

Trace Analysis Step-by-Step Guide



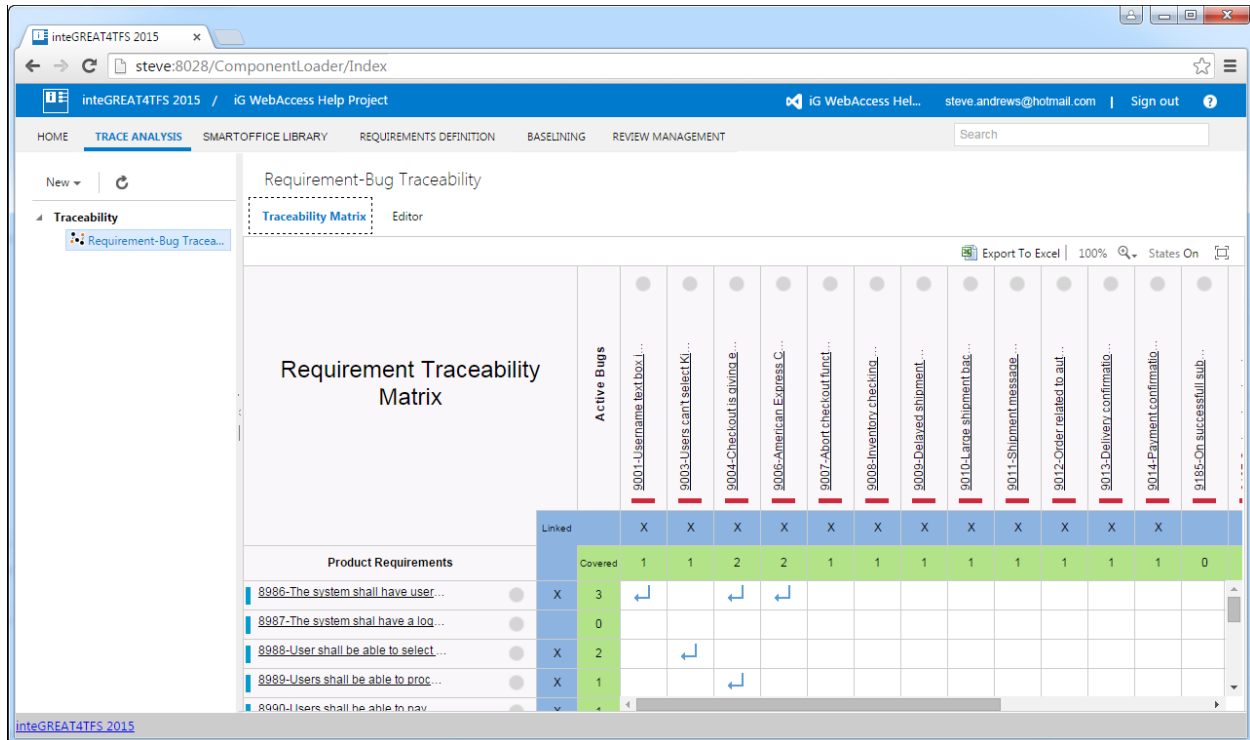
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OVERVIEW

Trace Analysis section of inteGREAT4TFS is the module that is used to manage traceability between Work Items.

This guide demonstrates how to use the Trace Analysis module in inteGREAT4TFS.



Product Requirements	Linked	Covered	9001-Username text box...	9003-Users can't select Ki...	9004-Checkout is giving a...	9006-American Express C...	9007-Abort checkout func...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...
8986-The system shall have user ...	X	3	X	X	X	X	X	X	X	X	X	X	X	X	X
8987-The system shall have a log ...		0													
8988-User shall be able to select ...	X	2		X											
8989-Users shall be able to proc ...	X	1			X										
8990-I leave shall be able to nav...															

KEY TAKEAWAYS

Individuals will learn how to perform the following tasks from this tutorial:

- Invoke the module
- User Interface of the module
- Creating a new Intersection Traceability Matrix
- Opening an existing Intersection Matrix
- Editing an Intersection Matrix
- Editing Work Items
- Creating a new Horizontal Traceability Matrix
- Exporting the Traceability Matrix to Excel

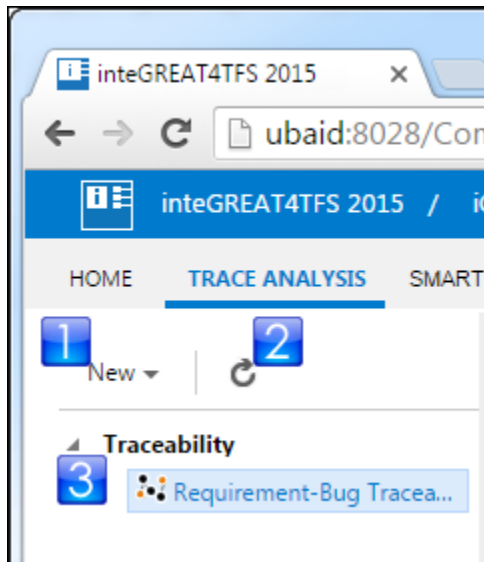
TRACE ANALYSIS UI

The Trace Analysis' user interface can be broadly divided into two sections as highlighted in the following image:

1. Folder Explorer
2. Traceability section

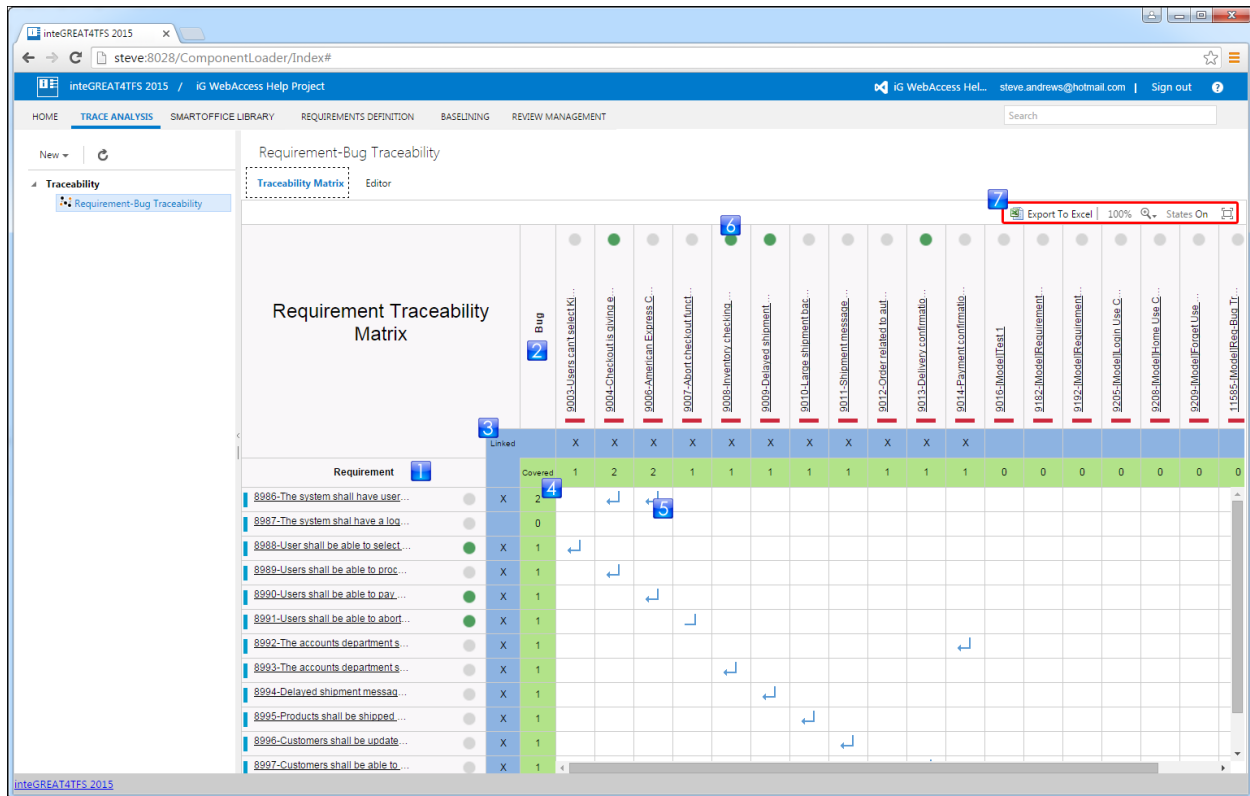
The screenshot shows the inteGREAT4TFS 2015 web application interface. The top navigation bar includes 'HOME', 'TRACE ANALYSIS', 'SMARTOFFICE LIBRARY', 'REQUIREMENTS DEFINITION', 'BASELINING', and 'REVIEW MANAGEMENT'. The 'TRACE ANALYSIS' section is active, showing a 'Requirement-Bug Traceability' view. On the left, a 'Folder Explorer' (labeled 1) shows a tree structure with 'Traceability' and 'Requirement-Bug Traceability'. The main area (labeled 2) displays the 'Requirement Traceability Matrix'. This matrix is a table with columns for 'Product Requirements' and 'Active Bugs'. The 'Product Requirements' column lists requirements such as '8986-The system shall have user ...', '8987-The system shall have a log ...', '8988-User shall be able to select ...', '8989-Users shall be able to proc ...', '8990-Users shall be able to pay ...', '8991-Users shall be able to abort ...', '8992-The accounts departments ...', and '8993-The accounts departments ...'. The 'Active Bugs' column lists bugs such as '9003-Users can't select Ki...', '9006-American Express C...', '9008-Inventory checking ...', '9009-Delayed shipment ...', '9010-Large shipment bac ...', '9011-Shipment messare ...', '9012-Order related to aut ...', '9013-Delivery confirmatio ...', '9014-Payment confirmatio ...', '9185-On successful sub ...', '9187-System do not naviga ...', '9188-join form on the we ...', and '9189-System doesnot acc ...'. The matrix cells show 'X' for linked requirements and 'Covered' values (1, 2, 0, 3, 1, 1, 1, 1) for the requirements. The interface also includes a 'New' button, a 'Traceability Matrix' tab, and an 'Export To Excel' button.

FOLDER EXPLORER



1	New	Used to create folders and new Traceability files
2	Refresh	Refreshes the traceability list
3	Traceability (List)	Shows the list of traceability files created so far

TRACEABILITY SECTION



1	Row Name	Name of the Row query/Work Item selected while elaborating the traceability
2	Column Query Name	Name of the Column query/Work Item selected while elaborating the traceability
3	Linked	Shows an arrow if a relationship exists between the particular Work Item and the Work Items of the other query
4	Covered	Shows the number of relationships (arrows in the grid) for a particular Work Item
5	Matrix Area showing Relations	Shows a grid of cells. The intersection cells of unrelated Work Items are shown empty while those of related Work Items shows the relation arrow.
6	State Property	State property of the Work Item
7	Mini Toolbar	Contains general options to tweak the matrix




MINI TOOLBAR



Export to Excel	Used to export the Traceability matrix to an Excel file
Zoom Level	Shows the current zoom level of the grid
Zoom Controller	Used to set the zoom level of the grid
State Property Toggle option	Makes State Property appear or hide on the grid
Full Screen Mode	Used to switch to Full Screen Mode









STATE PROPERTY LEGEND







The state property of the Work Items is shown with the help of relevant icons. The following table sums up the legends used.

Icon	Work Item State
	Approved, Committed, In Progress, Ready
	New, Proposed, Active, To-do, Design, Open
	Done, Resolved, Closed, Removed

WORK ITEM TYPE LEGEND






The Work Item Type is shown with a colored bar against the name of the Work Item.

Requirement Traceability Matrix				Active Bu	9001-Username text bo	9003-Users can't select	9004-Checkout is giving	9006-American Express
				Linked	X	X	X	X
Product Requirements				Covered	1	1	1	1
	8986-The system shall have user...		X	2				
	8987-The system shall have a log...		X	1				
	8988-User shall be able to select...		X	2				




Icon	Work Item Type
	Feature
	Requirement, Product Backlog Item, User Story
	Bug
	Task
	Epic
	Feedback Request, Feedback Response, Shared Steps, Test Plan, Impediment, Test Case, Change Request, Issue, Review, Risk

RELATION LEGEND

The relations between Work Items are shown with an arrow in the intersection cell.

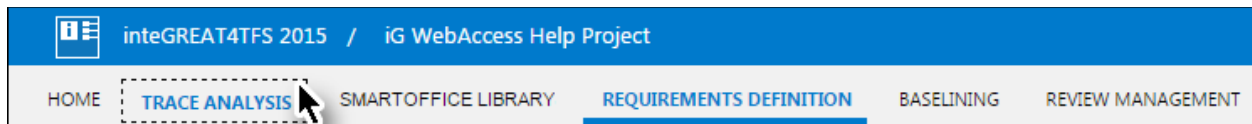
Linked		X	X	X	X	X
	Covered	1	1	1	1	1
X	2					
X	1					
X	2					
X	2					
X	2					
X	2					

All types of relationships are grouped into three link types. The following table sums up the legends used.

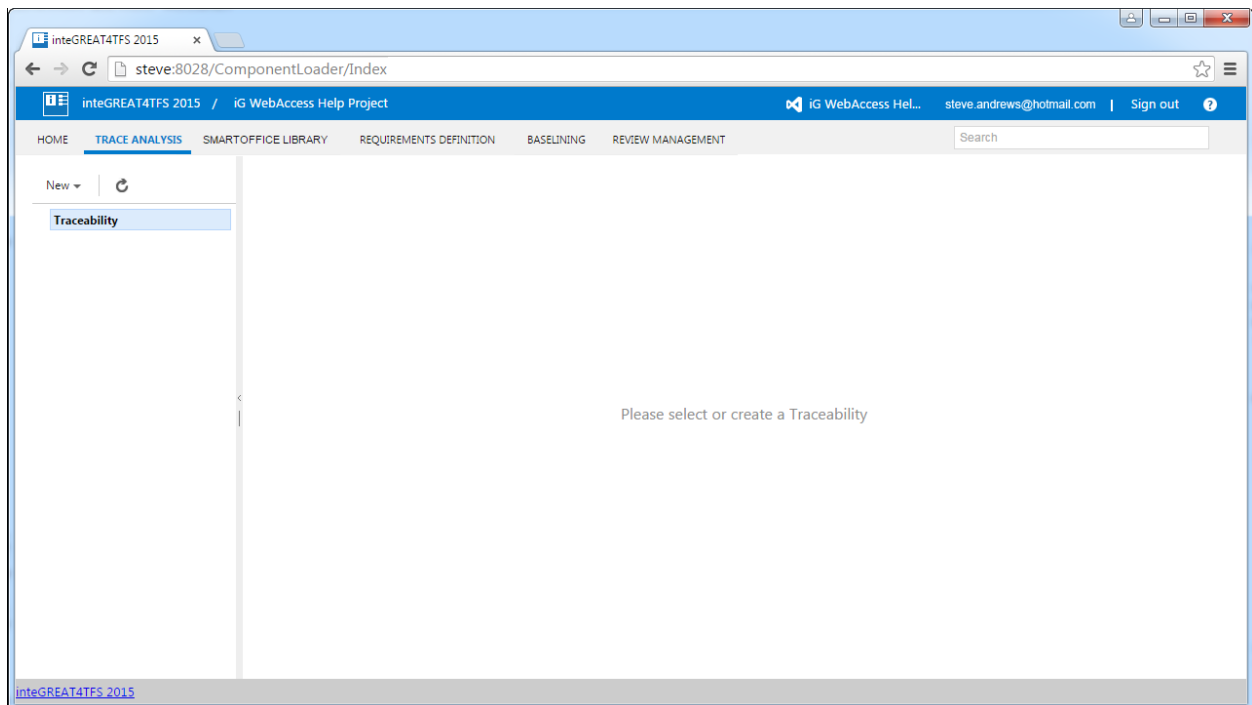
Icon	Relation Link Type
	Network
	Dependent
	Tree

INVOKING THE MODULE

In case another module is selected, user can invoke Trace Analysis by clicking on Trace Analysis option (below the Team Project Name).



The landing page of Trace Analysis module is displayed.

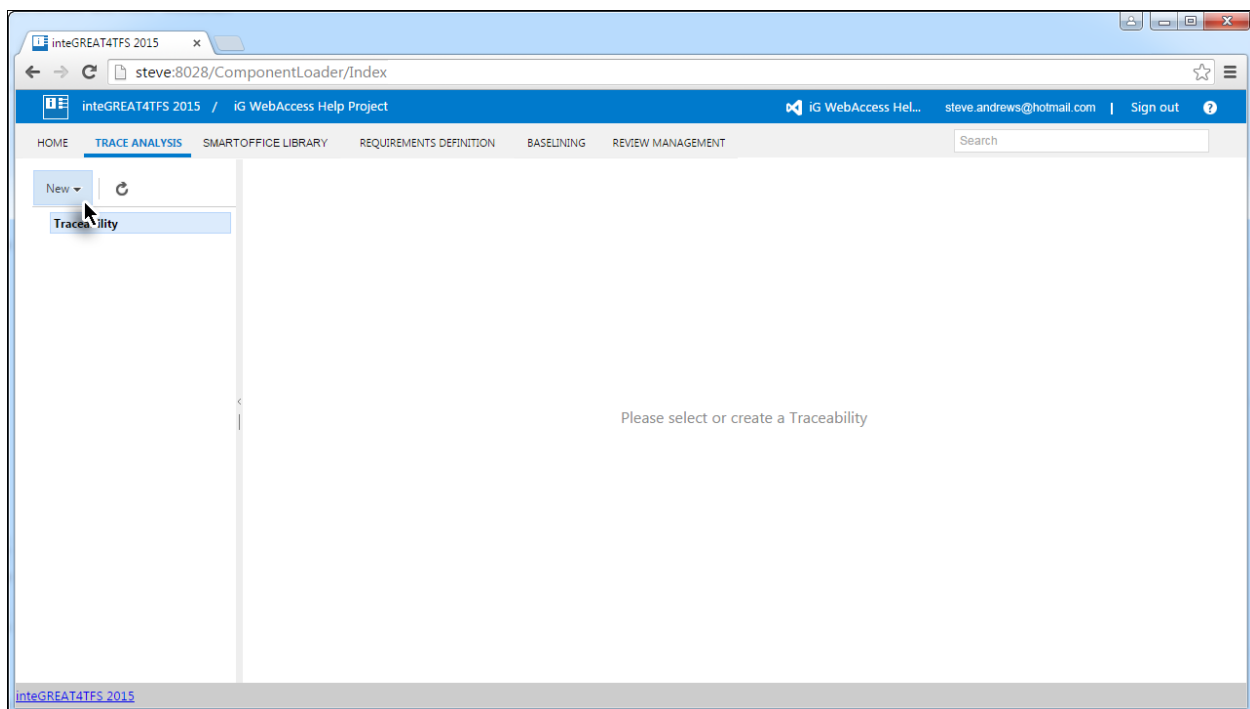


CREATING A NEW TRACEABILITY MATRIX

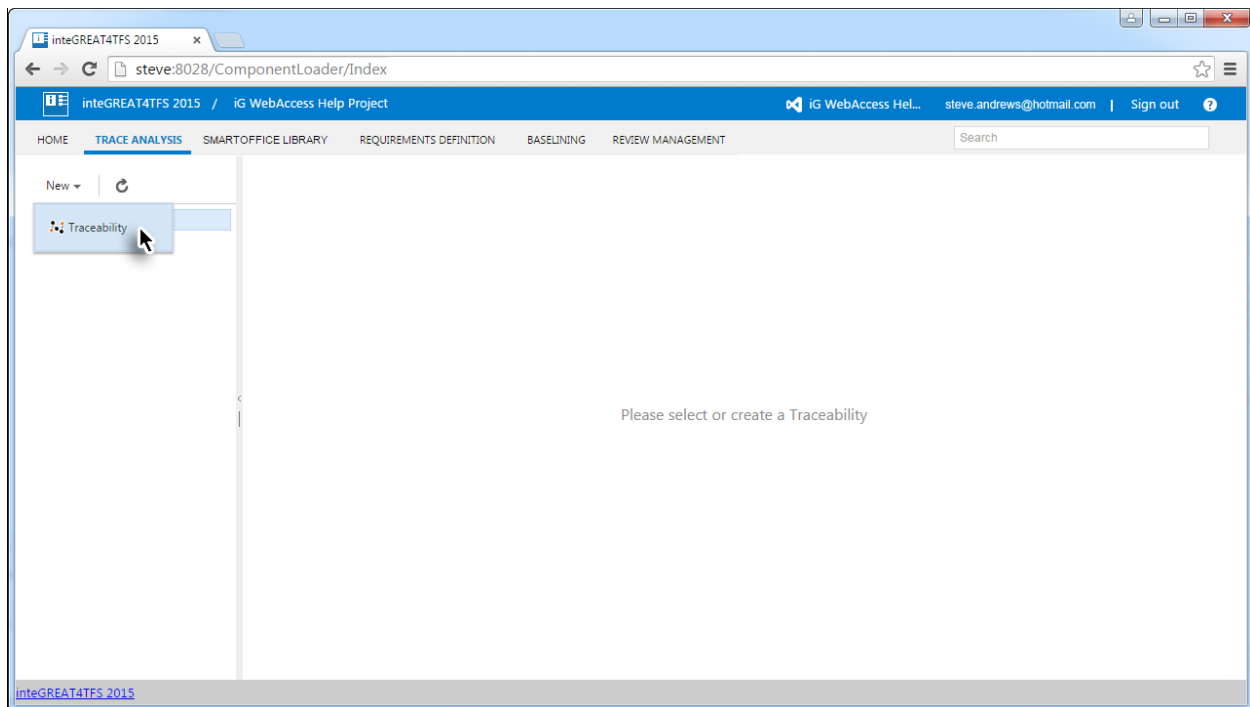
- Creating a new traceability is the first step in viewing and managing Traceability Matrices in inteGREAT4TFS
- This step leads to the Traceability Editor page. The traceability is not actually created until the selection criterion is set on the editor page.

STEP 1: CREATING AN INTERSECTION MATRIX

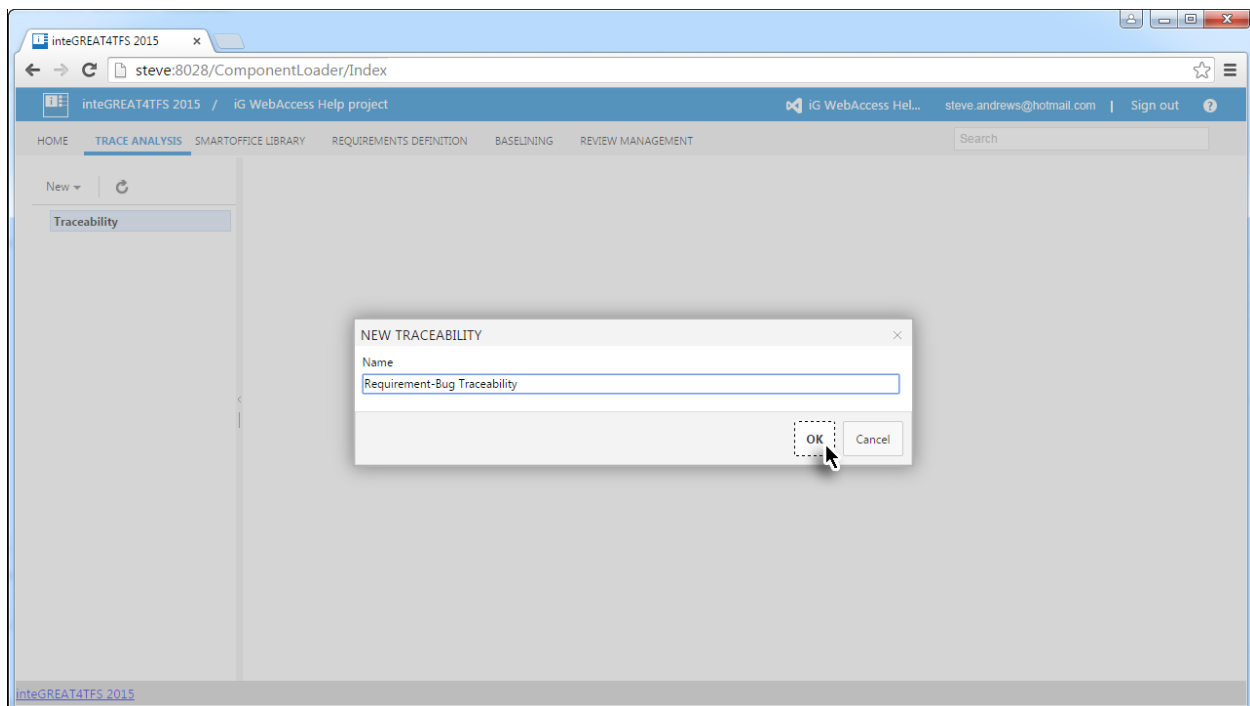
1. Click the **New** option in the Folder Explorer.



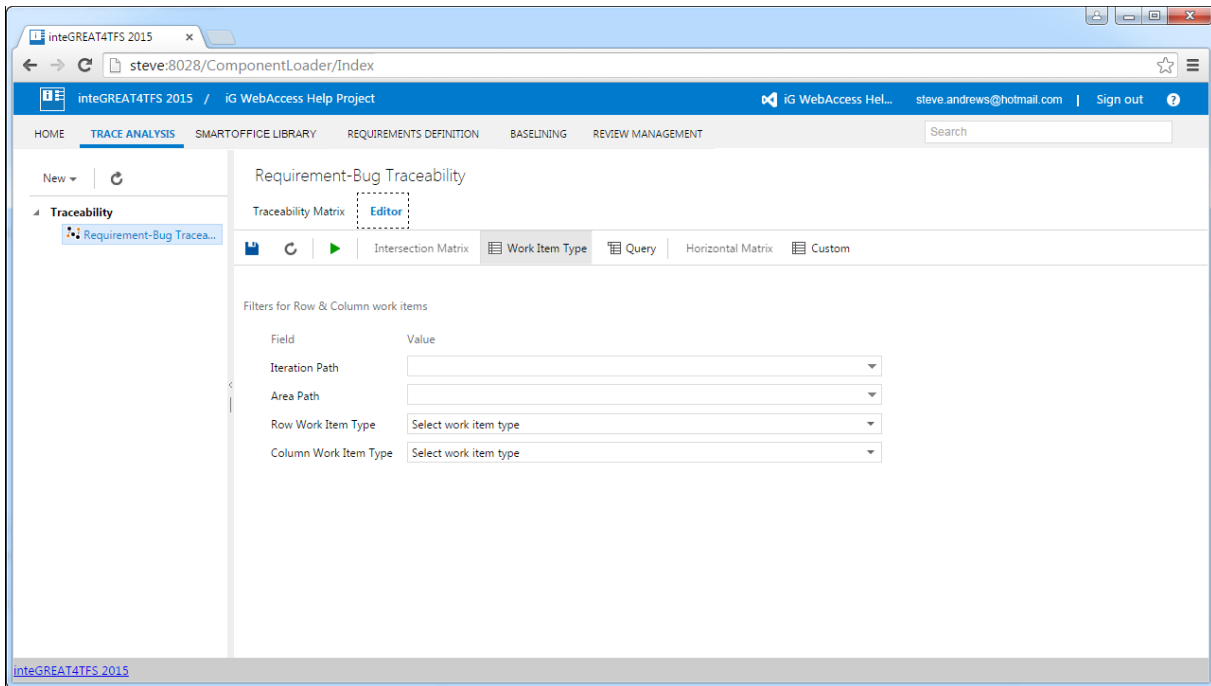
2. Select **Traceability** option from the pop-up menu.



3. Enter a suitable name for the traceability and click the **OK** Button.

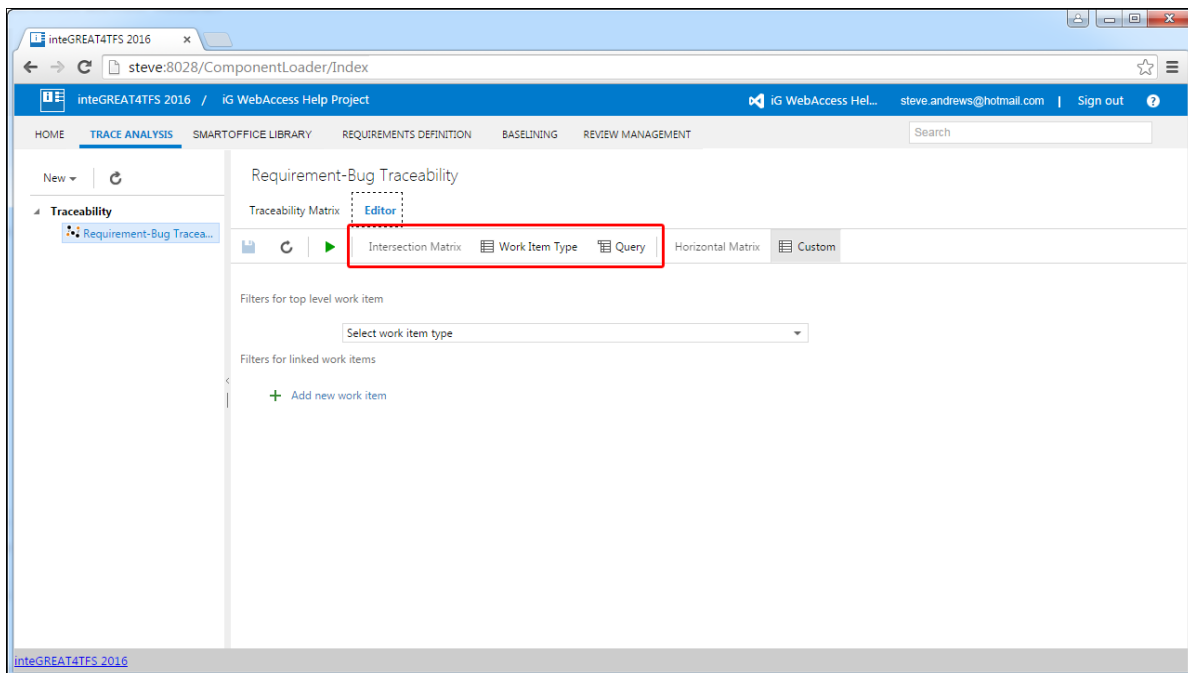


The traceability is created and the user is taken to the Traceability **Editor** page.

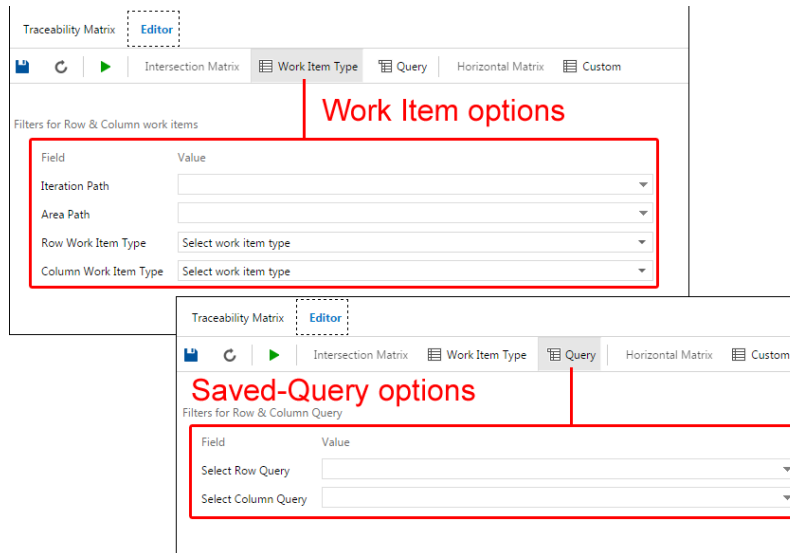


STEP 2: SELECTING THE INTERSECTION MATRIX

- This step involves selecting the desired query in the Intersection Matrix section of Toolbar.



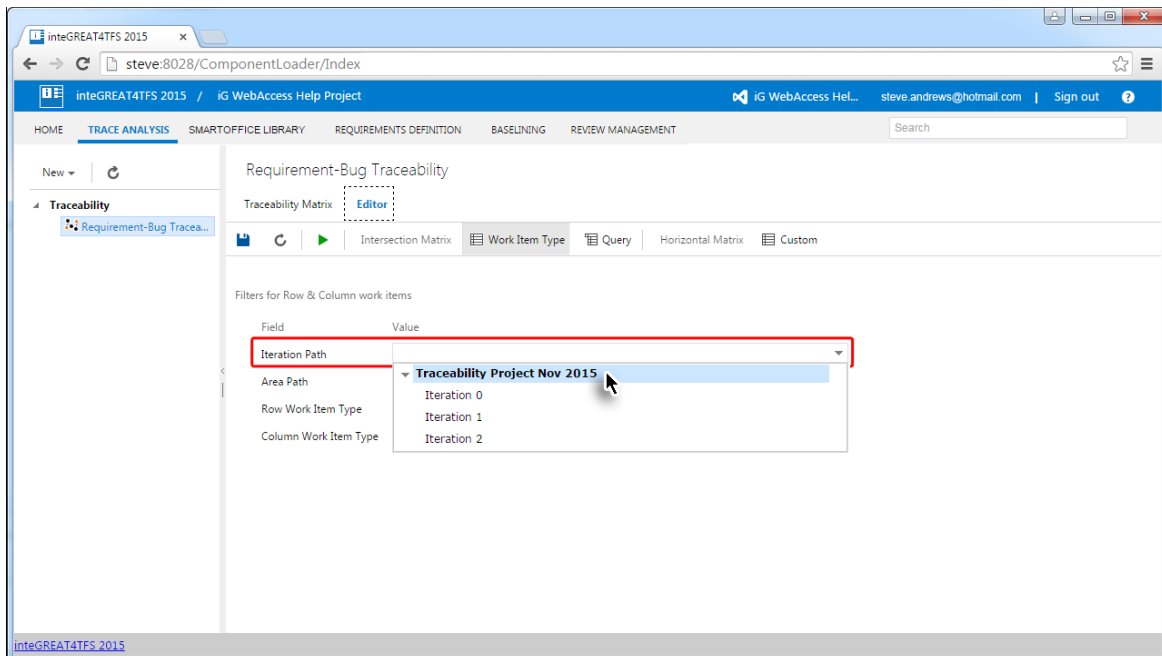
- Selecting the relevant query makes the corresponding options appear below the toolbar.



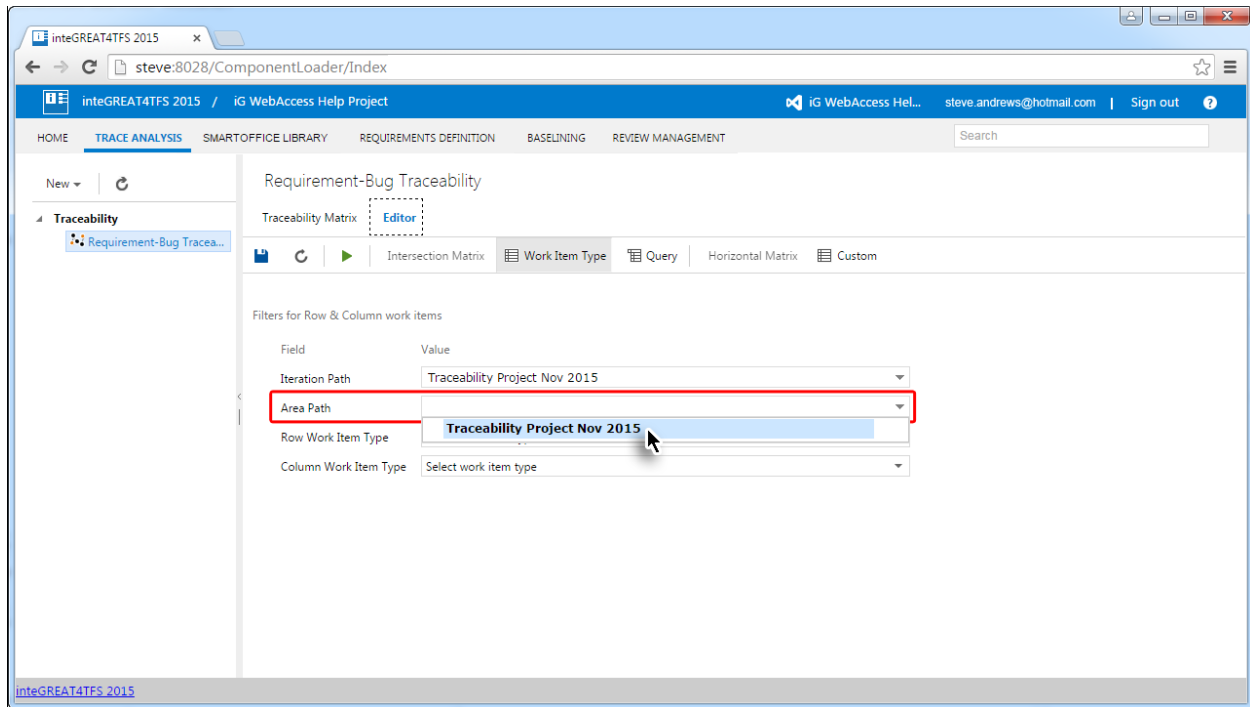
- Step 3 involves the configuration of relevant steps to generate the Intersection Matrix (using the selected method).

STEP 3: INTERSECTION MATRIX USING WORK ITEM

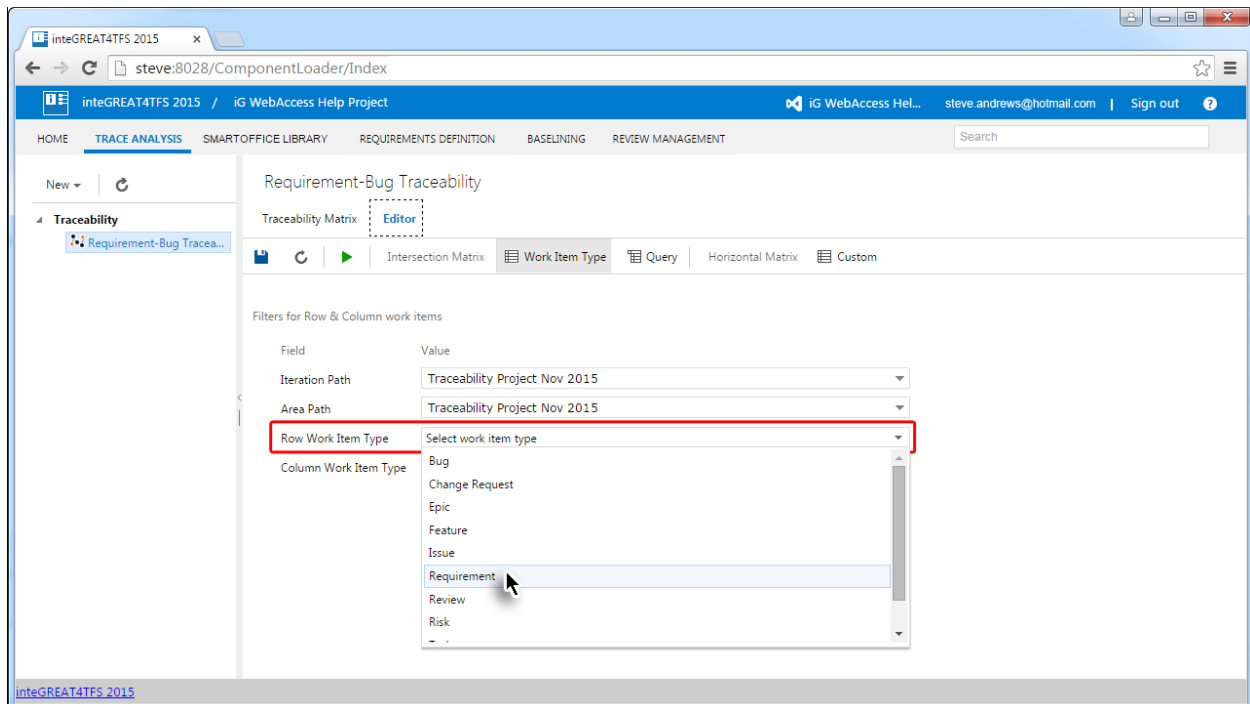
1. Select the relevant **Iteration Path**.



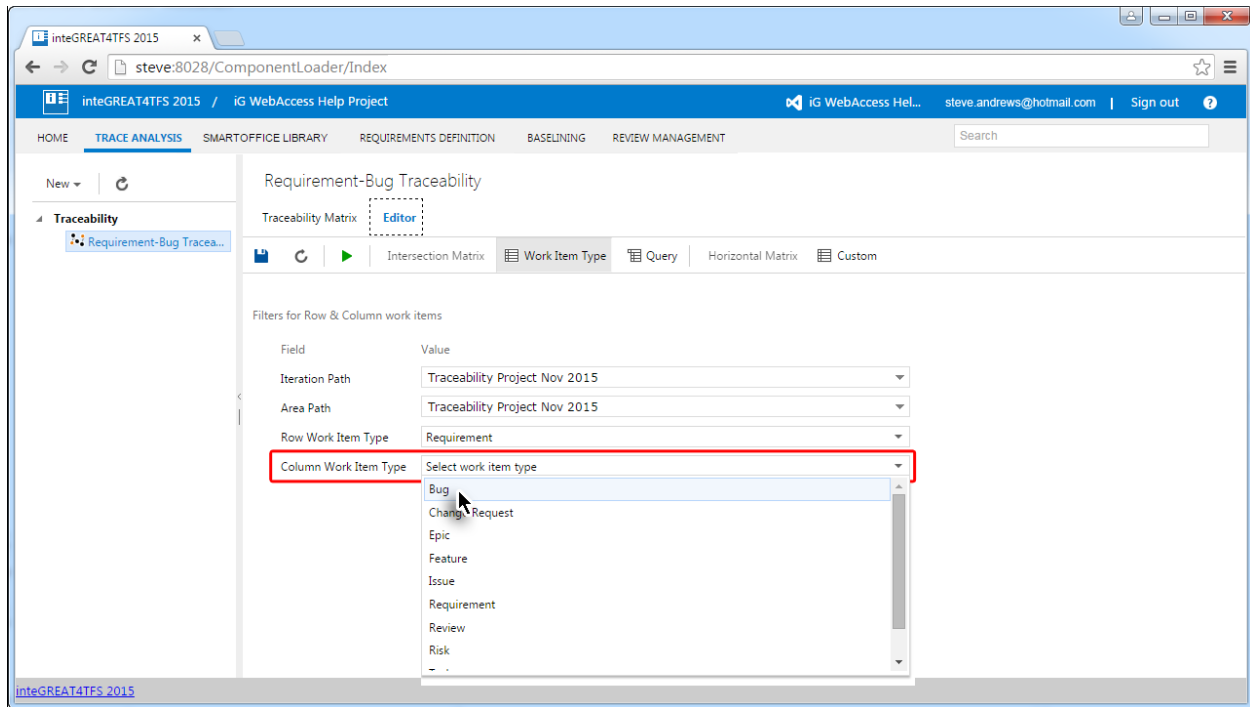
2. Select the relevant **Area Path**.



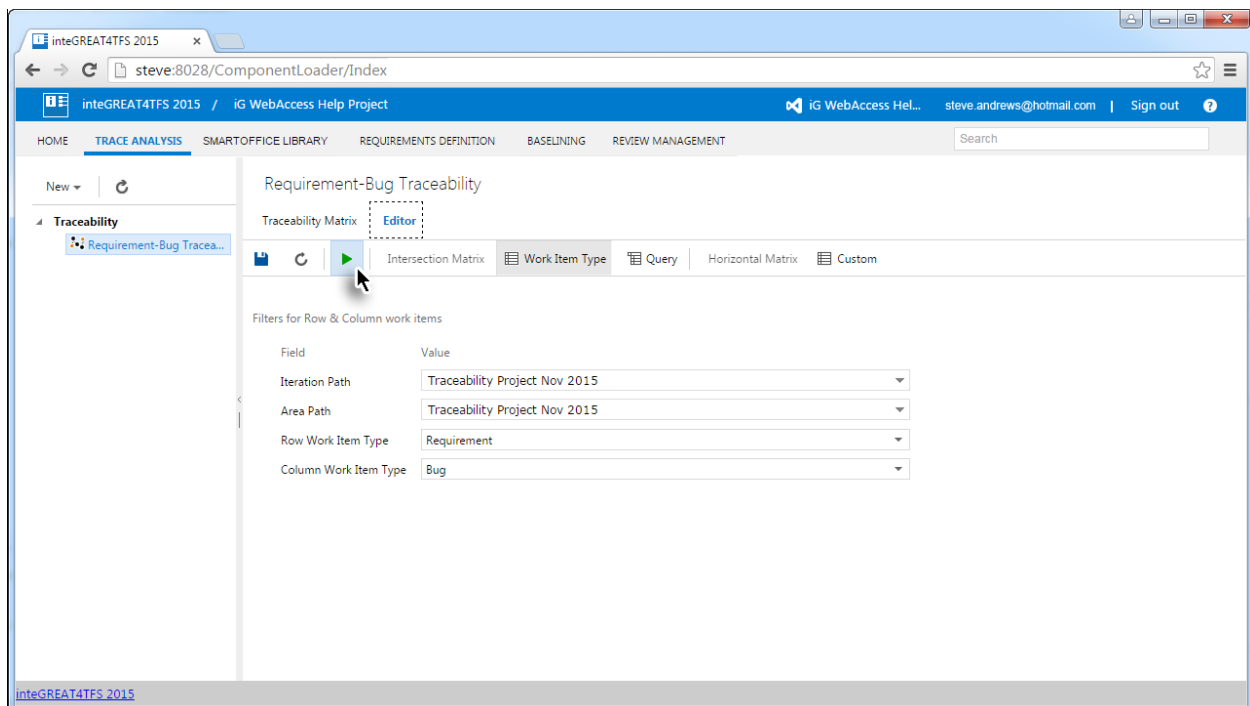
3. Select the desired **Row Work Item Type** (i.e. the Work Item type that is to be shown in rows of the matrix)



4. Select the desired **Column Work Item Type** (The Work Item that is to be shown in columns of the matrix).



5. Click the **Run** Button.



The Intersection Traceability Matrix is generated and displayed.

Requirement-Bug Traceability

Traceability Matrix Editor

Export To Excel 100% States On

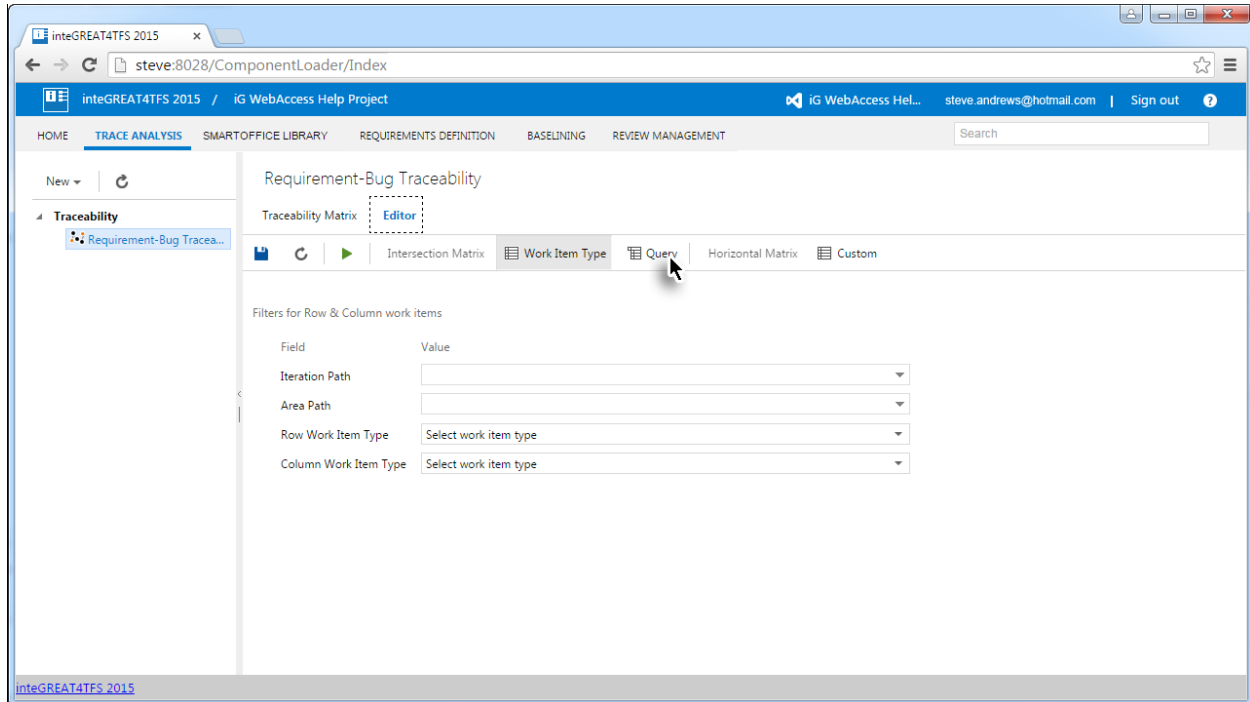
Requirement Traceability Matrix

Requirement	Linked	Covered	9001-Username text box I...	9003-Users can't select M...	9004-Checkout is divined e...	9005-American Express C...	9007-Abort checkout fund...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bas...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...
8986-The system shall have user ...	X	3	X	X	X	X	X	X	X	X	X	X	X	X	0
8987-The system shall have a log ...		0													
8988-User shall be able to select ...	X	2		X											
8989-Users shall be able to proc...	X	1			X										
8990-Users shall be able to nav...															

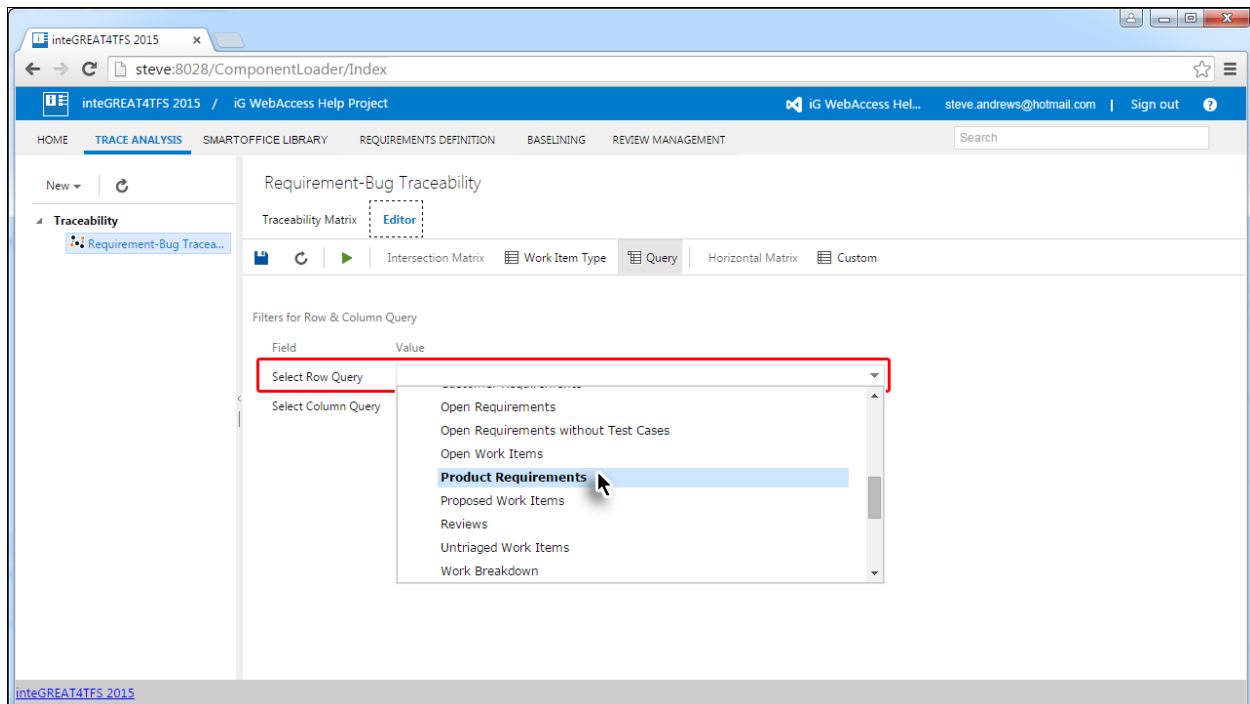
inteGREAT4TFS 2015

STEP 3: INTERSECTION MATRIX USING SAVED-QUERY

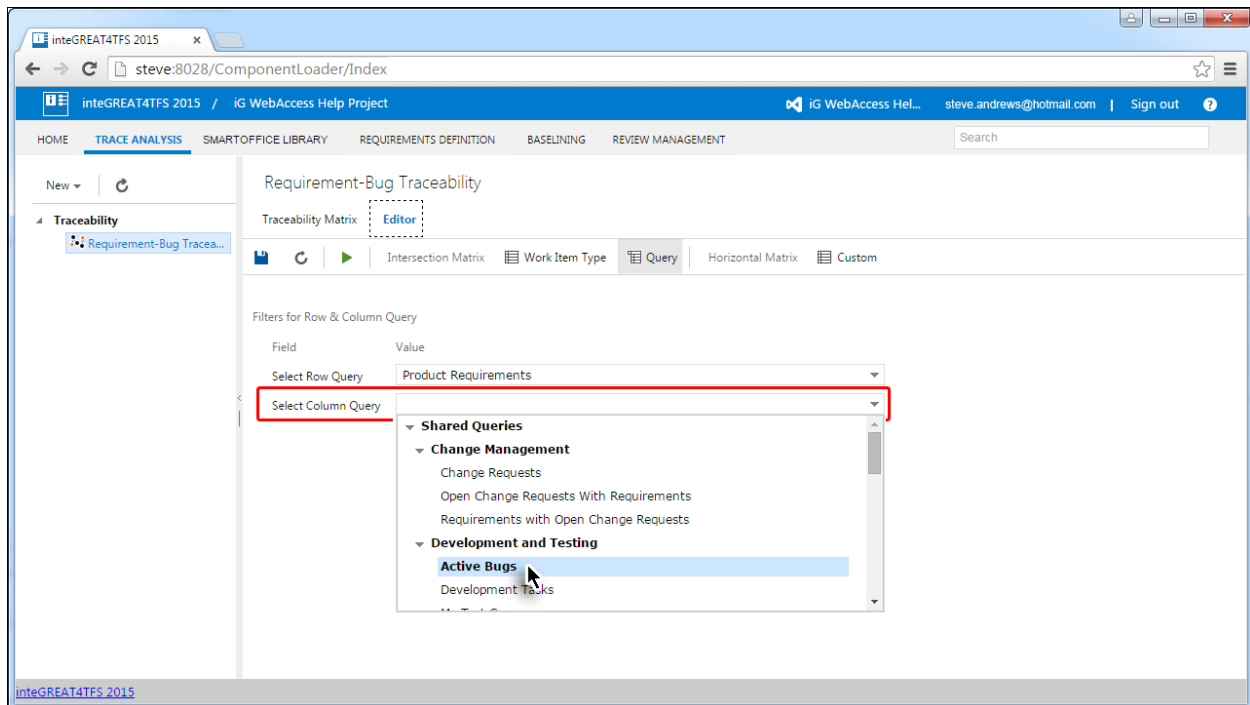
1. Select the Query Input Type (if not already selected).



2. Select the desired **Row Query**.



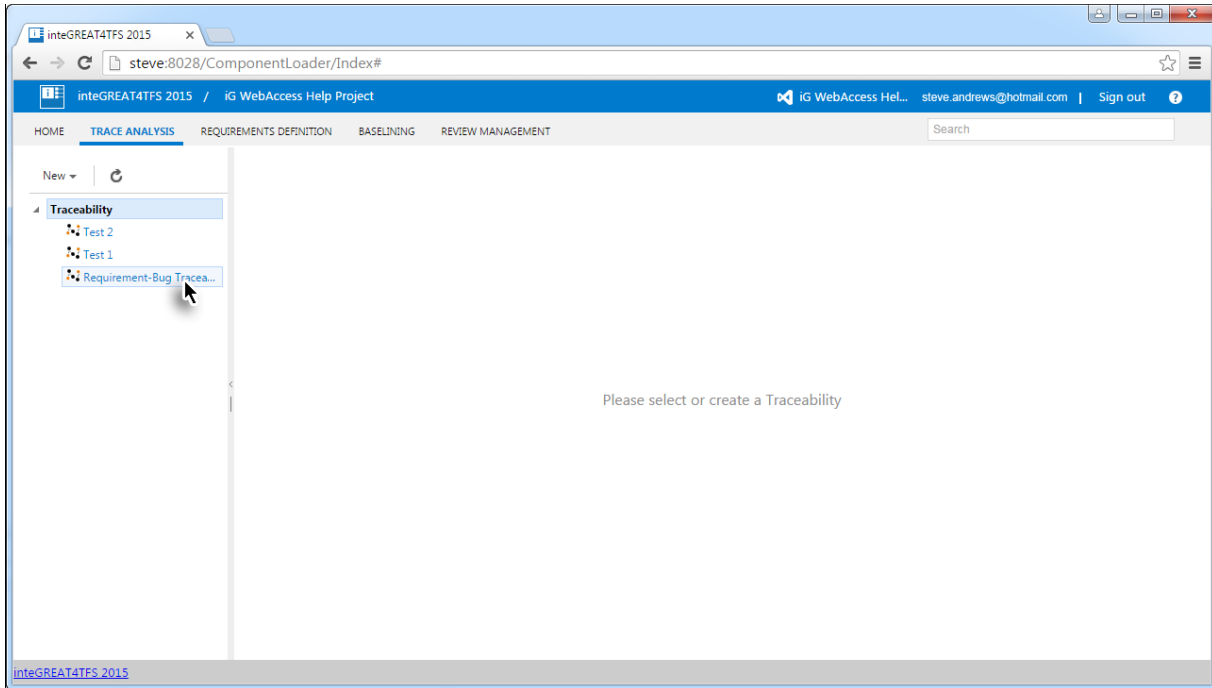
3. Select the desired **Column Query**.



4. Once the **Row** and **Column queries** have been selected, the next step is the same as **step 5** in Traceability, using Work Item Type.

OPENING AN EDITING AN EXISTING TRACEABILITY MATRIX

1. Click the name of the desired Traceability Matrix in the Folder Explorer.



The selected traceability matrix is opened.

The screenshot shows the 'Requirement-Bug Traceability' matrix editor. The matrix displays a grid of requirements and bugs with coverage data. The table below represents the data shown in the matrix.

Requirement Traceability Matrix		Active Bugs	9001-Username text box...	9003-Users can't select Ki...	9004-Checkout is giving a...	9006-American Express C...	9007-Abort checkout funct...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment del...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...
Product Requirements	Linked	Covered	1	1	2	2	1	1	1	1	1	1	1	1	0
9986-The system shall have user...	X	3													
9987-The system shall have a log...		0													
9988-User shall be able to select...	X	2													
9989-Users shall be able to proc...	X	1													
9990-I have shall be able to nav...															

2. Click the **Editor** option.

The screenshot shows the 'Requirement-Bug Traceability' page in the inteGREAT4TFS 2015 application. The 'Traceability Matrix' tab is selected, and the 'Editor' link is highlighted with a mouse cursor. The matrix displays a grid of requirements and bugs. The 'Product Requirements' section lists requirements 8986 through 8990. The 'Active Bugs' section lists bugs 9001 through 9185. The matrix shows the relationship between these requirements and bugs, with cells containing 'X' or numerical values.

Product Requirements	Active Bugs	9001-Username text box...	9003-Users can't select Ki...	9004-Checkout is giving a...	9006-American Express C...	9007-Abort checkout func...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment message...	9012-Order related to aud...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...
8986-The system shall have user...	Linked	X	X	X	X	X	X	X	X	X	X	X	X	X
8987-The system shall have a log...	Covered	1	1	2	2	1	1	1	1	1	1	1	1	0
8988-User shall be able to select...														
8989-Users shall be able to proc...														
8990-I users shall be able to nav...														

The matrix is opened in editable mode.

The screenshot shows the 'Requirement-Bug Traceability' page in the inteGREAT4TFS 2015 application, now in 'Editor' mode. The 'Editor' link is highlighted. The 'Query' tab is selected, showing filters for Row & Column Query. The 'Select Row Query' is set to 'Product Requirements' and the 'Select Column Query' is set to 'Active Bugs'.

Field	Value
Select Row Query	Product Requirements
Select Column Query	Active Bugs

- Now edit the traceability as desired and click the **Save** button to save the updates in the query.

ADDING RELATIONS IN INTERSECTION MATRIX

Users can add or delete relation (between Work Items) directly on Traceability Matrix. These relations are saved on TFS Server.

- Determine the intersection cell for creating relationship between corresponding Work Items.

The screenshot shows the 'Requirement-Bug Traceability Matrix' in the inteGREAT4TFS 2015 application. The table has two main sections: 'Product Requirements' and 'Active Bugs'.

Product Requirements	Linked	Covered	9003-Users can't select Ki...	9006-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment messag...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9015-On successful sub...	9017-System do not naviga...	9018-Login form on the we...	9019-System doesnot acc...
8986-The system shall have user ...	X	1	X	X	X	X	X	X	X	X	X	0	1	0	1
8987-The system shall have a log ...		0													
8988-User shall be able to select ...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to ...	X	1													

2. Place the mouse over the intersection cell.

The cell will show a + sign, as displayed in the image.

Requirement-Bug Traceability

Traceability Matrix

Export To Excel | 100% | States On

Requirement Traceability Matrix		Active Bugs	9003-Users can't select Ki...	9006-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment messag...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...	9187-System do not navig...	9188-Login form on the wa...	9189-System doesnot acc...
Product Requirements	Linked	Covered	X	X	X	X	X	X	X	X	X	0	1	0	1
8986-The system shall have user...	X	1					+								
8987-The system shall have a log...		0													
8988-User shall be able to select...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to...	X	1													

3. Click the + sign.
4. Select the desired type of relationship.

The screenshot displays the 'Requirement-Bug Traceability' interface in the inteGREAT4TFS 2015 application. A modal dialog titled 'ADD LINK TO REQUIREMENT 8986 : BUG 9009' is open, prompting the user to 'Select link type and details'. The 'Link Type' dropdown menu is expanded, showing the following options: Related, Predecessor, Referenced By, References, Related (highlighted), Shared Steps, Successor, and Test Case. The background shows a table with requirements and bugs, with a red box highlighting the 'Related' option in the dropdown.

Requirement	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9016-ModelTest1	9192-ModelRequirement...
8986-The system shall have user...	X	X	X	X	X	X		
8987-The system shall have a log...								
8988-User shall be able to select...								
8989-Users shall be able to proc...								
8990-Users shall be able to pay...								
8991-Users shall be able to abort...								
8992-The accounts departments...								
8993-The accounts departments...								
8994-Delayed shipment messag...								
8995-Products shall be shipped...								
8996-Customers shall be update...								
8997-Customers shall be able to...								

5. Click the **OK** Button.

The screenshot displays the 'Requirement-Bug Traceability' dialog box in the inteGREAT4TFS 2015 application. The dialog box is titled 'ADD LINK TO REQUIREMENT 8986 : BUG 9009'. It features a 'Select link type and details' section with a 'Link Type' dropdown menu set to 'Related'. Below this, two requirement boxes are shown: 'The system shall have user registration module(Proposed)' and 'American Express Credit cards not being accepted(Active)'. A 'Comment' text box is located at the bottom of the dialog, and 'OK' and 'Cancel' buttons are at the bottom right. The background shows a 'Requirement Matrix' table with various requirements and their status.

Requirement ID	Requirement Description	9009-Delayed shipment...	9010-Large shipment bas...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9016-Model Test 1	9182-Model Requirement...
8986	The system shall have user...	X	X	X	X	X	X		
8987	The system shall have a log...								
8988	User shall be able to select...								
8989	Users shall be able to proc...								
8990	Users shall be able to pay...								
8991	Users shall be able to abort...								
8992	The accounts departments...								
8993	The accounts departments...								
8994	Delayed shipment messag...								
8995	Products shall be shipped...								
8996	Customers shall be update...								
8997	Customers shall be able to...								

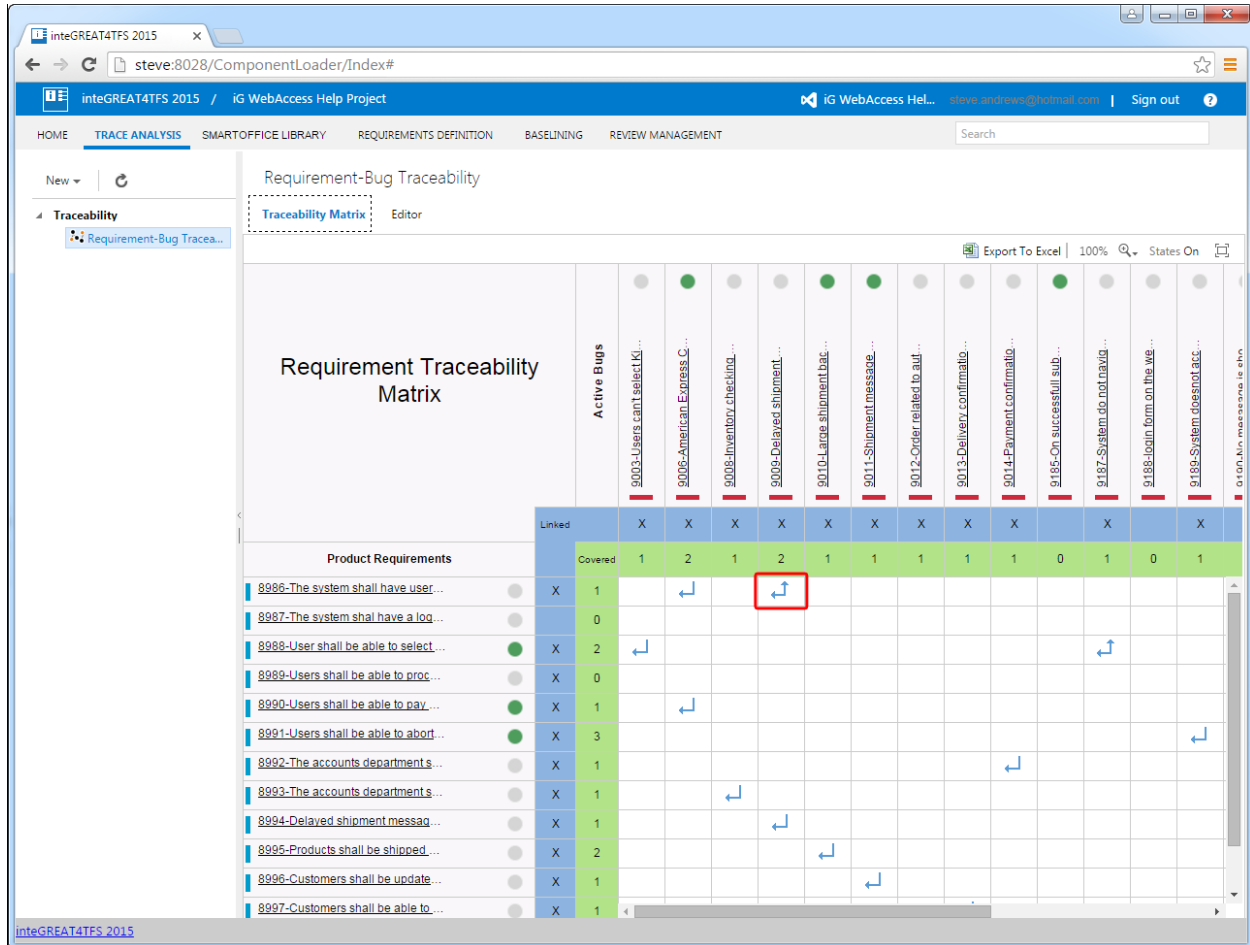
The relation is created between the two Work Items.

The screenshot shows the 'Requirement-Bug Traceability' matrix in the inteGREAT4TFS 2015 application. The interface includes a sidebar with 'Traceability' and 'Requirement-Bug Traceability' options. The main area displays a table with columns for 'Product Requirements', 'Active Bugs', and 'Linked'. A red box highlights a relationship between requirement 8986 and bug 9003.

Product Requirements	Linked	Covered	9003-Users can't select Ki...	9006-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bas...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...	9187-System do not navig...	9188-Login form on the we...	9189-System doesn't acc...
8986-The system shall have user...	X	1		X	X	X	X	X	X	X	X				
8987-The system shall have a log...		0													
8988-User shall be able to select...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to...	X	1													

DELETING RELATIONS IN TRACEABILITY MATRIX


1. Determine the intersection cell for deleting relationship between corresponding Work Items.

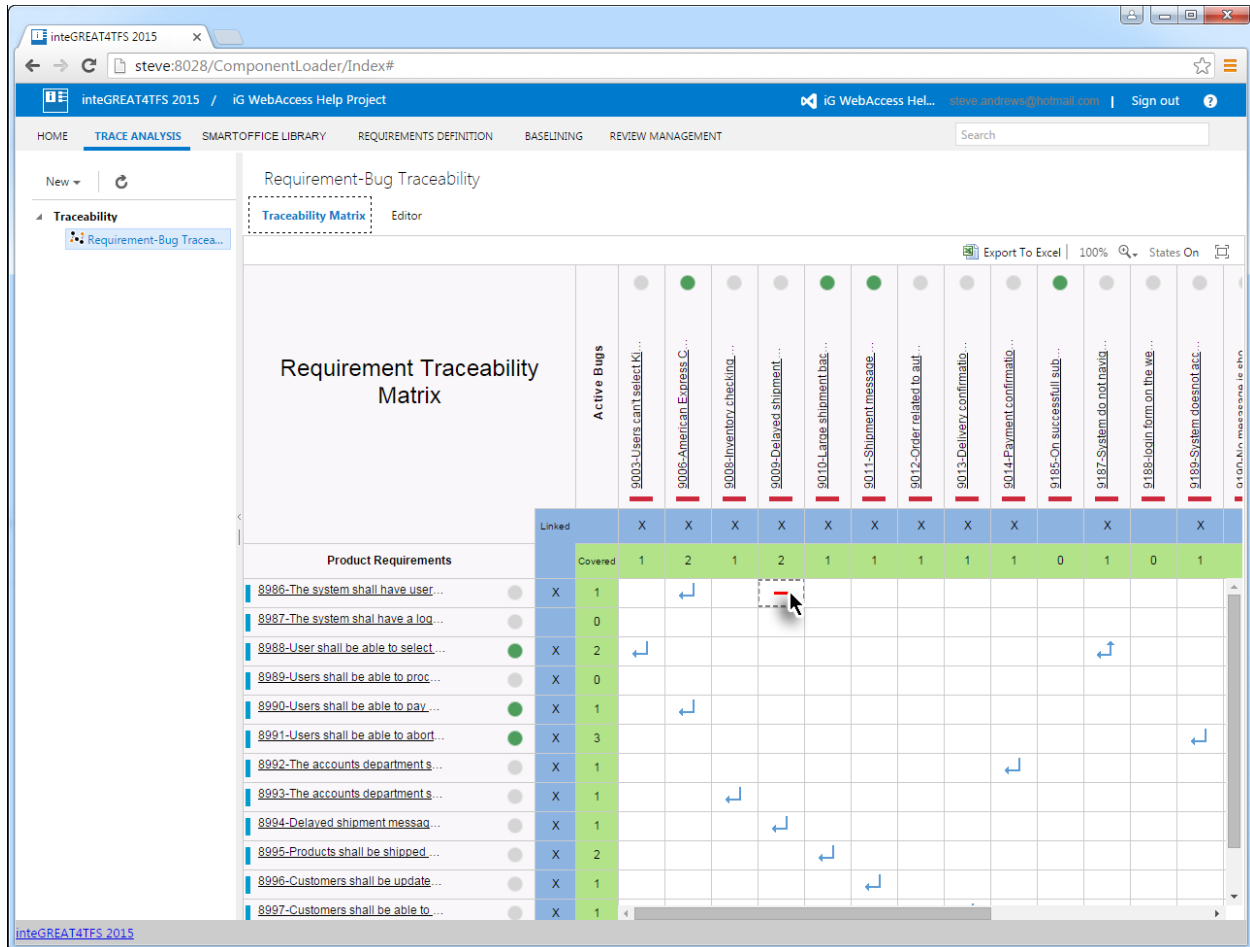


Requirement Traceability Matrix

Product Requirements	Linked	Covered	9003-Users can't select Ki...	9006-American Express C...	9008-Inventor checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9165-On successful sub...	9167-System do not navig...	9168-join form on the we...	9169-System doesnot acc...
8986-The system shall have user...	X	1	X	X	X	X	X	X	X	X	X	X	X	X	X
8987-The system shall have a log...		0													
8988-User shall be able to select...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to...	X	1													

2. Place the mouse over the intersection cell.

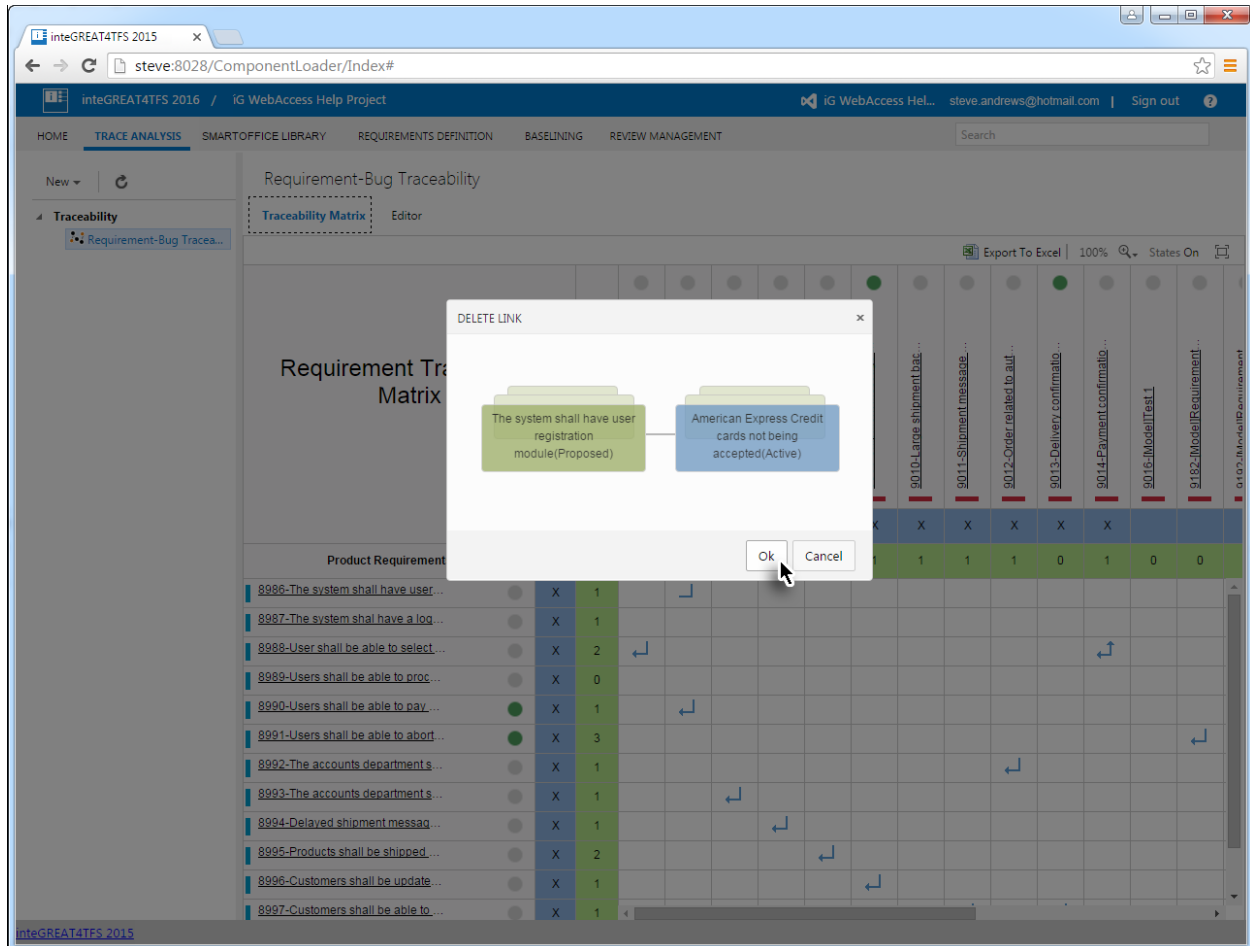
The cell will show a  sign, as displayed in the image.



The screenshot shows the 'Requirement-Bug Traceability' matrix in the inteGREAT4TFS 2015 application. The matrix is organized with 'Active Bugs' as columns and 'Product Requirements' as rows. A mouse cursor is positioned over the cell at the intersection of requirement 8986 and bug 9003, which displays a red minus sign. The matrix includes a 'Linked' column and a 'Covered' column. The 'Active Bugs' column lists bugs such as 9003, 9005, 9008, 9009, 9010, 9011, 9012, 9013, 9014, 9185, 9187, 9188, and 9189. The 'Product Requirements' column lists requirements such as 8986, 8987, 8988, 8989, 8990, 8991, 8992, 8993, 8994, 8995, 8996, and 8997. The 'Covered' column shows the number of bugs covered by each requirement, ranging from 0 to 3. The 'Linked' column shows the status of each requirement, with 'X' indicating a link to a requirement definition.

Product Requirements	Linked	Covered	9003-Users can't select Ki...	9005-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment messag...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...	9187-System do not navig...	9188-Login form on the we...	9189-System doesnot acc...
8986-The system shall have user ...	X	1													
8987-The system shall have a log ...		0													
8988-User shall be able to select ...	X	2													
8989-Users shall be able to proc ...	X	0													
8990-Users shall be able to pay ...	X	1													
8991-Users shall be able to abort ...	X	3													
8992-The accounts departments ...	X	1													
8993-The accounts departments ...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped ...	X	2													
8996-Customers shall be update ...	X	1													
8997-Customers shall be able to ...	X	1													

3. Click the **-** sign.
4. Click the **Ok** Button.



The relation is deleted.

The screenshot shows the 'Requirement-Bug Traceability' matrix in the inteGREAT4TFS 2015 application. The matrix is titled 'Requirement Traceability Matrix' and is divided into two main sections: 'Product Requirements' and 'Active Bugs'. The 'Product Requirements' section lists requirements 8986 through 8997. The 'Active Bugs' section lists bugs 9003 through 9189. The matrix cells contain 'X' for linked, 'Covered' for covered, and '0' for not covered. A red box highlights the cell for requirement 8986 and bug 9003, indicating a deleted relation.

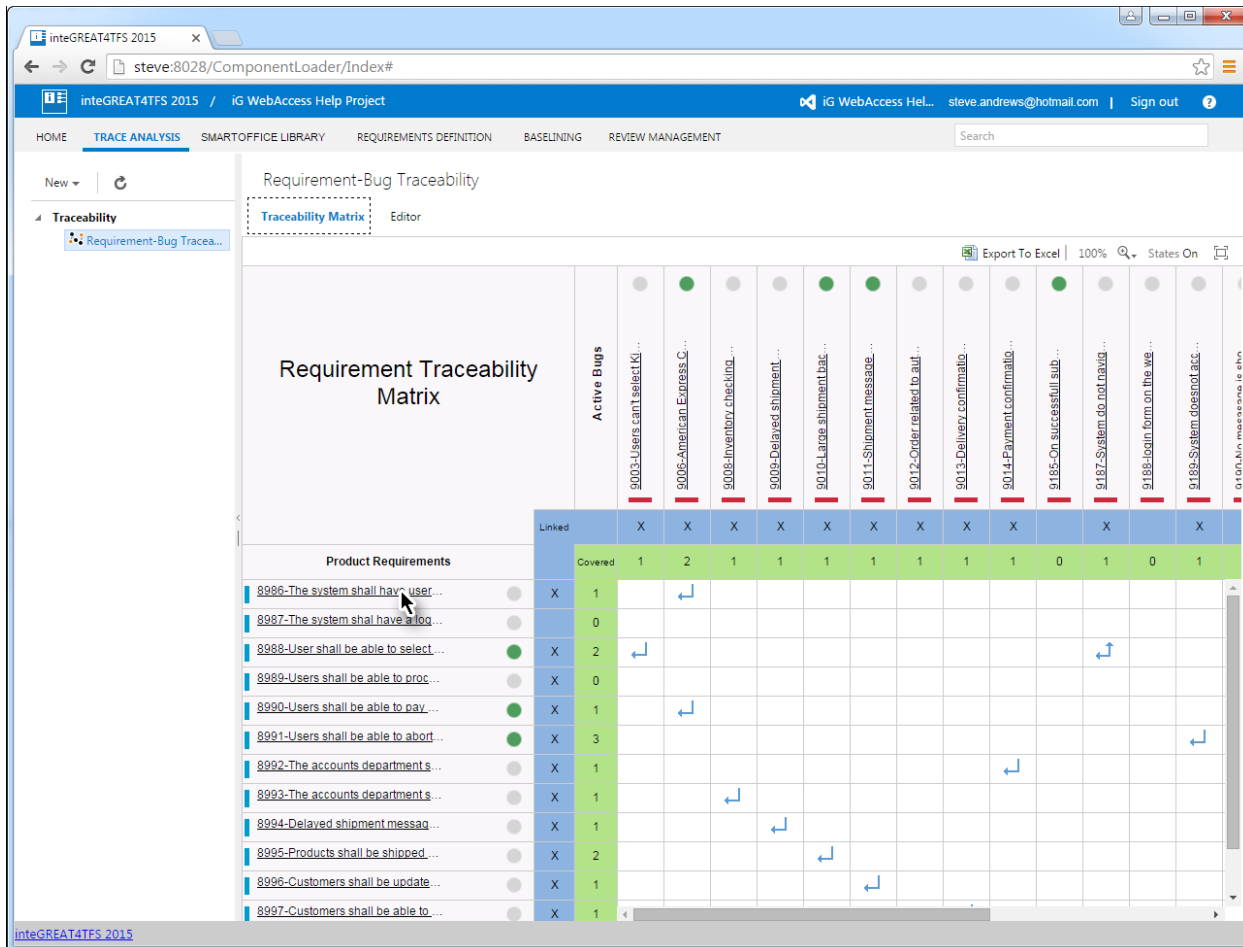
Product Requirements	Linked	Covered	9003-Users can't select Ki...	9006-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bas...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...	9187-System do not navig...	9188-Login form on the we...	9189-System doesnot acc...
8986-The system shall have user...	X	1	X	X	X	X	X	X	X	X	X				
8987-The system shall have a log...		0													
8988-User shall be able to select...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to...	X	1													

To verify that these relations have been deleted, users can view the Work Item details using the **Edit** option as shown in **Editing Work Items** topic.

EDITING WORK ITEMS

Using this option, users can edit Work Items directly from the Traceability Matrix.

1. Place the mouse over the desired Work Item.



The screenshot shows the 'Requirement-Bug Traceability Matrix' in the inteGREAT4TFS 2015 application. The interface includes a navigation bar with tabs: HOME, TRACE ANALYSIS, SMARTOFFICE LIBRARY, REQUIREMENTS DEFINITION, BASELINING, and REVIEW MANAGEMENT. The main area displays a table with columns for Product Requirements, Active Bugs, and a grid of traceability links. A mouse cursor is hovering over the first row of the grid.

Product Requirements	Linked	Covered	9003-Users can't select Ki...	9006-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...	9187-System do not navig...	9188-Login form on the we...	9189-System doesn't acc...
8986-The system shall have user...	X	1													
8987-The system shall have a log...		0													
8988-User shall be able to select...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to...	X	1													

2. Click the **Edit** button in the popup window.

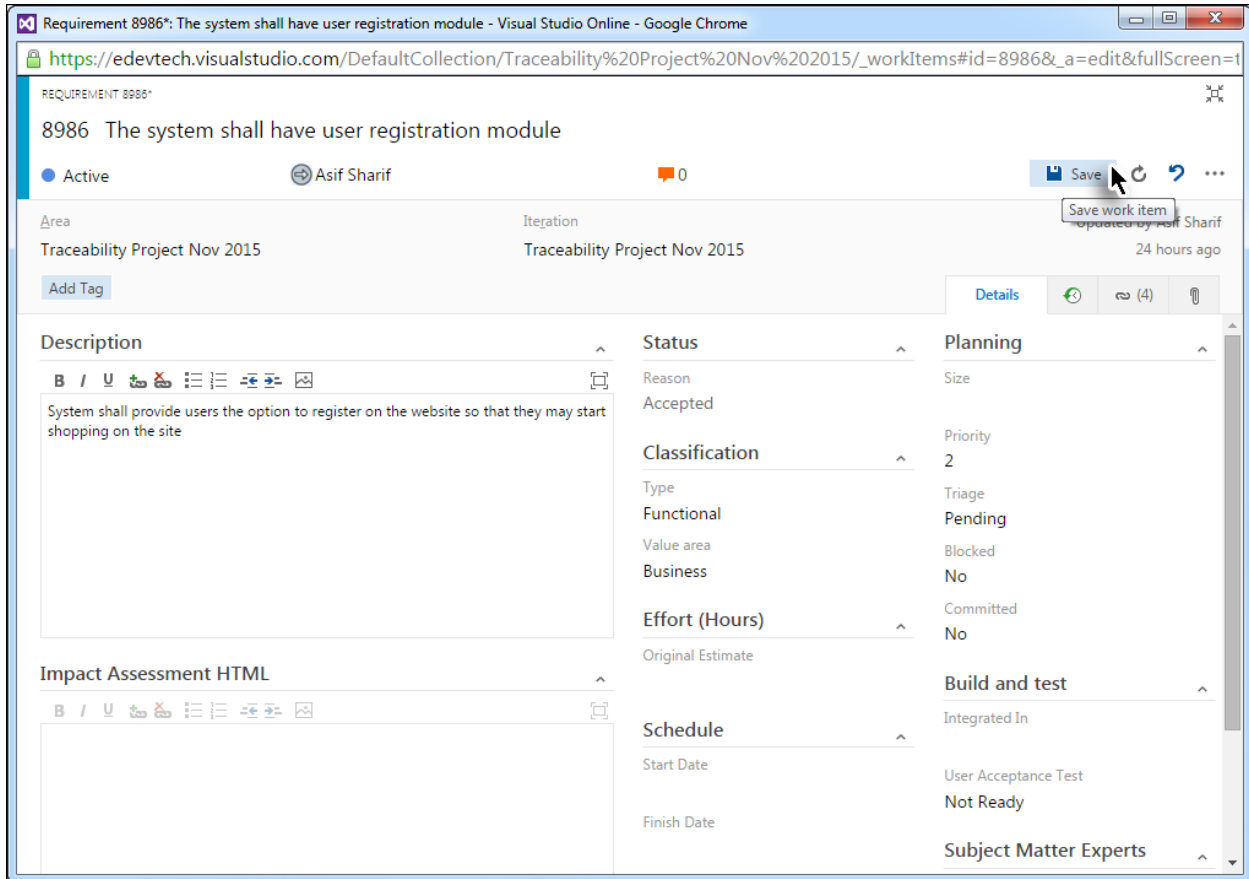
The screenshot shows the inteGREAT4TFS 2015 web application interface. The main window displays the 'Requirement-Bug Traceability' matrix. The matrix is divided into two sections: 'Requirement Traceability Matrix' and 'Product Requirements'. The 'Requirement Traceability Matrix' section shows a grid of requirements (rows) and bugs (columns). The 'Product Requirements' section shows a list of requirements with their status (Linked, Covered) and a count of bugs. A popup window is open over the matrix, displaying details for requirement 8986. The popup window has an 'Edit' button and a list of requirements. The requirement details are as follows:

ID	Title	Status	AreaPath	Iteration
8986	The System Shall Have User Registration Module	Proposed	Traceability Project Nov 2015	Traceability Project Nov 2015

The requirement details are as follows:

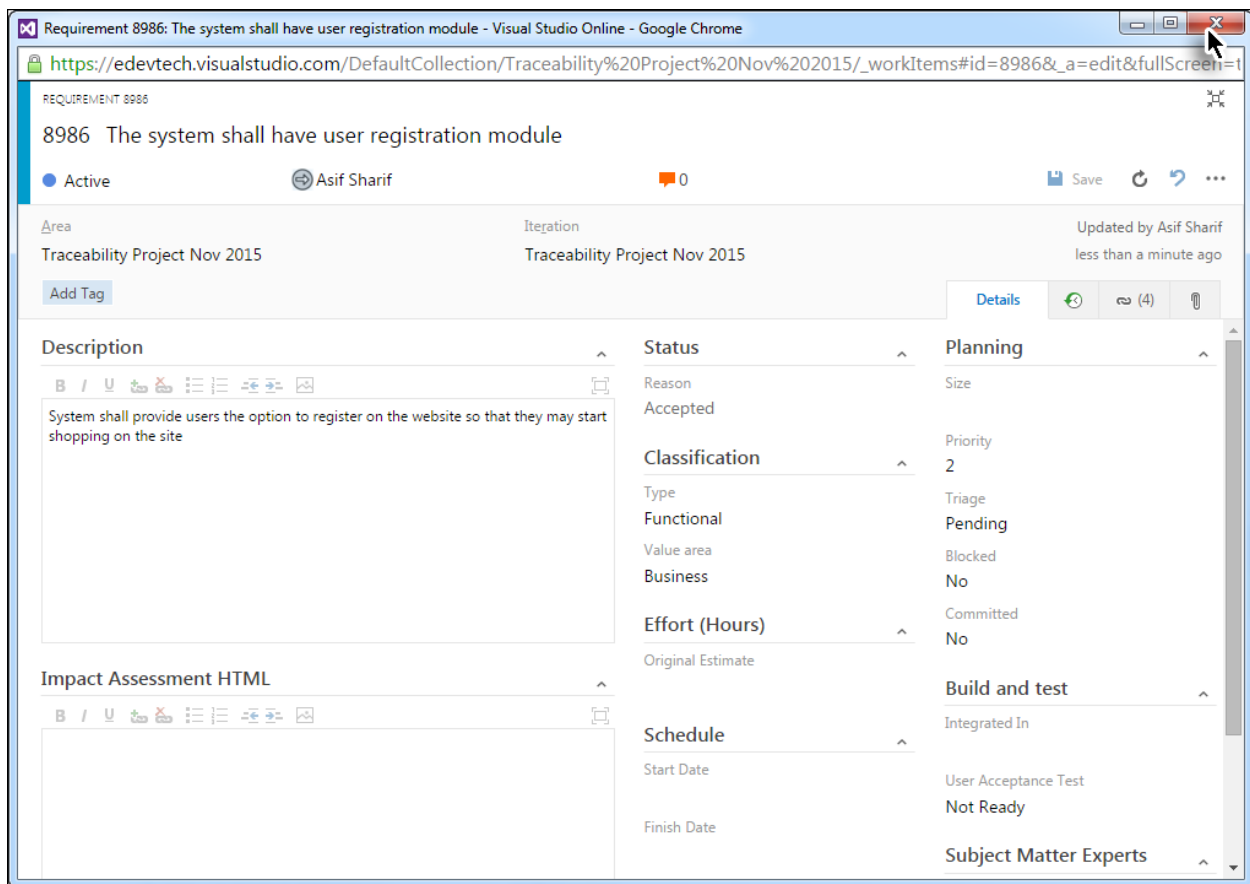
ID	Title	Status	AreaPath	Iteration
8986	The System Shall Have User Registration Module	Proposed	Traceability Project Nov 2015	Traceability Project Nov 2015

3. Edit the desired properties of the Work Item and click the **Save** Button.



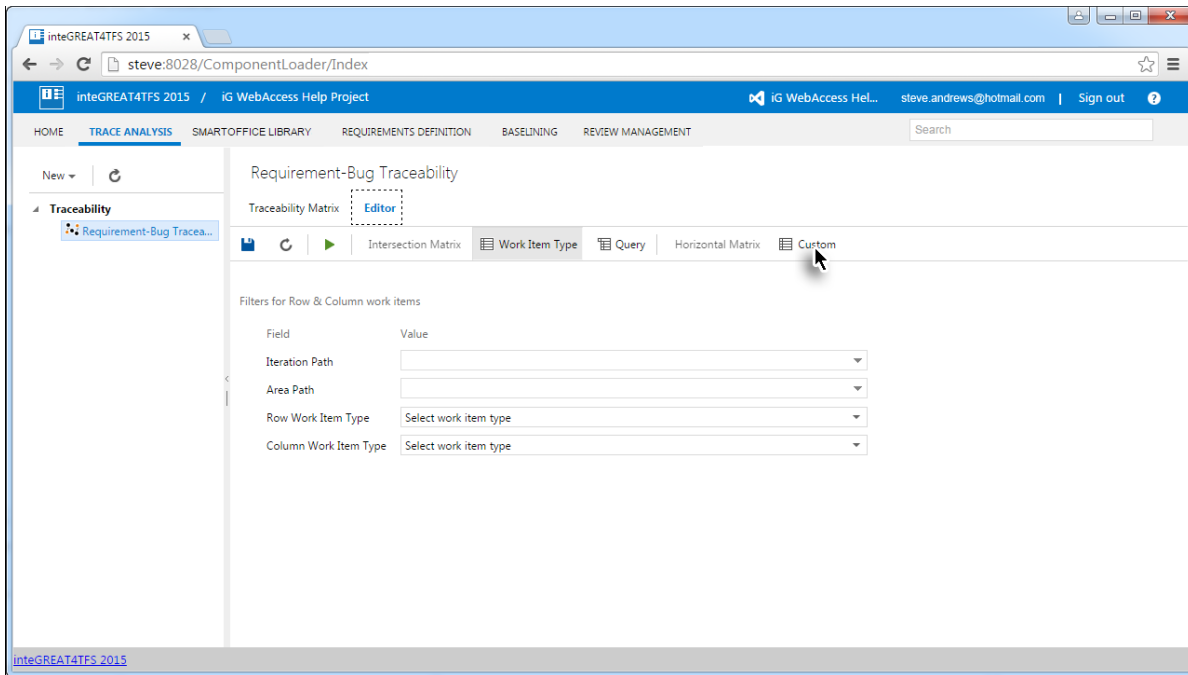
The screenshot shows the Visual Studio Online interface for editing a requirement work item. The browser address bar displays the URL: https://edevtech.visualstudio.com/DefaultCollection/Traceability%20Project%20Nov%202015/_workItems?id=8986&_a=edit&fullScreen=t. The work item title is "8986 The system shall have user registration module". The status is "Active", and the assignee is "Asif Sharif". The area is "Traceability Project Nov 2015" and the iteration is "Traceability Project Nov 2015". The description is "System shall provide users the option to register on the website so that they may start shopping on the site". The impact assessment HTML is empty. The status is "Accepted". The classification is "Functional". The effort (hours) is "No". The schedule is "Original Estimate". The planning section shows "Size", "Priority 2", "Triage", "Pending", "Blocked", "Committed", and "No". The build and test section shows "Integrated In", "User Acceptance Test", "Not Ready", and "Subject Matter Experts". The "Save" button is highlighted with a tooltip that says "Save work item".

4. Close the popup window.

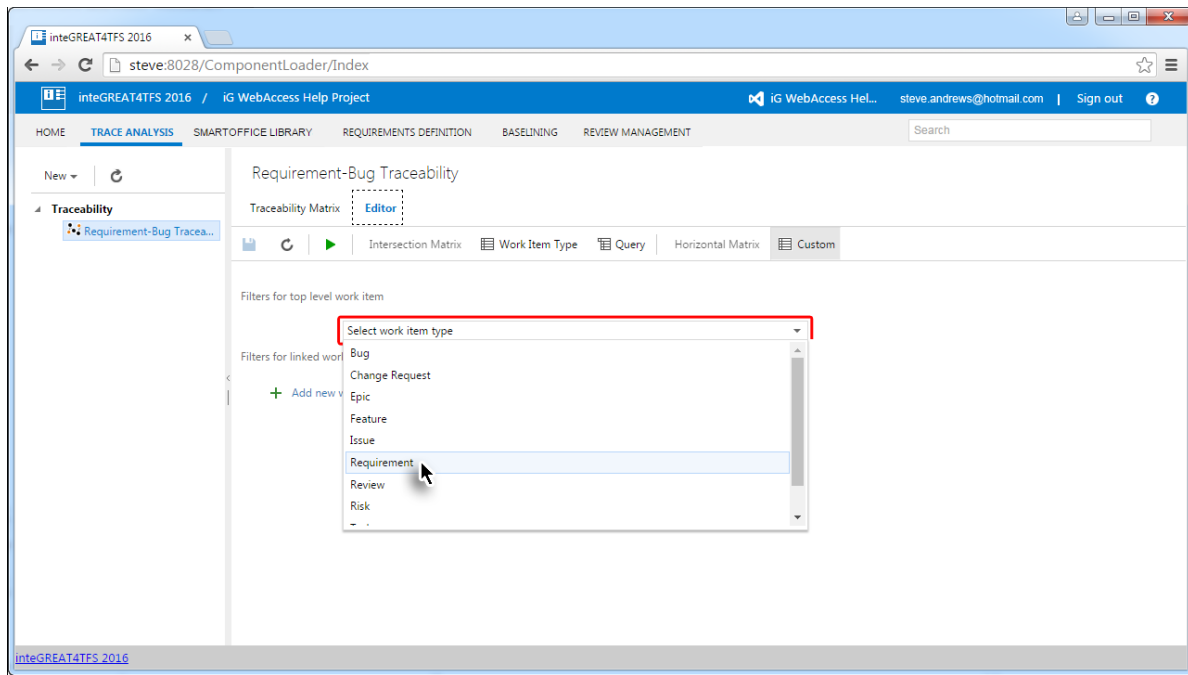


CREATING HORIZONTAL MATRIX

1. Follow the instructions in **Step 1: Creating a new Traceability Matrix** to create the matrix
2. On the Traceability Editor page; click the **Custom** option.



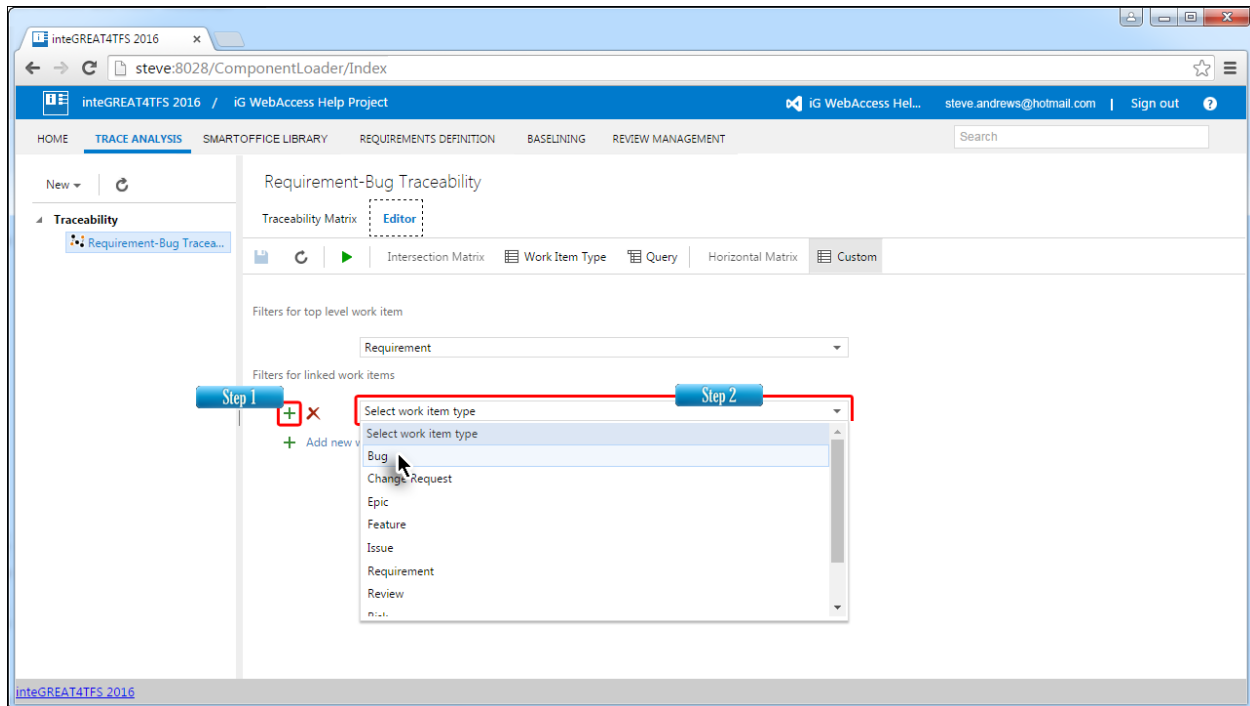
3. Select the top level Work Item.



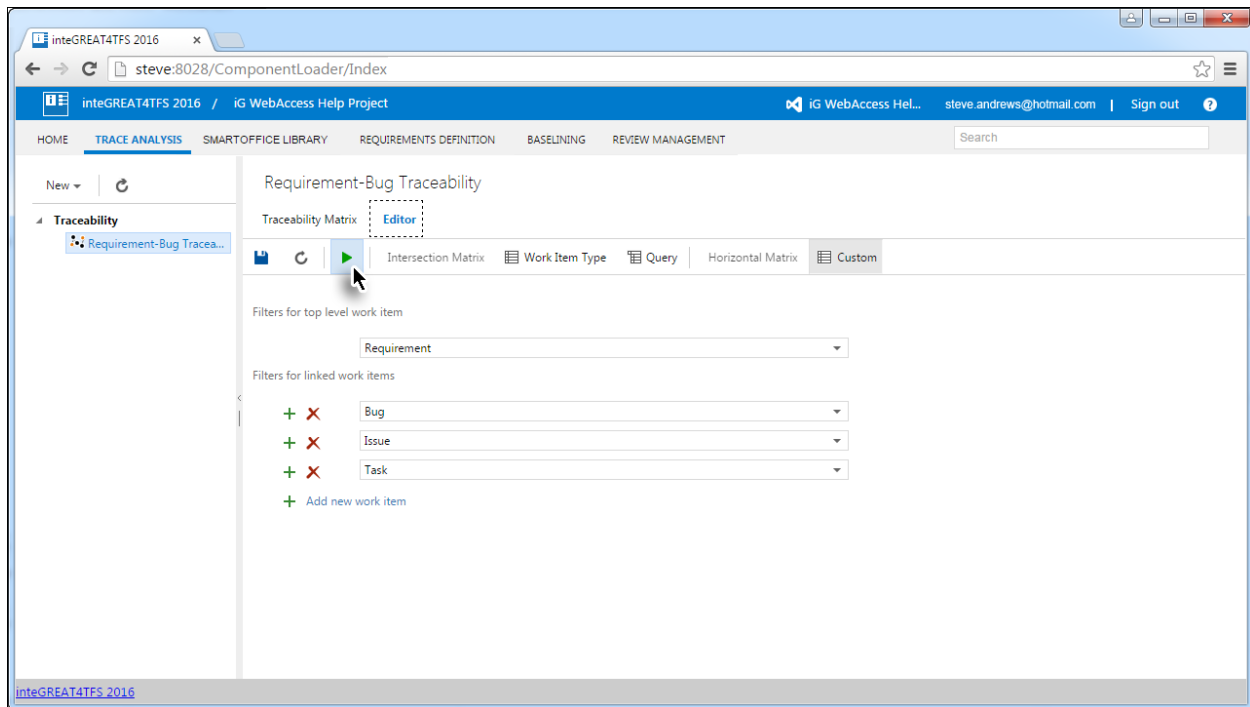
4. Similarly, select the relevant linked Work Items (if desired).

These Work Items indicate the type of Work Items linked with their upper level Work Item. In this example, we selected Requirement as the top level Work Item and Bug as the linked Work Item. This means that the first column in the matrix will show a list of Requirement Work Items and the second column will show a list of Bug Work Items that are linked to a Requirement Work Item.

Note: This step is optional



5. Click the **Run** Button in the Toolbar.

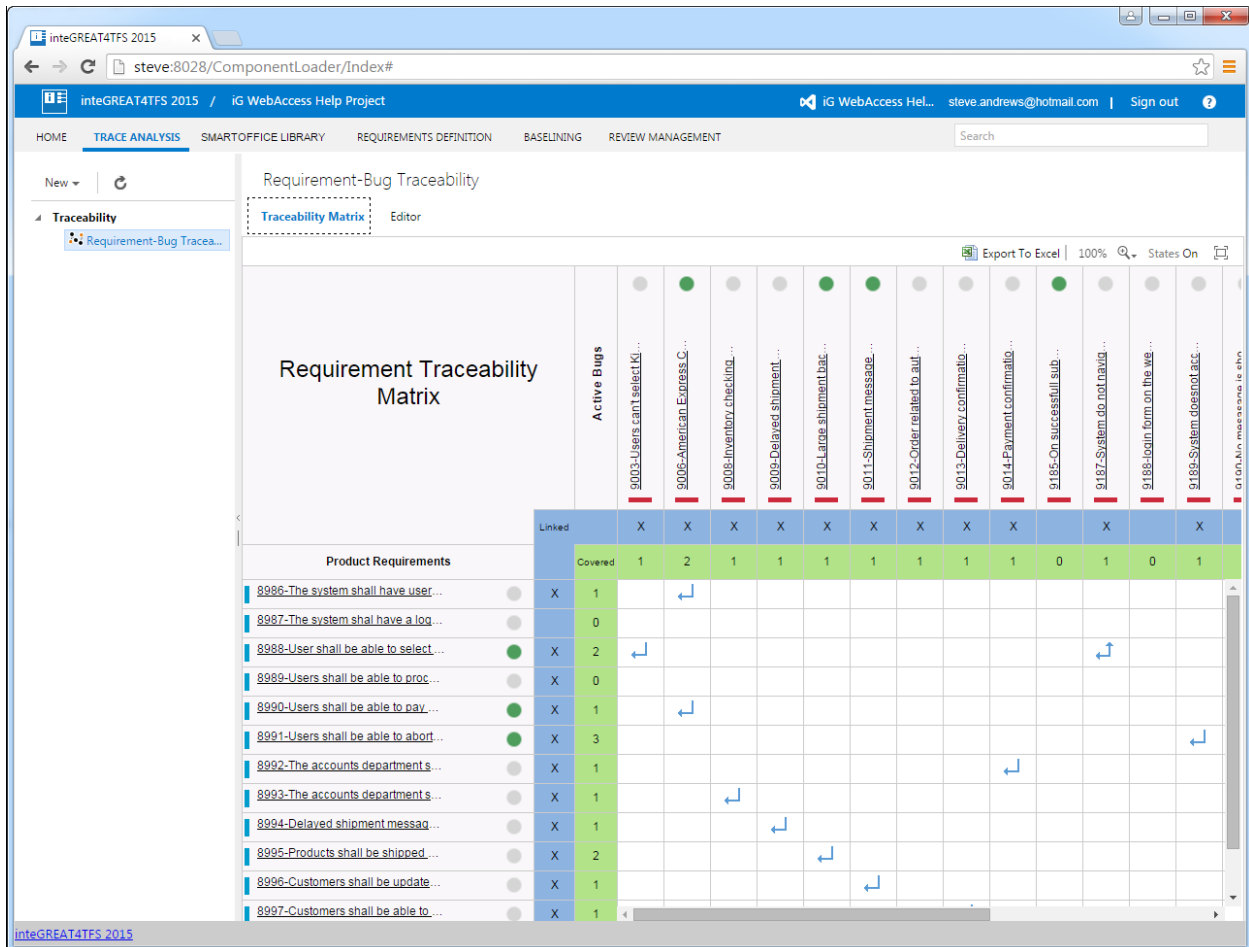


The Horizontal Matrix is generated.

Requirement			Bug			Issue			Task		
ID	Title	State	ID	Title	State	ID	Title	State	ID	Title	State
8886	The system shall have user registration module	Proposed	9021	Username text box is too small	Proposed						
			9004	Checkout is giving error	Pending						
			9006	American Express Credit cards not being accepted	Active						
8887	The system shall have a login module	Active	9012	Order related to automotive products are giving error upon closing	Active						
8888	User shall be able to select desired products from the website	Active	9003	Users can't select Kitchen items from the products	Active						
			9013	Delivery confirmation not fully functional yet	Active						
			9187	System do not navigate to forget password screen	Active						
8889	Users shall be able to proceed to checkout with their selected products	Active	9004	Checkout is giving error	Pending						
			9013	Delivery confirmation not fully functional yet	Active						
8890	Users shall be able to pay online for their selected products	Active	9006	American Express Credit cards not being accepted	Active						
8891	Users shall be able to abort checkout before online payment details are given	Active	9007	Abort checkout functionality not available yet	Pending						
			9189	System doesn't accept order greater than 200000	Active						
			9187	Same user is allowed to sign in twice	Active						
			9188	Multiple users can't access the system at the same time	Active						
8892	The accounts department shall send receipt to customers for their online payment	Proposed	9014	Payment confirmation message is giving email server error	Active						
8893	The accounts department shall be able to check the inventory of ordered and available products	Active	9008	Inventory checking not functional	Active						
8894	Delayed shipment message shall be sent to customers in case of out of stock products	Active	9009	Delayed shipment message giving email server error	Active						
8895	Products shall be shipped after payment confirmation	Active	9010	Large shipment backlog	Active						
			9190	No message is shown on invalid user name and id	Active						
8896	Customers shall be updated about the shipment of their ordered products	Active	9011	Shipment message giving email server error	Active						
8897	Customers shall be able to confirm delivery of their orders	Closed	9013	Delivery confirmation not fully functional yet	Active						
8898	Orders shall be closed after delivery confirmation from the customers	Proposed	9012	Order related to automotive products are giving error upon closing	Active						

EXPORT TO EXCEL

- This option is used to create an Excel file from the desired traceability matrix.
 - Once created, the Excel file can be shared with those stakeholders who currently do not use inteGREAT4TFS.
1. Open the desired Traceability Matrix.



The screenshot shows the 'Requirement-Bug Traceability' matrix in the inteGREAT4TFS 2015 application. The matrix is titled 'Requirement Traceability Matrix' and displays a grid of traceability links between 'Product Requirements' (rows) and 'Active Bugs' (columns). The 'Active Bugs' column lists bugs such as '9003-Users can't select Kl...', '9006-American Express C...', '9008-Inventory checking...', '9009-Delayed shipment...', '9010-Lane shipment bar...', '9011-Shipment message...', '9012-Order related to aut...', '9013-Delivery confirmatio...', '9014-Payment confirmatio...', '9185-On successful sub...', '9187-System do not naviga...', '9188-Login form on the we...', and '9189-System doesnot act...'. The 'Product Requirements' column lists requirements such as '8986-The system shall have user...', '8987-The system shall have a log...', '8988-User shall be able to select...', '8989-Users shall be able to proc...', '8990-Users shall be able to pay...', '8991-Users shall be able to abort...', '8992-The accounts departments...', '8993-The accounts departments...', '8994-Delayed shipment messag...', '8995-Products shall be shipped...', '8996-Customers shall be update...', and '8997-Customers shall be able to...'. The matrix shows 'X' marks indicating traceability links, and a 'Covered' column on the left shows the number of bugs covered by each requirement. An 'Export To Excel' button is visible in the top right corner of the matrix area.

- Click the **Export To Excel** option in the Mini Toolbar.

The screenshot shows the 'Requirement-Bug Traceability' interface in the inteGREAT4TFS 2015 application. The main area displays a 'Requirement Traceability Matrix' with columns for 'Active Bugs' and various requirements. The 'Export To Excel' button in the mini toolbar is highlighted with a red box.

Requirement	Linked	Covered	9003-Users can't select Ki...	9006-American Express C...	9008-Inventory checking...	9009-Delayed shipment...	9010-Large shipment bac...	9011-Shipment message...	9012-Order related to aut...	9013-Delivery confirmatio...	9014-Payment confirmatio...	9185-On successful sub...	9187-System do not navig...	9188-Login form on the we...	9189-System does not acc...
8986-The system shall have user ...	X	1													
8987-The system shall have a log ...		0													
8988-User shall be able to select ...	X	2													
8989-Users shall be able to proc...	X	0													
8990-Users shall be able to pay ...	X	1													
8991-Users shall be able to abort...	X	3													
8992-The accounts departments...	X	1													
8993-The accounts departments...	X	1													
8994-Delayed shipment messag...	X	1													
8995-Products shall be shipped...	X	2													
8996-Customers shall be update...	X	1													
8997-Customers shall be able to ...	X	1													

The Excel file is created.

The screenshot shows the 'Requirement-Bug Traceability' interface in the inteGREAT4TFS 2015 application. The 'Traceability Matrix' is displayed, showing a grid of requirements and bugs. The 'Active Bugs' column lists various bugs, and the 'Product Requirements' column lists requirements. The grid cells contain 'X' marks indicating traceability. A download bar at the bottom of the browser window shows the file 'Requirement-Bug Tr...xlsx' being downloaded.

Product Requirements	Active Bugs	Linked	Covered
8986-The system shall have user ...	9003-Users can't select Ki...	X	1
8987-The system shall have a log ...	9006-American Express C...	X	2
8988-The system shall have a log ...	9008-Inventory checking...	X	1
8989-The system shall have a log ...	9009-Delayed shipment...	X	1
8990-The system shall have a log ...	9010-Large shipment bas...	X	1
8991-The system shall have a log ...	9011-Shipment message...	X	1
8992-The system shall have a log ...	9012-Order related to aut...	X	1
8993-The system shall have a log ...	9013-Delivery confirmatio...	X	1
8994-Delayed shipment messag...	9014-Payment confirmatio...	X	0
8995-Products shall be shipped...	9185-On successful sub...	X	1
	9187-System do not navig...	X	0
	9188-Login form on the we...	X	0
	9189-System does not ac...	X	1

The file can now be opened in MS-Excel.

Traceability Matrix		Active Bugs	9003-User c	9006-Ame c	9008-Inver	9009-Delay	9010-Lang c	9011-Shipr	9012-Order	9013-Deliv	9014-Paym	9185-On sic	9187-Syst r	9188-log in c	9189-Syst r	9190-No rre	9191-Confr	9197-Sam c	9198-Mult p	9199-User n	9200-Placc	9201-User v	9202-Syst r
1																							
2		Linked	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	Product Requirements	Covered	1	2	1	1	1	1	2	3	1	0	1	0	1	1	1	1	1	0	0	0	0
4	8986-The system shall have u	X	1																				
5	8987-The system shall have	X	1																				
6	8988-User shall be able to s	X	3																				
7	8989-Users shall be able to p	X	1																				
8	8990-Users shall be able to p	X	1																				
9	8991-Users shall be able to t	X	3																				
10	8992-The accounts departm	X	1																				
11	8993-The accounts departm	X	1																				
12	8994-Delayed shipment mes	X	1																				
13	8995-Products shall be ship	X	2																				
14	8996-Customers shall be up	X	1																				
15	8997-Customers shall be able	X	1																				
16	8998-Orders shall be closed	X	1																				