Infor Education
Master Infor products.
Maximize your potential.

Infor CRM: Advanced Analytics v3.0 Training Workbook

Infor CRM

July 9, 2018

Course code: 01_0610830_IEN0113_CRM

Table of contents

About this workbook

Welcome to this Infor Education course! We hope you will find this learning experience enjoyable and instructive. This Training Workbook is designed to support the following forms of learning:

- Classroom instructor-led training
- Virtual instructor-led training
- Self-directed learning

This Training Workbook is not intended for use as a product user guide.

Activity data

You will be asked to complete some practice exercises during this course. Step-by-step instructions are provided in this guide to assist you with completing the exercises. Where necessary, data columns are included for your reference.

Your instructor will provide more information on systems used in class, including server addresses, login IDs, and passwords.

Self-directed learning

If you are taking this course as self-directed learning, there may be instructor-recorded presentations and/or simulations available to assist you.

If instructor-recorded presentations are available, a hyperlink to the recording will be included on the first page of each corresponding Lesson.

If simulations are available, the demos and exercises throughout this Training Workbook will include hyperlinks that allow you to view and/or practice the execution of the demo or exercise in a simulated training environment.

Learning Libraries

Learning Libraries in Infor Campus include learning materials that are available to you online, anytime, anywhere. These materials can supplement instructor-led training, providing you with additional learning resources to support your day-to-day business tasks and activities.

Please note that if you accessed this Training Workbook directly via a Learning Library, you will not have access to the Infor Education Training Environment that is provided with all instructor-led and most self-directed learning course versions, as referenced above. Therefore, you will not be able to practice the exercises in the specific Training Environment for which the exercises in this Training Workbook were written.

Symbols used in this workbook

Hands-on exercise (“Exercise”)	Your notes	Question
Instructor demonstration (“Demo”)	Important note	Answer
Can be used for either (“Scenario” or “Discussion”)	Critical note	Task simulation
For your reference		

Course overview

Estimated time

.25 hours

Learning objectives

Upon completion of this course, you'll be able to:

- Install and configure a working TIBCO Spotfire environment.
- Install and configure Infor CRM Advanced Analytics to third-party components.
- Add data to Spotfire from a custom Infor CRM table.
- Add data to Spotfire from a third-party table.
- Create a parallel model for customization.
- Design visualizations that can limit data based on other visualizations.
- Design visualizations that use custom expressions and bookmarks.
- Apply Infor CRM security to a custom dashboard.
- Add a dashboard to Infor CRM Windows and Web Client.

Topics

- Course description and agenda

Course description and agenda

This course covers how to install Infor CRM Advanced Analytics (ICAA), how to install TIBCO Spotfire and how to customize ICAA. The recommended agenda suggests completing Lessons 1-3 on Day 1 and Lesson 4 on Day 2. You are welcome to work ahead if you have time. This training is for Advanced Analytics v3.x.

Course duration

16 hours

Prerequisite knowledge

To optimize your learning experience, Infor recommends you have the following knowledge prior to attending this course:

- Infor CRM Implementing
- Infor CRM Development

Audience

- Business Consultant
- Technical Consultant
- Support
- System Administrator

System requirements

Infor CRM Training Environment

Reference materials

Infor CRM reference materials are available from the following locations:

- Infor CRM Help menu
- Infor Xtreme®

Course agenda

The agenda below details the contents of this course, including lesson-level learning objectives and supporting objectives.

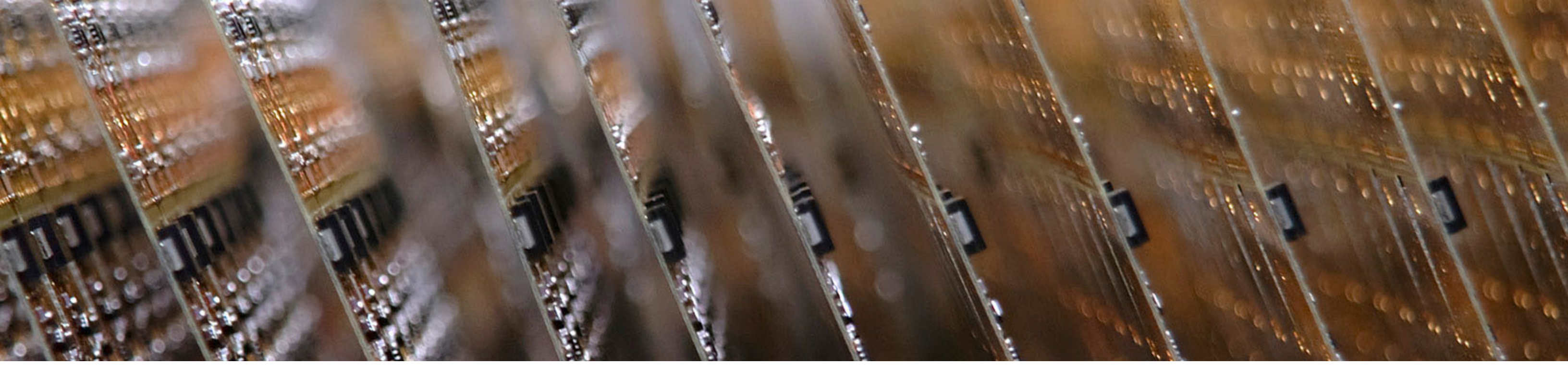
Lesson	Lesson title	Learning objectives	Day
Course overview		Review course expectations	1
1	Implementation overview	• ICAA components • System diagram	1

Lesson	Lesson title	Learning objectives	Day
		• Single sign-on authentication • Data security • Installation summary	
2	Preparing the Infor CRM environment	• Unpack the Infor CRM Advanced Analytics zip file. • Install the add-on license	1
3	TIBCO Spotfire installation	• Install TIBCO Spotfire	1
4	Infor CRM Advanced Analytics customization	• Customize Infor CRM Advanced Analytics • Customization Best Practices	1-2
Course summary		Debrief course.	2

Appendices

This section contains information that is not part of the instructional content of this course, but provides additional related reference information.

Appendix	Appendix title	Content description
Appendix A	Learner user accounts	This appendix provides a reference for student login credentials.
Appendix B	Installing the Spotfire Web Player on a different computer from the Spotfire Server	Install TIBCO Spotfire Web Player on a different computer from the Spotfire Server.



Lesson 1: Implementation overview

Estimated time

2 hours

Learning objectives

The Infor CRM Advanced Analytics installation has been prepared on your workstation. Use the TIBCO Spotfire Professional Client to edit or create new analyses and publish them to other Infor CRM users.

In this lesson, you will:

- List the components of Infor CRM Advanced Analytics.
- Recognize the relationships between Infor CRM and TIBCO Spotfire.
- Recall how Single sign-on is accomplished in Infor CRM Advanced Analytics.
- Explain how Data Security is handled within Infor CRM Advanced Analytics.

Topics

- ICAA components
- System diagram
- Single sign-on authentication
- Data security
- Installation summary

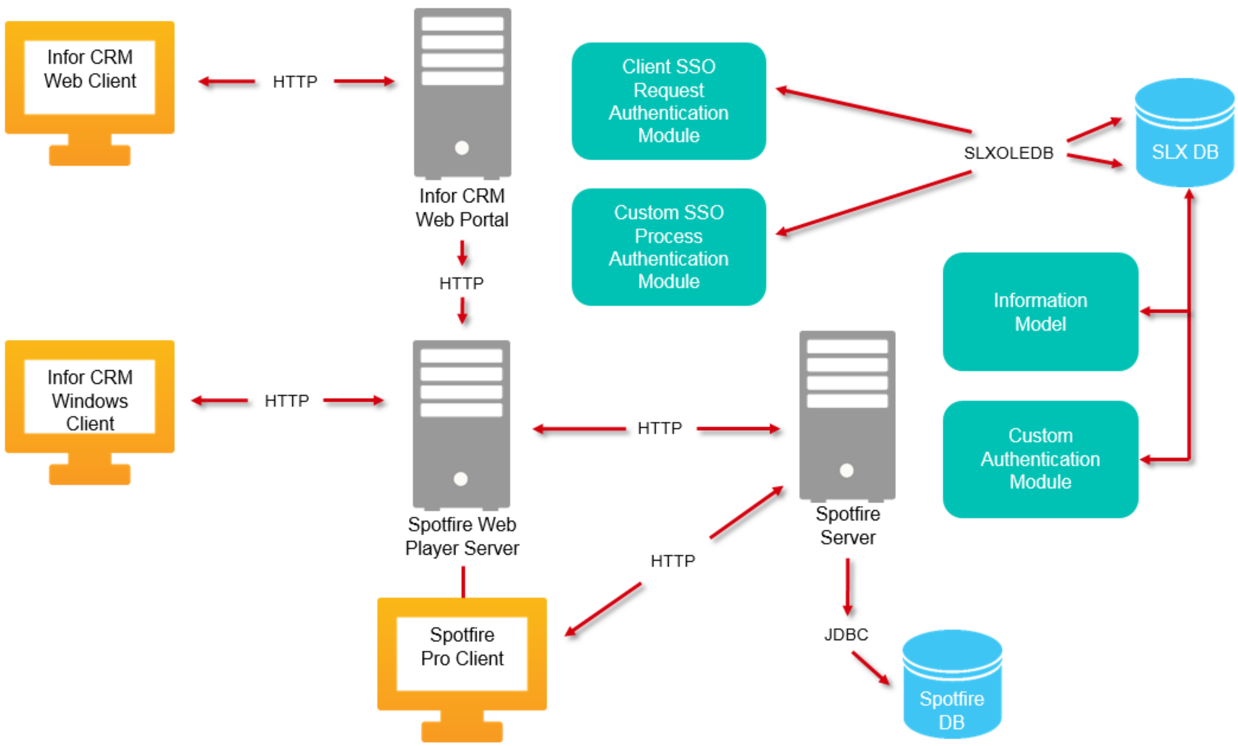
ICAA components

The components below are used in an Infor CRM Advanced Analytics implementation.

- **Analysis Support Bundle:** This bundle installs new Infor CRM dashboards and supporting plugins. It also creates new tables in the Infor CRM database. These components allow ICAA to be embedded within the Infor CRM application framework.
- **Web Analytics Support Bundle:** This bundle installs the **Advanced Analytics Navigation** bar and dashboards.
- **Infor CRM Database Server:** This is the core data source for the ICAA application.
- **Spotfire Web Player:** This client is embedded into Infor CRM. It is a zero-footprint, thin client that allows users to analyze data by interacting with the dashboard to drill, pivot, filter, and manipulate the visualizations included in the dashboard analysis.
- **Spotfire Professional Client:** This client allows administrators to edit or create new analyses and publish them to other Advanced Analytics users.

System diagram

ICAA content is built on an information model in the TIBCO Spotfire platform. The information model is used to map data from the data sources to Advanced Analytics. It's also used to create calculated fields, transform data, and perform other advanced tasks. Information links within the information model are used to create dashboards and other analysis.

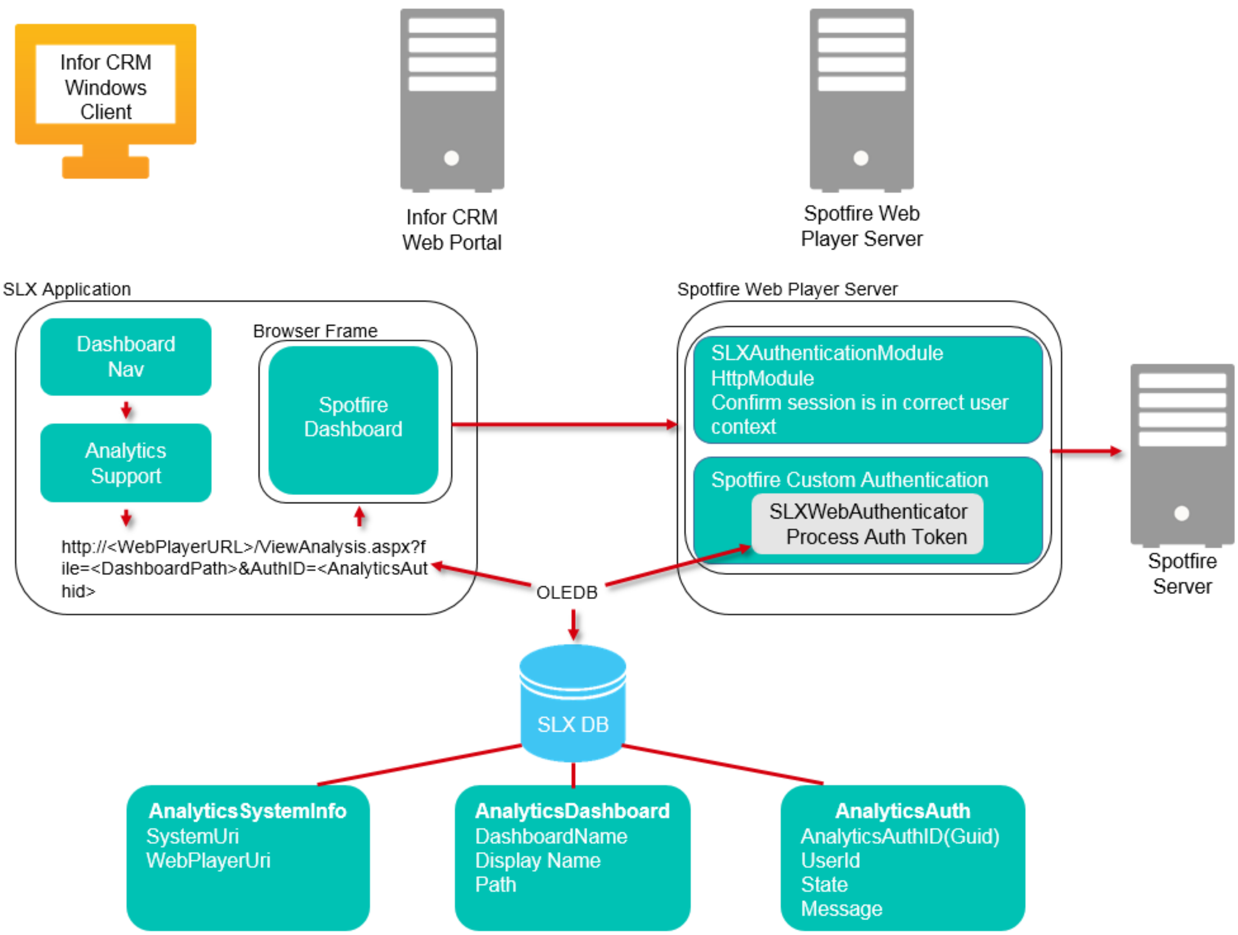


Information Model

Single sign-on authentication

ICAA is configured for single sign-on using impersonation with custom authentication. Spotfire Web Player uses Infor CRM user credentials to gain access to data the user can access.

Your administrator gives users access to Advanced Analytics dashboards by adding the Advanced Analytics role to the user in Infor CRM Web Administrator and opening the Spotfire Professional Client to synchronize users automatically. Your administrator can remove access to the Advanced Analytics dashboards for any user by removing their Advanced Analytics role and synchronizing in the Spotfire Professional Client.



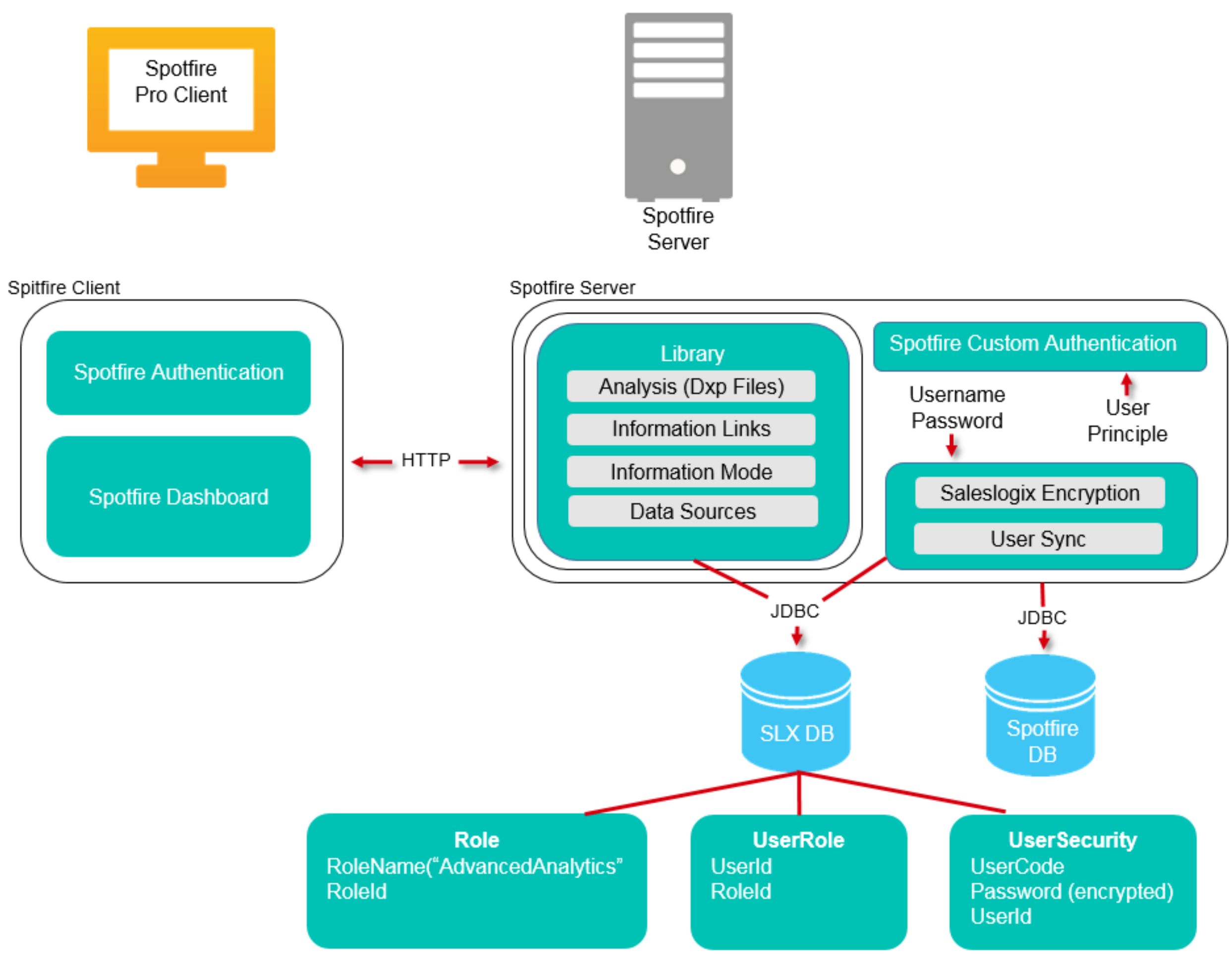
Data security

ICAA enforces the data security defined in Infor CRM. **Note:** Users cannot bypass data security.

- Users can only access data they see in Infor CRM.
- Dashboards cannot report on data the user does not have access to.

ICAA uses role security in both Infor CRM and Spotfire. In Infor CRM, roles grant access to the dashboards in the navigation bar. In Spotfire, roles grant access to Spotfire Professional Client or Web Player. Note: Users can have different levels of access to Spotfire Professional Client. For example, users can be restricted from performing certain actions such as editing the information model. New users added to Infor CRM are automatically added as Standard Client users in Spotfire. In addition to role security, the Infor CRM Web Client allows Secured Actions to be created. These can further restrict the users able to access specific dashboards.

Though ICAA does enforce the data security defined in Infor CRM, if you are using schedule updates within Spotfire, additional steps must be taken to verify security is followed. When using scheduled updates, Spotfire stores the data recorded at the time of the scheduled update based on the user who created the scheduled update, typically an administrator with access to all data. To verify proper data security, additional steps need to be taken.



Installation summary

Use the usernames and passwords below to explore other areas of the product.

Windows	
Username: administrator **Password:** password	This is the user account to sign in to Windows on your training workstation.
SQL Server	
Username: sa **Password:** password	This is the sa account to sign in to SQL Server on your training workstation.
Infor CRM demo database (owner)	
Host name: SRV10 **Database owner ID:** sysdba **Password:** Ma$t3rk3y	This is the owner of the Infor CRM demo database.
Infor CRM demo database (user)	
Database admin ID: sa **Password:** password	This is the user account to connect to the saleslogix_eval database.
Infor CRM admin user	
Username: admin **Password:** password	This is the user account to sign in to Infor as an administrator.
Spotfire Professional Client	
Username: admin **Password:** password	This is the user account to sign in to TIBCO Spotfire Professional Client.
Infor CRM SSAAService User	
Username: SSAAservice **Password:** password	This is the Infor CRM user used by Spotfire integration components for single sign-on and scheduled updates.

Lesson 2: Preparing the Infor CRM environment

Estimated time

3 hours

Learning objectives

In this lesson, you will prepare the Infor CRM environment for the TIBCO Spotfire installation.

Complete the following steps prior to installing Advanced Analytics:

- Unpack the InforCRM_Advanced_Analytics_v3_0.zip file to a location accessed by both your Infor CRM server and the server hosting Spotfire components.
- Install the license enabling SSAA Service User to connect to Infor CRM data.
- Copy Sage.Saleslogix.Client.GroupBuilder.dll.
- Install Saleslogix Legacy and Web Bundles.
- Build and deploy the Saleslogix Web Portal changes.
- Create the SSAAService user.
- Add the SSAAService and the Advanced Analytics role to users.

After completing this lesson, you will determine if an Infor CRM installation is ready for Infor CRM Advanced Analytics.

Topics

- Unpack the ICAA zip file
- Install the add-on license

Unpack the ICAA zip file

The **ICAA** zip file has been saved for you within the **C:\Classfiles\AA Training\ICAA** folder on your training workstation.

Use an extraction program to unpack the **InforCRM_Advanced_Analytics_v3_0.zip** file to a location accessed by both your Infor CRM server and the server hosting the Spotfire components. **Note:** Refer to this folder as the **Install Folder** for this course.

Install the add-on license

Create additional Advanced Analytics user's using an **Add-on User** license. **Note:** Install the license prior to use.

Because you're using an evaluation copy of the Infor CRM product in this training workstation, you'll use a network user in the exercises to follow.

The following steps show how to install an **Add-on User** license. If an additional user is required, these steps should only be performed in a production environment and should not be performed on your training workstation.

1. Open the license file and copy the license number. **Note**: A license is provided by an Infor business partner or Infor.
2. Open **Infor CRM Administrator**.
3. Type *admin* in the **Username** field. No password is required.
4. Click **Sign In**.
5. Click the **Systems Nav Bar**.
6. Click the **Licenses** tab.
7. Right-click the screen and then click **Add License**. The **License Wizard** window opens.
8. Click **Paste**.
9. Click **Next**.
10. Click **Finish**.

Exercise 2.1: Copy the Sage Saleslogix Client GroupBuilder.dll file

In this exercise, you will copy the DLL file.

The Export to Group feature utilizes the Sage.Saleslogix.Client.GroupBuilder.dll file in certain business rules. Note: The DLL is in both the SlxClient and SData Bin folders, but it doesn't copy automatically to the Reference Assemblies directory.

The Sage.Saleslogix.Client.GroupBuilder.dll file is required to support the Spotfire Export to Group.zip file.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Verify the GroupBuilder.dll files are available in the **Reference Assemblies** directory if you receive an error message such as the following or similar to:

- The namespace “Client” does not exist in “Sage.Saleslogix”.
- Unable to locate assembly reference Sage.Saleslogix.Client.GroupBuilder.dll in assemblies or C:\Program Files (x86)\Saleslogix\.

Exercise steps

Verify you are logged in to the Training Desktop. If not, log in following instructions provided by your course instructor.

Note: If you are taking this course as self-directed learning, follow the instructions on the course Lab On Demand screen.

1. Browse to **C:\inetpub\wwwroot\SlxClient\Bin** on the Infor CRM Server which is the machine hosting the Web Client and SData portals.
2. Copy **Sage.Saleslogix.Client.GroupBuilder.dll** and paste it to **C:\Program Files (x86)\Saleslogix\ReferenceAssemblies**.

Exercise 2.2: Install the Advanced Analytics legacy (sxb) and Advanced Analytics web (zip) bundles

In this exercise, you will install the Advanced Analytics legacy and web bundles.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Exercise steps

Part 1: Install Advanced Analytics legacy

1. Open **Infor CRM Administrator**.
2. Type *admin* in the **Username** field. No password is required.
3. Click **Sign In**.
4. Click the **Bundles Nav Bar**.
5. Click **Install**.
6. Browse to the **C:\Classfiles\AA Training\ICAA** install folder.
7. Open the **Bundles** folder.
8. Double-click the **Analytics Support.sxb** bundle. The **Choose Actions to Install** dialog box opens after the bundle loads.
9. Click **OK**.

10. Click **OK** again to close the window.
11. Select **Everyone** from the **Choose Teams** dialog box.
12. Click **OK**.
13. Repeat steps **5 through 12** to install **Spotfire Export to Group.sxb**.

    Tip: For more information on installing bundles, see the **Installing a Bundle** topic in the **Help** file.

Part 2: Install the Advanced Analytics web (zip) bundles

Verify you have **Write** permissions to the bundle installation folder by checking the security permissions in the **Security** tab on the folder properties.

1. Open **Infor CRM Administrator**.
2. Type *admin* in the **Username** field. No password is required.
3. Click **Sign In**.
4. Select **View > Bundle Manager**.
5. Click **Install**.
6. Click the **ellipsis** next to the **Filename** field and browse to **C:\ClassFiles\AA Training\ICAA\Bundles**.
7. Select **Web Analytics Support.zip** and click **Open**. The **Select Bundle** window opens.

    Note: Click **Yes** if the **Confirm Upgrade** dialog box opens.

8. Click **Next**. The **Select Items** window opens.
9. Verify the **Portals** check box is selected.
10. Click **Next**.
11. Click **Finish**.
12. Repeat steps **5 through 11** to install **Spotfire Export to Group.zip**.

Exercise 2.3: Building and deploying web changes

In this exercise, you will build and deploy the web portals in the Web Client.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Exercise steps

1. Select **Build > Build Web Platform**.

    Note: All assembly files are compiled for the current project. The build’s status displays in the **Output** window at the bottom of your screen.

2. Select **View > Deployment Explorer** once the build completes.

3. Expand **Deployments**.
4. Right-click **Core Portals** and then click **Deploy**.

   Note: This deploys the **Process Host**, **SData**, and **SlxClient** portals.
5. Close **Application Architect.**
6. Reset **IIS**.

Exercise 2.4: Create the SSAAService user and add the SSAAService to the Advanced Analytics role

In this exercise, you will create the SSAAService user and add the SSAAService to the Advanced Analytics role.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Because you're using an evaluation copy of Infor CRM in this training workstation, you'll create the SSAAService user as a network user. In a production environment, you'll use the add-on license installed earlier.

Exercise steps

Part 1: Create the SSAAService user

1. Open **Infor CRM Administrator**.
2. Type *admin* in the **Username** field. No password is required.
3. Click **Sign In**.
4. Select the **Administrator Nav Bar > Users**.
5. Click **Add**. The **Add** window opens.
6. Select **Network User**.
7. Select **1** in the **Quantity** field.
8. Click **OK**.
9. Click the **General** tab to create the **SSAA Service** user in the **User Profile** pane.
10. Type *Network User* in the **Type** field.
11. Type *SSAAService* in the **Username** field.
12. Type *SSAAService* in the **Name** field.
13. Type *SSAA Service Account* in the **Title** field.
14. Type *SSAA Service – do not modify or delete* in the **Notes** field.

15. Click **Change Password**.
16. Type *password* in the **Password** field.
17. Click the **Teams** tab.
18. Click **Manage**.
19. Select each team and verify a check box is selected for each team.
20. Click **OK** twice.
21. Close **Infor CRM Administrator**.

    Tip: For more information on creating users, see the **Adding a User** topic in the **Help** file.

Part 2: Add the SSAAService to the Advanced Analytics role

1. Open the **Infor CRM Web Client**.
2. Type *admin* in the **Username** field.
3. Type *password* in the **Password** field.
4. Expand the **Administration Nav Bar**.
5. Click **Analytics System Info**.
6. Click **Initialize Defaults**.

    Note: This initializes and creates roles, role actions, and dashboard paths if they don't already exist.

7. Click **Roles** from the **Administration Nav Bar**. The **Roles List View** opens.
8. Click **Advanced Analytics**.
9. Click the **Users** tab and **Add Users**.
10. Select the **SSAAService** user. **Note:** Use multi-select to add users to the Advanced Analytics role as needed.
11. Click **Add Selected**.
12. Click **Close**.
13. Click **Save**.
14. Close the **Web Client**.

Lesson 3: TIBCO Spotfire installation

Estimated time

3 hours

Learning objectives

In this lesson, you will:

- Install TIBCO Spotfire
- Configure Infor CRM's Advanced Analytics components.
- Assess which Spotfire licenses are required for which groups and users.

Topics

- Install TIBCO Spotfire

Install TIBCO Spotfire

Exercise 3.1: Install the TIBCO Spotfire Configuration Console and TIBCO Spotfire Server

In this exercise, you will install the TIBCO Spotfire Configuration Console and Spotfire Server to configure the database connection, authentication, and deployment files.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

Exercise steps

Part 1: Run the Advanced Analytics setup

1. Browse to the **C:\Classfiles\AA Training\ICAA** install folder.
2. Right-click **SLX Advanced Analytics Setup.exe**.
3. Select **Run as Administrator**. The setup process starts by opening the **Step 1: Create Spotfire Database & Server** window.

Part 2: Create the Spotfire Database and Server. Use the following data for connection information and to determine where Spotfire Server Install files are located.

Connection Information	Definition
DB Server	DB Server is the name of the database server where the Spotfire database is installed.
Instance (opt.)	Instance is the name of the SQL Server instance. If the SQL Server has no instance name then leave this area blank.
Port Number	TCP/IP port number for the database server.
Admin Name	Admin Name is the system administrator or user name for the database server. This user must have access to create databases and other users.
Admin Password	Admin Password is the password for the user specified in Admin Name.

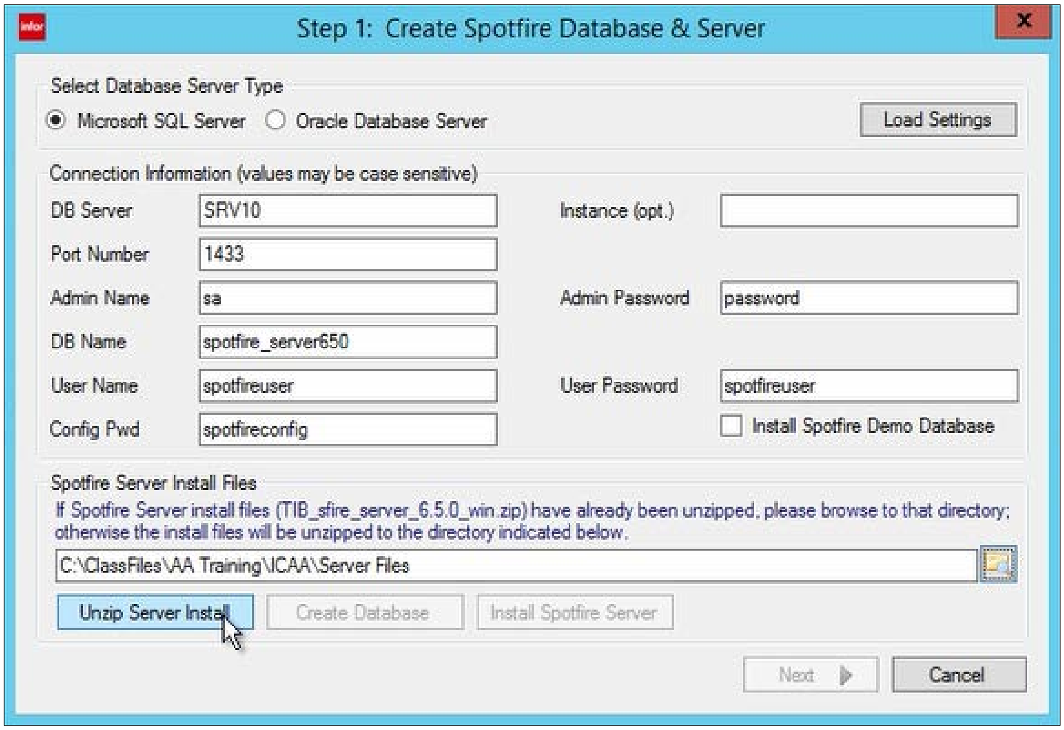
DB Name	DB Name is the name used when creating the Spotfire database. The default name of “spotfire_server650” used the “650” suffix to show the version as 6.5.0.
User Name	User Name is the primary user for the Spotfire database. This user is created by the database setup scripts. Note: If you choose an existing username, the scripts may generate an error. However, proceed with the setup.
User Password	User Password is set when the user’s user name is created.
Config Pwd	A configuration password is set to use for Spotfire configuration.
Install Spotfire Demo Database	The Install Spotfire Demo Database is a check box. If this check box is selected then the database set scripts also create the Spotfire Demo Database.

1. Select **Microsoft SQL Server** in the **Select Database Server Type** pane.
2. Type *SRV10* in the **DB Server** field.
3. Keep the **Instance (opt.)** field blank.
4. Type *1433* in the **Port Number** field.
5. Type *sa* in the **Admin Name** field.
6. Type *password* in the **Admin Password** field.
7. Type *spotfire_server650* in the **DB Name** field.
8. Type *spotfireuser* in the **User Name** field.
9. Type *spotfireuser* in the **User Password** field.
10. Type *spotfireconfig* in the **Config Pwd** field.
11. Verify the **Install Spotfire Demo Database** check box is cleared.
12. Unzip the **Spotfire Server Install Files** if not already unzipped and select a folder location or accept the default location.

    Note: If you select another folder location, the setup program detects whether the folder contains the server install. If the folder contains the server install, then the following occurs:

    - The message over the folder path changes
    - **Unzip Server Install** is disabled
    - **Create Database** is enabled

13. Click **Unzip Server Install**.



14. Click **Create Database** once the unzip completes.
15. Click **Install Spotfire Server** once the creation completes.
16. Click **Next**. The **Step 2: Configure Server** window opens. **Note: Next** is enabled once the install completes.

Part 3: Begin Step 2 which configures the server for Advanced Analytics and requires information about the following:

- Your Infor CRM database
- Ports
- User names

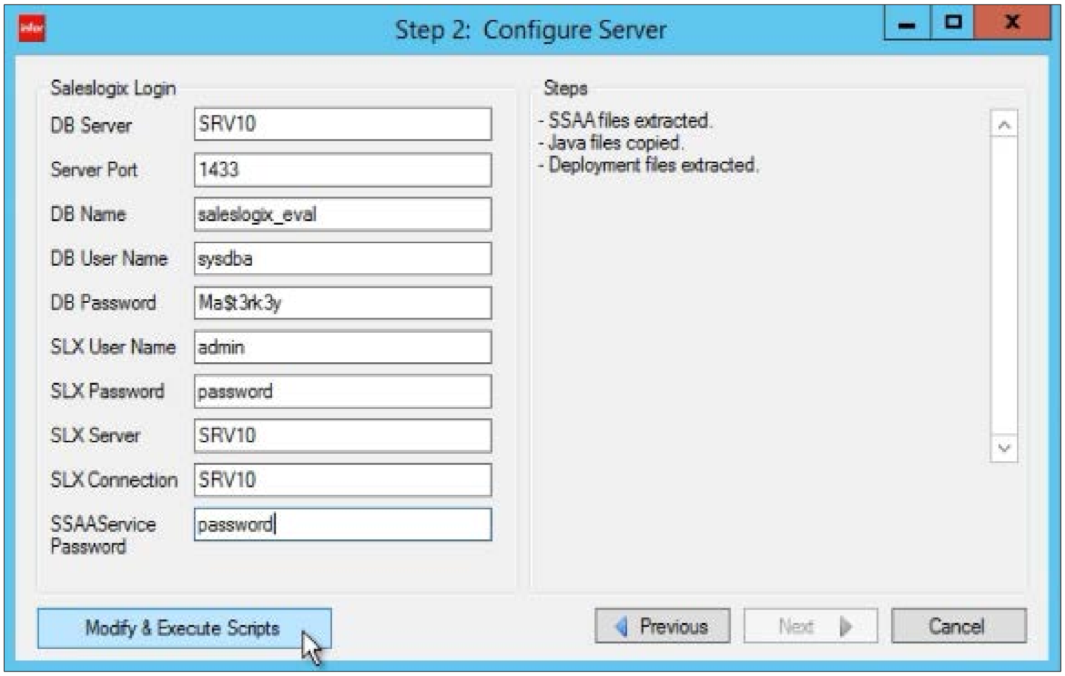
When you move from Step 1 to Step 2 you may see files unzipping in preparation for the configuration. These steps are noted in the Step 2 dialog of the Steps pane.

Use the following information to complete Step 2:

Infor CRM Sign In Information	Definition
DB Server	This is the name of the database server and instance if applicable where the Infor CRM database is located.

Infor CRM Sign In Information	**Definition**
Server Port	This is the port number of your Infor CRM database. This field defaults to the Port Number used in Step 1.
DB Name	This is the name of your Infor CRM database.
DB User Name	This is the owner of your Infor CRM database.
DB Password	This is the password for the database owner.
SLX User Name	This is the Spotfire Administrator Sign In to Infor CRM.
SLX Password	This is the required password for the Spotfire Administrator.
SLX Server	This is the server name providing the Infor CRM connection.
SLX Connection	This is the name of the connection provided by the Infor CRM server.
SSAAService Password	This is the password of the created SSAAService user.

1. Type *1433* in the **Server Port** field.
2. Type *saleslogix_eval* in the **DB Name** field.
3. Type *sysdba* in the **DB User Name** field.
4. Type *Ma$t3rk3y* in the **DB Password** field.
5. Type *admin* in the **SLX User Name** field.
6. Type *password* in the **SLX Password** field.
7. Type *SRV10* in the **SLX Server** field.
8. Type *SRV10* in the **SLX Connection** field.
9. Type *password* in the **SSAAService Password** field.



10. Click **Modify & Execute Scripts**.

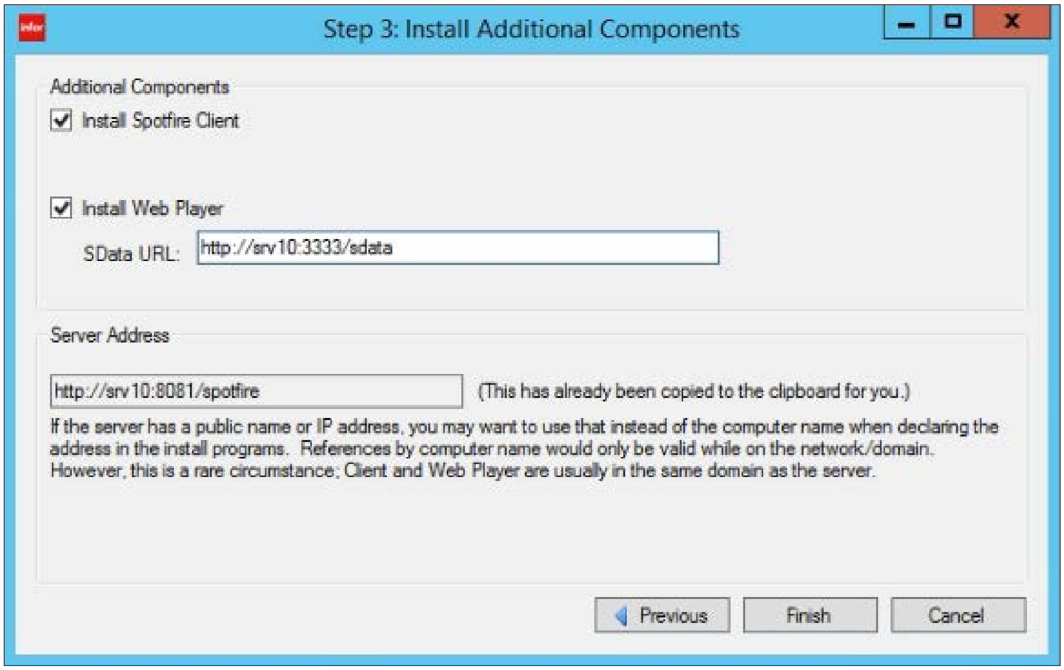
    Note: Command windows open and close as scripts execute and deployment files are added. Updates are shown in the **Step 2** dialog of the **Steps** pane.

11. Click **Next** when enabled. The **Step 3: Install Additional Components** window opens.

    Step 3 allows you to install the **Spotfire Client** and **Spotfire Web Player**.

It's recommended that your company installs both the Client and Web Player, however, each can be installed manually later.

12. Select the **Install Spotfire Client** check box.
13. Select the **Install Web Player** check box.
14. Type *http://SRV10:3333/sdata* in the **SData URL** field.



15. Click **Finish**. The **TIBCO Spotfire 6.5.0 – InstallShield Wizard** dialog box opens. **Note:** If you selected to install additional components, a TIBCO installer runs.

    The setup program installs the additional components selected. The Server Address provided is a reference needed for each install and should be saved for future reference. For your training, the address has been copied to your clipboard by the setup program. During this time you may see file extractions on your machine prior to the installer starting.

16. Click **Next**.
17. Accept the **License Agreement** and click **Next**.
18. Type *http://SRV10:8081/spotfire* in the **Server URL** field and click **Next**. The **Ready to Install the Program** dialog box opens.

    Note: The URL is in your clipboard if you are installing from the Advanced Analytics setup.

19. Click **Install**.
20. Click **Finish** when available. The **TIBCO Spotfire Web Player 6.5.0 – InstallShield Wizard** welcome window opens.

    Note: If the **Spotfire Client Sign In** window opens, leave it open in the background to return to later.

21. Click **Next**.
22. Accept the **License Agreement** and click **Next**.
23. Verify the installation folder and click **Next**. The default folder is **c:/Program Files\TIBCO\Spotfire Web Player\6.5.0**. The **IIS Web Application Settings** screen opens.
24. Type *SpotfireWeb* in the **Application Name** field.
25. Type *8080* in the **Web Site Port** field.

    Note: Always use this port number for the Spotfire Web Player and not another port number for another application.

26. Click **Next**. The **TIBCO Spotfire Server** screen opens.
27. Type *http://SRV10:8081/spotfire* in the **TIBCO Spotfire Server URL** field.
28. Click **Next**. The **Spotfire Administrator Email** screen opens.
29. Enter the **Spotfire Administrator Email** and click **Next**.
30. Click **Install**. The installation programs should close automatically but if not, click **Finish**. The **Tibco Spotfire** login screen appears.

    Note: If the Spotfire.Dxp.Web.UpgradeTool.exe security warning opens click Install.

Exercise 3.2: Configure the TIBCO Spotfire Console

In this exercise, you will import the Infor CRM Data Source, connect the Data Source to the database, update and install the Infor CRM information model, add groups and licensing, enable Web Client Support dashboard to link to tickets, configure Analytics System information, and schedule updates.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

Exercise steps

Part 1: Import the Infor CRM Data Source

1. Open the **TIBCO Spotfire** shortcut on your desktop if one was created. If not, select **Start > All Programs > TIBCO > TIBCO Spotfire**.
2. Click **Manage Server**.
3. Click **Add**. The **Add Server** dialog box opens.

   Note: If the server has already been added, click **Cancel** and proceed to **Step 7**.
4. Type *http://srv10:8081/* in the **TIBCO Spotfire Server Address**.
5. Click **OK** twice.
6. Type *admin* in the **Username** field.
7. Type *password* in the **Password** field.
8. Type *http://SRV10:8081/spotfire* in the **Server** field.
9. Click **Login**. If you are prompted to choose **Upgrade** or **Work Offline**, select **Upgrade**.

   You are prompted to login again once the upgrade completes.
10. Select **Tools > Library Administration**. The **Library Administration** window opens.

11. Click **Import.** The **Import** dialog box opens.
12. Click **Browse**.
13. Select **Saleslogix Data Source.part0.zip**.
14. Click **OK**.
15. Clear the **Include permissions** check box.
16. Select **Replace existing item** from the list of **If an imported item has the same name or GUID as an existing item** options.
17. Click **OK**. The **Select Destination Folder** dialog box opens.
18. Select **Library**.
19. Click **OK**.
20. Click **Close** when the import completes.
21. Close the **Library Import** window.
22. Close the **Library Administration** window.

Part 2: Connect the Data Source to the database

1. Select **Tools > Information Designer**.
2. Expand **Saleslogix Data Source**.
3. Right-click **Saleslogix** and select **Edit**.
4. Select **SQL Server (DataDirect)** from the **Type** drop-down list.
5. Replace **<host>** with **srv10** in the **Connection URL** field.
6. Replace **<port>** with **1433** in the **Connection URL** field.
7. Replace **<database>** with **saleslogix_eval** in the **Connection URL** field.

   Note: The database name for SQL Server is case-sensitive.
8. Verify the **Connection URL** is set to **jdbc:tibcosoftwareinc:sqlserver://srv10:1433;databaseName=saleslogix_eval**.
9. Type *sysdba* in the **User Name** field.
10. Type *Ma$t3rk3y* in the **Password** field.
11. Click **Save**. The password field updates and shows as blank.
12. Click **Close**.

Part 3: Update the Infor CRM information model

The information model is used to map data from data sources to Advanced Analytics. It’s also used to create fields, transform data, and perform other advanced tasks. Information links within the information model are used to create dashboards and other analysis.

The information model is set to use the Saleslogix database by default. If you are using another database, follow the steps below to update the information model:

Note: This process takes a few minutes to run. If you prefer to skip this step during the course, copy the following file

C:\ClassFiles\AA Training\Saleslogix.Mode.Part0.ICAA_Class.zip and move it to **C:\tibco\tss\6.5.0\tomcat\application-data\library.** Rename the file to *SaleslogixModel.part0.zip*.

1. Browse to **C:\Classfiles\AA Training\ICAA\SSAA\SpotfireServer\LibraryDBUtility**.
2. Open **LibraryDBChangeUtility.exe**.
3. Verify **C:\tibco\tss\6.5.0\jdk\jre\bin** is selected in the **Java Directory** field.
4. Verify **C:\Classfiles\AA Training\ICAA\SSAA\SpotfireServer\Library\SaleslogixModel.part0.zip** is selected in the **File to update** field.
5. Verify **C:\tibco\tss\6.5.0\tomcat\application-data\library** is selected in the **Output Directory** field.
6. Verify **MSSQL** is selected in the **Database Type** field.
7. Verify **saleslogix_eval** is selected in the **Database Name** field.
8. Verify **sysdba** is selected in the **Database Schema** field.
9. Click **Run**.

   A message opens stating, “There were errors converting some files, but others have been created successfully. Please review the log file.” This is a known issue and can be disregarded.
10. Click **Close** to close the **Utility tool** window.

Part 4: Install the Infor CRM Installation model to your TIBCO Spotfire server

1. Select **Tools > Library Administration**. The **Library Administration** window opens.
2. Click **Import**.
3. Click **Browse** and then select **Saleslogix Model.part0.zip**.
4. Click **OK**. The **Import** dialog box opens.
5. Clear the **Include permissions** check box.
6. Select **Replace existing item from the list** if an imported item has the same name or GUID as an existing item.
7. Click **OK**. The **Select Destination Folder** window opens.
8. Select **Library**.
9. Click **OK**.
10. Click **Close** when the import completes.
11. Close the **Library Administration** window.

Part 5: Add groups and licensing

Spotfire controls which software features are available to different users by assigning licenses to groups. Assign your SSAAService user to Spotfire groups. Users and groups are created, deleted, and managed in the Spotfire Client Administration Manager.

1. Select **Tools > Administration Manager**.
2. Click the **Groups and Licenses** tab.
3. Click **New Group**. The **New Group** dialog box opens.

4. Type *Standard* in the **Group Name** field.
5. Select **Create group at top level**.
6. Click **OK**.
7. Repeat steps **3 through 6** to create the **Power** group.
8. Repeat steps **3 through 6** to create the **Designer** group.
9. Select **Impersonator** in the **Available groups** area.
10. Click the **Properties** tab.
11. Click **Edit Members**.
12. Replace **a*** with **SSAA***.
13. Click **Search**.
14. Select the **SSAAService** group and click **Add**.
15. Click **OK**.
16. Select **Standard** in the **Available groups** area.
17. Click the **Properties** tab.
18. Click **Edit Members**.
19. Replace **a*** with **Every***.
20. Click **Search**.
21. Select the **Everyone** group and click **Add**.
22. Click the **Licenses** tab and then click **Edit**.
23. Enable the following:
    - TIBCO Spotfire Web Player
    - TIBCO Spotfire Enterprise Player.
    - TIBCO Spotfire Extensions.
24. Click **OK.**
25. Select **Power** from the **Available groups** area.
26. Click the **Licenses** tab and then click **Edit**. The **Licenses for 'Power'** dialog box opens.
27. Select the **TIBCO Spotfire Professional** check box.
28. Click **OK**. The following licenses are also enabled form the **Standard** group:
    - TIBCO Spotfire Web Player
    - TIBCO Spotfire Enterprise Player
    - TIBCO Spotfire Extensions
29. Select **Designer** from the **Available groups** area.
30. Click the **Licenses** tab and then click **Edit**. The **Licenses for 'Designer'** dialog box opens.
31. Select the **TIBCO Spotfire Professional** check box.
32. Select the **TIBCO Spotfire Advanced Analytics** check box.
33. Select the **TIBCO Spotfire Information Modeler** check box.

34. Click **OK**. The following licenses are also enabled from the **Standard** group:
    - TIBCO Spotfire Web Player
    - TIBCO Spotfire Enterprise Player
    - TIBCO Spotfire Extensions
35. Click **Close**.

When enabling licenses, you may see a green or red check mark in the enabled columns. These marks indicate the licenses the group has enabled.

Part 6: Enable the Web Client Support dashboard which contains URL links to tickets

The default URL used should be updated; enabling these links to open the ticket correctly. Use the following steps to update the URL:

1. Select **File > Open From > Library**.
2. Double-click **Saleslogix**.
3. Double-click **Analysis**.
4. Click **Support**.
5. Click **Open**.
6. Select **Edit > Document Properties**.
7. Click the **Properties** tab.
8. Select **SLXURL** from the list of **Available** properties.
9. Click **Edit**.
10. Type *http://srv10:3333/SlxClient/* in the **Value** field.
11. Click **OK** twice.
12. Select **File > Save**.

    A message opens stating, “This will update the analysis in the library. Would you like to continue?”
13. Click **Yes**.
14. Close the **TIBCO Spotfire Client**.

Part 7: Configure the Analytics System information by logging into the Infor CRM Web Client as an administrator

1. Open the **Infor CRM Web Client**.
2. Type *admin* in the **Username** field.
3. Type *password* in the **Password** field.
4. Select the **Administration Nav Bar > Analytics System Info**.
5. Type *http://srv10:8081/spotfire* in the **Analytics Server URL** field.
6. Type *http://srv10:8080/spotfireweb* in the **Web Player URL** field.

7. Click **Save**.
8. Click **Open** near the **Analytics Server URL** to verify the **Analytics Server** window opens.
9. Click **Open** near the **Web Player URL** to verify the **Web Player** window opens. Keep this window open for the next exercise.

It's important to save prior to testing each URL as each URL is replaced with a blank value if you test prior to saving.

Part 8: Schedule regular updates to keep KPI data current. Updates are configured in the Administration area of the Infor CRM Web Client

1. Select **Tools > Scheduled updates** from the **Spotfire Web Player** window.
2. Click **Add analysis file**. The **Select Schedule File** window opens.
3. Select **Add analysis file > Saleslogix > Analysis**.
4. Select **Marketing**. The **Configuration Update Schedule** window opens.
5. Select **Automatic** within the **Update Method** area.
6. Select the times when users will be accessing data in the **Keep analysis pre-loaded to assure fast access between** area.
7. Select **Reload and trigger update (within the specified time frame) every** and enter a time in minutes of how often data is to be refreshed.
8. Click **Save**.
9. Repeat steps **2 through 8** for the **Support** and **Sales** analysis.
10. Close the **Schedule Updates** and **Web Player** windows.
11. Click **Sign off** to close the **Infor CRM Web Client**.

Lesson 4: Infor CRM Advanced Analytics customizations

Estimated time

8 hours

Learning objectives

In this lesson, you will:

- Demonstrate adding a custom Infor CRM table to Spotfire.
- Demonstrate adding third-party data to Spotfire.
- Design visualizations that limit data based on other visualizations.
- Design visualizations that use custom expressions and bookmarks.
- Apply Infor CRM security to a custom table and dashboard.
- Launch a dashboard in Infor CRM Windows and Web.

Topics

- Customizing ICAA
- Customization best practices

Customizing ICAA

Exercise 4.1: Create a custom Infor CRM table

In this exercise, you will create a custom Infor CRM table. It's recommended for the company to install the add-on user license provided with ICAA so an existing named user license is not consumed in the production environment. However, several named user licenses are available for use in your training workstation.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

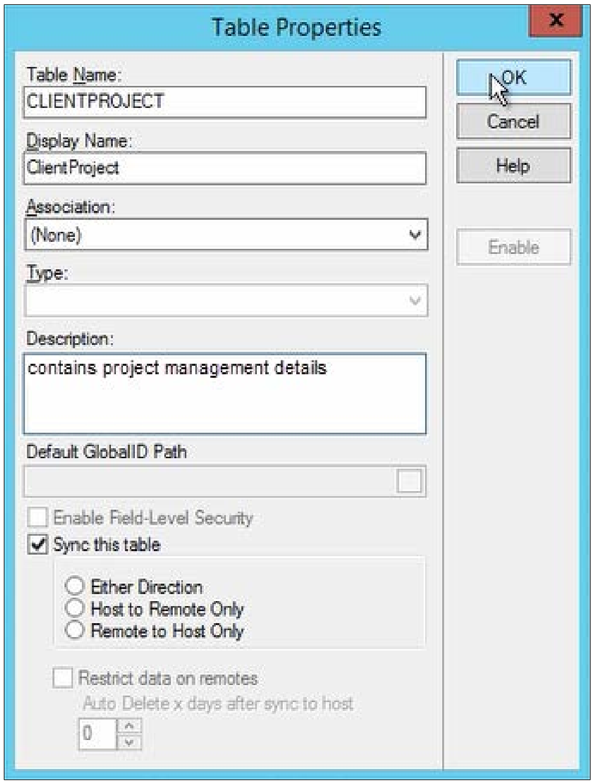
Exercise steps

Part 1: Create a custom Infor CRM table

1. Select **Start > All Programs > Infor CRM > Administrator**.
2. Type *admin* in the **User ID** field.
3. Type *password* in the **Password** field.
4. Click **Sign In**.
5. Select **Manage > Database**. The **Database Manager** screen opens.
6. Click **Create New Table**. The **Table Properties** dialog box opens.
7. Type *ClientProject* in the **Table Name** field and then press tab to exit out of the field.

   Notice the text defaults to **CAPS**.
8. Type *ClientProject* in the **Display Name** field.
9. Verify **(None)** is selected in the **Association** field.
10. Type *contains project management details* in the **Description** field.
11. Click **OK**.

The ClientProject table may have relationships (such as Account, Contact, Ticket, or User) with several other tables. If you associate another table using the **Association** drop-down list, your current table appears below the table with which you associated. This is done so we can create the relationships in Infor CRM later. However, you'll need to recreate the relationships when the data model is imported into ICAA. We do not touch on this training in the training workstation.



The table is added to the bottom of the Tables tree view. Review fields created automatically:

Fields: (Current Table Size: 36 bytes) Client Projects

Vis	Idx	Gbl ID	Field Name	Display Name	Type	Length	Description
✓	✓		CLIENTPROJECTID	Clientprojectid	String	12	
✓			CREATEUSER	Createuser	String	12	
✓			CREATEDATE	Createdate	Date/Time	0	
✓			MODIFYUSER	Modifyuser	String	12	
✓			MODIFYDATE	Modifydate	Date/Time	0	

The table isn't committed to the database yet so let's create additional fields we want the ClientProject table to have, such as project title, start date, and end date.

12. Right-click in the white space and select **Create New Field**. Verify the **Table Name** field reads **CLIENTPROJECT**.
13. Add the following properties:

Field Name	**Display Name**	**Data Type**	**Length**
TITLE	Title	String	32
DESCRIPTION	Description	Stringds	255
PROJECTTYPE	ProjectType	String	64
STARTDATE	StartDate	Date/Time	

Field Name	Display Name	Data Type	Length
ENDDATE	EndDate	Date/Time	
ESTIMATEDCOST	EstimatedCost	Currency	
ACTUALCOST	ActualCost	Currency	
ACCOUNTID	AccountId	SLX Standard Id	
MANAGERID	ManagerId	SLX Standard Id	

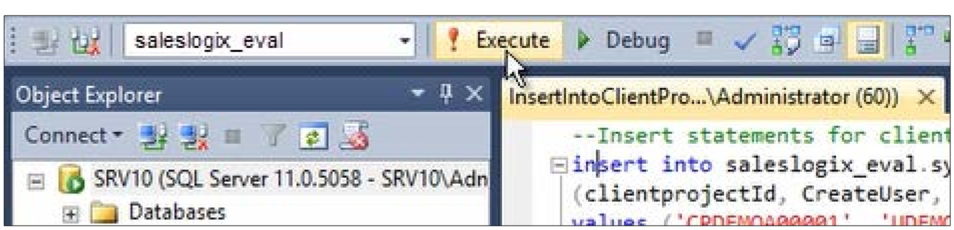
14. Click **OK** and repeat the process for any fields you need to create.
15. Wait for the **Database Manager** to reload.
16. Click **Apply Changes**.
17. Close **Administrator**.

In the above exercise, you created an entity with different data types to explore advanced aggregation when building visualizations. For example, you can use DateDiff to calculate the number of days between the StartDate and EndDate for a project.

Typically, when creating a new custom entity in Infor CRM you may choose to include the SECCODEID for security purposes, i.e. users can only see data in which they can access. You can use this property through the Account join which you'll set up inside Spotfire later.

Part 2: Insert sample data

1. Select **Start > SQL Server Management Studio**.
2. Verify the **Server name** is set to **SRV10** and click **Connect** to use **Windows Authentication**.
3. Select **File > Open > File**.
4. Browse to **C:\Classfiles\AA Training** and open the **InsertIntoClientProject.sql** file.
5. Click **Open**.
6. Click **Execute** once the file opens.



7. Expand **SRV10 > Databases** within the **Object Explorer** pane.

8. Expand **saleslogix_eval > Tables**.
9. Right-click the **sysdba.CLIENTPROJECT** table and then click **Select Top 1000 Rows**.

   Notice there are 25 rows of data. You can manually add rows too.
10. Close **SQL Server Manager Studio**.

What can be analyzed from the data?

You can analyze items, such as:

- Projects that charge the highest actual costs and for which accounts.
- Project managers who spend the most time on their projects.
- Project managers who have the most projects.

You have enough data in this example to justify a separate Project Management dashboard document and two dashboard pages at a minimum, i.e. Project Cost and Project Time.

Before you can design a dashboard using the above date, you need to import the dashboard into the information model within Spotfire. Within the information model you'll set up joins, column elements, and any additional information you want to use within an information link. This is how you know what data to include in an analysis (dashboard).

Exercise 4.2: Create a parallel model for customization

In this exercise, you will back up the main data model and create a folder structure for "Training."

Prior to making any customizations, export the main data model folder.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]()

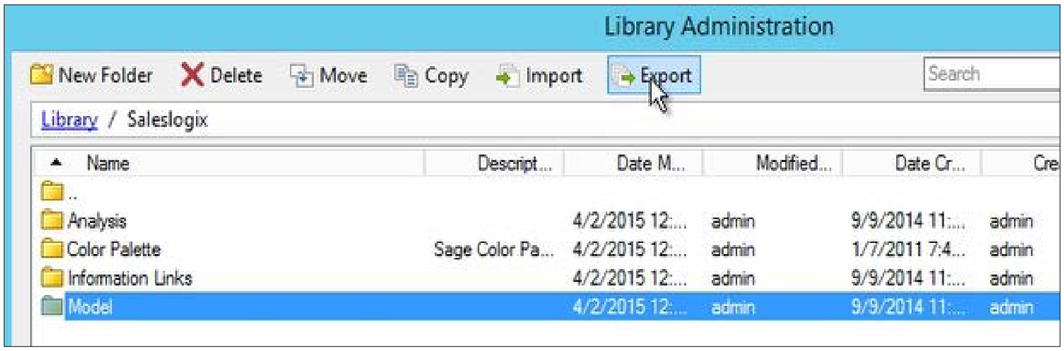
Exercise steps

Part 1: Backup the main data model

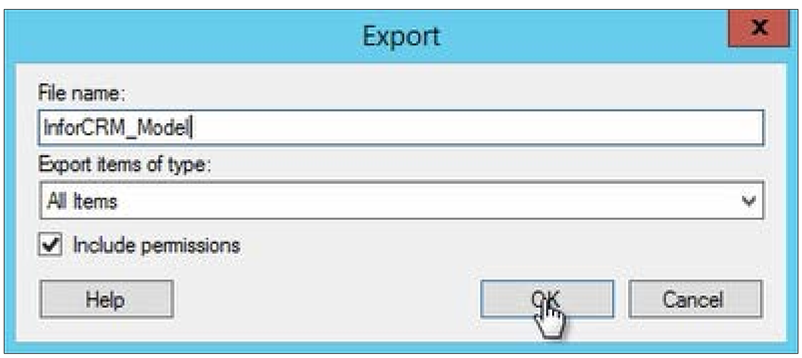
1. Open **TIBCO Spotfire Professional Client**.
2. Type *admin* in the **User ID** field if prompted.

3. Type *password* in the **Password** field if prompted.
4. Click **Sign In**.
5. Select **Tools > Library Administration**. The **Library Administration** window opens.

   The library contains all your analyses, color palettes, information links, data sources, and data models.
6. Double-click the **Saleslogix** folder.
7. Click the **Model** folder and then click **Export**. The **Export** dialog box opens.



8. Type *InforCRM_Model* in the **File name** field.
9. Verify **All Items** is selected in the **Export items of type** field.

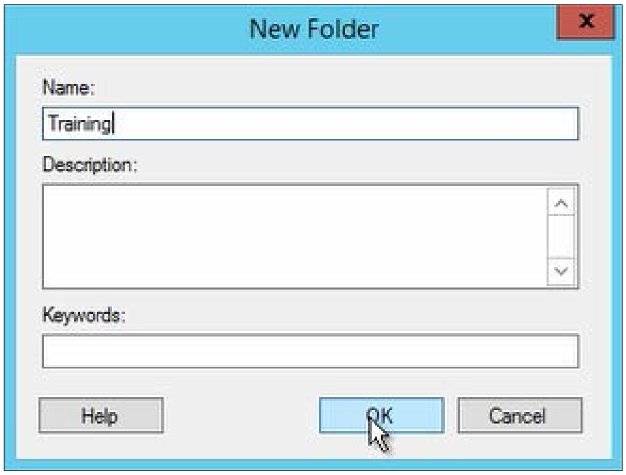


10. Click **OK**. The **Library Export** dialog box opens.
11. Click **Close** once the export finishes.
12. Close the **Library Administration** window.

    The backup just created is in C:\tibco\tss\6.5.0\tomcat\application-data\library.

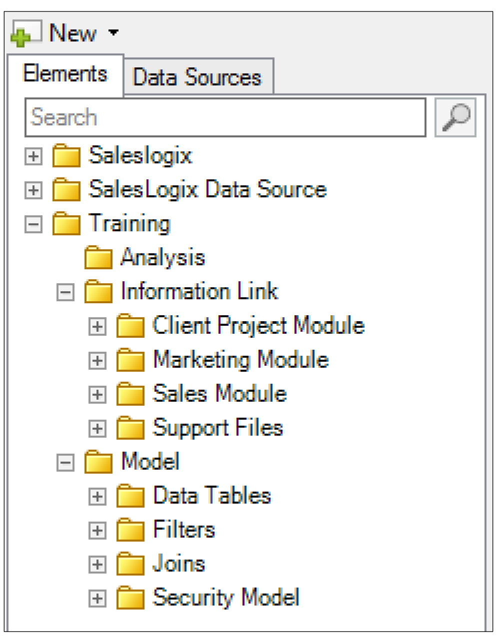
Part 2: Create a folder structure for “Training”

1. Select **Tools > Information Designer**.
2. Click the **Elements** tab and then right-click in the white space.
3. Click **New Folder**. The **New Folder** dialog box opens.
4. Type *Training* in the **Name** field.
5. Click **OK**.



6. Create the following sub folder structure for:

- Analysis
- Information Link
    - Client Project Module
    - Marketing Module
    - Sales Module
    - Support Files
- Model
    - Data Tables
    - Filters
    - Joins
    - Security Model



Whenever a new column, join, or information link is created, they should be saved in the appropriate **Training** sub folder.

Exercise 4.3: Importing a custom table into Spotfire

In this exercise, you will connect to a data source, customize the Infor CRM data model within Spotfire, and create the CLIENTPROJECT – ACCOUNT join, CLIENTPROJECT – USERINFO join, and information link.

Whether you plan to use custom data from a third-party source or from the Infor CRM database, you need to be able to connect to the data source from within Spotfire. You can connect to almost any provider if you enable that provider when ICAA is installed.

Because you're using a custom table inside Infor CRM, you're already connected to a data source which was configured during installation. However, if you use a third-party data source from a different database server other than the Infor CRM database, you can create a new connection.

The steps below are for reference only.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

Exercise steps

Part 1: Connect to a data source

On the training machines, the following steps have already been completed. However, if a Data Source was not previously created or you need to create another Data Source, these would be the steps to follow.

1. Open **TIBCO Spotfire Professional Client**.
2. Select **Tools > Information Designer**.
3. Click the **Elements** tab.
4. Select **New > Data Source**. The **Data Source** screen opens.

   This screen allows you to choose the type of Data Source and enter the Connection URL.
5. Update the **Connection URL** with the appropriate **<host>**, **<port>**, and **<database name>** (i.e. **jdbc:tibcosoftwareinc:sqlserver://srv10:1433;databaseName=saleslogix_eval)**.
6. Click **Close** but leave the **Information Designer** window open.

Part 2: Customize the Infor CRM model within Spotfire by creating new elements, joins, and information links in your model

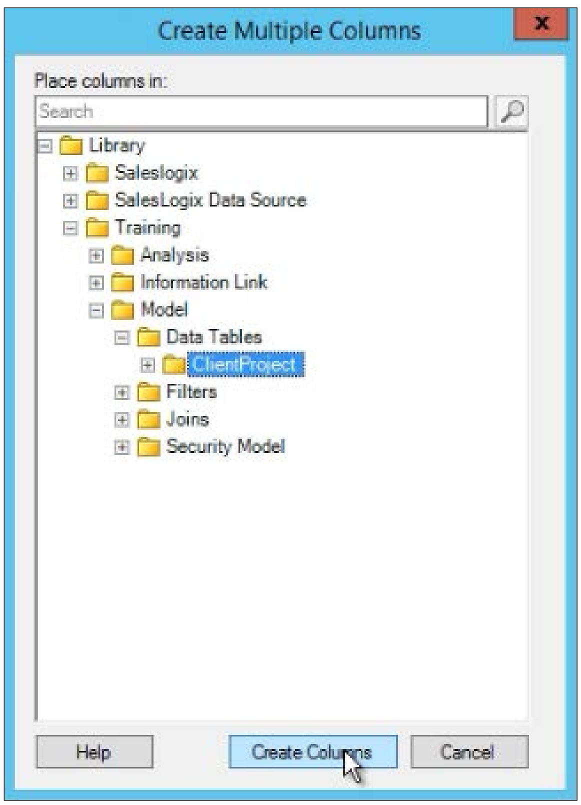
Whether using a custom Infor CRM table or a table from an external data source, the process is identical.

1. Click the **Elements** tab.
2. Expand **Training > Model > Data Tables**.

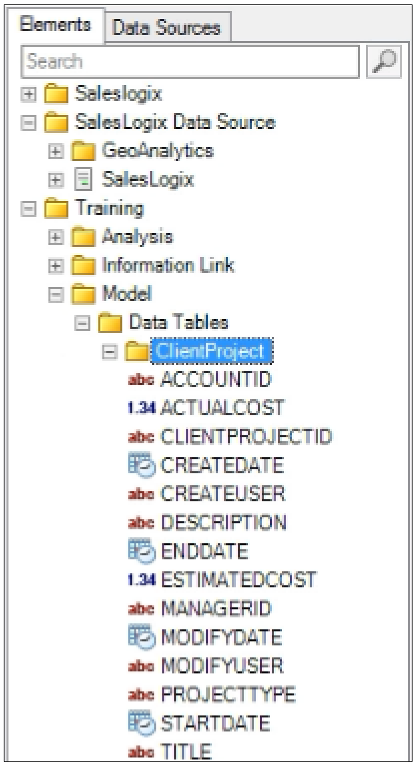
3. Right-click **Data Tables** and select **New**.
4. Click **Folder**. The **New Folder** dialog box opens.
5. Type *ClientProjects* in the **Name** field.
6. Click **OK**. The **New ClientProjects** folder opens and is empty.

   Tip: You can right-click the folder to add columns individually, however, an easier method is to create multiple element columns at once through the Data Source.

7. Click the **Data Sources** tab within the **Information Designer** window.
8. Expand **Saleslogix > saleslogix_eval > sysdba**.
9. Right-click the **CLIENTPROJECT** node and select **Create Column Elements**.
10. Click **Create Columns**. The **Create Multiple Columns** dialog box opens.
11. Expand **Library > Training > Model > Data Tables**.
12. Click the **ClientProject** folder and then click **Create Columns**.



13. Return to the **Elements** tab when the import finishes.
14. Expand the **ClientProject** folder in the **Training** node to view the element columns.

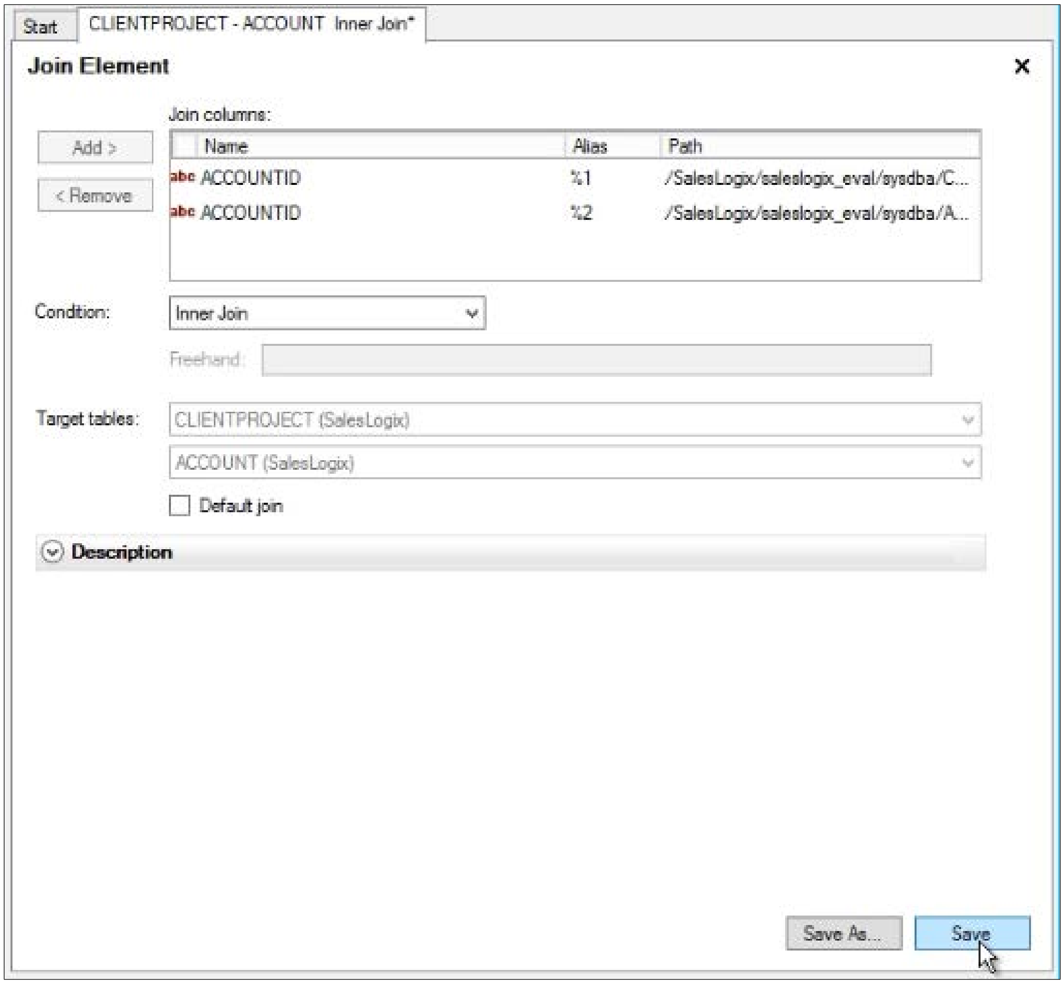


To alias any of the elements in your custom data tables folder or the out-of-the-box Infor CRM folder, e.g. COMPANY instead of ACCOUNT, right-click an element and click **Edit Properties**. The value you choose for the **Name** will appear within the Information Designer and any visualization properties as you or other Spotfire Profession client users develop.

If you do not alias column elements within the Information Designer, you can alias individual column names to change the display text for the user.

Part 3: Create the CLIENT PROJECT – ACCOUNT join

1. Click **Create Join** within the **Information Designer** window. The **Join Element** screen opens.
2. Click the **Data Sources** tab.
3. Expand **Saleslogix > saleslogix_eval > sysdba > ClientProject**.
4. Select the **ACCOUNTID** element column.
5. Click **Add** to include it in the **Join columns** pane.
6. Expand **Saleslogix > saleslogix_eval > sysdba > Account**.
7. Select the **ACCOUNTID** element column.
8. Click **Add** to include it in the **Join columns** pane.
9. Verify the **Condition** is set to **Inner Join**.
10. Click **Save**.

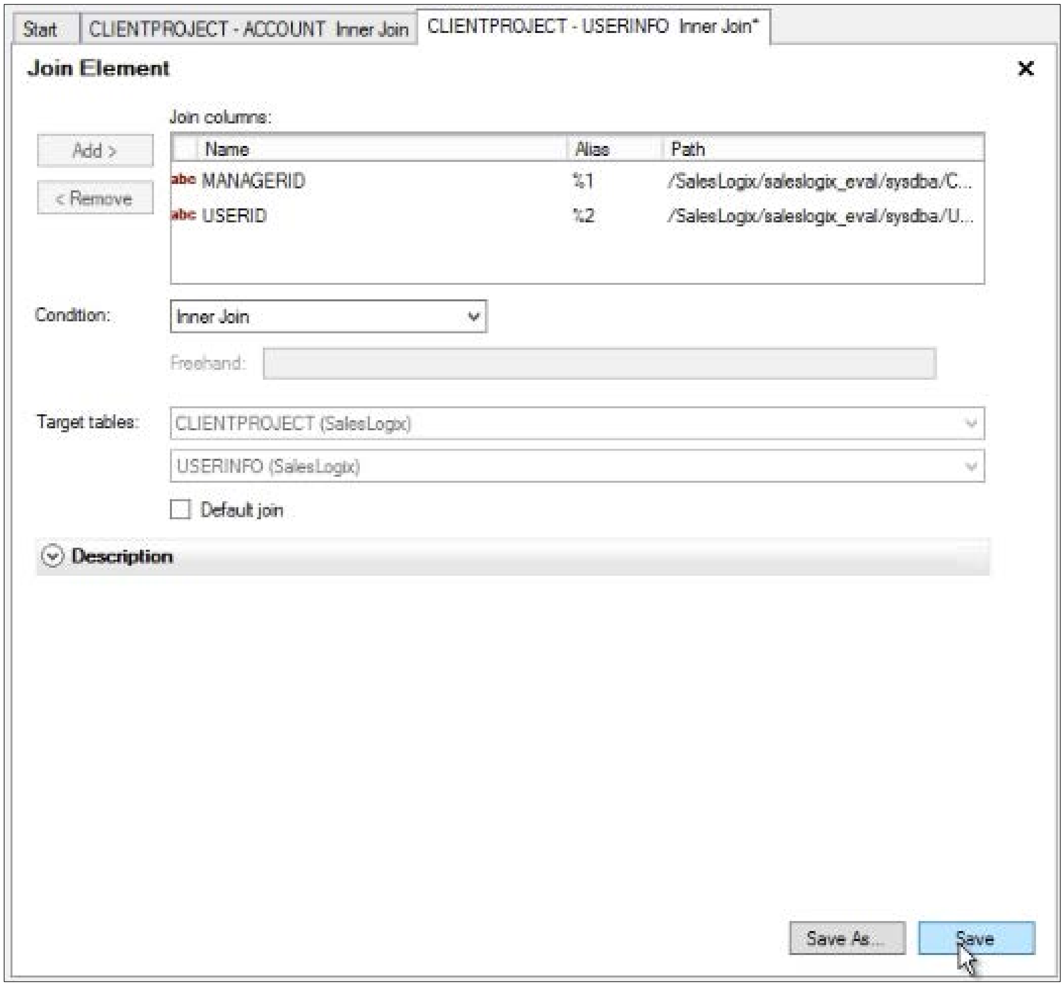


11. Expand **Library > Training > Model**.
12. Select **Joins**.
13. Leave the default name chosen.
14. Click **OK**.
15. Click **Save**.

Part 4: Create the CLIENTPROJECT – USERINFO join

1. Click **Create Join** within the **Information Designer** window's **Start** tab. The **Join Element** screen opens.
2. Expand **Saleslogix > saleslogix_eval > sysdba > ClientProject**.
3. Select the **MANAGERID** element column.
4. Click **Add** to include it in the **Join columns** pane.
5. Expand **Saleslogix > saleslogix_eval > sysdba > USERINFO Data Source**.
6. Select the **USERID** element column.
7. Click **Add** to include it in the **Join columns** pane.

8. Verify the **Condition** is set to **Inner Join**.
9. Click **Save**.



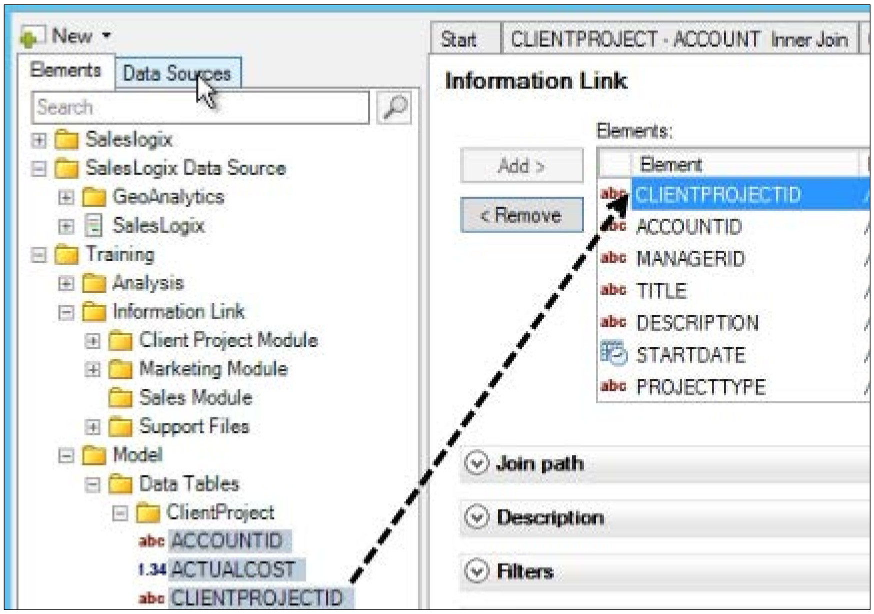
10. Expand **Library > Training > Model**.
11. Select **Joins**.
12. Leave the default name chosen.
13. Click **OK**.
14. Click **Save**.

Part 5: Create the information link

The information link is a container for columns, filters, joins, or procedures to use on a dashboard.

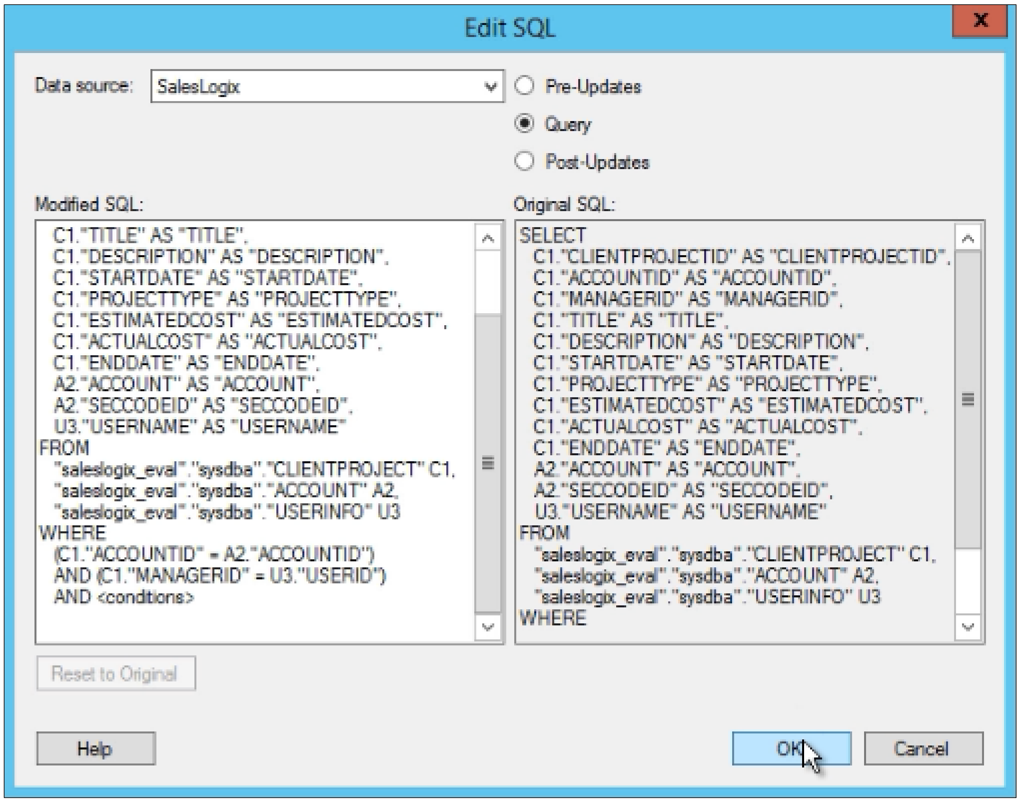
1. Click the **Elements** tab within the **Information Designer** window.
2. Expand **Training > Information Link**.
3. Right-click the **Sales Module** folder and select **New > Information Link**. The **Information link** screen opens.
4. Select **Training > Model > Data Tables > ClientProject**.

5. Select the following columns and then click **Add** to copy them into the **Elements** drop-down list:
   - CLIENTPROJECTID
   - ACCOUNTID
   - MANAGERID
   - TITLE
   - DESCRIPTION
   - STARTDATE
   - PROJECTTYPE
   - ENDDATE
   - ESTIMATEDCOST
   - ACTUALCOST



6. Click the **Elements** tab.
7. Expand **Saleslogix > Model > Data Tables > Account**.
8. Select **Account** and **SECCODEID**.
9. Click **Add** to add them to the **Elements** pane.
10. Click the **Elements** tab.
11. Expand **Saleslogix > Model > Data Tables > Userinfo**.
12. Select **USERNAME**.
13. Click **Add**.
14. Expand the **Join** path.
15. Click **Suggest Joins**.

    Note: The related joins (CLIENTPROJECT – USERINFO Inner Join and CLIENTPROJECT – ACCOUNT Inner Join) appear in the list.
16. Click **SQL** to view the join properties.
17. Click **OK**.



18. Click **Save**.
19. Browse to **Library** and select **Training > Information Link > Sales Module**.
20. Change the name of the information link to **Projects**.
21. Click **Save**.
22. Click **Close** to exit the **Information Designer**.

Exercise 4.4: Add a table to a dashboard

In this exercise, you will add a data table to a dashboard. Adding a data table loads data on the dashboard analysis you have open. For example, if you want to add a new Project Management dashboard page to the out-of-the-box Sales dashboard (analysis) you need to open the Sales analysis. To modify out-of-the-box dashboard documents, click **Edit**, click **Document Properties,** and set the **LoadSecurity** property to T. Also, click **File**, click **Save As**, click **Library Item**, and save it to your customization folder, i.e. Training.

However, for this training you are asked to create a new Projects dashboard (analysis) separate from the out-of-the-box dashboards. The new dashboard is exclusively used for project management-related data.

In this exercise, you'll add the data table now so a new dashboard is created automatically. You can also create a new dashboard first and add the table data instead.

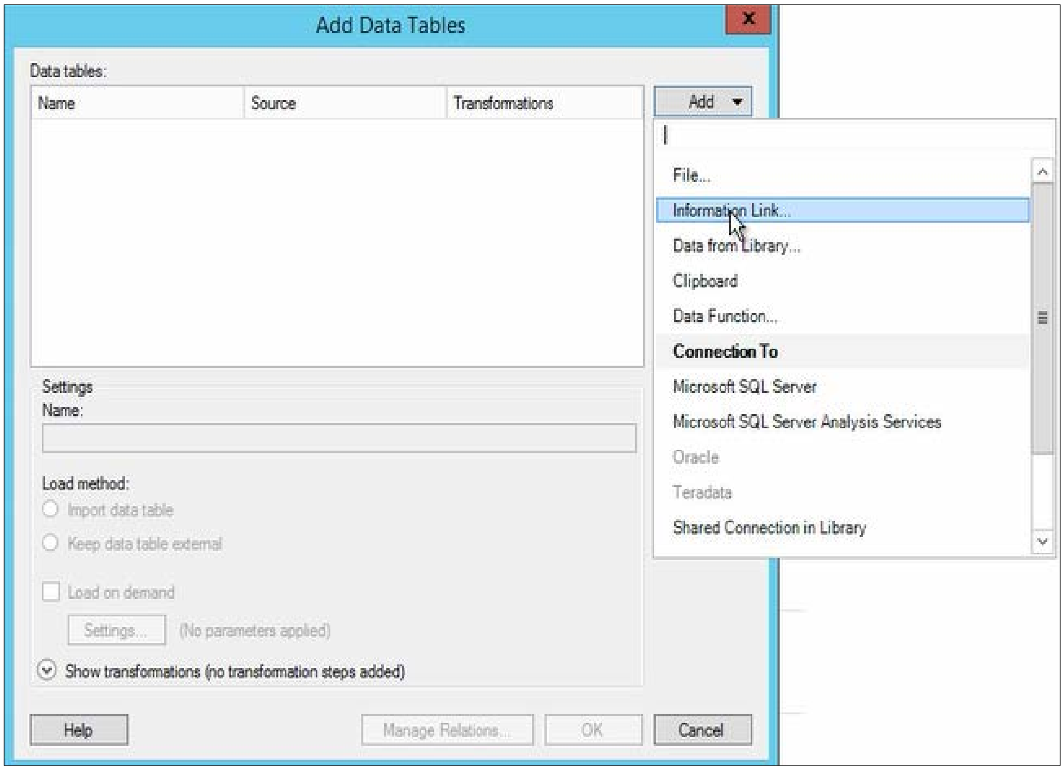
Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

Exercise steps

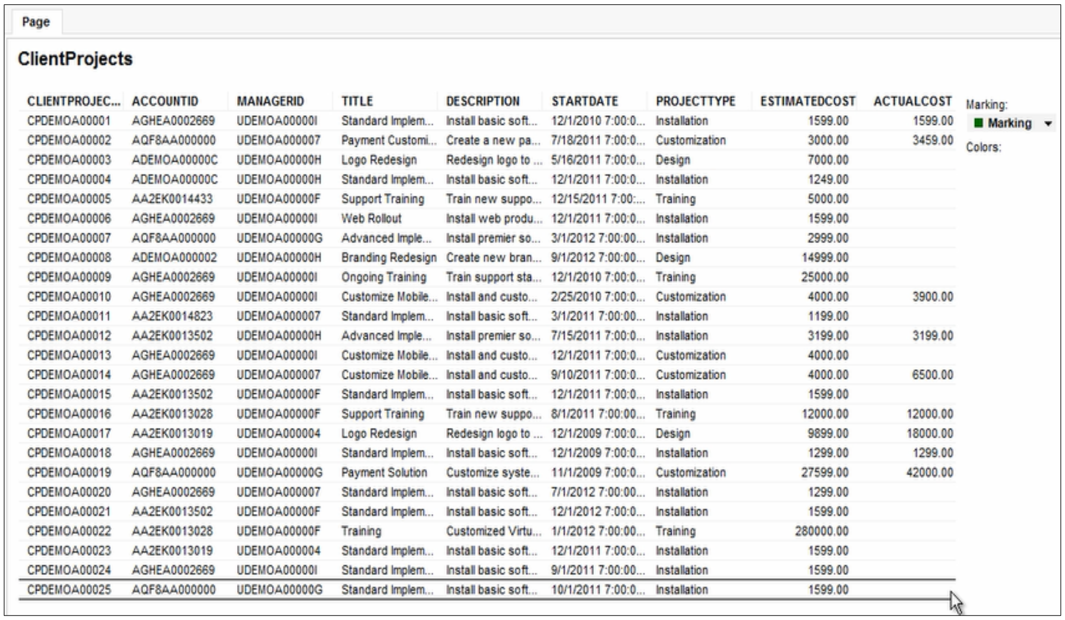
1. Open **TIBCO Spotfire Professional Client**.
2. Select **File > Add Data Tables**. The **Add Data Table** window opens.
3. Select **Add > Information Link**. The **Select Information Link** window opens.



4. Browse to **Library** and select **Training > Information Link > Sales Module**.
5. Click **ClientProjects**.
6. Click **OK** to return to the **Add Data Tables** window.
7. Click **OK** again. A new dashboard page opens.

   The selected data from the CLIENTPROJECT table appears in a Bar Graph visualization.
8. Right-click the visualization and select **Switch Visualization To > Table**.

   You can now see the data from your custom Infor CRM table.


Page

ClientProjects

CLIENTPROJEC...	ACCOUNTID	MANAGERID	TITLE	DESCRIPTION	STARTDATE	PROJECTTYPE	ESTIMATEDCOST	ACTUALCOST
CPDEMOA00001	AGHEA0002669	UDEMOA00000I	Standard Implem...	Install basic soft...	12/1/2010 7:00:0...	Installation	1599.00	1599.00
CPDEMOA00002	AQF8AA000000	UDEMOA000007	Payment Customi...	Create a new pa...	7/18/2011 7:00:0...	Customization	3000.00	3459.00
CPDEMOA00003	ADEMOA00000C	UDEMOA00000H	Logo Redesign	Redesign logo to ...	5/16/2011 7:00:0...	Design	7000.00	
CPDEMOA00004	ADEMOA00000C	UDEMOA00000H	Standard Implem...	Install basic soft...	12/1/2011 7:00:0...	Installation	1249.00	
CPDEMOA00005	AA2EK0014433	UDEMOA00000F	Support Training	Train new suppo...	12/15/2011 7:00:...	Training	5000.00	
CPDEMOA00006	AGHEA0002669	UDEMOA00000I	Web Rollout	Install web produ...	12/1/2011 7:00:0...	Installation	1599.00	
CPDEMOA00007	AQF8AA000000	UDEMOA00000G	Advanced Imple...	Install premier so...	3/1/2012 7:00:00...	Installation	2999.00	
CPDEMOA00008	ADEMOA000002	UDEMOA00000H	Branding Redesign	Create new bran...	9/1/2012 7:00:00...	Design	14999.00	
CPDEMOA00009	AGHEA0002669	UDEMOA00000I	Ongoing Training	Train support sta...	12/1/2010 7:00:0...	Training	25000.00	
CPDEMOA00010	AGHEA0002669	UDEMOA00000I	Customize Mobile...	Install and custo...	2/25/2010 7:00:0...	Customization	4000.00	3900.00
CPDEMOA00011	AA2EK0014823	UDEMOA000007	Standard Implem...	Install basic soft...	3/1/2011 7:00:00...	Installation	1199.00	
CPDEMOA00012	AA2EK0013502	UDEMOA00000H	Advanced Imple...	Install premier so...	7/15/2011 7:00:0...	Installation	3199.00	3199.00
CPDEMOA00013	AGHEA0002669	UDEMOA00000I	Customize Mobile...	Install and custo...	12/1/2011 7:00:0...	Customization	4000.00	
CPDEMOA00014	AGHEA0002669	UDEMOA000007	Customize Mobile...	Install and custo...	9/10/2011 7:00:0...	Customization	4000.00	6500.00
CPDEMOA00015	AA2EK0013502	UDEMOA00000F	Standard Implem...	Install basic soft...	12/1/2011 7:00:0...	Installation	1599.00	
CPDEMOA00016	AA2EK0013028	UDEMOA00000F	Support Training	Train new suppo...	8/1/2011 7:00:00...	Training	12000.00	12000.00
CPDEMOA00017	AA2EK0013019	UDEMOA000004	Logo Redesign	Redesign logo to ...	12/1/2009 7:00:0...	Design	9899.00	18000.00
CPDEMOA00018	AGHEA0002669	UDEMOA00000I	Standard Implem...	Install basic soft...	12/1/2009 7:00:0...	Installation	1299.00	1299.00
CPDEMOA00019	AQF8AA000000	UDEMOA00000G	Payment Solution	Customize syste...	11/1/2009 7:00:0...	Customization	27599.00	42000.00
CPDEMOA00020	AGHEA0002669	UDEMOA000007	Standard Implem...	Install basic soft...	7/1/2012 7:00:00...	Installation	1299.00	
CPDEMOA00021	AA2EK0013502	UDEMOA00000F	Standard Implem...	Install basic soft...	12/1/2012 7:00:0...	Installation	1599.00	
CPDEMOA00022	AA2EK0013028	UDEMOA00000F	Training	Customized Virtu...	1/1/2012 7:00:00...	Training	280000.00	
CPDEMOA00023	AA2EK0013019	UDEMOA000004	Standard Implem...	Install basic soft...	12/1/2011 7:00:0...	Installation	1599.00	
CPDEMOA00024	AGHEA0002669	UDEMOA00000I	Standard Implem...	Install basic soft...	9/1/2011 7:00:00...	Installation	1599.00	
CPDEMOA00025	AQF8AA000000	UDEMOA00000G	Standard Implem...	Install basic soft...	10/1/2011 7:00:0...	Installation	1599.00	

9. Select **File > Save As > Library Item**. The **Save As Library Item** window opens.
10. Browse to **Library** and select **Training > Analysis**.
11. Type *ClientProject* in the **Name** field.
12. Click **Finish**.
13. Click **Close** in the **Save as Library Item** window.

    You can add several dashboard pages to this newly created dashboard as well as redesign it with more intuitive visualizations and filters. But first, let's explore ways to reload data after it is added to a dashboard.

Exercise 4.5: Reload data in a dashboard

In this exercise, you will reload data. If you have data loaded onto a dashboard you can make changes to the model later. For example, you can create a new calculated field for COSTVARIANCE after the data has already been loaded. To make sure a new column element loads properly, let's use a calculated field as an example.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]

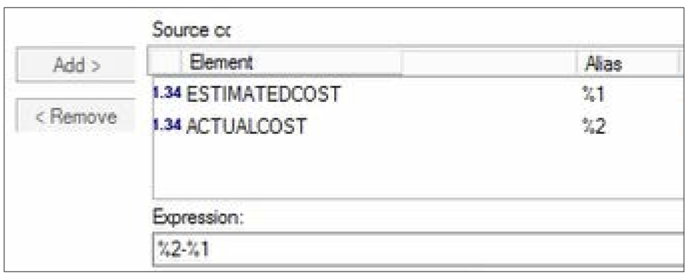
Exercise steps

1. Select **Tools > Information Designer**.

2. Click the **Elements** tab.
3. Expand **Training > Model > Data Tables**.
4. Right-click **ClientProject** and select **New > Column**.
5. Click the **Data Sources** tab.
6. Expand **Saleslogix > saleslogix_eval > sysdba > CLIENTPROJECT**.
7. Select **ESTIMATEDCOST** and **ACTUALCOST**.
8. Click **Add**.
9. Type *%2-%1* in the **Expression** field.

   The **Expression** field uses the alias value. The expression you want is **ActualCost – Estimated Cost** so you may need to verify the alias for each.

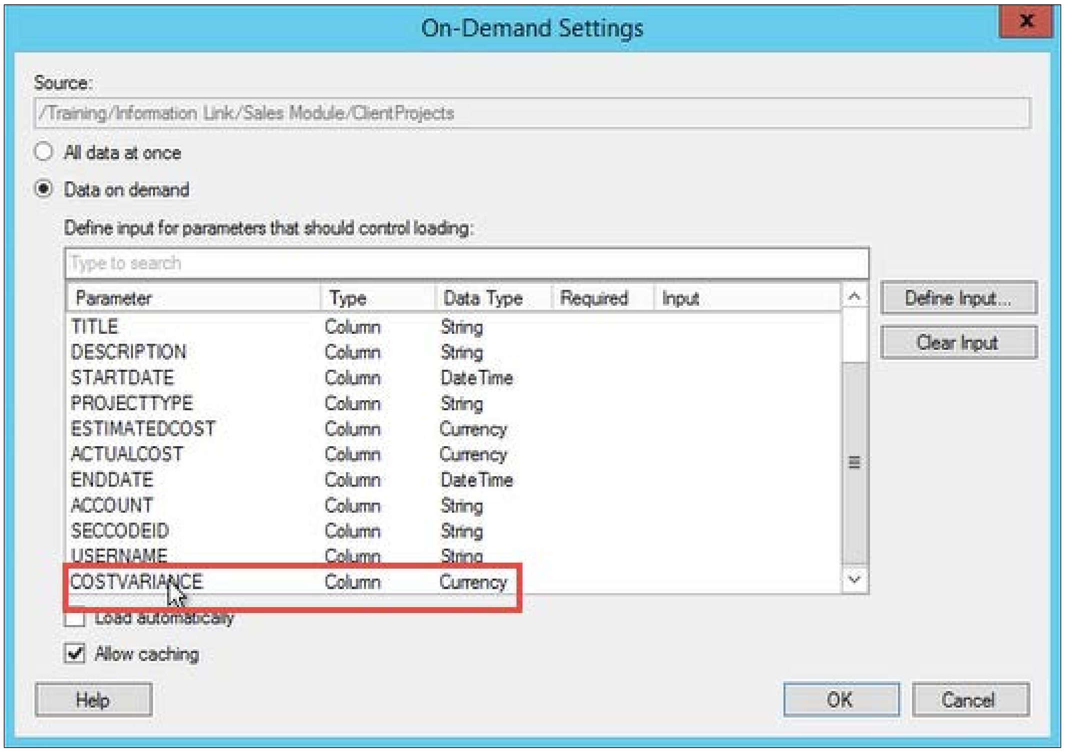
   Tip: For a list of other allowed functions, search the **Help** File for **Aggregate Functions**.



10. Click **Save**.
11. Expand **Library > Training > Model > Data Tables > ClientProject**.
12. Type *COSTVARIANCE* in the **Name** field.
13. Click **Save**.

    A new column element for **COSTVARIANCE** appears under the **ClientProject** folder within the **Elements** tab.
14. Click the **Elements** tab.
15. Expand **ClientProject**.
16. Click the **COSTVARIANCE** column and then click **Add** to include it in the **Elements** pane.
17. Click **Save**.
18. Click **Close**.
19. Close the **Information Designer**.
20. Select **Edit > Data Table Properties** in the **ClientProject** dashboard.
21. Click **Refresh Data** and select **Without Prompt**. The calculated field can now be use inside a visualization or as a filter.
22. Click **Settings** to verify the new field was added.
23. Click **OK** when finished.

    The new column element is listed as an information link parameter. Note that you may need to select **Data on demand** to scroll down and view. If so, select **All data at once** before clicking **OK**.



24. Click **OK** again to close the **Data Table Properties** window.

You can also use **Reload Data** in the toolbar to reload all data tables, however, this option can take a while if one or more tables is large. **Refresh Data** may be unavailable for some of your data tables if you added rows, columns, or frozen data in an embedded data table.

Exercise 4.6: Load data from an external database

In this exercise, you will use data from a third-party database in ICAA. One way to use third-party data is by joining data to an existing Infor CRM table. For this scenario, follow the steps in exercise 4.3 to create a connection, column elements, joins, and an information link.

Infor CRM has added a new ExternalProjects database, however, it's sitting on the same database server as Infor CRM in your training workstation. Rather than duplicate the steps in the Information Designer let's use an easier and alternate method of adding the data directly from the external database.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]()

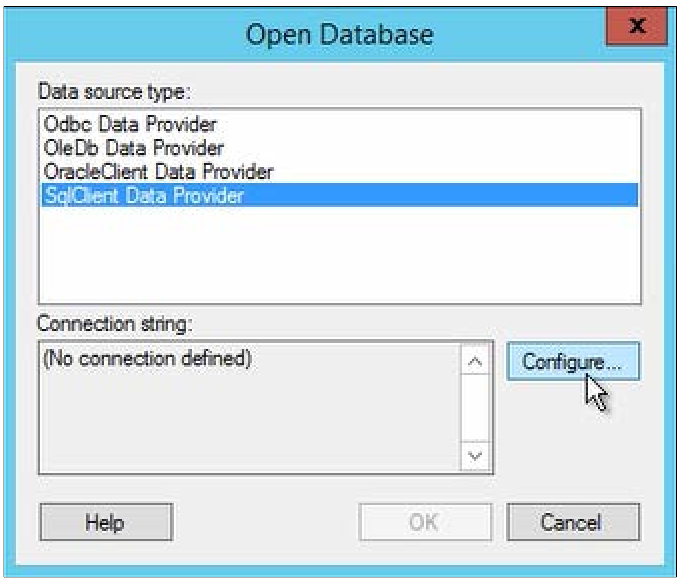
Exercise steps

1. Open **TIBCO Spotfire Professional Client**.
2. Select **File > Add Data Tables**. The **Add Data Tables** window opens.
3. Select **Add > Database**.

   Note: You may need to scroll down to see this option. The **Open Database** dialog box opens.

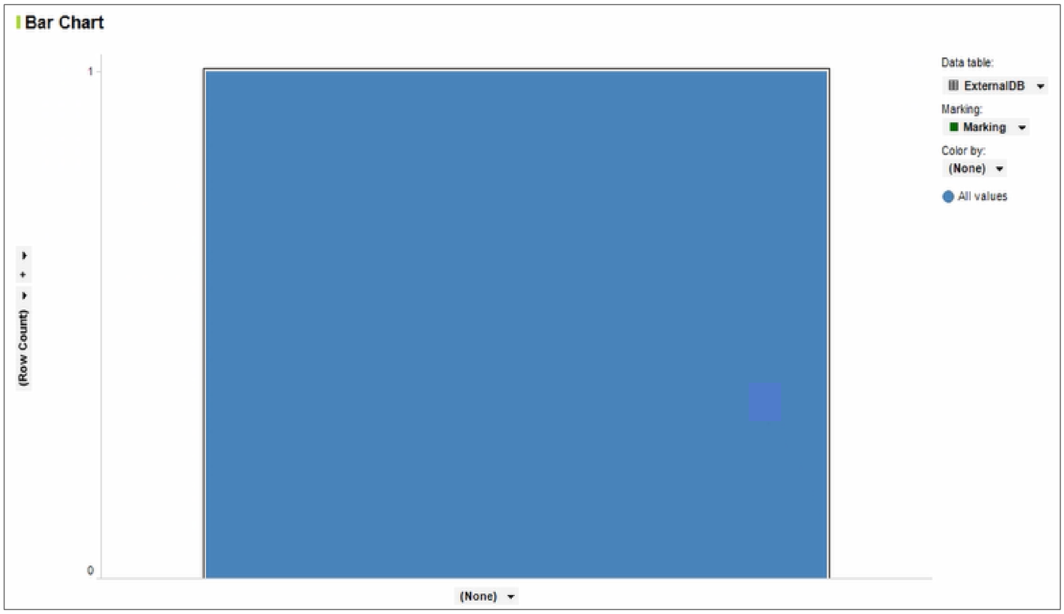
   In a production environment, Infor CRM recommends that you add a data table from an information link to join the data in Infor CRM.

4. Select **SqlClient Data Provider**.
5. Click Configure.



6. Type *SRV10* in the **SQL server name** field.
7. Select **Use Windows Authentication**.
8. Select **ExternalProjects** under **Connect to a Database**.
9. Click **OK** twice. The **Specify Tables and Columns** dialog box opens.
10. Expand **dbo > Projects** and **dbo >Tasks** within the **Tables, views and columns** area.
11. Select the **Projects** and **Tasks** check boxes to select all.
12. Type *ExternalDB* in the **Data source name** field.
13. Click **OK** twice.

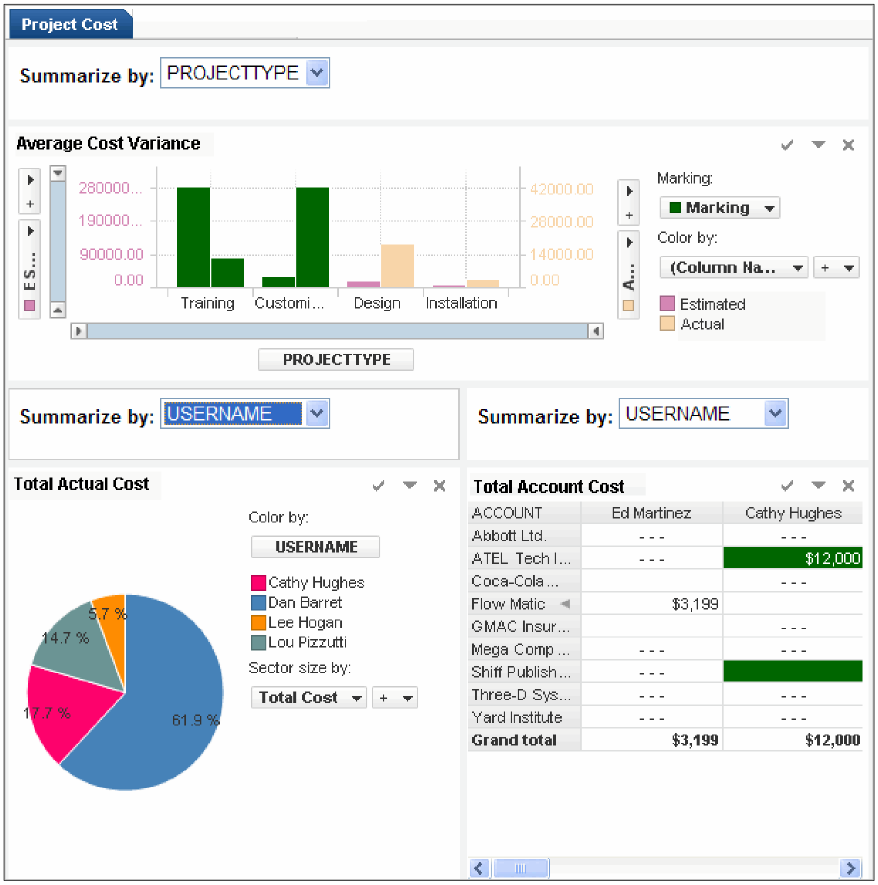
    A new dashboard page is added with a bar graph showing the data (1 records). By not creating the joins first and using an information link the raw data is not very useful. You can use the data table drop-down to switch which table is providing the data, ExternalDB or saleslogix_eval.


Bar Chart
1
0
(Row Count)
(None)
Data table:
ExternalDB
Marking:
Marking
Color by:
(None)
All values

Exercise 4.7: Design a new projects dashboard

In this exercise, you will add visualization and filters. If the dashboard is not loaded you can use the Recent Analyses view on the start page or select **File > Open From Library** and find your dashboard.

Your results after completing this lesson should look similar to the following image:



Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]

Exercise steps

1. Right-click the **Page** dashboard page and select **Rename Page**. The **Rename Page** dialog box opens.
2. Type *Project Cost* in the **Title** field.
3. Click **OK**.

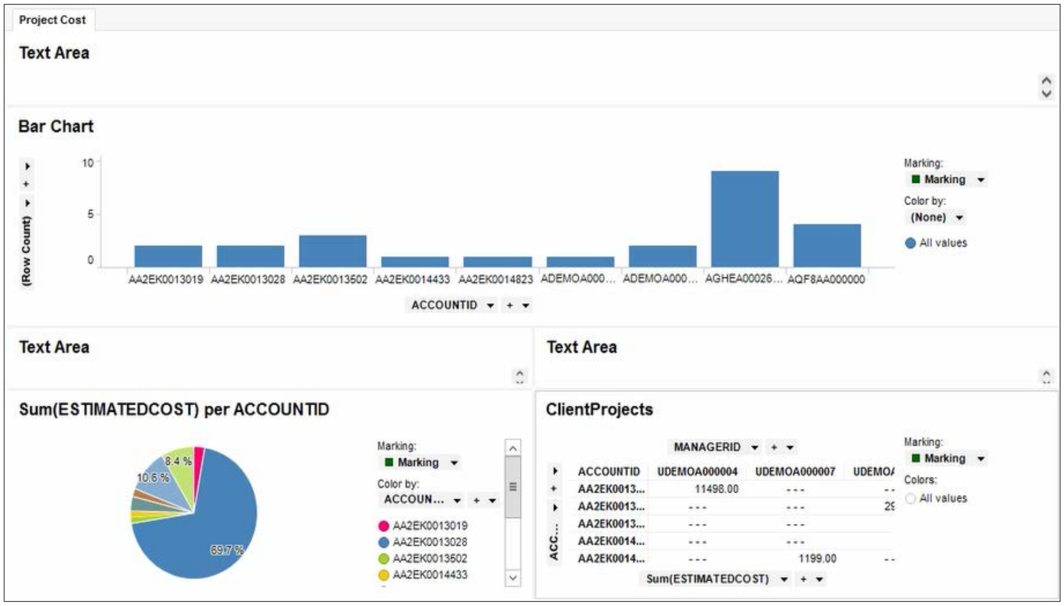
4. Click **X** to close the projects table visualization.

   Note: The bar with **X** doesn't appear until your mouse hovers near the top of the visualization.

5. Select **Insert > New Visualization** to add the following visualizations:

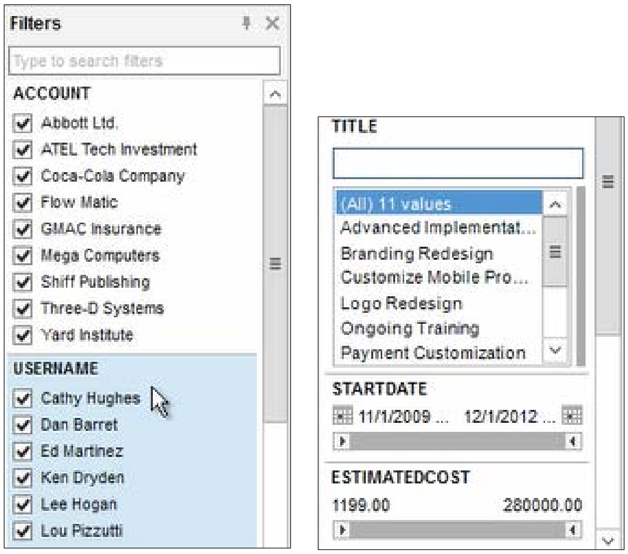
   - Bar chart
   - Pie chart
   - Cross table

6. Select **Insert > New Text Area** to insert three text areas. Drag the visualizations and text areas into the appropriate locations as show below:



7. Right-click anywhere in the **Filters** pane and select **Organize Filters**.
8. Clear the **CLIENTPROJECTID, ACCOUNTID, MANAGERID**, and **DESCRIPTION** check boxes in the **Project Cost – Organize Filters** window.
9. Select **ACCOUNT > Move First**.
10. Select **USERNAME > Move First**.
11. Click **OK**.
12. Right-click the **ACCOUNT** filter and select **Filter Type > List Box Filter**.
13. Right-click the **USERNAME** filter and select **Filter Type > List Box Filter**.
14. Right-click the **PROJECTTYPE** filter and select **Filter Type > List Box Filter**.

    The **Filters** pane should appear similar to the following figure. You can select a filter to see how the visualization data changes**.**

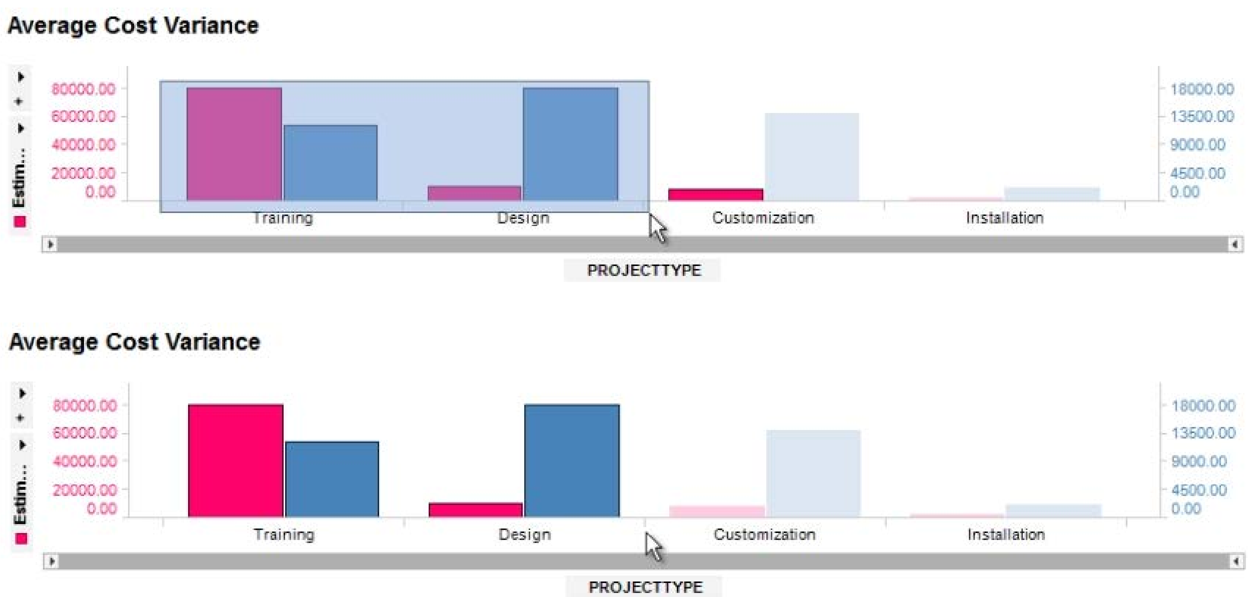


The **Filters** pane is now modified to better match your data types. As a reminder, filters limit data on the page for all visualizations whereas markings or filter boxes outside of the **Filter** pane apply to one visualization and not the entire page.

Understanding markings

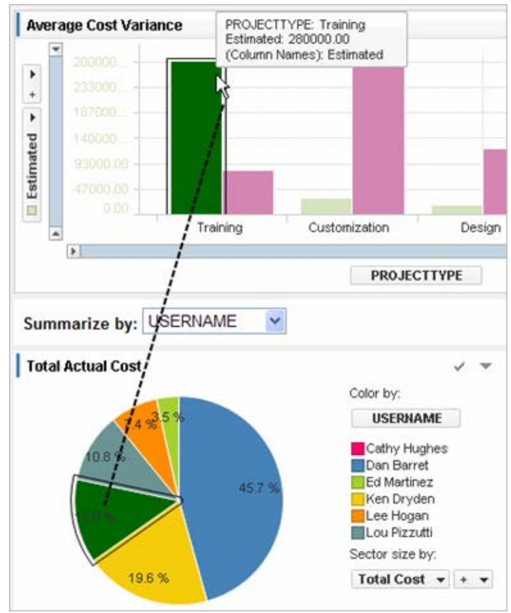
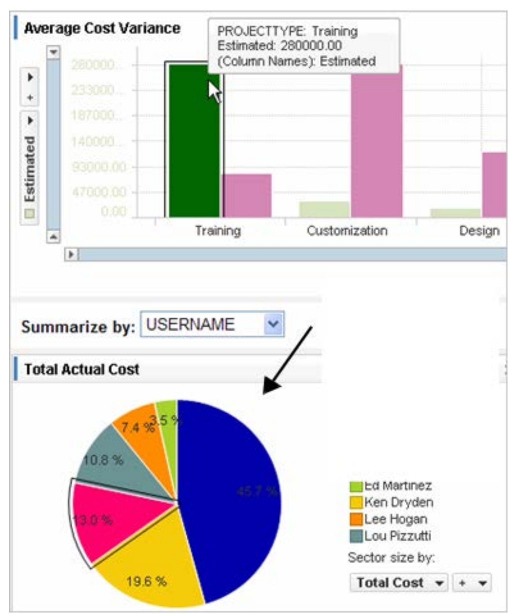
In the next exercise, you'll create dimension controls using document properties which change your visualized data and use markings in multiple visualizations on a page.

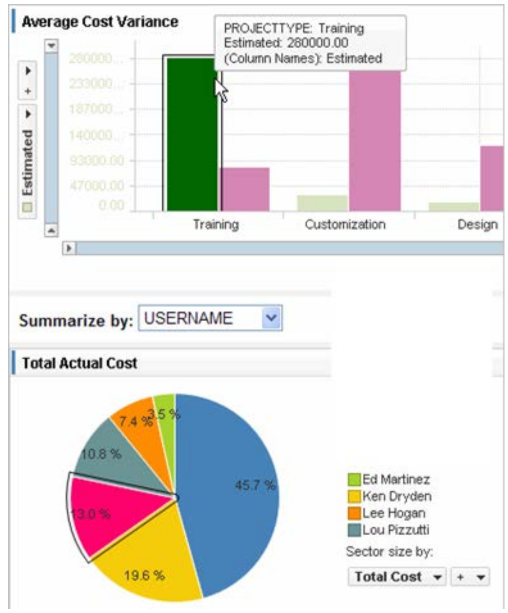
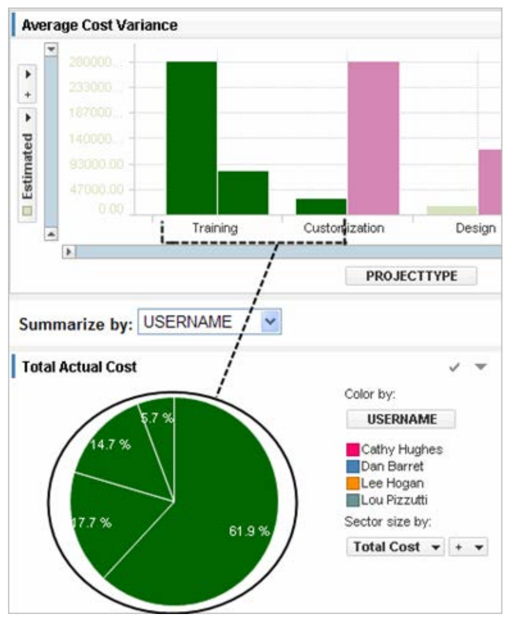
A marking represents a selection which occurs when the user interacts with the visualization. For example, when a visualization allows markings a user can either click on a bar in a chart to mark a single item or click-and-drag a rectangle around a group of bars in a chart. Marked rows are identified by a separate color.



Average Cost Variance Bar Graph Markings

As a developer, you decide the behavior of the visualization(s) based on each marking instance you create. The following six scenarios describe common approaches for configuring markings when you have two or more visualizations.

Behavior	Description	Example
Use the same marking, no data limiting	This option uses one marking instance for either all visualizations on a page or all visualizations in the dashboard, i.e. all pages. This means if a user makes a selection on one chart, all other charts using this marking instance automatically use the same identifying color to highlight the corresponding value. In this example, if the user marks a bar from the top charge the corresponding slice in the pie is automatically marked and vice versa.	
Use separate markings, no data limiting	This option uses a separate marking instance for each chart. In this example, a selection in the bar chart has no effect on a selection in the pie chart and vice versa. Additionally, a selection in the pie chart uses a different identifying color. Clicking on sector turns the marking dark blue on the pie chart which is unrelated to the bar chart marking.	

Use no markings, no data limiting	This option prevents users from making markings in one or more of the visualizations. In this example, only the pie chart is set to use no markings. This means the user can select anything in the bar charge but cannot select anything in the pie chart. Clicking on a sector does not result in a marking.	
Use the same marking, data limiting	This option is not useful in most situations. In this example, only the pie chart is set to limit data. This means the user's selection in the bar chart makes up 100% of the pie chart's total data automatically when selected.	

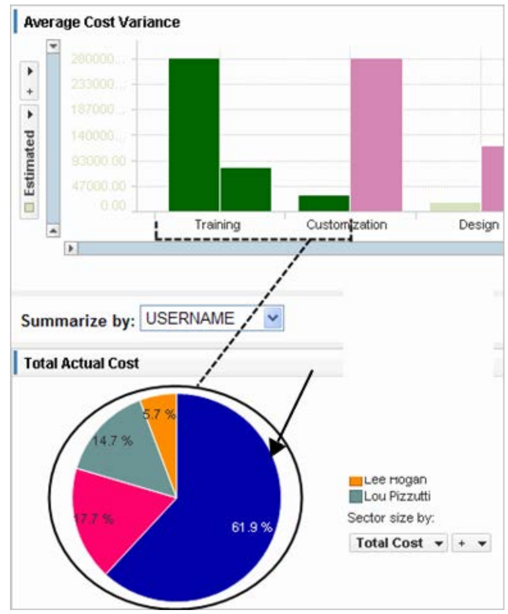
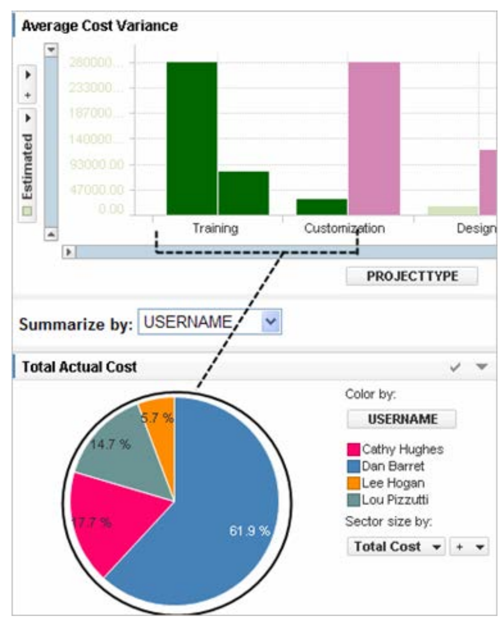
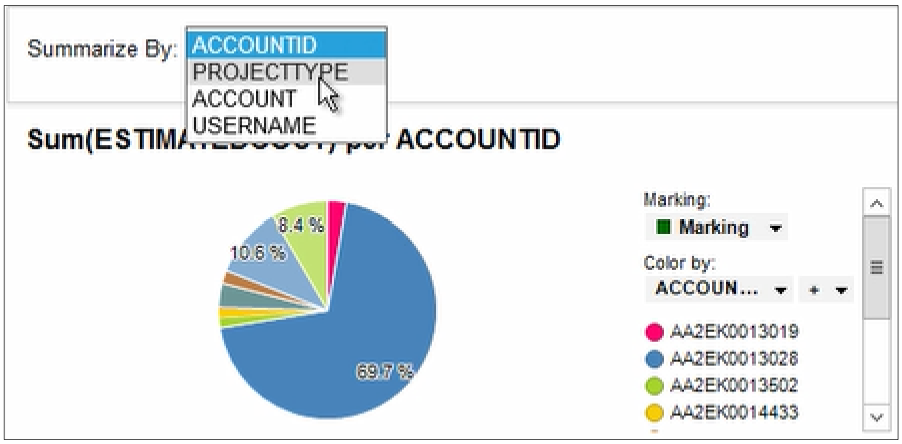
Use separate markings, data limiting	This option uses separate marking instances for each chart, however, the total data set for the pie chart is limited by the marking used in the bar chart. This means the pie chart won't be visible until a marking is made in the bar chart. Once visible, the user can select a segment in the pie chart without affecting the marking from the bar chart. In this example, clicking on a sector turns the marking on in the pie chart which is unrelated to the bar chart marking. If you have a third visualization with a separate marking you can limit the pie chart to use data from both markings in which case the total data set would reflect the intersection of the markings, i.e. only the data common to both charts.	
Use no markings, data limiting	This option is most commonly used. In this example, only the pie chart is set to use no markings and limit data which means the pie chart won't be visible until a marking is made in the bar chart. Additionally, the user cannot click to select anything in the pie chart.	

Table 1: Marking Behaviors & Descriptions

Exercise 4.8: Create dimension drop-down controls with document properties

In this exercise, you will create dimension drop-down controls with document properties. Let's begin by adding a new document property which you'll use for on-demand data loading. Document properties are variables applicable throughout the document. For example, a currency rate used in calculations in different columns. By using a property instead of placing the column name directly on the axes you only need to change a single value (the property value) to change all axes where property is used.

In your first dashboard page, you won't reuse the same document property and instead will create a new document property for each visualization on the page. Each of the document properties holds one or more column names which allows the user to dynamically choose which data to display on each chart.



Drop-down Controls with Properties

A document property within an expression is denoted as **${MyProperty}** and reviewed later.

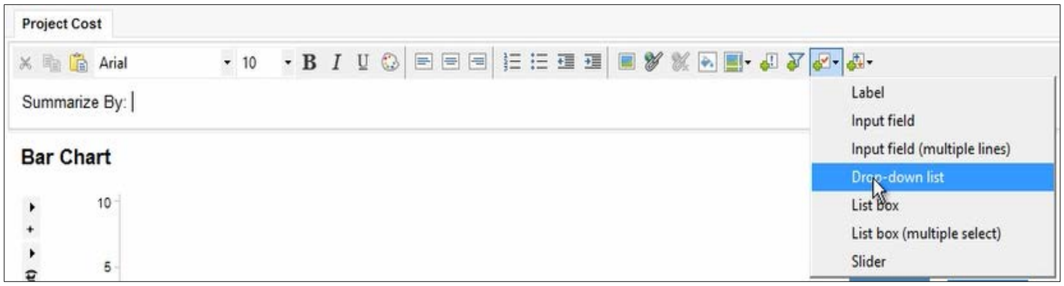
Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Exercise steps

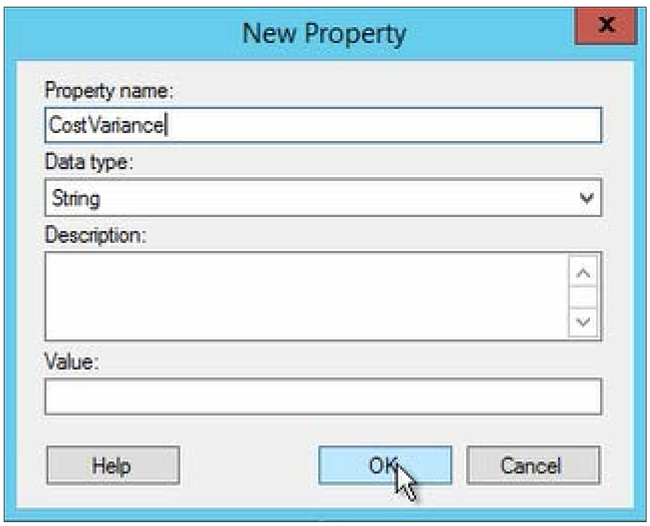
Part 1: Create dimension drop-down controls with document properties

1. Right-click in the **Text Area** pane above the Bar Chart and select **Properties**. The **Text Area Properties** window opens.
2. Clear the **Show title bar** check box and then click **Close**.
3. Right-click the **Text Area** pane again and select **Edit Text Area**. The text editor's toolbar appears.
4. Type *Summarize By:* with a space at the end to create the label for the drop-down list.
5. Select **Insert Property Control > Drop-down list**. The **Property Control** window opens.



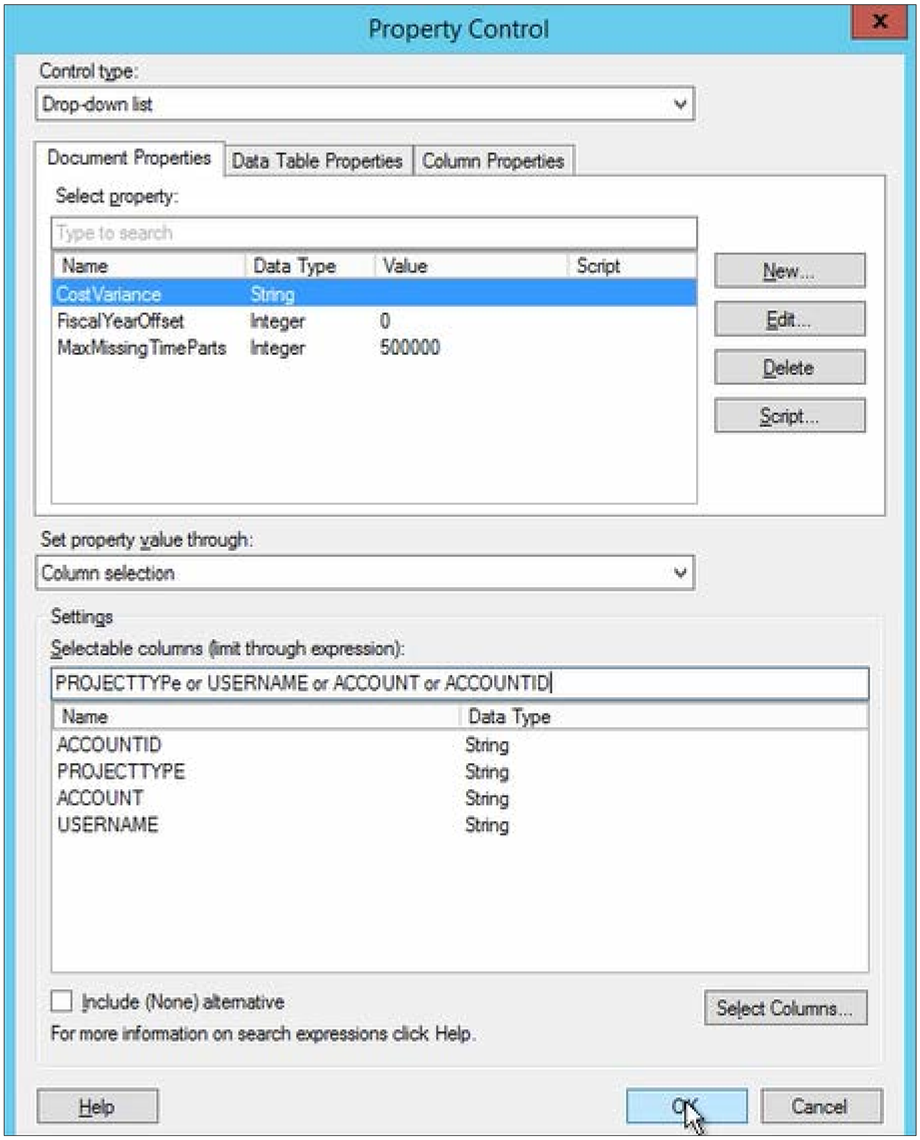
6. Click **New**. The **New Property** dialog box opens.
7. Type *CostVariance* in the **Property name** field.
8. Click **OK**.

   You're creating a new property holding one or more column names. You'll use this new property as the X-Axis so the user can choose what to see at runtime. These properties also determine colors or the Y-Axis.



   Note how all columns from the CLIENTPROJECT table are automatically included in the drop-down list in the **Settings** pane of the **Property Control** dialog box.

9. Type *PROJECTTYPE* or *USERNAME* or *ACCOUNT* or *ACCOUNTID* in the **Selectable columns (limit through expression)** field.
10. Click **OK**.



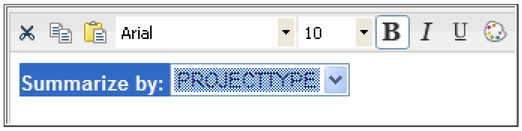
11. Right-click the text editor area above the Bar Chart and clear **Edit Text Area.**
12. Click the drop-down list to see the properties you chose.

    Note: Nothing happens yet. You'll need to tie the new CostVariance property to the visualization you want changed, i.e. the bar chart.

Prior to modifying the bar chart properties let's copy and paste the contents of the **Text** pane to the remaining text area and set two more properties for use on the pie chart and cross table visualizations.

13. Right-click the **Text Area** above the Pie Chart and select **Properties**.
14. Clear the **Show title bar** check box.

15. Right-click the **Text Area** above the Pie Chart again and select **Edit Text Area**.
16. Return to the first **Text Area**, select the contents of the text area in edit mode, and then press **CTRL+C** to copy.



17. Click the **Text Area** above the Pie Chart and then press **CTRL+V** to paste the label and drop-down control.
18. Right-click the new control and select **Edit Control**. The **Property Control** window opens.
19. Click **New**. The **New Property** window opens.
20. Type *ActualCost* in the **Property name** field.
21. Click **OK**.

    The same settings apply for selectable columns limited through expression. You'll use the same properties: PROJECTTYPE, USERNAME, and ACCOUNT, however, you do not want ACCOUNTID.

22. Delete **or ACCOUNTID**.
23. Click **OK**.
24. Right-click in the **Text Area** above the Pie Chart area and select **Properties**.
25. Clear the **Show title bar** check box and click **Close**.
26. Right-click the **Text Area** above the Pie Chart and clear the **Edit Text Area** radio button.

Part 2: Repeat the process for the Text Area above the Cross Table

1. Right-click in the **Text Area** above the Cross Table and select **Properties**.
2. Clear the **Show title bar** check box and then click **Close**.
3. Right-click the **Text Area** above the Cross Table again and select **Edit Text Area**.
4. Press **CTRL+V** to past the label and drop-down control.
5. Right-click the new control and select **Edit Control**. The **Property Control** window opens.
6. Click **New**. The **New Property** window opens.
7. Type *AccountCost* in the **Property name** field.
8. Click **OK**.

    The same settings apply for selectable columns limited through expression.

9. Verify **PROJECTTYPE** or **USERNAME** is selected in the **Selectable columns (limit through expression)** field but delete **or ACCOUNT**.
10. Click **OK**.

Exercise 4.9: Edit bar chart properties

In this exercise, you will edit a bar chart to use dimension variables.

Notes:

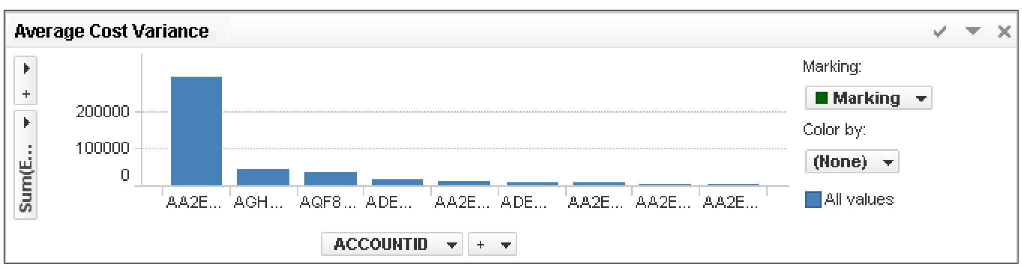
- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]

Exercise steps

Part 1: Edit a bar chart

1. Right-click the bar chart visualization and select **Properties**. The **Bar Chart Properties** window opens.
2. Click the **General** tab.
3. Type *Average Cost Variance* in the **Title** field.
4. Click **Appearance**.
5. Select the **Side-by-side bars** and **Sort bars by value** check boxes. The visualization changes in the background as you work.



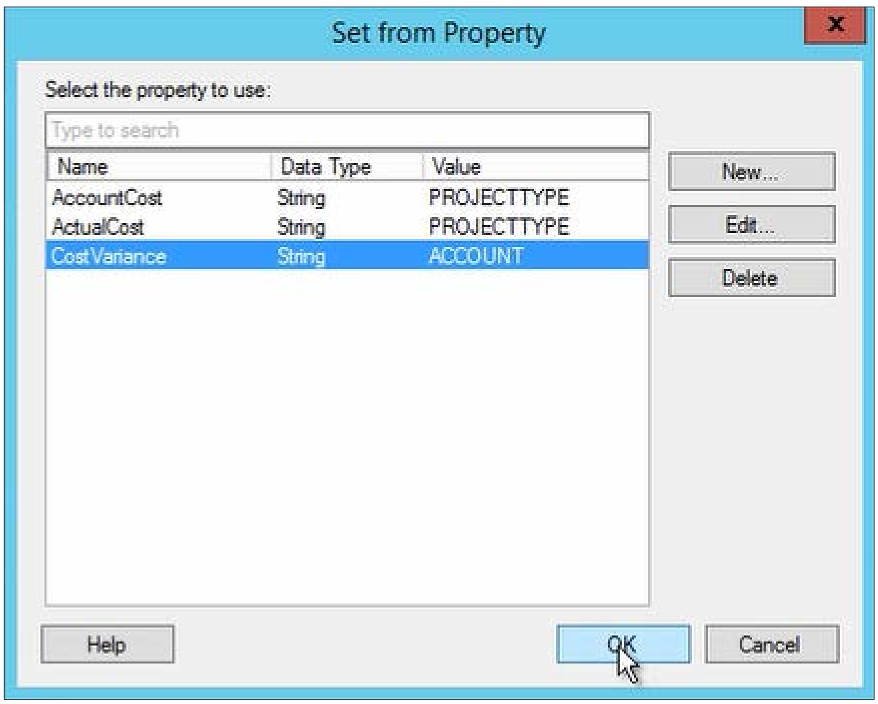
Part 2: Compare ESTIMATEDCOST with ACTUALCOST by adding two columns for the Y-Axis

1. Click **Value axis** in the **Bar Chart Properties** window.

   This represents the Y-Axis of the bar graph.
2. Select **Multiple scales**.
3. Select **ESTIMATEDCOST** from the first drop-down list in the **Columns** pane. The result is **Sum(ESTIMATEDCOST)**. This column may have already been added for you.
4. Replace the **Sum** aggregation and select **Avg (Average)**. The result is **Avg(ESTIMATEDCOST)**.
5. Select **Avg(ACTUALCOST)** from the second drop-down list in the **Columns** pane.

   Now you have two columns to compare against. The values may appear in red with no data showing in the background. This is because when multiple columns are used on the Y-Axis you need to use column names on either the X-Axis or the colors. Since you're using a custom property for the X-Axis in your training workstation this will be fixed once you get to the **Colors** screen. Right-click the **Columns** pane and click **Custom Expression**.

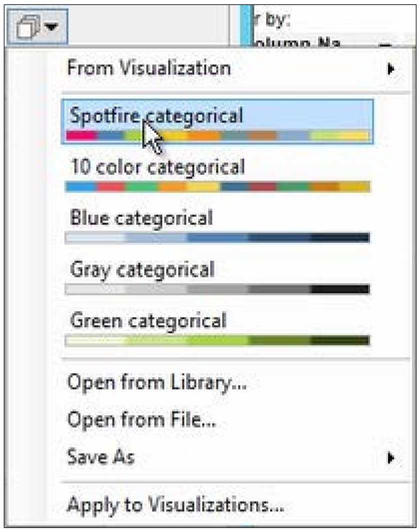
6. Alias the column names by modifying the following **Expression** field:
   - **AVG([ESTIMATEDCOST])** as **[ESTIMATED]**
   - **AVG([ACTUALCOST])** as **[ACTUAL]**
7. Click **OK**.
8. Click **Category Axis**. This represents the X-Axis of the bar graph.
9. Select **Show zoom slider**.
10. Right-click **ACCOUNTID** in the **Columns** pane and select **Set from Property**. The **Set from Property** window opens.
11. Click **CostVariance**. This was created earlier when the bar chart's dimension drop-down was created.
12. Click **OK**.



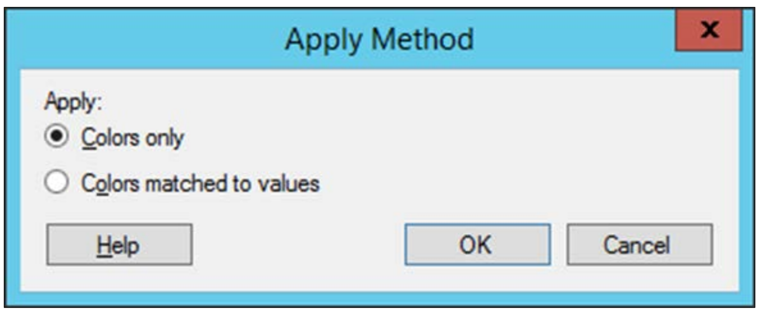
You've connected the bar chart with its drop-down control. The value selected from the drop-down list in the first **Text Area** is the X-Axis.

13. Click **Colors** within the **Bar Chart Properties** window.
14. Click the drop-down list within the **Columns** pane and select **(Column Names)** if the column is not already listed.

    The chart populates with data in the background.
15. Click **Color Schemes** and select **Spotfire categorical**. The **Apply Method** dialog box opens.

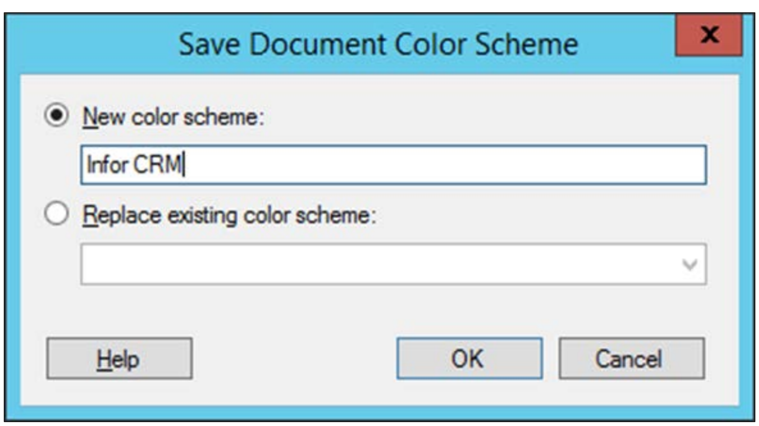


16. Select the **Colors matched to values** radio button.
17. Click **OK**.



Part 3: Save this color scheme to use for all visualizations in this training workstation

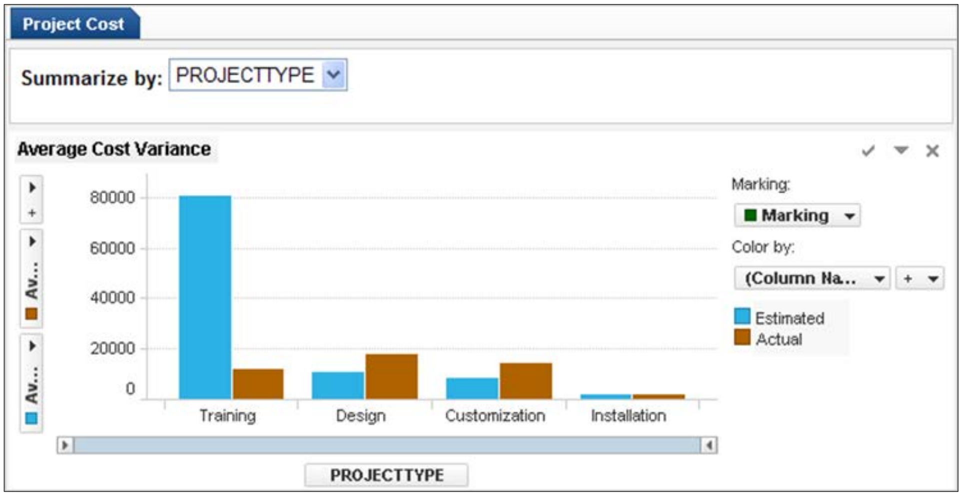
1. Select **Color Schemes > Save As > Document Color Scheme**. The **Save Document Color Scheme** dialog box opens.
2. Type *Infor CRM* in the **New color scheme** field.
3. Click **OK**.



4. Click **Legend**.

5. Clear all check boxes except **Marketing** and **Color by**.
6. Click **Close**.

   The bar chart should resemble the following figure:



Exercise 4.10: Edit a pie chart

In this exercise, you will edit a pie chart to use dimension variable.

Notes:

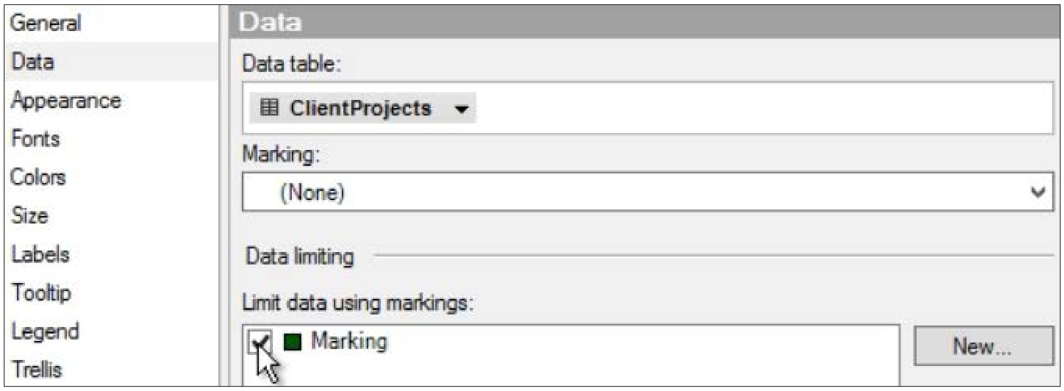
- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]

Exercise steps

1. Select two or more columns in the bar chart to verify you can still see the pie chart in the background when changes are made to the marking detail settings.
2. Right-click the pie chart visualization and select **Properties**. The pie chart **Properties** window opens.
3. Click the **General** tab.
4. Type *Total Actual Cost* in the **Name** field.
5. Click **Data**.
6. Select **(None)** from the **Marking** drop-down list.
7. Select the **Marking** check box.

   These settings determine how the pie chart populates based on a selection in the bar chart. If no markings are made the pie chart does not appear.

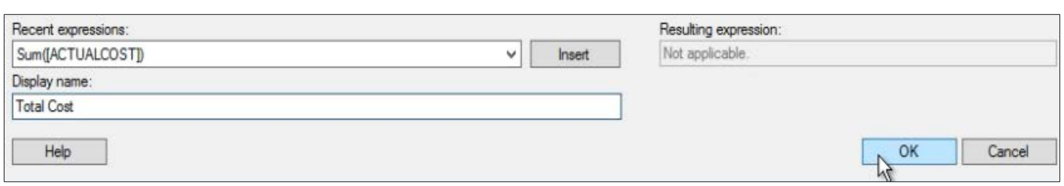


8. Click **Appearance**.
9. Select the **Sort sectors by size** check box.
10. Click **Colors**.
11. Right-click the **Columns** field and select **Set from Property**. The **Set from Property** dialog box opens.
12. Click the **ActualCost** property.
13. Click **OK**.

    This property was created earlier when you created the pie chart's dimension drop-down.

    You've now connected the pie chart with its drop-down control. The value selected from the drop-down list is the sector of the pie.
14. Select **Color Schemes > Document Color Schemes > Infor CRM**. The **Apply Method** dialog box opens.
15. Click **Colors matched to values**.
16. Click **OK**.
17. Click **Size** within the pie chart **Properties** window.
18. Select **ACTUALCOST** from the **Sector size by** drop-down list.

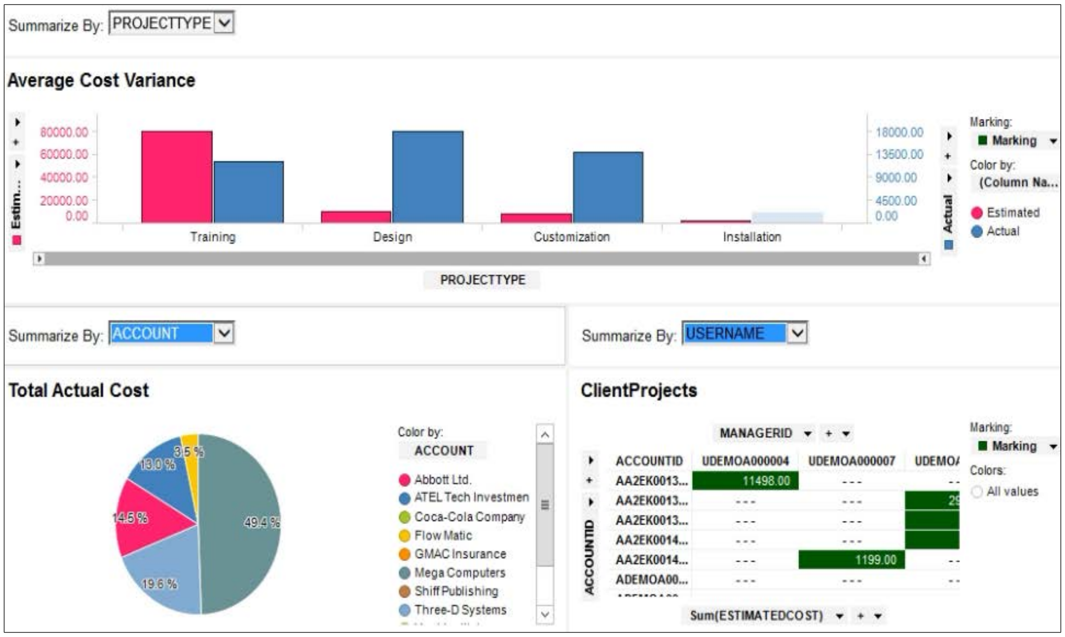
    The result is **Sum(ACTUALCOST)**. If not, change the **Aggregation** appropriately.
19. Right-click the **Sector size by** field and select **Custom Expression**. The **Custom Expression** dialog box opens.
20. Type *Total Cost* in the **Display name** field.
21. Click **OK**.



22. Click **Labels** within the pie chart **Properties** window.
23. Select the **Sector percentage** check box.
24. Change the **Sector percentage threshold** value to **2**.

25. Click **Legend**.
26. Clear all check boxes except **Color by** and **Sector size by**.
27. Click **Close**.

    The visualization should look similar to the following figure depending on the columns you selected:



Exercise 4.11: Edit cross table properties

In this exercise, you will modify the Project visualization cross table to use my document variable.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]

Exercise steps

1. Right-click the cross-table visualization and select **Properties**. The **Cross-Table Properties** window opens.
2. Click the **General** tab.
3. Type *Total Account Cost* in the **Name** field.
4. Click **Data**.

5. Verify **Marking** is selected in the **Marking** drop-down list.

   This means the bar chart and cross table share the same marking.

6. Clear the **Marking** check box.

   This means data in the cross table is not dependent on the selected marking.

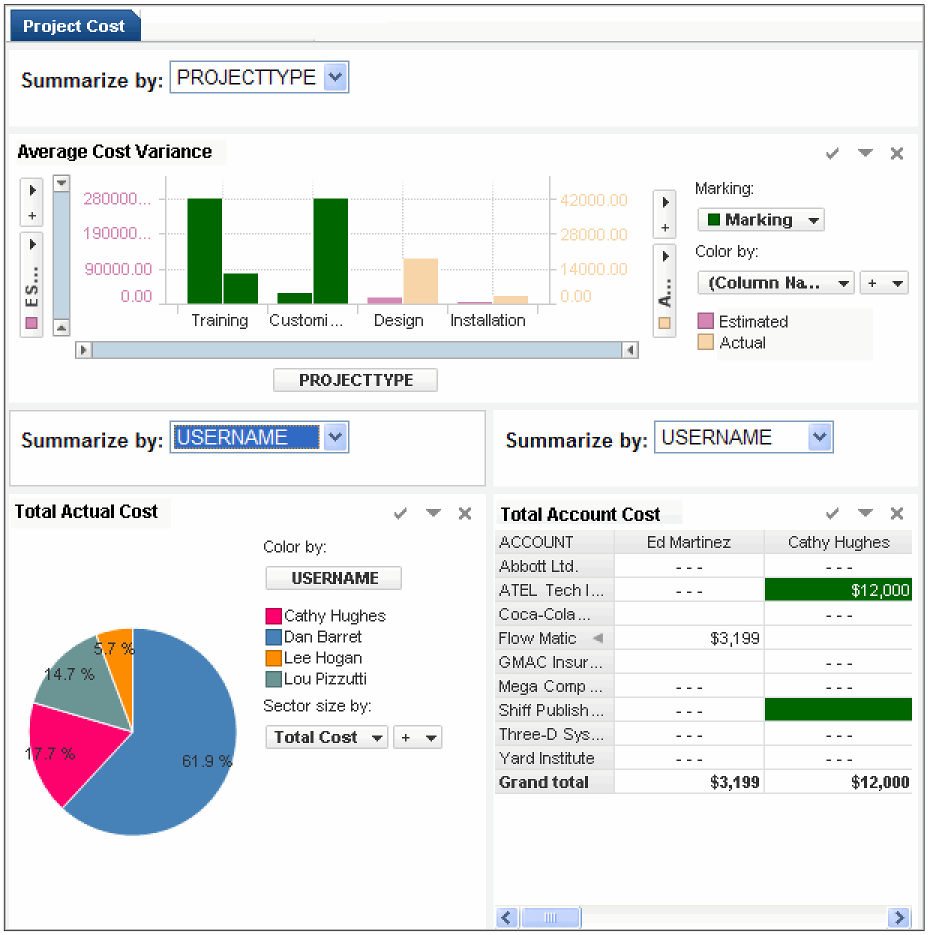
7. Click **Appearance**.
8. Select the **Grand total for columns** check box.
9. Click **Axes**.
10. Right-click the **Horizontal** drop-down list and select **Set from Property**. The **Set from Property** window opens.
11. Click **AccountCost** and click **OK**.

    This was created earlier when you created the cross-table's dimension drop-down list.

    You've now connect the cross table with its drop-down control. The value selected from the drop-down list is the column(s) of the cross table.

12. Select **ACCOUNT** from the **Vertical** drop-down list.
13. Select **Sum(ACTUALCOST)** from the **Cell values** drop-down list.
14. Right-click anywhere in the **Cell values** pane and select **Custom Expression**.
15. Click **OK** to return to the **Cross-Table Properties** window.
16. Click **Formatting**.
17. Select **Currency** from the **Category** drop-down list.
18. Select **2** in the **Decimals** field.
19. Select the **Use thousands separator** check box.
20. Click **Legend**.
21. Clear the **Show legend** check box.
22. Click **Close**.
23. Click the down arrow on the cross-table visualization title bar and disable **Axis Selectors**.

    The visualization should look similar to the following figure depending on the columns selected.



24. Test the **Select dimension** drop-down list to see the rows change for each new dimension.
25. Select **File > Save As > Library Item**. The **Save as Library Item** window opens.
26. Save as **Projects** and then click **Finish**.
27. Click **Yes** to overwrite **Projects**.
28. Click **Close** in the **Save as Library Item** window.

Exercise 4.12: Create the Project Time dashboard page

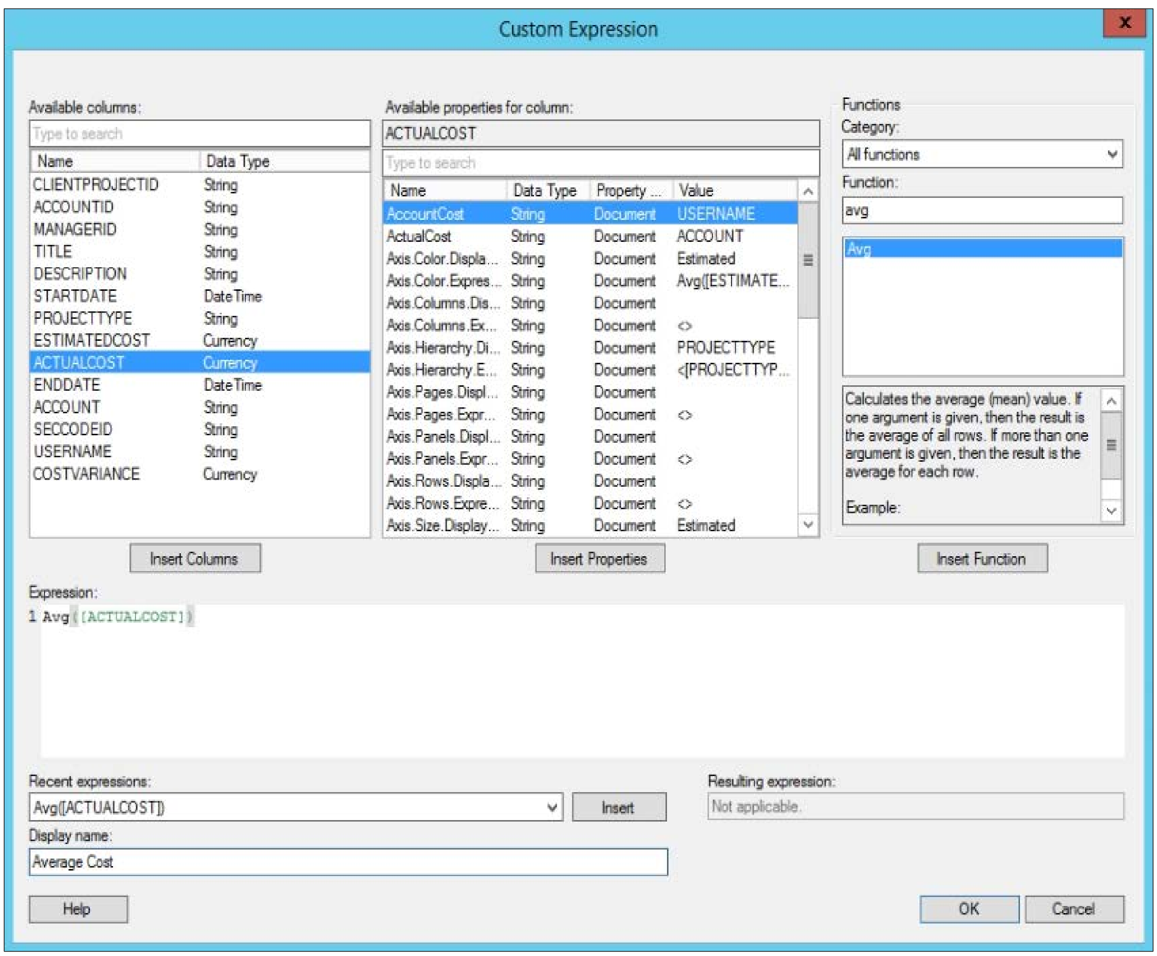
In this exercise, you will create a Project Time dashboard page. Let's begin by creating a new dashboard page by copying and reformatting three visualizations. You'll create a new document property called Duration which two of your visualizations will share. When a user picks an item from the drop-down list, both charts update to reflect the selection.

Next, you'll modify the properties of each visualization. Before you begin, let's explore custom expressions and aliasing.

When you set a column name inside a chart's properties, e.g. Category Axis, Value Axis, Color, or Size, you can choose to set from a custom property or from an existing column in the model. To apply aggregation to the column the Properties window contains several commonly-used functions.

Using an option from this menu lets you set simple column values quickly. However, you can also right-click inside the **Columns** pane and click **Custom Expression** to manually write the functionality.

The Custom Expression editor provides more flexibility for designing complex expressions using columns or properties.



Refer to the TIBCO Spotfire User's Guide (F1) for more tips on using custom expressions. Here are some items to keep in mind:

- Use the **Functions** panel to see a list of all functions and examples you can use as expressions, i.e. Binning, Conversion, Date and Time, Logical, Math, Operators, OVER, Property, Ranking, Spatial, Statistical, and Text.
- Use the **Expression** pane to write an expression. Enclose column names or property names in brackets. Use parentheses to enclose function content, except for operators. For example: Avg(DateDiff([ENDDATE],[STARTDATE]))

Use the as [ALIAS NAME] format to alias a column or property within the **Expression** pane. For example: Sum([ACTUALCOST]) as [Total Cost]. Alternatively, you could specify the alias inside the **Display name** field at the bottom of the dialog box.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

Exercise steps

Part 1: Create the Project Time dashboard

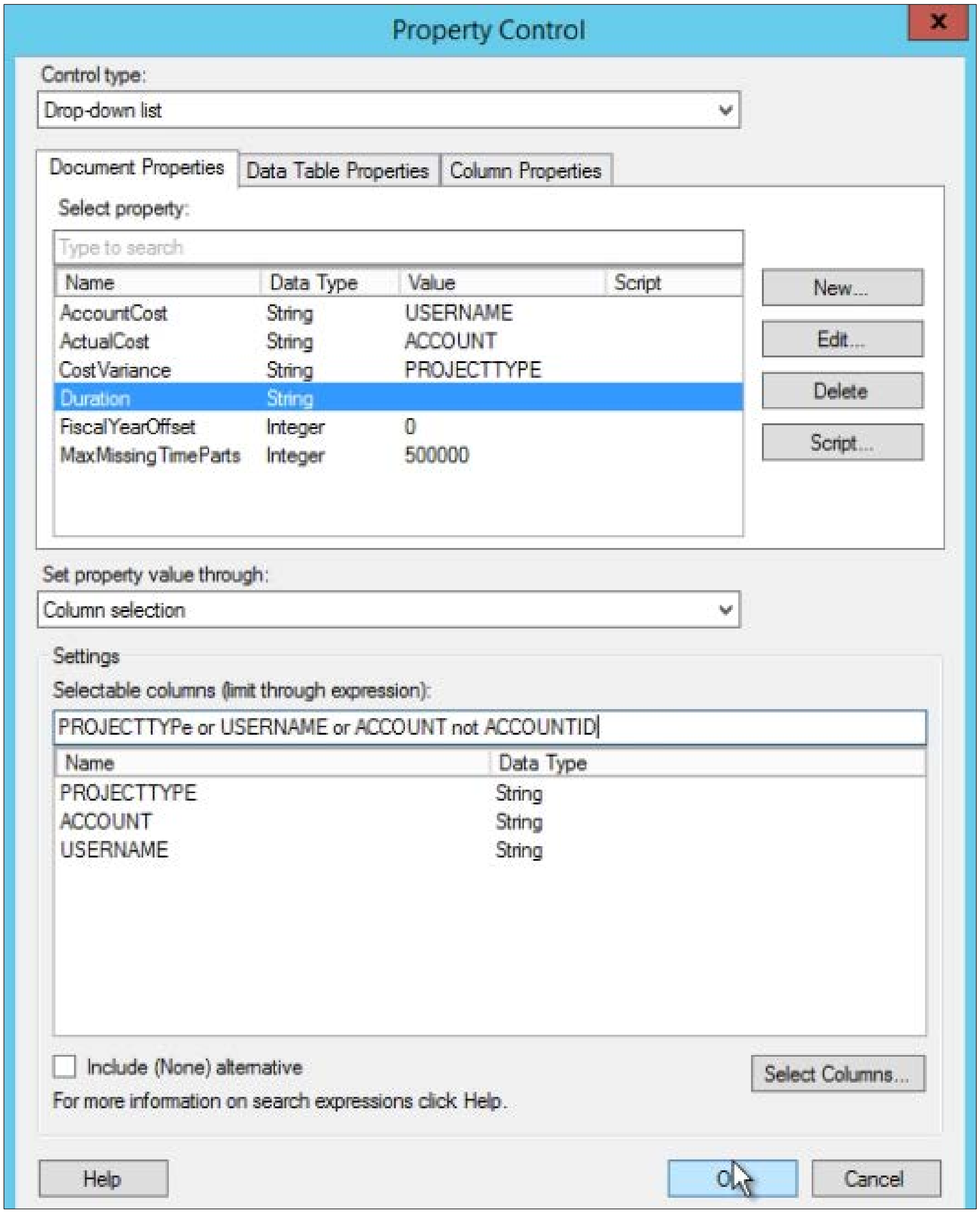
1. Right-click the **Project Cost** dashboard page and select **Duplicate Active Page**. A new page appears in the dashboard.
2. Right-click the new page and select **Rename Page**. The **Rename Page** dialog box opens.
3. Type *Project Time* in the **Title** field.
4. Click **OK**.

Part 2: Add a document property for another drop-down control and use the same property for two of your visualizations

1. Right-click the top-most **Summarize By Text Area** and select **Edit Text Area**.
2. Right-click the drop-down control and select **Edit Control**. The **Property Control** dialog box opens.
3. Click **New**. The **New Property** dialog box opens.
4. Type *Duration* in the **Property name** field.
5. Click **OK**.

   Note: All columns from the CLIENTPROJECT table are included automatically in the drop-down list in the **Settings** pane of the **Property Control** window. To limit the list, use the following expressions: PROJECTTYPE or USERNAME or ACCOUNT. Do not use ACCOUNTID.

6. Click **OK** again.



7. Right-click the text area and clear **Edit Text Area**.

Part 3: Modify the page layout

1. Right-click the **Summarize By** drop-down controls for the pie chart and cross table and select **Close** for each.
2. Click-and-drag the cross-table visualization to the right of the bar chart.
3. Right-click the bar chart and select **Switch Visualization To > Treemap**.
4. Right-click the cross table and select **Switch Visualization To > Scatter Plot**.
5. Right-click the pie chart and select **Switch Visualization To > Combination Chart**.

6. Right-click the treemap visualization and select **Properties**.
7. Modify the following properties:

Property	**Value**
General	Type *Average Project Cost by Duration* in the **Title** field.
Data	Click **New** to create a new marking. Type *Marking (2)* in the **Name** field and then click **OK**. Select **Marking (2)** from the **Marking** drop-down list. No data limiting.
Colors	Right-click the **Columns** field and select **Custom Expression**. Remove the current expression. Type *Avg* in the **Function** field and double-click **Avg**. Double-click **ACTUALCOST** from the list of **Available** columns. Type *Average Cost* in the **Display** name field. Click **OK**.
Colors	Click **Color Schemes > Document Color Schemes > Infor CRM**. Select the Colors matched to values radio button. Click **OK**.
Size	Right-click the **Size by** field and then click **Custom Expression**. Remove the current expression. Type *Avg* in the **Function** field and double-click **Avg**. Clear the **Function** field, type *Date*, and double-click **DateDiff**. From the list of Available columns, double-click **ENDDATE**, type a comma, and double-click **STARTDATE**. Type *Average Project Duration* in the **Display name** field. Click **OK**.
Hierarchy	Right click the **Hierarchy** field and then click **Set from Property**. Click **Duration**. Click **OK**.
Legend	Clear all check boxes except **Marking** and **Color by**. Click **OK**.

8. Click **Close**.
9. Right-click the **Scatter Plot** visualization and select **Properties**.

Property	**Value**
General	Type *Project Duration and Cost* in the **Title** field.
Data	Select **Marking (2)** from the **Marking** drop-down list.
X-Axis	Right-click the **Columns** field and then click **Custom Expression**. Remove the current expression. Type *Date* in the **Function** field and double-click **DateDiff**. From the list of Available columns, double-click **ENDDATE**, type a comma, and

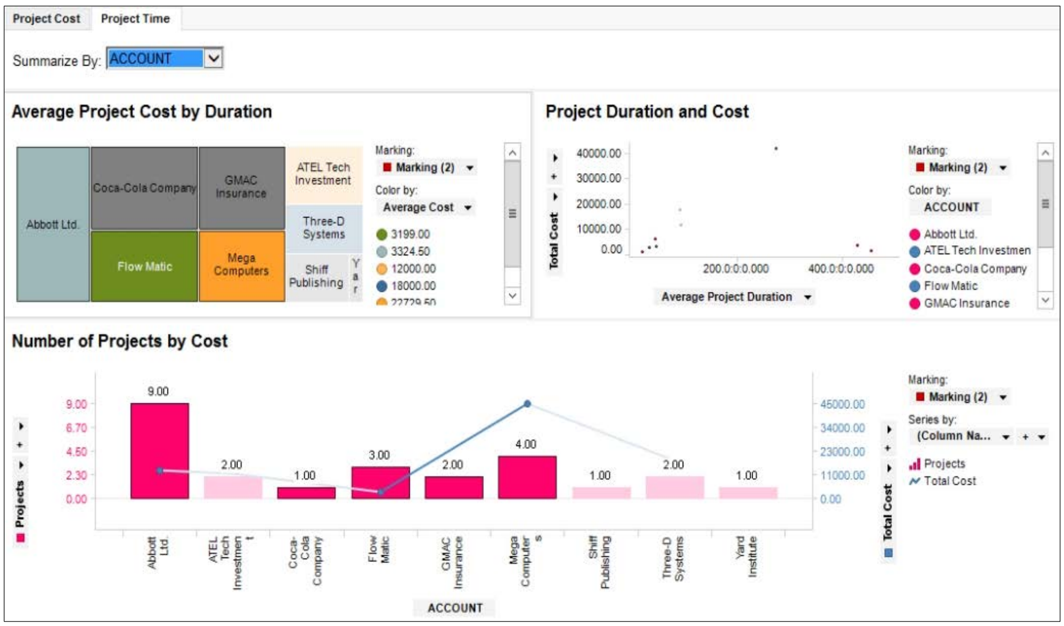
Property	Value
	double-click **STARTDATE**. Type *Average Project Duration* in the **Display name** field. Click **OK**.
Y-Axis	Right-click the **Columns** field and then click **Custom Expression**. Remove the current expression. From the list of **Available** columns, double-click **ACTUALCOST**. Type *Total Cost* in the **Display name** field. Click **OK**.
Colors	Right-click the **Columns** field and then click **Set from Property**. Click **Duration**. Click **OK**. Click **Color Schemes > Document Color Schemes > Infor CRM**. Select the **Colors only** radio button. Click **OK**.
Legend	Select the **Show legend** check box. Clear all check boxes except for **Marking** and **Color by**.

10. Click **Close**.
11. Right-click the combination chart visualization and select **Properties**.

Property	Value
General	Type *Number of Projects by Cost* in the **Title** field.
Data	Select **Marking (2)** from the **Marking** drop-down list.
X-Axis – Columns	Right-click the **Columns** field and click **Set from Property**. Click **Duration** and click **OK**. Select the **Show labels: Vertically** radio button.
Y-Axis – Columns	Right-click the **Columns** field and click **Custom Expression**. Remove the current expression. Type *Count* in the **Function** field and double-click **Count**. From the list of **Available** Columns, double-click CLIENTPROJECTID. In the **Expression** field, type *as [Projects]*. Type *Sum* in the **Function** field and click **Sum**. From the list of **Available columns**, double-click **ACTUALCOST**, type *as [Total Cost]*. Click **OK**. Select the **Multiple scales** and **For each color** radio buttons. The end results should read: *Count([CLIENTPROJECTID]) as [Projects], Sum{[ACTUALCOST]} as [Total Cost]*
Series	From the **Series by** drop-down list, select **(Column Names)**. Click **Total Cost** and select the **Line** radio button.
Legend	Select the **Show legend** check box and select the **Series by** and **Marking** check boxes.

12. Click **Close**.
13. Select **File > Save As > Library Item**. The **Save as Library Item** window opens.
14. Save as **Projects** and then click **Finish.**
15. Click **Yes** to overwrite **Projects**.
16. Click **Close** in the **Save as Library Item** window.

    When you mark anything in a treemap the corresponding values in the scatter plot and combination chart also display in the same marking color. You can mark inside the scatter plot or combination chart to see the corresponding colors marked in the treemap. This happens because they all share the same marking.



For more design ideas, go to the TIBCO Spotfire Demo and Template Gallery at http://spotfire.tibco.com/demo/.

Exercise 4.13: Capture bookmarks and set defaults

In this exercise, you will create bookmarks to make it easier for dashboard users to toggle on and off a group of filters.

- Add a bookmark for Cost Variance Low and Cost Variance High.
- Capture defaults.

Bookmarks are snapshots of the state of a dashboard which can be applied at any time. This allows the user to return to a previously created view of the data. Bookmarks can update one or more of the following:

- Rows to mark
- Page and visualization to be active
- Filtering to apply

One of the most important uses of bookmarks is to use them as links in a text area. This helps create guided analyses where the recipient of your analysis file can click action links to move through views of the analysis.

Notes:

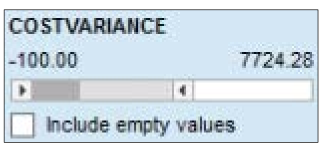
- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task]()

Exercise steps

1. Open the **Projects** dashboard and view the **Project Cost** page.
2. Type *-100* and *7724.28* in the **COSTVARIANCE** field of the **Filters** pane.

   Note: Double-click the value to type. This field accepts actual values only.
3. Clear the **Include empty values** check box.

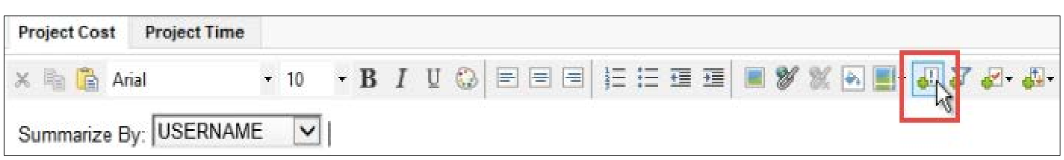
4. Select **USERNAME** from the **Summarize By** drop-down list in the bar chart's **Text Area**.
5. Select **PROJECTTYPE** from the **Summarize By** drop-down list in the pie chart's **Text Area**.
6. Select **View > Bookmarks**. The **Bookmarks** dialog box opens.
7. Type *Cost Variance Low* in the **Bookmarks** field and then click **Add Bookmark**.

   The **Cost Variance Low** bookmark appears at the bottom of the **Bookmarks** dialog box.
8. Type *7724.28* and *14401.00* in the **COSTVARIANCE** field of the **Filters** pane.
9. Select **View > Bookmarks**. The **Bookmarks** dialog box opens.
10. Type *Cost Variance High* in the **Bookmarks** field and click **Add Bookmark**.

    The **Cost Variance High** bookmark appears at the bottom of the **Bookmarks** dialog box.

Part 2: Add quick links to these bookmarks in a text area

1. Right-click the bar chart's **Text Area** and select **Edit Text Area**. The editor toolbar opens.
2. Add a couple spaces after the drop-down control.
3. Click **Insert Action Control**. The **Action Control** window opens.

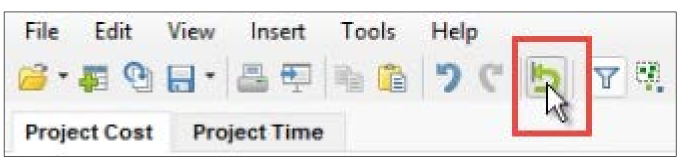
4. Type *Cost Variance Low* in the **Display text** field.
5. Select **Link** from the **Control type** drop-down list.
6. Expand **Bookmarks**.
7. Click **Cost Variance Low** in the **Available actions** pane.
8. Click **Add**.
9. Click **OK**. The bookmark link displays in the **Text Area**.
10. Repeat steps **1 through 3**.
11. Type *Cost Variance High* in the **Display text** field.
12. Select **Link** from the **Control type** drop-down list.
13. Expand **Bookmarks**.
14. Click **Cost Variance High** in the **Available actions** pane.
15. Click **Add**.
16. Click **OK**.
17. Right-click the **Text Area** and then clear the **Edit Text Area** check box.

    Links are available for each bookmark now. Test each link to verify they work.

Part 3: Set defaults for your dashboard.

The selected settings in the dashboard design view will become your defaults when a user accesses the dashboard from Infor CRM.

1. Click the **Project Cost** dashboard.
2. Click **Reset All Filters**.



3. Select **PROJECTTYPE** from the **Summarize By** drop-down list in the bar chart's **Text Area**.
4. Select **USERNAME** from the **Summarize By** drop-down list in the pie chart's **Text Area**.
5. Select **USERNAME** from the **Summarize By** drop-down list cross-table's **Text Area**.
6. Click **File >Save As > Library Item**. The **Save as Library Item** window opens.
7. Type *ClientProjects* in the **Name** field and then click **Finish**.
8. Click **Yes** to overwrite.
9. Click **Close**.

Exercise 4.14: Apply security to a custom dashboard

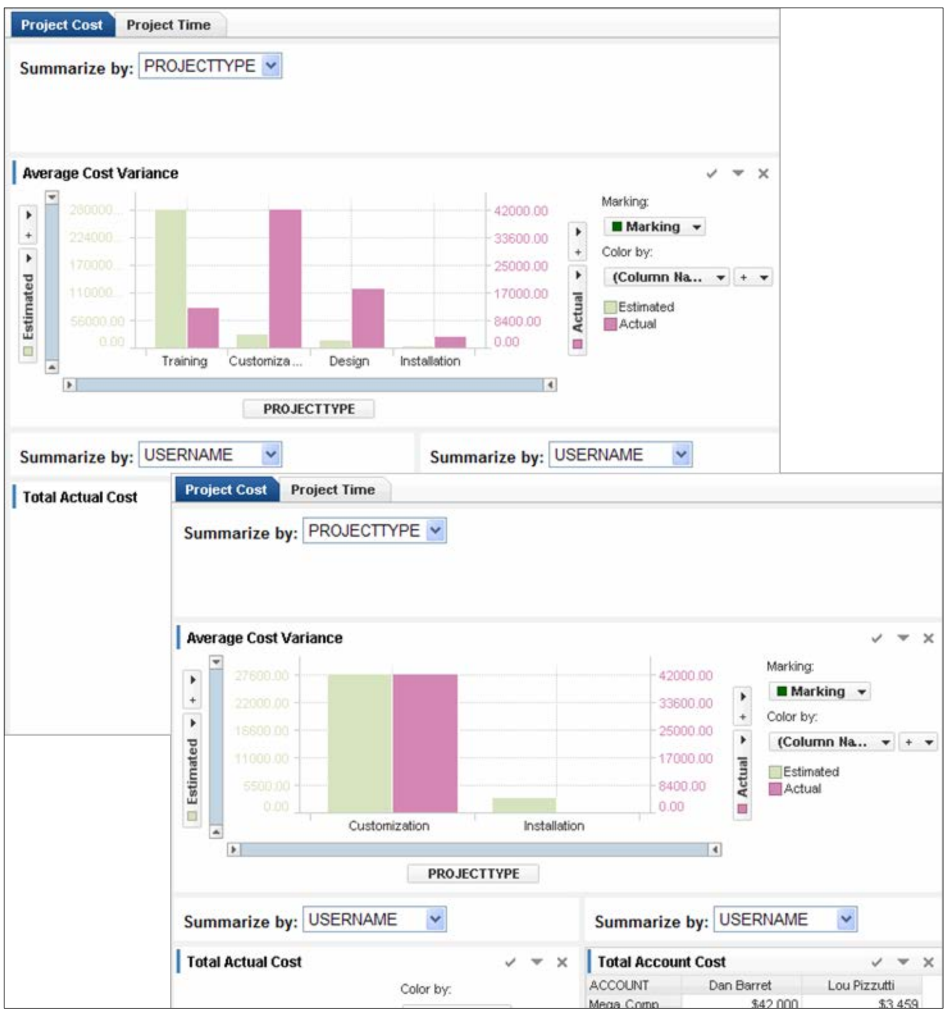
In this exercise, you will add security to custom dashboards where you don't want other users to see data they don't have access to. This is especially important if you have automatically scheduled updates. For example, since security has not been applied to your dashboard, signing in to Spotfire as admin whose default security only allows viewing for Everyone and Everyone – View Only accounts will still show project data for all accounts.

By creating a new document property and creating a link to security information in your dashboard you can verify security is pulled by the user viewing the data

Your instructor will demonstrate how to apply security to a dashboard so other user's see only data he or she is allowed access.

- Add a new document property and on-demand data table from security information link
- Create new relationships between the data tables
- Adjust filtering

After completing this exercise, your result should look similar to the following:



The same dashboard shows different data per user.

Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

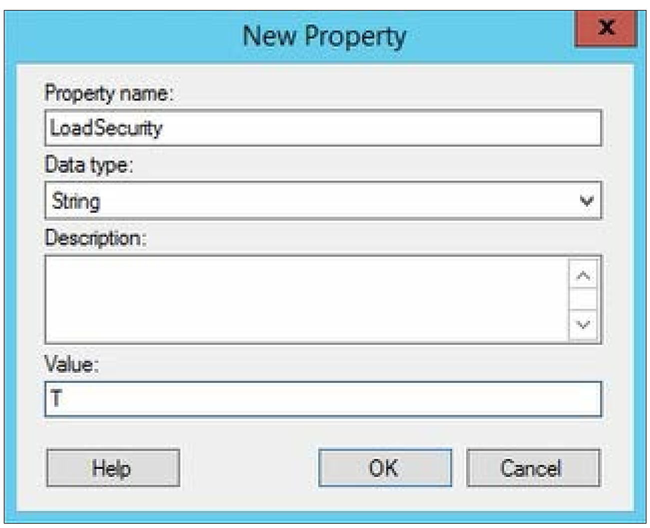
Exercise steps

Part 1: Add a new document property

1. Open the **Projects** dashboard if it's not already open.
2. Select **Edit > Document Properties**.
3. Click the **Properties** tab and then click **New**. The **New Property** window opens**.**
4. Type *LoadSecurity* in the **Name** field.
5. Verify **String** is selected in the **Data type** field.
6. Type *T* in the **Value** field.

When a user loads the dashboard document, Infor CRM runs a script to turn this property to T. If the property is already valued at T, the script values it to F and back to T to clear any data. You'll leave it at T to view your data filter within the visualization as you design it.

7. Click **OK**.



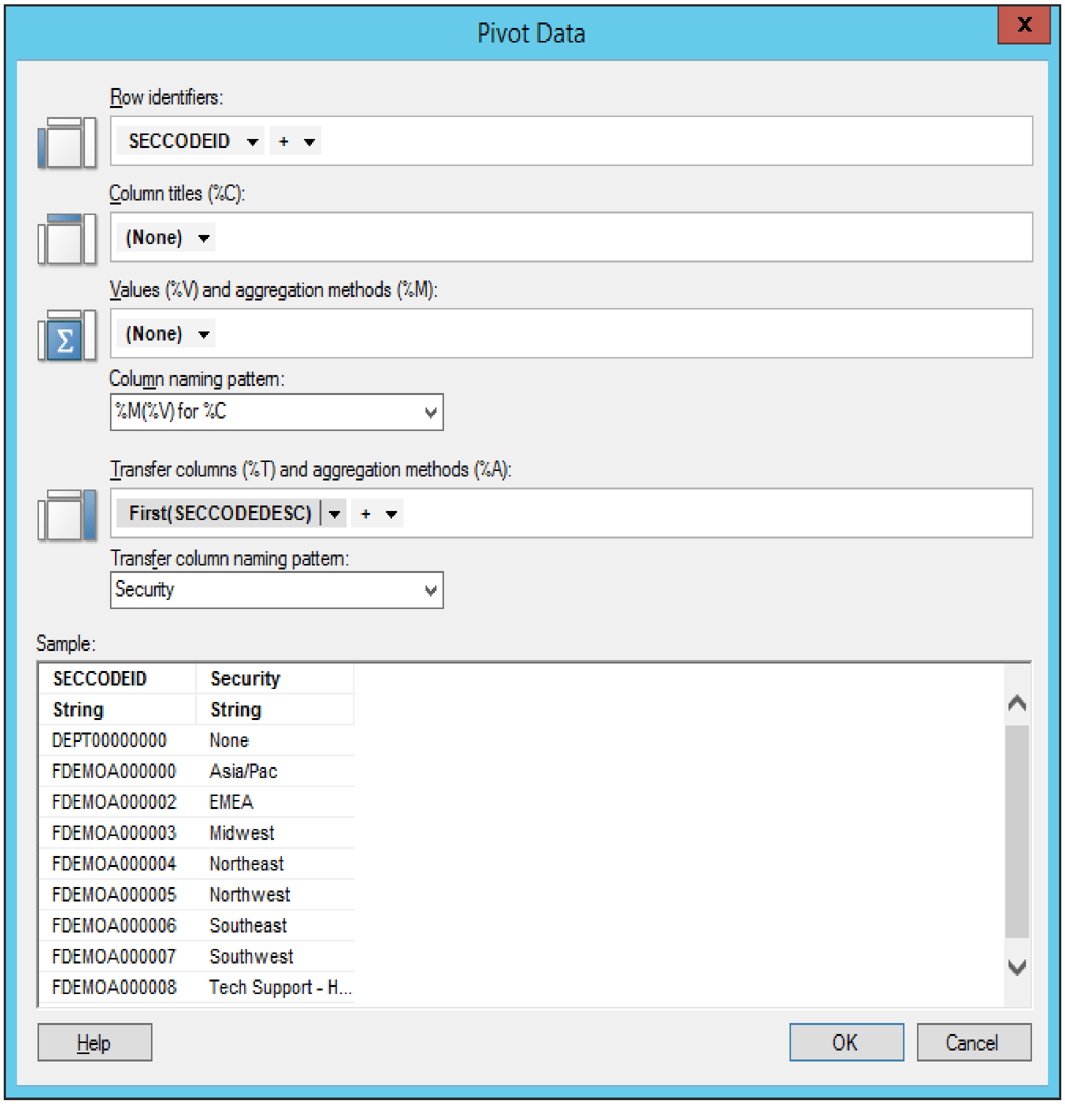
8. Click **OK** again to close the **Document Properties** window.

Part 2: Add a new column to your information link.

This column is from your Security model which holds your **SECCODEID** field. This column is used for security in Infor CRM.

1. Select **Insert > Columns**.
2. Select **Projects** from the **Add Columns to data table** drop-down list.

   Because this is the only data table in your analysis, it may already be selected.
3. Select **Information Link** from the **Select** drop-down list in the **Add Columns From** field.
4. Browse to **Library** and select **Saleslogix > Model > Security Model > Security**.
5. Click OK**.**
6. Expand the **Show transformations (no transformation steps added)** drop-down list and click **Pivot**.
7. Click **Add**. The **Pivot Data** window opens.
8. Select **SECCODEID** from the **Row Identifiers** drop-down field.
9. Select **SECCODEDESC** from the **Transfer Columns (%T) and aggregation methods (%A** drop-down list.
10. Type *Security* in the **Transfer column naming pattern** field.
11. Click **OK**.



12. Click **Next**. The **Insert Columns – Match Columns** window opens.
13. Select **SECCODEID** from the **From Current Data** drop-down list.
14. Select **SECCODEID** from the **From New Data** list.
15. Click **Match Selected**.
16. Click **Next**. The **Insert Columns – Import** window opens.
17. Select the **Security** check box in the **Columns to add from new data** pane.
18. Select the **Inner (rows matching in both current and new data only)** check box.
19. Click **Finish**.

Part 3: Update the data table properties to verify data is reloaded when the dashboard loads instead of pulling cached data from your scheduled updates.

1. Select **Edit > Data Table Properties**.
2. Click the **Scheduled Updates** tab.

3. Select the **Security** check box in the **Reload the following data for each user** pane.

   Note: If a data table is unchecked, the scheduled updates are used. When a data table is checked, the data is reloaded.

4. Click **OK**.
5. Select **File > Save**.
6. Click **Yes** to update the analysis in the library.

Part 4: Hide these from other users

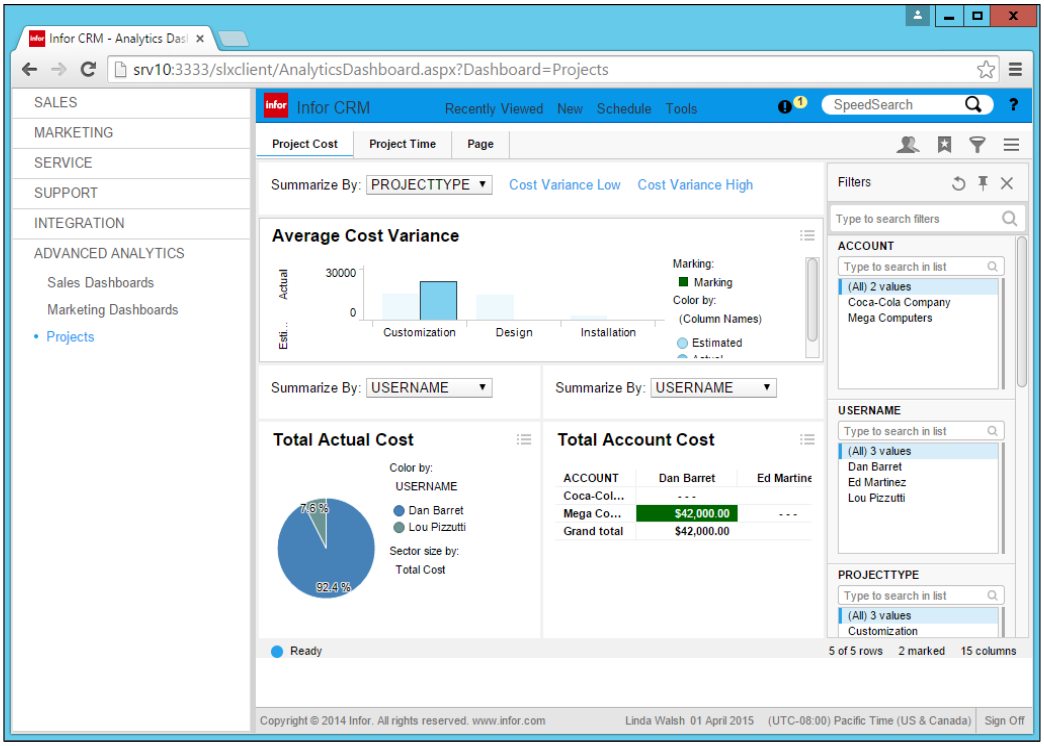
1. Select **Edit > Organize Filters**. The **Organize Filters** window opens.
2. Clear the **Security** check boxes.
3. Click **OK**.
4. Select **File > Save As > Library Item**. The **Save as Library Item** window opens.
5. Save as **Projects** and then click **Finish**.
6. Click **Yes** to overwrite **Projects**.
7. Click **Yes** to keep previously associated bookmarks.
8. Click **Close** when the save completes.

Exercise 4.15: Add the Projects Dashboard to the Infor CRM Web client

In this exercise, you will configure the Windows (Web) Client so users can launch custom dashboards from within the Windows (Web) Client.

Add the dashboard set to Infor CRM Web Client.

After completing this exercise, you should have the following result.



Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

Click here to view a demo and/or practice this task

Exercise steps

Part 1: Add the Project dashboard to Infor CRM Web client

1. Open your browser and type *localhost:3333/slxclient* to open the **Infor CRM Web Client**.
2. Type *admin* in the **Username** field.
3. Type *password* in the **Password** field.
4. Click **Sign In**.
5. Select the **Administration Nav Bar > Analytics Systems Info**.
6. Click **Add Dashboard Path**. The **Add Dashboard Path** window opens.
7. Type *ClientProjects* in the **Dashboard Name** field.
8. Type *Client Projects* in the **Display Name** field.
9. Type *Training/Analysis/ClientProjects* in the P**ath** field.

10. Click **OK**.
11. Click **Save**.
12. Press **CTRL+F5** to refresh the browser.

Part 2: Verify users have the Advanced Analytics roles and add a secured action for the dashboard

1. Select the **Administration Nav Bar > Users**.
2. Select all users by not selecting a user and clicking **Add to Role** from the **User Tasks** pane. The **Select Role** dialog box opens.
3. Click **Search**. The **Lookup Role** dialog box opens.
4. Click **Advanced Analytics**.
5. Click **OK** twice.
6. Click **Save**.
7. Click the **Administration Nav Bar**.
8. Right-click **Secured Actions** and select **New Secured Action**.
9. Type *AdvancedAnalytics/Dashboard/ClientProjects* in the **Name** field.
10. Click **Save**.
11. Select the **Advanced Analytics Nav Bar > Client Projects**.

    The dashboard loads in Infor CRM.
12. Click **Sign Off**.
13. Click **Return to sign in page**.
14. Type *Lee* in the **Username** field. No password required.
15. Click **Sign In**.
16. Select the **Advanced Analytics Nav Bar > Client Projects**.

Part 3: Test the dashboard with a larger data set

1. Click **Sign off**.
2. Click **Return to login page**.
3. Type *Linda* in the **Username** field. No password is required.
4. Click **Sign In**.

    Linda sees a limited amount of data on the **Client Projects** dashboard compared to Lee indicating how security is working.

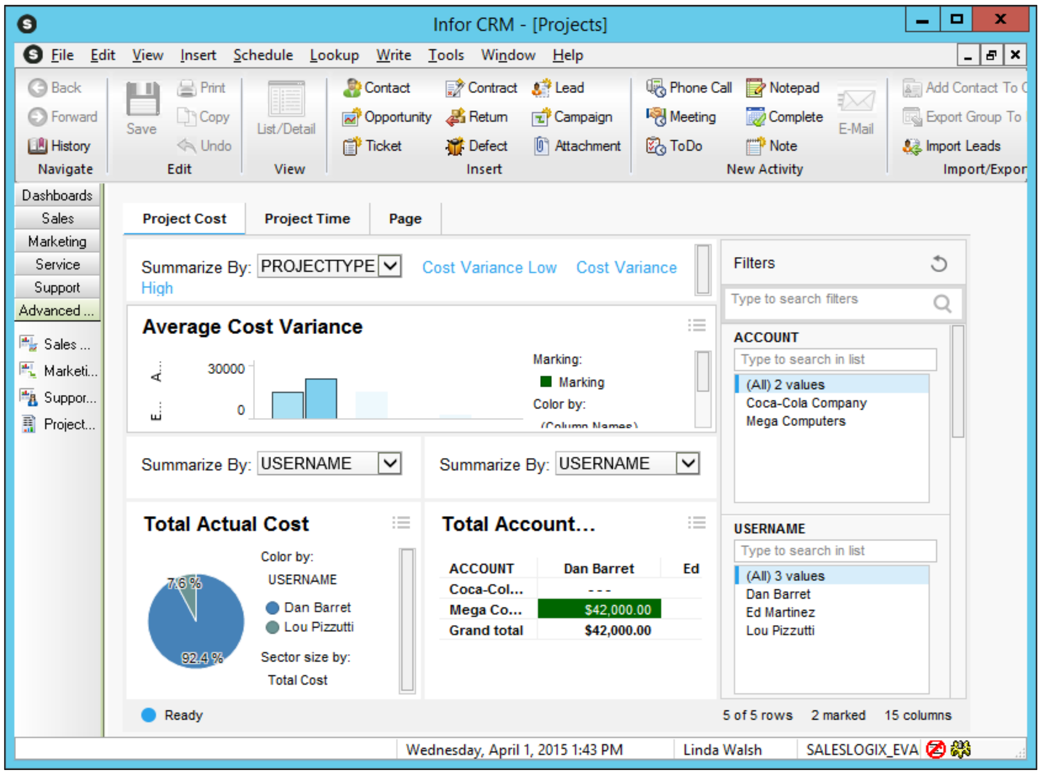
Verify Linda is added to Spotfire as a user. If you added all users to the Advanced Analytics role, they will all be added to Spotfire automatically, but you must log on to Spotfire Professional Client to trigger the proper functionality. If Linda doesn't have the Advanced Analytics role, refresh Spotfire Professional Client.

Exercise 4.16: Add a dashboard to the Windows client

In this exercise, you will configure the Projects dashboard setting so users can launch it from within the Windows client.

Add the dashboard set to Infor CRM Windows Client.

After completing this exercise, you should have the following result:



Notes:

- If you are taking this course as classroom or virtual instructor-led training, observe as your instructor first demonstrates this exercise.
- If you are taking this course as self-directed learning, complete the steps below.

[Click here to view a demo and/or practice this task](#)

Exercise steps

1. Select **Start > All Programs > Infor CRM > Architect**.
2. Type *admin* in the **Username** field.
3. Type *password* in the **Password** field.
4. Click **Sign In**. The **Open Project** window opens.
5. Click the **Analytics Support** project and then click **Open**. The **Project Manager – Analytics Support** window opens.

6. Double-click the **(Toolbars System:Analytics Dashboard NavBar)** plugin.

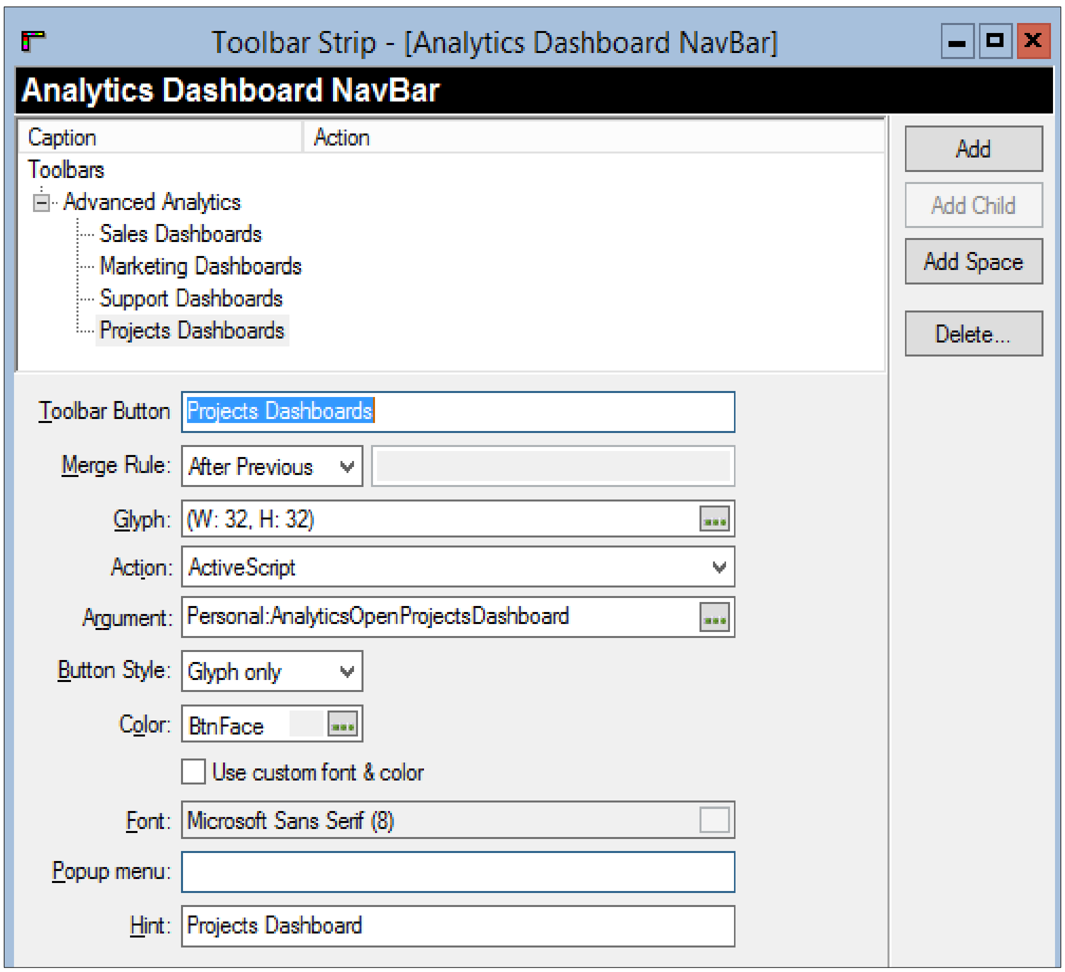
   A message opens indicating the plugin is Read Only.

7. Click **OK**.
8. Click the **Advanced Analytics** node in the **Toolbar Strip** window and select **Add Child**.
9. Type *ClientProjects Dashboard* in the **Toolbar Button** field.
10. Select **After Previous** from the **Merge Rule** drop-down list.
11. Browse to **C:\Program Files (x86)\Saleslogix** in the **Glyph** field.

    Change the type of file to ICO and select the Reports.ico.

    Tip: You can also open the glyph from the Support dashboards item above and save the image for use on the Projects item.

12. Select **ActiveScript** from the **Action** drop-down list.
13. Type *Personal:AnalyticsOpenProjectsDashboard* in the **Argument** field.
14. Type *Client Projects Dashboard* in the **Hint** field.

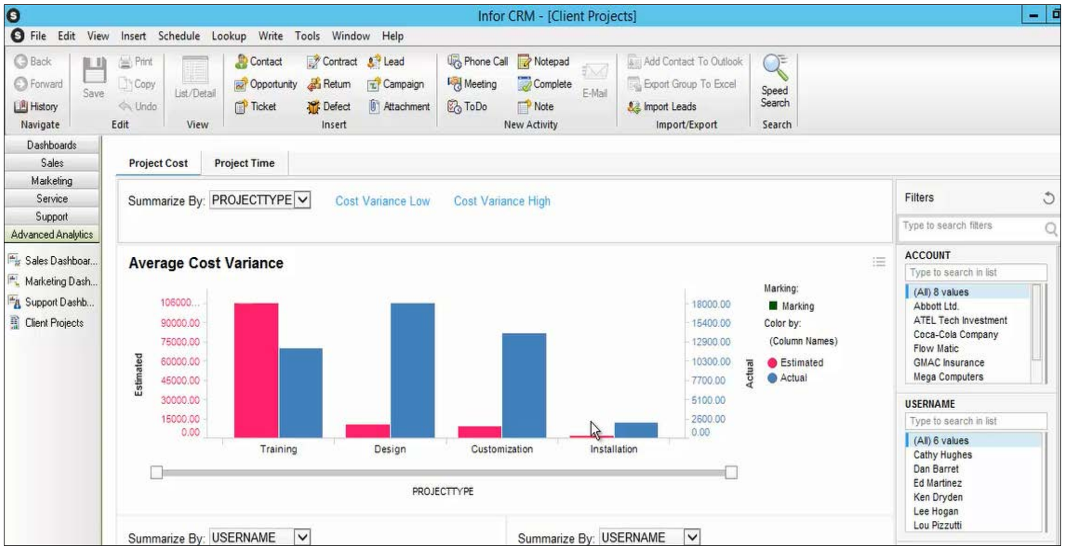


15. Click **Save**.
16. Leave the defaults and click **OK**.

17. Close the **Toolbar Strip** window.
18. Double-click the **(Scripts, VBscript System;AnalyticsOpenSupportDashboard)** plugin in the **Project Manager** window. A message appears indicating the plugin is Read Only.
19. Click **OK**.
20. Press **CTRL+A** and **CTRL+C** to copy all contents of the script to your clipboard.
21. Click **Close**.
22. Select **File > New Plugin > VB Script**.
23. Press **CTRL+A** and **CTRL+V** to replace all contents of the script with the code on your clipboard.
24. Modify the sub Main to OpenDashboard “Project.” The code should look similar to the following:

```
‘Including Script – System:Analytics Support

option explicit

sub Main

  OpenDashboard “ClientProjects”

end sub
```

25. Click **Include Additional Scripts** from the toolbar in the **Script** window.
26. Click **Add Script**. The **Select Plugin to Open** window opens.
27. Expand **System** and then click **Analytics Support**.
28. Click **OK**.
29. Select **File > Save**.
30. Leave the defaults and type *AnalyticsOpenProjectsDashboard* in the **Name** field.
31. Click **OK**.
32. Close the **Script** window.
33. Click **Release Plugins** in the **Project Manager** window. The **Release Plugins** window opens.
34. Select **Everyone** in the **Plugin is release to** pane.
35. Click **OK**.
36. Sign in to the **Infor CRM Windows Client** as Lee.
37. Type *Lee* in the **Username** field. No password is required.
38. Click **Sign In**.
39. Select the **Advanced Analytics Nav Bar > Client Projects Dashboard**. Verify the dashboard loads and Lee has access to the project data for only accounts he has access to.


Infor CRM - [Client Projects]
Project Cost
Project Time
Summarize By: PROJECTTYPE
Cost Variance Low
Cost Variance High
Average Cost Variance
Estimated
Actual
Training
Design
Customization
Installation
PROJECTTYPE
Marking:
Marking
Color by:
(Column Names)
Estimated
Actual
Filters
ACCOUNT
(All) 8 values
Abbott Ltd.
ATEL Tech Investment
Coca-Cola Company
Flow Matic
GMAC Insurance
Mega Computers
USERNAME
(All) 6 values
Cathy Hughes
Dan Barret
Ed Martinez
Ken Dryden
Lee Hogan
Lou Pizzutti
Summarize By: USERNAME
Summarize By: USERNAME

Customization best practices

QA and production testing

Follow the steps below when moving customizations between development, QA, and production environments:

1. Verify each environment has the same version of Advanced Analytics installed.
2. Using the Library Administration tool, export the Model folder of your customized folder structure. You can also export the Model folder of the Infor CRM folder structure assuming it was imported from production before developing.
3. Move the exported models to the QA environment.
4. Using the Library Administration tool, import the main and customized data models. Verify to select **Replace Existing Item** during the import process.
5. Test the customization. When everything works as expected repeat the steps to move the exported models to the production environment and import.

Upgrades

Follow the steps below when upgrading a customized environment to a new version of Advanced Analytics:

1. Use the Library Administration tool to export the main and customized data models to store it in a safe location in the QA environment.

   The customized data model and subfolders should not be changed by the upgrade; however, Infor CRM recommends that your company back them up.

2. Import the new main data model folder(s) from the upgrade. **Note:** Currently, there is only an Infor CRM main data model folder. A future upgrade may have more. Verify to select **Replace Existing Item** during the import process.

   No further action is required now for updating columns in your customized folder; they remain unaffected by the upgrade.

   Alternatively, for any customized content in the Information Link and Analysis sub folders verify you review the following steps/options:

   Content copied from OOTB content:

   a. Option 1 (Light Customizations): Copy the new OOTB information links or analysis files to the appropriate customized sub folder and re-do the customizations.
   b. Option 2 (Heavy Customizations): Do not copy the new OOTB content. Instead, change the customized versions of the Information Link or Analysis files to reflect changes made in the OOTB data tables, information links, or analysis files.

   New content without copying OOTB content:

   a. Make any necessary changes so they continue to work as designed. For example, a customized dashboard may not have been based on an OOTB dashboard and instead on an

OOTB information link. Changes to the information link may require changes to the customized dashboard.

3. When an upgrade completes use the export/import functions to move the model into a production environment.

Course summary

Estimated time

5 minutes

Learning objectives

Now that you have completed this course, you should be able to:

- Install and configure working TIBCO Spotfire environment.
- Install and configure Infor CRM Advanced Analytics to components.
- Add data to Spotfire from a custom Infor CRM table.
- Add data to Spotfire from a third-party table.
- Create a parallel model for customization.
- Design visualizations that limit data based on other visualizations.
- Design visualizations that use custom expressions and bookmarks.
- Apply Infor CRM security to a custom and dashboard.
- Add a dashboard to Infor CRM Windows and Web.

Topics

- Course review

Appendices

The following are included in this section:

- Appendix A: Learner user accounts
- Appendix B: Installing the Spotfire web player on a different computer from the Spotfire server

Appendix A: Learner user accounts

Your instructor will assign you a student user ID from the table listed below to use for class exercises.
Note: If you are taking this course as self-directed learning, refer to the Training Desktop Login Instructions on the Lab On Demand page.

Infor CRM: Advanced Analytics v3.0/01_0610830_IEN0113_CRM			
Application	**User ID**	**Username**	**Password**
Administrator	Administrator	Admin	<blank>
Administrator	Administrator	Admin	password
Application Architect	Administrator	Admin	password
Infor CRM Web Client	Administrator	Admin	<blank>
Infor CRM Web Client	Administrator	Admin	password
Infor CRM Web Client	Lee Hogan	Lee	<blank>
Infor CRM Web Client	Linda Walsh	Linda	<blank>
Infor CRM Windows Client	Lee Hogan	Lee	<blank>
TIBCO Spotfire Professional Client	Administrator	Admin	password

Appendix B: Installing the Spotfire web player on a different computer from the Spotfire server

The following steps explain how to install the TIBCO Spotfire Web Player on a different computer from the Spotfire Server.

To install

1. If you have not already installed and configured the Spotfire Server do this step first.
2. On the computer where the Spotfire Server installed, browse to the folder where the files were unzipped and find the SlxAASetup.log file.
3. Copy the file to a convenient location on the destination computer where you will install the Spotfire Web Player.
4. Browse to InforCRM_Advanced_Analytics_v3_0.zip and unzip the file to a convenient location on the destination computer.
5. Browse to SLX Advanced Analytics Setup.exe and double-click to begin the installation.
6. Click Load Settings on Step 1.
7. Browse to the SlxAASetup.log file and click OK.

   The setup program populates using the settings on the server. Proceed to **Step 3** which allows you to select Web Player install.
8. Click Finish to install the Web Player and Client.

   Client installs on other computers doesn't require or launch the additional steps added when installing the client on the same machine as the server.

You are prompted for a Port Number when installing the Web Player. Use the following port number for the Web Player and not the port number already established for the server.

The default is port 80, however, this port can cause conflicts. It's recommended by Infor CRM that your company use port 8080 or 8088 instead.