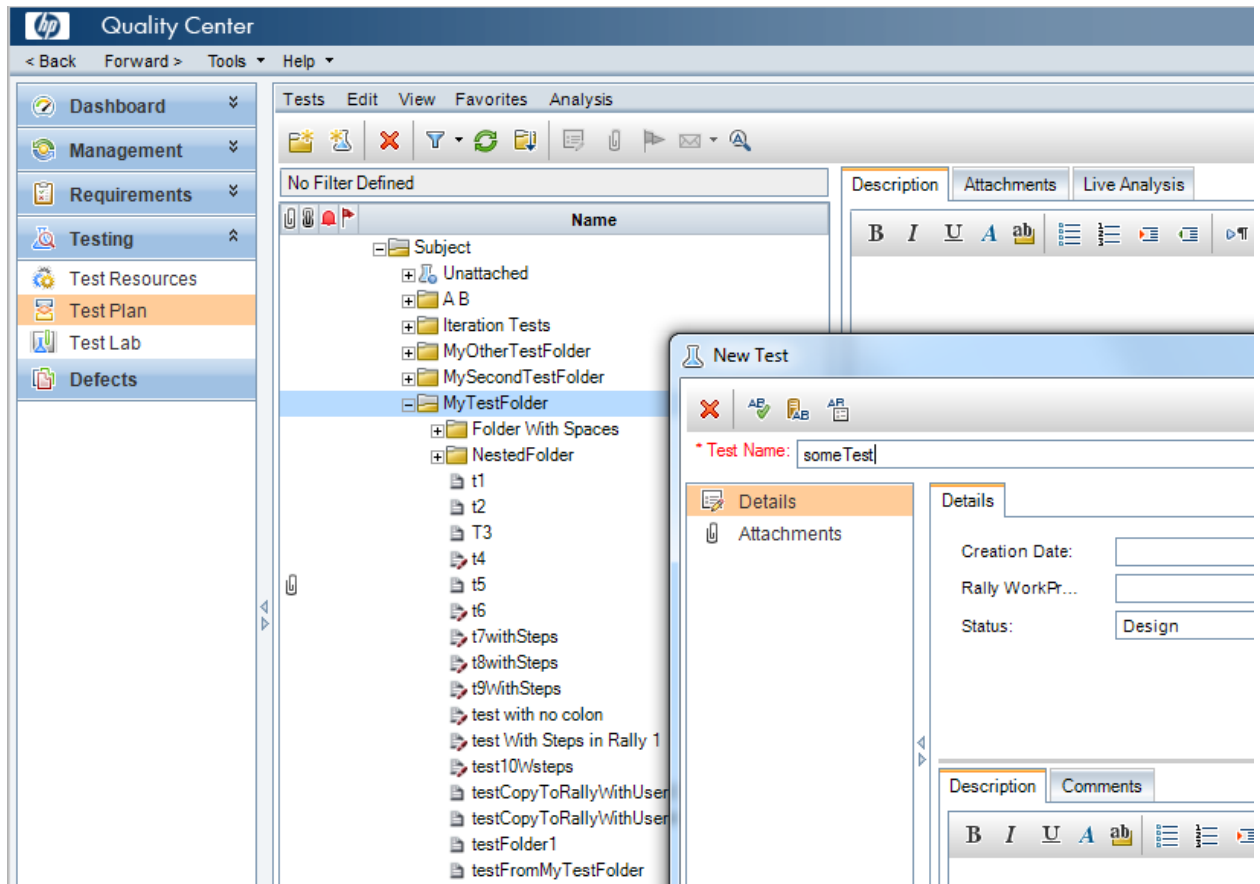
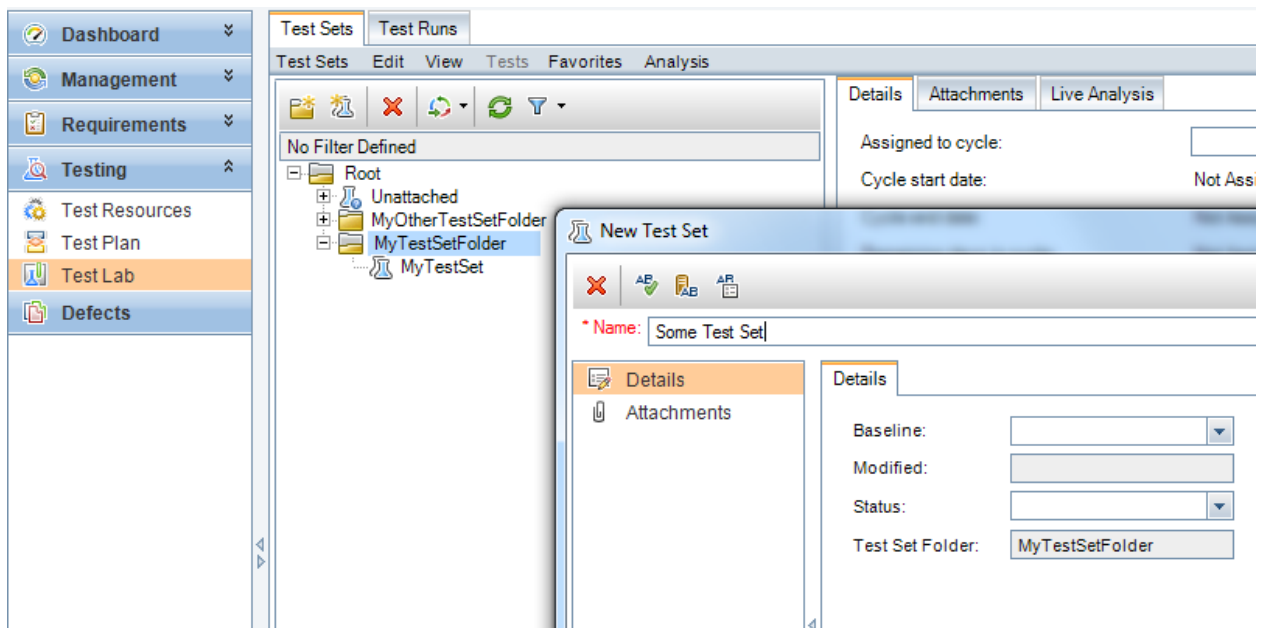


Creating test runs in QC:

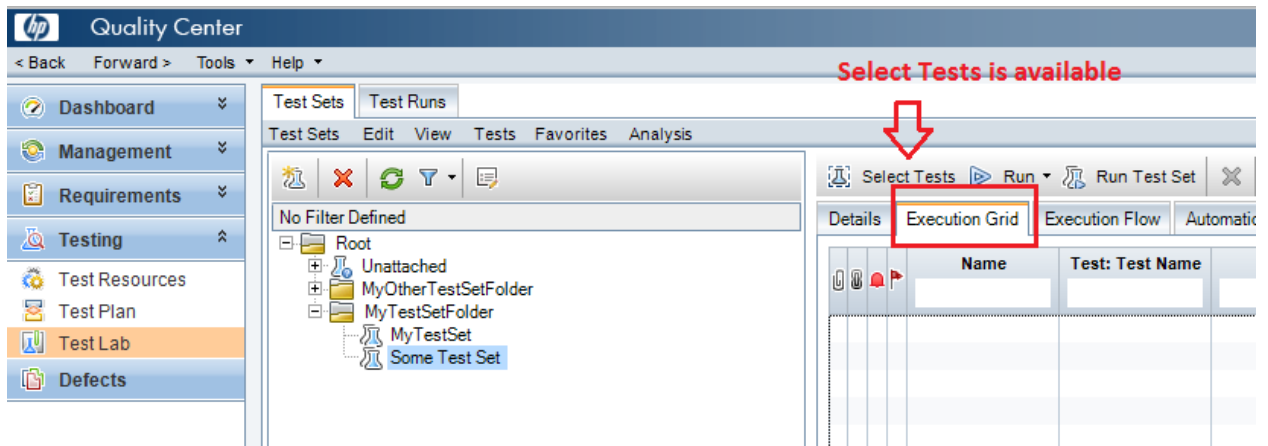
1. Create a test in Test Plan



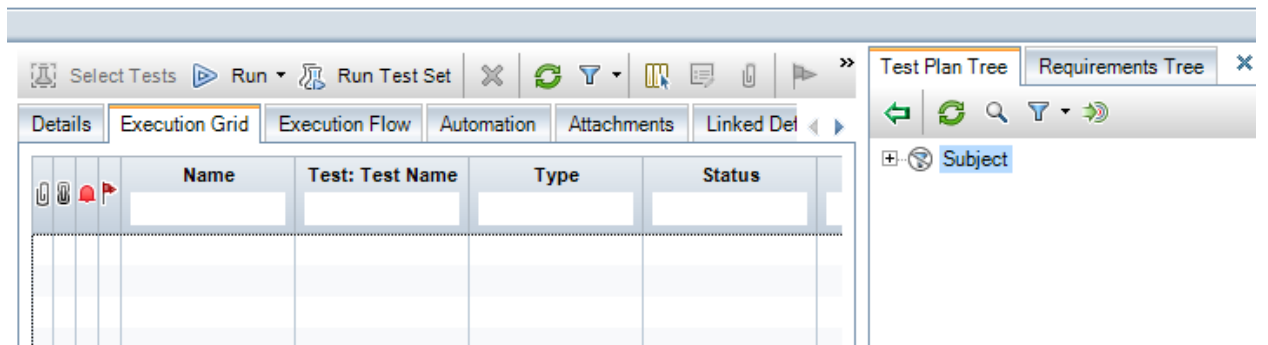
2. Create a test set in Test Lab:



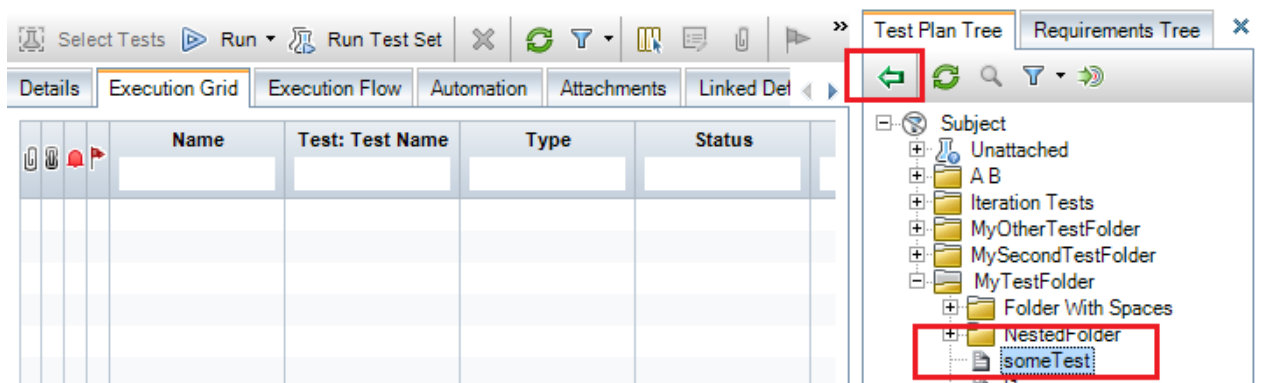
3. Go to Execution Grid tab.



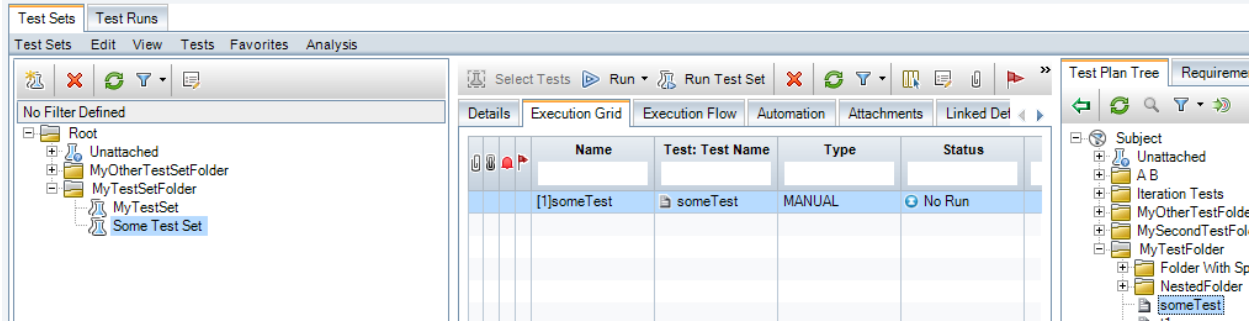
Click on Select Tests. Test Plan Tree is now available:



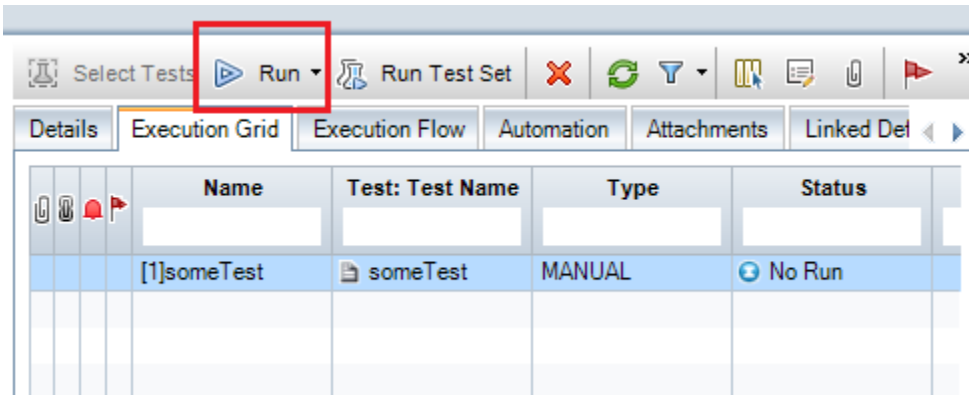
4. Select the test from Test Plan Tree and click on green arrow to create a Test Instance:



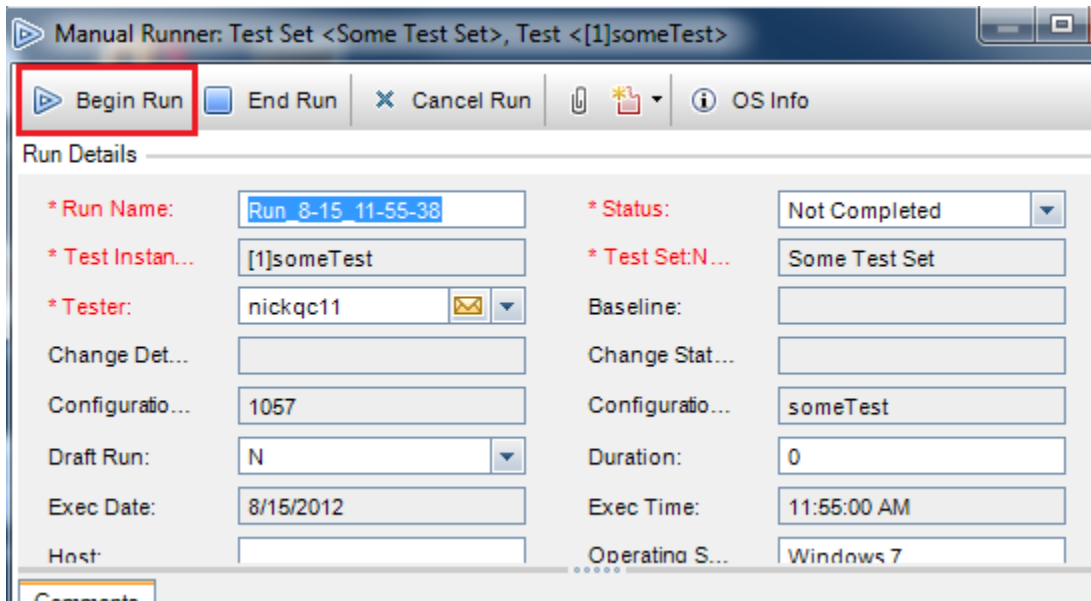
The Test Instance appears in the Execution Grid tab:



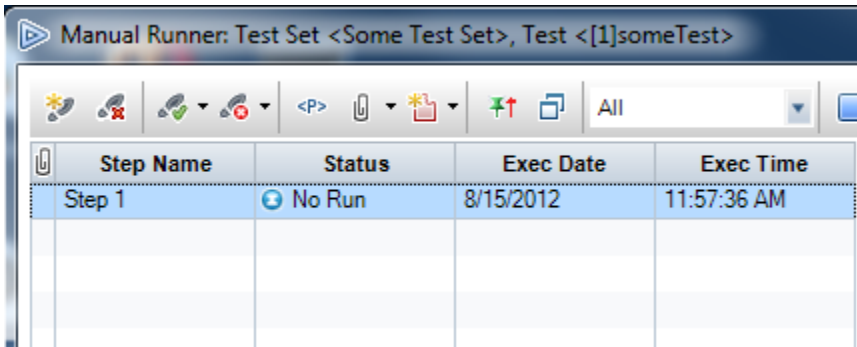
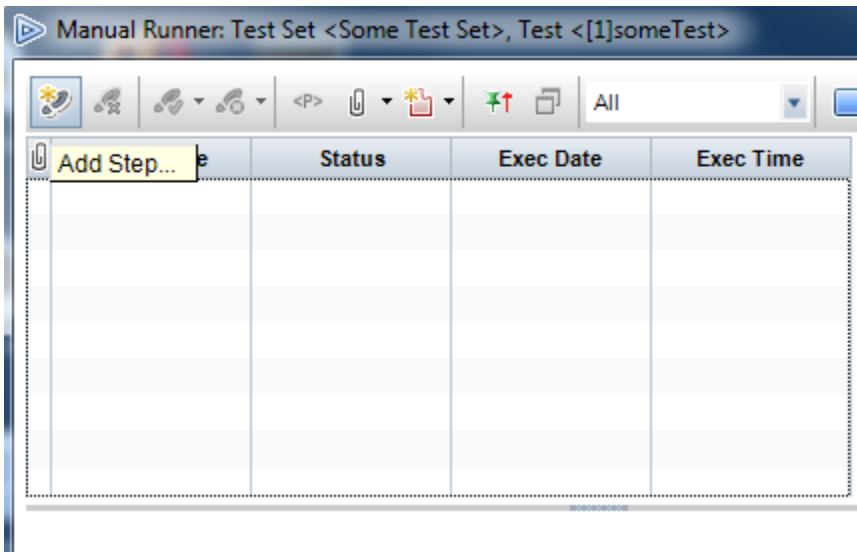
5. Click Run:



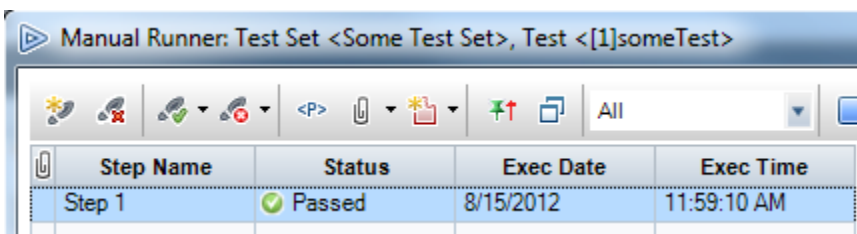
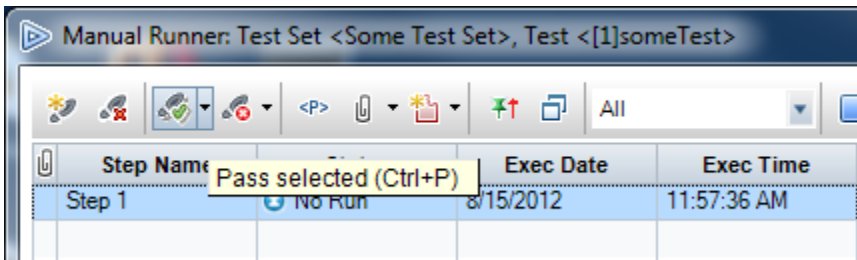
and click Begin Run:



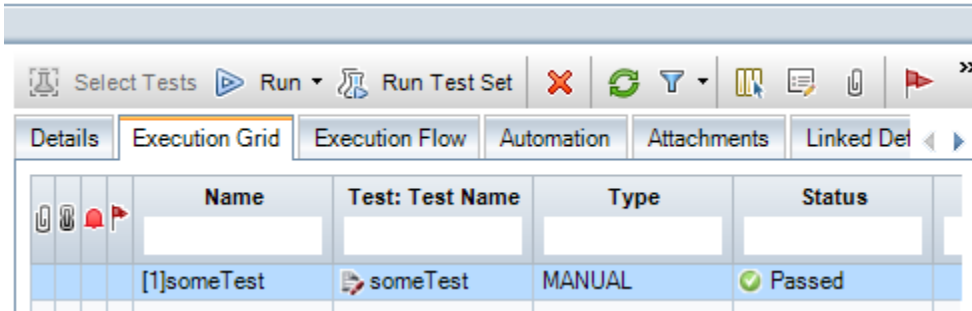
You may add a step:



And Pass or Fail it:



Save the test run:

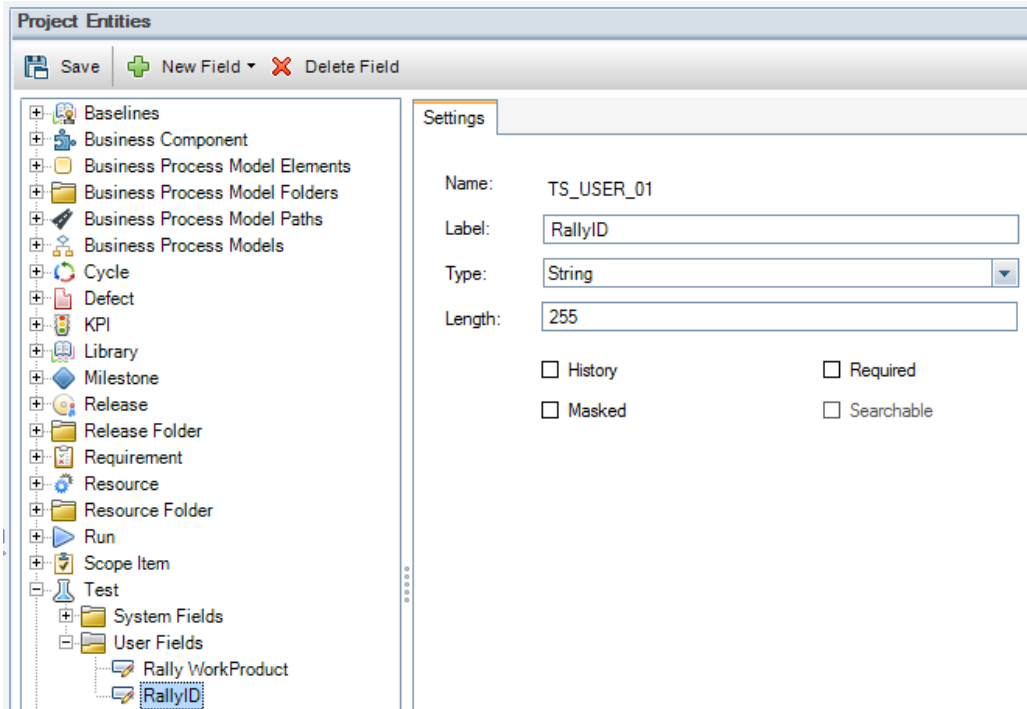


Using Rally - QC connector to copy tests and runs from QC to Rally:

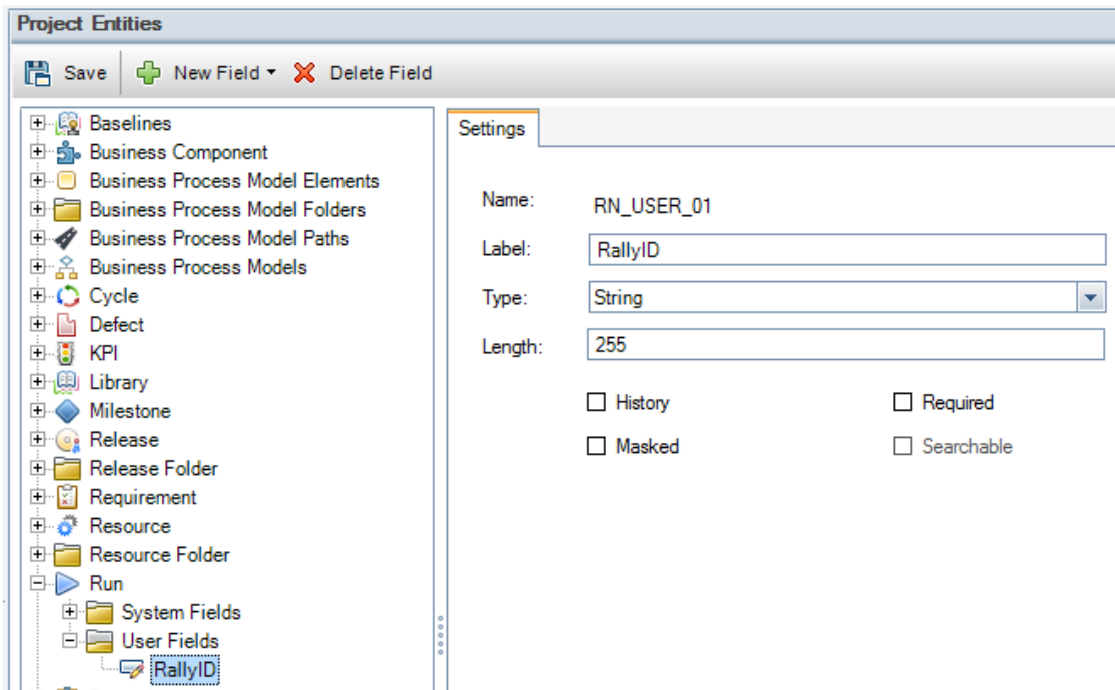
1. Configure the connector following the steps outlined in the guide:
<http://www.rallydev.com/help/quality-center-test-installation-user-guide>

Repeating the entire guide is outside of the scope of this document, but screenshots below illustrate custom fields created in QC for test and run artifact types, and custom field created in Rally for test case artifact type. Those fields are intended to store ID of the corresponding artifact from the other system.

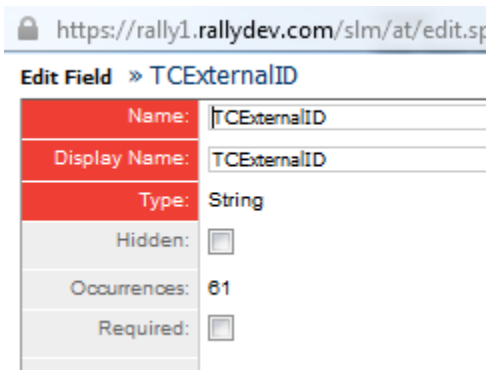
Here is the custom field created for QC's Test to hold Object ID of corresponding Rally test case:



Here is the custom field created for QC's Run to hold Object ID of corresponding Rally test case result:



Here is the custom field created for Rally's test case to hold ID of corresponding QC test:



Note that this is not symmetrical. Rally's TestCaseResult artifact type does not allow creation of custom fields to begin with, and as far as the support for mapping runs from QC to test case results from Rally, we only support Copy service in one direction, from QC to Rally.

As far as how these fields are represented in the xml configuration files, here are the relevant extracts from the files:

In config file for tests/test cases, in <RallyConnection>, there is

```
<ArtifactType>TestCase</ArtifactType>
  <ExternalIDField>TCEXternalID</ExternalIDField>
```

In the same config for test cases, in <QCConnection>, there is

```
<TestFolder>MyTestFolder</TestFolder>
  <IDField>TS_TEST_ID</IDField>
  <ExternalIDField>TS_USER_01</ExternalIDField>
```

In config file for runs/test case results, in <RallyTestResultConnection> the artifact type is specified by

```
<ArtifactType>TestCaseResult</ArtifactType>
```

but there is no such thing as ExternalIDField on the Rally.

In the same config file for runs/test case results, in <QCRunConnection> there is

```
<IDField>RN_RUN_ID</IDField>
  <ExternalIDField>RN_USER_01</ExternalIDField>
  <TestExternalIDField>TS_USER_01</TestExternalIDField>
```

Notice that <TestExternalIDField> has the same value here as <ExternalIDField> in the tests/test cases config. That's how the link between a run and test (test case result and test case) is maintained.

2. In the first part of this document a test in QC's Test Plan, and a run in Test Lab were created. Run the connector with both config files:

```
C:\CONNECTORS\QC2.8.1>rally2_qc_connector.exe t3.xml run3.xml -1
```

Here is a screenshot of the rallylog entry related to the copy of QC test to Rally test case:

```
[2012-08-16 00:45:34 Z] INFO : QCConnection.find_new - Found 1 New tests in QC
[2012-08-16 00:45:34 Z] INFO : Connector.copy_to_rally - Copy to Rally
[2012-08-16 00:45:34 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping TS_NAME(someTest) - to - Name(someTest)
[2012-08-16 00:45:35 Z] INFO : RallyConnection.create_internal - Created TC103
[2012-08-16 00:45:35 Z] DEBUG : QCConnection.update_external_id_fields - set QC Test TS_TEST_ID: 57 external id field TS_USER_01 --> |7533087462|
[2012-08-16 00:45:35 Z] INFO : Connector.copy_to_rally - Quality Center test 57 copied to Rally testcase TC103
[2012-08-16 00:45:35 Z] INFO : ConnectorRunner.process_service - Finished Service COPY_QUALITY_CENTER_TO_RALLY
```

Here is a screenshot of the rallylog entry related to the copy of QC run to Rally test case result:

```
[2012-08-16 00:47:37 Z] INFO : ConnectorRunner.process_service - Starting Service COPY_QUALITY_CENTER_TESTS_TO_RALLY
[2012-08-16 00:47:37 Z] INFO : QCRunConnection.find_new - find_new query: RN_USER_01 = "" and RN_EXECUTION_DATE >= "2012-08-14"
[2012-08-16 00:47:37 Z] DEBUG : QCRunConnection.find_new - find_new returned 1 total Test Runs
[2012-08-16 00:47:37 Z] DEBUG : QCRunConnection.find_new - find_new found 1 Test Runs with corresponding Rally tests
[2012-08-16 00:47:37 Z] INFO : QCRunConnection.find_new - Found 1 New runs in QC
[2012-08-16 00:47:37 Z] INFO : Connector.copy_to_rally - Copy to Rally
[2012-08-16 00:47:38 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping RN_TEST_ID(57) - to - TestCase(someTest)
[2012-08-16 00:47:38 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping RN_STATUS(Passed) - to - Verdict(Pass)
[2012-08-16 00:47:38 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping RN_EXECUTION_DATE(2012-08-15 00:00:00 -0600) - to - Date(2012-08-15 17:59:37 UTC)
[2012-08-16 00:47:38 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping RN_RUN_NAME(Run_8-15_11-55-38) - to - Build(Run_8-15_11-55-38)
```

Here is the screenshot of the details page of the newly created Rally test case. Notice that the Results link on the left shows that there is also a test case result associated with this test case:

The screenshot shows the 'Test Case TC103: someTest' details page. The left sidebar contains navigation links: Details for TC103, Defects (0), Test Sets (0), Results (1), Discussion (0), and Revisions (2). The main content area is divided into several sections:

- General:** ID: TC103, Name: someTest, Project: P_0.
- Test Case:** Objective, Work Product, Type: Acceptance, Method: Manual, Priority, Risk, Pre-Conditions, Steps: Input, Validation, Post-Conditions.
- Result:** Last Verdict: Pass, Last Run: 08/15/2012, Last Build: Run_8-15_11-55-38.
- Custom:** QCAttachments, QCReqID, TCEXternalID: 57.

The screenshot shows the 'Test Case Results' table for TC103: someTest. The table has columns for Build, Date, Test Set, Verdict, Duration, and Tester. A single result is shown for build Run_8-15_11-55-38 on 08/15/2012 with a Verdict of Pass. The tester is Nick M. The table includes a dropdown menu for Verdict (set to All) and a 'Display: 20' option.

| Build | Date | Test Set | Verdict | Duration | Tester |
|-------------------|------------|----------|---------|----------|--------|
| Run_8-15_11-55-38 | 08/15/2012 | | Pass | | Nick M |

Using Rally -QC connector to copy test cases from Rally to QC:

1. Create a test case in Rally:

https://rally1.rallydev.com/slm/tc/new.sp?cpoid=4742848527&projectScopeUp=false

Create Test Case

General

ID: _____

Name: some Test Case from Rally

Tags: Choose Tags

Description:

Save & Close Save & New Save Cancel

2. In xml config file of tests/test cases in <QCConnection> section there must be a pre-existing QC Test Folder(from Test Plan) specified ,e.g.

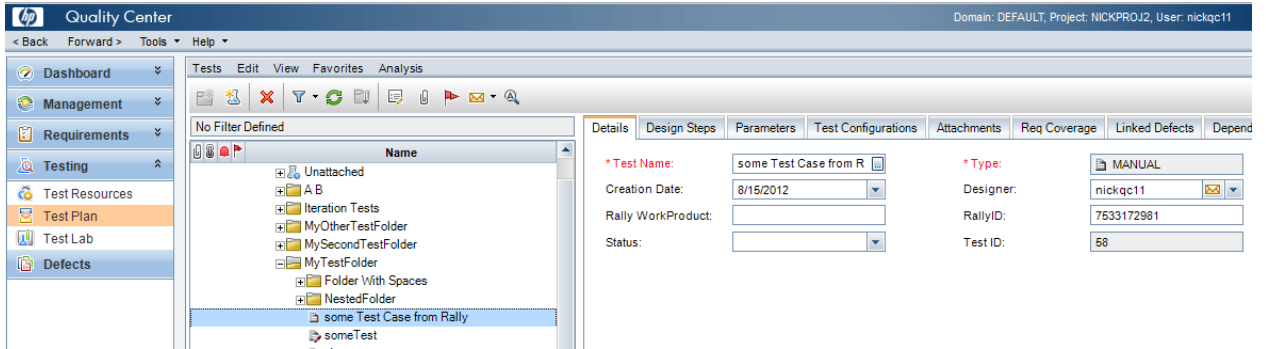
<TestFolder>MyTestFolder</TestFolder>

When the test case from Rally is copied to QC it should land in this folder.

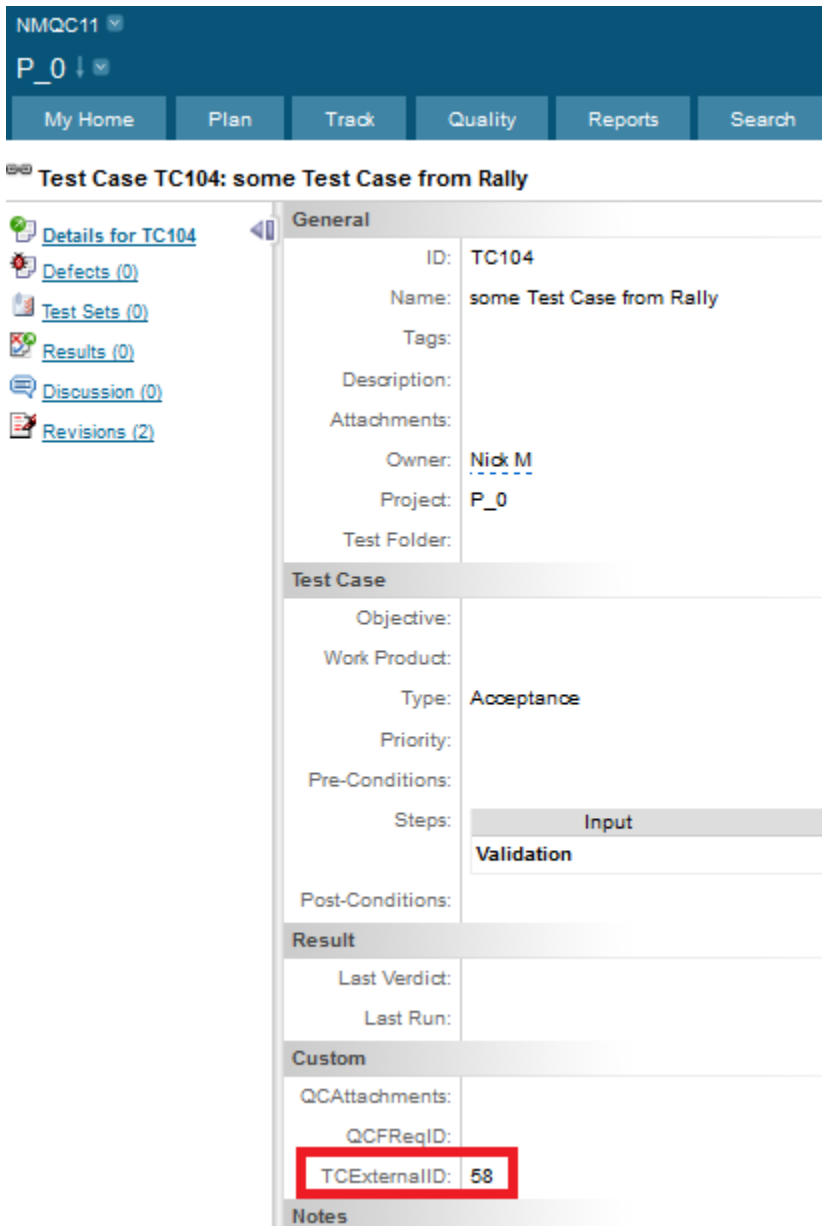
3. Run the connector:

```
[2012-08-16 01:01:07 Z] INFO : ConnectorRunner.process_service - Starting Service COPY_RALLY_TO_QUALITY CENTER
[2012-08-16 01:01:07 Z] INFO : RallyConnection.find_new - Find New Rally testcases
[2012-08-16 01:01:07 Z] INFO : RallyConnection.find_new - Found 1 new testcases in Rally
[2012-08-16 01:01:07 Z] INFO : Connector.copy_to_other - Copy to Quality Center
[2012-08-16 01:01:07 Z] DEBUG : Connector.block_in_map_fields_to_other - Mapping Name(some Test Case from Rally) - to - TS_NAME(some Test Case from Rally)
[2012-08-16 01:01:07 Z] DEBUG : QCConnection.create_internal - set all artifact fields
[2012-08-16 01:01:07 Z] INFO : QCConnection.create_internal - Created test 58 in QC
[2012-08-16 01:01:07 Z] INFO : RallyConnection.update_internal - Updating TC104
[2012-08-16 01:01:09 Z] INFO : Connector.copy_to_other - Rally testcase TC104 copied to Quality Center test 58
[2012-08-16 01:01:09 Z] INFO : ConnectorRunner.process_service - Finished Service COPY_RALLY_TO_QUALITY CENTER
```

The test is created in QC. Notice the TS_USER_01 labeled "RallyID" field populated with Object ID of the corresponding Rally test case:



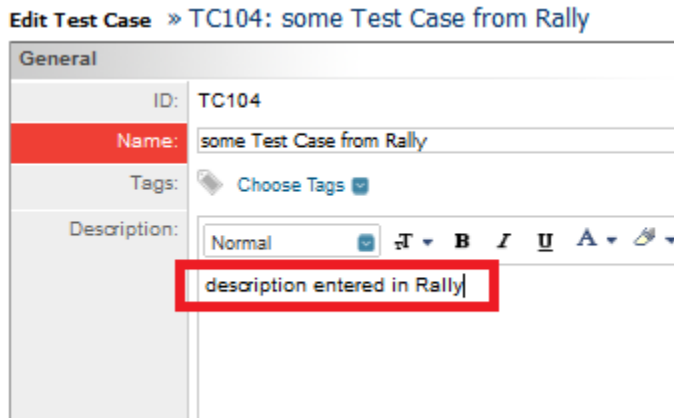
On the Rally side the original test case now has its custom field TCExternalID populated with the ID of the corresponding QC test:



At this point if an Test Instance of this test needs to be created in Test Lab, and a run needs to be copied from QC to Rally, please follow the steps described in previous section of this document. Note that runs can only be copied from QC to Rally. The connector does not support copy service from Rally to QC for test case results.

Using Rally -QC connector to update test cases from Rally to QC:

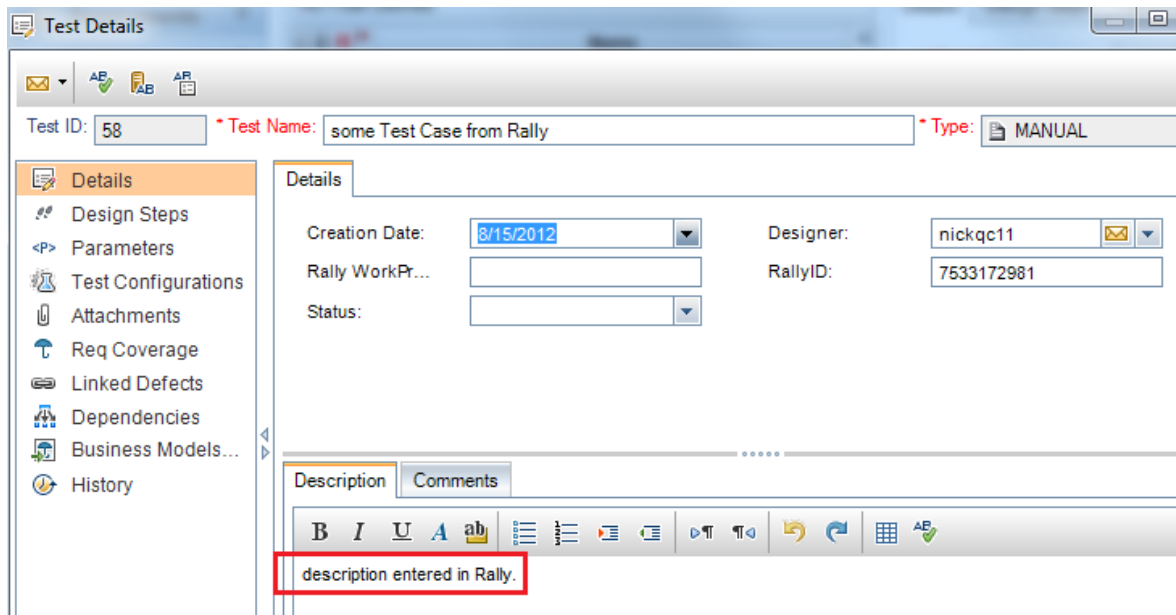
1. Updated test case in Rally:



This is a test case that was originally created in Rally and copied to QC as described in the previous section of this document.

2. Run the connector

```
[2012-08-16 17:36:51 Z] INFO : RallyConnection.find_updates - Found 1 updated testcases in Rally
[2012-08-16 17:36:51 Z] DEBUG : Connector.block in map_fields_to_other - Mapping Name(some Test Case from Rally) - to - TS_NAME(some Test Case from Rally)
[2012-08-16 17:36:51 Z] DEBUG : Connector.block in map_fields_to_other - Mapping Description(description entered in Rally.) - to - TS_DESCRIPTION(<html><bc
[2012-08-16 17:36:51 Z] INFO : QCConnection.update_internal - Updated test 58 in QC
[2012-08-16 17:36:51 Z] INFO : Connector.update_other - Quality Center test 58 updated from Rally testcase TC104
```



Using Rally -QC connector to update test cases from QC to Rally:

1. Updated test case in QC:

The screenshot shows the 'Test Details' page in Rally. The Test ID is 58 and the Test Name is 'some Test Case from Rally'. The Type is set to 'MANUAL'. The left sidebar contains navigation options: Details, Design Steps, Parameters, Test Configurations, Attachments, Req Coverage, Linked Defects, Dependencies, Business Models..., and History. The main area shows the 'Details' tab with fields for Creation Date (8/15/2012), Designer (nickqc11), Rally WorkPr..., RallyID (7533172981), and Status. Below this is a 'Description' tab with a rich text editor. The description contains two lines: 'description entered in Rally.' and 'description entered in QC.', with the second line highlighted in red.

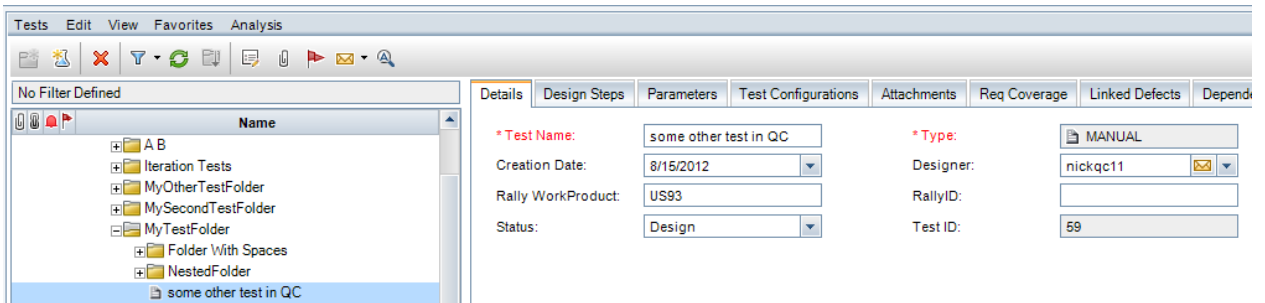
2. Run the connector. The corresponding test case in Rally is updated:

```
[2012-08-16 19:26:56 Z] INFO : ConnectorRunner.process_service - Starting Service UPDATE_QUALITY_CENTER_TO_RALLY
[2012-08-16 19:26:56 Z] INFO : QCConnection.find_updates - Looking for updates made after QC server time of: '2012-08-16 11:36:45'
[2012-08-16 19:26:56 Z] INFO : QCConnection.find_updates - Found 1 Updated tests in QC
```

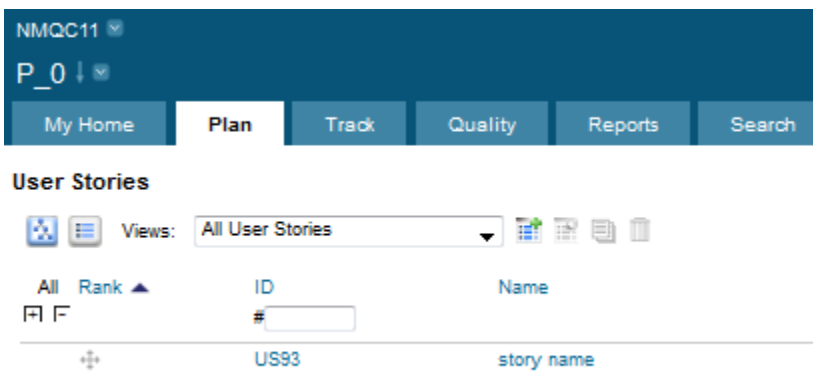
The screenshot shows the 'Test Case TC104: some Test Case from Rally' page in Rally. The user is logged in as NMQC11. The page has a navigation bar with 'My Home', 'Plan', 'Track', 'Quality', 'Reports', and 'Search'. The left sidebar contains navigation options: Details for TC104, Defects (0), Test Sets (0), Results (0), Discussion (0), and Revisions (6). The main area shows the 'General' tab with fields for ID (TC104), Name (some Test Case from Rally), Tags, Description (description entered in Rally. and description entered in QC., with the second line highlighted in red), and Attachments.

Using Rally -QC connector to link Rally story to Rally test case

1. Create a test in QC:

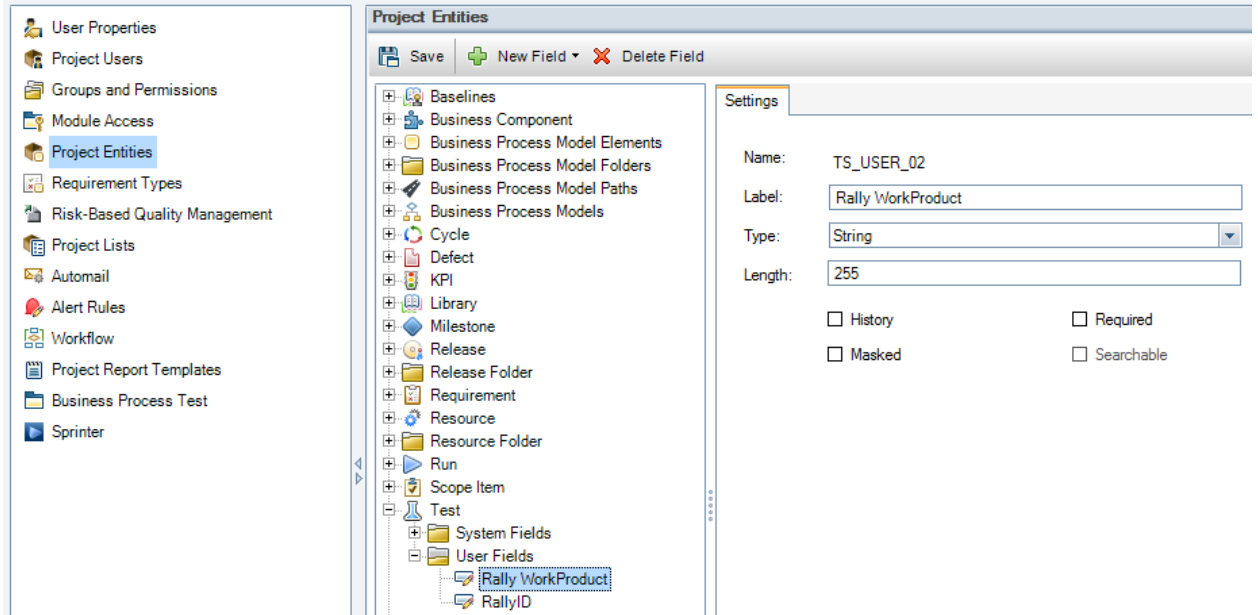


Notice a Formatted ID of Rally user story "US93" in the Rally WorkProduct field that references a real story in Rally in the same Rally workspace/project indicated in the config file:



The goal of this setup is to make sure that when a test is copied from QC to Rally, it is linked to a pre-existing user story in Rally by following the steps below. On Rally side the linking happens via a WorkProduct field of TestCase object.

- a) Create a user field in QC for Test artifact to hold Rally Formatted ID. The field must be of type String:



b) Add this mapping to the <FieldMapping> section of the config file for tests/test cases:
 <Field><Rally>WorkProduct</Rally><Other>TS_USER_02</Other></Field>

c) Add <RallyReferenceFieldHandler> to the <RallyFieldHandlers> section of the same config:

```
<RallyReferenceFieldHandler>
  <FieldName>WorkProduct</FieldName>
  <ReferencedFieldLookupID>FormattedID</ReferencedFieldLookupID>
</RallyReferenceFieldHandler>
</RallyFieldHandlers>
```

Here is an example of the syntax in the context of <Connector> section of the xml config file

```
<Connector>
  <FieldMapping>
    <Field><Rally>Name</Rally><Other>TS_NAME</Other></Field>
    <Field><Rally>WorkProduct</Rally><Other>TS_USER_02</Other></Field>
    <Field><Rally>Description</Rally><Other>TS_DESCRIPTION</Other></Field>
  </FieldMapping>
  <RallyFieldHandlers>
    <RallyReferenceFieldHandler>
    <FieldName>WorkProduct</FieldName>
    <ReferencedFieldLookupID>FormattedID</ReferencedFieldLookupID>
    </RallyReferenceFieldHandler>
  </RallyFieldHandlers>
</Connector>
```

2. Run the connector:

```
C:\CONNECTORS\QC2.8.1>rally2_qc_connector.exe t3.xml -1
```

```
[2012-08-16 01:33:44 Z] INFO : ConnectorRunner.process_service - Starting Service COPY_QUALITY CENTER_TO_RALLY
[2012-08-16 01:33:44 Z] INFO : QCConnection.find_new - Found 1 New tests in QC
[2012-08-16 01:33:44 Z] INFO : Connector.copy_to_rally - Copy to Rally
[2012-08-16 01:33:44 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping TS_NAME(some other test in QC) - to - Name(some other test in QC)
[2012-08-16 01:33:45 Z] DEBUG : Connector.block in map_fields_to_rally - Mapping TS_USER_02(US93) - to - WorkProduct(story name)
```

The test case is created in Rally, linked to a Rally story:

The screenshot shows the Rally interface for a test case. The top navigation bar includes 'My Home', 'Plan', 'Track', 'Quality', 'Reports', and 'Search'. The main content area is titled 'Test Case TC105: some other test in QC'. On the left, there is a sidebar with links for 'Details for TC105', 'Defects (0)', 'Test Sets (0)', 'Results (0)', 'Discussion (0)', and 'Revisions (1)'. The main panel is divided into sections: 'General', 'Test Case', 'Result', and 'Custom'. The 'General' section includes fields for ID (TC105), Name (some other test in QC), Tags, Description (some description), Attachments, Owner, Project (P_0), and Test Folder. The 'Test Case' section includes Objective, Work Product (US93: story name), Type (Acceptance), Priority, Pre-Conditions, Steps (Input, Validation), and Post-Conditions. The 'Result' section includes Last Verdict and Last Run. The 'Custom' section includes QCAttachments, QCReqID, and TCEXternalID (59). The 'Notes' section is at the bottom.