



TestSecretary™ User's Guide
Software Version 2.0

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1.0 Introduction

1.1 Overview

TestSecretary is a Continuous-Risk-Benefit (CRB) testing and monitoring platform. TestSecretary not only looks at running automated tests for quality assurance, but goes further to look at real-time risk-benefit quantification. This is only possible with the advanced framework and algorithms used by the platform. The application consists of 12 modules, each of which plays an important role in the CRB life-cycle. Each module is designed to enable a specific function, from requirements specification to detailed platform analytics.

TestSecretary is available as a SaaS platform on a subscription biases with multiple price tiers.

1.2 Key Features of TestSecretary

TestSecretary provides the user with many valuable features. The key features are listed below:

- Supports the end-to-end tech application testing and monitoring.
- Supports Multi-technology testing and monitoring.
- Supports the UAP[®] Automation engine for automated test execution.
- Supports autonomous execution with MAGIC[®]
- Supports auto-defects.
- Supports the end-to-end issue tracking.
- Supports end-to-end traceability
- Supports quantification of bugs by monetary value.
- Supports CRB dashboard.
- Supports the no-code scripting language KSL[®] for script generation.
- Supports document archiving and tracking.
- Supports module analytics.
- Integrated automation scheduler for scheduling automation runs.
- Multi-lingual support.

1.3 TestSecretary Testbeds

TestSecretary is organized in testbeds. A testbed can be views as a tenant workspace that house the entire functionality of the 12 TestSecretary modules. Testbeds are completely siloed of each other. For example, Testbed A and Testbed B created by Company X have

no connection whatsoever. This feature helps keep entire initiatives separate when such isolation is necessary.

Testbeds can be manipulated from a dashboard accessed by clicking the **Select Testbed** link in the application header when logged in. Here testbeds can be created, deleted and cloned by the administrator. If your account has multiple testbeds associated with it, you can designate a default testbed. The default testbed is the one you are logged into when you first sign in.

2.0 Getting Started

2.1 Starting TestSecretary

To Start TestSecretary, go to the URL www.TestSecretary.com, the TestSecretary home page will pop up as shown in Figure 1.

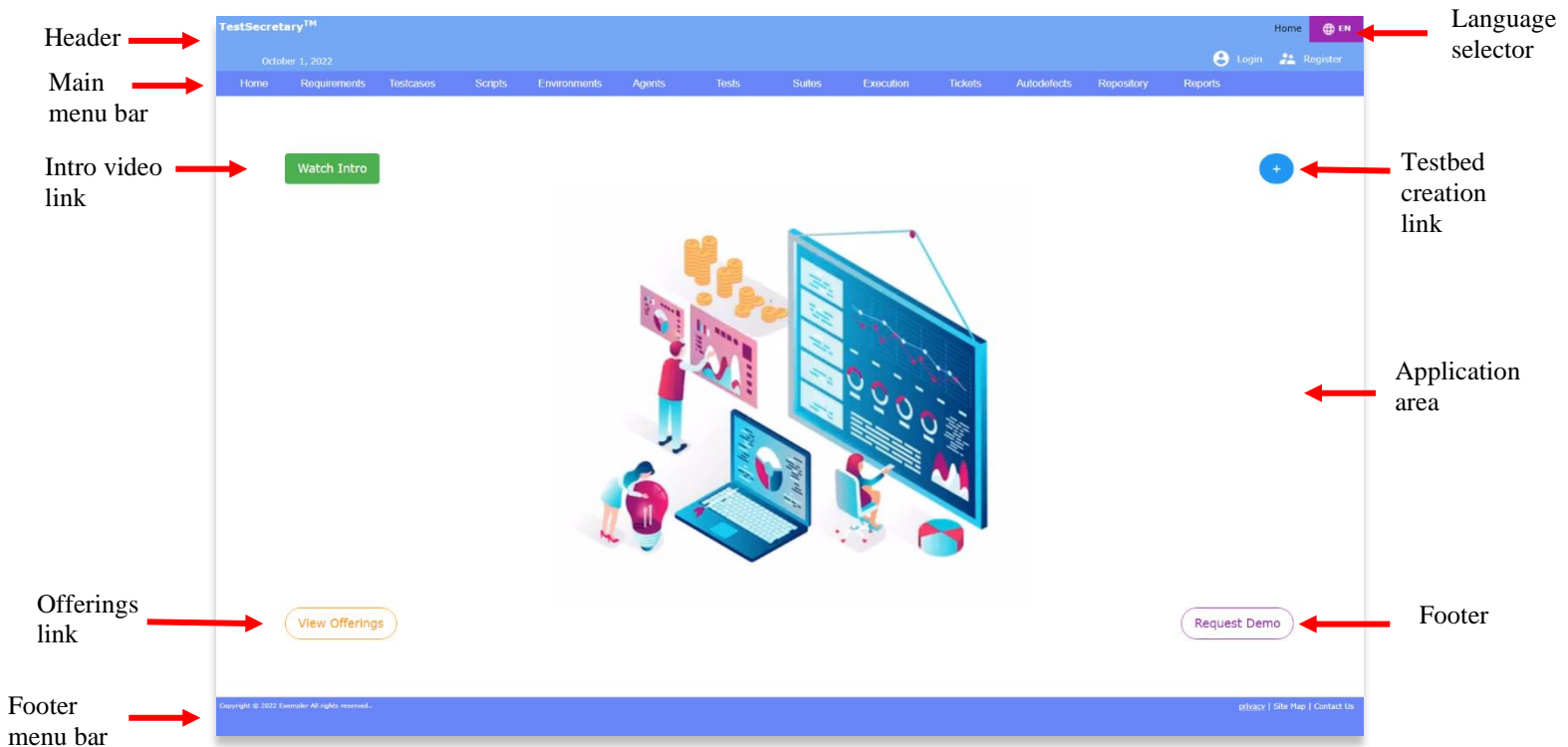
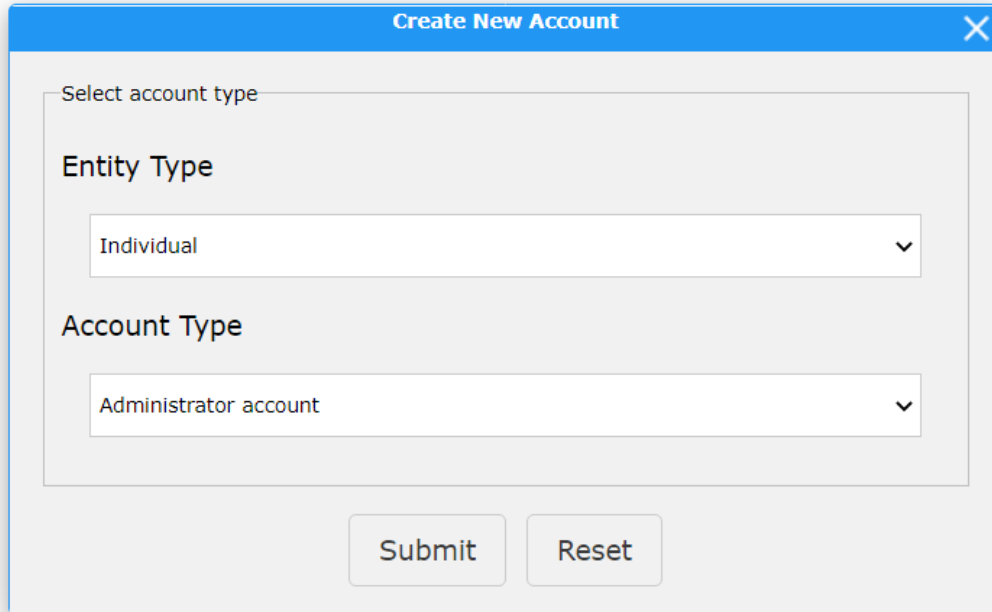


Figure 1 – TestSecretary home page.

2.2 Opening an Account

2.2.1 Opening an Individual Account

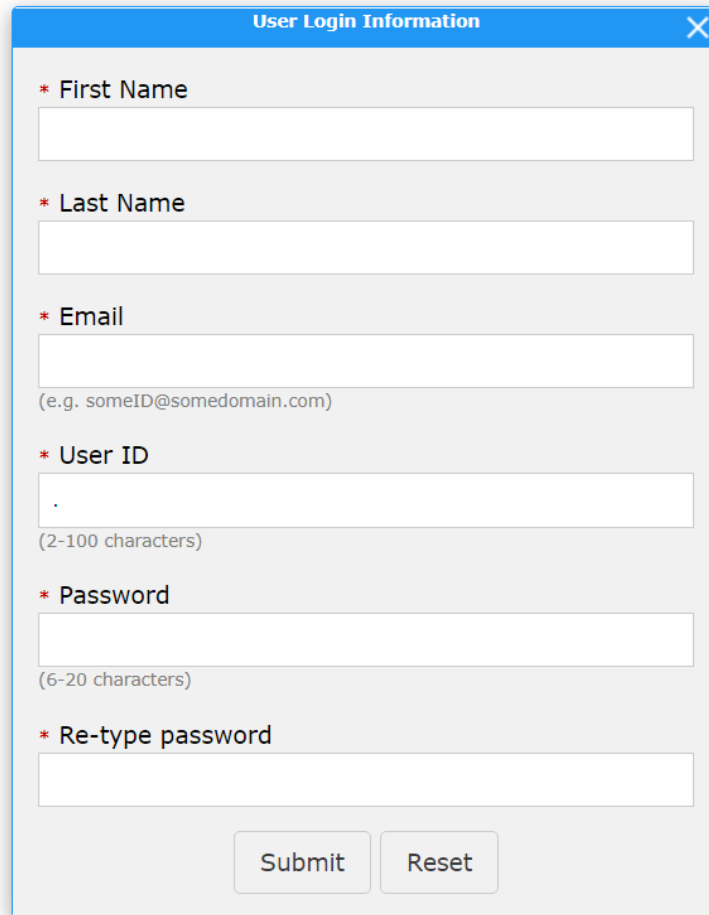
Once on the home page, you can create a user account by clicking the **Register** link in the header section of the application. You will be presented with a widget as shown in Figure 2. To open an individual account, select entity type, **individual** and account type **administrator**.



The image shows a "Create New Account" dialog box. It has a blue header with the text "Create New Account" and a close button (X) in the top right corner. The main content area is light gray and contains a section titled "Select account type". This section includes two dropdown menus. The first dropdown is labeled "Entity Type" and has "Individual" selected. The second dropdown is labeled "Account Type" and has "Administrator account" selected. At the bottom of the dialog, there are two buttons: "Submit" and "Reset".

Figure 2 – Individual account creation selection widget.

Once you hit **Submit**, you will be presented with a user information form as shown in Figure 3. Once you fill in the form and hit **Submit** your account will be created. Note that as an individual you will only have one Testbed. To create multiple testbeds, you need to create a company account. This is described in the next section.



The image shows a 'User Login Information' dialog box with the following fields and buttons:

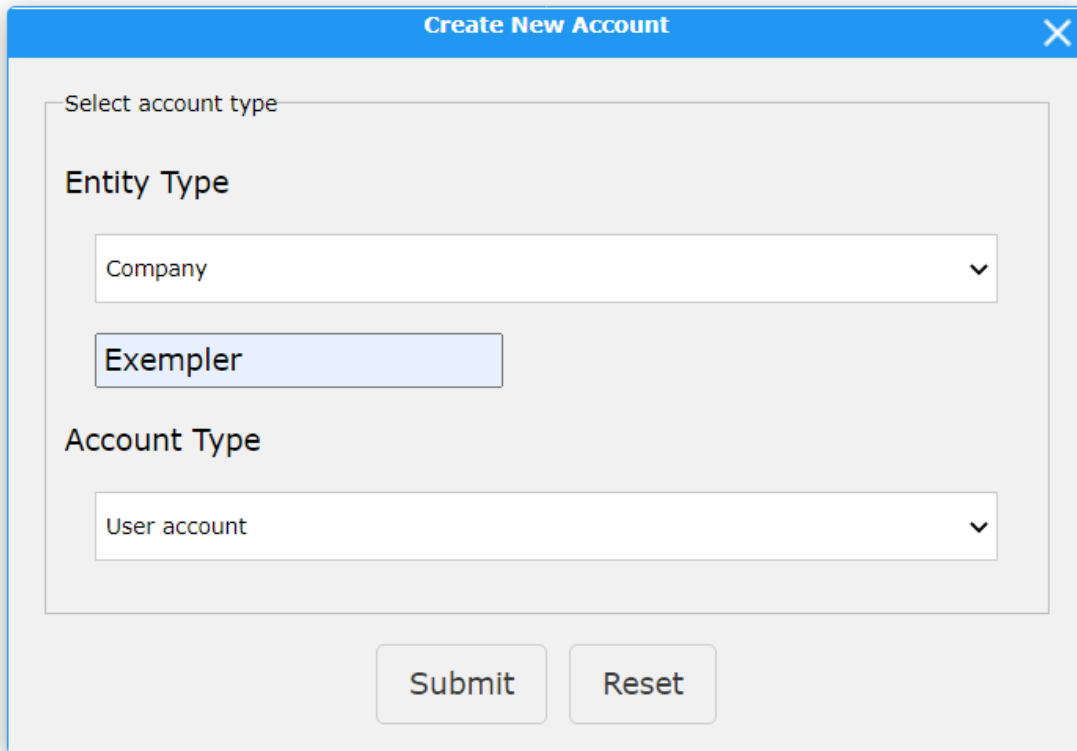
- * First Name**: Text input field.
- * Last Name**: Text input field.
- * Email**: Text input field with a placeholder example: (e.g. someID@somedomain.com).
- * User ID**: Text input field with a placeholder character: . and a note: (2-100 characters).
- * Password**: Text input field with a note: (6-20 characters).
- * Re-type password**: Text input field.

At the bottom of the dialog are two buttons: **Submit** and **Reset**.

Figure 3 – User login Information Widget

2.2.2 Opening a Company Account

To open a company account, select entity type, **Company**. An entry field to enter the company name will appear. Then, if the company does not already have an account select **Administrator account** for the account type. If on the other hand the company already has an account, select **user account**. Figure 4 shows the account selection widget for creating a company account.



The image shows a 'Create New Account' dialog box. It features a blue header with the title 'Create New Account' and a close button (X). The main content area is titled 'Select account type' and contains two dropdown menus. The first dropdown, labeled 'Entity Type', has 'Company' selected. Below it is a text input field containing 'Exempler'. The second dropdown, labeled 'Account Type', has 'User account' selected. At the bottom of the dialog are two buttons: 'Submit' and 'Reset'.

Figure 4 – Company account creation selection widget.

For the creation of a company administrator account the form is identical to that in Figure 3. However, for the creation of a user account, the form will be as shown in Figure 5. The main difference in the user creation form, is the addition of two extra fields;

TestSecretaryID and the **Requested Role**. The **TestSecretaryID** is the id of the testbed to link the account to, and can be obtained from the administrator of the company account and **Requested Role** should be selected from the drop-down menu.

User Login Information ✕

* **First Name**

* **Last Name**

* **Email**

(e.g. someID@somedomain.com)

* **User ID**

(2-100 characters)

* **Password**

(6-20 characters)

* **Re-type password**

* **TestSecretary ID**

(A 14 character string issued by your administrator)

Requested Role

Figure 5 – Company user account creation form.

TestSecretary has five user role types. Table 1 is a summary of the different account types. Note that there must be one administrator of the system. They are responsible for editing all other user accounts.

2.2.3 Account Role Types

Table 1 – User role types

Account role	Description
Administrator	The administrator can access all pages in the system. They can also assign and edit account types. There can only be one administrator. The administrator can also pass on their role to another user.
Advanced	The advanced user can access all pages except those that assign and edit accounts.
Standard	The standard user can perform all actions as the advanced user, except execute automation.
Vendor	The vendor user can only work on trouble tickets in the system.
Guest	The guest user has read-only access to the system. They can also download information from the system.

To create an account, follow the process outlined in the prior section. Follow the screens to create a new user account. If you are not the administrator your assigned account will be **Guest**. An e-mail will be sent to the administrator with information about your requested account type. It is up to the administrator to assign you an account type other than **Guest**. Once the administrator assigns you an account, you will receive an e-mail with your new account details.

2.2.4 Administrator Account features

As the administrator of a TestSecretary instance, you have access the functionality that helps you manage other user accounts. Once you login the administrator account, click on the word **Administrator** in the header section of the application and you will be presented with a screen as shown in Figure 6.

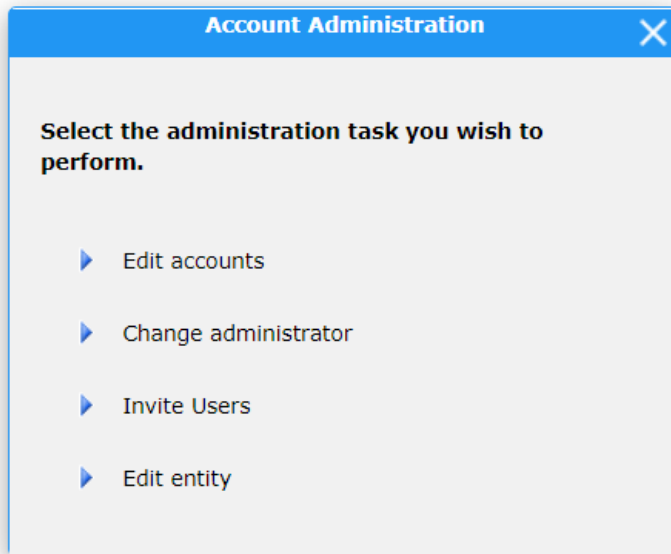
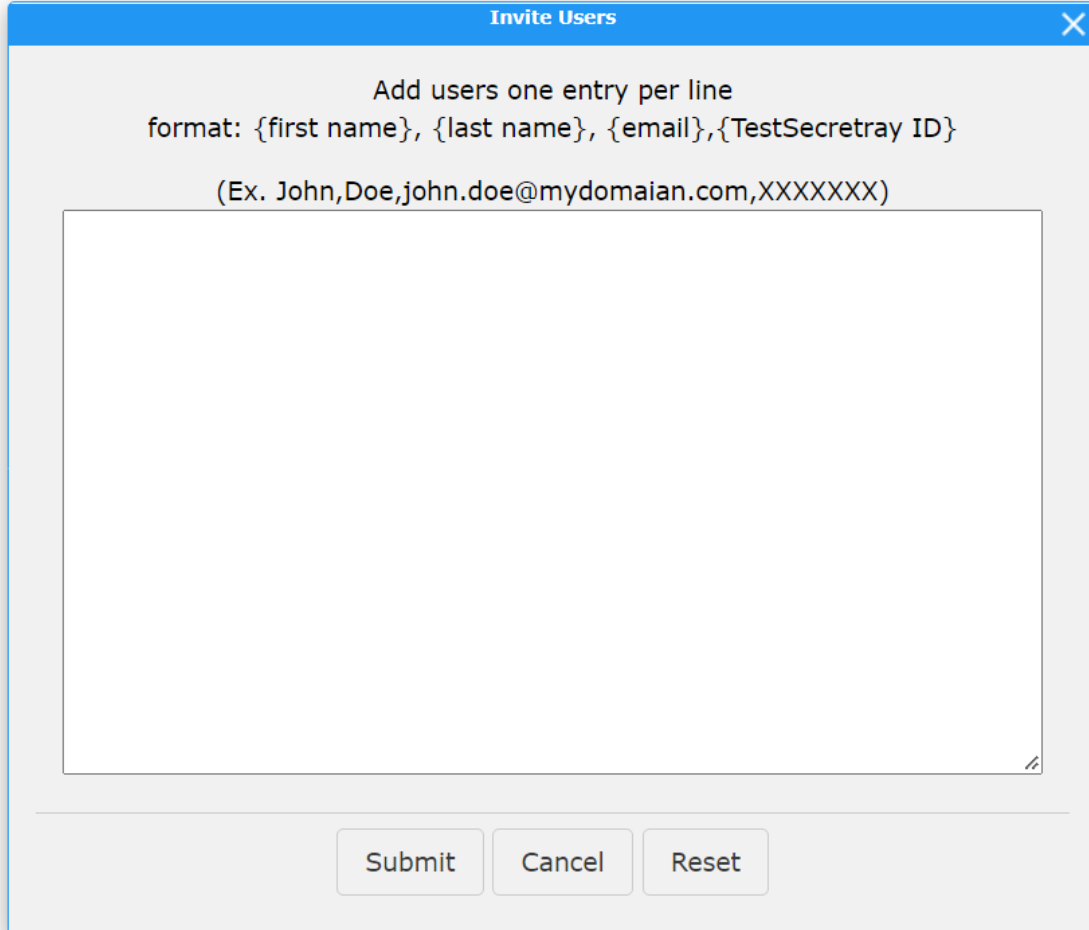


Figure 6 – Administrator selection Form

The **Edit accounts** link is used to activate/deactivate users and change account types.

The **Change administrator** Link is used to change the administrator. Once the administrator is changed the new administrator will be notified of their new role and you will no longer have access to administrator functions in the application.

The **Invite Users** link is used to add users your TestSecretary testbed(s). Once you click on the link you will be presented with a link as shown in Figure 7. The form allows you to add users in bulk using a comma separated format. Each line should contain information for a single user. The data structure to use is shown in the header of the form. Once you have entered the users you want to invite and submit the form, each user will be notified of their new account details via email. If erroneous data was entered for a user entry, the system will alert you of the error and will not send the invitation email for that user.



Invite Users

Add users one entry per line
format: {first name}, {last name}, {email},{TestSecretray ID}
(Ex. John,Doe,john.doe@mydomaian.com,XXXXXXX)

Submit Cancel Reset

Figure 7 – Bulk user invitation form

2.3 Using TestSecretary

2.3.1 Accessing Your Account

Once you have a user account you are ready to login and use the application. Click the login icon on the right of the application header. You will be prompted to enter your user name and password. Once you enter the information, click the **Login** button. If the login information is incorrect, you will be prompted to re-enter the information. If the login is successful, the screen that appears will resemble that in Figure 8. Note that this page differs from that in Figure 1 in that it the login link is replaced by a logout icon, the **Open Account** link is replaced by a **Profile** link and your user information is displayed in the application header. To logout, click the **Logout** link.

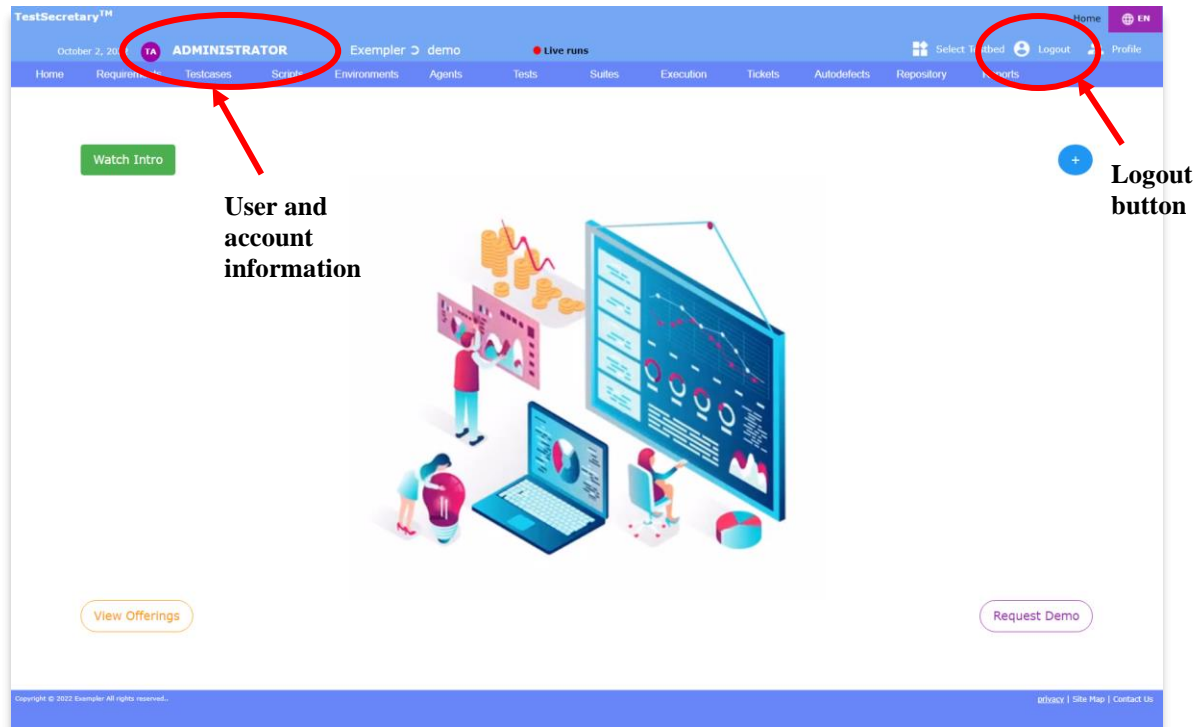


Figure 8 – Home page after logging in

2.3.2 Managing Your Account

Once logged in you can manage your account. To edit your account information, click the **Profile** link. Here you can view and edit your account information.

2.3.4 Navigating Through the Application

When logged in, you can navigate through the application. The top menu bar contains the main navigation links with corresponding dropdown sub-menu tabs. Note that the top right corner of the header area shows the current page you are on. The right footer menu bar always shows three links; **privacy**, **sitemap** and **contact**.

When you launch the application or are initially log in, the active main menu tab is the **Home** tab. Here you can find out general information about the application. The corresponding sub menu links with descriptions are shown in Table 2.

Table 2 – Home tab sub menus

Sub tab	Description
About	Information about the TestSecretary software

Overview	Short general description of TestSecretary
Features	Key features of TestSecretary with explainer videos
Packages	TestSecretary SaaS packages
Services	Exemplar services
EULA	TestSecretary End User License Agreement
Contact	Exemplar contact page

The footer menu tabs with descriptions are shown in Table 3.

Table 3 – Home tab sub menus

Sub tab	Description
Privacy	Exemplar privacy statement
Sitemap	TestSecretary site map
Contact	Exemplar contact page

Likewise, each of the other main menu tabs have sub menu links, each of which is used to perform a specific function in the application.

3.0 Application Modules

3.1 Requirements Management

The Requirements module is used to enter and track your business requirements. The module can be used independently to house and track your business requirements or you can use it in conjunction with other modules to achieve the desired level of traceability. Test requirements can be created directly in the system or using a CSV file and then imported into TestSecretary. To enter the Requirements module, click the **Requirements** tab in the main menu.

3.1.1 Entering a New Requirement

To enter a new requirement, use the following procedure:

- Click the **New** tab in the sub menu bar. An entry form will appear.
- Enter all the required information.
- Click **Submit** to create the requirement.

3.1.2 Editing a Requirement

Requirements are stored in sub-categories of main categories. To edit a specific requirement, you need to know the category and sub-category it is in.

Use the following procedure to edit a requirement:

- Open the edit page by clicking the **Edit** sub menu link.
- Select a category.
- Select a sub-category.
- Select the desired requirement from the list of available requirements.
- Edit the requirement and click **Submit** when done.

Note that if you change the ID of a requirement when editing, a new requirement will be created. If you wish to delete the old requirement, use the delete sub menu link.

3.1.3 Importing Requirements

The import feature allows you to import several requirements at a time. To import a batch of requirements you must first complete the CSV template. The template, **RequirementTemplate.csv**, can be found in the **Template** sub menu link of the **Requirements** dropdown. Download the file onto your computer and fill in the information. The first line is the header line and should not be removed. The fields of the

template with their descriptions can be found in Table 4. The required fields must be populated to successfully upload the template. Note that the template must be saved as a .csv file.

Table 4 – Requirements template fields with descriptions

Field name	Description	Notes
RequirementID	Identifier for the requirement.	Required
Title	The title of the requirement.	Required
Author	The author of the requirement. The author must have an account in the system.	Required
Owner	The owner of the requirement. The owner must have an account in the system. The owner may be the same as the author.	Required
Category	The category of the requirement. The category must already exist in the system.	Required
SubCategory	The sub-category of the requirement.	Required
RequirementStatus	The requirement status can only be one of the following: <ul style="list-style-type: none"> • Pending • Complete 	Required
Description	The description of the requirement.	Required
Notes	Any notes related to the requirement.	Not required

Once the template has been completed, perform the following steps to upload the information into the system:

- Open the import page by clicking the **Import** sub menu link.
- Select or drag and drop a populated requirements template file.
- Upload the populated template file.
- Follow the next screens.
- The last screen will show how many requirements were successfully loaded.

Note that if a requirement already exists in the system and one with the same requirement ID is loaded, the loaded requirement will replace the one already in the system.

3.1.4 Exporting Requirements

The export feature allows you to download requirements to a CSV file. To export requirements, perform the following steps:

- Open the export page by clicking on the **Export** sub menu link.

- Select the criteria for the requirements you wish to export. Note that if you specify the requirement ID, only that requirement will be selected even if other criteria are entered.
- Next, the requirements that met your criteria will be displayed. You can view a requirement by clicking on the ID.
- Click the **Export** button to download the requirements.

3.1.5 Printing a Preview of Requirements

The print functionality enables you to preview a batch of requirements at one time. To do this, perform the following steps:

- Open the print page by clicking on the **Print** sub menu link.
- Select the criteria for the requirements you wish to print. Note that if you specify the requirement ID, only that requirement will be selected even if other criteria are entered.
- Next the requirements that met your criteria will be displayed. You can view an individual requirement by clicking on the ID.
- Click the **Print** button to preview the requirements.

3.1.6 Finding Requirements

The search tab allows you to find requirements that meet particular search criteria. There are two search modes, basic and advanced. The basic search mode will search the requirement ID, and title fields only. The advanced search mode will search the description and note fields in addition. To search for requirements, follow the procedure listed next:

- Open the search page by clicking the **Search** sub menu link.
- Select basic or advanced search, this is a toggle link.
- Enter your search string, and if on the advanced screen select the additional fields to search.
- Click the **Search** button to initiate the search.
- Next the requirements that met your criteria will be displayed. You can view an individual requirement by clicking on the ID or you can edit a requirement by clicking the corresponding **Edit** link.
- Click **Export** to export the requirements, you may also cancel the operation or exit the page.

3.1.7 Deleting Requirements

The delete feature allows you to remove requirements from the system. To perform this action, follow the steps listed next:

- Open the delete page by clicking on the **Delete** sub menu link.
- Select the criteria for the requirements you wish to delete. Note that if you specify the requirement ID, only that requirement will be selected even if other criteria are entered.
- Next, the requirements that met your criteria will be displayed. You can view an individual requirement by clicking on the ID.
- Select the requirements you wish to delete using the corresponding checkbox.
- Click the **Submit** button to remove the requirements. You will be prompted to confirm the action. Once you confirm, the selected requirements will be removed from the system.
- Once you delete a requirement, the link to any test cases will be removed.

3.1.8 Managing Requirements

You can add new requirement categories using the **Manage** link. Follow the steps outlined below:

- Open the manage page by clicking on the **Manage** sub menu link.
- Enter the name of the category you want to create.
- You will be prompted to confirm your entry. Once you confirm, the category will be created. Note that the category will also be created for the **Test Case** and **Script** modules.

3.1.9 Viewing Requirement Statistics

The requirements module is equipped with a statistics sub-module. Here you can view the number of pending and complete requirements over a selected time period. To view requirements statistics, follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- Select the date range if desired. If no date range is selected, statistics will be displayed for all date ranges. You may also click the **Advanced** link to specify additional constraints.
- The next window will display a pie chart of the number of complete and pending requirements for the selected criteria.
- Click directly on the graph or the **Details** button to view tabular statistics details.
- The statistics details show totals, complete and pending information arranged by categories and sub categories.

3.2 Test Case Management

The Test Case module allows you to build test cases based on requirements. Test cases are organized into categories and sub categories and are assigned a level of importance.

Test cases are also flagged as automatable or non-automatable. Test cases can be created in the system or using a CSV file and then imported into TestSecretary. To enter the Test Case module, click the **Test Cases** tab in the main menu.

3.2.1 Entering a New Test Case

To enter a new test case, use the following procedure:

- Click the **New** tab in the sub menu bar. An entry form will appear.
- Enter all the required information.
- Click **Submit** to create the test case.

3.2.2 Editing a Test Case

Test cases are stored in sub-categories of main categories. To edit a specific test case, you need to know the category and sub-category it is in.

Use the following procedure to edit a test case:

- Open the edit page by clicking the **Edit** sub menu link.
- Select a category.
- Select a sub-category.
- Select the desired test case from the list of available test cases.
- Edit the test case and click **Submit** when done.

Note that if you change the ID of a test case when editing, a new test case will be created. If you wish to delete the old test case use the **Delete** tab.

3.2.3 Importing Test Cases

The import feature allows you to import several test cases at a time. To import a batch of test cases you must first complete the Excel template. The CSV template, **TestCaseTemplate.csv**, can be found in the document repository of the system under the directory **TestSecretary** → **Templates**. Download the file onto your computer and fill in the information. The first line is the header line and should not be removed. The fields of the template with their descriptions can be found in Table 5. The required fields must be populated to successfully upload the template later. Note that the template must be saved as a **.csv** file not an **.xls** file.

Table 5 – Test cases template fields with descriptions

Field name	Description	Notes
TestCaseID	Identifier for the test case.	Required
TestCaseTitle	The title of the test case.	Required

Author	The author of the test case. The author must have an account in the system.	Required
Owner	The owner of the test case. The owner must have an account in the system. The owner may be the same as the author.	Required
Category	The category of the test case. The category must already exist in the system.	Required
SubCategory	The sub-category of the test case.	Required
Priority	Importance of the test case. The allowable values are: <ul style="list-style-type: none"> • High • Medium • Low 	Required
Automatable	An indicator to determine if the test case is automatable or not. the allowable values are: <ul style="list-style-type: none"> • Yes • No 	Required
Status	Status of the test cases. Available values are: <ul style="list-style-type: none"> • Pending • Complete 	Required
Requirement Link	Test Requirement the test case is linked to	Required
TestCaseStatus	The test case status can only be one of the following: <ul style="list-style-type: none"> • Pending • Complete 	Required
Objective	The objective of the test case.	Required
SetupProcedures	Any set up required to run the test case.	Required
ExpectedResults	The test steps along with expected results for each step.	Required
Notes	Any notes related to the test case.	Not required

Once the template has been completed, perform the following steps to upload the information into the system:

- Open the import page by clicking the **Import** sub menu link.
- Select or drag and drop a populated test cases template file.
- Upload the populated template file.
- Follow the next screens.

- The last screen will show how many test cases were successfully loaded.

Note that if a test case already exists in the system and one with the same test case ID is loaded, the loaded test case will replace the one already in the system.

3.2.4 Exporting Test Cases

The export feature allows you to download test cases to a CSV file. To export test cases perform the following steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select the criteria for the test cases you wish to export. Note that if you specify the test case ID, only that test case will be selected even if other criteria are entered.
- Next, the test cases that met your criteria will be displayed. You can view a test case by clicking on the ID.
- Click the **Export** button to download the test cases.

3.2.5 Printing a Preview of Test Cases

The print functionality enables you to preview a batch of test cases at one time. To do this, perform the following steps:

- Open the print page by clicking on the **Print** sub menu link.
- Select the criteria for the test cases you wish to print. Note that if you specify the test case ID, only that test case will be selected even if other criteria are entered.
- Next, the test cases that met your criteria will be displayed. You can view an individual test case by clicking on the ID.
- Click the **Print** button to preview the test cases.
- The results will show details of the test case(s) along with the requirement they are linked to.

3.2.6 Finding Test Cases

The search tab allows you to find test cases that meet particular search criteria. There are two search modes, basic and advanced. The basic search mode will search the test case ID, and title fields only. The advanced search mode will search the description and note fields in addition. To search for test cases, follow the procedure listed next:

- Open the search page by clicking the **Search** sub menu link.
- Select basic or advanced search, this is a toggle link.
- Enter your search string, and if on the advanced screen select the additional fields to search.
- Click the **Search** button to initiate the search.

- Next, the test cases that met your criteria will be displayed. You can view an individual test case by clicking on the ID or you can edit a test case by clicking the corresponding **Edit** link.
- Click **Export** to export the test cases, you may also cancel the operation or exit the page.

3.2.7 Deleting Test Cases

The delete feature allows you to remove test cases from the system. To perform this action, follow the steps listed next:

- Open the delete page by clicking on the **Delete** sub menu link.
- Select the criteria for the test cases you wish to delete. Note that if you specify the test case ID, only that test case will be selected even if other criteria are entered.
- Next, the test cases that met your criteria will be displayed. You can view an individual test case by clicking on the ID.
- Select the test cases you wish to delete using the corresponding checkbox.
- Click the **Submit** button to remove the test cases. You will be prompted to confirm the action. Once you confirm, the selected test cases will be removed from the system.

3.2.8 Linking Test Cases to Requirements

The test case linking feature allows to link test cases to a requirement. To link a specific test case to a requirement, you need to know the category and sub-category it is in.

Use the following procedure to link a test case:

- Open the edit page by clicking the **Link** sub menu link.
- Select a category.
- Select a sub-category.
- Select the desired test case from the list of available test cases.
- Select the requirement you want to link the test case to and click **Submit** when done.

3.2.9 Managing Test Cases

You can add new test case categories using the **Manage** link. Follow the steps outlined below:

- Open the manage page by clicking on the **Manage** sub menu link.
- Enter the name of the category you want to create.

- You will be prompted to confirm your entry. Once you confirm, the category will be created. . Note that the category will also be created for the **Requirements** and **Script** modules.

3.2.10 Viewing Test Cases Statistics

The test cases module is equipped with a statistics sub-module. Here you can view the number of pending and complete test cases over a selected time period. To view test cases statistics, follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- Select the date range if desired. If no date range is selected, statistics will be displayed for all date ranges. You may also click the **Advanced** link to specify additional constraints.
- The next window will display a pie chart of the number of complete and pending test cases for the selected criteria.
- Click directly on the graph or the **Details** button to view tabular statistics details.
- The statistics details shows totals, complete and pending information arranged by categories and sub categories.

3.3 Test Script Management

The scripting module enables you to write or document your scripts. Scripts are organized into categories and sub categories and are assigned a status. Input can be generated from within the system or imported into the repository from CSV files. To enter the Test Scripts module, click the **Test Scripts** tab in the main menu.

3.3.1 Entering a New Test Script

To enter a new test script, use the following procedure:

- Click the **New** link in the sub menu bar. An entry form will appear.
- Enter all the required information.
- Click submit to create the test script.

Scripts in TestSecretary are written in KSL. For more details on how to write KSL script refer to the KSL Scripting Guide.

3.3.2 Editing a Test Script

Test scripts are stored in sub-categories of main categories. To edit a specific test script, you need to know the category and sub-category it is in.

Use the following procedure to edit a test script:

- Open the edit page by clicking the **Edit** sub menu link.
- Select a category.
- Select a sub-category.
- Select the desired test script from the list of available test scripts.
- Edit the test script and click submit when done.

Note that if you change the ID of a test script when editing, a new test script will be created. If you wish to delete the old test script, use the delete tab. Note that you cannot change a script if it is in use. An error message will be generated if you try to do so.

3.3.3 Importing Test Scripts

The import feature allows you to import several test scripts at a time. To import a batch of test scripts you must first complete the CSV template. The CSV template, **ScriptTemplate.csv**, can be found in the document repository of the system under the directory **TestSecretary** → **Templates**. Download the file onto your computer and fill in the information. The first line is the header line and should not be removed. The fields of the template with their descriptions can be found in Table 6. The required fields must be populated to successfully upload the template later. Note that the template must be saved as a **.csv** file not an **.xls** file.

Table 6 – Test scripts template fields with descriptions

Field name	Description	Notes
ScriptID	Identifier for the test script.	Required
Title	The title of the test script.	Required
Author	The author of the test script. The author must have an account in the system.	Required
Owner	The owner of the test script. The owner must have an account in the system. The owner may be the same as the author.	Required
Category	The category of the test script. The category must already exist in the system.	Required
SubCategory	The sub-category of the test script.	Required
ScriptStatus	The test script status can only be one of the following: <ul style="list-style-type: none"> • Pending • Complete 	Required
Test Case Link	The testcase the script links to	Required
Script	The test script.	Required
Notes	Any notes related to the test script.	Not required

Once the template has been completed, perform the following steps to upload the information into the system:

- Open the import page by clicking the **Import** sub menu link.
- Select or drag and drop a populated test scripts template file.
- Upload the populated template file.
- Follow the next screens.
- The last screen will show how many test scripts were successfully loaded.

Note that if a test script already exists in the system and one with the same test script ID is loaded, the loaded test script will replace the one already in the system.

3.3.4 Exporting Test Scripts

The export feature allows you to download test scripts to a CSV file. To export test scripts, perform the following steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select the criteria for the test scripts you wish to export. Note that if you specify the test script ID, only that test script will be selected even if other criteria are entered.
- Next, the test scripts that met your criteria will be displayed. You can view a test script by clicking on the ID.
- Click the **Export** button to download the test scripts.

3.3.5 Printing a Preview of Test Scripts

The print functionality enables you to preview a batch of test scripts at one time. To do this, perform the following steps:

- Open the print page by clicking on the **Print** sub menu link.
- Select the criteria for the test scripts you wish to print. Note that if you specify the test script ID, only that test script will be selected even if other criteria are entered.
- Next, the test scripts that met your criteria will be displayed. You can view an individual test script by clicking on the ID.
- Click the **Print** button to preview the test scripts.
- The results will show details of the script(s) along with the test case they are linked to.

3.3.6 Finding Test Scripts

The search tab allows you to find test scripts that meet particular search criteria. There are two search modes, basic and advanced. The basic search mode will search the test

script ID, and title fields only. The advanced search mode will search the description and note fields in addition. To search for test scripts, follow the procedure listed next:

- Open the search page by clicking the **Search** menu tab.
- Select basic or advanced search, this is a toggle link.
- Enter your search string and if on the advanced screen select the additional fields to search.
- Click the **Search** button to initiate the search.
- Next, the test scripts that met your criteria will be displayed. You can view an individual test script by clicking on the ID or you can edit a test script by clicking the corresponding **Edit** link.
- Click **Export** to export the test scripts, you may also cancel the operation or exit the page.

3.3.7 Deleting Test Scripts

The delete feature allows you to remove test scripts from the system. To perform this action, follow the steps listed next:

- Open the delete page by clicking on the **Delete** sub menu link.
- Select the criteria for the test scripts you wish to delete Note that if you specify the test script ID, only that test script will be selected even if other criteria are entered.
- Next the test scripts that met your criteria will be displayed. You can view an individual test script by clicking on the ID.
- Select the test scripts you wish to delete using the corresponding checkbox.
- Click the **Submit** button to remove the test scripts. You will be prompted to confirm the action. Once you confirm, the selected test scripts will be removed from the system.

3.3.8 Linking Test Scripts to Test Cases

The test case linking feature allows to link test scripts to a test cases. To link a specific test script to a test case, you need to know the category and sub-category it is in.

Use the following procedure to link a test case:

- Open the edit page by clicking the **Link** sub menu link.
- Select a category.
- Select a sub-category.
- Select the desired test script from the list of available test cases.
- Select the test case you want to link the test script to and click **Submit** when done.

3.3.9 Managing Test Scripts

You can add new test script categories using the **Manage** link. Follow the steps outlined below:

- Open the manage page by clicking on the **Manage** sub menu link.
- Enter the name of the category you want to create.
- You will be prompted to confirm your entry. Once you confirm, the category will be created. Note that the category will also be created for the **Test Case** and **Requirements** modules.

3.3.10 Viewing Test Scripts Statistics

The test scripts module is equipped with a statistics sub-module. Here you can view the number of pending and complete test scripts over a selected time period. To view test scripts statistics, follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- Select the date range if desired. If no date range is selected, statistics will be displayed for all date ranges. You may also click the **Advanced** link to specify additional constraints.
- The next window will display a pie chart of the number of complete and pending test scripts for the selected criteria.
- Click directly on the graph or the **Details** button to view tabular statistics details.
- The statistics details shows totals, complete and pending information arranged by categories and sub categories.

3.4 Environment Management

The environment module helps you document your test environment topology and when used in conjunction with the agent module, the information is used to fully specify tests to run.

The environment module uses a tree structure to define a system under test. Every network environment can be broken down to this form. Figure 9 show the topology of a generic test environment. Basically, each environment consists of element nodes and each element node has a number of device nodes and in turn each device node has several terminations. The terminations are the access points to perform tests.

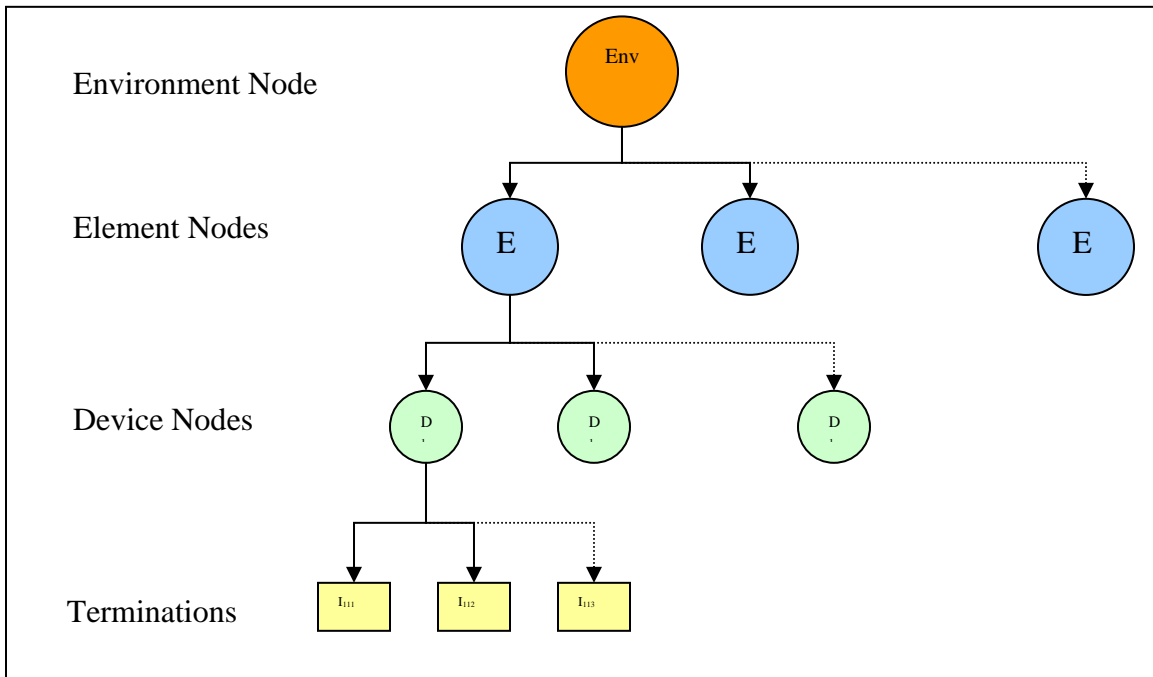


Figure 9 – Test environment topology

3.4.1 Creating a New Environment

To enter a new test environment, use the following procedure:

- Open the environment page by clicking on the **New** sub menu link.
- Fill in the information in the environment form. The name and number of elements are required. You must have at least one element in your environment. Click **Submit** when done.
- The next form will ask you to enter the elements in your environment. One entry for each element. The name of the elements and the number of devices in each are required. Click **Submit** when done.
- The next pages are to enter the devices for the network elements. Each page displays the devices for one element. The device name and number of terminations are required. Note the **Details** field can contain comma separated name/value pair data. This information can be used by the test agent later when running automation. Notice that there is a **Next** button until the last devices page.
- Enter the devices for the first element and click **Next**, you will then be presented with a page to enter the devices for the next element and so on until you reach the last element. On the last page click **Submit**.
- The next few pages are used to enter the device terminations. One page per termination. The header on the page will give you an indication of which device of which element you are entering the termination for. Enter the information and click **Next** until you reach the last page, then click **Submit**.

- You will be informed if all the information is valid and the environment has been created.

3.4.2 Editing an Existing Environment

To edit an environment already in the system, follow the procedure listed below:

- Open the edit page by clicking on the **Edit** sub menu link.
- Select the environment you wish to edit and click **Next**.
- The next screens will show the information in the environment. You may edit delete and add information as you browse through the pages.
- Note that you must go through all the pages for all the changes to apply.

3.4.3 Exporting an Environment

The export feature allows you to download environments to an Excel® spreadsheet. To export a test environment, follow the next steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select the environment you wish to export.
- Next the test environment you selected will be displayed.
- Click the **Export** button to download the test environment.

3.4.4 Printing a Preview of an Environment

The print functionality enables you to preview a flattened version of a test environment topology. To do this follow the next steps:

- Open the print page by clicking on the **Print** sub menu link.
- Select the environment you wish to print.
- Next the environment you selected is displayed. You can also export the environment from this page.

3.4.5 Finding an Environment

The search tab allows you to find a test environment. There are two search modes, basic and advanced. The basic search mode will search the environment name only. The advanced search mode will search several additional fields. To search environments, follow the procedure listed next:

- Open the search page by clicking the **Search** sub menu link.
- Select basic or advanced search, this is a toggle link.
- Enter your search string, and if in the advanced screen select the additional fields to search.

- Click the **Search** button to initiate the search.
- Next, the environments that met your criteria will be displayed. You can export the environment by clicking the **Export** button or you can edit the environment by clicking the corresponding **Edit** link.

3.4.6 Linking Environment Termination to Test Agent Ports

Environment device terminations can be linked to test agent ports. This linking is done using the **Link** sub menu link. To link information, perform the following steps:

- Open the link page by clicking on the **Link** sub menu link.
- Select the environment and the test agent you wish to use in the linking.
- The next screen will show the device terminations of the environment and the available test agent ports.
- Select a test agent port for each environment termination. When finished click **Submit** to commit the linking.

3.4.7 Viewing Environment Statistics

The Environment module is equipped with statistics sub-module. Here you can view the number of devices and terminations for each network element. To view test environment statistics, follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- The next page will show the number of devices and interfaces for each element in an environment arranged by environment.

3.5 Test Agent Management

The test agent module is used to organize and use the Unvisceral Automation Platform (UAP) to run automated tests. By creating an agent, you can link UAP terminations to environment interfaces. You can then use this information later to launch automation runs. All UAP related data can also be stored in folders created specifically for the agent. The layout of a test agent is shown in Figure 10. And the directory structure created for each test agent is shown in Figure 11. To access the Test Agent module, click the **Agents** tab in the main menu.

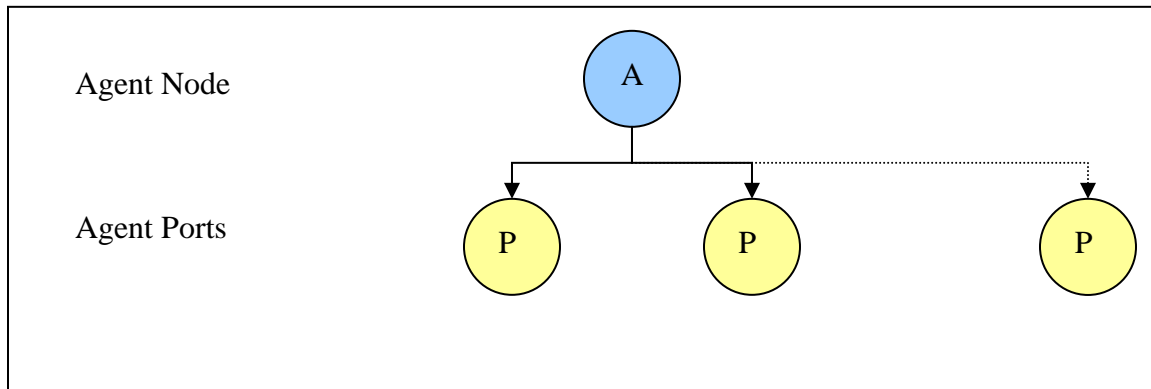


Figure 10 – Test agent layout

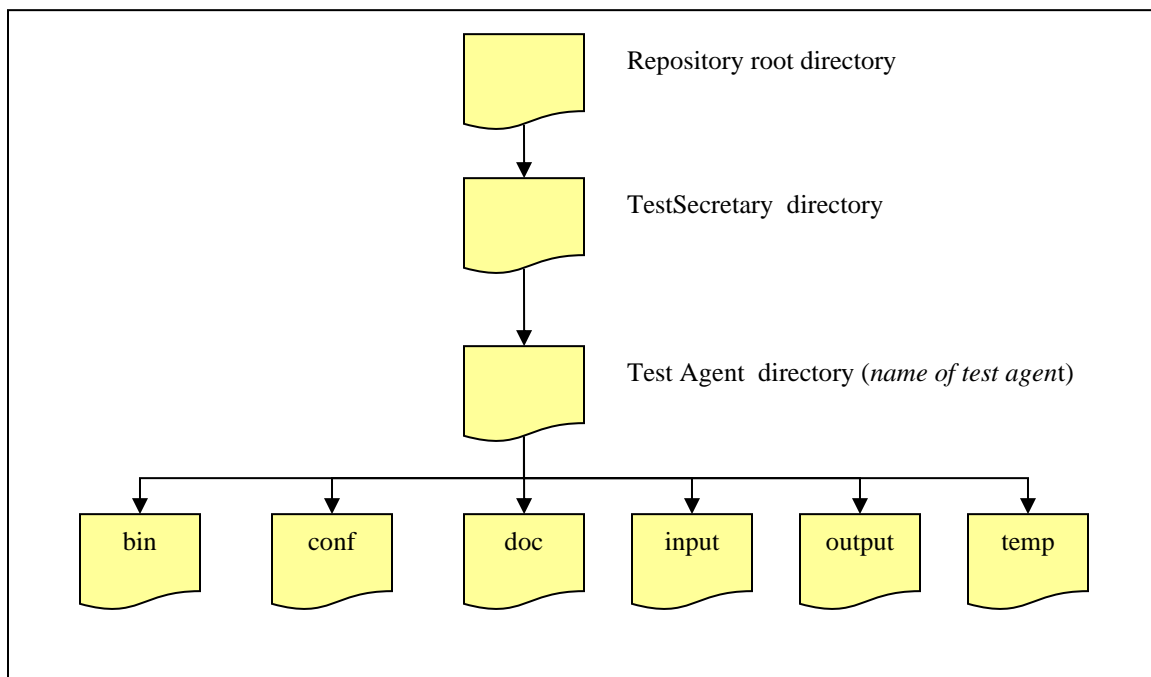


Figure 11 – Test agent directory structure

3.5.1 Creating a New Test Agent

To create a new test agent, use the following procedure:

- Open the test agent page by clicking on the **New** sub menu link.
- Fill the information in the test agent form. The name, time zone, number of ports and UAP Script timeout are required.
- The next page is used to enter the endpoint details for the test agent. The port name, port id and the port technology are required. When you are done entering all the information click **Submit**.

3.5.2 Editing an Existing Test Agent

To edit a test agent already in the system, follow the procedure listed below:

- Open the edit page by clicking on the **Edit** sub menu link.
- Select the test agent you wish to edit and click **Next**.
- The next screens will show the information in the test agent. You may edit, delete and add endpoint information.
- Note that you must go through all the pages for all the changes to apply.

3.5.3 Creating a Test Agent Client

To create and download a test agent client, click the **Client** sub menu link. The system will create the agent present you with a download arrow link for the client. This client is to be installed on a server instance that has the resources to run tests against the environment under test.

3.5.4 Exporting a Test Agent

The export feature allows you to download test agents to an CSV file. To export a test agent, follow the next steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select the test agent you wish to export.
- Next a flattened view of the test agent you selected will be displayed.
- Click the **Export** button to download the test agent.

3.5.5 Printing a Preview of a Test Agent

The print functionality enables you to preview a flattened version of a test agent. To do this, follow the next steps:

- Open the print page by clicking on the **Print** sub menu link.
- Select the test agent you wish to print.
- Next, the test agent you selected is displayed. You can also export the test agent details from this page.

3.5.6 Finding a Test Agent

The search tab allows you to find a test agent. There are two search modes, basic and advanced. The basic search mode will search the test agent name field only. The advanced search mode will search several additional fields. To search test agents follow the procedure listed next:

- Open the search page by clicking the **Search** sub menu link.

- Select basic or advanced search, this is a toggle link.
- Enter your search string, and if in the advanced screen select the additional fields to search.
- Click the **Search** button to initiate the search.
- Next, the test agents that met your criteria will be displayed. You can export the test agent details by clicking the **Export** button.

3.5.7 Linking Test Agents to Scripts

Test agents can be linked to test scripts. This linking is done using the **Link** sub menu link. To link information, perform the following steps:

- Open the link page by clicking on the **Link** sub menu link.
- Select the test agent you wish to use in the linking.
- The next screen will show the test scripts available to link to.
- Select one or more scripts to link to the test agent. To multi select hold down the control key while selecting the scripts. When finished click **Submit** to commit the linking.

3.6 Test Management

The test module is used to create tests based on test scripts, environment and agent port data. Efficient test planning implies that a single test case can be run on multiple test environments or platforms. The test module allows you to create specific test for an environment. To enter the Tests module, click the **Tests** tab in the main menu.

3.6.1 Creating New Tests

To create new tests, follow the procedure outlined below:

- Open the new page by clicking the **New** sub menu link.
- Enter the information on the page. Note the test environment to run the tests in, number of new tests to be created.
- Next, enter the test name(s) and the test cases they are linked to, then click **Submit**.
- The next screen requires you to select the endpoints each test will use to run the test using UAP.
- Click **Submit** to create all the tests

3.6.2 Editing Tests

To edit a test, follow the steps below:

- Open the edit page by clicking on the Edit sub menu link.
- Select a test environment.
- Then select test(s).
- In the next screen, you can edit endpoints, elect to change or delete each test by checking its corresponding checkbox next to the appropriate action.
- Click submit to apply the changes.

3.6.3 Finding Tests

The search tab allows you to find tests:

- Open the search page by clicking the **Search** sub menu link.
- Enter your search string.
- Click the **Search** button to initiate the search.
- Next, the test(s) that met your criteria will be displayed. You can edit a test by clicking the corresponding **Edit** link.

3.6.2 Delete Tests

To delete a test, follow the steps below:

- Open the edit page by clicking on the Edit sub menu link.
- Select a test environment.
- Then select test(s).
- In the next screen, select the delete checkbox for each test you wish to remove.
- Click submit to apply the changes.

3.7 Suite Management

The suite module is used create groups of tests for execution and reporting purposes. To enter the Suites module, click the **Suites** tab in the main menu.

3.7.1 Creating a New Suite

To create a new suite, follow the procedure outlined below:

- Open the new page by clicking the **New** sub menu link.
- Enter the information on the page. Note the name, number of new tests to be created and the test environment to use are all required.
- Next, select tests from the **available** box and drag then into the **existing** box. To multi-select hold down the control key while selecting. You can also remove test

by selecting test from the **existing** box and placing them into the **available** box. Once you are done, click **Submit**.

3.7.2 Editing a Test Suite

To edit a test suite, follow the steps below:

- Open the edit page by clicking on the Edit sub menu link.
- Use the next screens to edit suite information.

3.7.3 Exporting a Suite

The export feature allows you to download suites to a csv file. To export a test suite, follow the next steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select the suite you wish to export.
- Next the tests in the suite you selected will be displayed.
- Click the **Export** button to download the suite.

3.7.5 Printing a Preview of a Suite

The print functionality enables you to preview a suite. To do this follow the next steps:

- Open the print page by clicking on the **Print** sub menu link.
- Select the suite you wish to print.
- Next the suite you selected is displayed. You can also export the suite from this page.

3.7.6 Finding a Suite

The search tab allows you to find a test suite. There are two search modes, basic and advanced. The basic search mode will search the test agent name field only. The advanced search mode will search several additional fields. To search test agents follow the procedure listed next:

- Open the search page by clicking the **Search** sub menu link.
- Select basic or advanced search, this is a toggle link.
- Enter your search string, and if on the advanced screen select the additional fields to search.
- Click the **Search** button to initiate the search.
- Next, the suites that met your criteria will be displayed. You can export the suites by clicking the **Export** button or you can edit a test suite by clicking the corresponding **Edit** link.

3.7.7 Viewing Suite Statistics

The suite module is equipped with statistics pages. Here you can view the number of automated and manual tests over for suites created between a selected time period. To view suite statistics, follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- Select the date range if desired. If no date range is selected, statistics will be displayed for all date ranges. You may also click the **Advanced** link to specify additional constraints.
- The next window will display a pie chart of the number of automated and manual tests for the selected criteria.
- Click directly on the graph or the **Details** button to view tabular statistics details.
- The statistics details show totals, automated and manual counts for each suite arranged by environment.

3.8 Execution Management

The execution module allows you to execute your tests in a manual or automated mode. For tests run in an automated mode, the automation engine allows you to schedule tests to run unsupervised at a time of your choice. Results are posted back to the system in real time and run progress can be monitored. To enter the Execution module, click the **Execution** tab in the main menu.

3.8.1 Creating a New Execution Campaign

To initiate a new execution campaign, perform the following steps:

- Open the execution page by clicking the **New** sub menu link
- Enter the required fields in the **New Execution Campaign** entry form. Note that the campaign name is auto generated by the system but you may specify any other name of your choice. Click **Submit** when done.
- The next entry form is for selecting the test or suite to run. Note that if executing in manual mode you may select either a test or a suite. When executing in automation mode you may only select a suite.
- If executing a campaign in manual mode, the next page will display information about the suite or test you are executing. The next page will display an execution entry form to execute the selected test. Tests in a suite can be executed in any order. Once you have finished executing the current test you will be asked if you wish to continue to the next test, pause the campaign or end the campaign. If you elect to continue, you may pick any test from the suite to execute. If only

executing a single test, you will be asked if you wish to execute another instance of the same test.

- If executing a campaign in automated mode, the next page will display schedule information. Fill out the information and click **Submit** to start the run. A dialog window will inform you if the test has successfully started or not. If successful, a link to the execution engine log is shown; you may open the log to view the run progress.

3.8.2 Re-opening an Execution Campaign

To open an existing campaign, follow the steps listed next:

- Access the open page by clicking the **Open** sub menu link.
- Select the campaign you wish to open. Note that you can always re-open an automated campaign; however, you can only open a manual campaign if it has been paused. You cannot re-open a closed manual campaign.
- The next page will show you the campaign information plus the number of runs performed in that campaign. Note that you can edit the release information on this page.
- If in manual mode, the next page will show you information about the suite or test you are running. The next page will display the execution entry form. Once you have finished executing the current test, you will be asked if you wish to continue to the next test, pause the campaign or end the campaign. If you elect to continue, you may pick any test from the suite to execute. If only executing a single test, you will be asked if you wish to execute another instance of the same test.
- If executing a campaign in automated mode, the next page will display schedule information. Fill out the information and click **Submit** to start the run. A dialog window will inform you if the test has successfully started or not. If successful, a link to the execution engine log is shown; you may open the log to view the run progress.

3.8.3 Exporting Test Results

To export campaign results information, perform the following steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select your export criteria and click **Submit**. A table of results that meet your criteria will be displayed.
- Click the **Export** button to download the results.

3.8.4 Viewing the Status of Automation Runs

The Status page displays the current status of automation campaigns. The two status indicators are, **Pending** and **In progress**. A run is **Pending** if it has been scheduled to run at a future date. And when a campaign is running, its status indicator is **In progress**.

To find out the status of all automation runs in the system, simply click the **Status** sub menu link. If there is any activity a table of runs and their statuses will be displayed. If there is no activity a dialog will indicate that there is no active campaign in the system.

3.8.5 Finding Test Results

The search feature allows you to find results of tests runs. To find a test, perform the listed steps:

- Open the search page by clicking the **Search** sub menu link
- Enter your search criteria in the search form, and click **Submit** to begin the search.
- A table of test results will be displayed. You can export the table by clicking the **Export** button.

3.8.6 Ending a Manual Campaign

The close feature allows you to end a manual campaign. To close a manual campaign, perform the following actions:

- Open the close page by clicking on the **Close** sub menu link.
- Select the campaign you wish to close and click **Next**. A dialog window will appear to confirm your selection. If you are sure you want to end the campaign click **Submit**.

3.8.7 Viewing Test Results

Result of all runs can be viewed in the system. To view results perform the following:

- Open the results page by clicking on the **Results** sub menu link.
- Enter the criteria for the results you which to view and click **Submit**.
- The next page displays a pie chart of the results with pass, fail and abort information.
- You can drill down to the next level by clicking on the graph or the **Details** button.
- The next page shows a summary of the pass, fail and abort results organized by test.
- Clicking on any of the numbers will give you specific information about the runs that comprise that number.

- You can also view all the results by clicking the **Details** button.

3.9 Trouble Ticket Management

The trouble ticket module allows you to enter and track your test related defects. The module supports the entire defect lifecycle, from initial problem identification through problem resolution. To enter the Trouble Tickets module, click the **Tickets** tab in the main menu.

3.9.1 Entering a New Trouble Ticket

To enter a new trouble ticket into the system, perform the following steps:

- Open the new page by clicking the **New** sub menu link.
- The entry form to enter the ticket information is displayed. Note that the ticket number is auto generated by the system and cannot be changed.
- Enter all the required information and click **Submit** to create the ticket.

3.9.2 Editing an Unassigned Trouble Ticket

If a ticket has not been assigned it can be edited. To edit an unassigned ticket, follow the next steps:

- Access the edit page by clicking the **Edit** sub menu link.
- Select the ticket you wish to edit. You can search by ticket ID or use the drop-down menu to find the desired trouble ticket. Click **Submit** to access the ticket.
- Edit the desired ticket information on the next page and click **Submit** when done.

3.9.3 Assigning a Trouble Ticket

Once a ticket has been created it can be assigned to a user in the system. To do so follow the procedure listed next:

- Open the assign page by clicking on the **Assign** sub menu link.
- A list of unassigned tickets will be listed. Select the desired ticket and click **Submit**.
- The Next page will display the original ticket information, with a drop down menu with the list of users that the ticket can be assigned to. You can also add notes to the ticket. Click **Submit** to assign the ticket.

3.9.4 Updating a Trouble Ticket

Once a ticket has been assigned it can be updated. To do so, follow the steps below:

- Open the update page by clicking the **Update** sub menu link.
- A list of assigned tickets will be listed. Select the desired ticket and click **Submit**.
- The Next page will display the original ticket information, with a drop-down menu with the list of users that can update the ticket. The comments field allows you to add information to the ticket. Click **Submit** to update the ticket. Note that you can click the **Ticket History** link to view the event history of the ticket.

3.9.5 Closing a Trouble Ticket

Trouble tickets that have been labeled, “resolved” can be closed. To close a ticket, perform the next steps:

- Access the close page by clicking on the **Close** sub menu link.
- A list of resolved tickets will be listed. Select the desired ticket and click **Submit**.
- The Next page will display the original ticket information. The comments field allows you to add information to the ticket prior to closing. Click **Submit** button to update the ticket. Note that you can click the **Ticket History** link to view the event history of the ticket.

3.9.6 Importing Trouble Tickets

The import feature allows you to import several trouble tickets at a time. To import a batch of tickets you must first complete the CSV template. The template, **TroubleTicketTemplate.csv**, can be found in the **Template** sub menu of the **Tickets** drop-down. Download the file onto your computer and fill in the information. The first line is the header line and should not be removed. The fields of the template with their descriptions can be found in Table 7. The required fields must be populated to successfully upload the template later. Note that the template must be saved as a **.csv** file.

Table 7 – Trouble ticket template fields with descriptions

Field name	Description	Notes
Title	The title of the trouble ticket	Required
Author	The author of the trouble ticket. The author must have an account in the system.	Required
Owner	The owner of the trouble ticket. The owner must have an account in the system. The owner may be the same as the author.	Required
Category	The category of the trouble ticket. The category must already exist in the system.	Required
SubCategory	The sub-category of the trouble ticket.	Required

Vendor	The vendor the ticket is assigned to.	Required
Severity	The severity of the trouble ticket. The allowable values are: <ul style="list-style-type: none"> • Critical • Major • Minor 	Required
Issue	A description of the issue.	Required

Once the template has been completed, perform the following steps to upload the information into the system:

- Open the import page by clicking the **Import** sub menu link.
- Select or drag and drop a populated trouble ticket template file.
- Upload the populated template file.
- Follow the next screens.
- The last screen will show how many tickets were successfully loaded.

Note that the ticket ID will be auto-generated by the system.

3.9.7 Exporting Trouble Tickets

The export feature allows you to download trouble tickets to a csv file. To export tickets, perform the following steps:

- Open the export page by clicking on the **Export** sub menu link.
- Select the criteria for the trouble tickets you wish to export. Note that if you specify the ticket ID, only that trouble ticket will be selected even if other criteria are entered.
- Next the tickets that met your criteria will be displayed. You can view a trouble ticket by clicking on the ID.
- Click the **Export** button to download the tickets. Note the entire ticket with history is downloaded.

3.9.8 Printing a Preview of Trouble Tickets

The print functionality enables you to preview a batch of trouble tickets at one time. To do this, follow the steps below:

- Open the print page by clicking on the **Print** sub menu link.
- Select the criteria for the trouble tickets you wish to print. Note that if you specify the ticket ID, only that trouble ticket will be selected even if other criteria are entered.
- Next, the tickets that met your criteria will be displayed. You can view an individual trouble ticket by clicking on the ID.
- Click the **Print** button to preview the trouble tickets.

3.9.9 Finding Trouble Tickets

The search link allows you to find trouble tickets that meet particular search criteria. There are two search modes, basic and advanced. The basic search mode will search the ticket ID, and title fields only. The advanced search mode will search the issues and history fields in addition. To search for trouble tickets, follow the procedure listed next:

- Open the search page by clicking the **Search** menu tab.
- Select basic or advanced search, this is a toggle link.
- Enter your search string, and if on the advanced screen select the additional fields to search.
- Click the **Search** button to initiate the search.
- Next, the trouble tickets that met your criteria will be displayed. You can view an individual trouble ticket by clicking on the ID. You can also edit a ticket by clicking the corresponding **Edit** link. Note that only unassigned tickets may be edited.
- Click **Export** to export the tickets, you may also cancel the operation or exit the page.

3.9.10 Deleting Trouble Tickets

The delete feature allows you to remove any unassigned trouble tickets from the system. To perform this action, follow the steps listed next:

- Open the delete page by clicking on the **Delete** sub menu link.
- Select the criteria for the trouble tickets you wish to delete. Note that if you specify the ticket ID, only that trouble ticket will be selected even if other criteria are entered.
- Next, the trouble tickets that met your criteria will be displayed. You can view an individual trouble ticket by clicking on the ID.
- Select the tickets you wish to delete using the corresponding checkbox.
- Click the **Submit** button to remove the tickets. You will be prompted to confirm the action. Once you confirm, the selected trouble tickets will be removed from the system.

3.9.11 Managing Trouble Tickets

You can add new trouble ticket categories and vendors using the manage tab. Follow the steps outlined below:

- Open the manage page by clicking on the **Manage** sub menu link.
- Select what action you want to perform; add a category or a vendor.
- Enter the required information.
- You will be prompted to confirm your entry. Once you confirm, the information will be recorded.

3.9.12 Viewing Trouble Ticket Statistics

The trouble tickets module is equipped with a statistics module. Here you can view the number of open and closed trouble tickets over a selected time period. To view trouble ticket statistics, follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- Select the date range if desired. If no date range is selected, statistics will be displayed for all date ranges. You may also click to the **Advanced link** to specify additional constraints.
- The next window will display a pie chart of the number of open and closed trouble tickets for the selected criteria.
- Click directly on the graph or the **Details** button to view tabular statistics details.
- The statistics details shows totals, open and closed information arranged by categories and sub categories.

3.10 Auto Defects Management

The auto defects module allows you to enter and track your test run generated defects. These are defects that are found automatically when tests are running in TestSecretary, when a set of criteria a met. Once an auto defect is found, the user that is assigned to that defect is alerted. When the defect is fix, it is only closed when TestSecretary executes tests and the exit criteria set in the auto defect are met. The module supports the entire defect lifecycle by working with the Trouble Ticket module. To enter the Auto Defects module, click the **Autodefects** tab in the main menu.

3.10.1 Entering a New Auto Defects

To enter a new auto defect into the system, perform the following steps:

- Open the new page by clicking the **New** sub menu link.
- The entry form to enter the defect information is displayed. Note that the defect number is auto generated by the system and cannot be changed.
- Enter all the required information and click **Submit** to create the defect.

3.10.2 Editing an Auto Defects

To edit an auto defect:

- Access the edit page by clicking the **Edit** sub menu link.
- Select the defect you wish to edit. You can search by defect ID or use the drop-down menu to find the desired defect. Click **Submit** to access the defect.
- Edit the desired defect information on the next page and click **Submit** when done.

3.10.3 Printing a Preview of Auto Defects

The print functionality enables you to preview a batch of defects at one time. To do this, follow the steps below:

- Open the print page by clicking on the **Print** sub menu link.
- Select the criteria for the defect you wish to print. Note that if you specify the ticket ID, only that defect will be selected even if other criteria are entered.
- Next, the defect that met your criteria will be displayed. You can view an individual defect by clicking on the ID.
- Click the **Print** button to preview the defects.

3.10.4 Search Auto Defects

The search link allows you to find defects that meet particular search criteria. To search for defects, follow the procedure listed next:

- Open the search page by clicking the **Search** menu tab.
- Enter your search string.
- Click the **Search** button to initiate the search.
- Next, the defects that met your criteria will be displayed. You can view an individual defect by clicking on the ID. You can also edit a defect by clicking the corresponding **Edit** icon link.
- Click **Preview** to batch view the defects.

3.10.5 Deleting Auto Defects

The delete feature allows you to remove auto defects from the system. To perform this action, follow the steps listed next:

- Open the delete page by clicking on the **Delete** sub menu link.
- Select the criteria for the defect you wish to delete. Note that if you specify the defect ID, only that defect will be selected even if other criteria are entered.
- Next, the defects that met your criteria will be displayed. You can view an individual defect by clicking on the ID.
- Select the defect you wish to delete using the corresponding checkbox.
- Click the **Submit** button to remove the defect. You will be prompted to confirm the action. Once you confirm, the selected defect will be removed from the system.

3.11 Document Management

The document module allows you to house various test related documents. Not all documents can be integrated into a management system yet it is desirable to have your documents in a central location. The document repository is designed for this very purpose. You can organize your documents into directories; create, edit or remove files and directories to suit your needs. To access the document repository click the **Repository** tab in the main menu.

3.11.1 Opening the Document Repository

To open the document repository, click the **Open** sub menu link. To open any directory, click the corresponding directory icon. To download a file, click the corresponding file icon.

3.11.2 Creating a New Directory

To create a new directory, follow the steps below:

- Make sure you are in the directory in which you want to create the new directory.
- Click the **New** sub menu link.
- Enter the desired directory name.
- Confirm and click **Submit** to create the directory.

3.11.3 Editing a File or Directory

To edit a directory, follow the steps below:

- Make sure you are in the directory in which you want to edit.
- Click the **Edit** sub menu link.
- Enter the desired directory name.
- Confirm and click **Submit** to edit the directory.

To edit a file:

- Click the edit link next to the file.
- Enter the new name of the file.
- Confirm your selection.

3.11.4 Importing a File into a Directory

To import a file into a directory, follow the steps below:

- Make sure you are in the directory in which you want to upload the file.
- Click the **Import** sub menu link.
- Select or drag and drop the desired file.
- Click **Upload** to import the file into the directory.

3.11.5 Finding a File or Directory

To find a file or directory follow the steps listed next:

- Access the search page by clicking the **Search** sub menu link.
- Enter the search string and click **Search**.
- Tabulated results that met your criteria will be printed next. If your search string yields no results, a dialog box will indicate so.
- Click the link in the table to go to the directory where the file or directory is located.

3.11.6 Deleting a File or Directory

To delete a directory, follow the steps below:

- Make sure you are in the directory you want to delete.
- Click the **Delete** sub menu link.
- Confirm and click **Submit** to delete the directory.

To delete a file:

- Click the delete link next to the file.
- Confirm your selection.

3.11.7 Viewing Document Repository Statistics

The document repository is equipped with a statistics module. Here you can view two sets of statistics. The first is the size of the repository and the remaining repository space. The second is activity related statistics. To view document repository statistics follow the steps shown below:

- Open the statistics page by clicking on the **Statistics** sub menu link.
- The first set of statistics will be displayed. The information displayed is the amount of repository space used, the amount of free space left, the repository capacity and percent usage.
- Click on details to see a further breakdown of the information.

To view activity statistics:

- Click the activity statistics link on the statistics page.
- Select the date range for which you wish to see the statistics.
- Click **Submit** and a chart of total operations, new items created, delete items, renamed items and uploaded items, will be displayed.
- Clicking the **Details** button will display the same information but categorized by files and directories.
- By clicking on the **Details** button, tabular information of details of each operation is displayed.

- You can export this data by clicking the **Export** button on the page.

3.12 Report Management

The Reports module is designed provide end-to-end Continuous Risk Benefit (CRB) reports on a periodic basis. Reports Show the current testing and monitoring status of the active testbed. To select reports for a different testbed, click the **Select Testbed**, link in the main menu.

The header section of the CRB report gives you the option to select the time interval for which the analytics should be displayed. The available time intervals are; day, week, year, year-to-date and custom. In the header you can also select if you want to view analytics for live or support runs. All time intervals except for custom, have to option to view prior and next interval results if available.

The analytics portion of the dashboard is sectioned in to 12 parts and the structure is as follows:

Section 1: The first section of the CRB report looks at the percentage pass rate for; requirements, test executions and defects. The progress bar on the top is an overall percentage that indicates the health of the testbed in terms of the three aforementioned items. The percentage is a weighted average of the 3 values. The weights are 33% for each item by default and can be changed in the **Manage** section of the module.

Section 2: This section looks at CRB quantitative values, specifically the monetary risk posed by unattended defects and the cost avoidance benefit of fixing the defect(s).

Section 3: The third section shows an execution heatmap over time. Each square in the heatmap represents a time slot and is color coded to depict the execution pass rate of that period. The colors are, green for a pass rate at or above the high threshold and orange for a pass rate between the medium and high thresholds, yellow for a pass rate between the low and medium thresholds and red for anything below the low threshold. The threshold values are defaulted to 90, 60 and 40 for high, medium, low respectively. These thresholds can be changed in the manage section of the module.

Section 4: This section displays metrics associated with requirements. For the entire testbed the following values are presented for the current selected time period, the prior time period and the change over the two selected periods:

- Total number of requirements
- Number of new requirements
- Number of requirements tested
- Number of requirements passed
- Number of requirements failed

- Requirements coverage

Section 5: The fifth section displays requirement pass/fail bar graphs for the current and prior time frame organized by the categories used in the Requirements module.

Section 6: This section displays metrics associated with test cases. For the entire testbed the following values are presented for the current selected time period, the prior time period and the change over the two selected periods:

- Total number of test cases
- Number of new test cases
- Number of test cases executed
- Number of test cases passed
- Number of test cases failed
- Test case coverage

Section 7: The seventh section of the dashboard displays two trending time line graphs that shows the performance of up to the 5 best and 5 worst tests respectively.

Section 8: This section displays metrics associated with tests. For the entire testbed the following values are presented for the current selected time period, the prior time period and the change over the two selected periods:

- Total number of tests executed
- Number of tests passed
- Number of tests failed
- Number of tests invalid
- Test execution pass rate

Section 9: Section 9 shows a time line graph of the raw pass rate and the cumulative pass rate of tests running in the entire testbed.

Section 10: The tenth section of the dashboard displays two trending time line graphs that shows the performance of up to the 5 best and 5 worst suites respectively.

Section 11: This section displays metrics associated with defects. For the entire testbed the following metrics are presented for the current selected time period, the prior time period and the change over the two selected periods:

- Total Number of defects
- Number of new defects found
- Number of defects resolved
- Number of defects not resolved
- Defect resolution rate

Section 12: The last section of the Reports module displays charts pertaining to defects. The first chart is the number of defects, high, medium, low per category and the second chart is a Pareto chart showing the defects per category.

4.0 The Automation API

4.1 Introduction

The automation API is a combination of three major components that together enables you to execute automated runs against an environment using test equipment. The first component is a system of directories that house data to be used by the required programs to execute runs. The second component is the scheduler service; it gathers all the information from the various directories and schedules runs. The third component UAP program that runs on the test against the environment under test. The next sections will describe the details of each component.

4.2 API Components

This section describes in details the three different components of the automation API. Data storage and manipulation is based on a flat file system. The scheduler is a service written in PHP that integrates with TestSecretary for real-time data logging. The automation engine is the UAP program that runs against the environment under test.

4.2.1 Data Storage System

The data storage system consists of several directories and files that are used by the scheduler to run tests. Figure 12 shows the typical directory and file structure for the API system. Note that its structure can be different since the full paths to files are used to specify file locations. The root directory of a campaign must have a unique name as not to conflict with another campaign that may have the same information. In this directory are two files, a schedule file that contains all the run schedule information and a suite file that contains the lists of tests and their full file paths. In the same root directory are three data directories. The first is a logs directory which is used to house logs from individual test runs. The second is the steps directory, it houses any test steps files used by the individual tests. The third directory is the tests directory and it houses files that contain data for the individual tests.

The schedule file is a file that houses the schedule information in a name/value pair format delimited by an equal sign, one name/value pair per line. Table 8 shows the parameter names with descriptions of each. Note that the parameter names are case sensitive. Figure 13 is a sample schedule file.

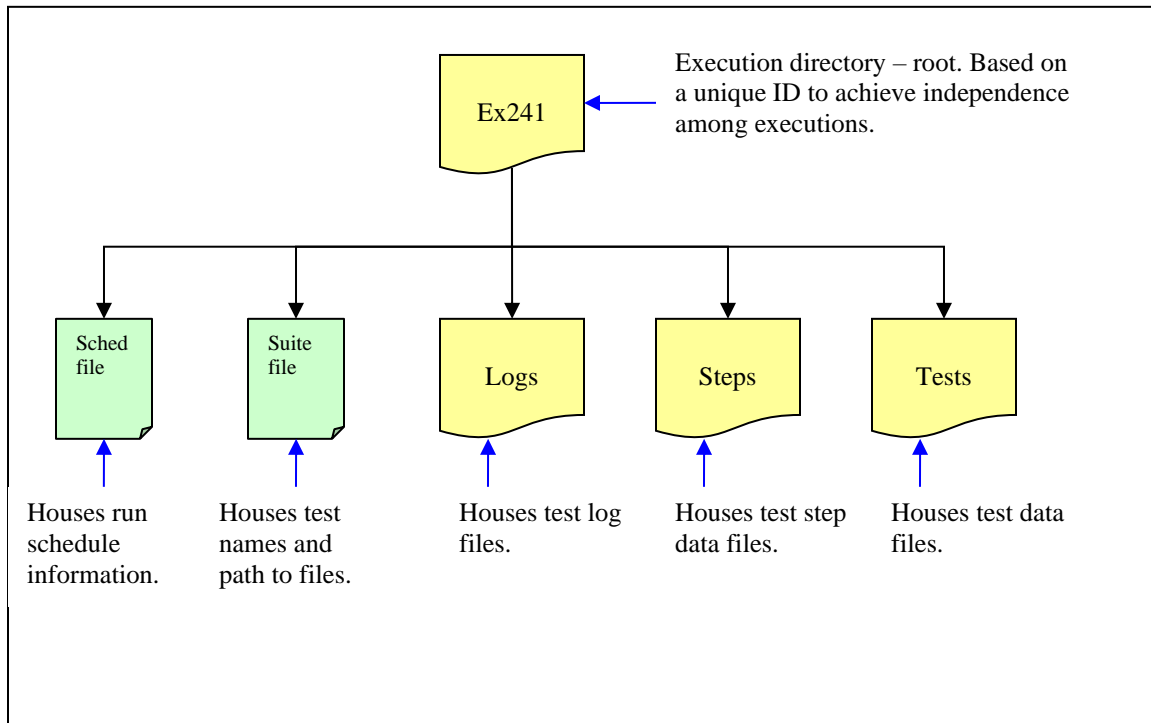


Figure 12 – Data Storage System

Table 8 – Schedule parameters with descriptions

Parameter name	Description	Notes
campaignID	Unique identifier for the execution campaign.	Required
runid	Unique identifier for the run.	Required
starttime	Time when the run will start. This is in the Unix time format.	Required
endtime	Time when the run will start. This is in the Unix time format.	Required
interval	The time in seconds to pause before running the next test.	Required
ncycle	The number of times to run the suite being executed.	Required
randomize	Indication whether or not to randomize the runs. The allowable values are: <ul style="list-style-type: none"> • 0 – do not randomize run order • 1 – randomize run order 	Required
cycleInterval	Time in seconds to pause before running the next suite cycle. For example if a value of 60 is specified, the system will wait for 1 minute before running the next cycle of the same suite.	Required

suitepath	Full path to the suite file (i.e. includes file name).	Required
logpath	Path to the logs directory. Does not include file name, the files are auto generated by the system.	Required
engine	Full path to the external program to be run (this will be the full path to the UAP executable file).	Required
engineStop	None. This value is reserved for future use	Required
timeout	The timeout period to wait for UAP to respond with an answer before terminating the test. Note, it is only the test that is terminated and not the suite. So if there is a test after the one that was terminated due to the time out, it will run next.	Required
repeat	The interval with which to repeat the entire suite after it has finished executing	Not Required

```

campaignID = 1642
runid = 1620
starttime = 1664585700
endtime = 1696121700
ncycle = 1
interval = 0
randomize = 0
cycleInterval = 1
suitepath = https://application.exemplar.com/tmdocs/fb5d0a05f4/documents/TestSecretary/Executions/Ex1642/midwest-desktop.txt
logpath = https://application.exemplar.com/tmdocs/fb5d0a05f4/documents/TestSecretary/Executions/Ex1642/logs
engine = /uap/bin/uap
engineStop = none
timeout = 1800
repeat = Hourly
    
```

Figure 13 – Sample schedule file

The suite file houses the test names and the full path to the test file for each test in the suite. Figure 14 is an example of a suite file. Each line has information for a single test in a comma separated form. Note that the name of the file corresponds to the suite name.

```

T-AB-FIXED-01,http://application.exemplar.com/tmdocs/fb5d0a05f4/documents/TestSecretary/Executions/Ex64/tests/T-AB-FIXED-01.txt
T-CND-FIXED-01,http://application.exemplar.com/tmdocs/fb5d0a05f4/documents/TestSecretary/Executions/Ex64/tests/T-CND-FIXED-01.txt
    
```

Figure 14 – Sample suite file

The logs directory houses logs generated by the UAP engine for each test. The log for each test is housed in a separate file. The file name is a combination of the test name and the timestamp when the file was generated.

The steps directory houses test information used by the engine. The UAP engine is programmed to pick up information from this directory.

The tests directory houses the data for each test. Each test file houses the test data in a name/value pair format delimited by an equal sign, one name/value pair per line. To achieve integration with TestSecretary the parameters for each test must coincide with those shown in Table 9. Figure 15 is an example test file.

Table 9 – Test parameters with descriptions

Parameter name	Description	Notes
testname	Name of the test being run. This name should correspond to the name of the same test in the suite file..	Required
testcase	The name of the test case being executed. This is for reporting purposes.	Required
agent	The name of the TestSecretary test agent associated with the program running on the test equipment.	Required
script	The full path to the script that will run the test. This script is called by the engine.	Not Required
port[i...n]	The ports the engine will use for the test. This is often the ports on the test equipment that will interface with the environment.	Not required
address[i...n]	The environment addresses involved in the test.	Not required
party[i...n]	Alias for the parties involved in a test.	Not Required
technology[i...n]	Technology of the interface or end point	Required


```
testname = T-AB-FIXED-01
testcase = TC-AB-000001
agent = UAP-MIDWEST
script = http://application.exempler.com/tmdocs/fb5d0a05f4/documents/TestSecretary/Executions/Ex64/steps/TS-AB-000001.txt
port1 = 9887dc393234545a42
address1 = 9132301673
party1 = B
technology1 = Android
port2 = 0149C22002012008
address2 = 9132304070
party2 = A
technology2 = Android
```

Figure 15 – Sample test file

The test file is read by the UAP engine.

4.2.2 The Scheduler

The scheduler uses the information from the data storage system to schedule, execute and archive data from a campaign. The scheduler is a program written in PHP and it takes a single input argument, the schedule file. The syntax for using the scheduler is as follows:

aeExec.php <*schedule file*>

where aeExec.php is the scheduler and schedule file is the schedule file, similar to that shown in Figure 13. The scheduler is then responsible for reading the schedule file, processing the information, scheduling the campaign to run at the requested time, running the suite of tests, logging the results and ending the campaign. Figure 16 shows the flow of events in the scheduler.

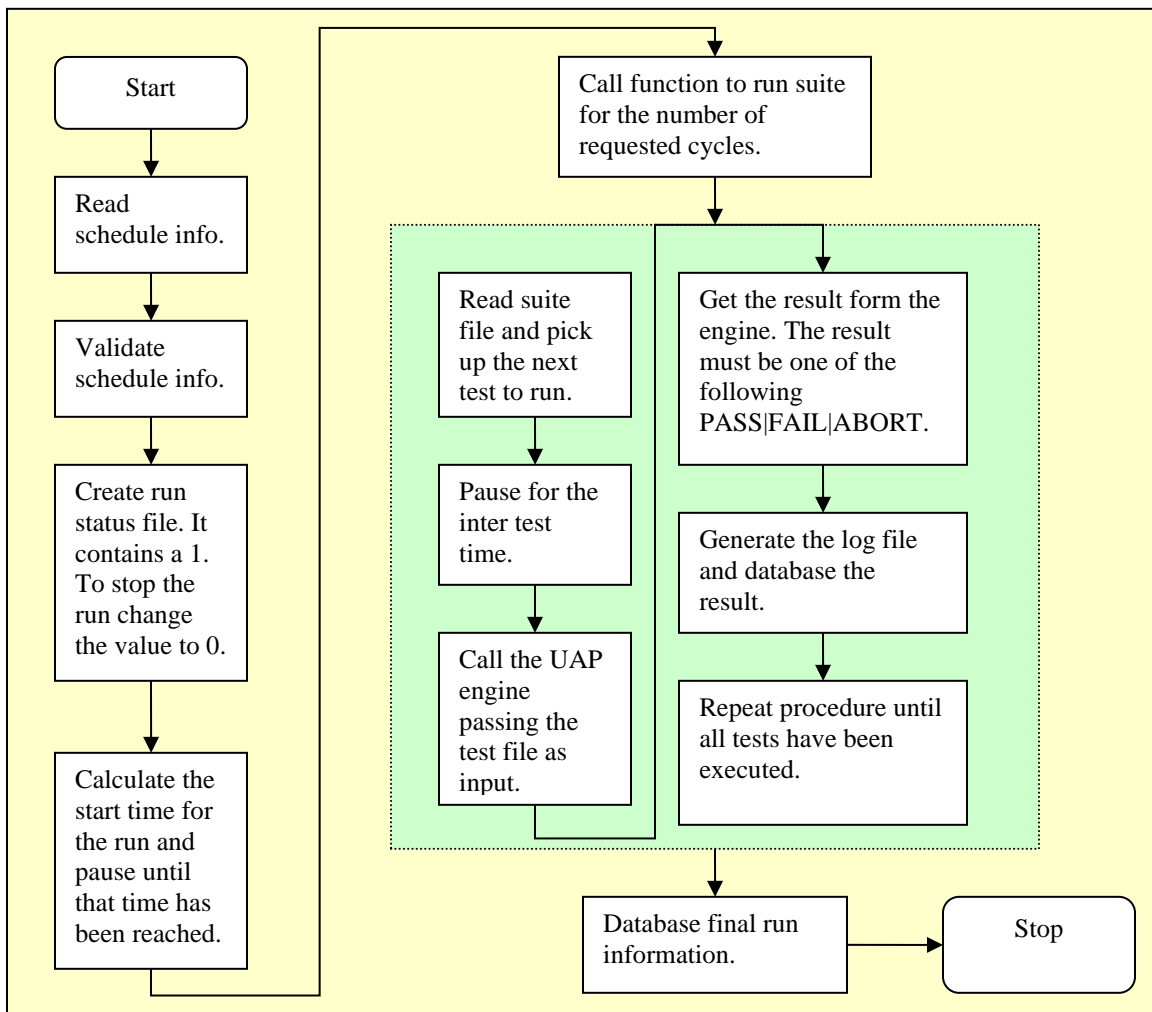


Figure 16 – Scheduler event flow

4.2.3 The UAP Engine

The UAP engine is the program that runs on the test equipment in use. To achieve integration with the TestSecretary automation API, the program must have the following requirements:

- It must be able to run from a command line.
- It must take in one input parameter, the test file.
- It must be able to read name/value par data, where one name/value per is placed per line and the two are delimited by an equal sign (see Figure 15).
- If logging is desired, it must write the data to stdout.
- The result must be the last piece of data written to stdout and must be one of the following: PASS|FAIL|ABORT.

Note that you can place additional information to be used by UAP in the directories created specifically for that UAP agent (see Figure 11).

Notes