Modern Requirements4DevOps

Test Case Management

Version 3.0

Document Revision History

| Rev. #	Date	Details	Revised By	Approved By
Version 3.0	3rd February, 2023	• Added support for Requirement WI • Added Build Number property for Test Point, Test Run, and Test Result • Added support for Capture user actions, Record Screen, and Record Screen under Result attachment property in Test Result Virtual WI	Syed Hammad	Hira Sharif
Version 2.2	26th August, 2022	• Added support for multiple comments and attachments in Test Parameter under Test Result Virtual Work Item. • Added Test Parameter and Iteration field for Test Step Run Virtual Work Item.	Syed Hammad	Hira Sharif
Version 2.1	2nd March, 2022	• Technote Updated for Test Point WI • Images Updated • Virtual Work item Properties updated	Syed Hammad	Hira Sharif
Version 2.0	17th December, 2021	• Design/Formatting of the document has been changed	Syed Hammad	Hira Sharif
Version 1.0	4th November, 2020	• Document created	Syed Hammad	Hira Sharif

Table of Contents

INTRODUCTION

In the simplest form, the test case management software consolidates several aspects of testing into one place. This reduces the testing effort, improves resource utilization, speed, and quality of the tests.

Most often, the tools differ in their scope, ability, effectiveness, flexibility, and more. While some organizations settle on one comprehensive solution, others opt to use a combination of different tools.

The normal testing hierarchy supported **by Azure DevOps** is as following:
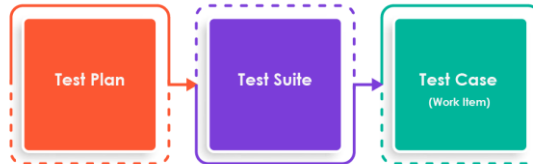
Whereas organizations normally have a more comprehensive **Test Case Management** as illustrated below:
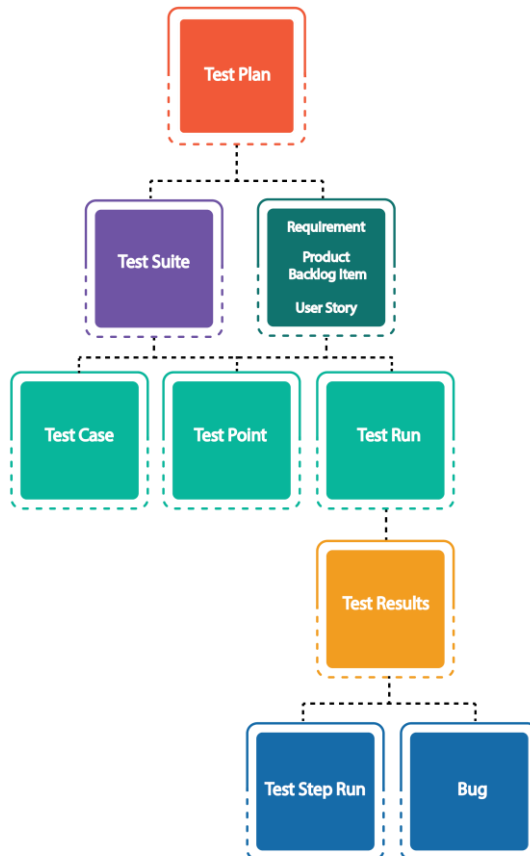
The Requirement work item will be available when Requirement suite is created from the Test Hub.

Note: The Requirement work item is supported in Trace Analysis.

WHAT MODERN REQUIREMENTS4DEVOPS HAS TO OFFER?

In order to fill the gap between what test strategy companies usually follow and what Azure DevOps has to offer, **Modern Requirements4DevOps** now offers **Virtual work items.**

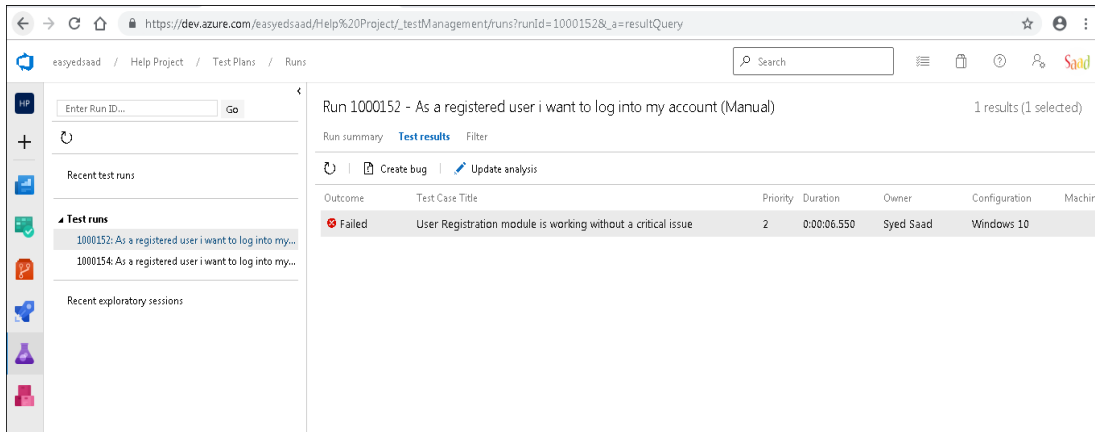In **Azure DevOps**, the data for these virtual work items can be fetched from TFS using the following tabs:

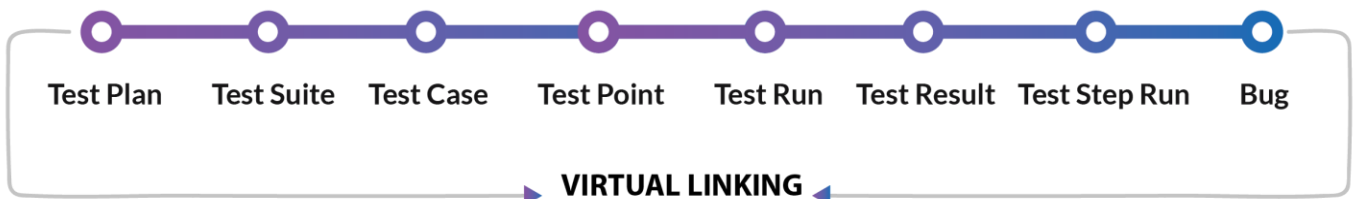### TEST POINT

TEST RUN

TEST RESULT

TEST STEP RUN
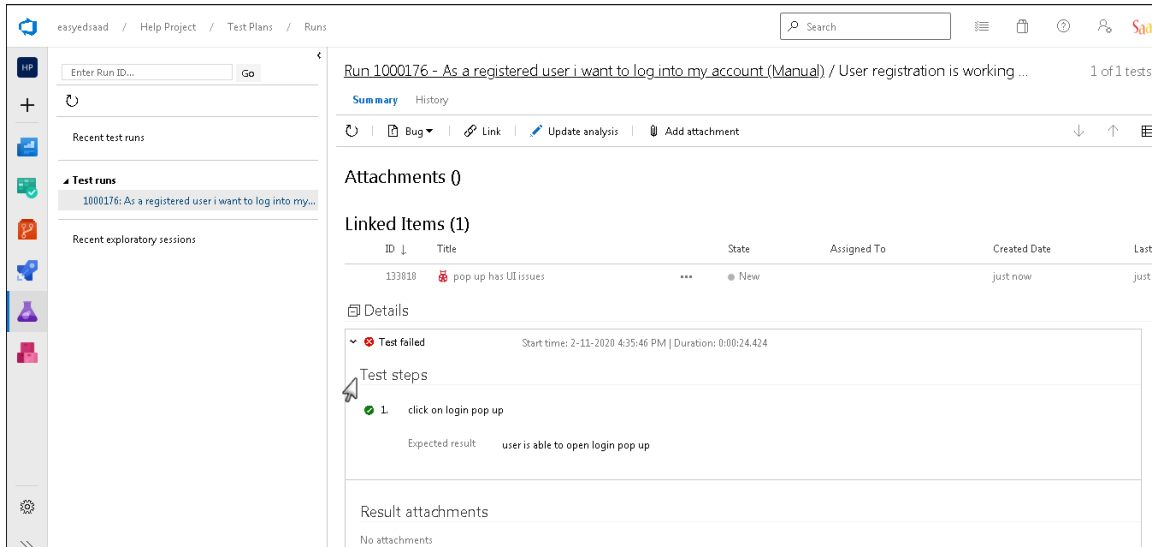
These **Virtual work** items are linked with existing work items using **Virtual Link**.

VIRTUAL WORK ITEMS PROPERTIES

Properties for Test Point

Outcome	Config Name	Test Case ID	Suite ID	Plan ID	Tester

Last Updated By	Is Automated	Build Number

Properties of Test Run

Complete Date	Start Date	Owner	Unanalyzed Test	Total Results	Pass Test	Is Automated

Failed Tests	Not Applicable Test	Incomplete Tests	Total Test	Build Number

Properties of Test Result

Plan ID	Suite ID	Test Case ID	Duration	Last Updated By	Outcome	Run By
Config name (Configuration)	Completed Date	Pass Test	Total Test Steps	Failed Tests	Unspecified Tests	Test Parameter

Details	Detail Comment	Result Attachment	Build Number

Properties for Test Step Run

Outcome	Action	Expected Result	Completed Date	Iteration	Test Parameter

Comment	Attachment

Note: Click on the links to view details on Test Parameter, Details, Detail Comment, Result Attachment, Comment and Attachment.

SUPPORT FOR ATTACHMENT AND COMMENTS FIELD

Attachments and Comments are now supported in Trace Analysis and Smart Report module (Trace Analysis, Test Plan Hub, Queries tab and Smart Doc)

- Comment added on run test case is mapped to **"Detail Comments"** field.

- Attachment added on run test case is mapped to **"Result Attachment"** field.
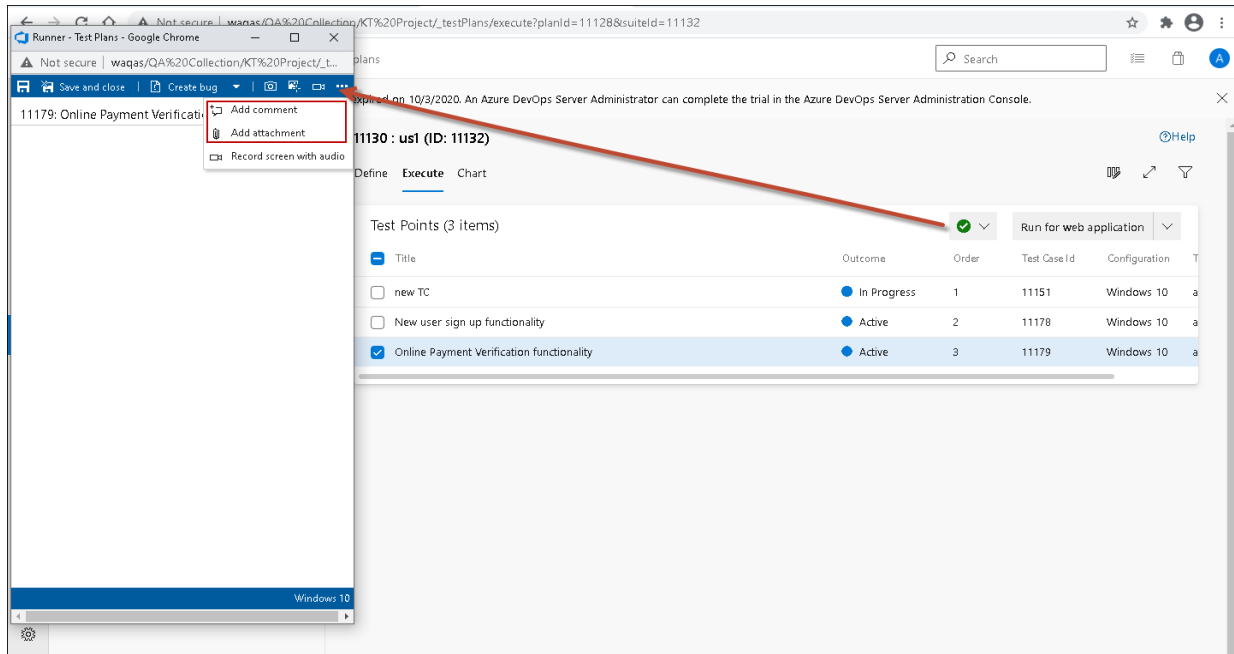
Comment and **attachment** added from test run are mapped in test results virtual work item.

	Test Results(10)							
State	Link Type	ID	Title	Detail Comments	Comment	Result Attachment	Link Type	ID
open	vLink	100000	Run 60 - 11130 : us1 (Manual) / Online Payment Verification functio...	Option 1 to 4 are ...				
open	vLink	100000	Run 61 - 11130 : us1 (Manual) / Online Payment Verification functio...			Contextual Compa...		

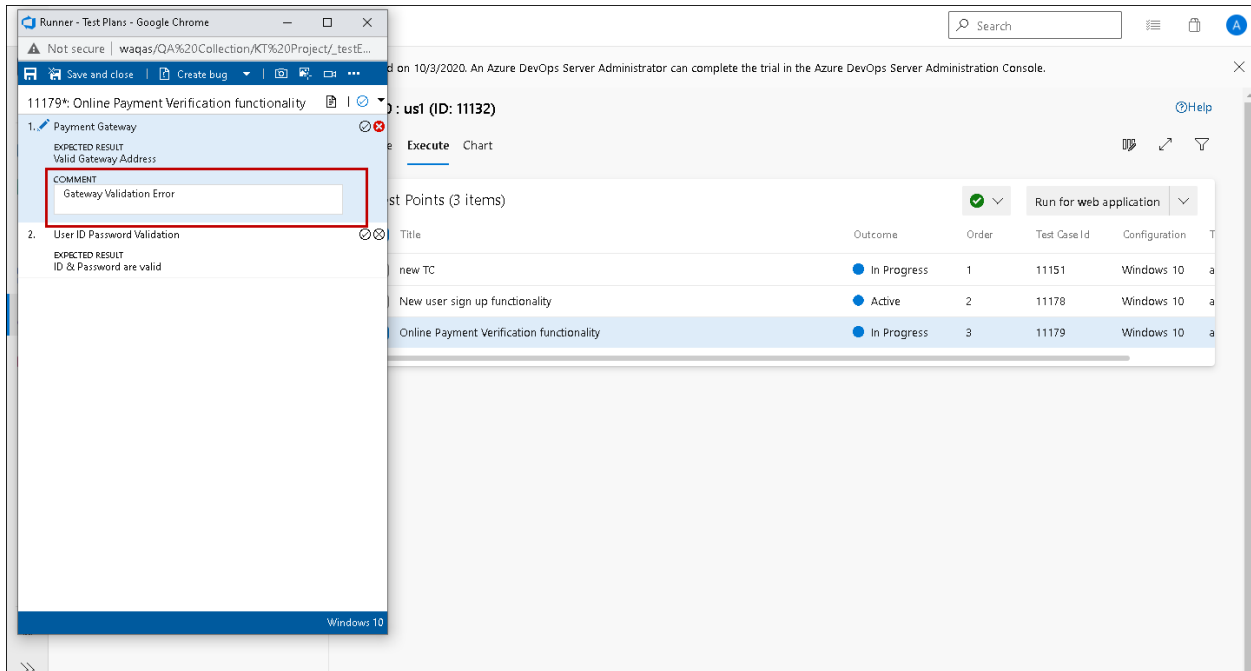### Smart Report Configuraion:

Output:

- Comments added from update analysis will be mapped to **"Comment"** field in test results.
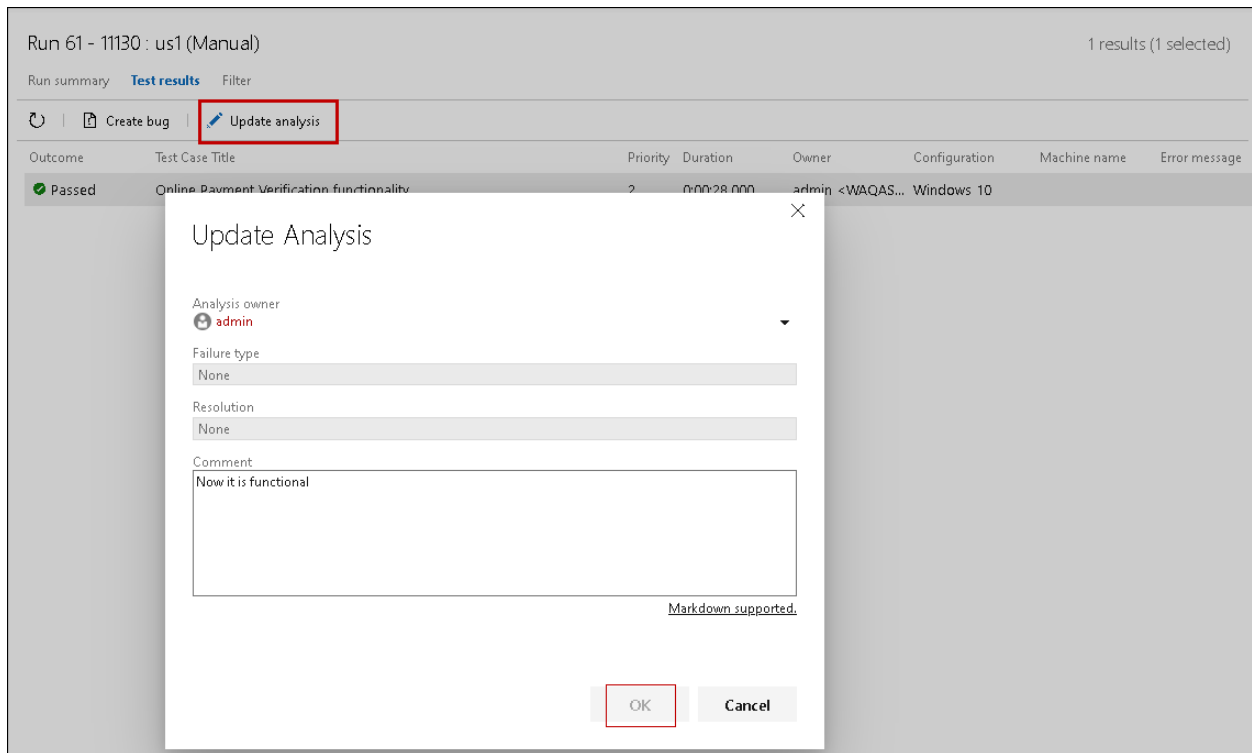
Comment added from update analysis is added to the **"Comment"** field in Test Results.

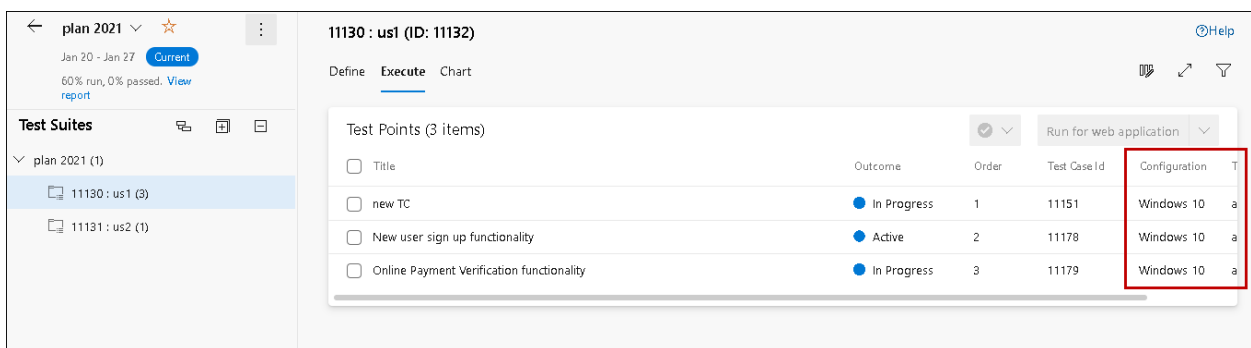| Link Type	ID	Title	Detail Comments	Comment	Result Attachment	Config Name	Link Type
			Test Results(12)				
vLink	100000	Run 60 - 11130 : us1 (Manual) / Online Payment Verification functio...	Option 1 to 4 are ...			Windows 10	
vLink	100000	Run 61 - 11130 : us1 (Manual) / Online Payment Verification functio...		Now it is functional	Contextual Compar...	Windows 10	
vLink	100000	Run 64 - 11130 : us1 (Manual) / Online Payment Verification functio...				Windows 10	
vLink	100000	Run 65 - 11130 : us1 (Manual) / Online Payment Verification functio...				Windows 10	vLink
							vLink

▪ Comments added on fail steps on run test case are mapped to the **"Comment"** field in Test Step Run.

Comment for fail step added in **"Comment"** field of Test Step Run in Trace Analysis and Smart Report.

▪ Configuration is mapped to **"Config Name"** field in Test Results

Configuration can be seen mapped below in test results.

|		Test Results(12)						
ype	ID	Title	Detail Comments	Comment	Result Attachment	Config Name	Link Type	ID
	100000	Run 60 - 11130 : us1 (Manual) / Online Payment Verification functio...	Option 1 to 4 are ...			Windows 10		
	100000	Run 61 - 11130 : us1 (Manual) / Online Payment Verification functio...		Now it is functional	Contextual Compar...	Windows 10		
	100000	Run 64 - 11130 : us1 (Manual) / Online Payment Verification functio...				Windows 10		
	100000	Run 65 - 11130 : us1 (Manual) / Online Payment Verification functio...				Windows 10	vLink	2
							vLink	3

- **Captured screenshot** from Test Run are mapped as an attachment in Test Step Run virtual work item.

User can take screenshot from the **Capture screenshot** option as shown in the image below.
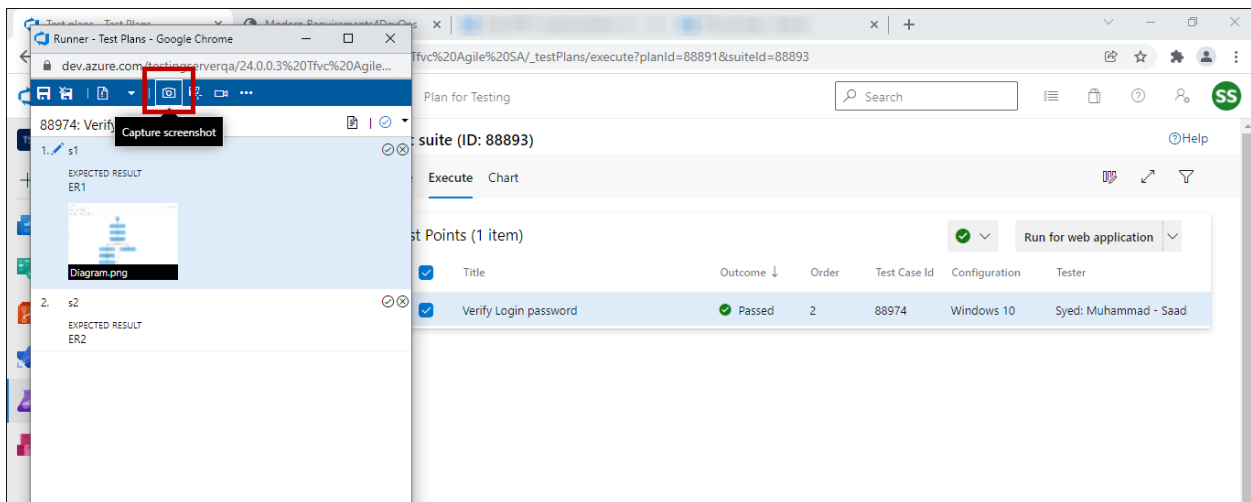
The captured screenshot can be seen in ADO **mapped as an attachmen**t. Users can download the captured screenshot by clicking on it.
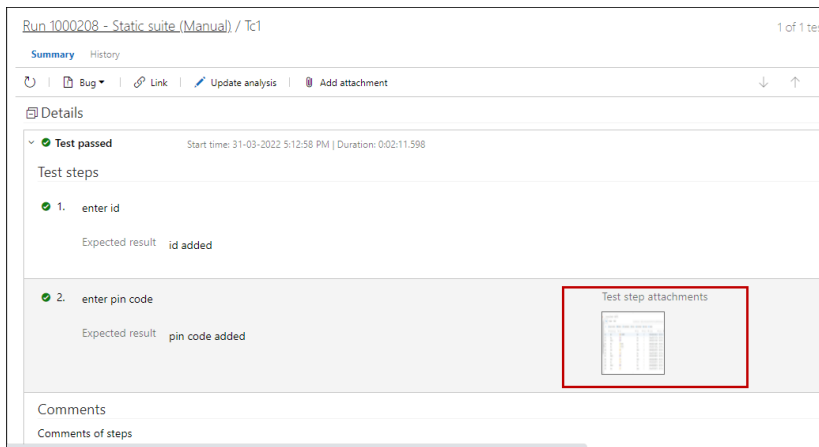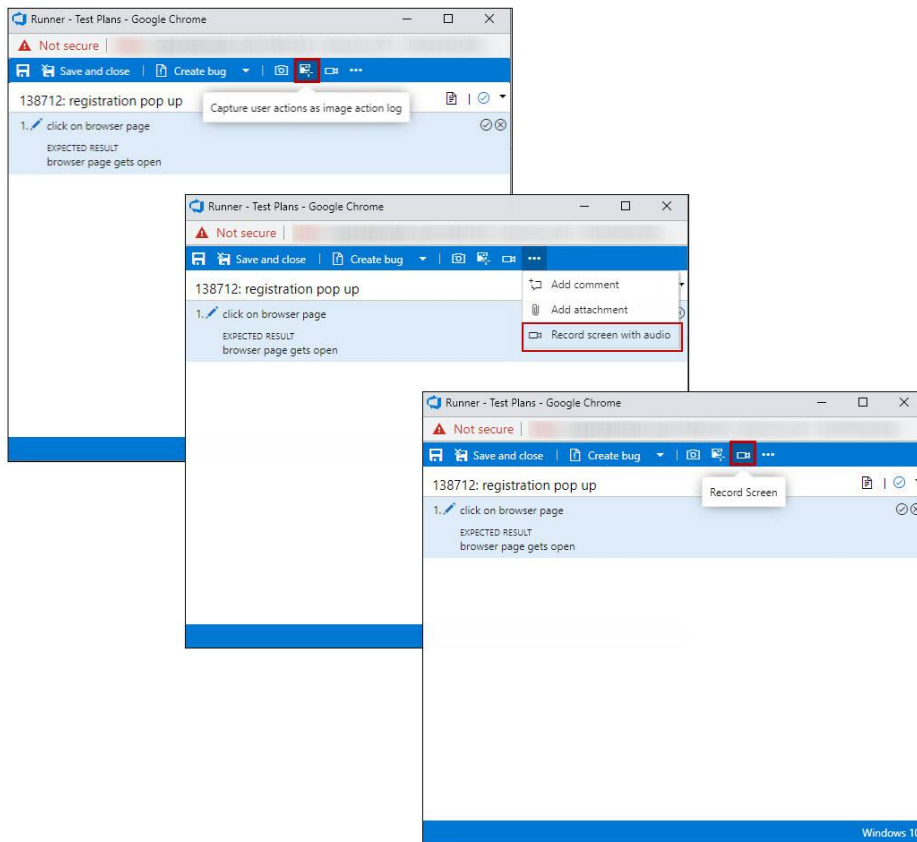
The captured screenshot can be seen **as an attachment in the Smart Report**. Users can download the attachment by clicking on it.

The options **Capture user actions**, **Record Screen**, and **Record screen with audio** are supported in the Test Result virtual work item. Once a user adds these attachments from ADO, they will be visible in the Smart Report/Trace Analysis section of the Test Result work item under the "Result attachment" property.

For multiple iterations, **Comments** and **Attachments** added in each iteration is shown. On run test case, if there are multiple iterations, user can add comments in each iteration which can be seen by adding "**Details**" field from column options in Trace analysis and through "**Report Designer**" in Smart Report.

ADO:

Comments and attachments added against each iteration can been seen in the "Summary" section.

Trace Analysis:

Comments and Attachments added by the user against each of the iterations will be visible in the Traceability Matrix.

Smart Report:

By adding "**Details**" field from the column options, **comments** and **attachments** for each iteration can be seen in "Report Designer" in Smart Report.

TEST PARAMETER

Parameter added in Test case steps can be seen by adding "**Test Parameter**" field from column options in Trace analysis and through "Report Designer" in Smart Report.

ADO:

Trace Analysis:

By selecting the "**Test Parameter**" field from column options, user can see "Parameters" column in Traceability Matrix.

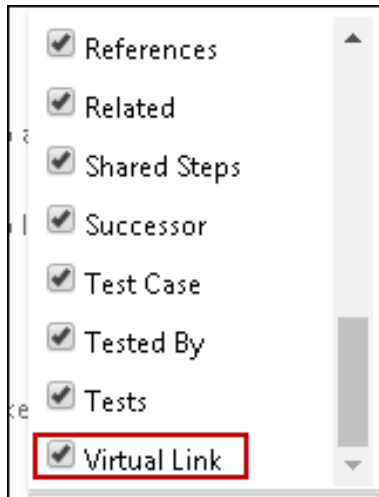| Test Step Run(12)						
Link Type	ID	Title	State	Test Parameters	Iteration	
vLink	1	Run 265 - 139964 : Requirement (M...	open	page = First	1	
vLink	2	Run 265 - 139964 : Requirement (M...	open	field = One	1	
vLink	1	Run 265 - 139964 : Requirement (M...	open	page = Second	2	
vLink	2	Run 265 - 139964 : Requirement (M...	open	field = Two	2	

Smart Report:

By selecting the "**Test Parameter**" field from column options, user can see "Parameters" column in Smart Report.

| #	Work Item Type	ID	Title	Outcome	Action	Expected Result	Completed Date	Parameters
1.1.8.1.1.	Test Step Run	1	Run 265 - 139964 : Requirement (Manual)	Unspecified	Click on + icon from folder explorer @page 1	Create request window should open.	01-Aug-22 5:38 PM (UTC+5)	page = First
1.1.8.1.2.	Test Step Run	2	Run 265 - 139964 : Requirement (Manual)	Unspecified	Fill all fields on create request window and click on Send button @field	Review should be created.	01-Aug-22 5:38 PM (UTC+5)	field = One
1.1.8.1.3.	Test Step Run	1	Run 265 - 139964 : Requirement (Manual)	Unspecified	Click on + icon from folder explorer @page 1	Create request window should open.	01-Aug-22 5:38 PM (UTC+5)	page = Second
1.1.8.1.4.	Test Step Run	2	Run 265 - 139964 : Requirement (Manual)	Unspecified	Fill all fields on create request window and click on Send button @field	Review should be created.	01-Aug-22 5:38 PM (UTC+5)	field = Two

LINKING OF VIRTUAL WORK ITEMS

In Smart Report, the virtual linking is automatically applied. However, in Trace Analysis you need to manually select the Virtual Link option to link the Virtual work items as shown in the image below:

HIERARCHY

The hierarchy below can be created and shown in **Smart Report** as well as while working in **Traceability module**:

Test Plan vs **Test Suite** vs **Test Case/Test Point** vs **Test Run** vs **Test Result** vs **Test Step Run** vs **Bugs**
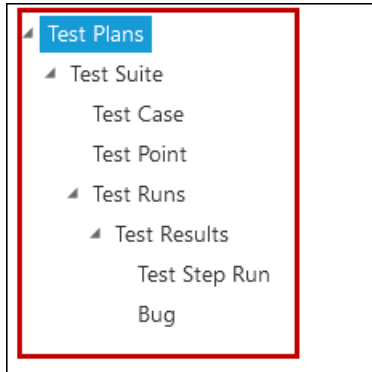
Same hierarchy can be created while showing the work in **Trace Analysis**

PATHS TO GENERATE OUTPUT

Following are the different paths you can define to generate the output:

- Test plan vs Test suite
- Test suite vs Test case
- Test plan vs Test suite vs Test case
- Test run
- Test run vs Test result
- Test run vs Test result vs Test step run
- Test run vs Test result vs Bugs
- Test run vs Test result vs Test step run vs Bugs
- Test run vs Test result vs Bugs vs Test step run
- Test suite vs Test case vs Test run vs Test result vs Test step run
- Test plan vs Test suite vs Test run vs Test result vs Bugs
- Test suite vs Test case vs Test run vs Test result vs Test step run vs Bugs
- Test plan vs Test suite vs Test run vs Test result vs Test step run vs Bugs
- Test suite vs Test case vs Test run vs Test result vs Bugs vs Test step run
- Test plan vs Test suite vs Test run vs Test result vs Bugs vs Test step run
- Test plan vs Test suite vs Test case vs Test run vs Test result vs Test step run vs Bugs
- Test Plan vs Test Suite vs Test Point vs Test Run vs Test Result vs Test Step Run vs Bugs
- Test Plan vs Test Suite vs Test Case vs Test Point vs Test Run vs Test Result vs Test Step Run vs Bugs
- Test Plan vs Test Suite vs Test Point vs Test Case vs Test Run vs Test Result vs Test Step Run vs Bugs
- Test Plan vs Test Suite vs Test Point
- Test Plan vs Requirement/PBI/User Story vs Test Case vs Test Run vs Test Result vs Test Step Run Vs Bugs

USABILITY OF THE VIRTUAL WORK ITEMS

These work items can be used in the following modules/sections:

SMART REPORT

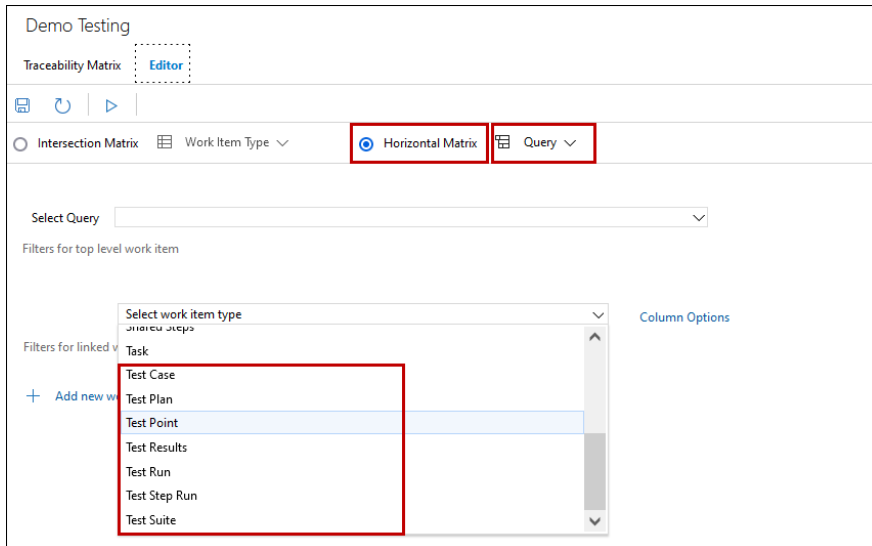Virtual work items can be used in **Smart Report** available under the **Queries tab**, **Test Hub** and **Smart Docs.**
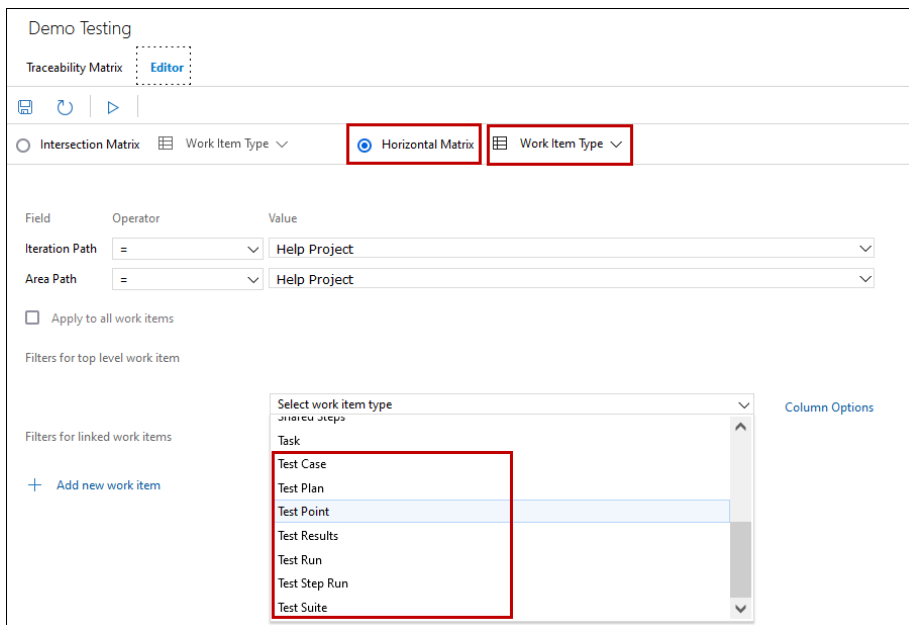
TRACE ANALYSIS

In the **Traceability** module, these virtual items can be used to create a **horizontal matrix** using:

- **Work item** type
- **Query** type

USING VIRTUAL WORK ITEMS TO CREATE A HORIZONTAL MATRIX USING QUERY TYPE

USING VIRTUAL WORK ITEMS TO CREATE A HORIZONTAL MATRIX USING WORK ITEM TYPE

CREATING TEST PLAN / TEST SUITE FROM TEST HUB IN AZURE DEVOPS

LIMITATIONS

SMART REPORT | QUERIES TAB :

- The linking of virtual work items is supported only when the report is generated from the **toolbar.**

- In Smart Report (Queries Tab), all the sections should be hierarchical except for the ones that do not have any subordinates and, for these, the hierarchy would be false.

- If you have work items other than Test Plan, Test Suite and Test Case, you cannot generate a test case API. If other work items are also a part of the query then the smart report will be generated on its normal functionality.

SMART REPORT | SMART DOCS MODULE :

- While using Smart Report in Smart Docs, the default section should have work item type "Any" or root work item type.

- The Report will only be generated on adding **Test Plan** / **Test Siute** / **Test Case** work items from **Insert Work Item** option. These work items are to be created from **Test Plan Hub.**