



Compuware  
Optimal Trace™

## Optimal Trace VSTS Integration 5.0 Help

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## 1 Preface

This manual provides a description of the features that are available in Compuware Optimal Trace VSTS Integration. The integration is a plugin component for Optimal Trace Enterprise allowing Optimal Trace requirements to be exported into Microsoft Visual Studio Team System (VSTS).

### 1.1 Audience

This document is suitable for those who are gathering and managing requirements for software systems in Optimal Trace and using VSTS for lifecycle control and downstream activities. These roles include:

- ! Business analysts
- ! System analysts
- ! Project managers
- ! Technical architects
- ! Test analysts
- ! QA test leads

### 1.2 Contacting Compuware Customer Support

For all technical problems and support queries, please logon to Frontline at <http://frontline.compuware.com/products/ci/>

Frontline contains the Optimal Trace forum as well as a FAQ area. You can also find up to date release information and contact numbers.

## 2 Installation

The Optimal Trace VSTS Integration installs as a plugin within the Optimal Trace Enterprise installation in the following location:

<Optimal Trace Installation>\plugins\VSTS Plugin

## 3 Introduction

The Optimal Trace VSTS Integration provides the ability to export Optimal Trace requirements as work items within Microsoft Team Foundation Server (TFS).

A work item type named **Optimal Trace Requirement** is automatically created the first time requirements are exported to a TFS project. Each Optimal Trace requirement is represented by an Optimal Trace requirement work item which provides a read-only view of the following requirement details originating from Optimal Trace:

- ! Requirement properties - name, description etc. (including custom properties)
- ! Scenarios - main success/alternative scenarios and steps (including custom properties)

- ! Non-Functional requirements
- ! Notes
- ! Links

Optimal Trace simple requirements will appear in VSTS as **Optimal Trace Simple Requirement** along with Optimal Trace simple requirement items mapping to VSTS **Optimal Trace Simple Requirement** item type.

Each Optimal Trace simple requirement is represented by an **Optimal Trace Simple Requirement** work item which provides a read-only view of the following simple requirement details originating from Optimal Trace:

- ! Name
- ! Description
- ! Path
- ! Properties and custom properties
- ! Notes
- ! Links

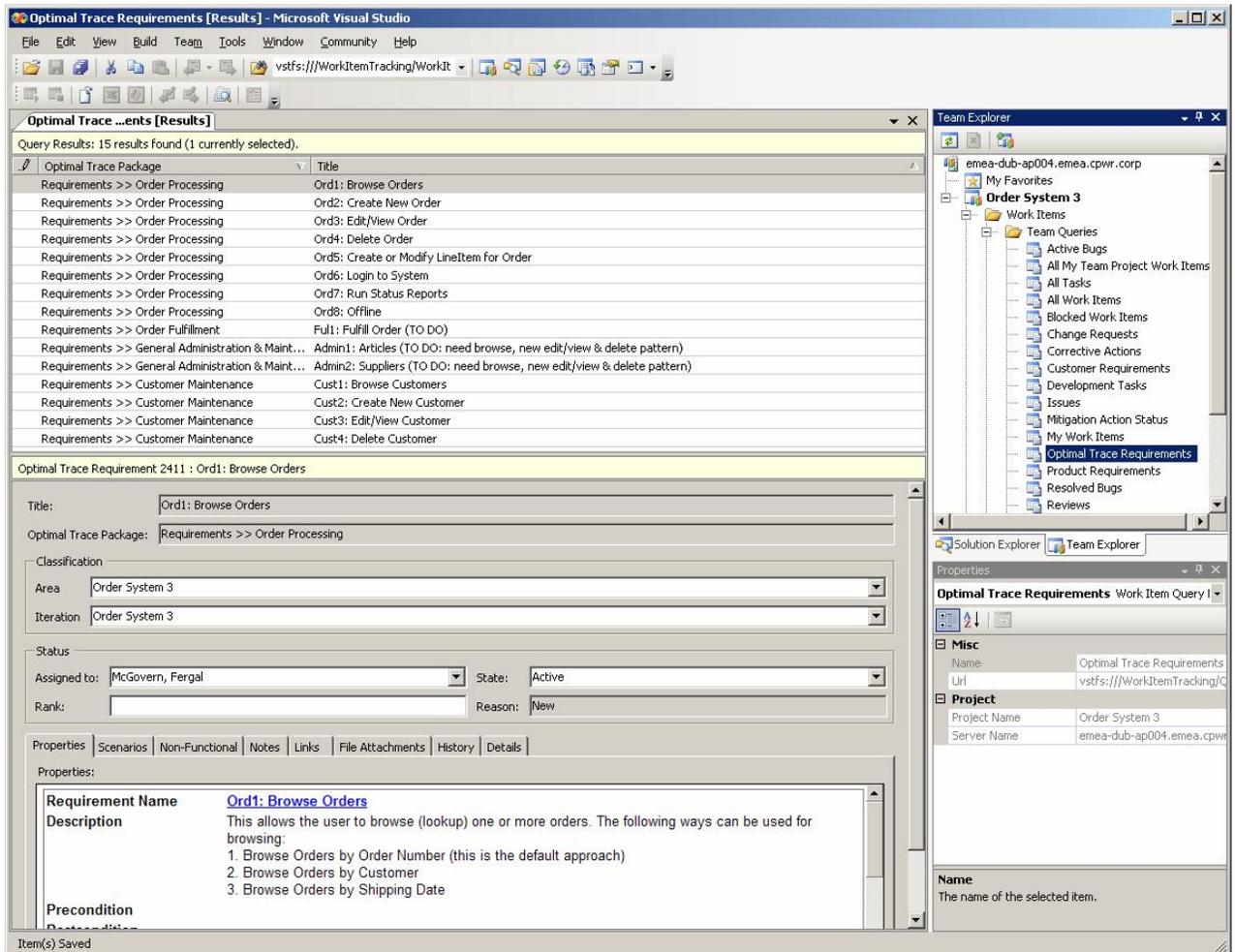
Optionally, if selecting **Export Work Items** for the export, the Optimal Trace Simple Requirement work items will be exported to VSTS as **Optimal Trace Simple Requirement Items** work item. The **Export Work Items** checkbox is selected by default. The following simple requirement work items details appear in VSTS:

- ! Name
- ! Description
- ! Properties and custom properties
- ! Links

Any additional attributes of the VSTS work item can be modified within the TFS project at will. Additionally, on subsequent updates from Optimal Trace into the TFS project, such edited attributes are maintained in tact, thus supporting changes to the requirements and simple requirements.

An **Optimal Trace Requirements** query (in Team Explorer -> Work Items\Team Queries) is automatically created the first time requirements are exported to a TFS project.

The following screen shot shows the **Optimal Trace Requirement** work items created after initially exporting the Optimal Trace **Order System** demo project into a TFS project that was created using the CMMi template.



**Figure 1 - Optimal Trace Requirement Work Items**

**Note:** The Optimal Trace VSTS Integration works regardless of what underlying TFS Project Template you use. For instance you can use the CMMi or Agile MSF templates that ship with VSTS or any customized template in conjunction with the integration.

## 4 Using Optimal Trace VSTS Integration

This section describes how to use Optimal Trace VSTS Integration.

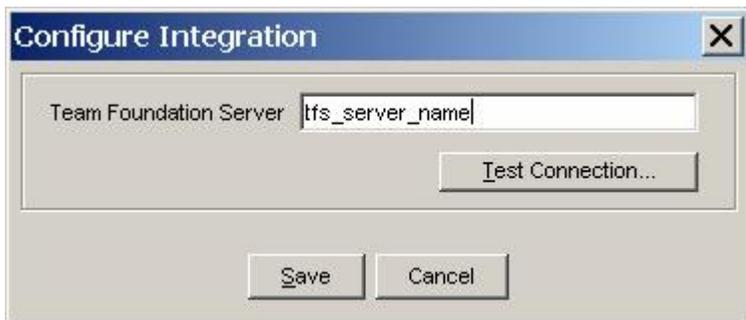
**Note:** Prior to using Optimal Trace VSTS Integration, create a TFS project. See the relevant VSTS documentation for further details on creating projects in VSTS.

### 4.1 Configure VSTS Integration

The first step is to configure the VSTS Integration.

1. In Optimal Trace, choose **Tools>VSTS Integration>Configure VSTS Integration**. The Configure Integration dialog box appears. (see Figure 2)

2. Type the name of the Team Foundation Server in the **Team Foundation Server** field.
3. Click **Save**.



**Figure 2 - Configure Integration dialog box**

4. Click **Test Connection** to test the connection to the server. The utility will attempt to connect the client to the specified team foundation server. A detailed result screen displays if there is an issue with the connection.

## 4.2 Export to VSTS

In Optimal Trace, choose **Tools>VSTS Integration>Export to VSTS**. The utility exports from the selected Optimal Trace project.

**Note:** Only Optimal Trace repository projects can be exported to VSTS.

The utility attempts to connect to the Team Foundation Server using the configured server name. If the connection fails you have the option to configure the integration (see Figure 3). If you configure the integration and save the changes another attempt is made to connect to the Team Foundation Server.

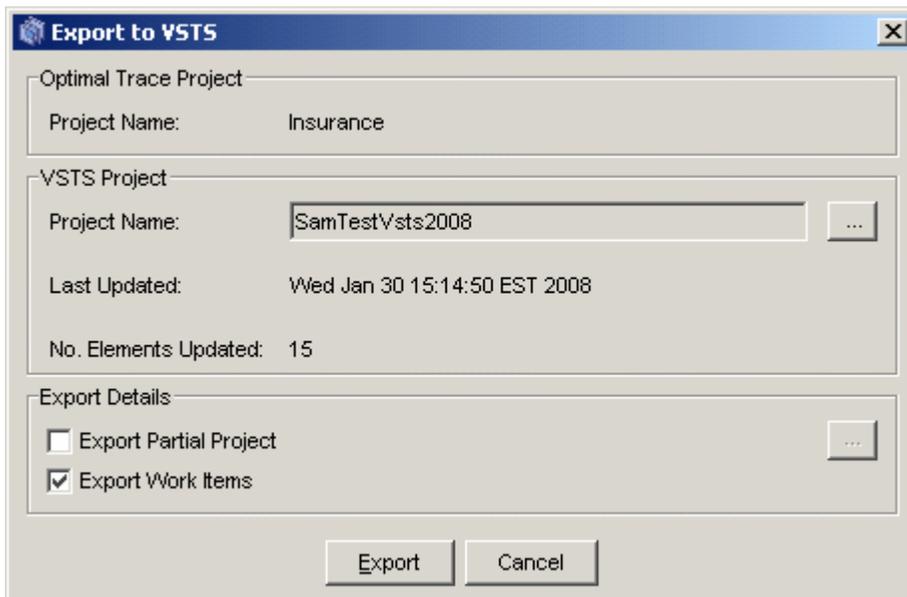


**Figure 3 - Connection failed to Team Foundation Server**

After a connection is established to the Team Foundation Server the main export dialog box appears.

### 4.2.1 Select a VSTS Project

If the Optimal Trace project was not exported, the VSTS Project fields remain empty and the **Export** button is disabled (see Figure 4).



**Figure 4 - Export to VSTS for the first time**

To select a VSTS project:

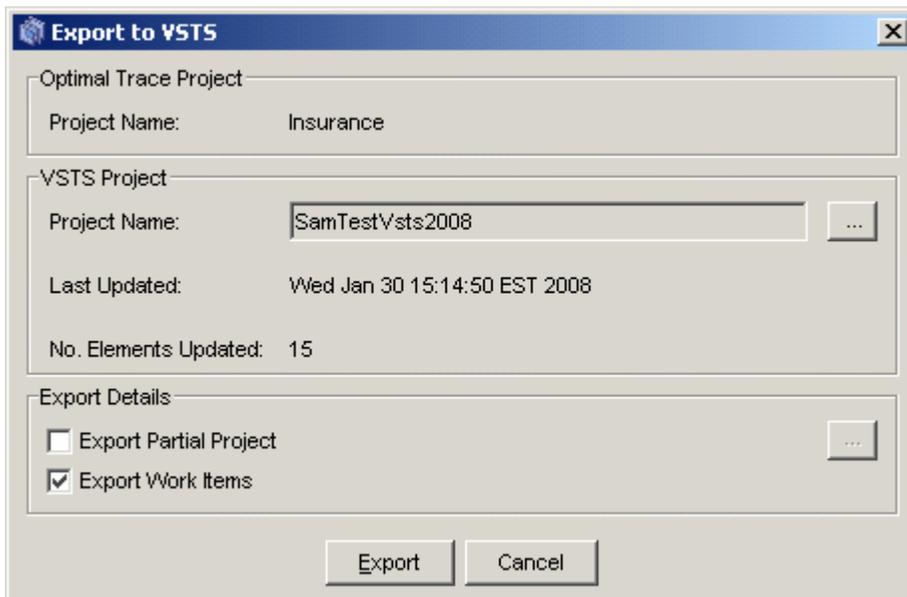
1. Click the ... button next to the **Project Name** field to display a list of Team Foundation Server projects (see Figure 5).



**Figure 5 - Select VSTS Project for Export**

2. Select the VSTS project from the list and click **OK**.

If you have previously exported the Optimal Trace project to a VSTS project, the utility retains the associated VSTS project. The VSTS Project fields will display the VSTS project name, the date/time of the last update and the number of elements updated (see Figure 6).

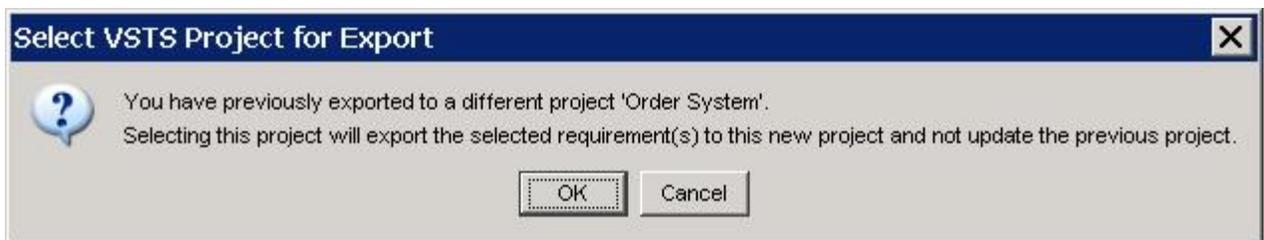


**Figure 6- Subsequent Export to VSTS**

To change the current VSTS project:

1. Click the ... button next to the **Project Name** field. This displays the list of Team Foundation Server projects with the currently selected project highlighted.
2. Select a VSTS project.
3. Click **OK**.

If selecting a different project, the utility displays a reminder that the previous project will not be updated (see Figure 7).



**Figure 7 - Export to a different VSTS project**

#### 4.2.2 Select Export Details

To export a partial project:

1. After selecting a VSTS project, click **Export** (see Export). Optionally before exporting, you can select a subset of project elements to export. To perform a partial project export, select the **Export Partial Project** checkbox.

**Note:** Selecting **Export Partial Project** checkbox disables the **Export** button until you have selected a subset of project elements to export. If you no longer want to export a partial

project, deselect the **Export Partial Project** checkbox. This re-enables the **Export** button and will export the entire project when clicked.

2. Click the ... located next to the **Export Partial Project** field to display a tree containing Optimal Trace packages and requirements (see Figure 8).
3. Select either multiple requirements or multiple packages. Selecting a package(s) will include all sub-packages and requirements contained within the selected package(s) for export.
4. Click **OK** to return to the main export dialog.



**Figure 8 - Select Project Elements to Export**

To export simple requirement work items:

Select the Export Work Items checkbox. This checkbox is selected by default. Any work items contained within the simple requirements are exported to VSTS as **Optimal Trace Simple Requirement Items** work items.

### 4.2.3 Export

Click **Export** button to start the export to VSTS. A dialog displays the export progress (see Figure 9).



**Figure 9 - Export in progress**

The export process creates and populates **Optimal Trace Requirement** work items to reflect the set of project elements selected for export within Optimal Trace. This results in the

creation of an **Optimal Trace Requirement** work item for each Optimal Trace requirement selected for export.

Within Optimal Trace, links are created for each exported requirement to its associated TFS Work Item. Each link is a Work Item URI (for example, `vstfs:///WorkItemTracking/WorkItem/124`) obtained from the MS Work Item Object Model.

**Note:** Microsoft VSTS does not support launching work item URIs from external sources. Please see Microsoft VSTS documentation for further details or contact Microsoft support for further information.

#### 4.2.4 Export with update

It is also possible to transfer any changes made directly in the Optimal Trace project into the associated TFS project. This updates the requirements detail within VSTS while preserving any values contained in non-requirement fields. For example, if you define a value in a field called **Rank**, that value is preserved on update.

In the case where Optimal Trace requirements have been deleted and since VSTS does not support deleting work items, work items are stamped with a **Deleted** status. This enables queries to filter the correct requirements.

#### 4.3 View Integration Status

Choose **Tools>VSTS Integration>View Integration Status** to view the integration status. The **View Integration Status** dialog box appears (see Figure 10). This dialog box displays details about the most recent export. The details include VSTS project name, the date/time of the last update, and the number of elements updated.



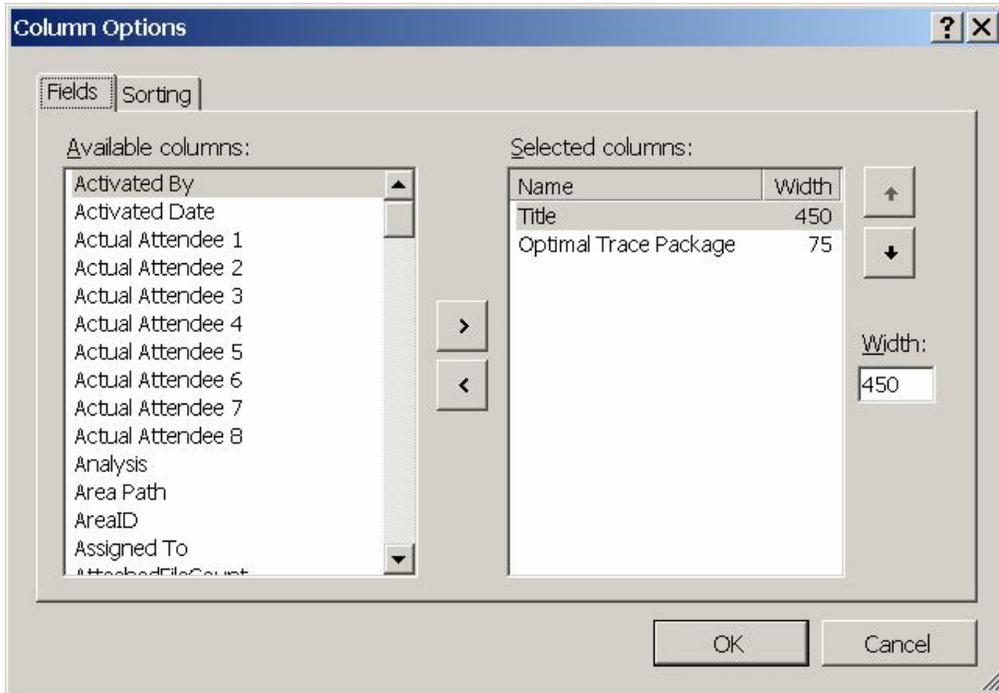
Figure 10 - View Integration Status

## 5 Managing Work Items in VSTS

### 5.1 Customizing Query Results Window

The Team Explorer Query Results view can be customised to provide a more useful view of the **Optimal Trace Requirement** work items.

1. In Team Explorer run the **Optimal Trace Requirements** query.
2. Choose **Team>Column Options**. The Column Options dialog box appears.



**Figure 11 - Team Explorer Column Options dialog**

The **Fields** tab provides a set of columns that can be displayed in the Query Results window (see Figure 11). Displaying the **Optimal Trace Package** column is useful when used in conjunction with column sorting.

The **Sorting** tab provides the capability to sort columns. Sorting by **Optimal Trace Package**, then **Title** is useful for viewing **Optimal Trace Requirement** work items.

## 5.2 Optimal Trace Requirement Work Item Type Format

All Optimal Trace fields within the **Optimal Trace Requirement** work item type start with the same value in the refname attribute:

```
refname="Compuware.OptimalTrace.<field_name>"
```

To facilitate deleting **Optimal Trace Requirement** work items, the state is defined as deleted. During export to VSTS, Optimal Trace VSTS Integration utility automatically generates a Transition to **Deleted** for any States that don't already exist.

**Caution:** Even though it is possible to add/edit fields, states and transitions in the **Optimal Trace Requirement** work item type, do not delete or modify because they are required.

## 5.3 Customizing Optimal Trace Requirement Work Item Type

The **Optimal Trace Requirement** work item type is automatically imported to a TFS project if it is the first time that requirements are being exported to the TFS project.

It is possible that you may want to customize the **Optimal Trace Requirement** work item so that it can contain additional fields by default.

There are two approaches to do this.

### 5.3.1 Customizing a Work Item Type Instance

Once the **Optimal Trace Requirement** Work item type has been imported into a TFS project you can export, modify and import that projects version of the **Optimal Trace Requirement** work item type using the Microsoft Visual Studio command line tools **witexport.exe** and **witimport.exe**.

For more information, refer to the VSTS documentation.

### 5.3.2 Customizing the Template

The previous section discusses customizing the **Optimal Trace Requirement** work item type for an individual TFS project. It is also possible to customize the template file that Optimal Trace VSTS Integration uses to automatically create the **Optimal Trace Requirement** work item type, thus allowing all TFS projects to automatically have a consistent view of Optimal Trace requirements.

The template file contains the xml definition for the **Optimal Trace Requirement** work item type and can be found in:

<Optimal Trace Installation>\plugins\VSTS Plugin\Optimal Trace Requirement Work Item.xml

Open the file and modify the relevant fields.