



iAuthor User Guide

December 2017

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Executive Summary

Introduction

Abstract

iAuthor proposes an approach to generate test scenarios directly from UML activity diagram. In this approach, test scenarios are directly derived from the activity diagram, and the tool provides a systematic approach towards formulating test cases. iAuthor is also useful in exporting the test cases into an Excel file

Purpose

The purpose of the document is to guide the user on iAuthor installation and usage.

Scope

The scope of this document is to give guidelines for installing iAuthor and using iAuthor for generating test scenarios, creating use cases and exporting the test cases etc

Prerequisites

- User should have iAuthor login credentials
- Admin rights shall be provided by Product team (UTO group)
- Admin user should know the projects to be created and user's information to create
- HP-ALM configuration details are optional

Technology Used

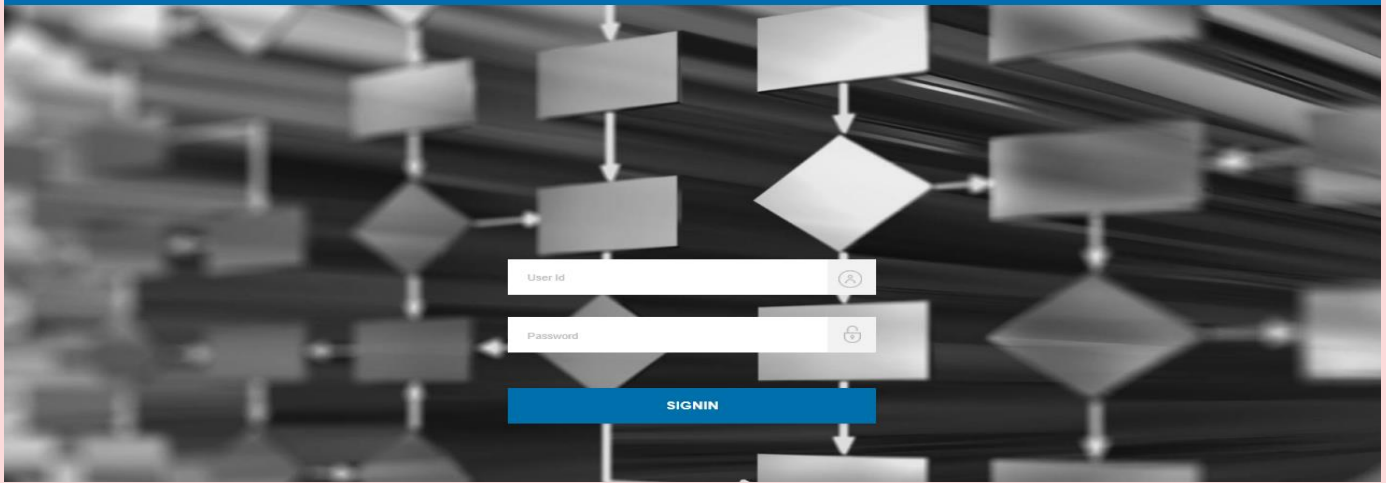
- Node JS 6.11.x
- Joint JS 1.1.x (Commercial library)
- JQuery 3.1.x
- My SQL

Drawing an activity diagram

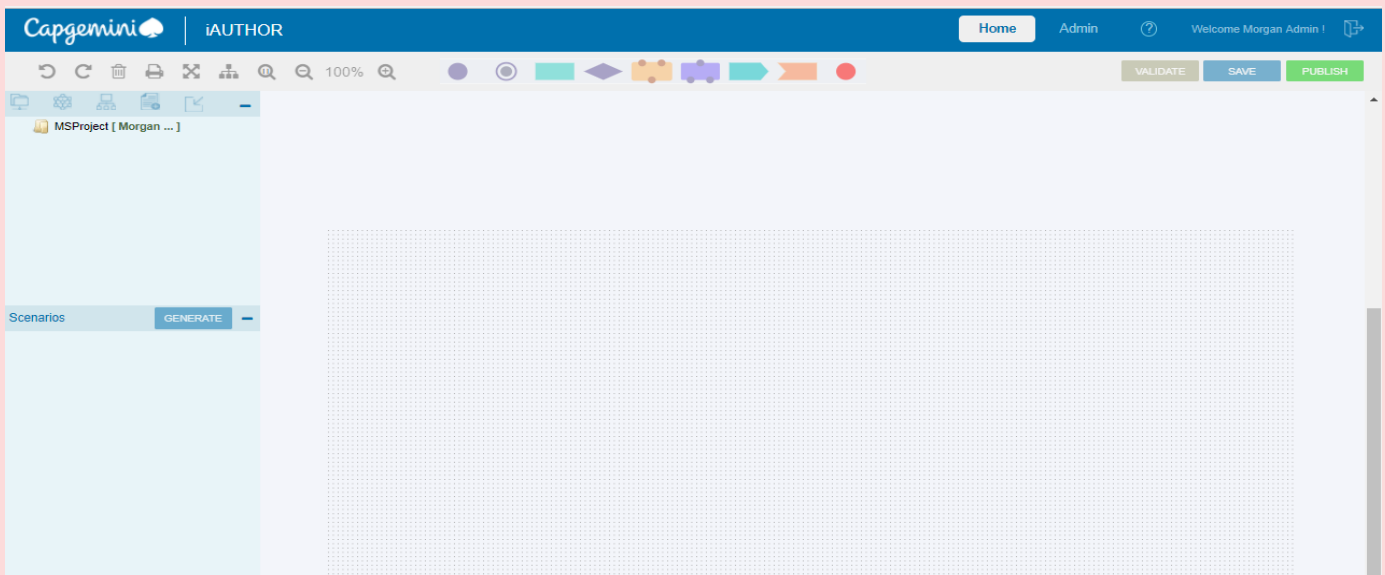
Creating iAuthor project

Below are the instructions to create a new project:


Access the iAuthor web application using domain name.

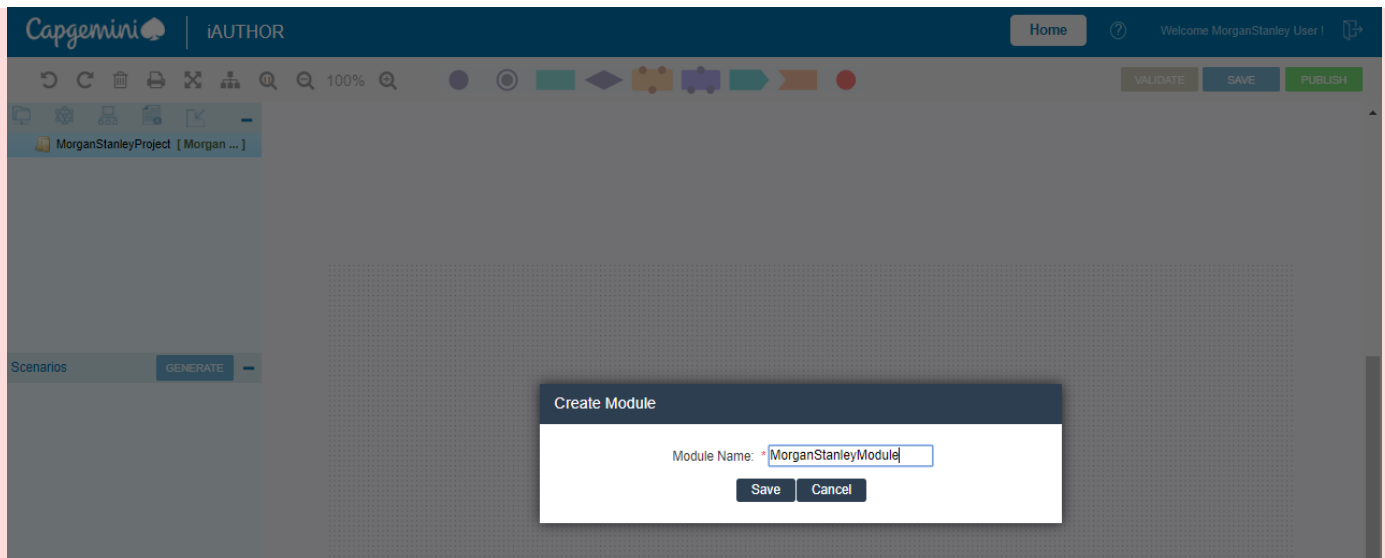


Once user enter the user name and password click on “signin” button. If authentication success page will redirect to iAuthor home page, else login page will populate login failed message for incorrect user id or password and number of attempts to remain.

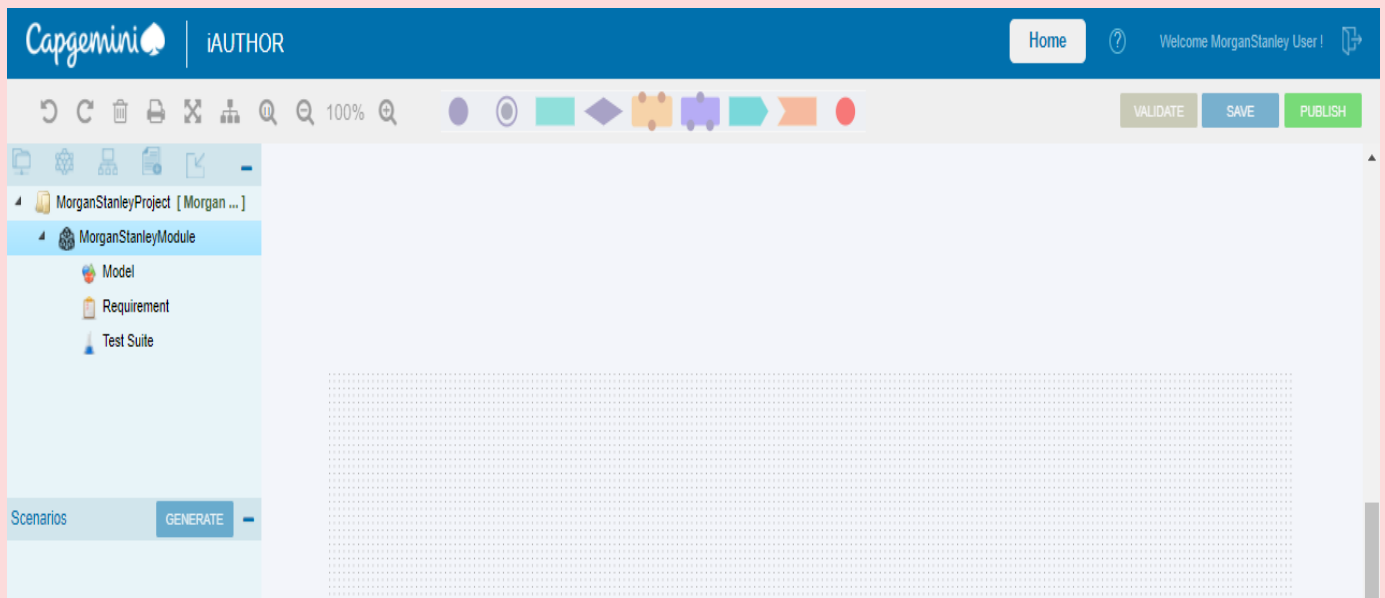



Users are not allowed to create a new project, users are allowed to create a new module, model and versions of the existing projects.

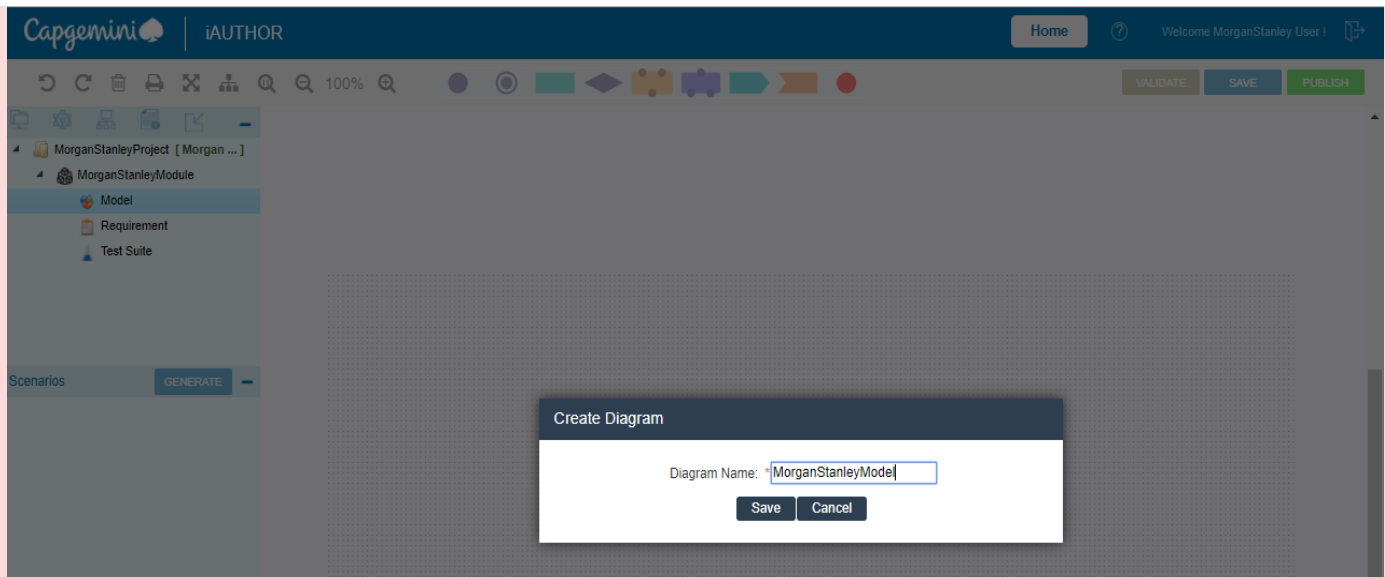
Creating a new module: Select the project and click on Create new module  option. It will display popup for module creation, provide the module name to the project and click on save button. Module created successfully.




Under the module automatically generated 3 sub directories called Model, Requirement, Test Suite.



Create a new model: Select the module and click on Create new model  option. It will display popup for model creation, provide the model name to the project and click on save button. Model created successfully.



Create a new version: Select the model and click on Create new version  option. It will display popup for version creation.

Version creation popup having three options to select:

- Yes: Open new popup for select the previous module and related versions. Click on yes button will imported the selected model version of diagram inside the model. Click on No button back to the home page.
- Blank Page: It will create the version without diagram.
- No: popup will close.

Based on user selection version will be created under model. At the same time model and version generated under Test Suite also.













Draw an activity diagram

Below are the instructions to create an activity diagram:

Drawing canvas will be available right side of the Project Navigation View pane to draw a diagram. To draw a diagram, use the components available in the stencil pane.







Stencil Pane provide the activities to draw a diagram:

-  Start activity: A black circle is the standard notation for an initial state before an activity takes place.
-  End activity: The black circle that looks like a selected radio button is the UML symbol for the end state of an activity.
-  Activity: The activity symbols are the basic building blocks of an activity diagram and usually have a short description of the activity they represent.
-  Decision activity: A activity marker shaped like a diamond is the standard symbol for a decision. There are always at least two paths coming out of a decision and the condition text lets you know which options are mutually exclusive.
-  Join activity: A join combines two concurrent activities back into a flow where only one activity is happening at a time.
-  Fork activity: A fork splits one activity flow into two concurrent activities
-  Send Signal Activity: Sending a signal means that a signal is being sent to an accepting activity
-  Accept Event activity: This action waits for an event to occur. After the event is accepted, the flow that comes from this action is executed.
-  Exception activity: Exception represent the exception case of the flow chart.
-  Arrow activity: Arrows represent the direction flow of the flow chart. The arrow points in the direction of progressing activities.

Drag the activities in drawing canvas based on your business requirement.

Drag any activity in drawing canvas, each activity having some functionality like below:



-  Click and drag to clone and connect the object in one go
-  Click and drag to connect the object.
-  Click and drag to clone the object.
-  Click and drag to rotate the object.
-  Click to remove the object.
-  Click to break all connections to other

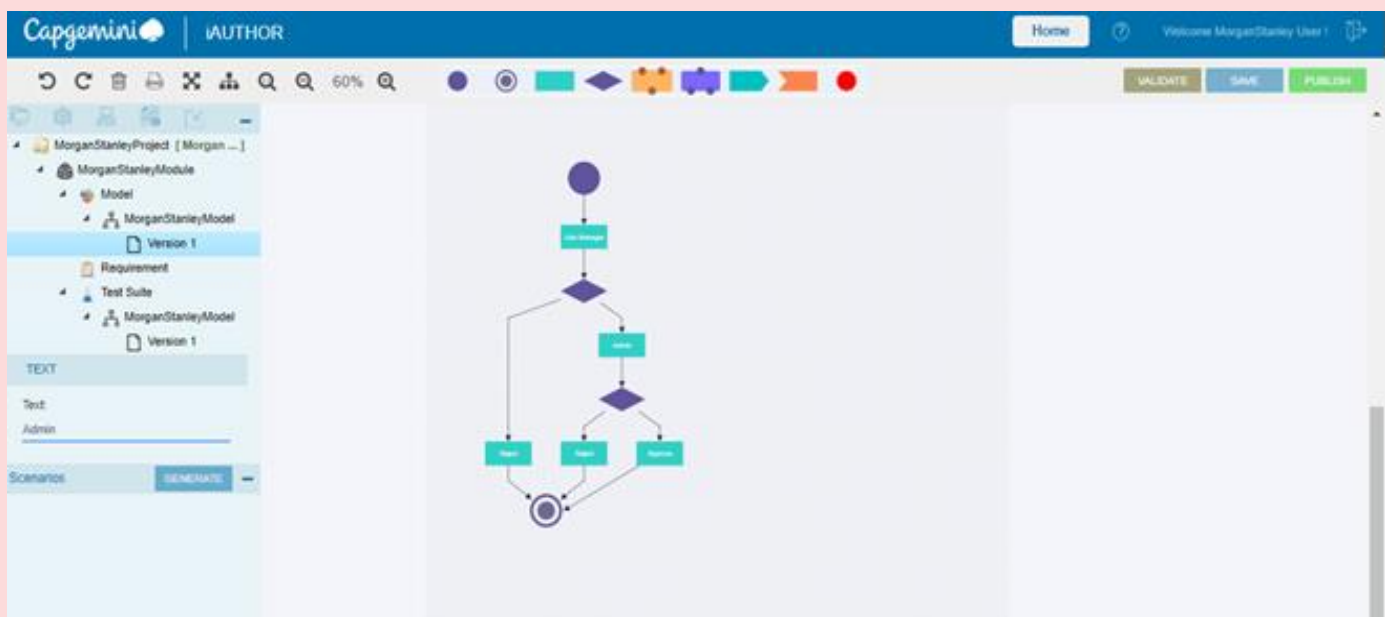


Diagram start with start activity and end with end activity.

Select any activity it will popup information panel under drawing canvas. Information panel having Problem, Scenario Details, Description, Test Condition and Node Traceability buttons.

- **Problems:** It will display problems and errors occurred by the flow.
- **Scenario Details:** It will display the scenario details.
- **Description:** It will display the selected scenario flow and related steps for that flow.
- **Test Condition:** It will apply the conditions on test cases.
- **Node Traceability:** It will display the scenarios covered by the flow and scenario details.

Will discuss each option in detail next sections.

Text:

Provide name to the activity using Text pane. It's available in below the project pane.

Based on business flow provide the meaningful names to the activities to understand easily.

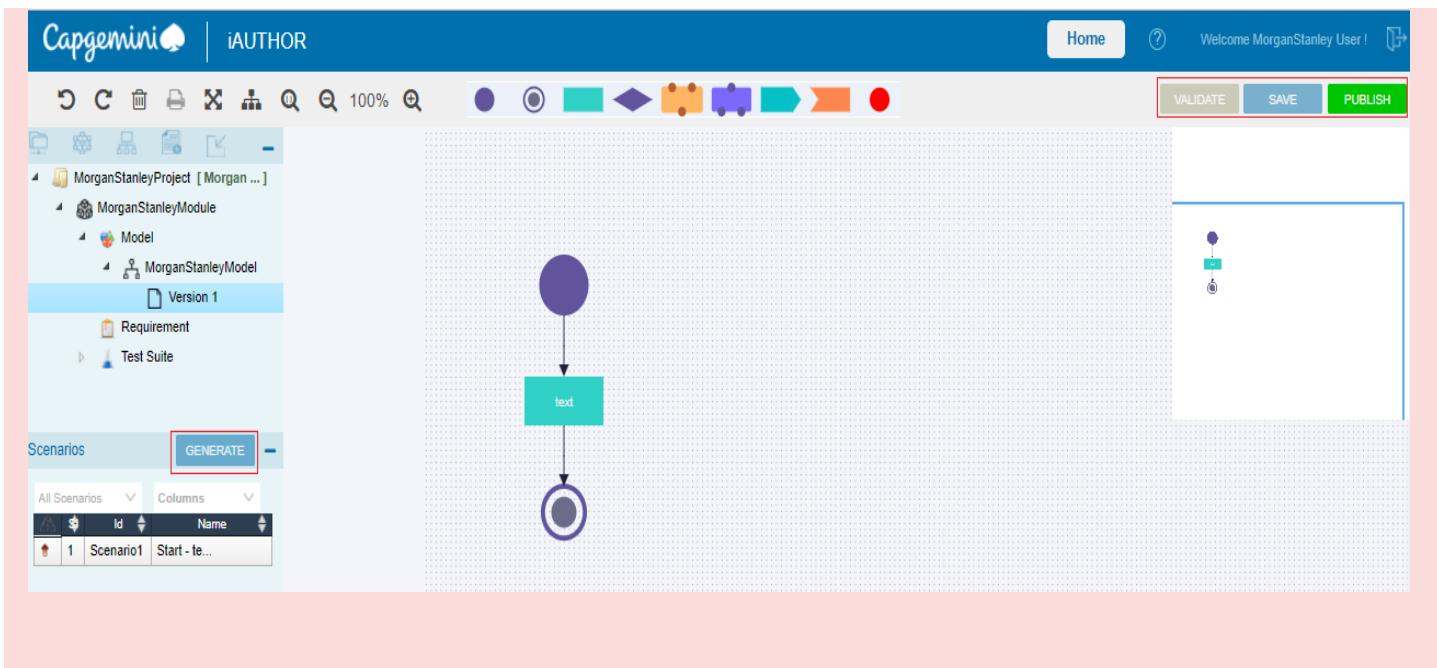
The screenshot displays the software interface. On the left, the 'TEXT' pane is visible with a text input field labeled 'Name of the Activity'. Below it, the 'Scenarios' pane shows a table with columns 'SI', 'Id', and 'Name'. The table contains four rows of scenarios. On the right, a large grid area shows a diagram with a central node labeled 'Name of the Activity'. At the bottom, there are tabs for 'Problems', 'Scenario Details', 'Description', 'Test Condition', and 'Node Traceability'. Below the tabs, there are buttons for 'Test Steps' (Choose File, No ...en, GetTemplate, Save, Add Row, Delete Row) and 'Delete' (Choose File, No ...en, GetTemplate, Save, Add, Delete). A message at the bottom says 'Please click 'Add Row' button to enter values'.

SI	Id	Name
1	Scenario1	Start - Li...
2	Scenario2	Start - Li...
3	Scenario3	Start - Li...
4	Scenario4	Start - Li...

Validate, Save, Generate Scenarios and Publish an activity diagrams

Below are the instructions to validate, save, generate scenarios and publish an activity diagram:

- **Validation:** Validate the diagram by using validate option. If any problems occurred, it will show in problems tab present in the information pane.
Note: Before save the diagram must and should validate the diagram.
- **Save:** Once validation successful, save the diagram by using save option.
- **Generate:** After save the diagram, generate the possible scenarios covered by the flow using generate option in scenarios pane. Scenario Details can be viewed in the Scenario Details tab present in the Information Pane
Note: Scenario generation and details will discuss in detail next sections.
- **Publish:** Once design completed you can publish the diagram by using publish option.
Note: Once published you can't modify the diagram.



Modify existing activity diagrams

Below are the instructions to modify existing activity diagrams

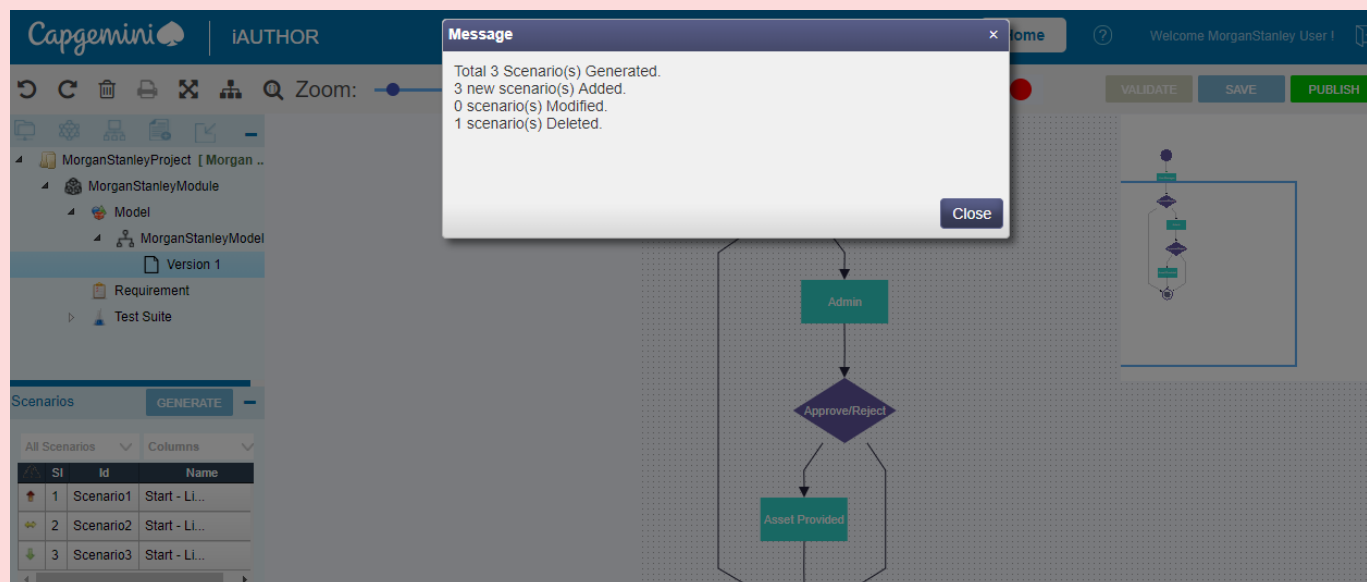
Note: Published versions can't be modifiable.

Select any existing version of activity diagram make necessary changes in the diagram.

- **Validation:** Validate the diagram by using validate option. If any problems occurred, it will show in problems tab present in the information pane.

Note: Before save the diagram must and should validate the diagram.

- **Save:** Once validation successful, save the diagram by using save option.
- **Generate** Click on Generate option in scenario pane it will generated new scenarios based on the changes. Display the popup for newly generated scenarios and the number of scenarios deleted from previous generation.

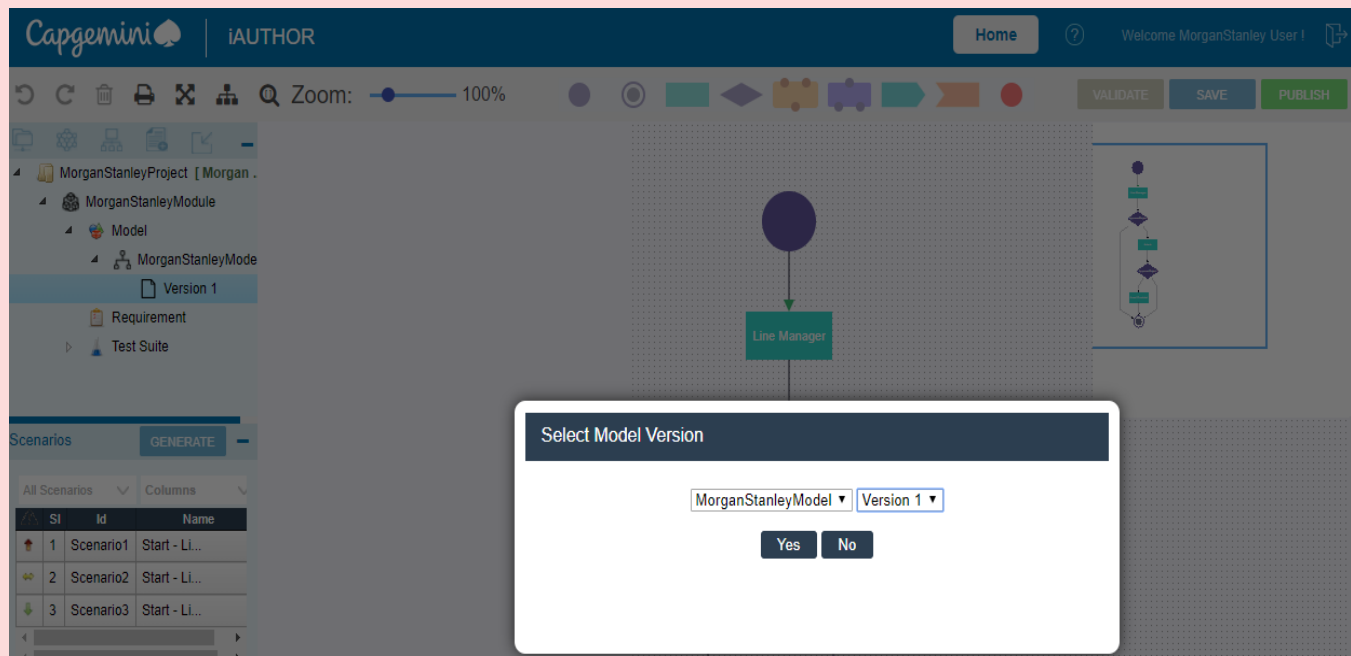


Publishing an activity diagrams

Below are the instructions to publish an activity diagram:

Select the version to publish in project navigation view pane and click on publish button available in tool bar.

Once publish the version you can't modify the diagram. If user need to add some more functionality follow the below instructions:



User can create new version of the published activity diagram by selecting Create New version button available in menu

User can also create a form with different version by clicking Yes in prompt box of Create New Version page. Then User select the Model and version

Now tool will create new version Activity diagram




Note: User cannot make any changes after publishing the Activity Diagram

Scenarios and Test case generation

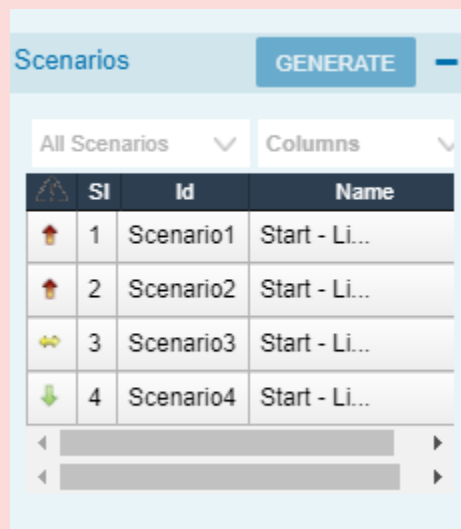
Scenario generation

Below are the instructions to generate test scenarios automatically

To generate test case scenarios, click on generate button in scenarios pane. Tool will generate test cases by using the diagram and display information about number of test scenarios and priority. Scenarios will be listed out in the scenarios pane along with their id, names and priority.

-  Symbol represents that the scenario is having High Risk Exposure.
-  Symbol represents that the scenario is having Medium Risk Exposure.
-  Symbol represents that the scenario is having Low Risk Exposure.

The tool has provided to customize the scenarios based on criticality and scenario type in scenario pane



Scenario selection and details

Below are the instructions to scenarios selection and details:

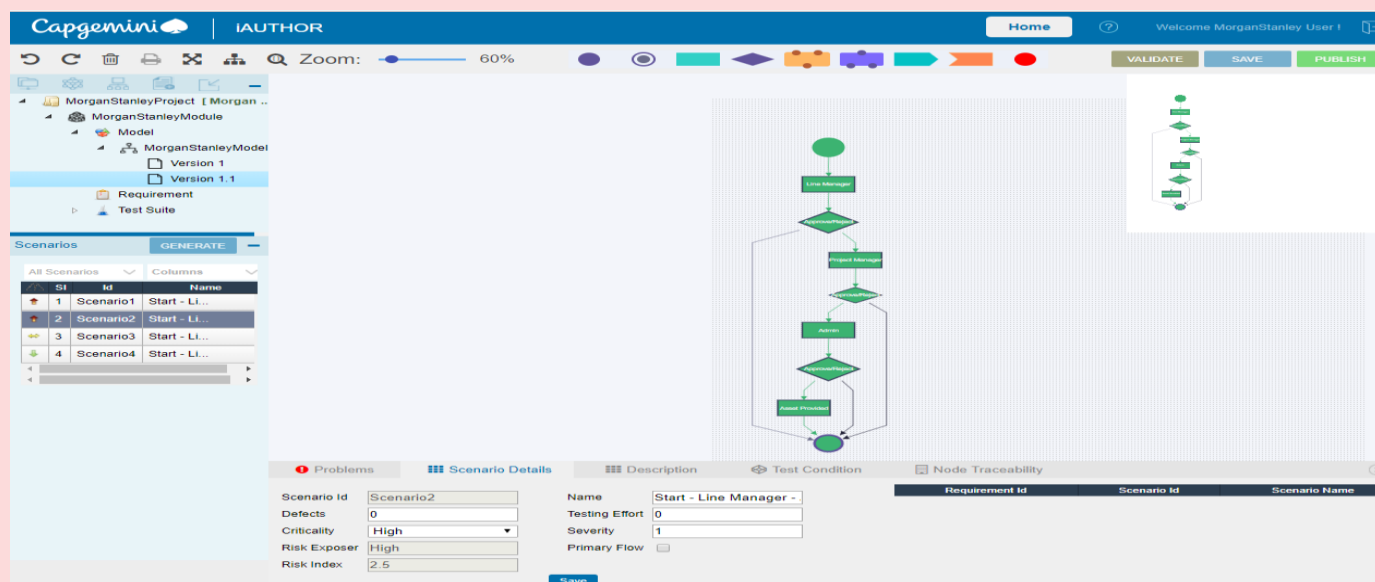
Select any one of the scenario in scenarios pane. Scenario flow will high light in diagram and selected scenario details are displayed in scenario details tab present in the Information Pane (which is available below the drawing canvas).

Scenario details tab:

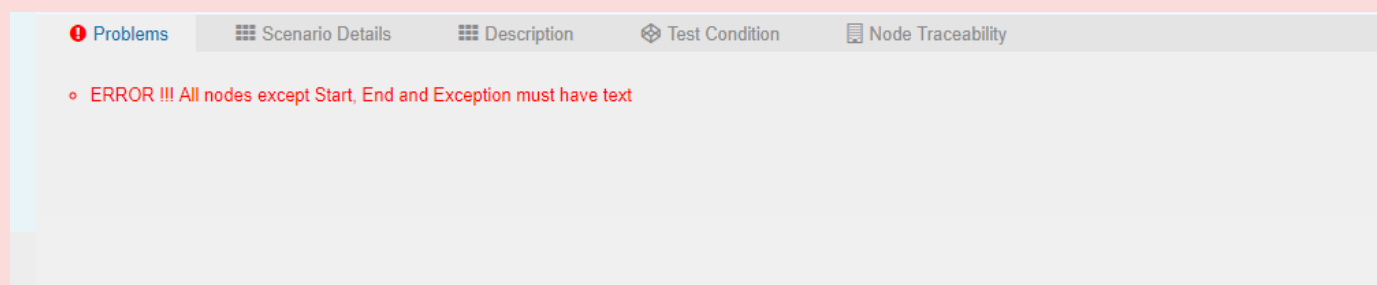
In the scenario details tab, will display the Scenario Id, Name, Defects, Testing Effort, Criticality, Severity, Risk Exposer, primary flow, Risk Index.

Some of the fields are editable, based on requirement to change the Name, Defects, Testing Effort, Criticality, Severity, primary flow.

Note: To make these changes effective, Save the changes by clicking the Save button in the Information Pane after editing the scenario details.



Problems tab: Problems tab will display the problems and errors occurred in all stages.



Description tab: It will display the selected scenario flow and steps details.

The screenshot shows the 'Description' tab selected in the top navigation bar. Below the navigation bar, there is a table with the following data:

ScenarioID	StepsID	Steps	Test Step	Expected Result
Scenario3				
	Step1	startState		
	Step2	Line Manager		
	Step3	Approve/Reject		
	Step4	Project Manager		

Test Condition tab: It will be used for adding test conditions to the nodes.

To create test steps to a node, in two ways:

1. Download the file using getTemplate and file upload option:

- Tool provide an option to download the test steps template by selecting Get Template button in test condition tab.
- After download the template file, fill the information (S. No, Action, Target Type, target, Step Data, Description) and save the file.

The screenshot shows the 'Test Condition' tab selected in the top navigation bar. Below the navigation bar, there is a table with the following data:

S.No	Action	TargetType	Target	Data
1	Close	Browser	browser will close	chrome

- Export the template using choose file button in test condition tab.
- Finally click on Save button to save the test steps data

Problems Scenario Details Description **Test Condition** Node Traceability


Test Steps: Choose File No ...en GetTemplate Save Add Row Delete Row

#	Action	TargetType	Target	Step Data	Description	
1	Close	Browser	Browser will close		Close Browser will close Browser	

Choose File No ...en GetTemplate Save Add Delete

Please click add button to enter values

2. Add Row option:

- Click add row button under test steps. Then add S. No, Action, Target Type, target, Description in the table. If you want to add another step, again click on add row button
- Finally, click save button under Test Condition to save the test steps and test data.
- Once add the test steps provide the data to the steps by clicking the  button. Without clicking arrow button can't be add the data.

Problems Scenario Details Description **Test Condition** Node Traceability

Test Steps: Choose File No ...en GetTemplate Save Add Row Delete Row

#	Action	TargetType	Target	Step Data	Description	
1	Close	Browser	Browser will close		Close Browser will close Browser	

Choose File No ...en GetTemplate Save Add Delete

#	Target	Data
1	Close->Browser->Browser will close	

Node Traceability tab: It will display the node traceability.

Select any node of the activity diagram and click on node traceability tab in information pane. It will list out the scenarios used this node.

Scenarios

GENERATE

All Scenarios

Columns

SI	Id	Name
1	Scenario1	Start - Li...
2	Scenario2	Start - Li...
3	Scenario3	Start - Li...
4	Scenario4	Start - Li...

Problems

Scenario Details

Description

Test Condition

Node Traceability

#	Scenario ID	Scenario Name	Criticality	Risk Exposure
1	Scenario1	Start - Line Manager - Approve/Reject - End	5	3
2	Scenario2	Start - Line Manager - Approve/Reject - Project Manager - Approve/Reject - Admin - Approve/Reject - Asset Provided - End	4	2.5
3	Scenario3	Start - Line Manager - Approve/Reject - Project Manager - Approve/Reject - Admin - Approve/Reject - End	2	2.5
4	Scenario4	Start - Line Manager - Approve/Reject - Project Manager - Approve/Reject - End	4	2.5

Regression Testing

iAuthor allows user to compare two different versions of an activity diagram

- Right click on Model of the Project in project pane and then select regression
- Now iAuthor will be opened in regression perspective
- In the regression view pane, select the versions of the flow diagrams to be compared. Then, click compare button (Refer the snapshot below)

Capgemini

iAUTHOR

Home

Welcome MorganStanley User

Compare Version

Version 1

and

Version 1.1

compare

Version 1_daigram

Version 1.1_daigram

Scenario Status

Node Traceability

New

Existing

Modified

Deleted

SI	ID
1	startState;LineManager;Approve/Reject;ProjectManager;Approve/Reject;Admin;Approve/Reject;AssetProvided;endState;
2	startState;LineManager;Approve/Reject;ProjectManager;Approve/Reject;Admin;Approve/Reject;endState;

- Now the selected versions of the activity diagram will be opened under the regression view pane as above
- Now iAuthor will display New, Existing, Modified and Deleted node details between the versions

Note: Activity Diagram should have minimum two versions iAuthor allow user to perform regression testing if Diagram should have minimum of two versions

Exporting test cases:

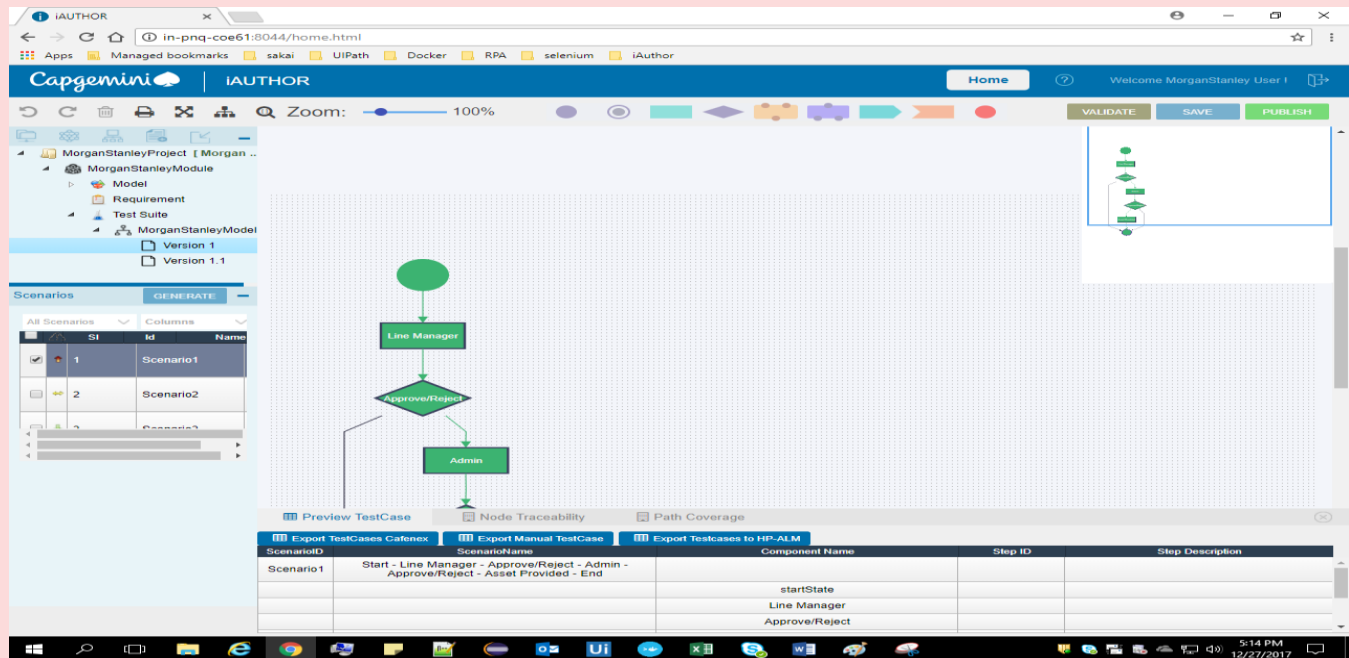
Exporting Test Case into an Excel File

Below are the instructions to export the test cases into an Excel file:

Select a version of an activity diagram under Test Suite in the project navigation view pane, iAuthor will be opened in Test Suite perspective.

Select the scenario in Scenario pane: Test case details are visible in three tabs

Preview Test case, Node Traceability and Path Coverage tabs



Preview Test Case Tab

Preview test case tab will show the ways of exporting test cases:

1. Export Test Cases in Cafenex format:

- Select the required scenarios from the scenario pane
- Now click on Export Test Cases to Cafenex button available in Preview Test Case tab
- Now tool will download excel file for selected scenario details and tool will download the selected scenarios in cafenex format

ScenarioID	ScenarioName	Component Name	Step ID	Step Description
Scenario1	Start - Line Manager - Approve/Reject - Admin - Approve/Reject - Asset Provided - End			
		startState		
		Line Manager		
		Approve/Reject		

2. Export Manual Test case format:

- Select the required scenarios from the Scenario List pane
- Now click on Export Manual Test Case button available in Preview Test Case tab
- Now tool will download the excel file to selected scenario details.

3. Export Test Cases in HP-ALM format:

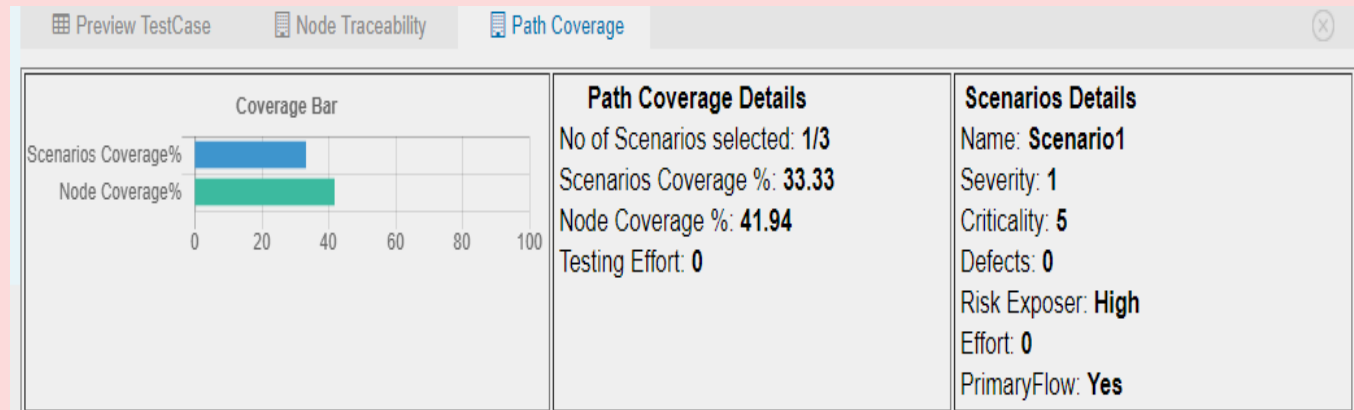
- Select the required scenarios from the Scenario List pane
- Now click on Export Test Cases to HP-ALM button available in Preview Test Case tab
- Now tool will display HP-ALM login page to connect HP-ALM and user provide the mandatory details to connect HP-ALM.
- Now tool will export the scenario details and post/create test case details in HP-ALM server.

ScenarioID	ScenarioName	Component Name	Step ID	Step Description
Scenario1	Start - Line Manager - Approve/Reject - Admin - Approve/Reject - Asset Provided - End			
		startState		
		Line Manager		
		Approve/Reject		

Path Coverage Tab

Select a version of an activity diagram in Test Suite Project Navigation View pane, iAuthor will be opened in Test Suite perspective

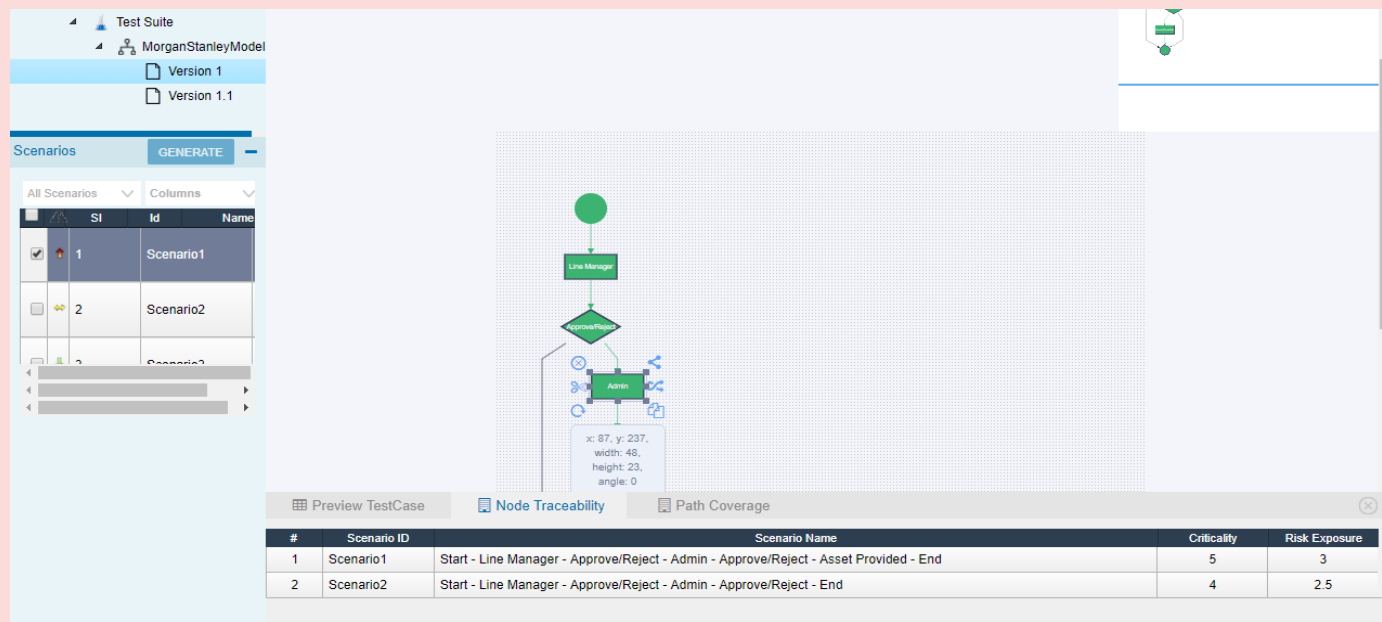
- Select the required scenarios from the Scenario pane
- Now click on Path Coverage button available under diagram
- It will populate Coverage details.



Node Traceability Tab

Select the required scenarios from the Scenario pane

Select any node of the activity diagram and click on node traceability tab in information pane. It will list out the scenarios used this node.



Generate diagrams using Import functionality:

Reverse Engineering/Importing Microsoft Excel files as iAuthor Activity Diagrams

Below are the instructions to import the test cases to draw an activity diagram

Click on Import File  option available in project pane.

- Select the version to import the diagram using test cases.
- Choose the excel file to the directory and then click on Import button.
- Now tool will display the Activity Diagram as shown below.

Note:

- The supported file types are xls andxlsx
- iAuthor does not allow user to import the version which is published
- User needs to validate, save the Activity Diagram before generating scenarios

Importing Visio diagram as iAuthor Activity Diagrams

Below are the instructions to export the test cases of the scenarios

- Click on Import File option available in menu
- In the next dialog box, Browse the directory of the Visio diagrams and then click on Import button.
- Now tool will display the Activity Diagram as shown below.

Note:

- vsdx file type only allowed
- iAuthor does not allow user to import the version which is published
- User needs to validate, save the Activity Diagram before generate scenarios

Importing XML files as iAuthor Activity Diagrams

Below are the instructions to export the test cases of the scenarios

- Click on Import File option available in menu.
- In the next dialog box, Browse the directory of the xml file and then click on Import button.
- Now tool will display the Activity Diagram as shown below.

Note:

- Only xml file type is allowed
- iAuthor does not allow user to import the version which is published
- User needs to validate, save the Activity Diagram before generate scenarios

Appendix

Exporting the iAuthor projects as XML files

Exporting Use cases

Backup for iAuthor Project
