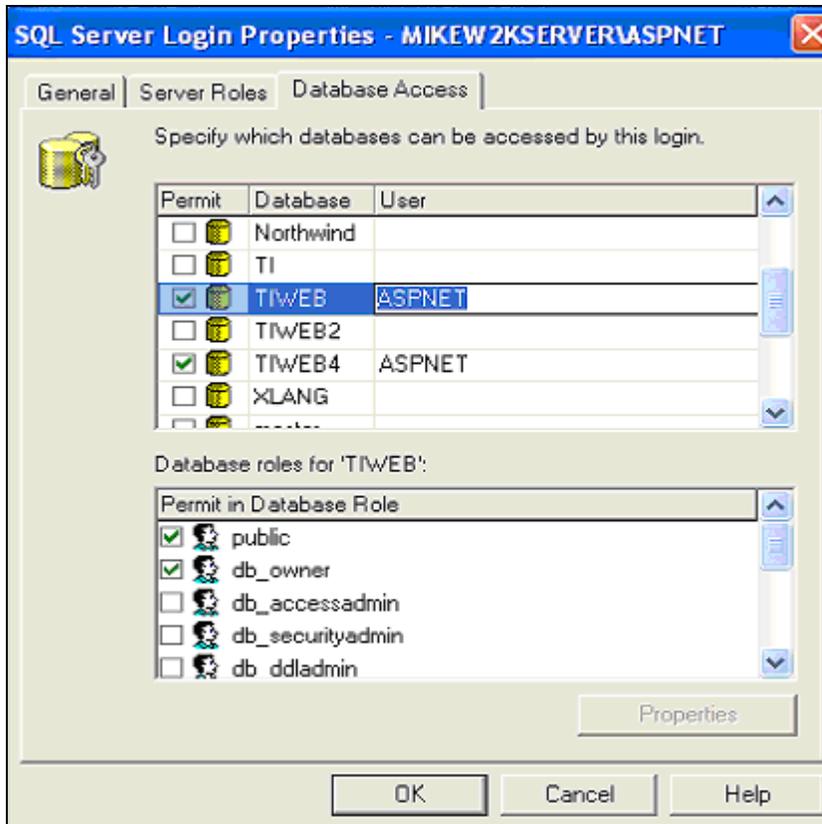
8 Appendix B: Windows Integrated Security

A typical installation creates a user ASPNET and gives it access to the Transaction Insight database. The password for ASPNET is stored in the Web.config file on the web server

You can avoid storing this sensitive information in Web.config by using Windows Integrated Security. In that case, the username will be the one that is running the web server.

You will need to give that username access to the Transaction Insight database:

1. Edit the XML file **Web.config** on the web server machine.
Look for <appSettings> and replace the UID and PWD entries with **Integrated Security=true**
2. On the database machine, check SQL Server Login to be sure that the user that will run the web server has owner privileges for the Transaction Insight database. In this example, the Transaction Insight database is called TIWEB and the user running the web server is ASPNET.



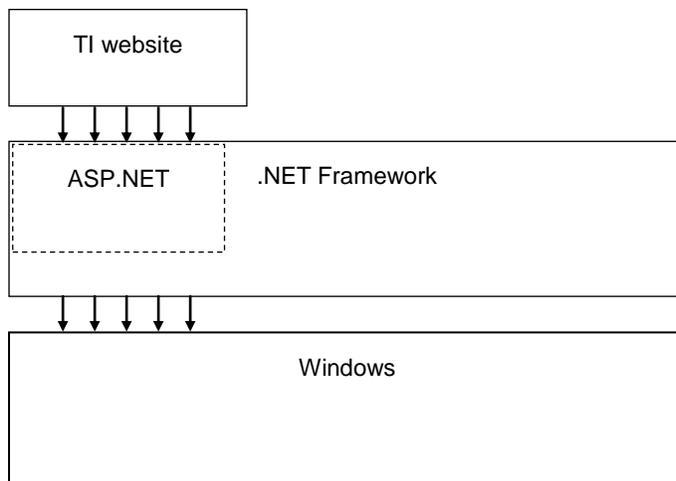
9 Appendix C: .NET

Overview of .NET and Transaction Insight

Microsoft's .NET Framework must be installed on the web server before you install Transaction Insight.

The .NET Framework is Microsoft's managed code development platform for creating secure, high-quality software applications.

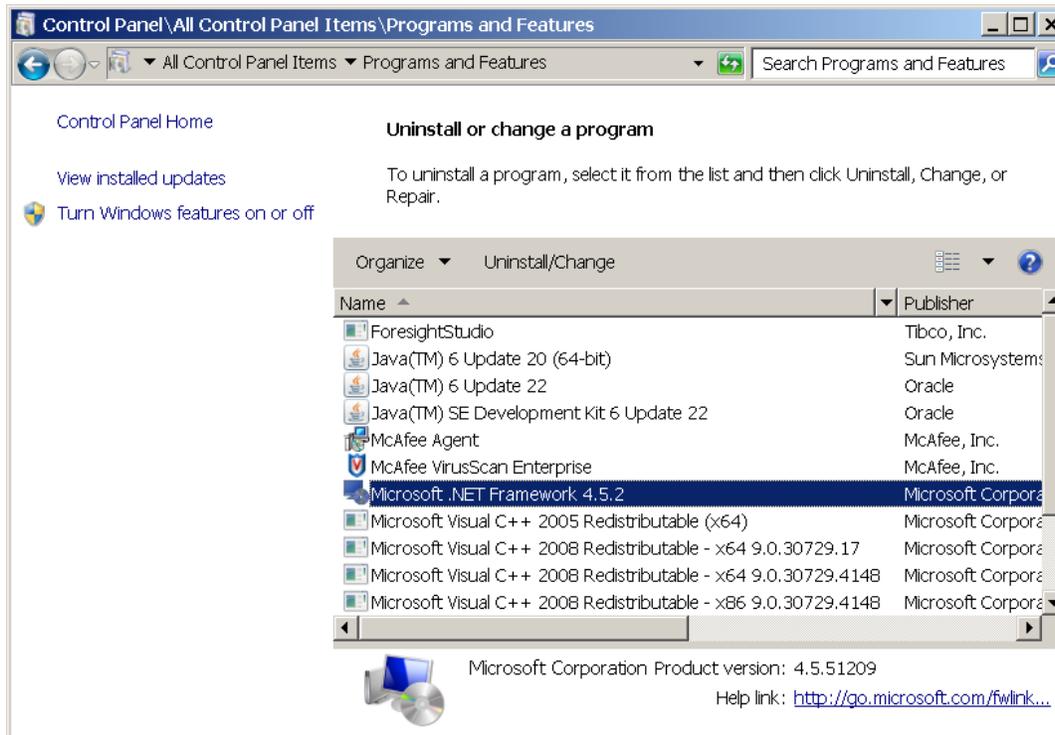
Transaction Insight is built using ASP.NET, a component of .NET Framework for developing web sites, web applications, and web services.



Checking for .NET

.NET 4.5 is required on the Transaction Insight web server. .NET 4.5 is installed on Windows Server 2012 by default, but must be downloaded and installed on Windows Server 2008 R2.

To see if .NET version 4.5 or later is installed, look in **Control Panel -> Programs and Features** for an entry that starts with "Microsoft .NET Framework 4". For example:



Installing .NET 4.5

You can download the **.NET Framework Version 4.5 Redistributable Package** from <http://www.microsoft.com/downloads>. You can download the web installer, which requires an Internet connection, or the offline installer which does not (and is larger). The latest version of .NET Framework 4.5 is recommended. At the time of this writing the latest version is 4.5.2 and these links will take you directly to the relevant downloads.

.NET 4.5.2 Web Installer - <http://go.microsoft.com/fwlink/?LinkId=397707>

.NET 4.5.2 Offline Installer - <http://go.microsoft.com/fwlink/?LinkId=3977>

10 Appendix D: Network Load Balancing

Overview

You can set up multiple servers that work together to provide better performance and reliability, while appearing to be a single system to your Transaction Insight users.

In Windows, you can use Microsoft Network Load Balancing (NLB), where each host runs separate copies of the server application. Incoming requests are distributed among the clustered servers.

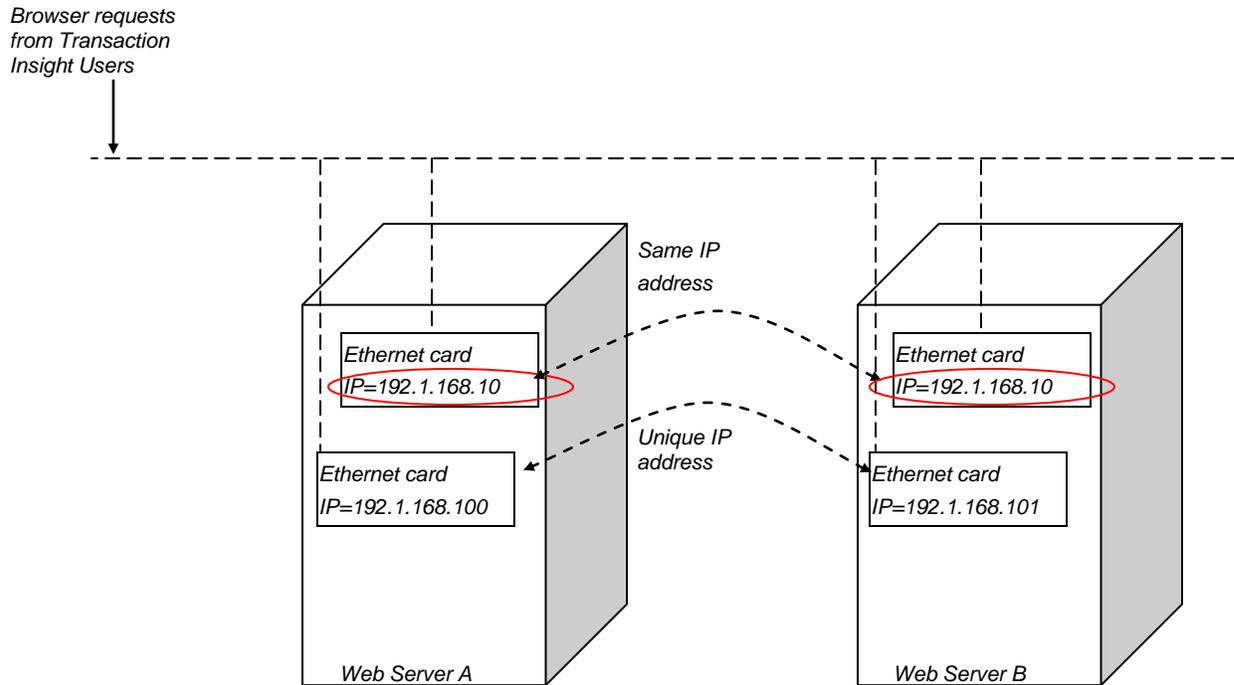
When a host fails or goes offline, active connections are lost but the new incoming load is automatically redistributed among the other hosts. A drawback: If a server has failed but is still responding to the network, the NLB system will continue to send users to it.

This method requires two network cards on each machine. One card on each machine must be capable of NLB.

All of the computers in the cluster have the same cluster IP address – the one that maps to the Internet address used by Transaction Insight browsers.

Each server also retains its own unique, dedicated IP address.

You can cluster up to 32 servers, which must all be located on the same subnet.



Preparing to Set up NLB

Important

If using NLB, set it up before installing Transaction Insight.

1. Install all Transaction Insight prerequisites on the machines.
2. Request a cluster IP address and create a DNS record for it.
3. Install IIS on each machine:
 - Log on as the domain administrator on both web server machines.
 - Go to Control Panel's Add/Remove Programs and choose Add/Remove Windows Components.
 - Select Application Server (or IIS) / Details.
 - Select ASP.net, IIS, and Com+.
4. Run IIS Administrator under **Control Panel | Administrative Tools | Internet Information Services (IIS)** and ensure that ASP.NET is enabled.
5. Set up NLB on each machine (see below)

After setting up NLB, you are ready to run the Transaction Insight installation program.

Setting up Network Load Balancing

1. Set up the NLB cluster network card on each machine:
 - a. Under **Control Panel | Network Connections**, select the card to be used for NLB (suggestion: rename it NLB to avoid confusion later) and choose **Properties**.
 - b. Make sure only Network Load Balancing and Internet Protocol are checked.
 - c. Edit the properties of Network Load Balancing and set up the three tabs as follows:

Cluster Parameters – set up information for the clustered IP address including its IP address, subnet mask, and full Internet name. For Cluster operation mode, select **Unicast**. This information will be the same on all clustered machines.

Host Parameters – set up information for the local IP address, including IP address, subnet mark, and priority. Priority is a unique integer assigned to each machine in the cluster. It determines the order in which requests are delivered.

Port Rules – check the settings. Single affinity is recommended so that users can reconnect to the same session if they are disconnected.
2. Return to the NLB properties and edit the properties of **Internet Protocol**.

Select Use the following IP addresses.

Insert the NLP cluster IP, subnet mask, and default gateway.

Insert the DNS server addresses.
3. Verify the setup by going to the command line and running **ipconfig /all**. You should see the dedicated IP and clustered IP addresses.

Connecting to the NLB Cluster

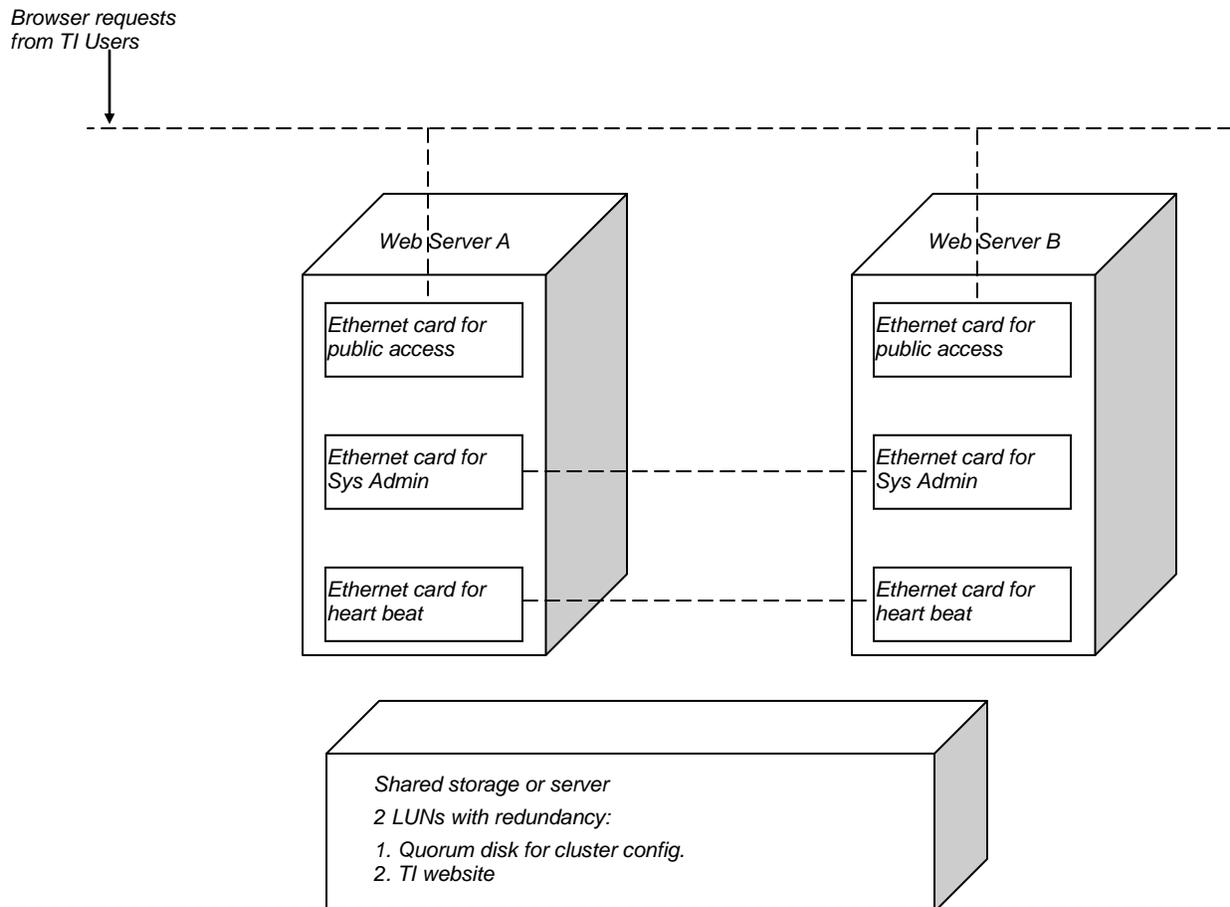
Direct browsers to the shared IP address or the Internet address that points to it.

11 Appendix E: Network Clustering

Overview

Microsoft Windows Server clustering provides failover – when the primary server fails, a backup server takes over with no loss of data or functionality.

Example Configuration



When web server A is active, web server B is not responding to browser requests, but it is tracking all actions by web server A.

When web server A fails, web server B immediately takes up where A left off.

On the public Ethernet card, each server has its own IP address.

In addition, the active machine has a cluster IP address and a Transaction Insight cluster IP address. These two addresses are attached to the active server and move when a fail over occurs.

Example

Web server A is the primary server for handling browser requests from Transaction Insight users. Web server B is the backup.

- Both have unique permanent machine IP addresses for the public access Ethernet connection.

In this example, A has 192.168.1.180 and B has 192.168.1.181.

- In addition, whichever server is active has two additional public IP addresses. When the active server fails, the cluster software automatically moves these to the other server.

In this example, the addresses 192.168.1.179 and 192.168.1.175 will be on the active server and not on the passive one.

	IP addresses for server A	IP addresses for server B
Machine IP address	192.168.1.180	192.168.1.181
Cluster IP address	192.168.1.175 – points to <i>www.ourcompany.com</i>	
TI cluster IP address	192.168.1.179 – points to <i>www.TI.ourcompany.com</i>	

12 Appendix F: Payara (GlassFish)

If you will be using Web Services or using Transaction Insight to view EDIFACT transactions, Payara (formerly GlassFish) is required. You can obtain Payara software and detailed installation instructions from the following link: <http://www.payara.fish/downloads>.

Platform	Required Payara (GlassFish) Version	Required Java Version
Windows	Payara Server 4.1	Sun Java Runtime Environment 1.8.x (JDK required for Payara).
Red Hat Enterprise Linux Server	Payara Server 4.1	Sun Java Runtime Environment 1.8.x (JDK required for Payara) or OpenJDK Java Runtime Environment 1.8.x (JDK required for Payara).
AIX	Payara Server 4.1	IBM Java Runtime Environment 1.8 (JDK required for Payara).

Installation

1. Unzip the package and place the newly created folder anywhere on your system.
(The rest of this section assumes you are on Windows and have placed Payara (GlassFish) in the root of the C: drive: e.g. C:\payara41.)
2. A default domain (domain1) is configured ready to run. To start the domain, cd to the bin directory
`cd C:\payara41\bin`
3. Use the asadmin tool
`asadmin start-domain domain1`
4. To install Payara as a Windows service:
`asadmin create-service --name domain1`
5. To rename the Windows service:
`sc config domain1 DisplayName= " Payara domain1"`

See **Webservices_at_Foresight.pdf** for more information about Payara (GlassFish).

13 Appendix G: Database Scripts

Overview

During database creation, scripts are used to create tables, indexes, and constraints, as well as to populate code and setting tables with their initial values. During a database upgrade, scripts are used to update stored procedures, functions, and views.

Note: SQLServer uses the term “database” while Oracle uses “schema.” For our purposes, the terms database and schema are the same.

Location of Database Scripts

After unzipping the install package, database scripts are found in these directories:

- \SqlServerScripts
- \OracleScripts.

Creating a new Database

Caution The scripts referenced in the following sections are only for creating a **NEW** Transaction Insight, Foresight Archive and Retrieval System, or Foresight Operational Monitor database. If you are upgrading a database for Transaction Insight, Foresight Archive and Retrieval System, or Foresight Operational Monitor, see [Upgrading Databases](#) on page 97.

There are two ways to create a database:

- (SQL Server only) Select **Create new database** during installation and the installation program creates and customizes the database for you.
Using this method, no database scripts are required and the information in this section does not apply.
- (SQL Server and Oracle) Run the scripts yourself, before or after running the installation program.
Follow the procedures in this section.

After either method, you may be required to run Hotfix scripts to bring the system to its most current version.

Before you Begin

Before running the database scripts:

1. Give the exact names and server locations to the person who will be installing the portal applications with instructions to “use” the databases rather than “create” them.
2. Create an empty database for Transaction Insight, Foresight Archive and Retrieval System, and Foresight Operational Monitor if they are to be installed.
3. (Oracle only) Set required permissions. You can run the scripts as a:
 - user with the DBA role – this approach requires minimal permissions
 - schema owner – this approach requires additional permissions be given to the schema owner, some of which you may wish to revoke after the scripts have been executed.

See [Setting Permissions when Running Scripts as DBA](#) or [Setting Permissions when Running Scripts as Schema Owner](#) below.

Setting Permissions when Running Scripts as DBA (Oracle only)

In this mode the schema owner is given minimal permissions. This procedure assumes a schema named "TI" has been created and granted the "UNLIMITED TABLESPACE" and "CONNECT" privileges.

1. Log in to your Oracle server as a user with the DBA role.
2. Assign minimal permissions to the Transaction Insight schema.

```
GRANT CREATE VIEW TO TI;
```

3. Set target schema where objects will be created.

```
ALTER SESSION SET CURRENT_SCHEMA=TI;
```

4. Continue with the steps found in [Creating the Transaction Insight Database on page 95](#), [Creating the Foresight Archive and Retrieval System Database on page 96](#), or [Creating the Foresight Operational Monitor Database, on page 97](#).

Setting Permissions when Running Scripts as Schema Owner (Oracle only)

Note: If you decide to use a role to assign privileges to the schema owner you must still assign the CREATE VIEW privilege directly to the user because it is used within a stored procedure. Privileges granted indirectly through a role are not available to the user inside a stored procedure.

In this mode the schema owner is first granted the necessary privileges and then that user logs in and runs the scripts. This procedure assumes a schema named "TI" has been created and granted the "UNLIMITED TABLESPACE" and "CONNECT" privileges.

1. Log in to your Oracle server as a user with the DBA role.
2. Execute the following commands.

```
GRANT CREATE VIEW TO TI;  
GRANT CREATE SEQUENCE TO TI;  
GRANT CREATE TABLE TO TI;  
GRANT CREATE TRIGGER TO TI;  
GRANT CREATE PROCEDURE TO TI;  
GRANT CREATE SYNONYM TO TI;  
GRANT CREATE TYPE TO TI;
```

3. Log in as the schema owner.
4. Continue with the steps found in [Creating the Transaction Insight Database \(below\)](#), [Creating the Foresight Archive and Retrieval System Database on page 96](#), or [Creating the Foresight Operational Monitor Database, on page 97](#).

Creating the Transaction Insight Database

If you **DID NOT** create a Transaction Insight database from the Transaction Insight 5.2.0 installation program, create a new database (SQL Server) or schema (Oracle) and run these scripts **in sequential order** to create and configure the Transaction Insight database:

1. Run the following script:

```
TIB_fsp_transactioninsight_create_partitioned_schema_5.2.0.sql
```

2. (Oracle only) Compile fs_dbms_output package to avoid ORA-04068:

```
ALTER PACKAGE fs_dbms_output COMPILE;
```

3. Run the following script:

```
TIB_fsp_transactioninsight_proc_and_views_5.2.0.sql
```

Creating the Foresight Archive and Retrieval System Database

If you **DID NOT** create a Foresight Archive and Retrieval System database from the Transaction Insight 5.2.0 installation program, create a new database (SQL Server) or schema (Oracle) and run these scripts **in sequential order** to configure the database:

1. Run the following script:

```
TIB_fsp_transactioninsight_create_partitioned_schema_5.2.0.sql
```

2. (Oracle only) Compile fs_dbms_output package to avoid ORA-04068:

```
ALTER PACKAGE fs_dbms_output COMPILE;
```

3. Run the following script:

```
TIB_fsp_transactioninsight_proc_and_views_5.2.0.sql
```

4. Run the following script:

```
TIB_fsp_archive_create_partitioned_schema_5.2.0.sql
```

Creates tables, indexes, views, procs, functions, constraints, etc.

5. Run the following script:

```
TIB_fsp_archive_proc_and_views_5.2.0.sql
```

Creates stored procedures, functions and views.

6. Edit the following script (see the following section) and then run it:

```
TIB_fsp_archive_load_filter_maps_5.2.0.sql
```

Loads a minimal set of filter maps that can be used to search the archive. It contains detailed instructions about how to customize the filter maps for your environment.

Editing TIB_fsp_archive_load_filter_maps_5.2.0.sql

This script makes four example filters for the Foresight Archive and Retrieval System Search page.

This script entry makes a filter called Sender ID:

(SQL Server database):

```
EXECUTE [dbo].[MakeFilter] 'PRN:ISA06', 'TRANSFILTER001', 0, 'Sender ID',  
    'ALL', 'ALL';
```

(ORACLE database):

```
call #DATABASE_NAME#.MakeFilter('PRN:ISA06', TRANSFILTER001', 0, 'Sender ID',  
    'ALL', 'ALL');
```

When the user types an ISA06 value into the filter from Foresight Archive and Retrieval System's Search page, all archived files with that value in the ISA06 will be in the Search Results.

Leave the four example filters in the script if you want to make them available on Foresight Archive and Retrieval System's Search page, or you can remove them. Using the same pattern, add your own filters to the script. Follow the comments in the script for the exact format. When finished, run the script. Documents that come into Foresight Archive and Retrieval System after you do so will be flagged for this filter.

Creating the Foresight Operational Monitor Database

If you **DID NOT** create a Foresight Operational Monitor database from the Transaction Insight 5.2.0 installation program, create a new database (SQL Server) or schema (Oracle) and run these scripts **in sequential order** to configure the database:

1. Run the following script:

```
TIB_fsp_opmon_create_partitioned_schema_5.2.0.sql
```

Creates tables, indexes, constraints, etc.

2. Run the following script:

```
TIB_fsp_opmon_proc_and_views_5.2.0.sql
```

Creates stored procedures, functions and views.

Upgrading Databases

Caution The scripts referenced in the following sections are specific to upgrading a Transaction Insight, Foresight Archive and Retrieval System, or Foresight Operational Monitor database from Release 5.1.0 to Release 5.2.0. If you are creating a new database for Transaction Insight, Foresight Archive and Retrieval System, or Foresight Operational Monitor, see [Creating a new Database on page 94](#).

Note for SQL Server Upgrades

SQL Server database upgrades may utilize a large number of system resources. To minimize this, we recommend the following procedure:

1. Take a full database backup.
2. Change the recovery mode to “Bulk-Logged.”
3. Run the appropriate Upgrade Schema script (see the following sections).
4. Run the appropriate Procs and Views script (see the following sections).
5. Change the recovery mode to “Full.”
6. Take a full database backup.

Upgrading the Transaction Insight Database from Release 5.1.0 to Release 5.2.0

NOTE: You can only upgrade from a Transaction Insight 5.1.0 database to a 5.2.0 or newer database. There is no upgrade path from previous versions to Transaction Insight 5.1.0 and later. You must use a new environment with a new database.

Run the following database scripts **in sequential order** to upgrade your database to 5.2.0.

1. Run the following script:

```
TIB_fsp_transactioninsight_upgrade_schema_5.2.0.sql
```

2. Run the following script:

```
TIB_fsp_transactioninsight_procs_and_views_5.2.0.sql
```

Upgrading the Foresight Archive and Retrieval System Database from Release 5.1.0 to Release 5.2.0

NOTE: You can only upgrade from a Foresight Archive and Retrieval System 5.1.0 database to a 5.2.0 or newer database. There is no upgrade path from previous versions to Foresight Archive and Retrieval System 5.1.0 and later. You must use a new environment with a new database.

Run the following database scripts **in sequential order** to upgrade your database to Foresight Archive and Retrieval System 5.2.0.

1. Run the following script:

```
TIB_fsp_transactioninsight_upgrade_schema_5.2.0.sql
```

2. Run the following script:

```
TIB_fsp_transactioninsight_procs_and_views_5.2.0.sql
```

3. Run the following script:

```
TIB_fsp_archive_upgrade_schema_5.2.0.sql
```

4. Run the following script:

```
TIB_fsp_archive_procs_and_views_5.2.0.sql
```

Upgrading the Foresight Operational Monitor Database from Release 5.1.0 to Release 5.2.0

No scripts are required to upgrade your Foresight Operational Monitor Database from 5.1.0 to 5.2.0.

14 Appendix H: Instream and Transaction Insight

About Instream

Executable	HVInStream.exe
Configuration files	APF files, guidelines, various INI files, CSV files for partner automation
Default location	Selected during installation
Documentation	InstreamValidationTechnicalManual.pdf

Synchronizing Validation and Re-Validation Instreams

The “validation Instream”

Before being imported into Transaction Insight or Foresight Archive and Retrieval System, EDI is validated with Instream and the detail file sent to Importer.

The “revalidation Instream”

When a Transaction Insight user changes data on a form and chooses Validate, the corrected data is sent to Instream. It is identified by InStreamDirectory in Web.config.

It is easier to keep validation consistent if these are the same installation of Instream. If not, be sure they have the same version, guidelines, code lists, custom error message files, and profiles.

These items are used to populate drop-down lists on the forms and on the Code Lookup page.

Updating Error Messages in the Transaction Insight database

Please read [Synchronizing_TI_and_Instream.pdf](#).

Custom Error Messages

If you will be importing documents that have been validated with your own guidelines, and those guidelines use custom error messages, please read [ManagingCustomErrorMessages.pdf](#), a part of Instream documentation. You will need to contact TIBCO Foresight Support to get an Oracle or SQL Server script to run after you have finished setting up your database. This will add your custom error messages into Transaction Insight.

15 Appendix I: Troubleshooting

General Login Page Problems

- Be sure that IIS is running (see page 67).
- You may have to add Default.aspx to the URL.
- Open Web.config for that environment (under 'TI's Environments*envname*\ TIWeb directory) and check the WebApplicationUrl setting.
- In Control Panel, choose **Administrative Tools | Internet Information Services** and be sure that ASP.NET is set to Allowed.

HTTP Error 403 - Access Denied

If users outside of your domain are being denied access with a HTTP Error 403, be sure that these match:

- IIS username and password for anonymous access
- The web server's local Windows username and password for anonymous access

This should be done by a network administrator. The general areas to check are as follows.

To set the IIS anonymous username and password:

1. Go to **Control Panel | Administrative Tools | Internet Information Services** and expand the local computer and Web Sites.
2. Right-click on the Transaction Insight website (usually Default Web Site) and choose **Properties**.
3. Choose the Directory Security tab and edit Anonymous access and authentication control.
3. Turn off Allow IIS to control password.
4. Note the username and type a password for the local machine's anonymous access.

To set a matching username/password for the local machine's anonymous username and password:

1. Go to **Control Panel | Administrative Tools | Computer Management** and expand Local Users and Groups.
2. Click **Users**.
3. Make sure the Internet Guest Account has the same username as the one in IIS.
4. Right-click on the **Internet Guest Account** and chose **Set Password**. Type the same password.

Problems with Global.aspx

To fix problems with Global.aspx:

1. From the command prompt, under WINDOWS or WINNT, go to the Microsoft.NET\Framework\v2.0.50727.
2. Run this: `aspnet_regiis -iru`
3. Run this: `aspnet_regiis -ga ASPNET`
4. Run this: `aspnet_regiis -s W3SVC/1/ROOT/SampleApp1`

Where *SampleApp1* is your Transaction Insight website

Example: For Transaction Insight website <http://TI-TEST/TIprototype>, this command would be:

```
aspnet_regiis -s W3SVC/1/ROOT/TIprototype
```

You can look up your Transaction Insight website in Web.config:

```
<add key="WebApplicationUrl" value="http://TI-TEST/TIprototype/" />
```

Problems Starting TIUtilities

See [TIUtilities.pdf](#).

Importer Problems

See [Importer.pdf](#).

TIMatcher Problems

If a listing of matching documents with links does not appear at the bottom of the Document Summary page, update your web.config setting as shown here:

```
<add key="Matching" value="true"></add>
```

See **TIMatcher.pdf**.

Custom Error Message Problems

Custom error messages (in the 32000-32999 range) that have not been defined in the Transaction Insight database will display as UNKNOWN on the Top 10 Errors page:

32201	17814	<input type="text" value="Choose Category"/>	[UNKNOWN_32201 Inserted by Importer]
32203	5280	<input type="text" value="Choose Category"/>	[UNKNOWN_32203 Inserted by Importer]

You will need to import the custom error messages into your Transaction Insight database. See **ManagingCustomErrorMessages.pdf** in Instream's doc directory.

On other pages, custom errors will display as they appear in the imported DTL file.

ASP.NET-related Errors

Microsoft has a limit to the number of data elements on an ASP.NET form, and this limit can cause various errors when trying to load a Transaction Insight page with a large amount of data. Look for the text "ThrowIfMaxHttpCollectionKeysExceeded" in the message.

An Internet search will provide more information about this setting. To resolve this issue, add the following key within the <appsettings> section of the Web.config for each of your web servers. The value of 2000 should suffice in most cases. As always, please test before promoting to production.

```
<appsettings>
```

```
<add key="aspnet:MaxHttpCollectionKeys" value="2000"></add>
```

```
</appsettings>
```

Oracle -related Errors

TIUtilities may log an error indicating it can't find oraocci12.dll even though it is in the PATH.

```
965:MainThread.cpp      | 09:32:27 | VERBOSE: Config - Confidential Identifiers File set to: C:\
968:MainThread.cpp      | 09:32:27 | VERBOSE: Config - DB type set to: Oracle
20:oracleDelayLoad.cpp | 09:32:27 | ERROR: Could not load Oracle library (oraocci12.dll).
System error message: The specified module could not be found.
Is the 64-bit Oracle Instant Client version 12.1 in your PATH
```

This occurs on Windows with Oracle systems when TIUtilities or Importer is copied or moved without using the Transaction Insight Installation program. In this situation, manually install Visual C 2010 runtime, which is available from Microsoft as "Microsoft Visual C++ 2010 Service Pack 1 Redistributable Package MFC Security Update" (<https://www.microsoft.com/en-us/download/details.aspx?id=26999>). The executable "vcredist_x64.exe" is required.

Database Problems

CAUTION

Never modify your database directly in any way, including with a script. This can cause problems that cannot be fixed. Make changes through TI Portal or contact TIBCO Foresight Support.

If you wish to extract data from the database, the TIBCO Foresight® BI Bridge® - BAM Extract tool is meant to accomplish this. Contact your TIBCO Foresight TIBCO Foresight Support for details.

Improving Database Performance

Databases use "statistics" to determine the best algorithm for any operation and thereby affect database performance. Statistics should be "gathered" regularly for optimal performance. These example commands will manually update statistics for your database and may improve performance.

SQL Server example

```
-- Update statistics for ALL tables in current database
EXEC sp_updatestats
```

Oracle example

```
-- Update statistics for ALL tables in schema "SOMESCHEMA"
begin
dbms_stats.gather_schema_stats(ownname=> 'SOMESCHEMA' , cascade=> TRUE);
end;
/
```

16 Appendix J: Customizing Web Page Styles

Style Overview

You can customize the look of your Transaction Insight web pages.

This is a global change for all web pages in the same environment.

To make style changes, you will need:

- a designer to determine what the pages should look like
- someone with knowledge of CSS
- someone who understands the Transaction Insight directory structure.

Using Transaction Insight Style Sheets

The files that you will edit to make portal style changes are in the environment's TIWeb\Styles directory.

Back up the file before you change it.

The files are:

File	Used by
CustomerStyleSheet.css	Transaction Insight and Common Administration
BaseStyleSheet.html	You, for reference. This chart shows how CSS styles are used.

Do not change any of the.css files for forms, such as ADAForm.css, HCFAForm.css or UB04Form.css. They are optimized for the forms.

Example

To change the Transaction Insight banner color to green:

1. Edit the CustomerStyleSheet.css file (recommended method) **or** create a backup of the BaseStyleSheet.css and edit the original.

(**Note:** If the BaseStyleSheet.css is modified, those changes may be overwritten when an updated version of the file is deployed. That is why we recommend adding custom styling to the CustomerStyleSheet.css.)

2. Add this text to an area that is not commented out:

```
/* styles for the banner at the top of all pages */  
.banner  
{  
    background-color: #009900;  
    border: none;  
}
```

3. Save.
4. Log in to Transaction Insight or refresh the page if already logged in.

17 Appendix K: Web.config Settings

Settings in Web.config file

See TIWeb on page [66](#) for overview information.

Settings in Web.config

The web application uses the standard ASP.NET configuration file format. Your customizations are in the <appSettings> section.

<appSettings> section	
These are user-configurable and specific to TI	
Setting	Explanation/Value
AllowIsolateDocument	<p>Important: TIBCO Foresight does not recommend using the AllowIsolateDocument option, as it can lead to unintended consequences. Contact TIBCO Foresight Technical Support before enabling this option.</p> <p>AllowIsolateDocument is not present in the default Web.config file installed with Transaction Insight. If added and set to <code>true</code>, a user editing a document that has related documents is given the option to “isolate” the changes to that particular document. By default, Isolation is not available and editing one document impacts all related documents.</p> <p>Note: Related documents are not the same as Matching documents. Related documents appear on the Document Summary page under the section Related Documents.</p> <p>Examples:</p> <p>Form Actions if AllowIsolateDocument is not added:</p> <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;"> <p>The changes you made to the ISA loop will affect 1 other document(s). Changed field(s): Interchange Sender ID Would you like to:</p> <p><input type="radio"/> Save and change all related document(s) <input type="radio"/> Continue editing (don't save yet)</p> </div> <p>Form Actions if AllowIsolateDocument is added:</p> <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;"> <p>The changes you made to the ISA loop will affect 1 other document(s). Changed field(s): Interchange Sender ID Would you like to:</p> <p><input type="radio"/> Save and change all related document(s) <input type="radio"/> Save but make a copy of this document (with its envelope) first so related document(s) will not be affected <input type="radio"/> Continue editing (don't save yet)</p> </div>
Auditing	<p>If set to <code>true</code>, the event log will track many user actions, which you can see under Settings Event Log in the TI Portal. This greatly increases the size of your event log.</p> <p>See TI_Reference_Manual.pdf for details about what information is captured by audit.</p>
CollectorDirectory	Directory containing the Importer.exe used after revalidation of corrected data.
CustomDefaultPage	If <code>on</code> , you can add information to the main page of the web user interface. The changes go in CustomDefault.html.
CustomDefaultPageLeft	Sets the left starting position of the CustomDefault.html file. Value should be defined in pixels.
CustomDefaultPageTop	Sets the top starting position of the CustomDefault.html file. Value should be defined in pixels.
DaysOfPasswordPeriod	No longer needed. See Password changing, expiration and deactivation in TIB_transactioninsight_ version_commonadmin.pdf .
DaysOfReusePasswordAging	No longer needed. See Password changing, expiration and deactivation in TIB_transactioninsight_ version_commonadmin.pdf .

<appSettings> section	
These are user-configurable and specific to TI	
Setting	Explanation/Value
DB:TransactionInsight	Connection string to the Transaction Insight database.
DB:TransactionInsight Archive	Connection string to the Foresight Archive and Retrieval System database.
DB:TransactionInsight OpMon	Connection string to the Foresight Operational Monitor database.
DBType	Value is <code>SqlServer</code> or <code>Oracle</code> .
DisplayArchivePortal	If set to <code>true</code> , Foresight Archive and Retrieval System appears on the portal for those who have a role with Foresight Archive and Retrieval System permission. This will not appear if Foresight Archive and Retrieval System is not installed and licensed.
DisplayArchiveToOpMonLink	If set to <code>true</code> , a “View in Operational Monitor” link from a file on Foresight Archive and Retrieval System’s Action page appears. It takes you to the same file in Foresight Operational Monitor.
DisplayCommon AdministrationPortal	If set to <code>true</code> , Common Administration appears on the portal for those who have a role with Admin permission.
DisplayOperationalMonitor Portal	If set to <code>true</code> , Foresight Operational Monitor appears on the portal for those who have a role with Foresight Operational Monitor permission. This will not appear if Foresight Operational Monitor is not installed and licensed.
DisplayDoNotPurgeButton	If set to <code>true</code> , the <code>DoNotPurgeButton</code> is displayed on the Document Summary Page.
DisplayOpMonJobEndDate	If set to <code>true</code> , Foresight Operational Monitor’s End Date column displays. This column is not displayed by default, because it is not populated meaningfully by Automator. You may wish to display the column if you implement your own Foresight Operational Monitor API call to populate it.
DisplayTransactionInsight Portal	If set to <code>true</code> , Transaction Insight appears on the portal for those who have a role with Statistics, Tasks, Files, or Search permissions.
DocumentFileSize	<p>If set to <code>true</code>, or the product is in TIBCO Foresight® Test Asset Management Suite (TAMS) or Insight Reporting mode, then this setting determines the maximum number of characters allowed on the Errors Not in Form or Structured EDI View page. If the document contains more than this number, the user will get an error message saying the document is too large to be displayed.</p> <p>Setting this to a large number will cause the page to load slowly or not at all. The default value is 10000.</p> <p>If the value is set to something larger than a signed 32 bit int (2147483647), the default of 10000 will be used.</p>
ExclusionSetting	If set to <code>on</code> , error exclusion is enabled. This excludes an admin-created list of error numbers from force through. See TI_Reference_Manual.pdf .

<appSettings> section	
These are user-configurable and specific to TI	
Setting	Explanation/Value
ForceDirectory	Directory where Transaction Insight saves forced documents. When installed, this is commented out. See TI_Reference_Manual.pdf .
FormErrorCategory Threshold	Minimum error level to display on a form. Value can be: Ignore Information Warning Error (the default)
FormViewerCharacter	Allows you to choose the character to be used for blanking out form fields for users who have been restricted by confidentiality or field permissions. It can be a keyboard character or extended ASCII character. Example: "FormViewerCharacter" value="*" > "FormViewerCharacter" value="█" > (Turn on Num Lock; use Alt plus the ASCII code on the numeric keypad.) See TI_Reference_Manual.pdf .
FromAddress	The "From:" address in e-mail sent by TI. Please be sure that this is a properly formatted e-mail address; otherwise, e-mail cannot be sent. See E-Mails in the TIB_transactioninsight_ version_commonadmin.pdf .
IncludeForesightDocument InformationOnSubmission	For use with external systems. Leave this set to false unless told otherwise by TIBCO Foresight. This controls whether data corrected on a form and resubmitted will contain an added ACT segment containing an always-unique ID called an FSUID. If IncludeForesightDocumentInformationOnSubmission is set to true, and if the revalidation guideline has a GenerateFSUID business rule, the ACT segment will be added. If the guideline does not contain this rule, this setting is ignored.
InStreamDirectory	Directory containing HVInStream.exe (used when submitting data corrected in Transaction Insight forms). When users click the Validate button on a form to revalidate data they corrected, this installation of Instream will be used.
InStreamDocumentRoot	Specifies a non-standard guideline directory for use during Instream revalidation. Note that \Database is appended to the path. For example, a path of "C:\temp" for this setting would be interpreted as "C:\temp\Database".
IsClaimForceThrough	Specifies use of forcethrough for 837I/P/D only.
IsEditGoodDataEnabled	Used for Foresight® Test Asset Management Suite (TAMS) only. Allows users to edit good data. Turns on the Edit document button even if the user got to the document summary page from somewhere other than My Tasks. See TAMS.pdf .
IsTestEnvironmentEnabled	Used for Foresight® Test Asset Management Suite (TAMS) only. Enables TAMS environment. See TAMS.pdf .

<appSettings> section	
These are user-configurable and specific to TI	
Setting	Explanation/Value
IsTop10ErrorTypeSearchOn	If <code>true</code> , the Errors page can be filtered by type or severity, and you can see counts for both errors and warnings.
Matching	If set to <code>true</code> , document matching is enabled. See TIMatcher.pdf .
MaxDocSearchDateRange	Maximum date range when using Search, a value of up to 180 days. If omitted, this defaults to 31 days. TIBCO Foresight does not recommend settings greater than 31 days since this may greatly reduce performance throughout TI. Example: <pre><add key="MaxDocSearchDateRange" value="15"/></pre>
MaxLoginAttempts	Number of failed login tries before a user is locked out. If omitted, this defaults to 3. Example: <pre><add key="MaxLoginAttempts" value="4" /></pre>
RevalidationDirectory	Working directory used for revalidation with Instream. When users click the Validate button on a form to revalidate data, the revalidated files are written to this directory. Note: This is a working directory; files are not stored permanently in this location.
ShowAllCutoff	This controls whether the Partners, Senders, and Receivers pages will have an "All" entry in the drop-down list to "Show ___ records per page" at the bottom left. Default is to omit "All" in these lists. This prevents performance problems if you have a lot of partners. To include an "All" choice in these partner lists, add a ShowAllCutoff option to Web.config. This displays the "All" selection if the list contains under a certain number of partners. Example: <pre><add key="ShowAllCutoff" value="50" /></pre>
ShowDocumentSummaryDetails	This will display the following document information on tabs at the bottom of the Document Summary page: <ul style="list-style-type: none"> ▪ Transaction filters values ▪ Extended field values ▪ External identifier values Example: <pre><add key="ShowDocumentSummaryDetails" value="true" /></pre>
ShowSaveLoginBox	This controls whether the Remember Login box appears on the login page. Default is <code>true</code> . Example: <pre><add key="ShowSaveLoginBox" value="false"/></pre>
SmtServer	The SMTP server that Transaction Insight uses to send e-mail. See E-Mails in the TIB_transactioninsight_ version_commonadmin.pdf .

<appSettings> section	
These are user-configurable and specific to TI	
Setting	Explanation/Value
SubmitDirectory	<p>Directory where the EDI corrected in a Transaction Insight form goes when it is submitted.</p> <p>See Submit Documents in the TIB_transactioninsight_ version_commonadmin.pdf and Submitting Overview in the TIB_transactioninsight_ version_usersguide.pdf.</p>
SubmitOneFilePer Document	If set to <code>true</code> , each application document is placed in a separate external file when you submit corrected data, even if you have multiple documents selected.
TestAppDefaultMode	Specifies whether Test or Production is the default value in the test/production dropdown menu. If set to <code>true</code> , Test is the default value.
TurnOnAllErrorsNotInForm	<p>If set to <code>true</code>, the Errors not in Form tab in Transaction Insight will show all EDI elements, not just those with errors. Setting this to <code>true</code> slows performance. See DocumentFileSize to limit the size of the page.</p> <p>This does not apply to TAMS or Insight Reporting modes; these modes always have this turned on and it cannot be turned off.</p>
UsePartnerCache	<p>If <code>true</code>, when the webserver starts, a separate thread loads the Transaction Insight All Partners list according to the values of the following Settings > Cache parameters:</p> <p>Partner cache refresh time Partner cache retry count</p> <p>When a user with a role that has All Partners logs in, Transaction Insight uses the partner list that is already created.</p> <p>See Administrator Pages > Settings > Cache in TIB_transactioninsight_ version_commonadmin.pdf for additional information about Partner cache refresh time and partner cache retry count.</p>
ValidateDebug	Leave this set to 0 unless a TIBCO Foresight technical support team member directs you to do otherwise.
WebApplicationUrl	<p>Base URL for Transaction Insight e-mail links.</p> <p>Example: <code>http://SERVER21/TIDemo/</code></p> <p>See Messages in the TIB_transactioninsight_ version_commonadmin.pdf.</p>

<system.web> settings

Caution: Use care when changing anything in this section

See Microsoft documentation for details

<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cpguide/html/cpconconfiguringclientapplication.asp>

timeout

Web.config has two timeout settings, which are Microsoft .NET entries:

- One sets the time in minutes before a user is logged out (should be equal to or greater than the session timeout):

```
<forms name=".ASPXAUTH" loginUrl="default.aspx" protection="All"
timeout="60"/>
```

- The other one sets the time in minutes before a user's session is discontinued:

```
<sessionState mode="InProc" .
:
:
timeout="20"/>
```

Application Settings in Web.config – SQL Server Example

```
<add key="DBType:TransactionInsight" value="SqlServer" />
<add key="DB:TransactionInsight" value="Application Name=
TIWebGUI;server=duelmach;initial catalog=TIDEV;UID=QAadmin2;
PWD=w1e2r3t4y5;"/>
<add key="SmtpServer" value="relay.foresightcorp.com" />
<add key="FromAddress" value="donotreply@foresightcorp.com" />
<add key="WebApplicationUrl" value="http://www.Kavercorp.com/TI4.3.06.0
Web/" />
<add key="SubmitDirectory" value="c:\Projects\" />
<add key="InStreamDirectory" value="c:\foresight\instream\bin" />
<add key="RevalidationDirectory"
value="\Projects\TransactionInsight\RevalidatedFiles" />
<add key="CollectorDirectory" value="C:\Projects\TransactionInsight\
Collector\bin" />
<add key="997Matching" value="false"></add>
<add key="CustomDefaultPage" value="off"></add>
<add key="FormViewerCharacter" value="■" ></add>
<add key="ExclusionSetting" value="off"></add>
<add key="ForceDirectory" value="c:\Inbound\Fforce\" />
<add key="FormErrorCategoryThreshold" value="Error"/>
<add key="IncludeForesightDocumentInformationOnSubmission" value="true"/>
<add key="UsePartnerCache" value="true"/>
```

Application Settings in Web.config – Oracle Example

The application settings are similar to the SQL Server example, except for DBType and DB. Example:

```
<add key="DBType:TransactionInsight" value="Oracle" />
<add key="DB:TransactionInsight" value="Data Source=ora10_M1;
Pooling=true;User ID=QAadmin1;Password=w1e2r3t4y5;Persist Security
Info=true;"/>
```

Connection String example in Web.config – Oracle Instant Client

```
<add key="DB:TransactionInsight" value="Data Source=localhost:1521/xe;
Pooling=true;User ID=Qaadmin1;Password=w1e2r3t4y5;Persist Security
Info=true;"/>
```

Where:

localhost:1521	system and port
xe	Oracle SID
User ID=Qaadmin1	Oracle schema name
Password= w1e2r3t4y5	Oracle schema password

Encrypting Password Information in Web.config

To encrypt Web.config's appsettings section, including the database password:

1. Back up the unencrypted Web.config to another location, since the encrypted file will only work on the current machine.
2. Go to the directory containing Web.config (the environment's TIWeb directory).
3. As Administrator, execute this at the command line:

```
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe -pef "appSettings".
```

The period at the end is part of the command.

Look for this message:

```
Encrypting configuration section...
Succeeded!
```

The appsettings section should now be encrypted.

4. Give ASPNET user access:

```
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis -pa
"NetFrameworkConfigurationKey" "ASPNET"
```

Look for this message:

```
Adding ACL for access to the RSA Key container...
Succeeded!
```

To unencrypt:

```
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe
-pdf "appSettings"
```

18 Appendix L: Additional System Requirements

Database

Microsoft SQL Server 2008 R2 Datacenter or Enterprise Edition or 2012 Enterprise Edition

Any machine that connects to a SQL Server database will need Microsoft SQL Server ODBC Driver Version 3 or later. Windows 2008 and later include native support for ODBC.

Detailed instructions for configuring an ODBC datasource to connect to Microsoft SQL Server can be found in the Windows help system. One way to access this is through **My Computer | Help | Help and Support Center**.

If you choose SQL Server for your Transaction Insight database during installation, you do not need to perform any additional configuration.

Oracle Database 11g Release 2 (11.2) or 12c Enterprise Edition with Oracle Partitioning

Download and install Oracle Instant Client version **12.1.x**

You will need one of these:

- The name of the database machine, port, and Oracle instance.
- A TNS_ADMIN environment variable and corresponding TNSnames.ora file that contains connection information for the Transaction Insight database.

Transaction Insight does not use ODBC for Oracle.

Java

Important: sqljdbc_auth.dll **must** be in the path for Java-based programs that use Windows Authentication with SQL Server. This includes Foresight Archive and Retrieval System client and web services, ScenarioDetector, TIICDAnnotator, TIMatcher, TIPurge, and BI Bridge® - BAM Extract.

sqljdbc_auth.dll is installed in the <environment>/bin directory and can be referenced a few different ways:

- If only one version of the SQL Server JDBC driver is in use (4.0 is shipped with the product) then add the dll to your Windows PATH environment variable and reboot.
- To reference the dll only within the context of a given Java application you can set the "java.library.path" on the command line. e.g. `-Djava.library.path=path/to/env/bin`
- For web services running under Payara (GlassFish), the Windows PATH is still the easiest choice but there are multiple ways to add this dll to the Java environment. See **Webservices_at_Foresight.pdf** for details.

Use the correct version of Java for your platform.

Steps

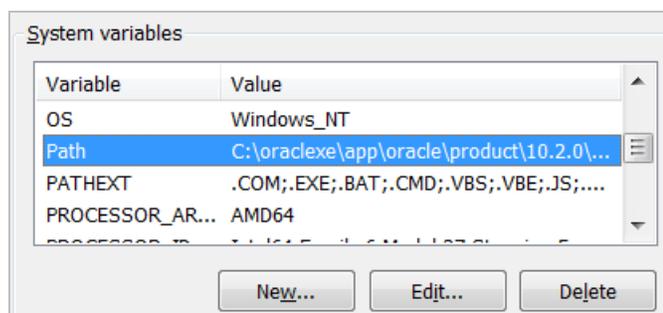
1. To see if the required version of Java is installed, look for it under Program Files or Program Files (x86).

If you don't have the required version of Java, you can download it from the Oracle website and install it.

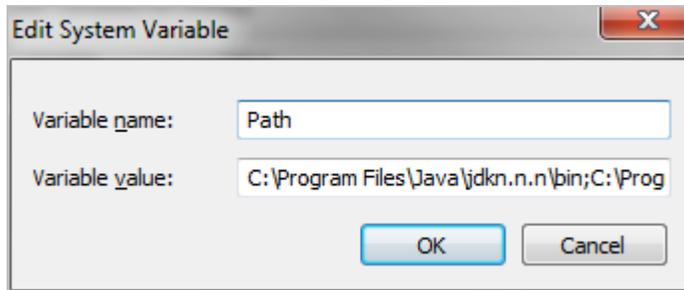
2. Add the **bin** directory circled above to your System Variables PATH.

To do this:

- a. Choose **Control Panel | System | Advanced | Environment variables**.
- b. Under System Variables, click Path and choose EDIT:



- c. Go to the beginning of the path and type or paste Java's **bin** directory, followed by a semi-colon for a separator:



(It is important to have this version of Java appear earlier in the path than any other Java version.)

3. Also under System variables, see if **JAVA_HOME** is set to the high-level Java JDK directory, or to the high-level JRE directory if you do not have JDK:

If not, edit it or choose **New** and set it up.

To check your Java version:

Windows From the command prompt, type **java -version**

UNIX Type **java -version**

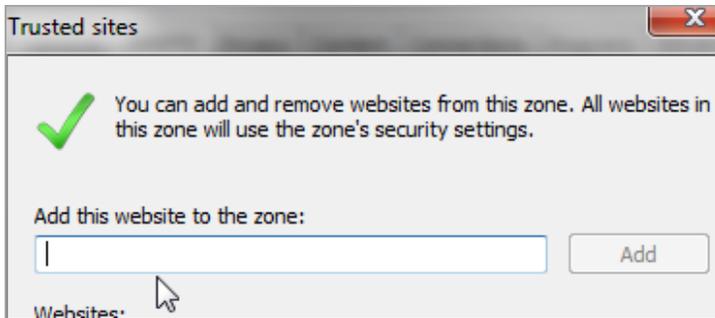
If it shows an older version in another directory, be sure that the latest Java is earlier in your Path than other versions.

Typing **set** at the command line will display the JAVA_HOME setting.

Transaction Insight Users' Machine Settings

For the optimal Transaction Insight experience using Internet Explorer, users should:

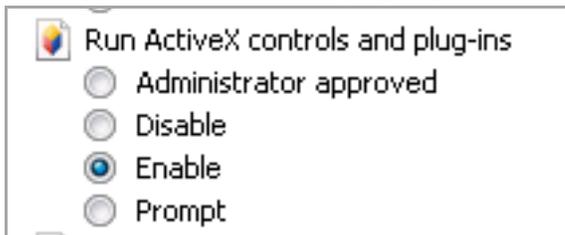
- Turn off compatibility view (**Tools | Compatibility View**).
- Add the Transaction Insight website as a Trusted Site in the browser (**Tools | Internet Options | Security | Trusted sites**).



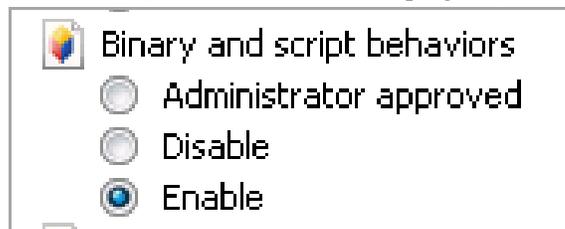
- Ensure the following settings are enabled for Security for Trusted Sites (Tools | Internet Options | Security | Trusted sites | Security Level for this zone | Custom level...).

Note: Enabling under the Trusted site area enables the setting for the Transaction Insight site (and all trusted sites), but not for all sites on the Internet.

In the [ActiveX Controls and plug-ins] section, enable Run ActiveX controls and plug-ins:



Also, in the [ActiveX Controls and plug-ins] section, enable Binary and script behaviors:



In the [Scripting] section, enable Active scripting:

