USER MANUAL

Web: continuousassurance.org
App: https://www.mir-swamp.org
Twitter: @swampteam

Technical Support

Following is contact information for the SWAMP:

- Email: support@continuousassurance.org
- Support: to create a support ticket, go to https://ticket.continuousassurance.org or email support@continuousassurance.org.

Preface

This document guides users to successfully use the Software Assurance Marketplace (SWAMP).

The SWAMP is state of-the-art software designed to serve as an open resource for software developers, assurance tool developers, and researchers who wish to perform continuous software assurance (CSwA) testing in a safe, secure environment.

The SWAMP is funded by the Department of Homeland Security Science and Technology Directorate and directed by academic experts in high-throughput computing, identity management, and security from the following organizations: the Morgridge Institute for Research, the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign, the Center for Applied Cybersecurity Research at Indiana University, and the University of Wisconsin-Madison.

Introduction to the Software Assurance Marketplace (SWAMP)

The SWAMP is a national, no-cost resource for software assurance (SwA) technologies used across research institutions, non-governmental organizations, and civilian agencies and their communities as both a research platform and a core component of the software development life cycle (SDLC).

It is our vision that widespread adoption of the SWAMP services will lead to a safer and more secure software ecosystem.

The Software Assurance Marketplace (SWAMP) channels the mission of the Department of Homeland Security Science and Technology Directorate's (DHS S&T) Cybersecurity Division by:

- Developing and leveraging technologies, tools, and techniques to defend and secure current systems to better protect critical infrastructures against attacks from our adversaries,
- Facilitating technology transition through a marketplace approach where a collection of innovative technologies can be harnessed by the community, and
- Providing a collaborative research environment by which DHS customers, agencies of the U.S. government, academia, private industry, and international partners can exchange technical and research ideas to help advance software security and quality improvements.

The SWAMP may be used without cost by open-source, for profit, and non-profit organizations to test software for vulnerabilities and/or security risks. The accessibility of the SWAMP allows users at all levels to engage in the software development life cycle. A user can upload his/her Software Package and/or assessment Tool to the SWAMP for SwA testing. Users have access to hundreds of Software Packages on the most popular Platforms (operating systems).

The SWAMP protects your intellectual property and personally identifiable information. You control access to your Software Packages, assessment Tools, and software assessment Results.

In the future, the SWAMP will offer the most frequently requested Software Packages, software assessment Tools, and Platforms.

The SWAMP currently provides the following software assurance services:

1. Support for software written in one of the following programming languages:
    1. C/C++
    2. Java source
    3. Java bytecode
    4. Python
    5. Ruby/Ruby on Rails
2. Assessments using one or more of the following open-source static code analysis tools:
    1. FindBugs with FindSecurityBugs

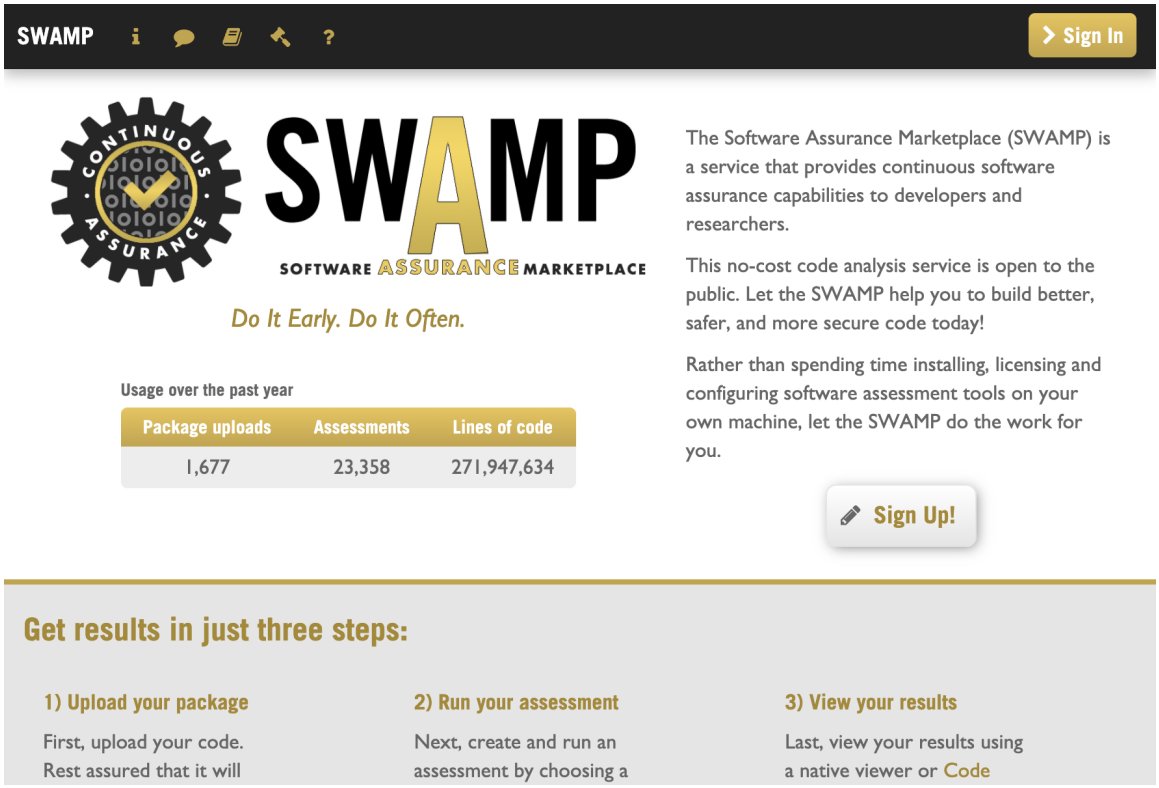
    2. PMD
    3. Clang Static Analyzer
    4. cppcheck
    5. GCC
    6. checkstyle
    7. error-prone
    8. Pylint
    9. Bandit
    10. Flake8
    11. Android Lint
    12. ruby-lint
    13. RuboCop
    14. Reek
    15. Brakeman
    16. Dawn
3. Assessments using one or more of the following commercial static code analysis tools:
    1. Parasoft C/C++test
    2. Parasoft Jtest
    3. Red Lizard Goanna
4. Assessments of Android APK packages:
    1. RevealDroid
5. Support for software that runs on one or more of the following platforms (operating systems):
    1. Red Hat Enterprise Linux 6.4 32-bit
    2. Red Hat Enterprise Linux 6.4 64-bit
    3. Fedora 18 64-bit
    4. Fedora 19 64-bit
    5. Ubuntu 12.04 LTS Lucid Lynx 64-bit
    6. Debian 7.0 64-bit
    7. Scientific Linux 5.9 32-bit
    8. Scientific Linux 5.9 64-bit
    9. Scientific Linux 6.4 64-bit
    10. Google Android on Ubuntu 12.04 64-bit

Part 1: Registration

Accessing the SWAMP

The SWAMP is a web-based software application. The latest version of most modern web browsers should be sufficient to use the SWAMP, but Chrome and Firefox are recommended, as the SWAMP is regularly tested with the latest Chrome and Firefox browsers.

To use the SWAMP, open your web browser, and go to: https://www.mir-swamp.org.



Registering with the SWAMP

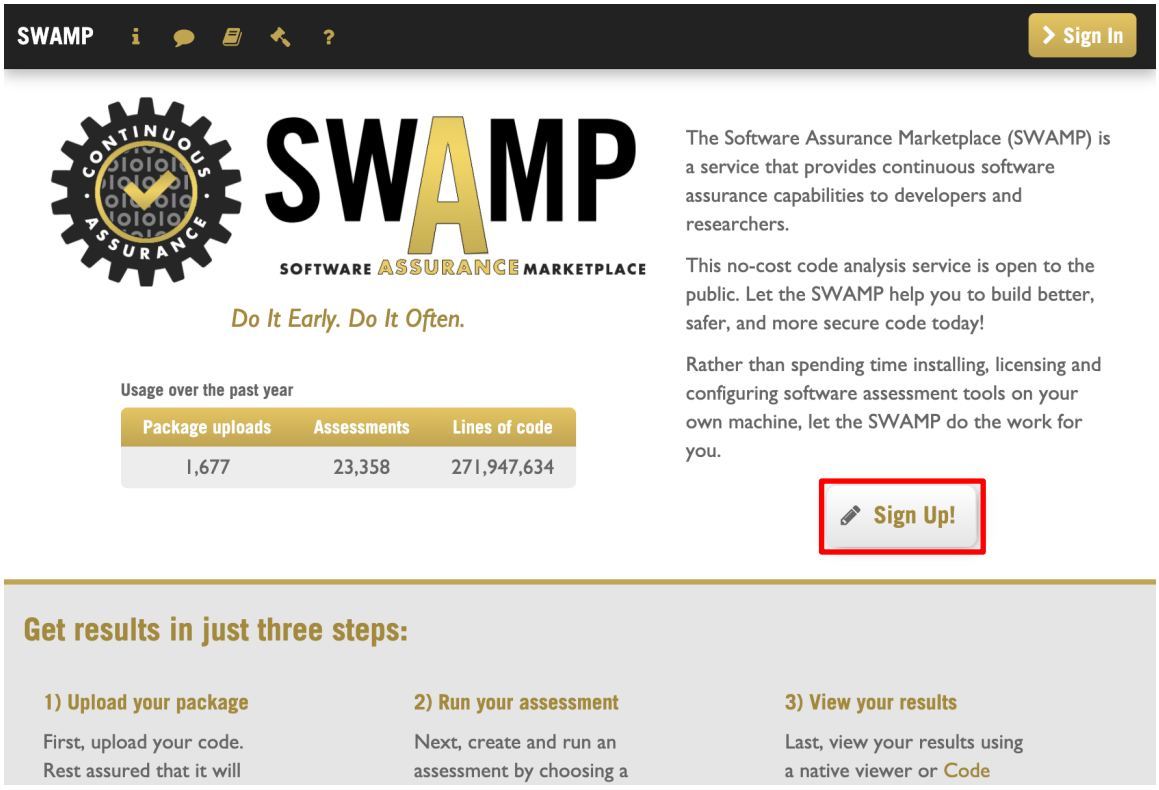
To create a new account with the SWAMP, click the **Sign Up!** button. You will be given a choice to register with a new account (may require some personally identifiable information) or register with an existing Google, GitHub or other third party identity provider. You can only have one third party account linked to a single SWAMP account. You may have more than one SWAMP user account. Different email address or login identifications are needed for each additional SWAMP user account that is created. You may use the same personally identifiable information in additional SWAMP user accounts that was used in your initial SWAMP user account.

Your privacy is important to us. We will not provide your personal information to other organizations.

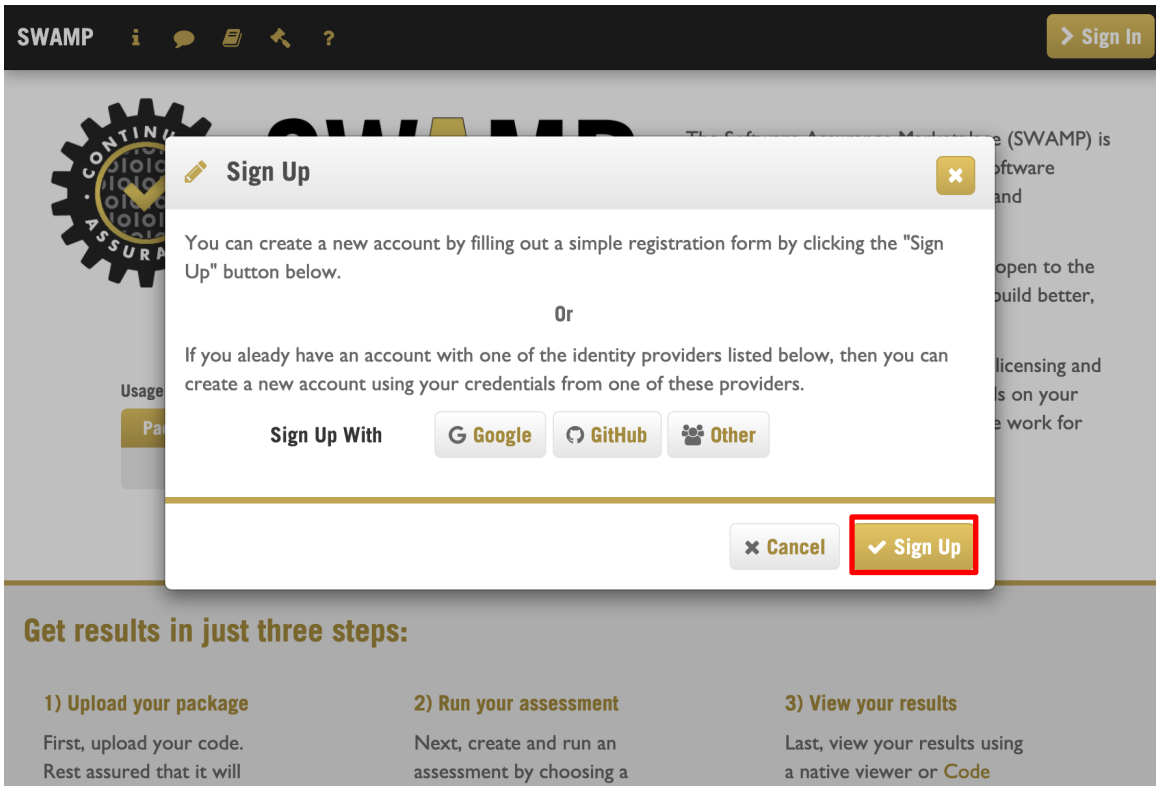
Follow the steps below to register with the SWAMP without using GitHub.

***Note:** Inappropriate use of the SWAMP that may or may not violate the **Acceptable Use Policy** will result in **deactivation** of your SWAMP user account. SWAMP reserves the right to terminate your user account at any time without notice. If this happens, contact SWAMP at support@continuousassurance.org with any questions you may have, to request account reactivation, or to determine next steps to be able to access the SWAMP again.*

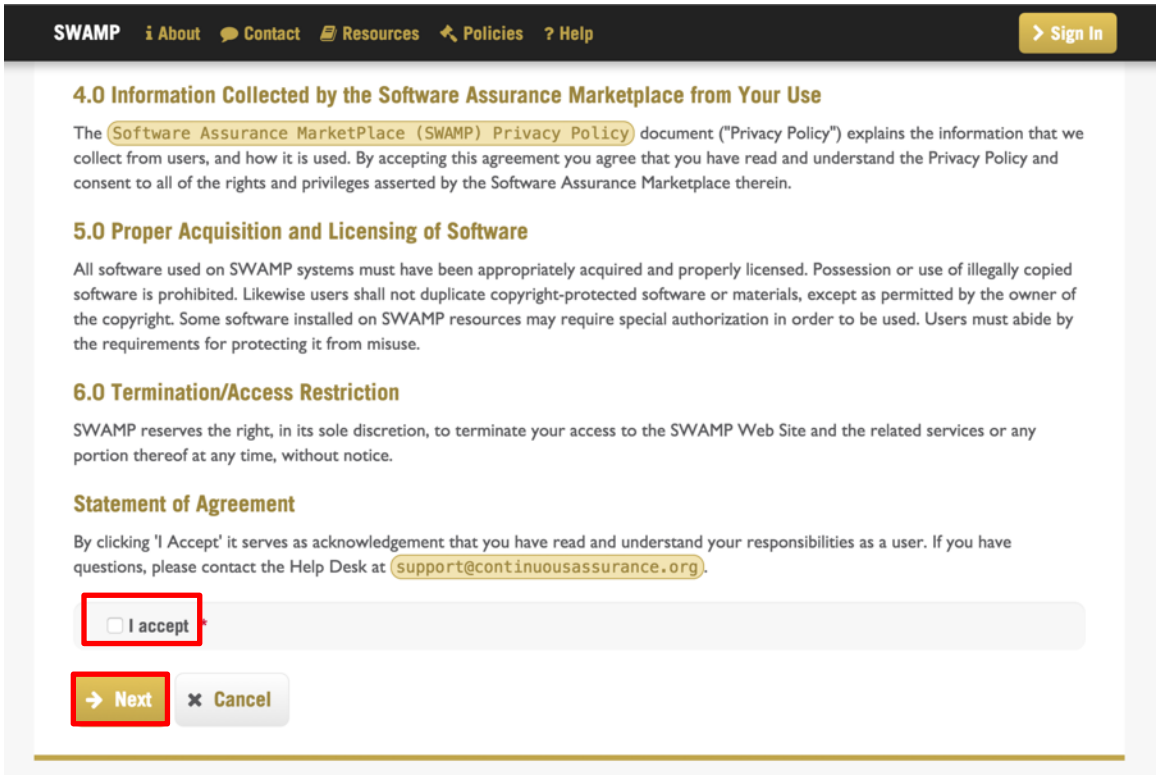
1. Navigate to **https://www.mir-swamp.org**. Click the **Sign Up! button**



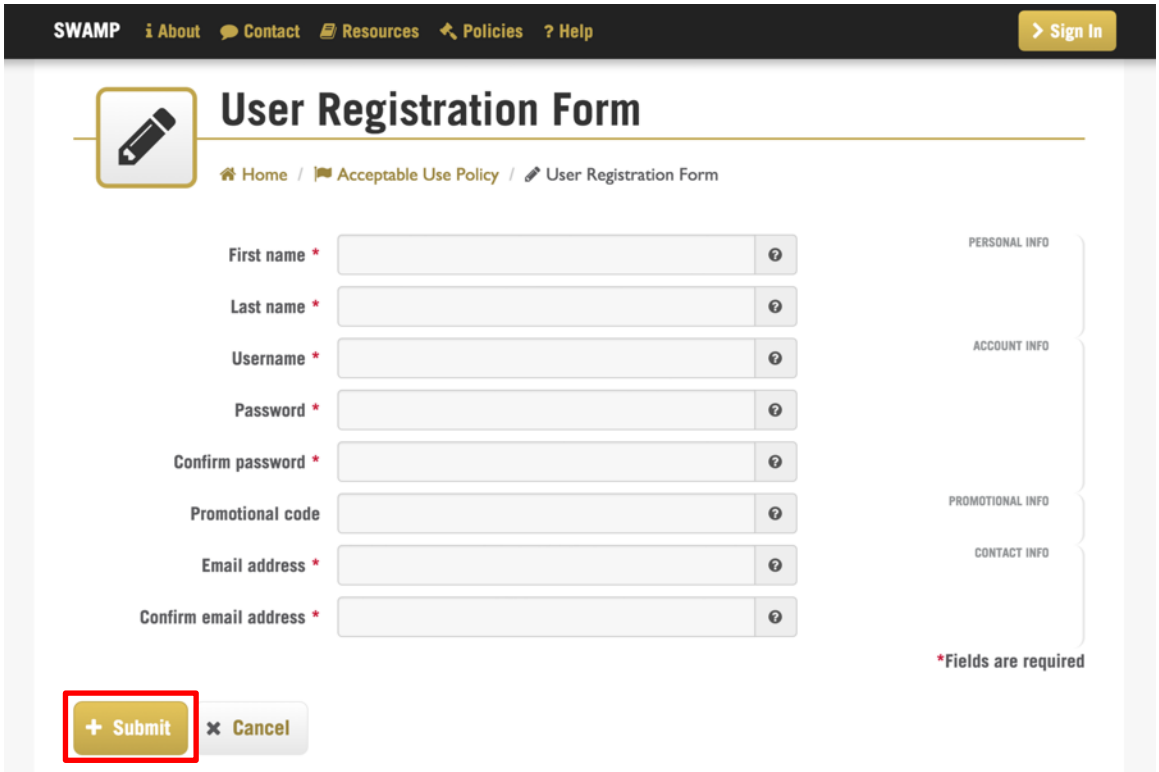
2. On The Sign Up Dialog, you will be presented with a number of ways to sign up. To register, click the **Sign Up** button in the lower right corner.



3. Read and accept the **Acceptable Use Policy**. Check **I accept** to agree to the policy, and select **Next**.



4. On the **User Registration Form**, type the requested information, and select **Submit**.



Notes:

- All fields, except SWAMP promotional code, are required.
- For the **Email address** field, only email addresses from institutions are accepted. For example, Joe.Smith@morgridge.org or Joe.Smith@wisc.edu. Use the GitHub registration method to register with a freely available email account, such as Gmail, Hotmail, or Yahoo.
- For the SWAMP **Username** field, the username may be recorded in log files.

Password Requirements

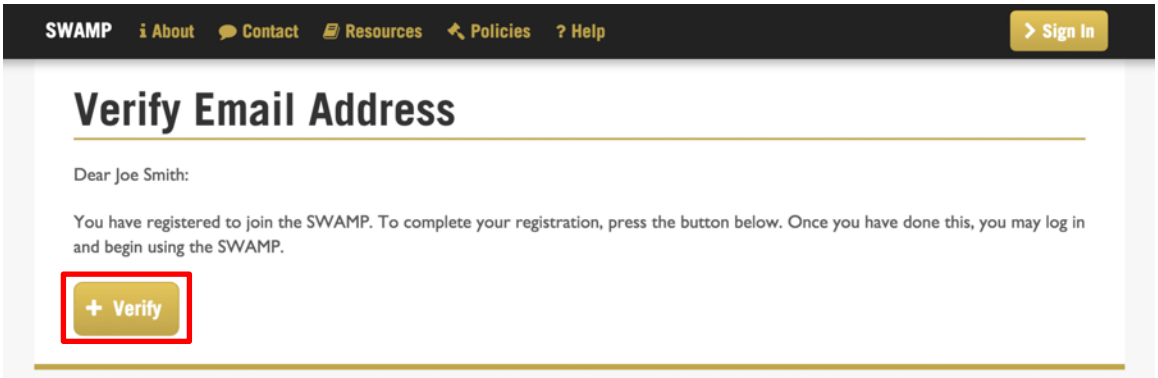
A strong password is required to complete registration and access the SWAMP. The following are the **minimum acceptable** password requirements:

- At least ten characters
- At least three of the following character types:
  - upper-case alphabetic character
  - lower-case alphabetic character

    - number/digit
    - symbol
- Do not use common or simple words found in the dictionary
- Do not use ASCII characters outside the range of 32 to 126
- The maximum password length is 200 characters

5. After submitting the registration form, you will be asked to verify your email address. Select **OK**.

6. You will receive a verification email. Within the email, follow the link to verify your email address. Select **Verify**, then select **OK**.



7. You have now completed the registration process and can sign in to the SWAMP. You will receive a welcome email to help you get started.

****Note:** *Inappropriate use of the SWAMP that may or may not violate the* ***Acceptable Use Policy*** *will result in* ***deactivation*** *of your SWAMP user account. SWAMP reserves the right to terminate your user account at any time without notice.*

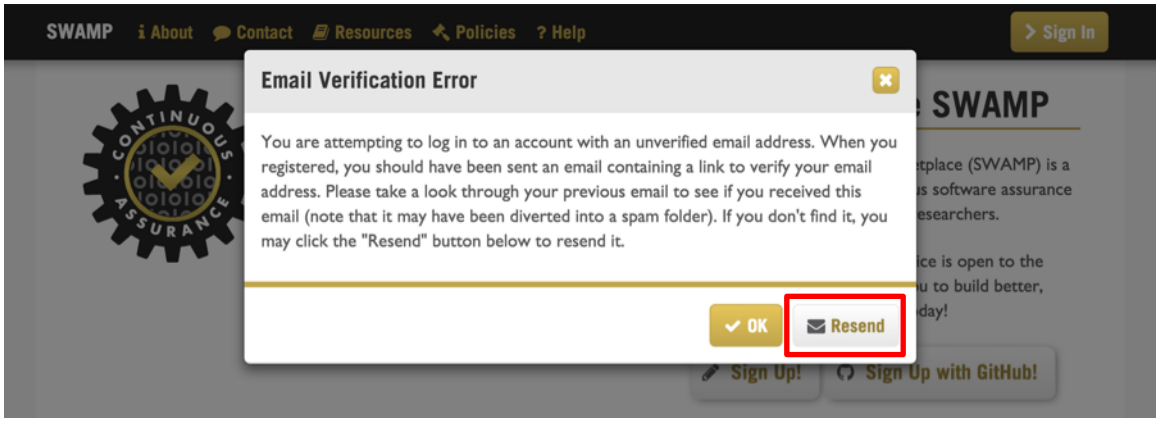
Resend Verification Email

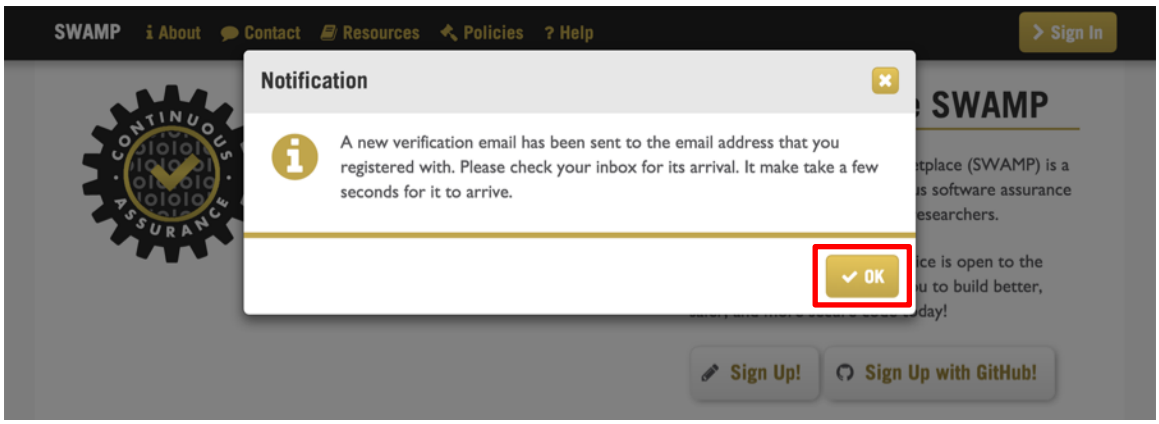
If you did not receive a SWAMP User Verification email, you may request a new one.

1. Click the **Sign In** button on the SWAMP home page, type your Username and Password, and select **OK**.


SWAMP
About
Contact
Resources
Policies
Help
Sign In
SWAMP
The Software Assurance Marketplace (SWAMP) is a service that provides continuous software assurance capabilities to developers and researchers.
Sign In
Username
Request my username
Password
Reset my password
Or
Sign In With
Google
GitHub
Other
OK
Cancel
Get results in just
1) Upload your package
First, upload your code. Rest assured that it will remain secure. See our privacy policy.
Next, create and run an assessment by choosing a package, tool, and platform.
Last, view your results using a native viewer or Code Dx™ for full featured analysis.

2. If you have already checked your email and spam folder, select **Resend** to send a new verification email. Select **OK**.

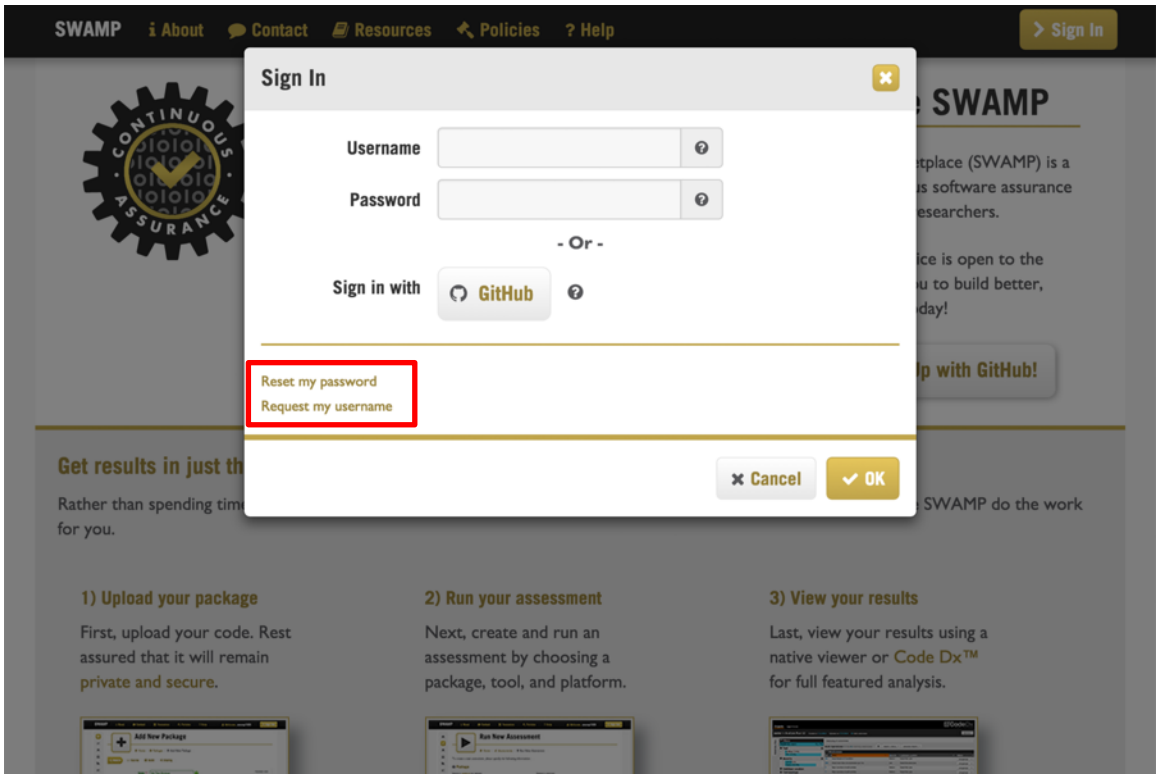




3. If you still do not receive a SWAMP User Verification email, select **Contact** on the home page for SWAMP support.

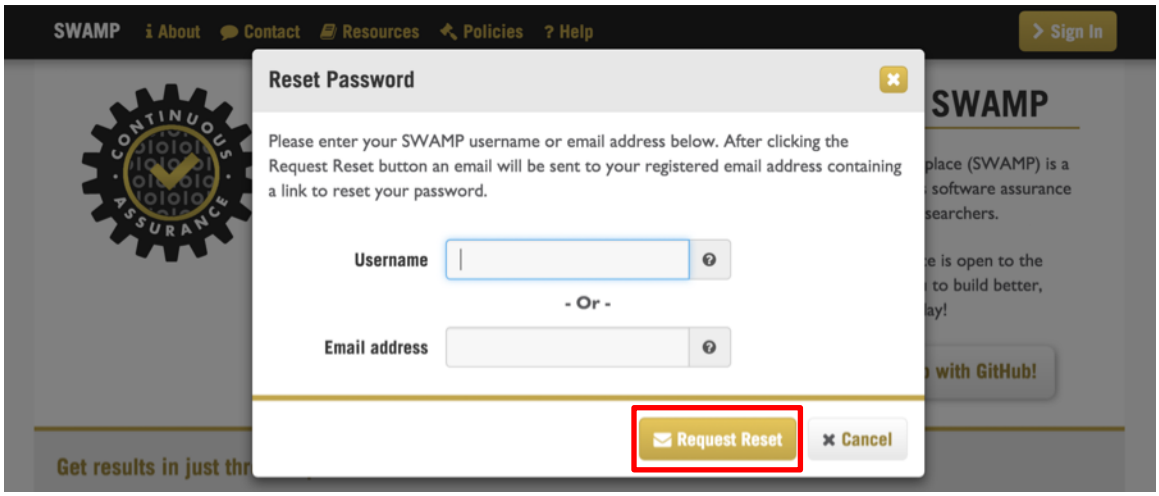
Forgotten Username or Password

If you have forgotten your login information, select **Sign In** from the SWAMP home page and choose **Request my username** or **Reset my password**, depending on the information you are requesting.



Resetting Your Password

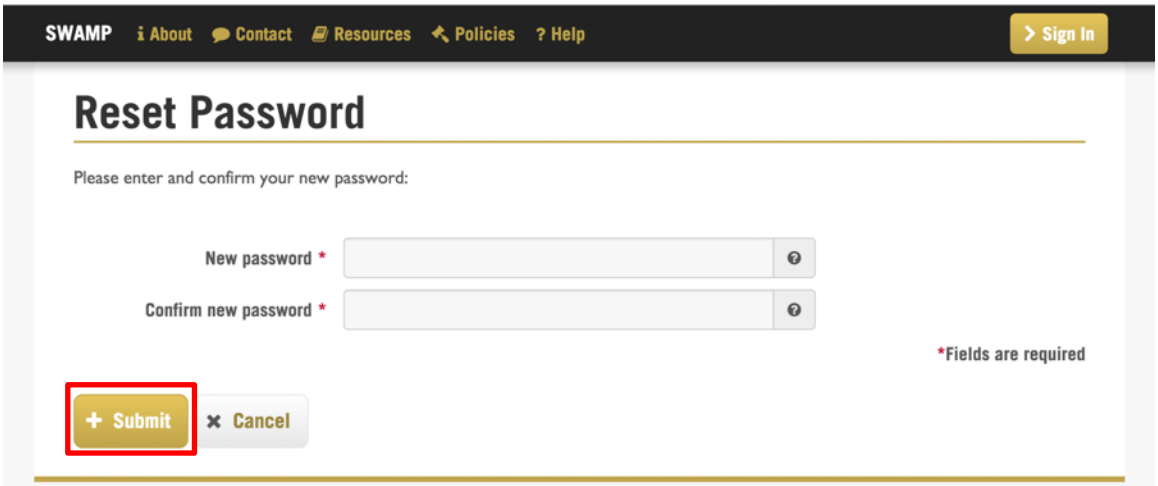
1. Select **Reset my password.**
2. Enter your SWAMP Username or Email address. Select **Request Reset**.



3. An email will be sent to the email address associated with your SWAMP account containing a link to reset your password.

4. Once you receive this email, follow the link to reset your password.

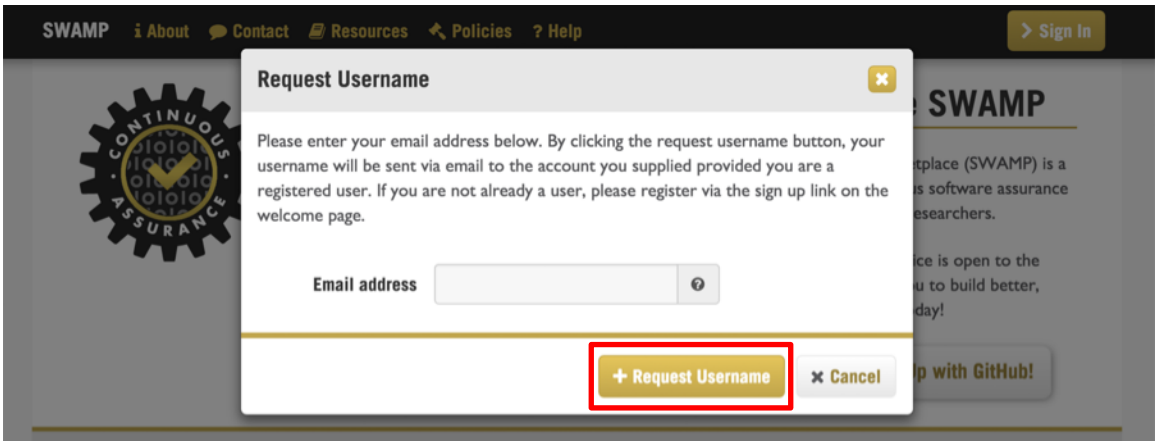
5. Enter and confirm your new password, and select **Submit.**



Requesting Your Username

1. Select **Request my username**.

2. Enter your SWAMP Email address. Select **Request Username**.



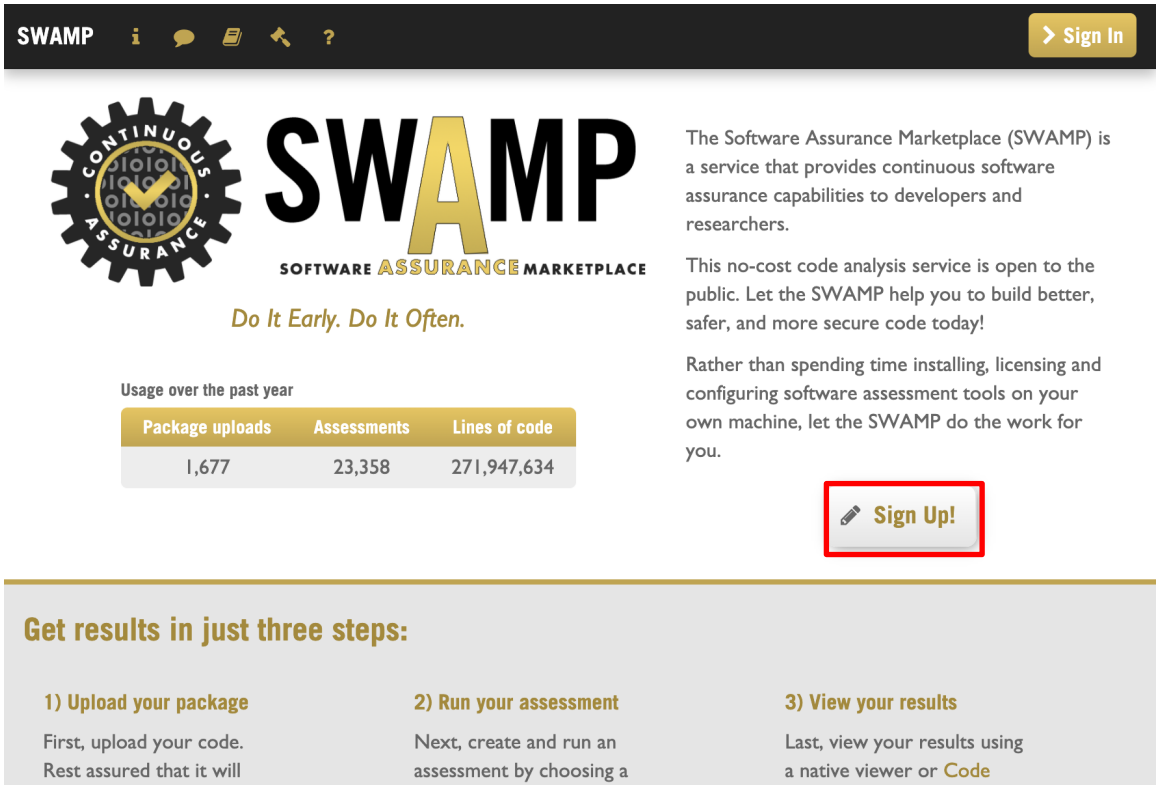
3. An email will be sent to the email address associated with your SWAMP account containing your current username.

Registering with the SWAMP Using Your GitHub Account

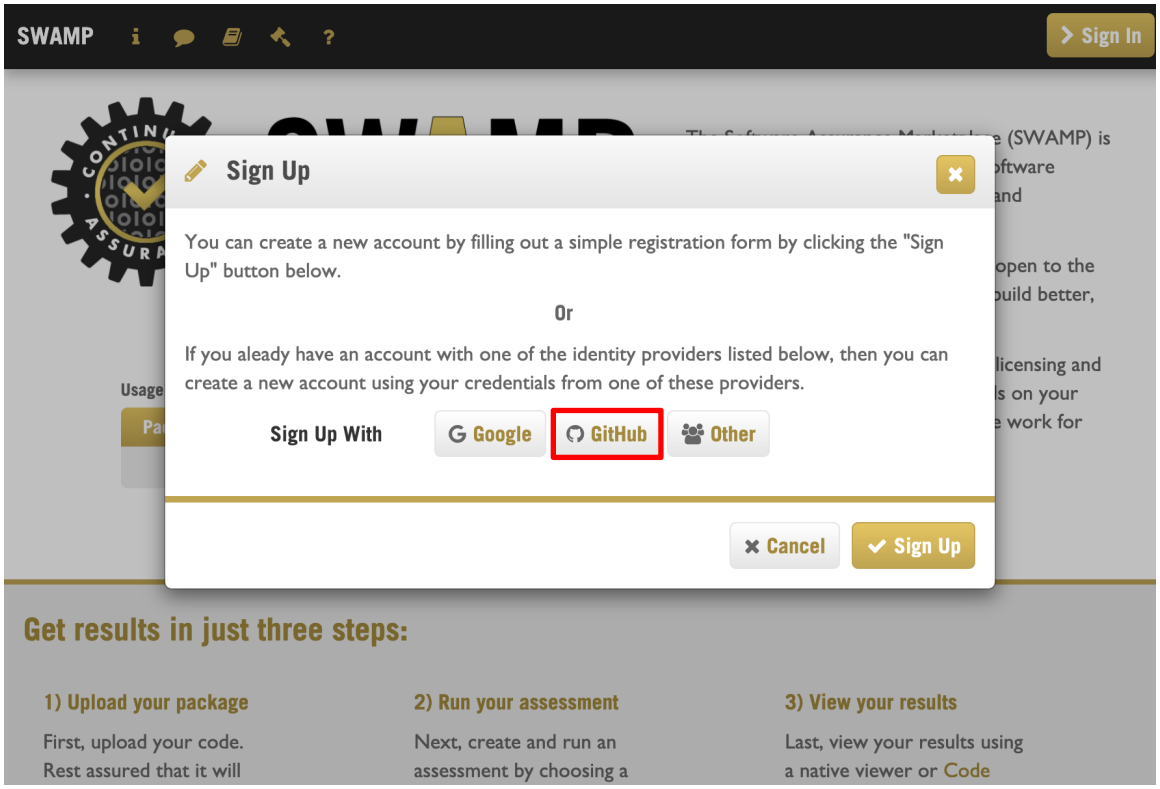
To simplify sign-up and be an open resource to the development community, the SWAMP will enable single sign-on with trusted platforms. Currently, SWAMP supports registration using GitHub credentials.

To register using your GitHub account, follow these steps. Once your GitHub credentials are authenticated, you must complete your SWAMP profile, including creating a unique username and password (reference the steps listed above).

1. Navigate to **https://www.mir-swamp.org**. Click on the **Sign Up!** button.

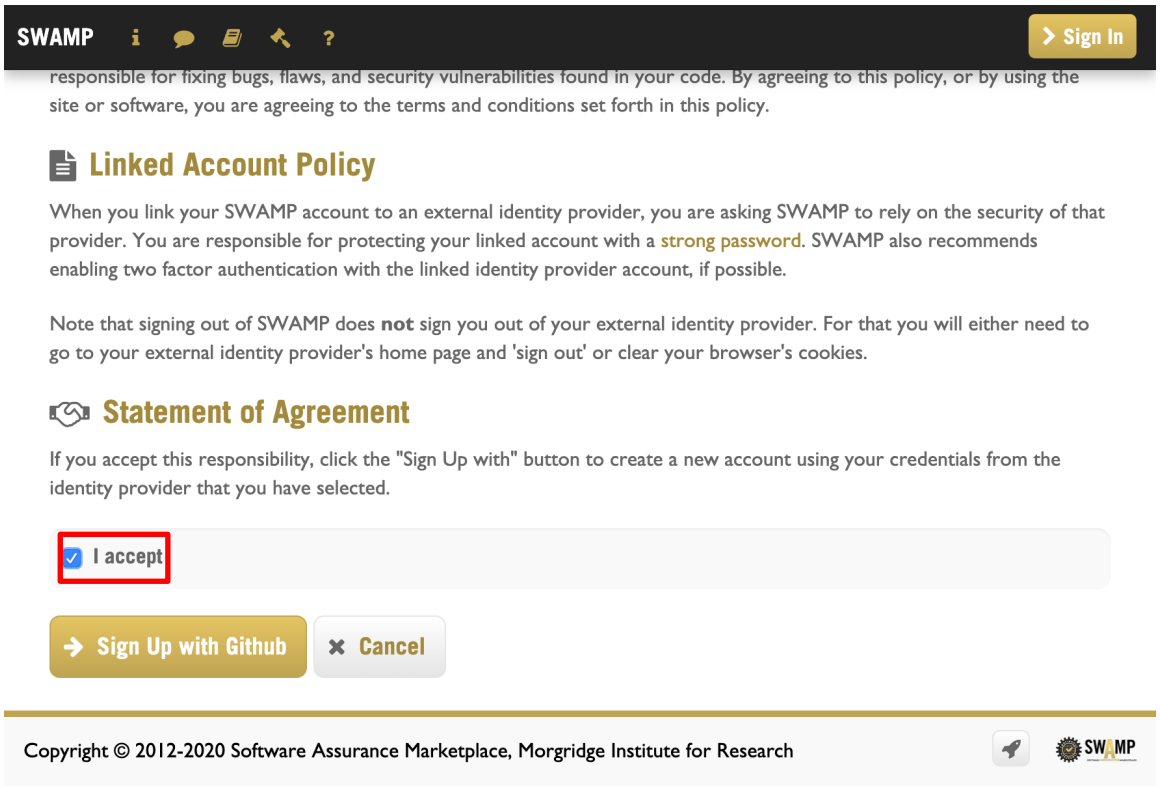


2. Click on the GitHub button or the identity provider of your choice.

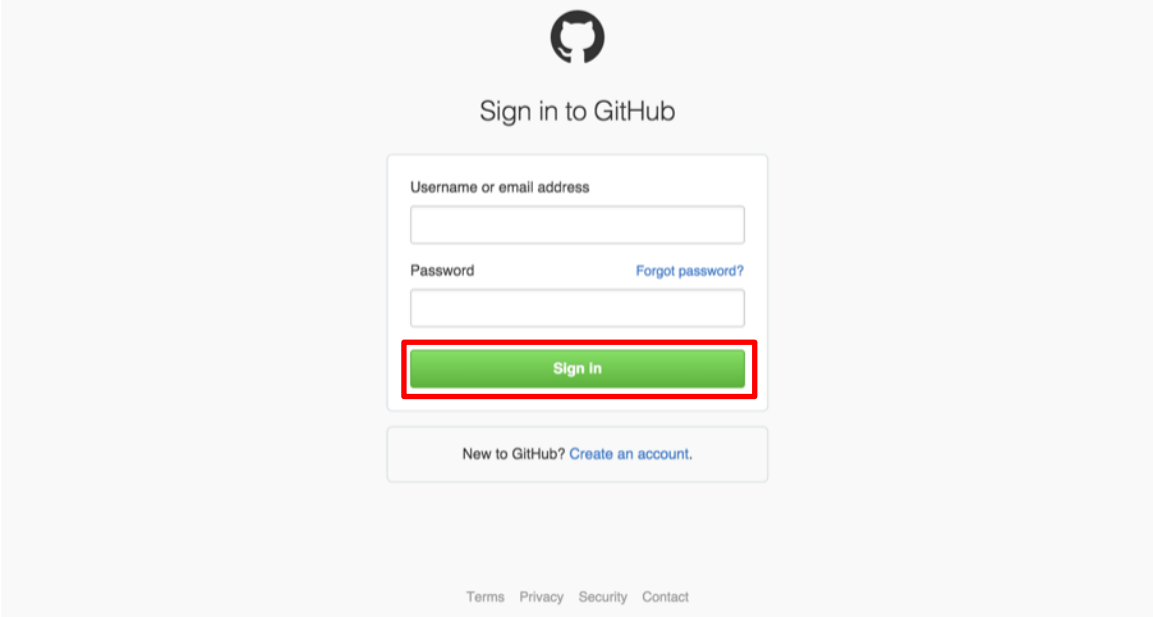


3. Next, you will be prompted to review SWAMP's specific **GitHub Use Policy**. When using GitHub in the SWAMP, you are relying on the security of your GitHub account. Therefore, take security precautions in GitHub, such as choosing a strong password and using GitHub's two-factor authentication.

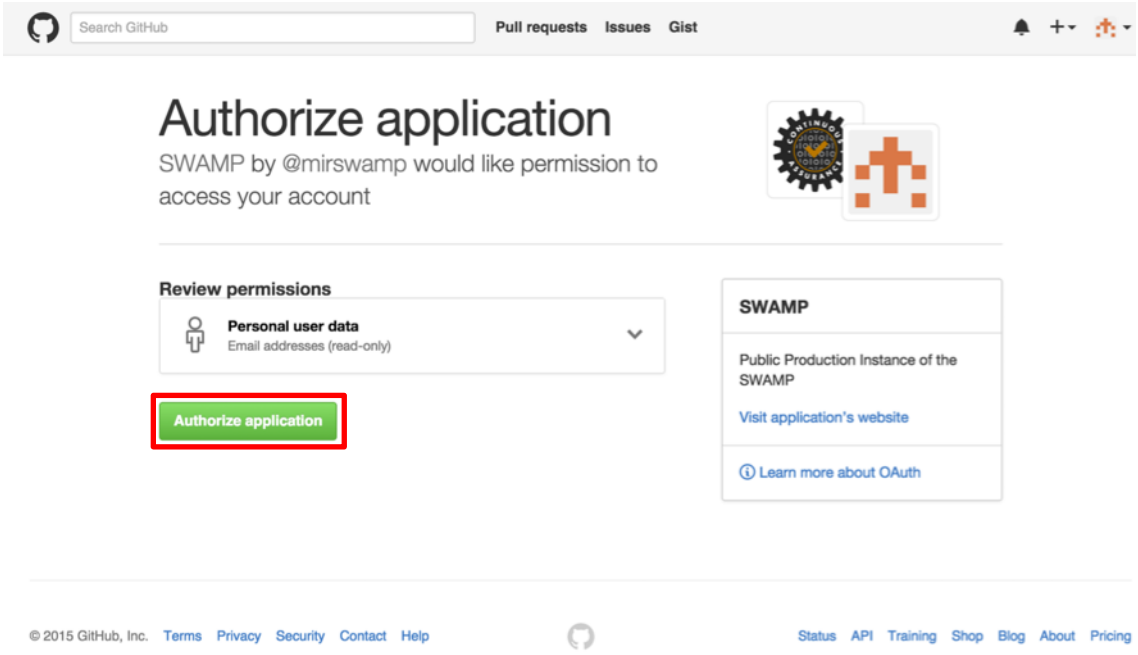
   Read and accept the **GitHub Use Policy**. Check **I accept** to agree to the policy.



4. You will be redirected to the GitHub sign in page. Sign in to GitHub with your GitHub credentials. Select **Sign In**.



5. Review the GitHub Authorize application page to ensure that @mirswamp is requesting access to your GitHub account. Select **Authorize application**.



6. You have now completed the registration process. You will be signed in to the SWAMP and redirected to your SWAMP account's Home screen.

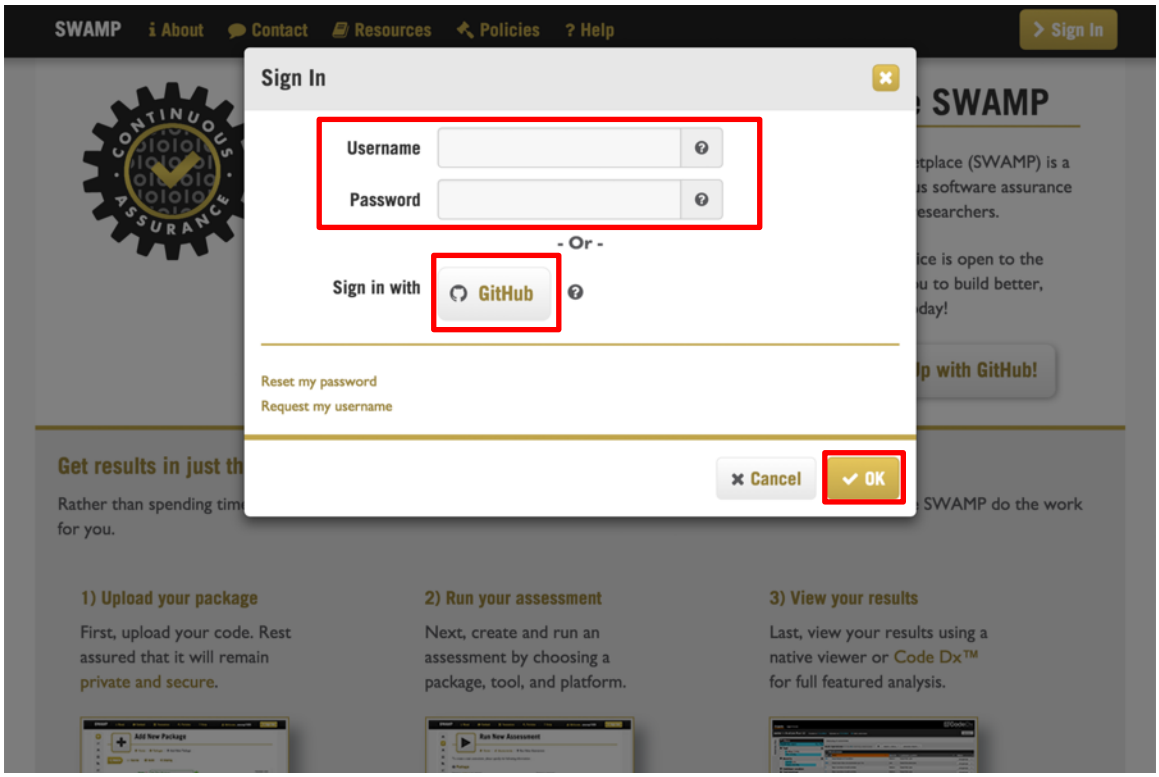
Signing in to the SWAMP

On the SWAMP home page, there are currently two options for sign in. You may use your SWAMP username and password or you can use your GitHub credentials.

To sign in to SWAMP using your SWAMP Username and Password, enter your username and password in the designated fields, and select **OK**. You will be logged in to the SWAMP and land on your Home screen.

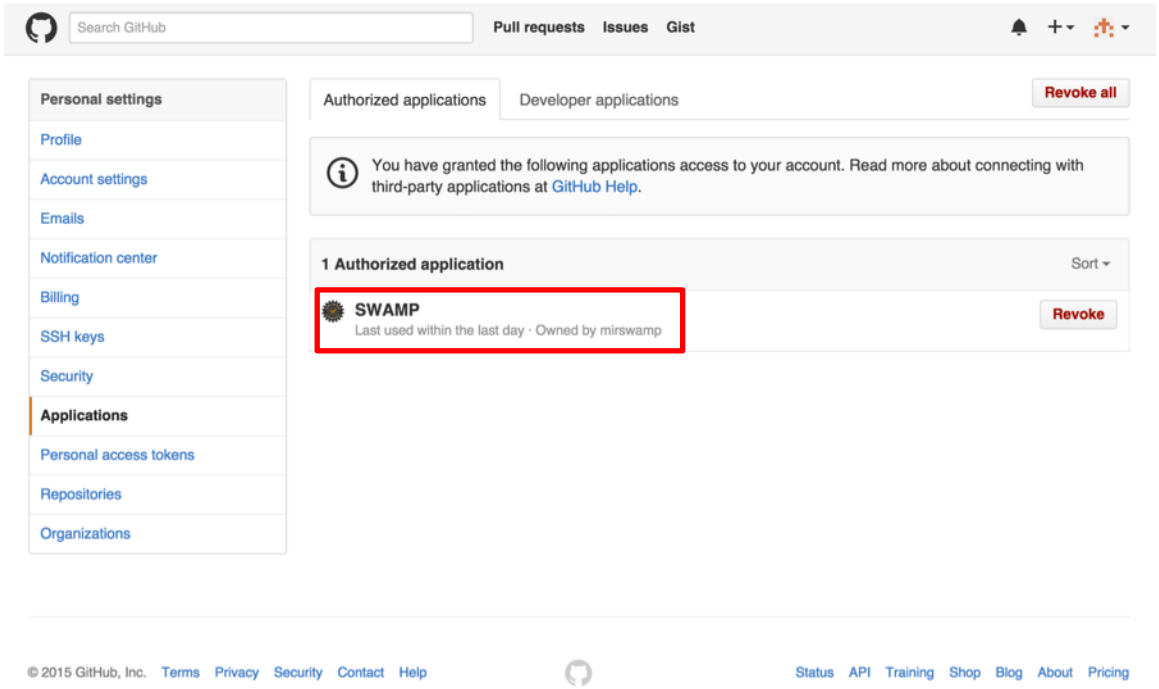
If you have difficulties signing in with your SWAMP credentials, refer to the *Reset my password or Request my username* options on pages 14-15 of this User Manual.

To sign in to SWAMP with GitHub, select **GitHub**. SWAMP will authenticate your GitHub account.



Once your account is verified, your Home screen will be visible. You may now use the SWAMP.

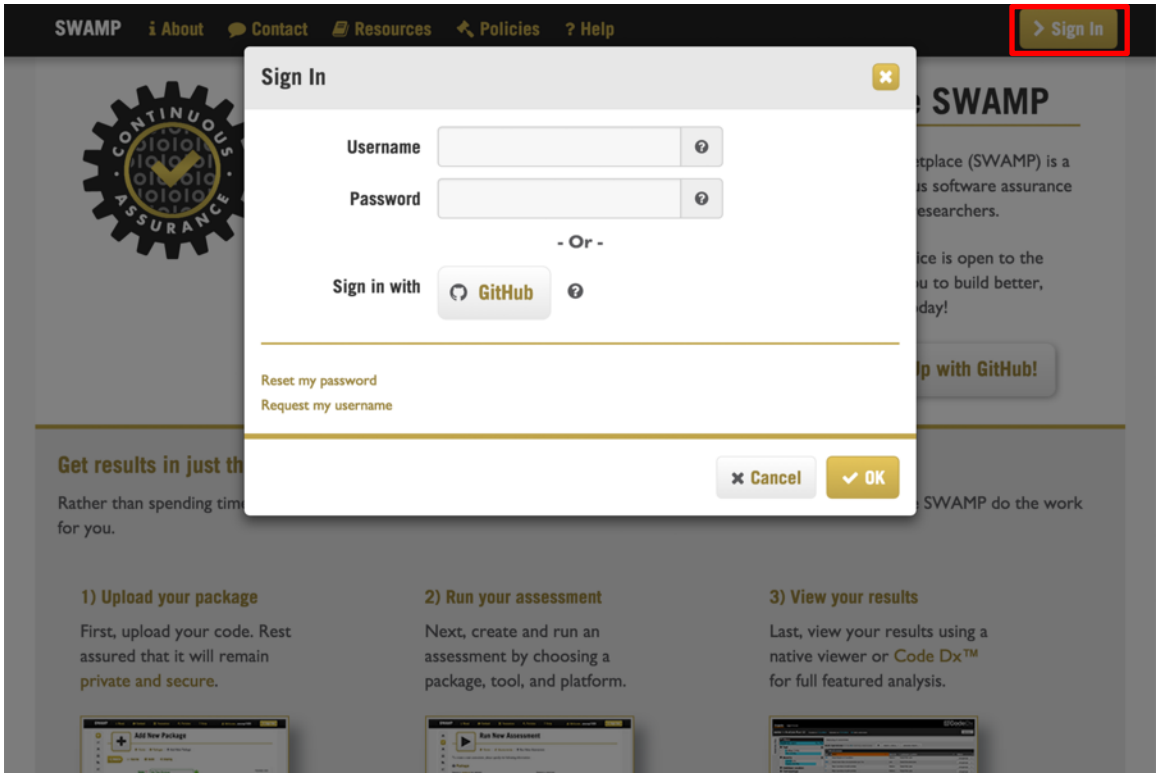
If you have difficulty signing in with GitHub, visit your GitHub account to make sure that your password and username are correct and that SWAMP is an Authorized application in the Applications section of your Personal Settings.



Unlinking your GitHub account from your SWAMP account

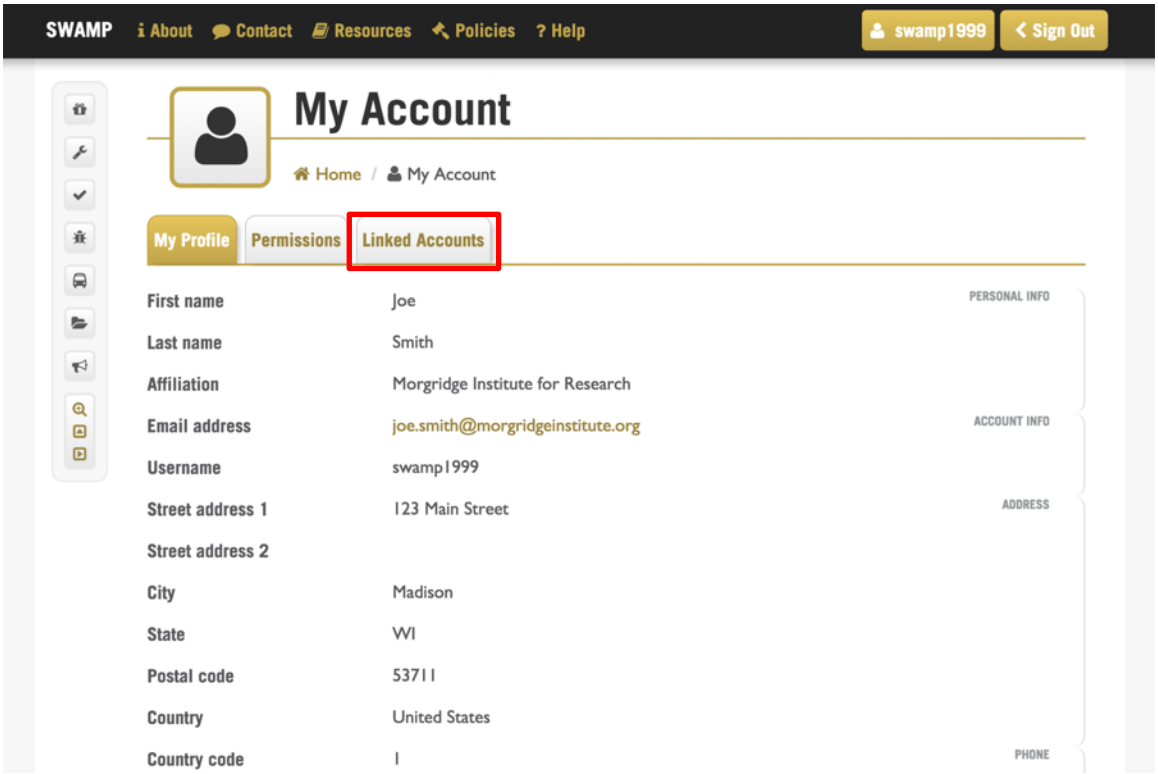
If needed, you can unlink your GitHub account from your SWAMP account. To do so, you must unlink the GitHub application in your SWAMP account AND also revoke SWAMP access in your GitHub account by following the steps below.

1. Sign in to your SWAMP account. You can sign in using your SWAMP or your GitHub credentials.

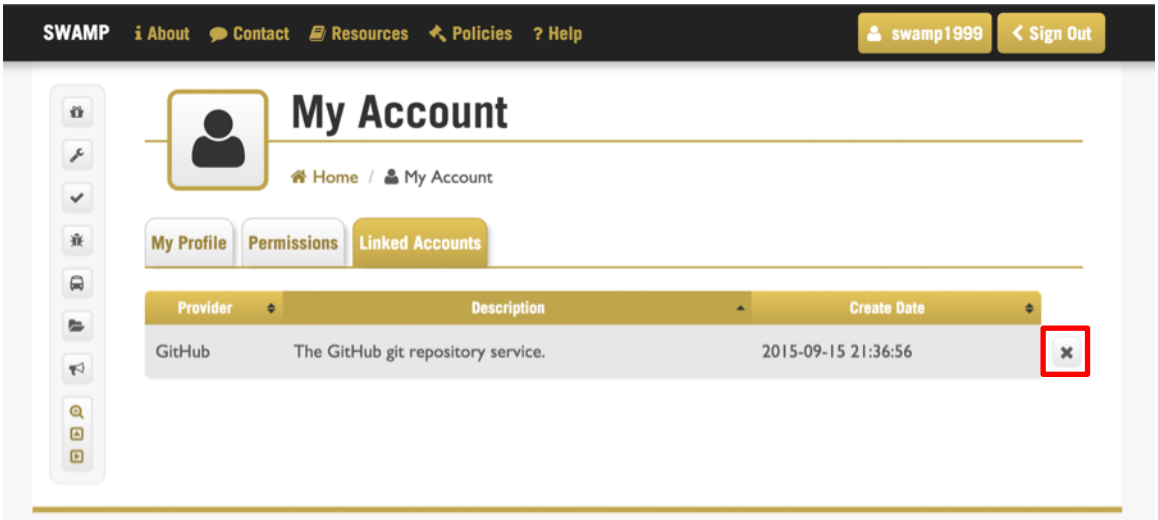


2. Select **My Account** by clicking your username on the upper right side of the page.

3. Select the **Linked Accounts** tab.

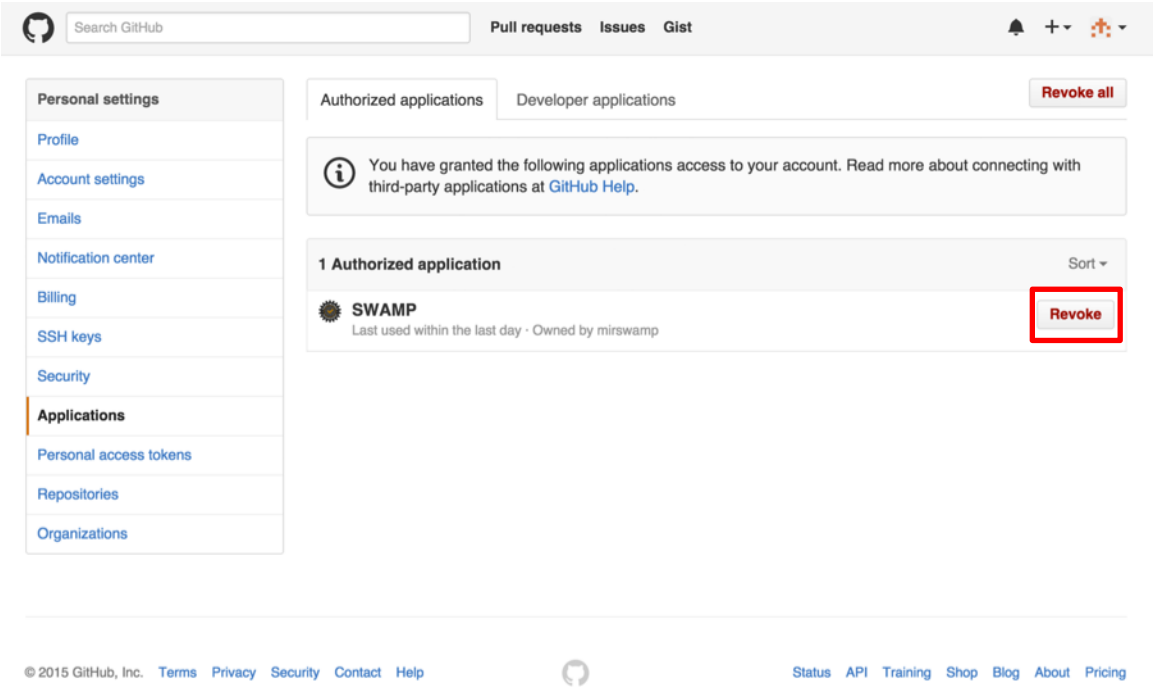


4. Select the **X** on the right to unlink your GitHub account from your SWAMP account.

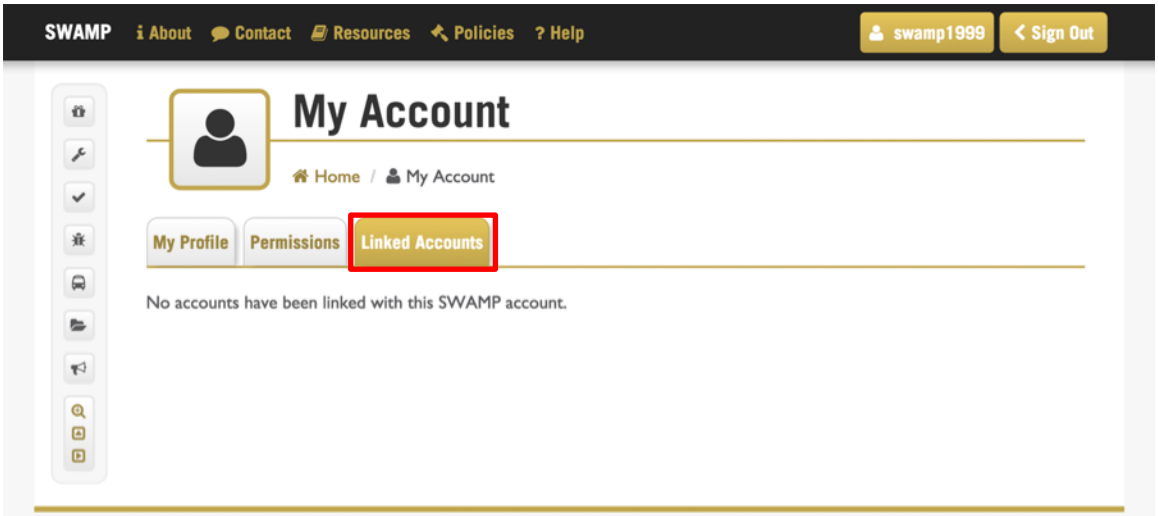


5. Now, sign in to your GitHub account.
6. Select Settings from the upper right side of the page.
7. Select **Applications** in the left side bar.

8. On the Authorized applications tab, select **Revoke** next to SWAMP to remove the link to your GitHub account.



Your GitHub account has now been successfully unlinked from your SWAMP account. Your **Linked Accounts** tab should now show no linked accounts.



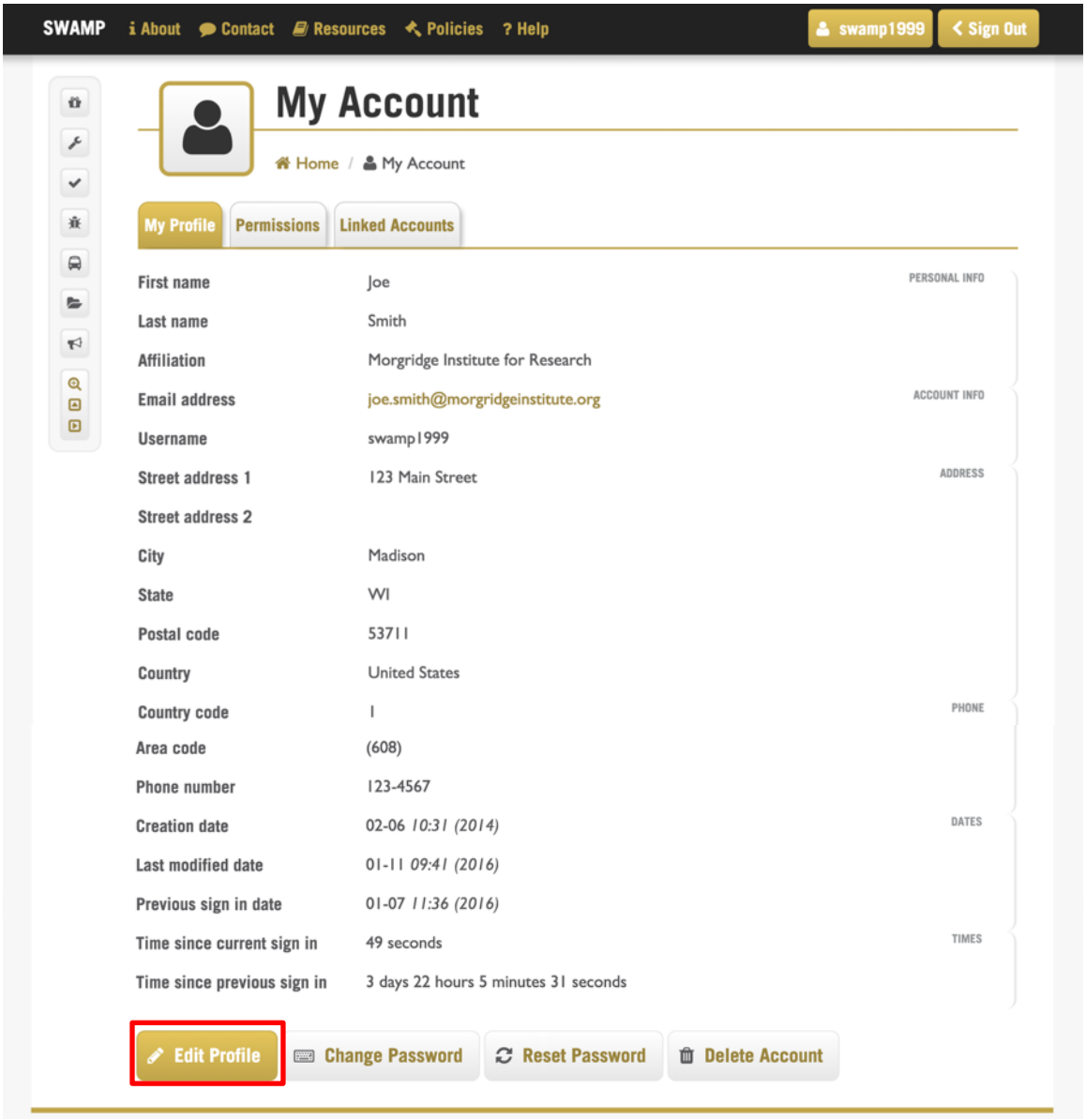
Updating Your SWAMP Account

If your personal information changes, you can update your profile at any time.

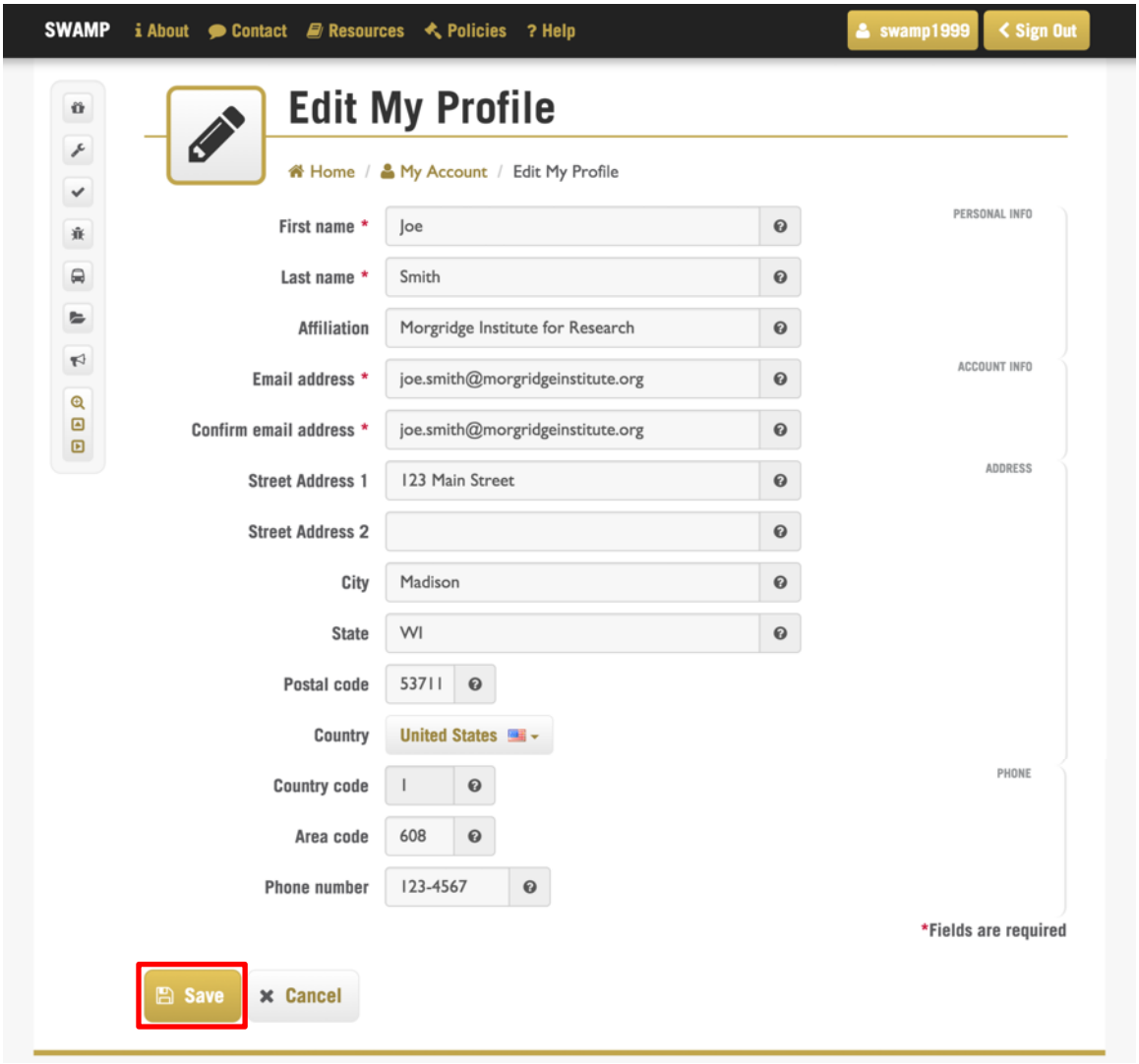
1. Sign in to the SWAMP.

2. From your **Home** screen, click your username on the upper right side of the page to open **My Account**.

3. On the **My Profile** tab, select **Edit Profile**.



4. **Edit My Profile** screen, make the desired changes, and select **Save**.

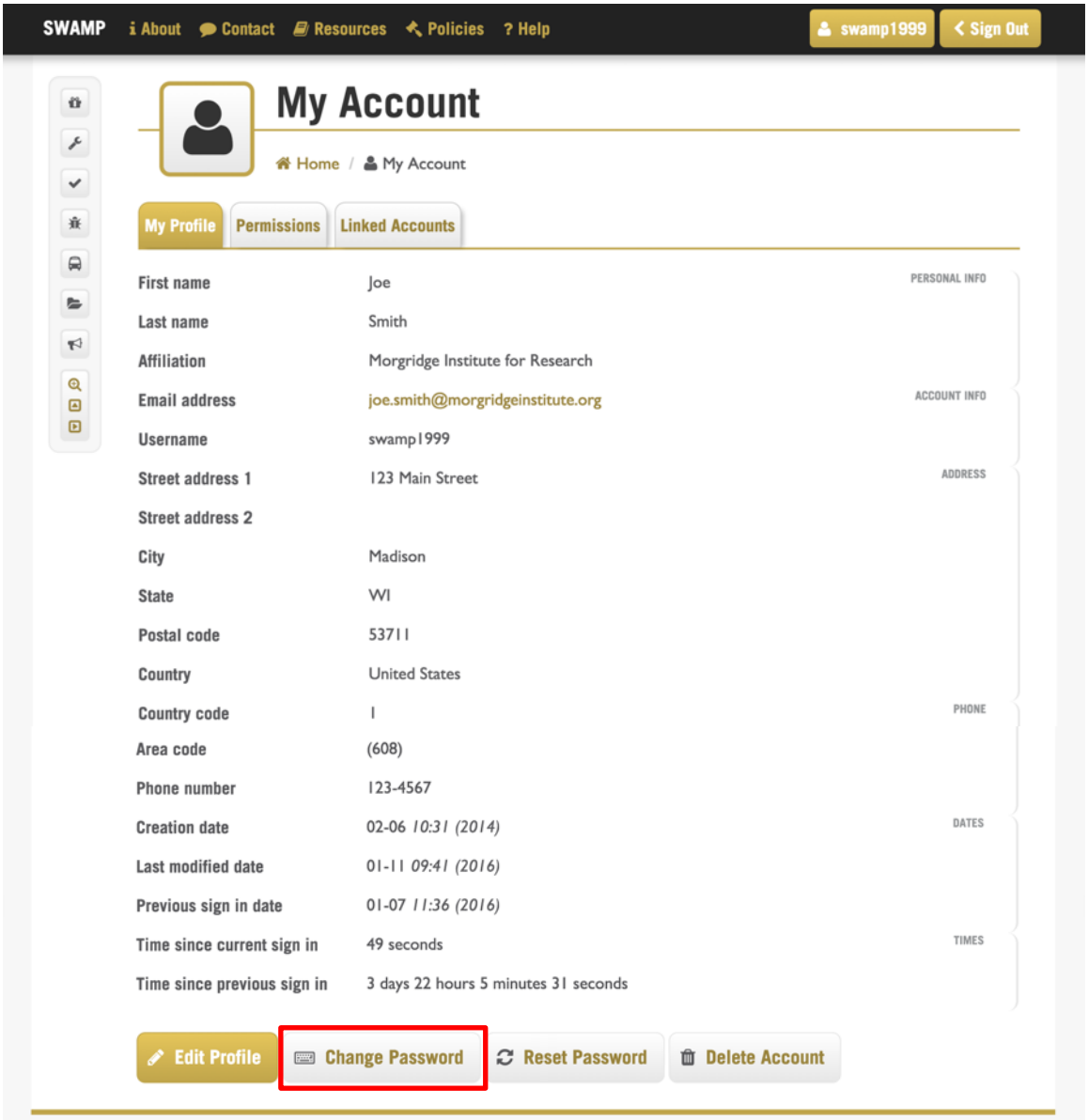


Changing Your Password

To create a new password or if you feel that your current password might have become compromised, you have the option to change your password at any time.

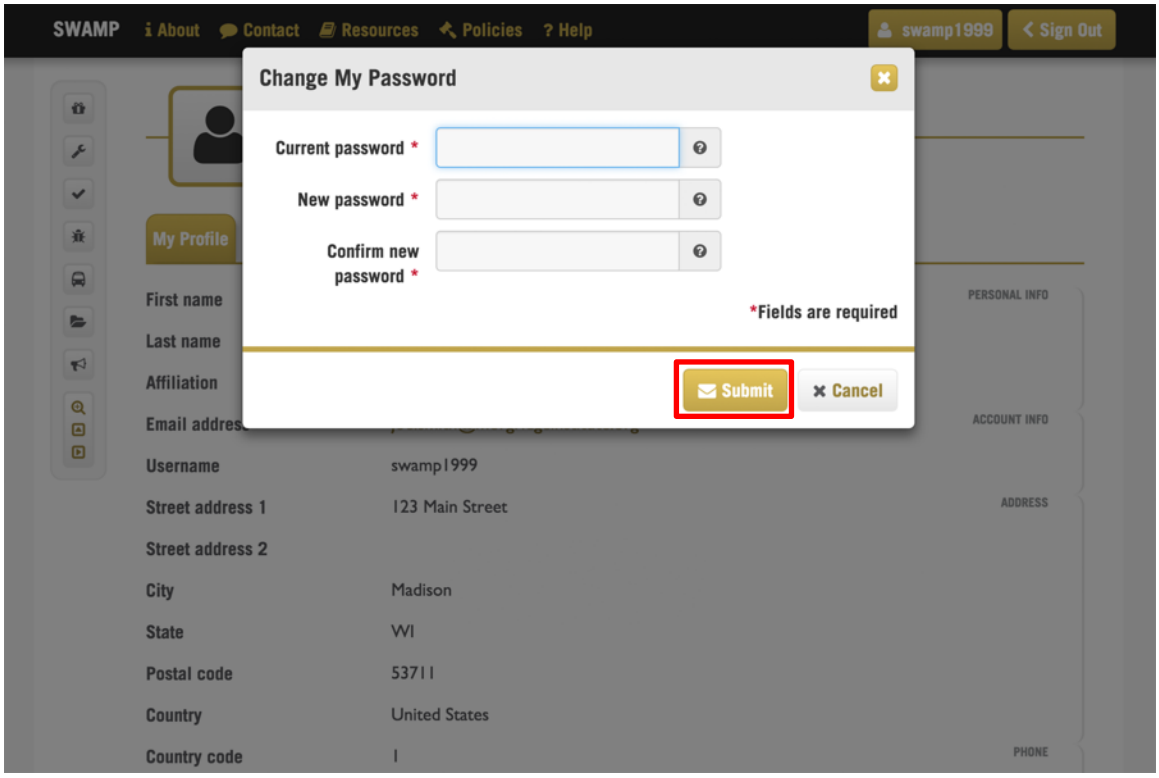
1. To change your password, click your username on the upper right side of the page to open **My Account**.

2. Select **Change Password**.



3. Refer to the Password Requirements on page 10 of this User Manual for more information about creating a strong password.

4. Type your current password and then your new password, and select **Submit**.



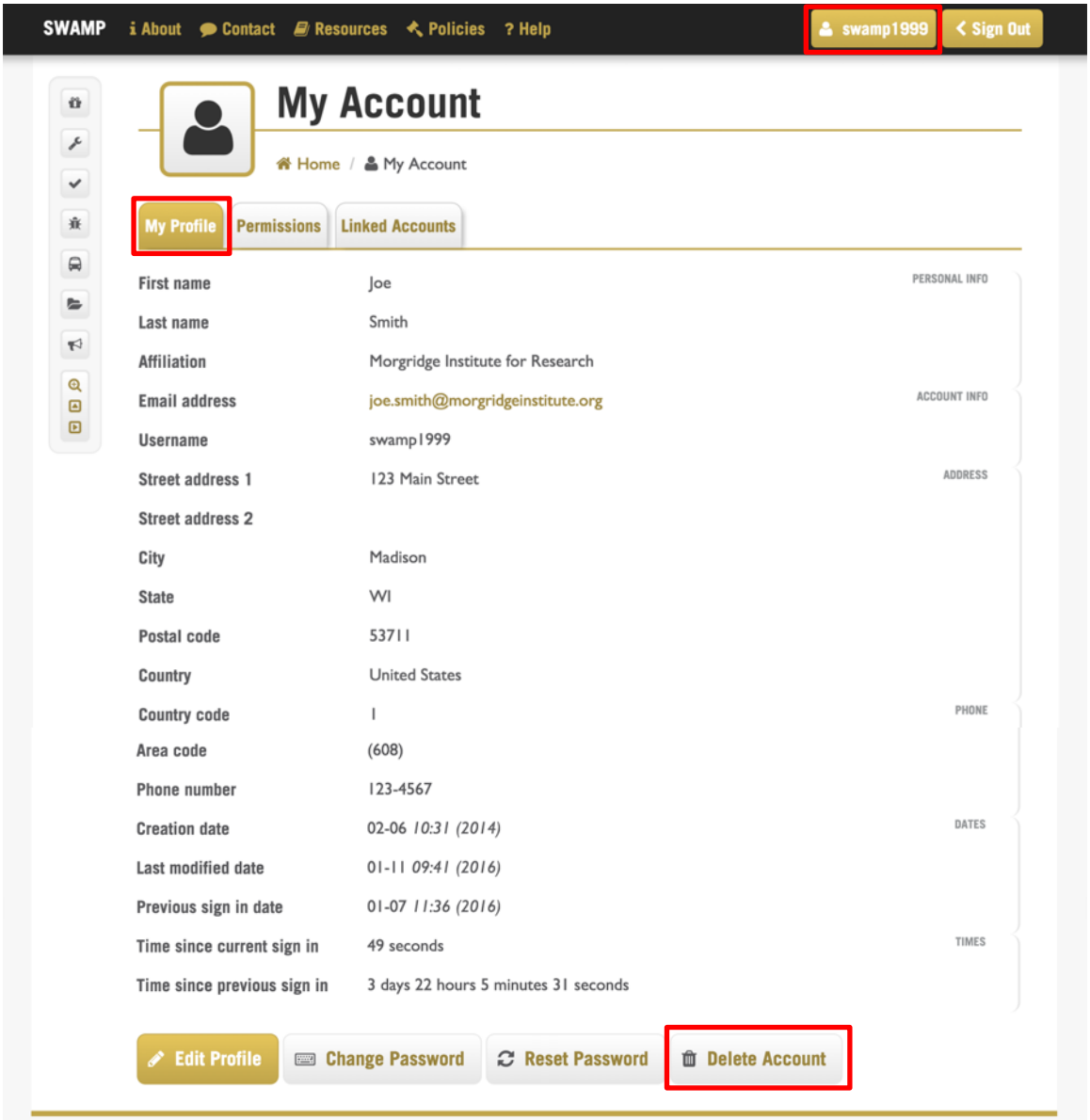
Deleting Your SWAMP Account

If for any reason you would like to delete your SWAMP user account, you have the option to do so. By deleting your SWAMP user account, you will lose access to all information in your SWAMP user account. The information will be stored in the SWAMP databases. If in the future you wish to use the SWAMP again, you may register for a new SWAMP user account at any time. Refer to pages 8-11 of this User Manual to create a new user account.

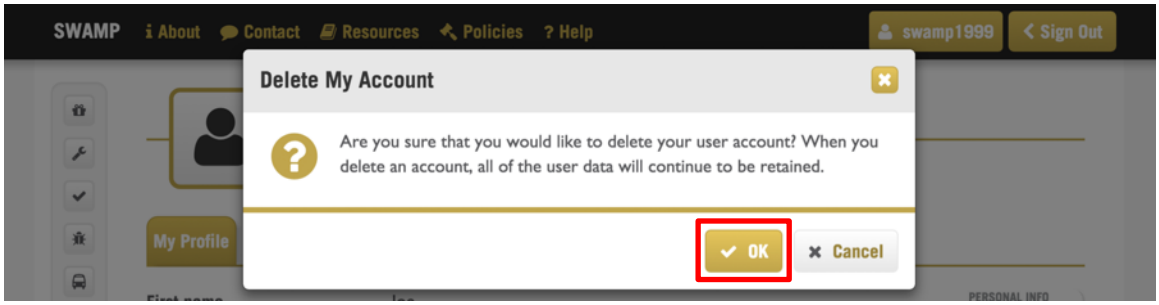
For access to your user account information, contact SWAMP at support@continuousassurance.org.

1. To delete your SWAMP account, click your username on the upper right side of the page to open **My Account**.

2. On the **My Profile** tab, select **Delete Account**.



3. You will receive a prompt asking you to confirm the deletion. Select **OK** to delete your account or **Cancel** to cancel your request.

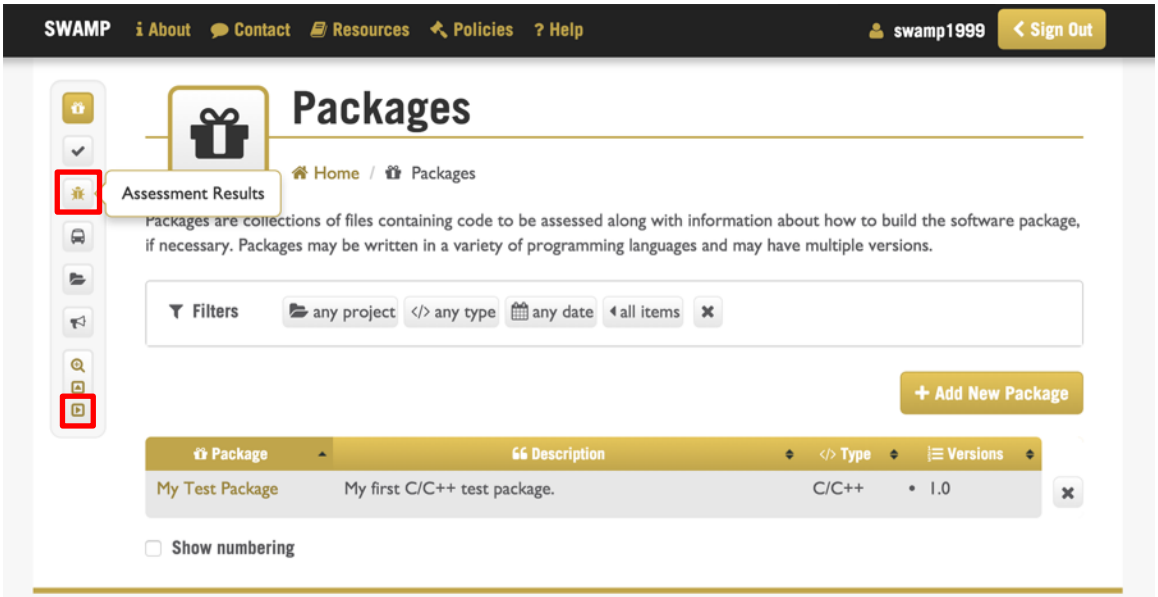


Home Screen and Navigation Bar

After you sign in to the SWAMP, you arrive on your Home screen. From the Home screen, you can access all of the different areas of the SWAMP. You can return to your Home screen from anywhere in the SWAMP by selecting **SWAMP** on the top left.

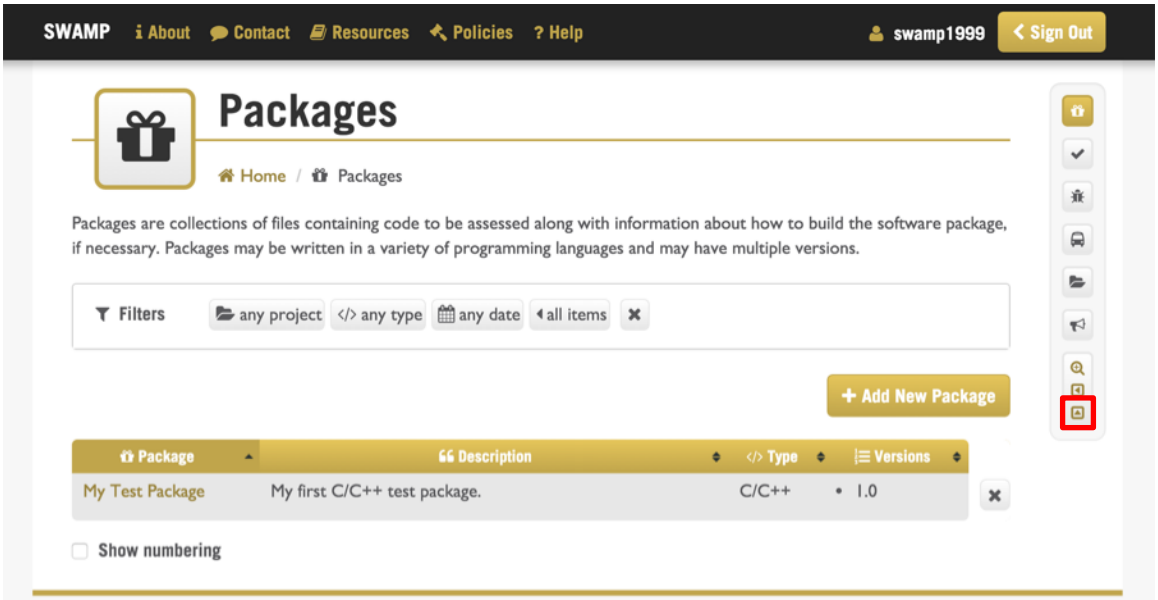
From all other areas of the SWAMP, the Navigation Bar allows you to quickly access the different areas of the SWAMP without needing to return to your Home screen.

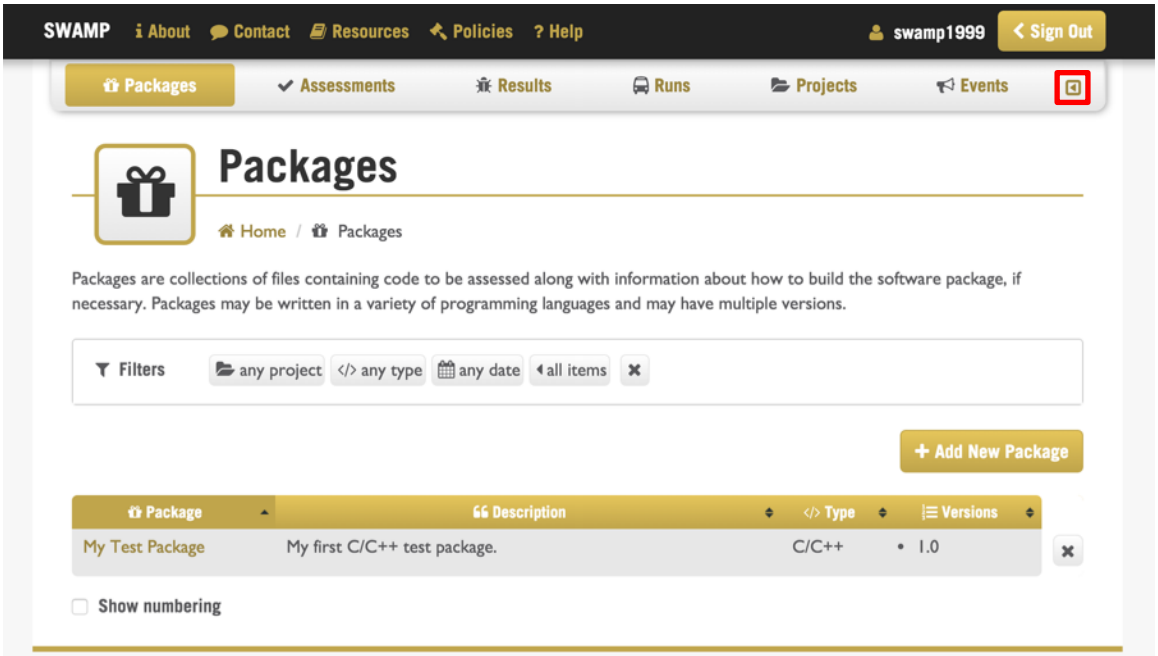
In the example below, selecting the Results icon on the Navigation Bar will move you from the Packages page to the Assessment Results page.



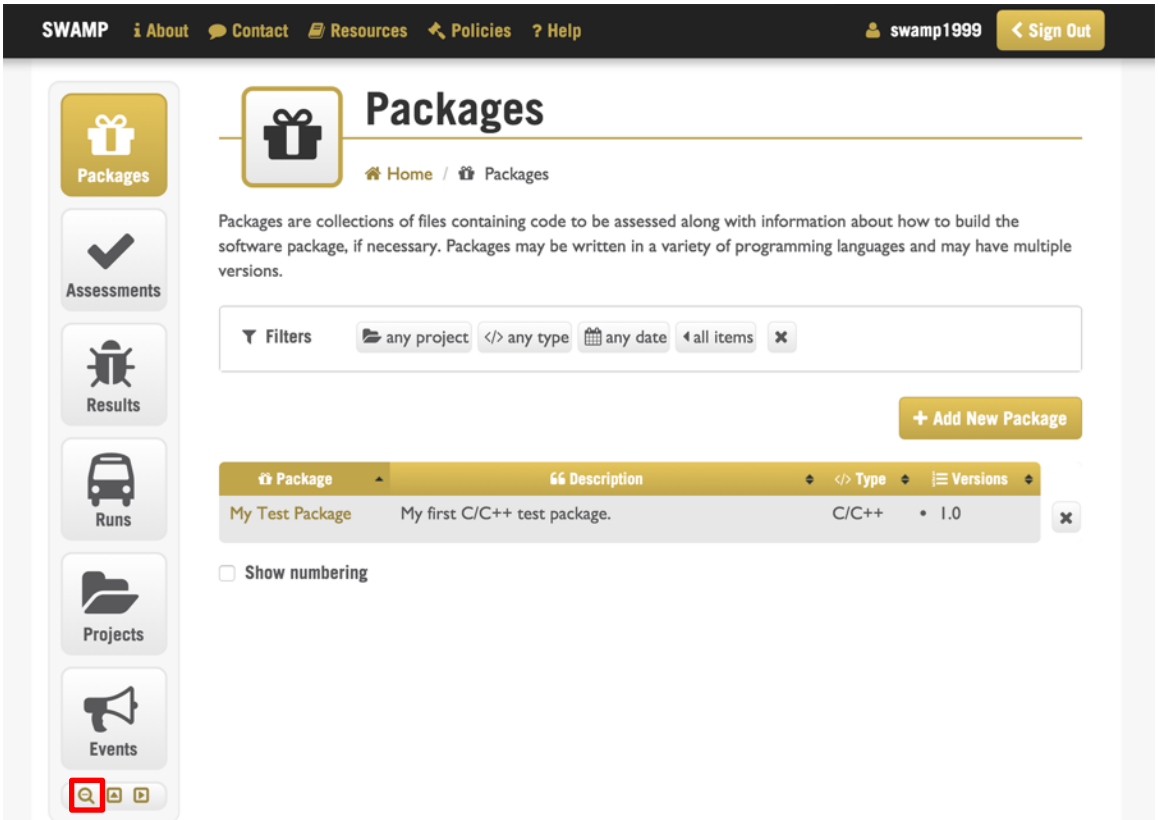
The size and location of the Navigation Bar may be changed based on your preference and will be remembered by your browser.

The left/right or up arrow buttons move the Navigation Bar to the left/right or top of the screen.




SWAMP
About
Contact
Resources
Policies
Help
swamp1999
Sign Out
Packages
Assessments
Results
Runs
Projects
Events
Packages
Home / Packages
Packages are collections of files containing code to be assessed along with information about how to build the software package, if necessary. Packages may be written in a variety of programming languages and may have multiple versions.
Filters
any project
any type
any date
all items
+ Add New Package
Package
Description
Type
Versions
My Test Package
My first C/C++ test package.
C/C++
1.0
Show numbering

The magnifying glass button minimizes/maximizes the size of the Navigation Bar.



Requesting Permissions and Ownership

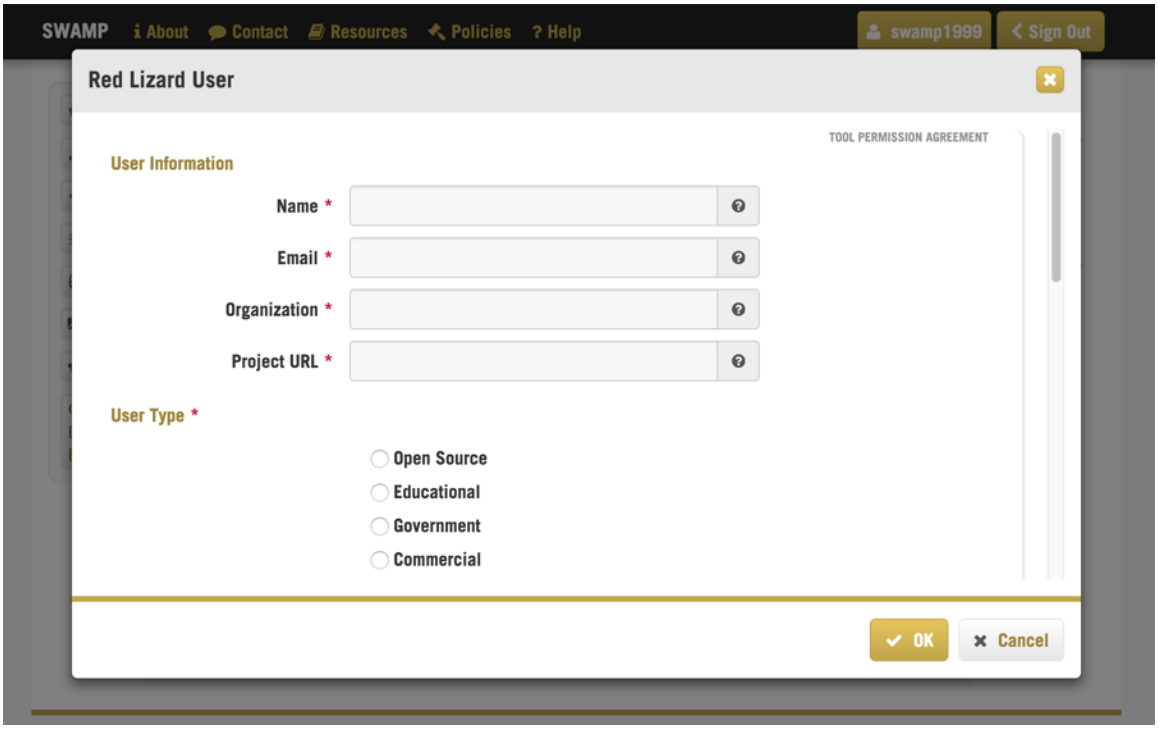
In order to become a project owner or to use commercial tools available in the SWAMP, you will need to request access.

1. Click your username on the upper right side of the page to open **My Account**.

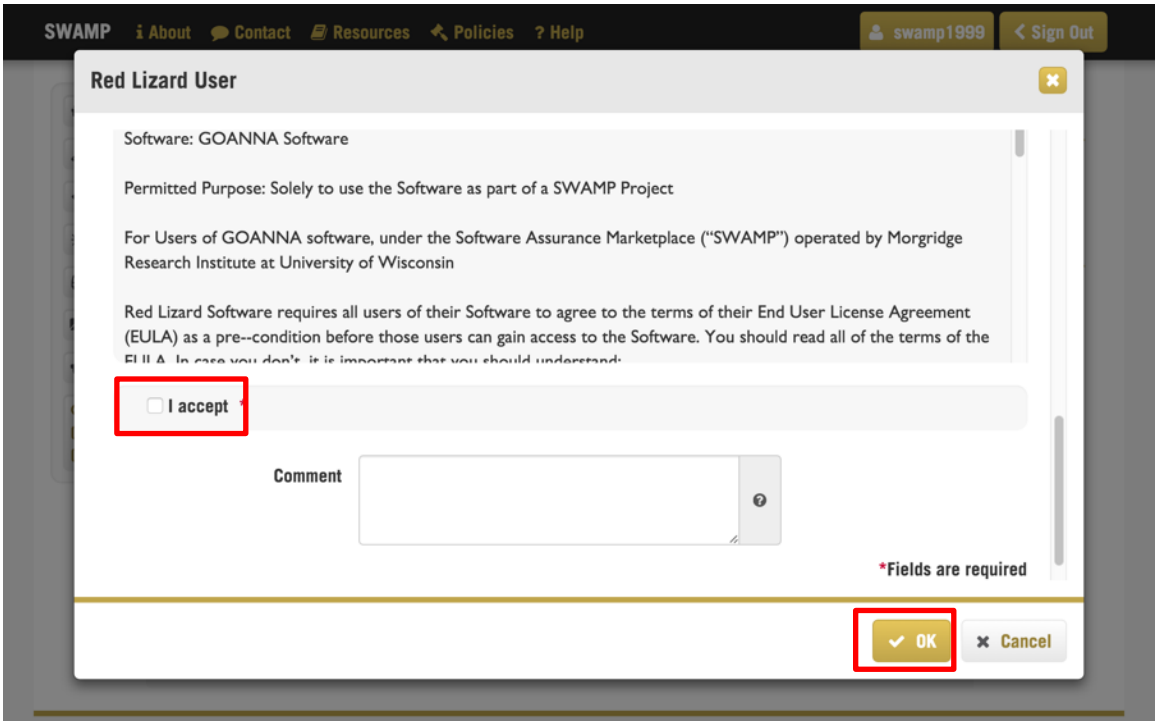
2. Navigate to the **Permissions** tab.

3. You will see a list of possible permissions. If you would like additional permissions, select **Request** next to the desired access.

4. For Commercial Tools, you will be asked for information about yourself, your organization (if applicable), and the project/package you wish to assess with the commercial tool. You will also be asked to select and **Accept** your user type. The purpose/nature of your project/package and your user type will determine the appropriate End User License Agreement (EULA) for you to review and **Accept**. Use the optional comment field to provide additional information about yourself or your project/package. Select **OK**.



***Note:** *Fill in all required fields on the form. This may require scrolling.*



5. A SWAMP administrator and/or the commercial tool vendor will review your request(s) and respond as soon as possible. You will be notified via email of any permission status changes.

***Note:** All permissions expire after one year and will need to be requested again, if desired.

****Note:** *Inappropriate use of the SWAMP or SWAMP permissions that may or may not violate the **Acceptable Use Policy**, **Project Ownership Policy**, or **Commercial Tool User Policies/EULAs** will result in permissions being **revoked** and/or **deactivation** of your SWAMP user account. SWAMP reserves the right to revoke permissions or terminate your user account at any time without notice. If this happens, contact SWAMP at support@continuousassurance.org with any questions you may have, to request permissions, to request account reactivation, or to determine next steps to be able to access the SWAMP again.*

Using Commercial Tools

There are some differences in the ways that commercial tools work in the SWAMP.

Once permission has been granted for you to use Parasoft C/C++test or Parasoft Jtest, you will be able to select and use these tools just like the open-source tools available in the SWAMP.

Once permission has been granted for you to use Red Lizard Goanna, you will receive an email invitation to join a Project with exclusive access to the Goanna tool. Follow the

link in the email, and **Accept** the invitation. Upload and/or share your C/C++ package with this Goanna-specific Project and run an assessment.

******Note:*** *Goanna is the only tool available to Packages in your Goanna-specific Project. No other commercial or open-source tools are available to this Project. A Package must be shared with your Goanna-specific Project in order to use the Goanna tool.*

Part 2: Projects

My Project

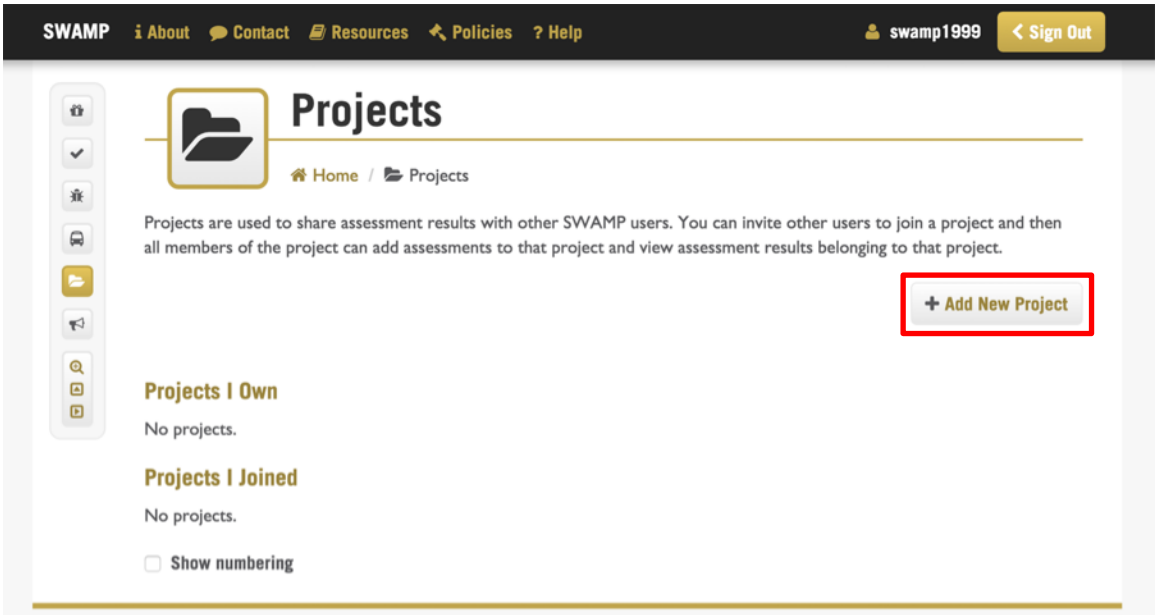
My Project is a project that is automatically created for each user. My Project allows each individual user to upload Packages, run Assessments, and view the Results of assessment runs, but other members cannot be invited to this project.

Requesting Project Ownership

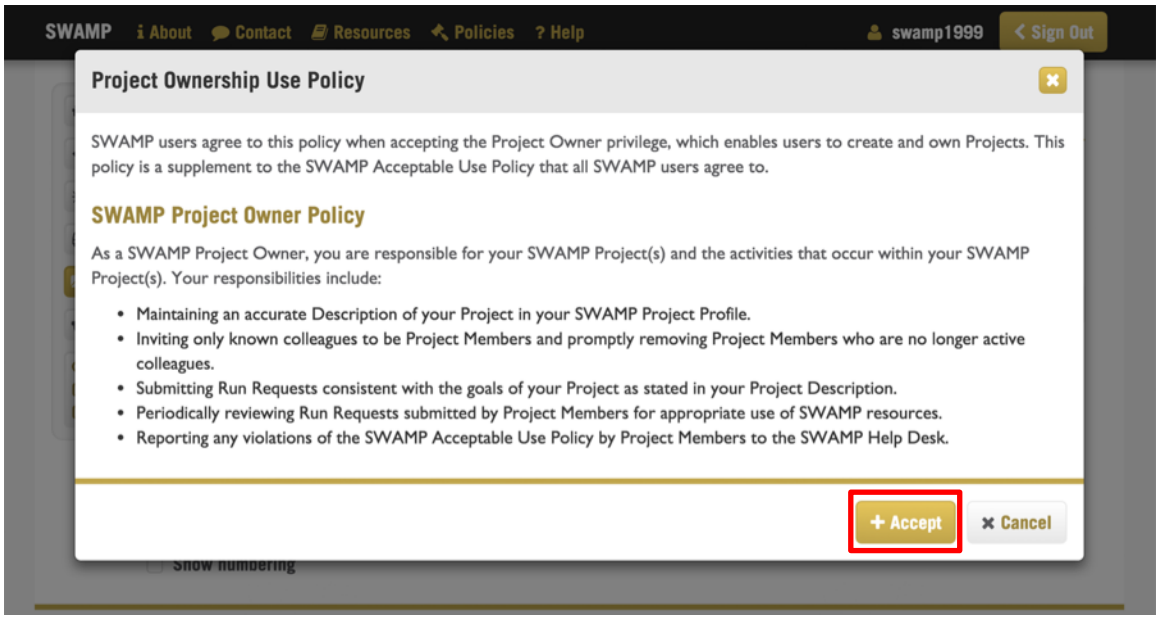
To ensure cybersecurity, users must request Project Ownership status to create new projects. Follow the steps below to become an approved Project Owner. Once approved, you may create Projects and invite others to join your Project. Project Members can create Assessments, schedule Runs, and view assessment Results. You only need to request Project Ownership status once.

1. Sign in to your SWAMP account to get to your **Home** screen, and select **Projects**.

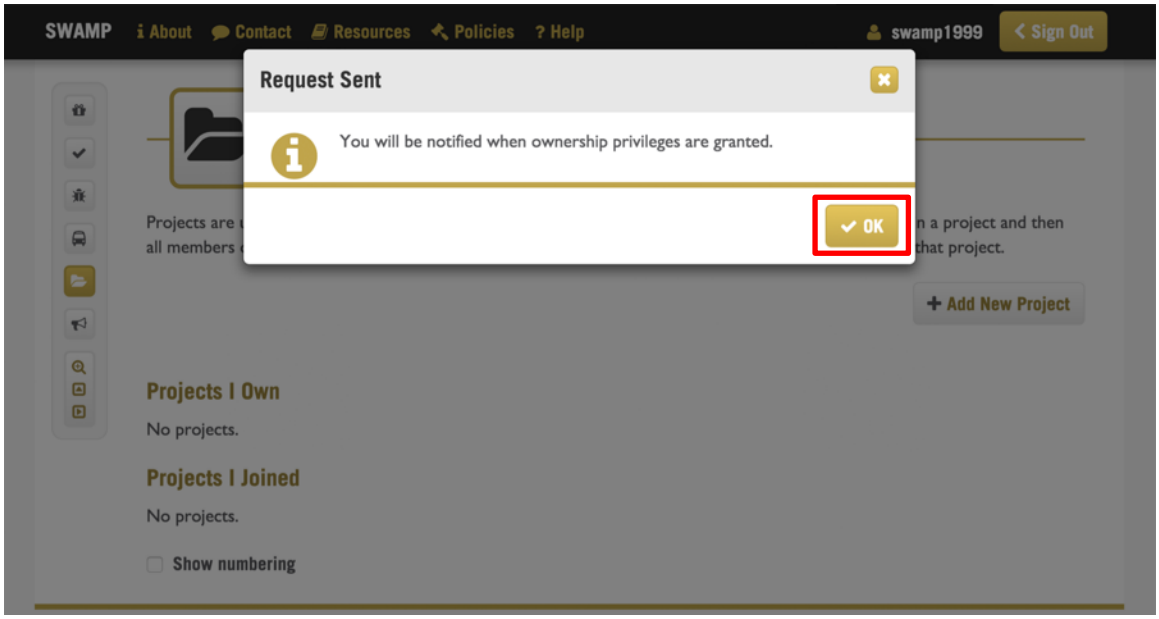
2. Select **Add New Project** to request **Project Ownership**.



3. **Accept** the Project Ownership Use Policy.



4. You will be notified via email when you have been approved for Project Ownership.



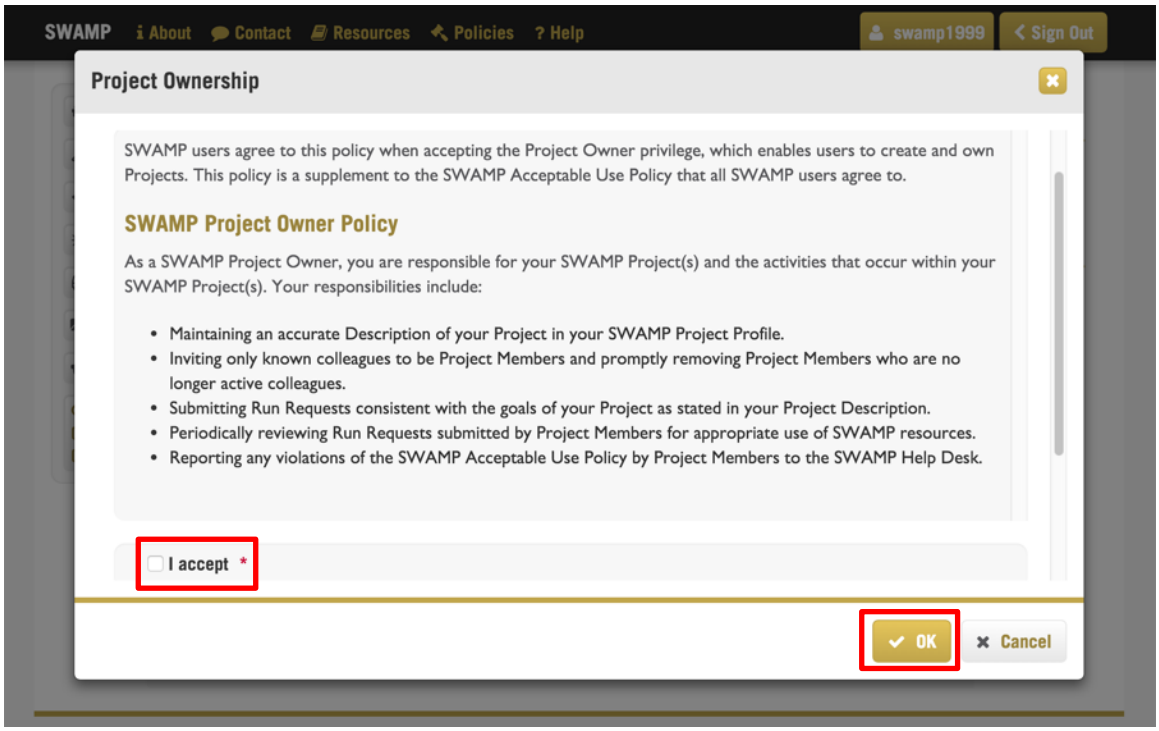
Alternatively, you may request Project Ownership through your SWAMP user account.

1. Click your username on the upper right side of the page to open **My Account**.
2. Navigate to the **Permissions** tab.

3. You will see a list of possible permissions. If you would like additional permissions, select **Request** next to the desired access.

4. Review and **Accept** the Policy. Select **OK**.

******Note:*** *Fill in all required fields on the form. This may require scrolling.*



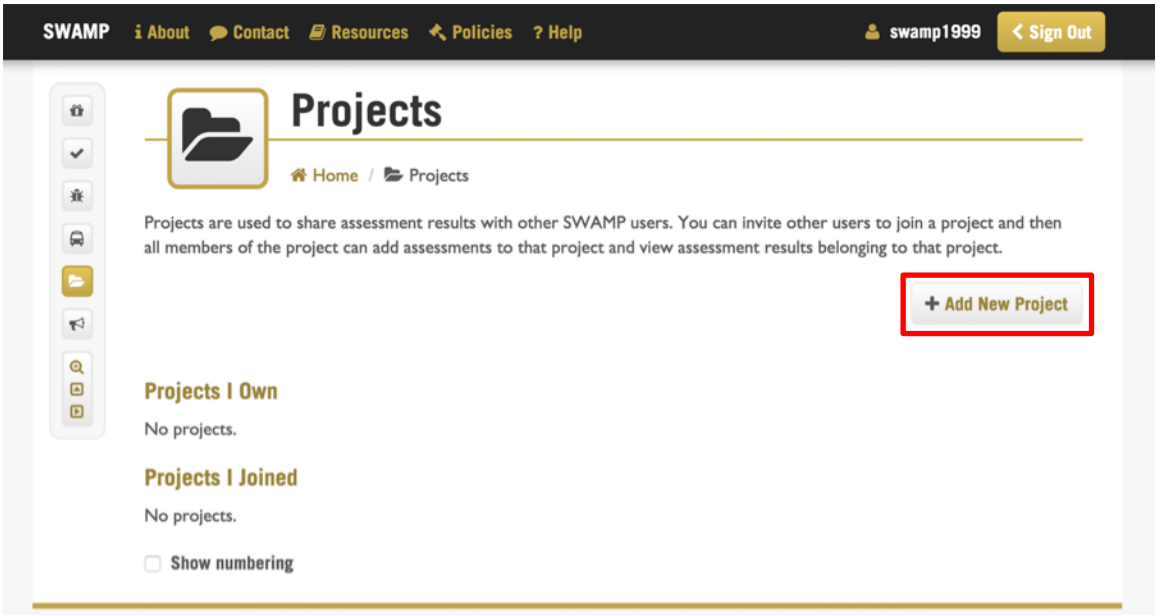
5. A SWAMP administrator will review your request and respond as soon as possible. You will be notified via email when you have been approved for Project Ownership.

Creating a Project

Once you are an approved Project Owner, you may create Projects and invite others to join your Project.

1. Sign in to your SWAMP account to get to your **Home** screen, and select **Projects**.

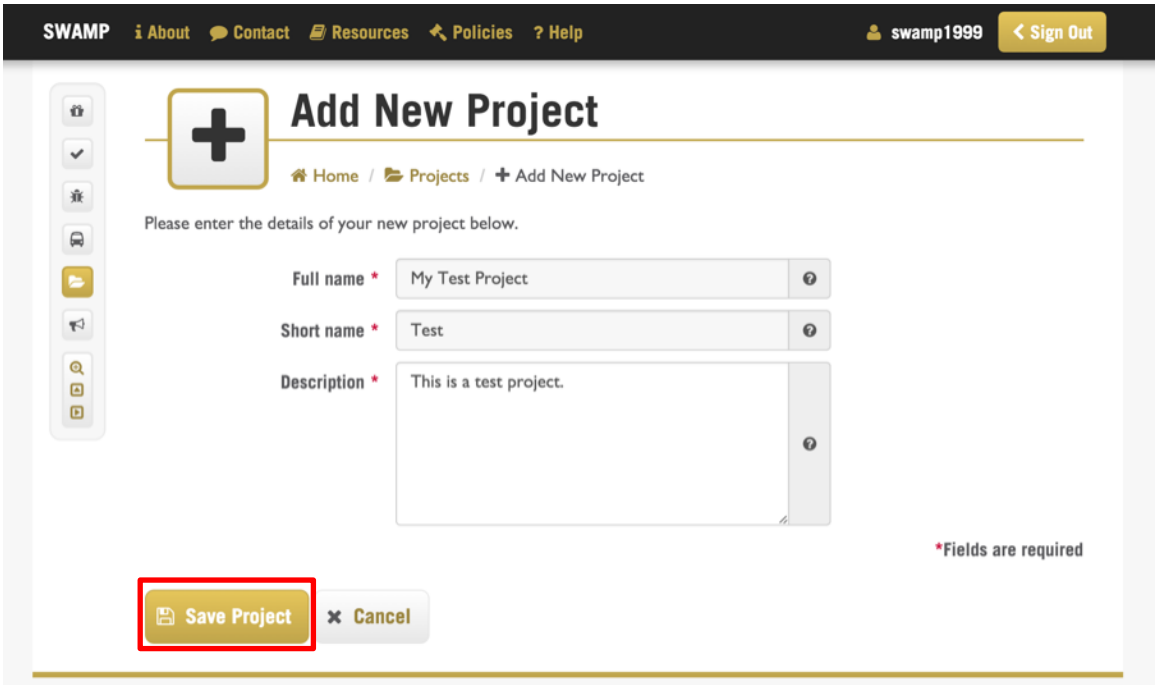
2. Select **Add New Project** to create a new Project.



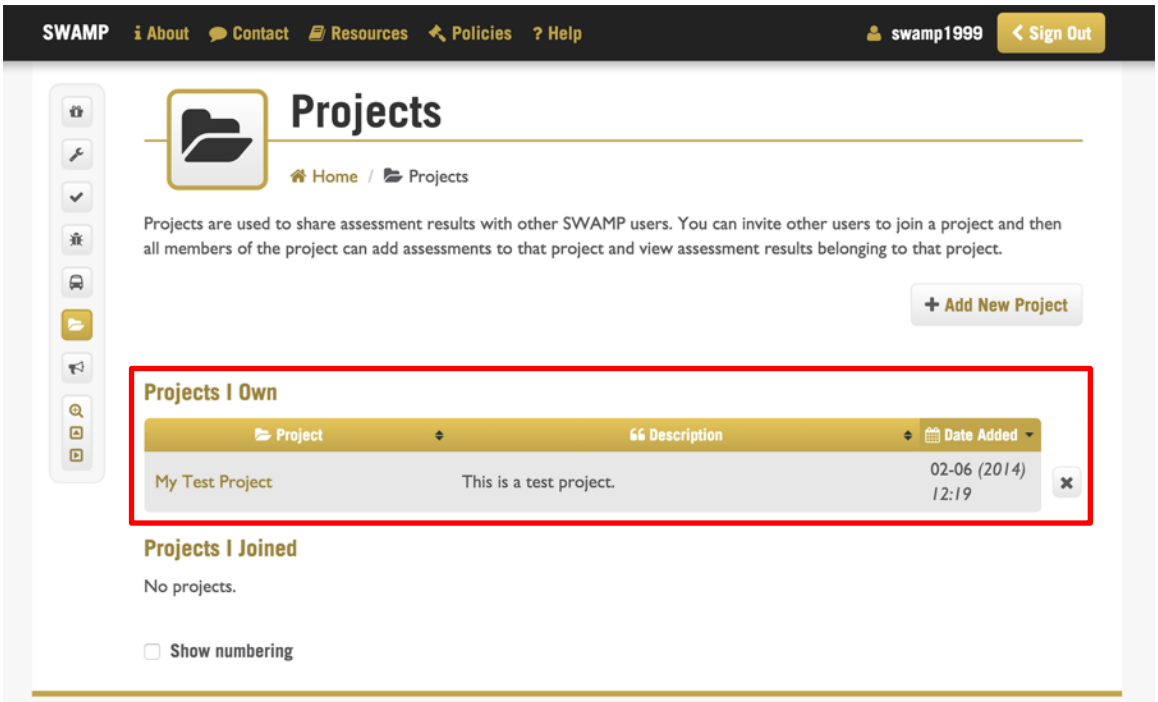
3. On the **Add New Project Form**, complete the following fields:

Full name:	The full name is the long version of your Project's name.
Short name:	The short name or alias is the shortened version of your Project's name.
Description:	Provide a description of your Project.

4. Select **Save Project**.



5. Your new **Project** will appear under **Projects I Own,** accessible from **Projects** on the **Home** screen.

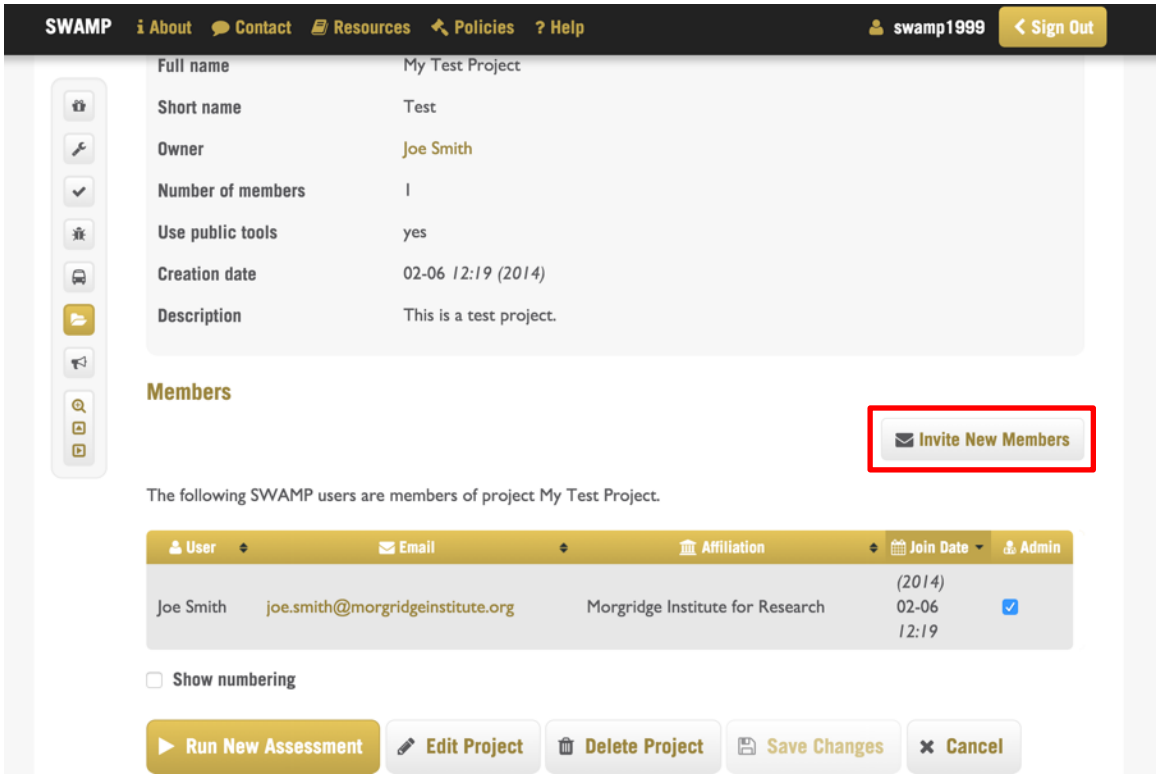


Inviting Members to Your Project

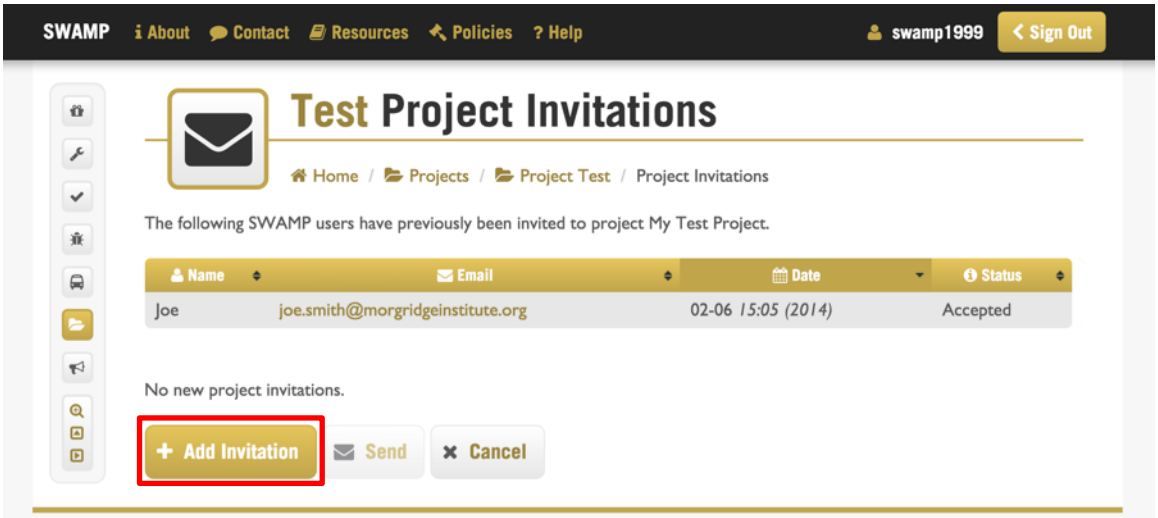
Project Owners may invite others to join their Project. Invitees do not need to be current users of the SWAMP but must register with the SWAMP to become a Project Member. Project Members are able to create Assessments, schedule Runs, and view assessment Results. The Project Owner is automatically a Project Member of any Projects they create.

1. The Projects page lists your Projects under **Projects I Own**.
2. Select a Project you own by clicking the name in the Project column.
3. Scroll down to view the **Members** section, and select **Invite New Members**.

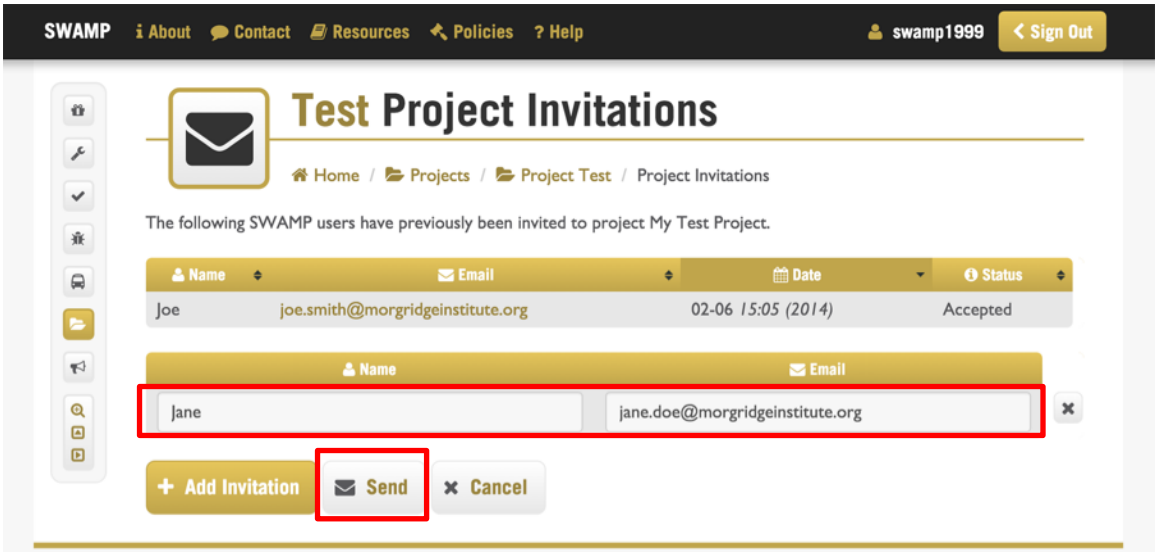
****Note:** *SWAMP automatically lists the Project Owner's name*



4. Select **Add Invitation**.



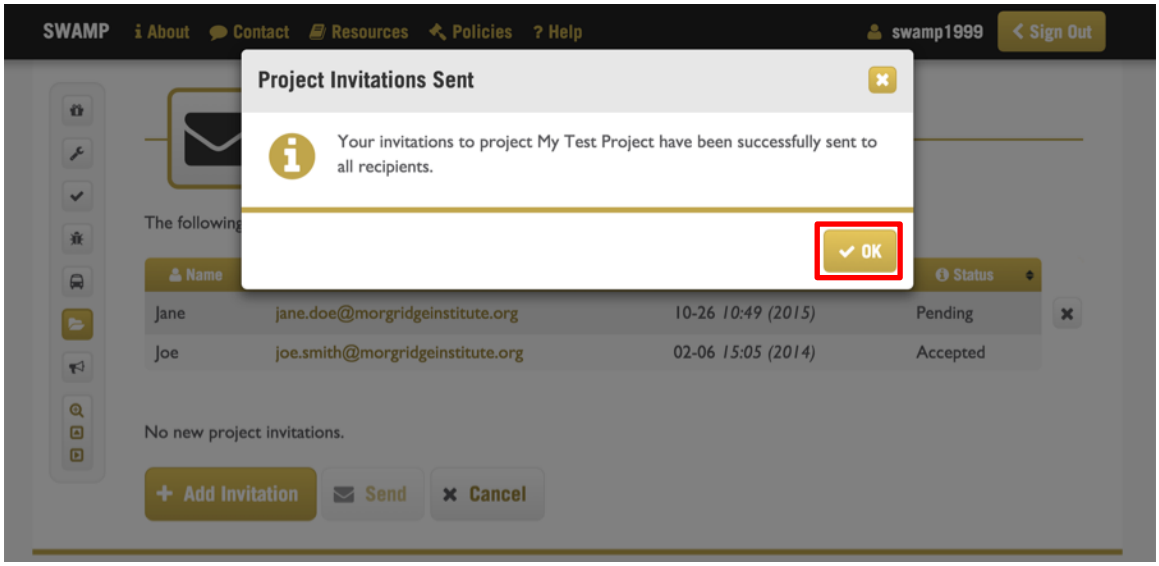
5. Type the name and email of the person you would like to invite to your Project.



6. Continue to use **Add Invitation** to invite any others to join your Project. Individuals do not have to be registered users of the SWAMP to be invited but must register for the SWAMP if they are going to be a part of the project.

7. Select **Send** when you are done. You can add new members at any time.

8. You will receive a notification that invitations have successfully been sent to all new persons invited to join your Project. Select **OK**.



9. Individuals who are invited to your project will receive a SWAMP Project Invitation email. They must follow the link in the email and select **Accept** in order to join the project. The project will appear under **Projects I Joined** on their Projects page.

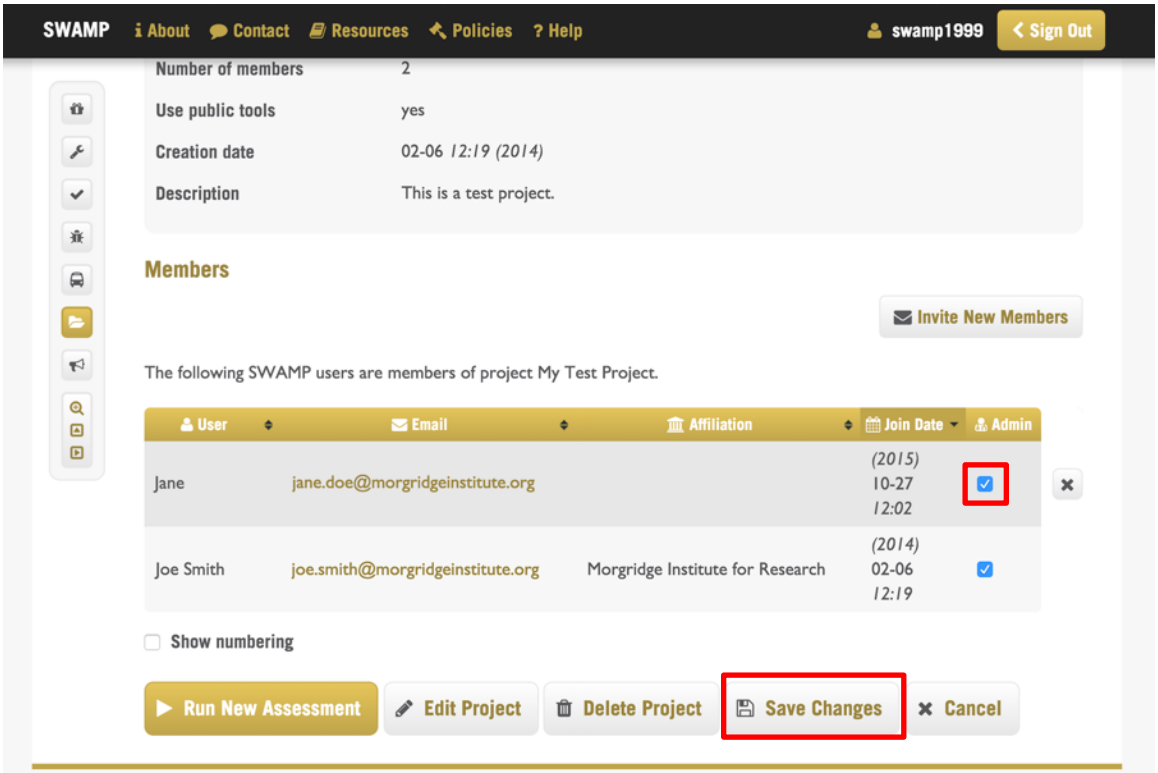
Changing Project Member Status

A **Project Owner** may change the status of a **Project Member** by navigating to the Members section at the bottom of the Projects page for a given Project they own. A Project Owner may change a Project Member's status to Admin (Administrator) or remove the Project Member from the project entirely. **Admin** rights give other Project Members the additional capability to approve and invite new Project Members.

1. From the Projects page, select a Project under **Projects I Own**.

2. Scroll down to view the **Members** section.

3. Check the box under the **Admin** column to give **Admin** rights to the **Project Member(s)**. Select **Save Changes**.



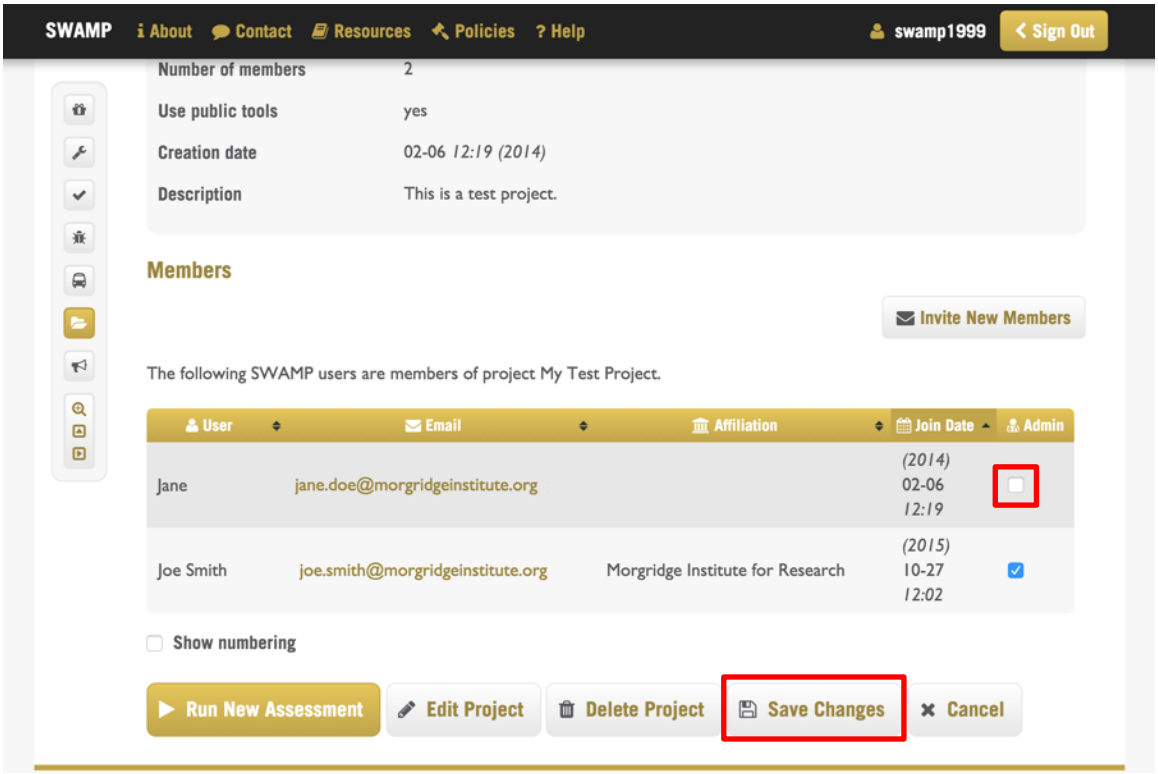
****Note:** *To remove a Project Member from the Project, the Project Member cannot have Admin rights. Remove Admin rights before removing the Project Member.*

Removing Admin (Administrator) Rights and Project Members

As the needs of your Project change, you can add/remove Admin rights from individual Project Members. Follow the steps below to remove Admin rights from the Project Member.

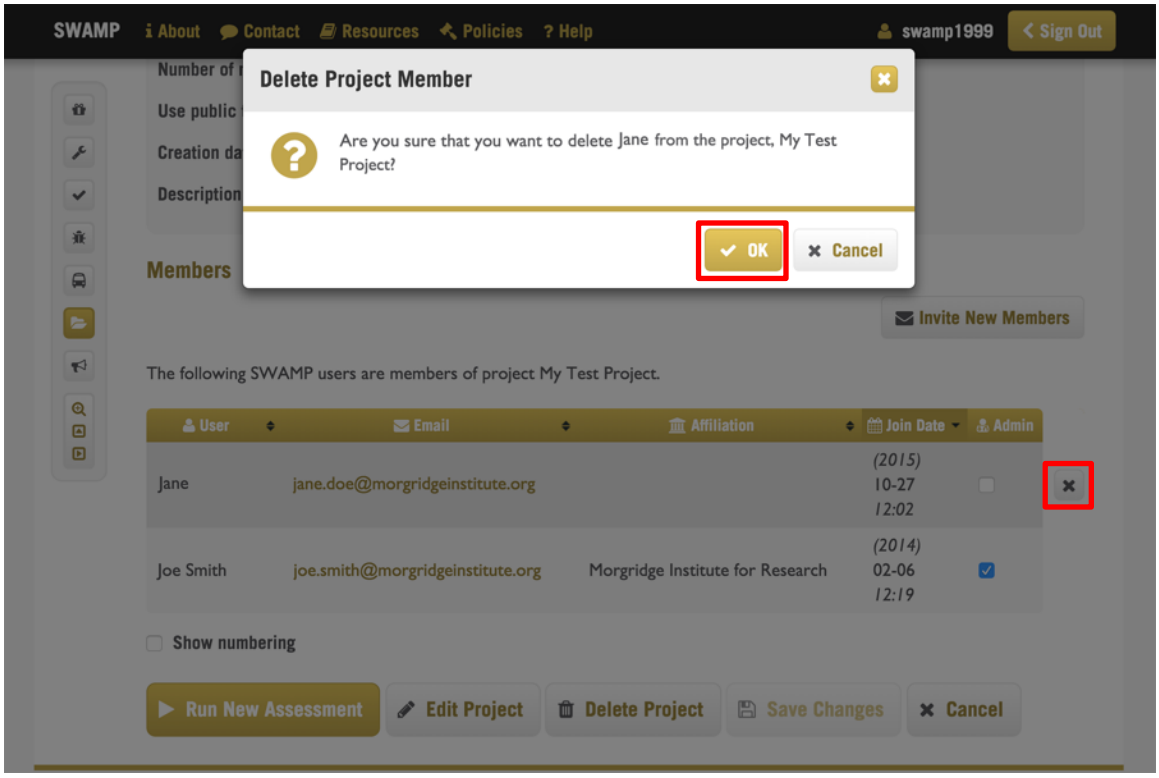
1. Uncheck the box under the **Admin** column.

2. Select **Save Changes**.



3. An **X** will appear next to the Admin column for each Project Member that does not have Admin rights.

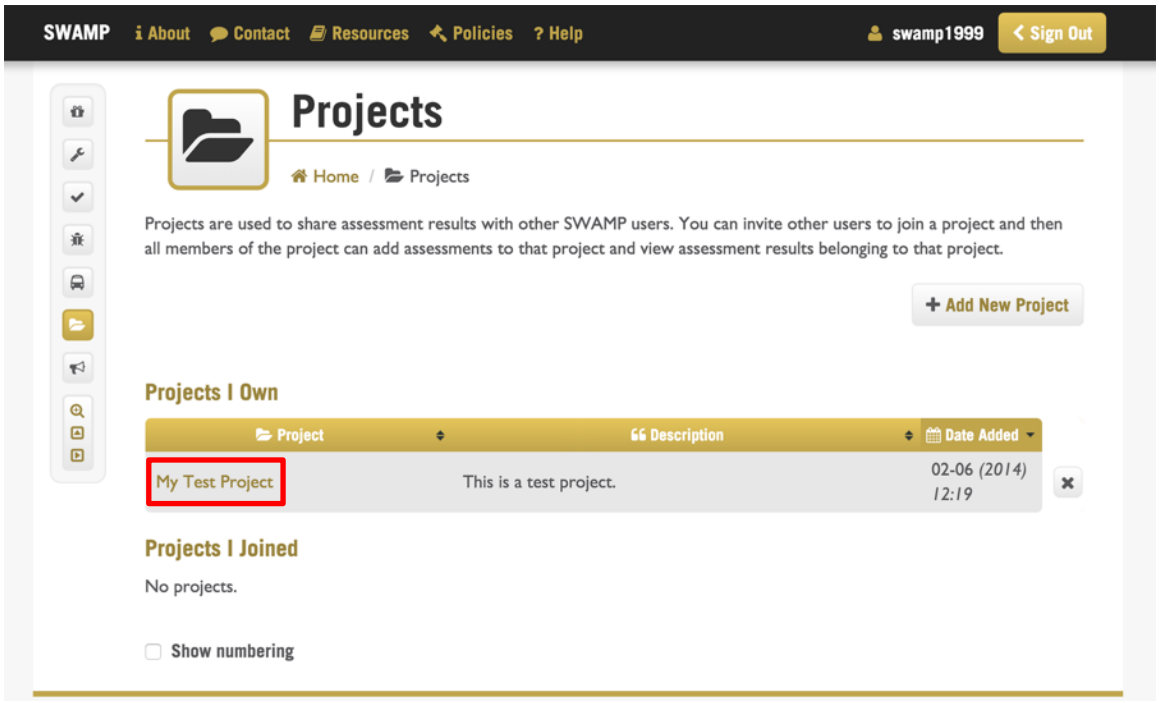
4. Select the **X** next to the Admin column to remove the Project Member from the Project. Then select **OK**.



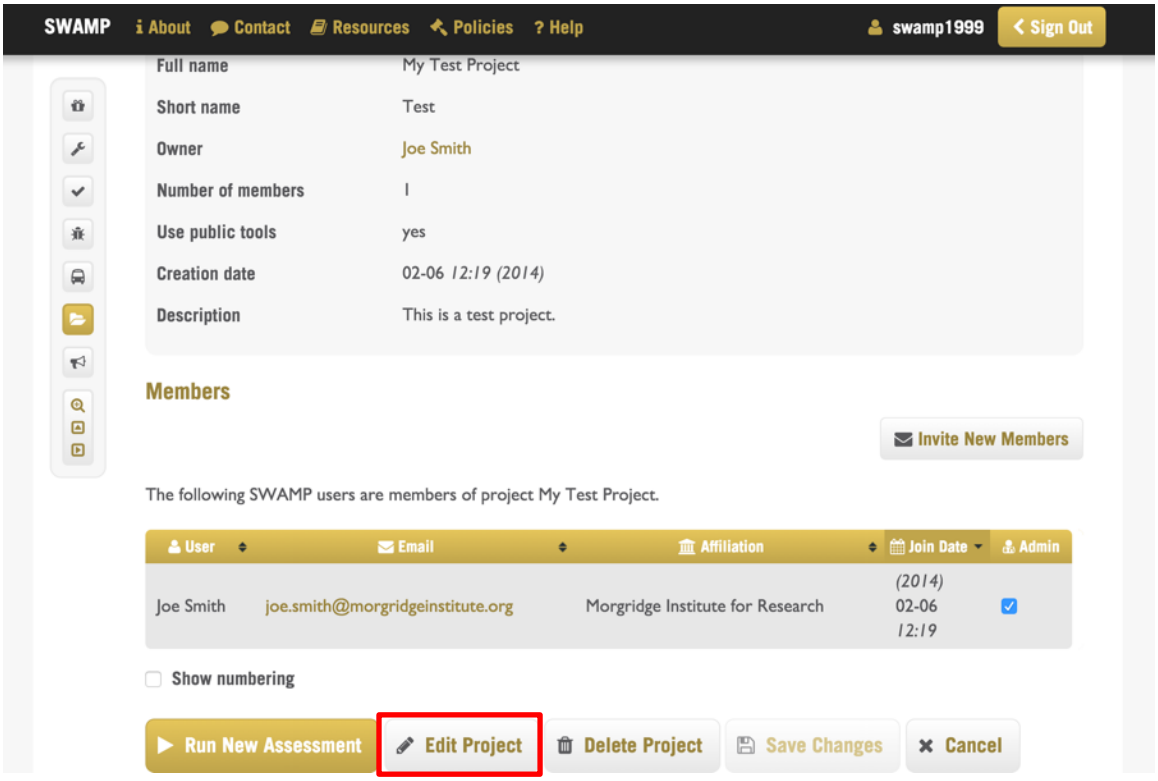
Editing Project Details

You may rename your project or update its description.

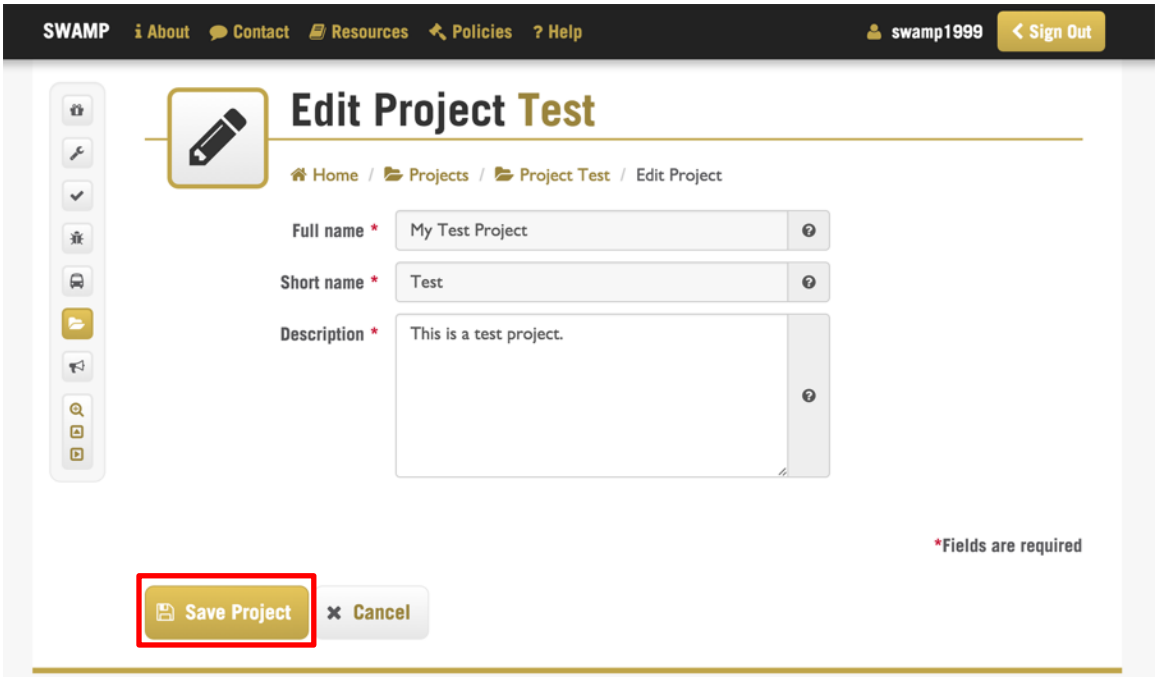
1. From the **Projects I Own** section of the Projects page, select the name of a Project in the Project column.



2. Select **Edit Project** to change the project details.

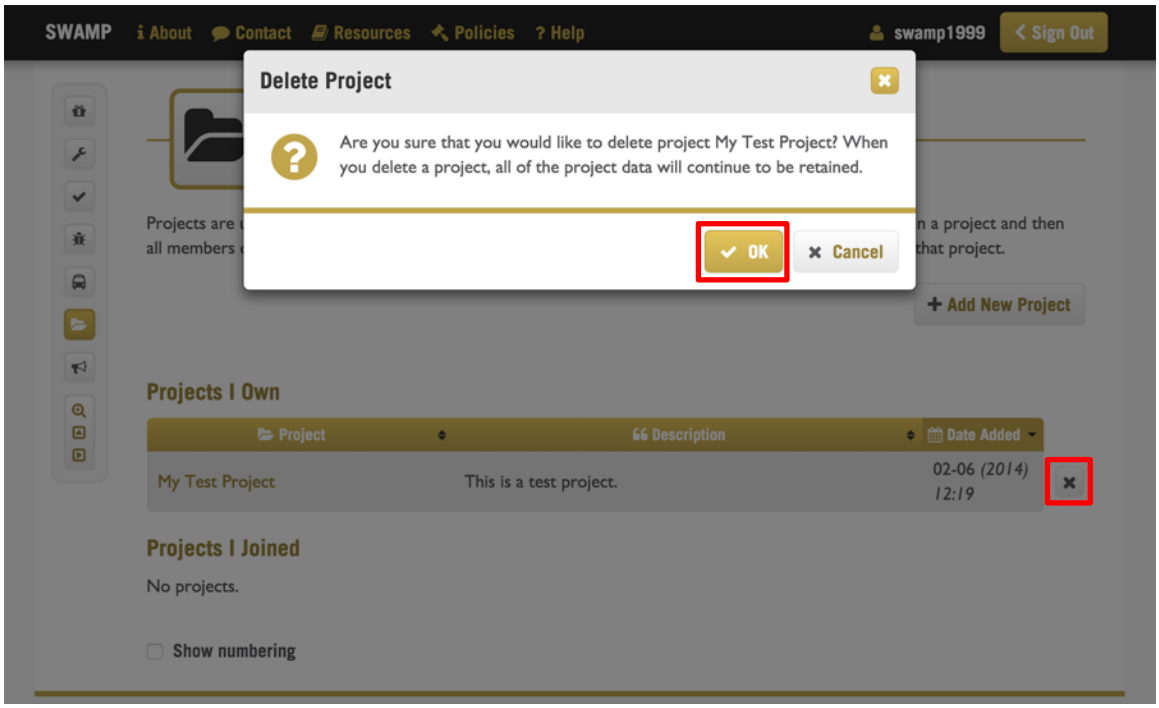


4. Select **Save Project.**

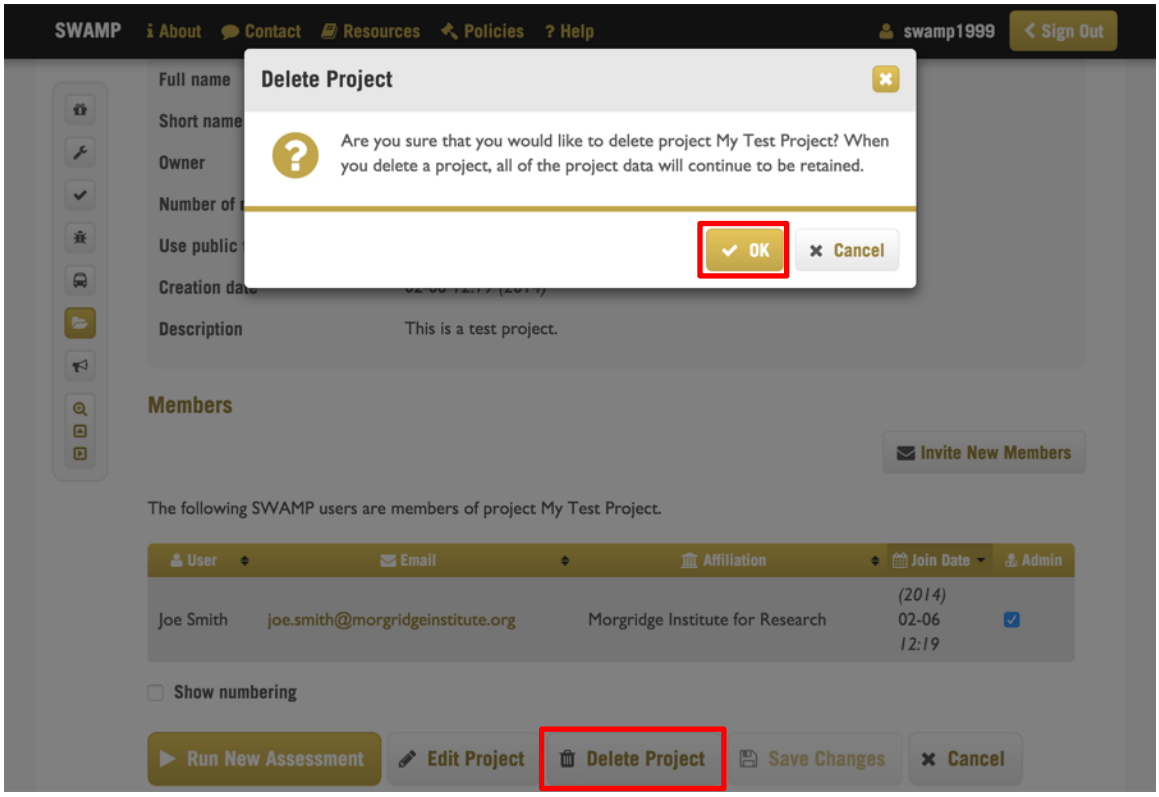


Deleting a Project

You may delete projects that you have created. From the **Projects I Own** section of the Projects page, select the **X** next to the Date Added column. Then select **OK**.



Alternatively, you can delete a Project from within that Project. Select **Delete Project**, and then select **OK**.

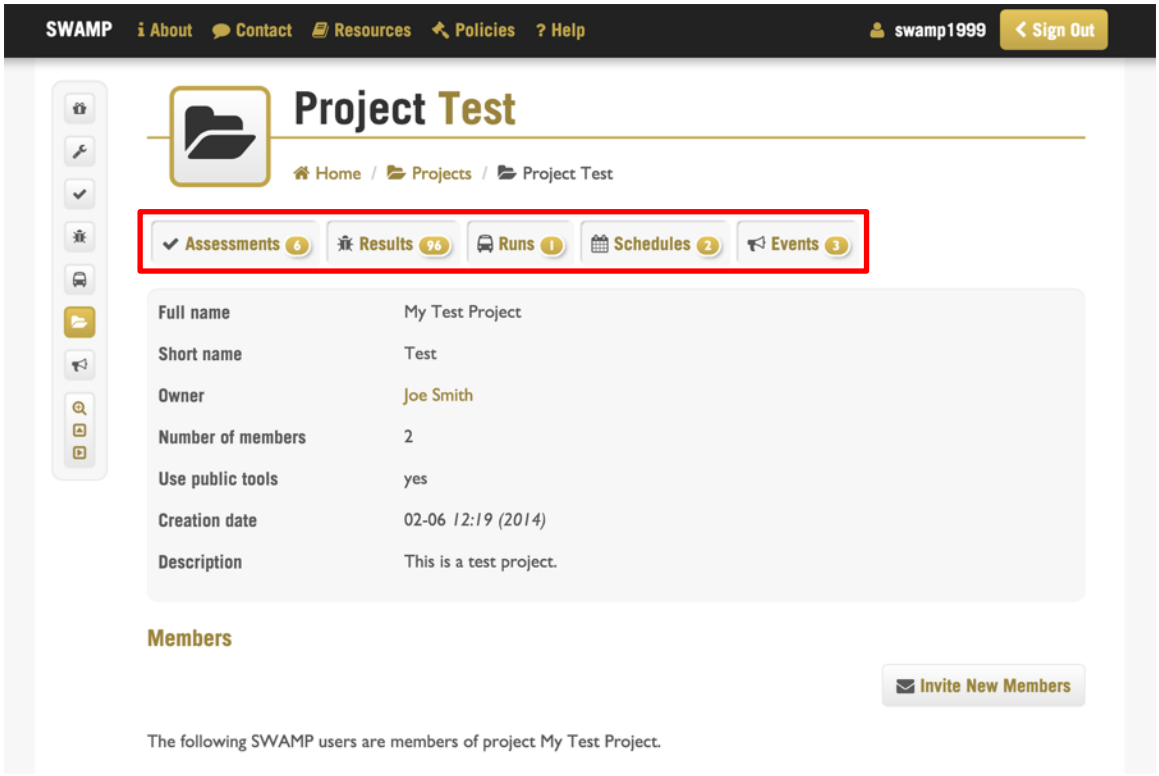


Navigating from Within a Project

From within a Project, you can easily view Assessments, Results, Runs, Schedules, and Events associated with that Project.

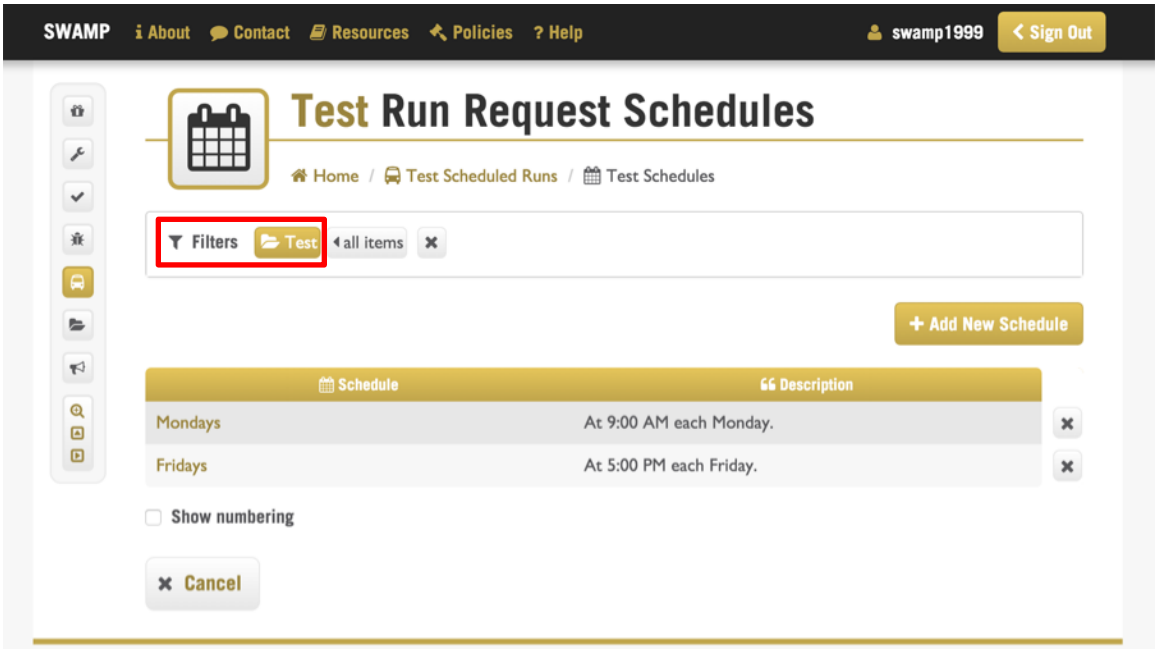
1. From the **Projects I Own** section of the Projects page, select the name of a Project in the Project column.

2. Buttons located at the top of a specific Project page take you to the Assessments, Results, Runs, Schedules, or Events pages.



3. On those pages, the Project filter is set to the name of your Project, so only those items relevant to that specific Project are shown.

   For example, selecting the Schedules button takes you to the Schedules page. On the Schedules page, the Project filter is set so that only those Schedules associated with the “Test” Project are shown.



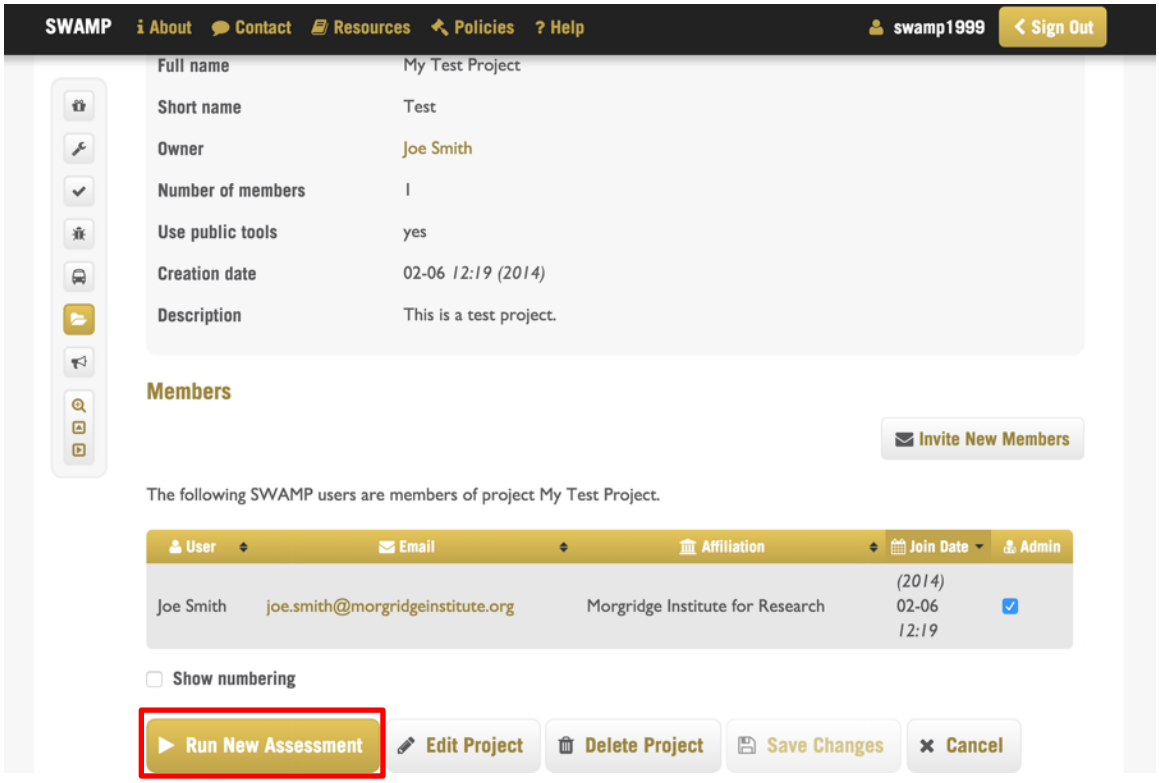
4. To return to your Project page, you will need to use the back button within your browser to preserve any filters set on that page. Alternatively, you can use the Navigation Bar to return to the Projects page and select the name of your Project.

Running Assessments from a Project

You can run an Assessment directly from a Project. Before doing so, you may wish to upload a Package and share it with that Project. (Refer to Part 3 of this User Manual for how to create a Package.) Otherwise, you may select one of the curated packages available in the SWAMP.

1. From the **Projects I Own** section of the Projects page, select the name of a Project in the Project column.

2. Select **Run New Assessment** to create an Assessment. You will then be prompted to select a Package, Tool, and Platform.



3. Refer to Part 4 of this User Manual for how to run an Assessment.

Part 3: Software Packages

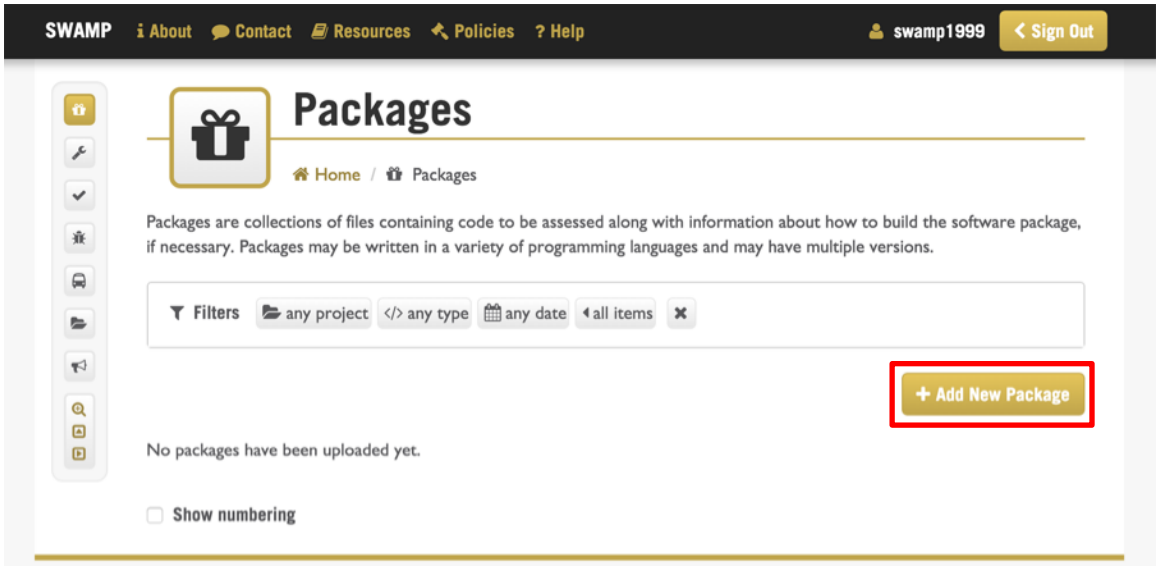
Adding Your Software Package to the SWAMP

A **Software Package** is a set of files containing related software or source code that needs to be assessed for vulnerabilities or security issues. You may add and upload, edit, or delete your Software Packages and versions of your Software Packages.

Uploading a Software Package

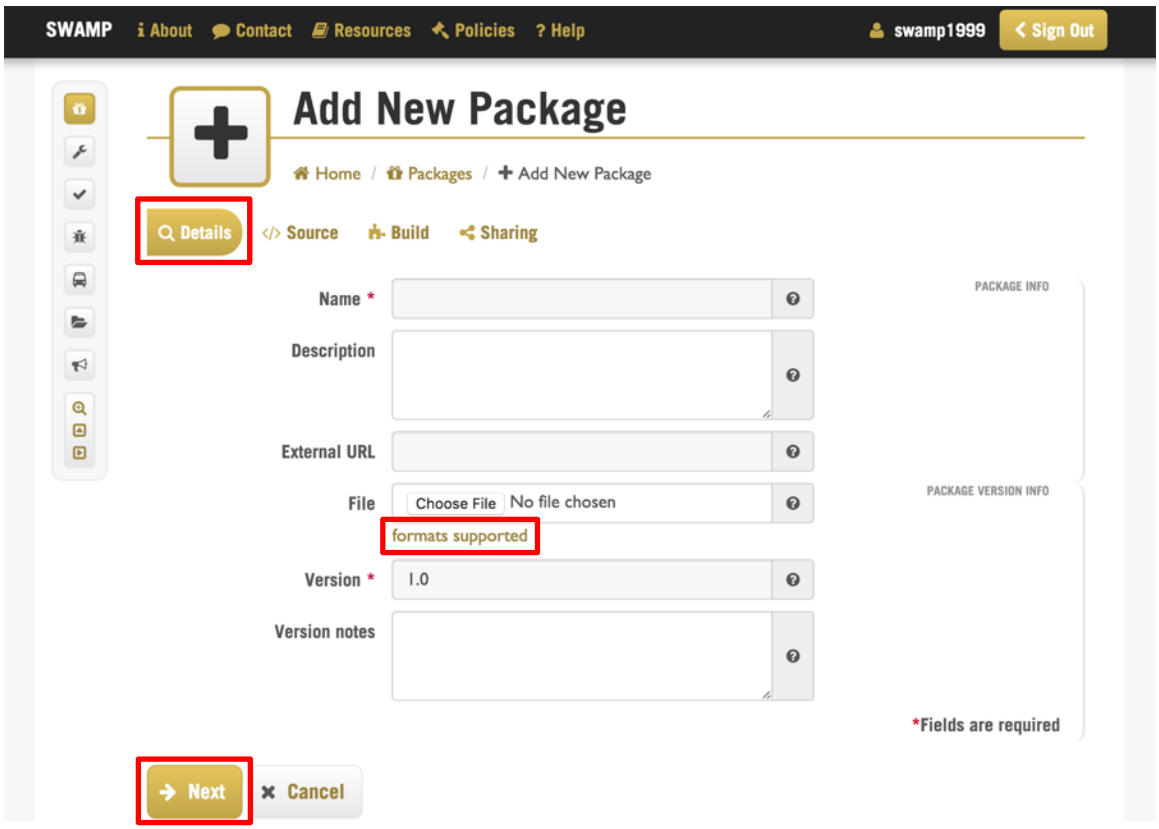
1. Sign in to your SWAMP account to get to your **Home** screen, and select **Packages**.

2. Select **Add New Package**.



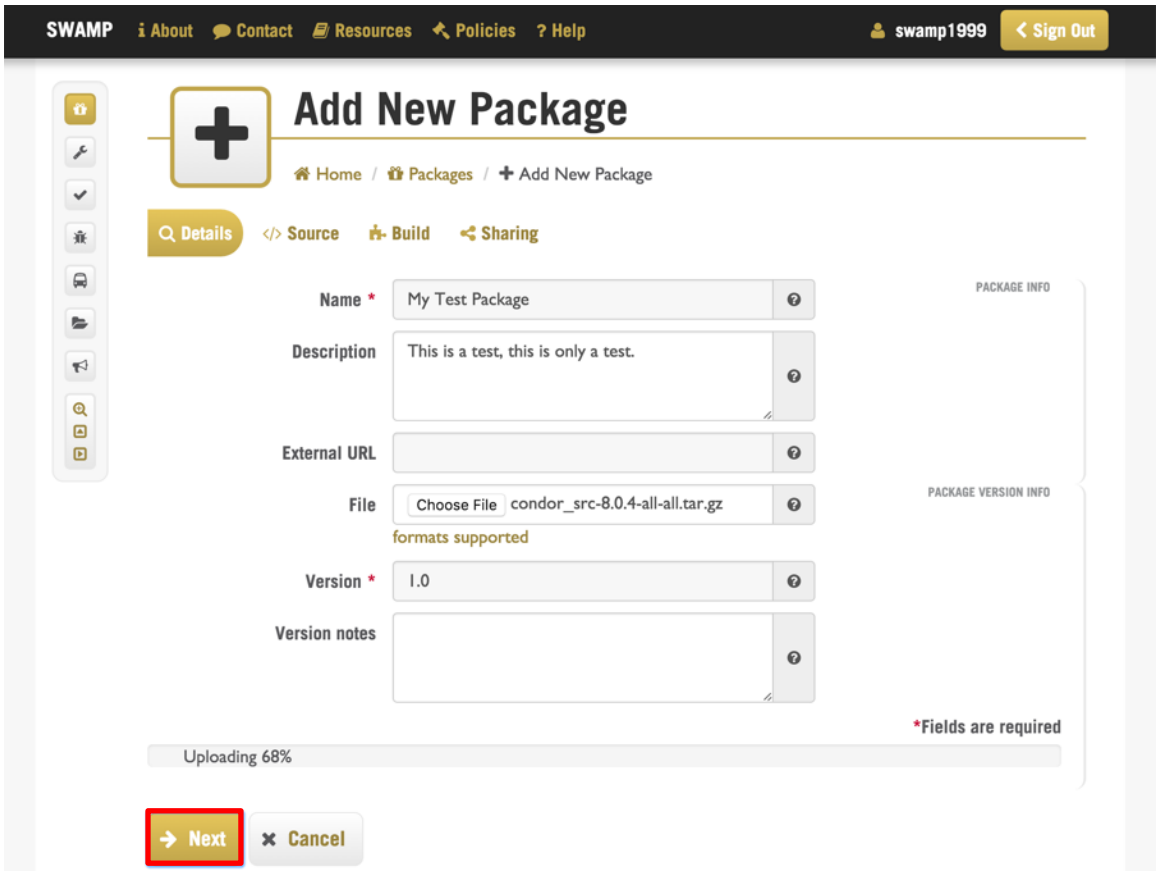
3. Complete the fields on the **Details** tab.

   ******Note:*** *When choosing a file to upload, hover your mouse over* ***formats supported*** *to view the supported file types.*



Name:	Name of the Software Package
Description:	A description of the package (Optional)
External URL:	Publicly clonable GitHub repository URL from which to clone or pull files for the package. The “HTTPS clone URL” on the GitHub repository page (ends with .git). The default branch will be used. (Optional)
File:	Software Package to upload
Version:	Revision of the uploaded software
Version Notes:	A description of the package version (Optional)

4. Select **Next**, and your package will begin to upload. A progress bar will appear across the bottom of the screen.



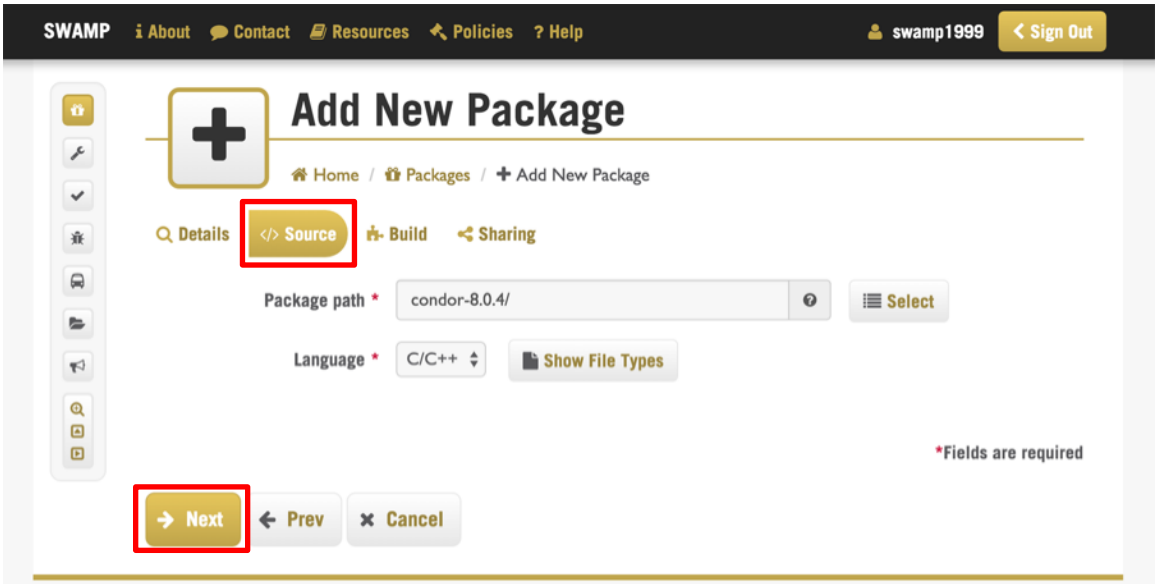
5. After your file has successfully uploaded, you will be on the **Source** tab.

   The SWAMP will automatically review your file to determine an appropriate **Package path** and **Language**. It may take a few moments for values to populate into these fields.

   Verify that the correct values have been chosen, and make changes, if needed, by choosing **Select**.

   Once this information is correct, select **Next**.

   ******Note:** Fields on the **Source** tab vary based upon the Language chosen. Refer to the next section for language-specific views.*



Package path: A required field and the name of the top level directory that is produced when the archive file is unarchived.

******Note:** Use the **Select** button to make changes to the **Package path**. In the **Select Package Path** window, only directories/folders appear by default. To view all files, check **Show all files**.*

Language: This field indicates whether or not to invoke the build system to build the software from source code. Languages are automatically chosen based on a quick scan of the file to be uploaded (e.g. C/C++). Additional options may appear based on the Language selected.

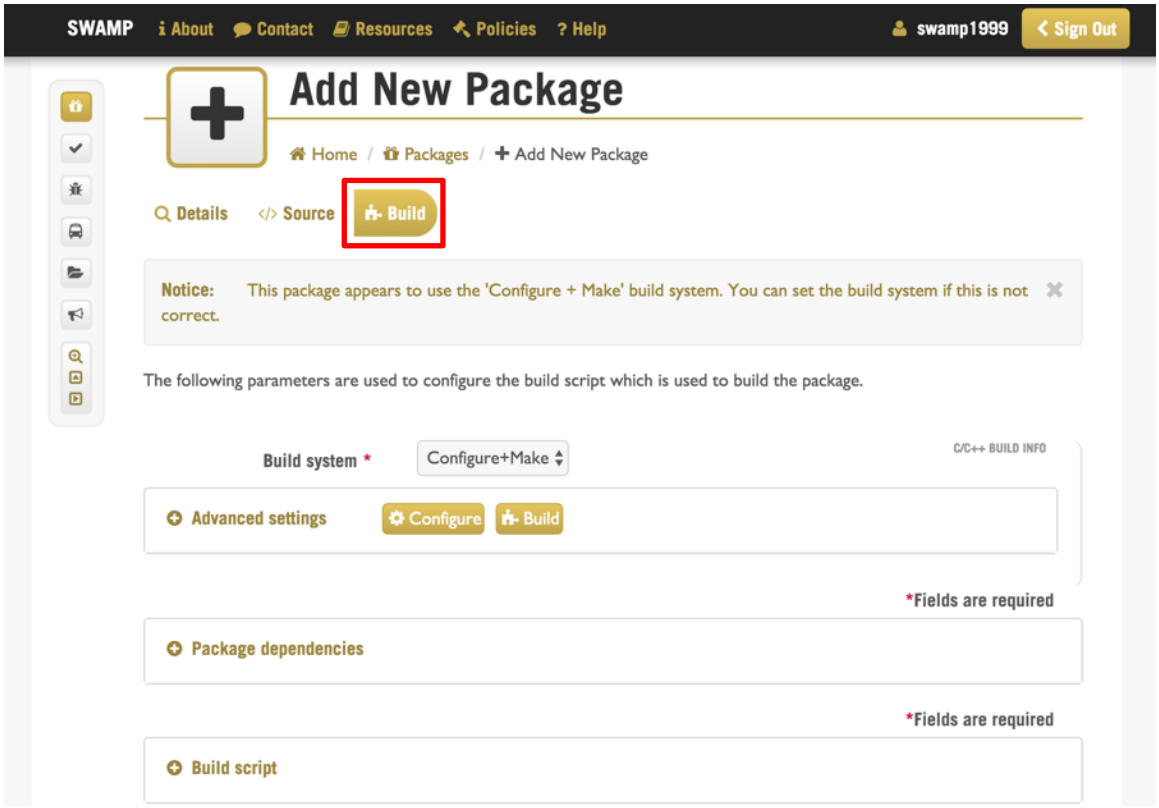
******Note:** The **Show File Types** button displays the number of files with each file extension within the specified **Package path**.*

6. You will now be on the **Build** tab.

   The SWAMP will automatically review your file to determine an appropriate **Build system**. It may take a few moments for a value to populate into this field.

   Verify that the correct value has been chosen, and make changes, if needed.

   ******Note: Build system*** *values vary based upon the Language chosen. Refer to the next section for Language-specific views.*



Build system: Name of the system to use to build the software.

- For C/C++, the following may be chosen: No build, Cmake+Make, Configure+Make, Make, Other.
- For Java source, the following may be chosen: No build, Ant, Ant+Ivy, Maven, Gradle.
- For Java source Android, the following may be chosen: Ant, Maven, Gradle.
- For Java bytecode Android APK, the following may be chosen: Android APK.
- For Python, the following may be chosen: No build, Build with Setuptools, Build (Other).
- For Ruby, the following may be chosen: Bundler, Bundler + Rake, Bundler + Other, Rake, Other, No Build, Ruby Gem.

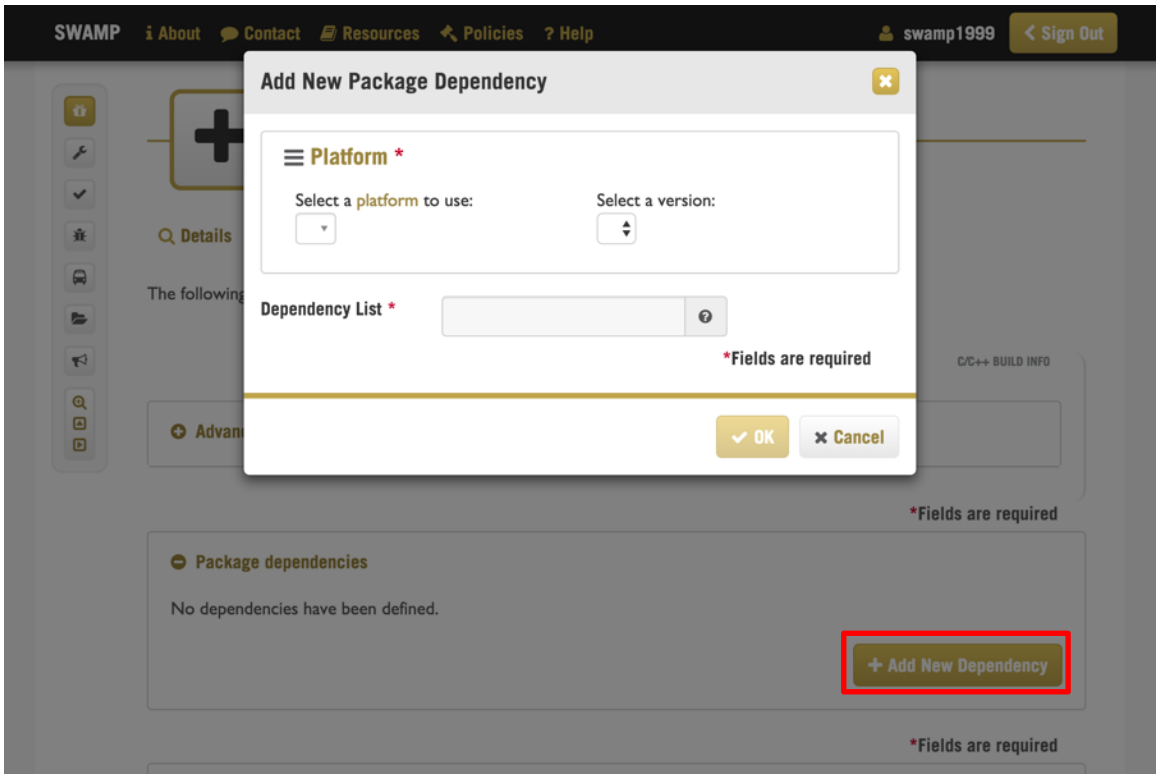
Build command: If a build system other than the ones listed has to be used, select “Other” in the **Build system** field and provide a build command to execute the package. This is only used with C/C++, Python, or Ruby packages.

Advanced settings: Additional settings that should be included in the **Build script**

Package dependencies: Platform, platform version, and dependencies required by the package

Build script: Script to run to build the package

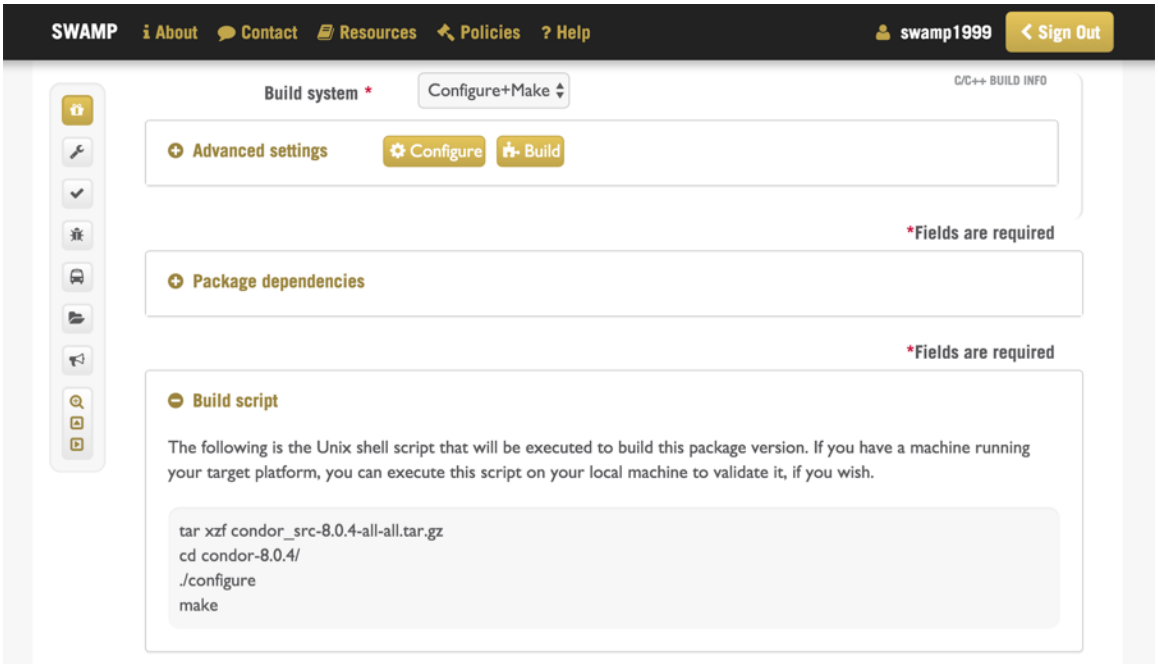
7. To specify a platform, platform version, and list of dependencies for your package, select **Add New Dependency** in the **Package dependencies** section. Then select **OK**. Multiple sets of platforms and dependencies may be added.



Platform: Select a supported platform and platform version

Dependency List: A space separated list of packages required for the selected platform version. These packages will be supplied to and installed with the package manager for the associated platform before your build script is run.

8. Review the **Build script** to ensure the correct script will be executed.

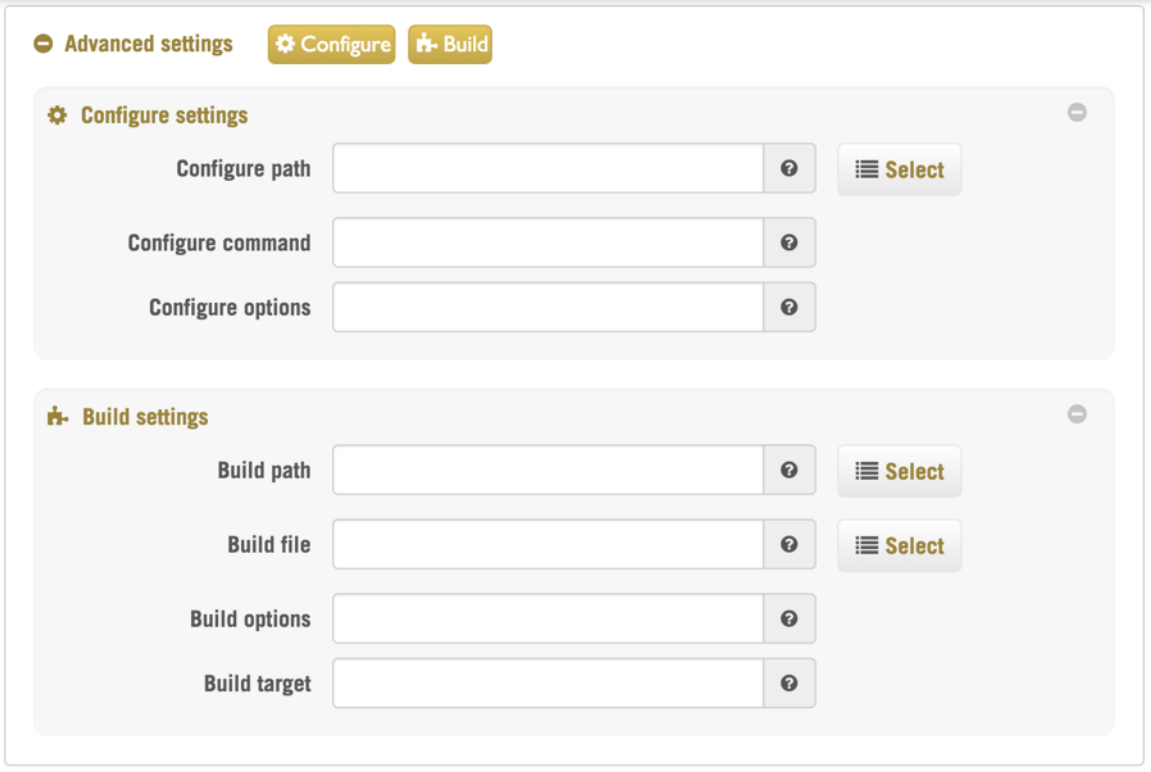


The **Build script** can be changed by filling out the optional fields under **Advanced settings**.

Use the **Select** button to choose a new path or file.

******Note:*** *Only directories/folders appear by default. You may need to check* ***Show all files****. Selected build files are identified by a puzzle icon and gold font.*

Advanced settings



Configure path: The name of the directory relative to package-dir to change before running the configure command. If undefined/empty, '.' is assumed. (Optional)

Configure command: The name of a command to configure the package before building. If undefined/empty, no command is run. (Optional)

Configure options: The name of options, i.e. the arguments to pass to the configure command. (Optional)

Build path: The path to the directory related to the source path to change to before building. If undefined/empty, '.' is assumed. (Optional)

Build file: The path to the build file related to the build path to use for the build systems. For the **Build system** "Other," the name of the file needs to be passed in the build options. (Optional)

Build options: Name of the options and arguments to pass to the build command. (Optional)

Build target: The name of the file to be created by the build process. This target is passed to the build command. (Optional)

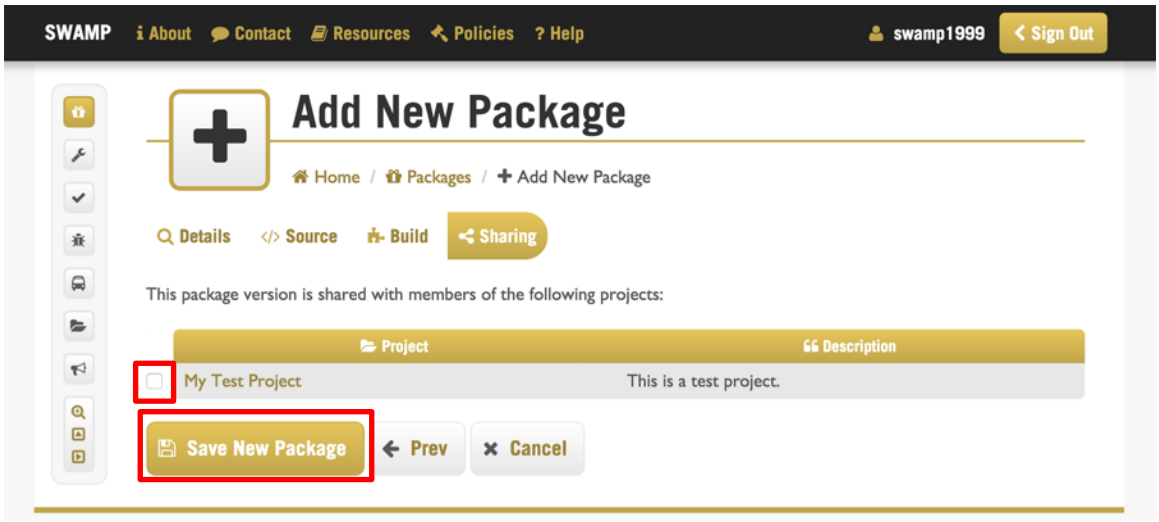
9. If you are not a Project Owner or have not been invited to any Projects, select **Save New Package** at the bottom of the **Build** tab.

   ***Note:** By default, the Package will be shared with your My Project.*

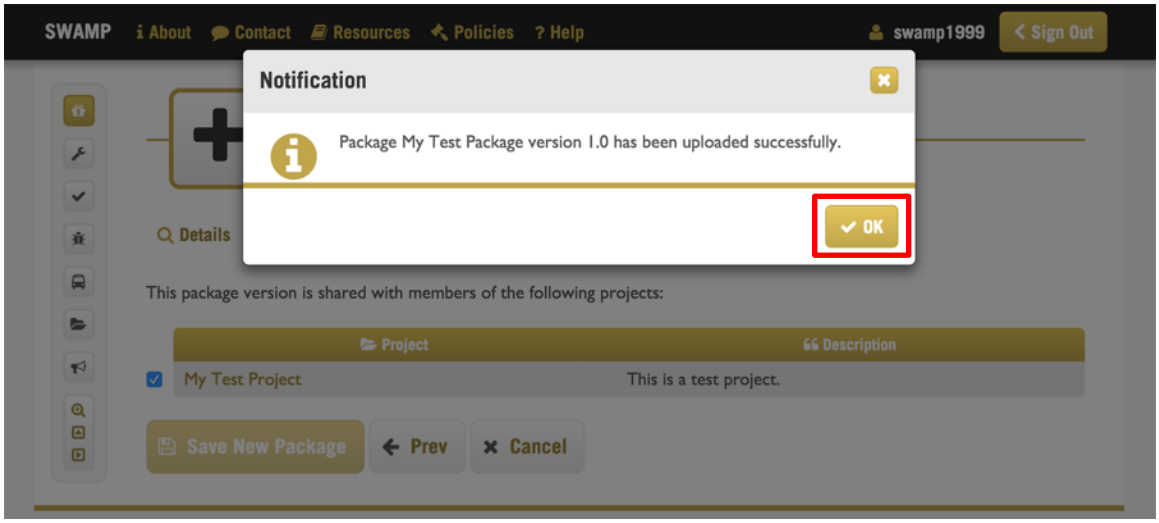
10. If you are a Project Owner with your own Projects or have been invited to a Project, select **Next** at the bottom of the **Build** tab. You will now be on the **Sharing** tab.

    To share this Package with one or more Projects, check the box to the left of a Project, and select **Save New Package**.

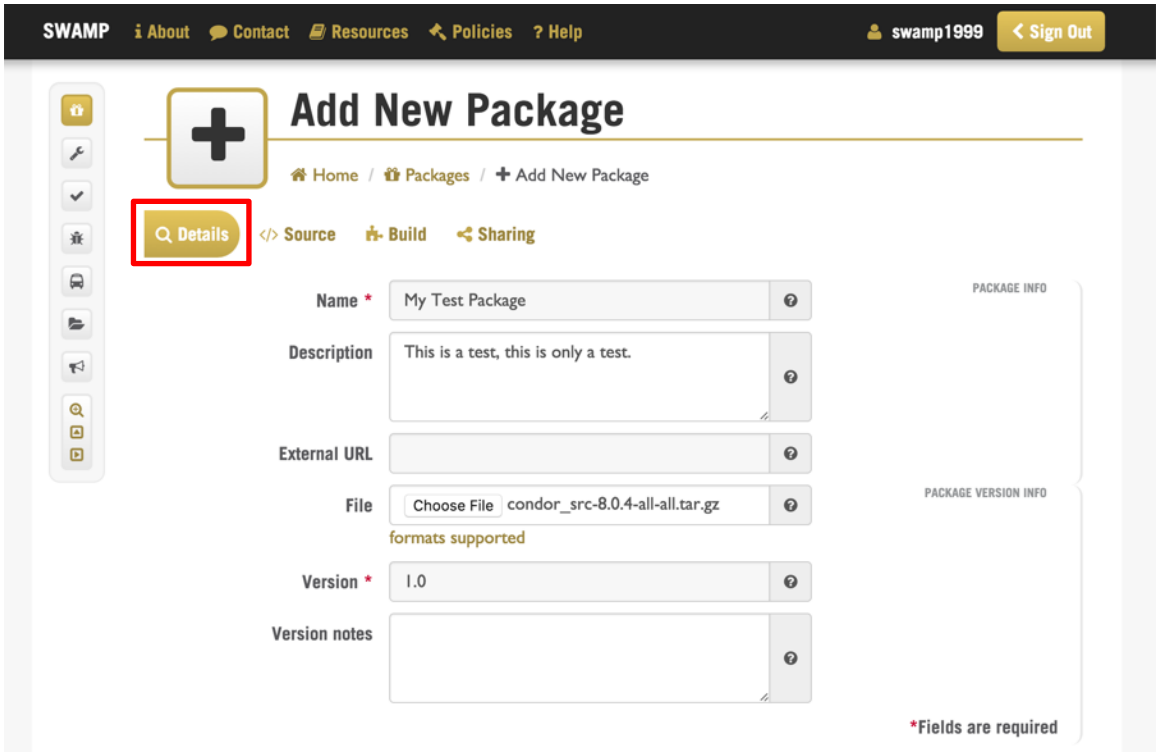
    ***Note:** If a Project is not selected, the Package will be shared with your My Project.*



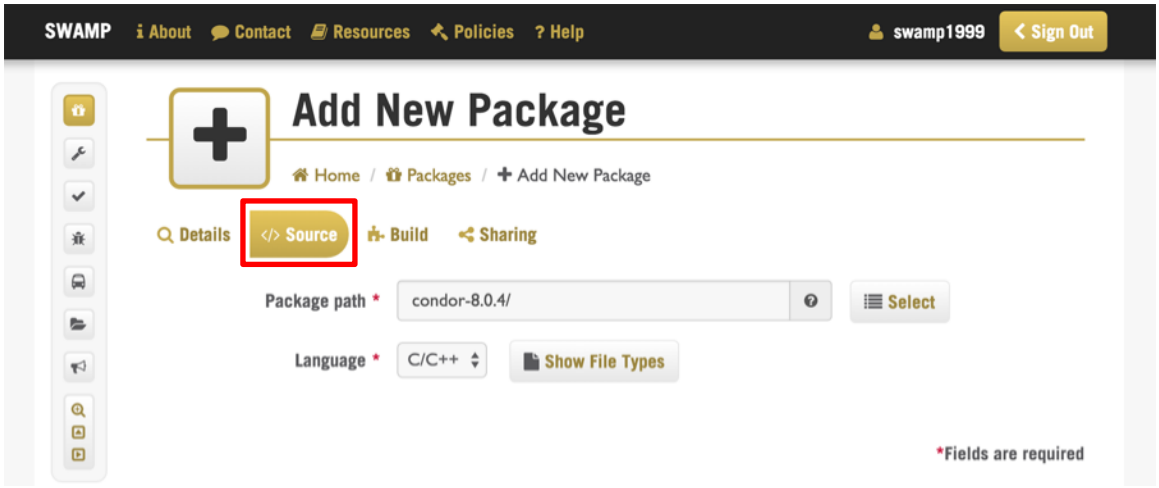
11. You will receive a notification once the Package upload is complete. Select **OK**.



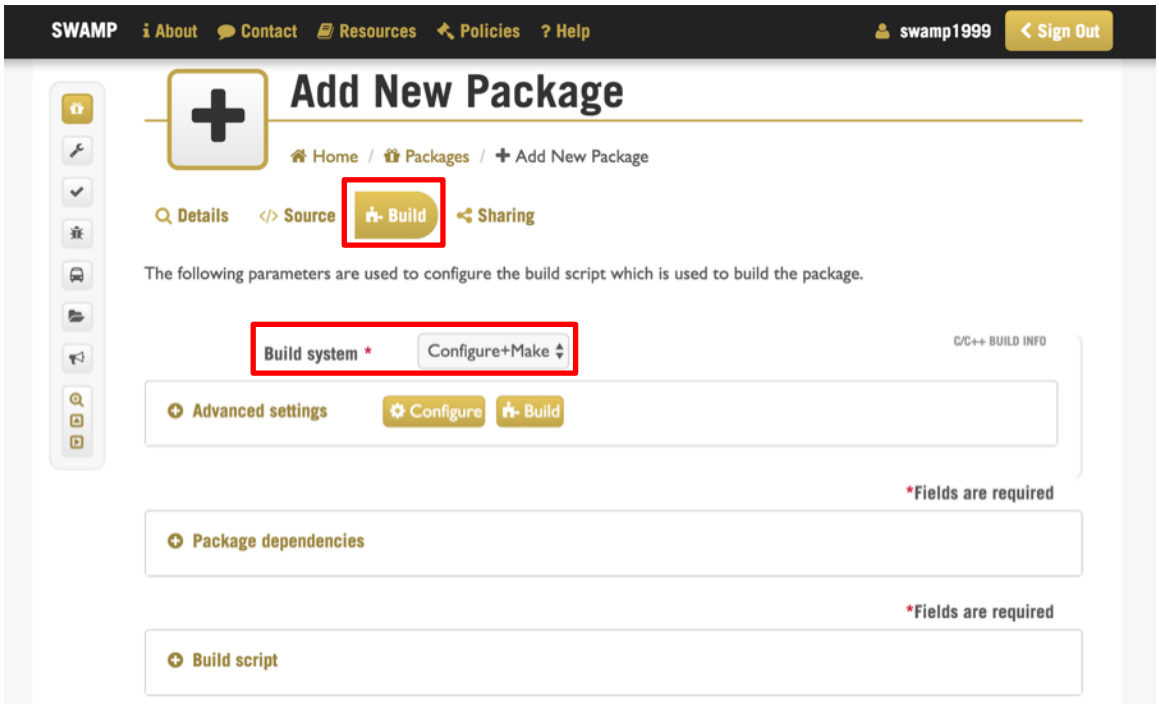
Uploading a New C/C++ Package



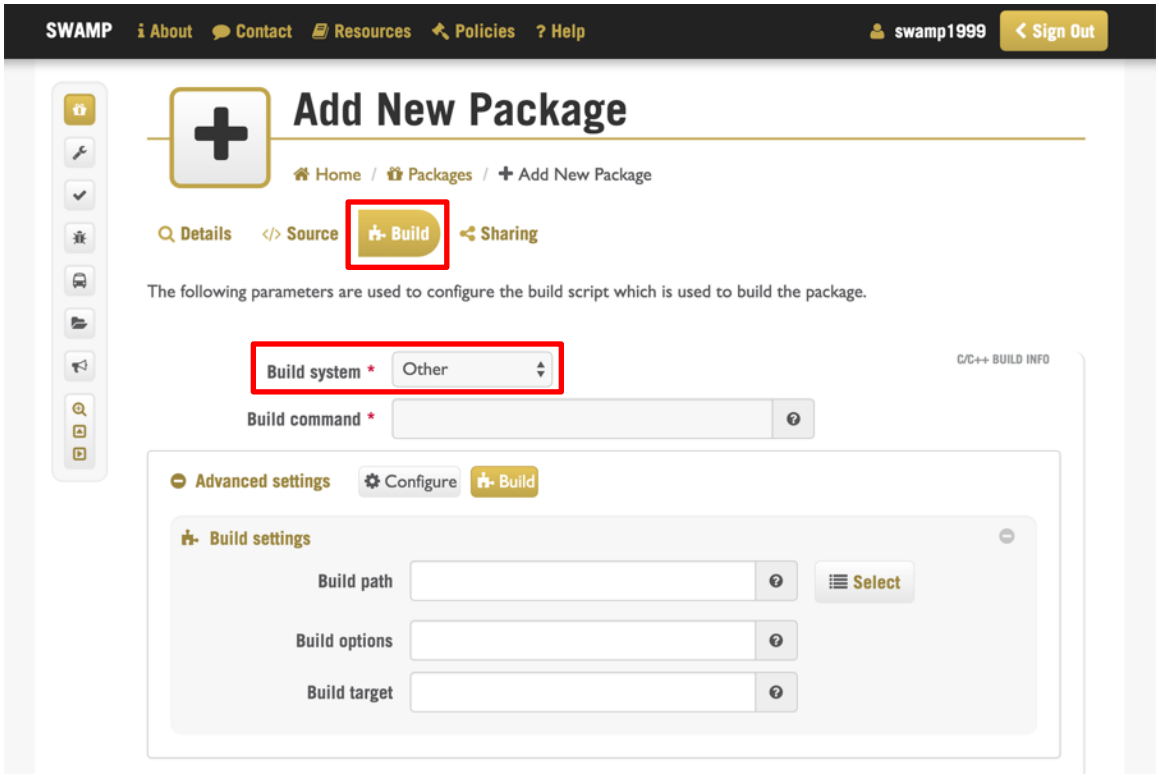
C/C++, Details Tab



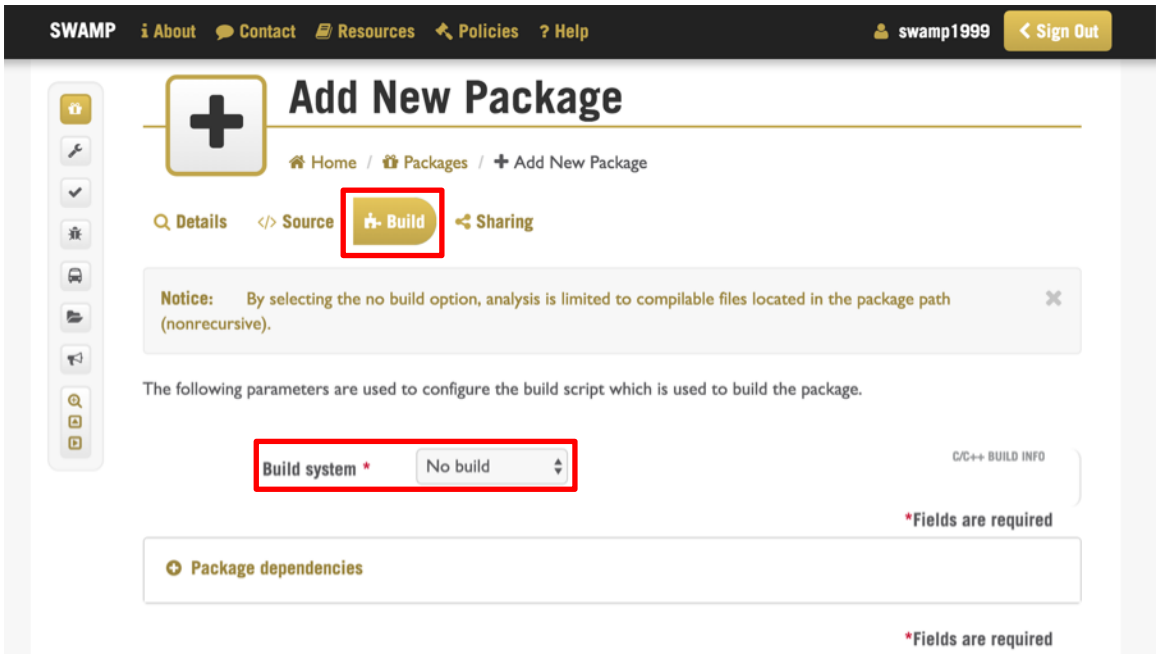
C/C++, Source Tab



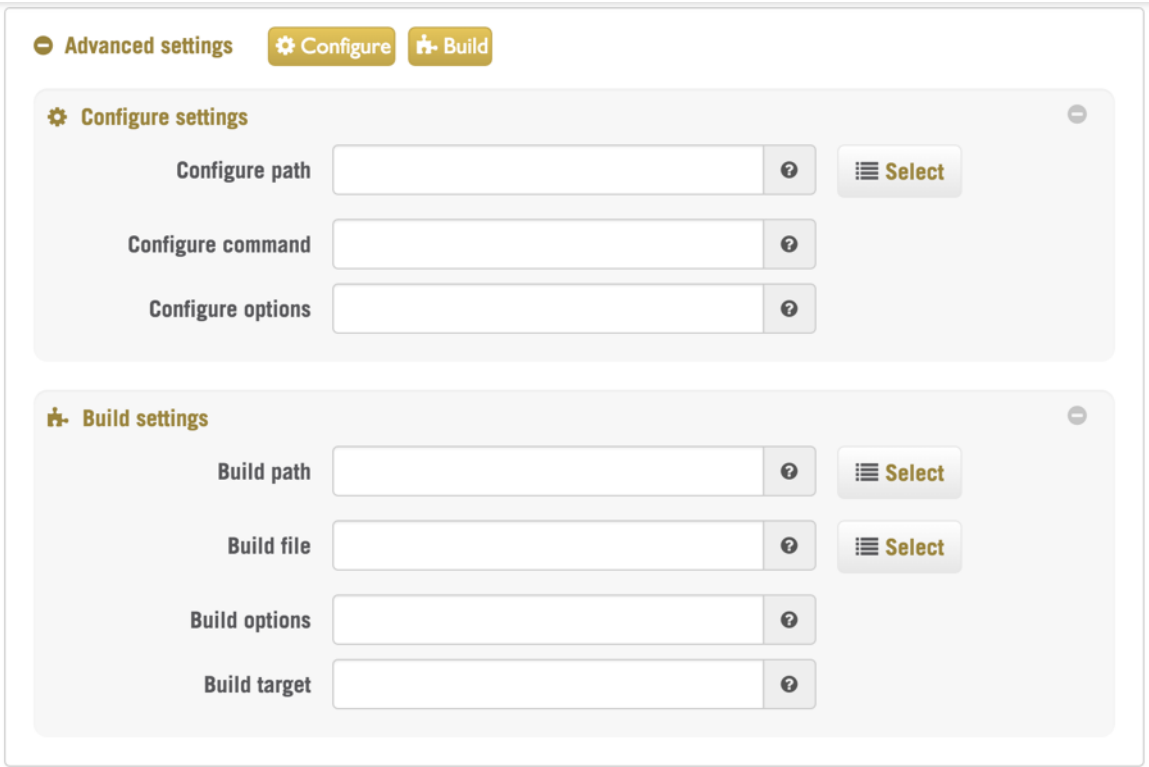
C/C++ Defaulted "Configure+Make" Build System, Build Tab



C/C++ "Other" Build System, Build Tab

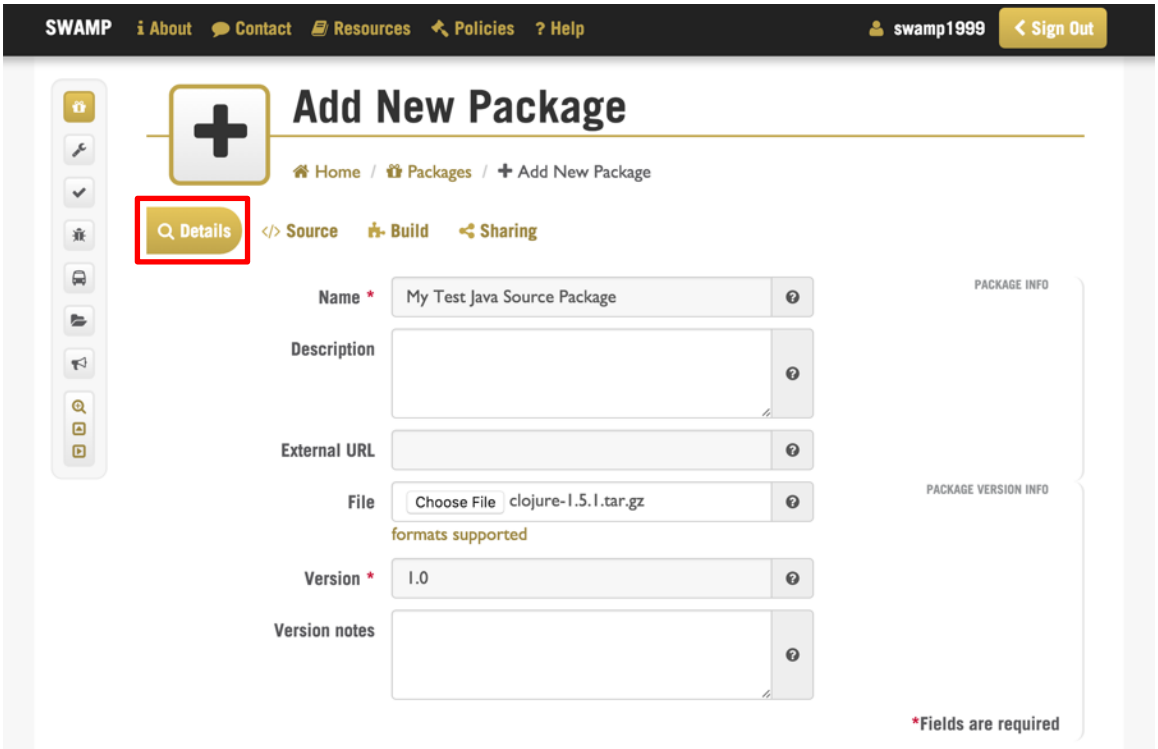


C/C++ "No Build" Build System, Build Tab

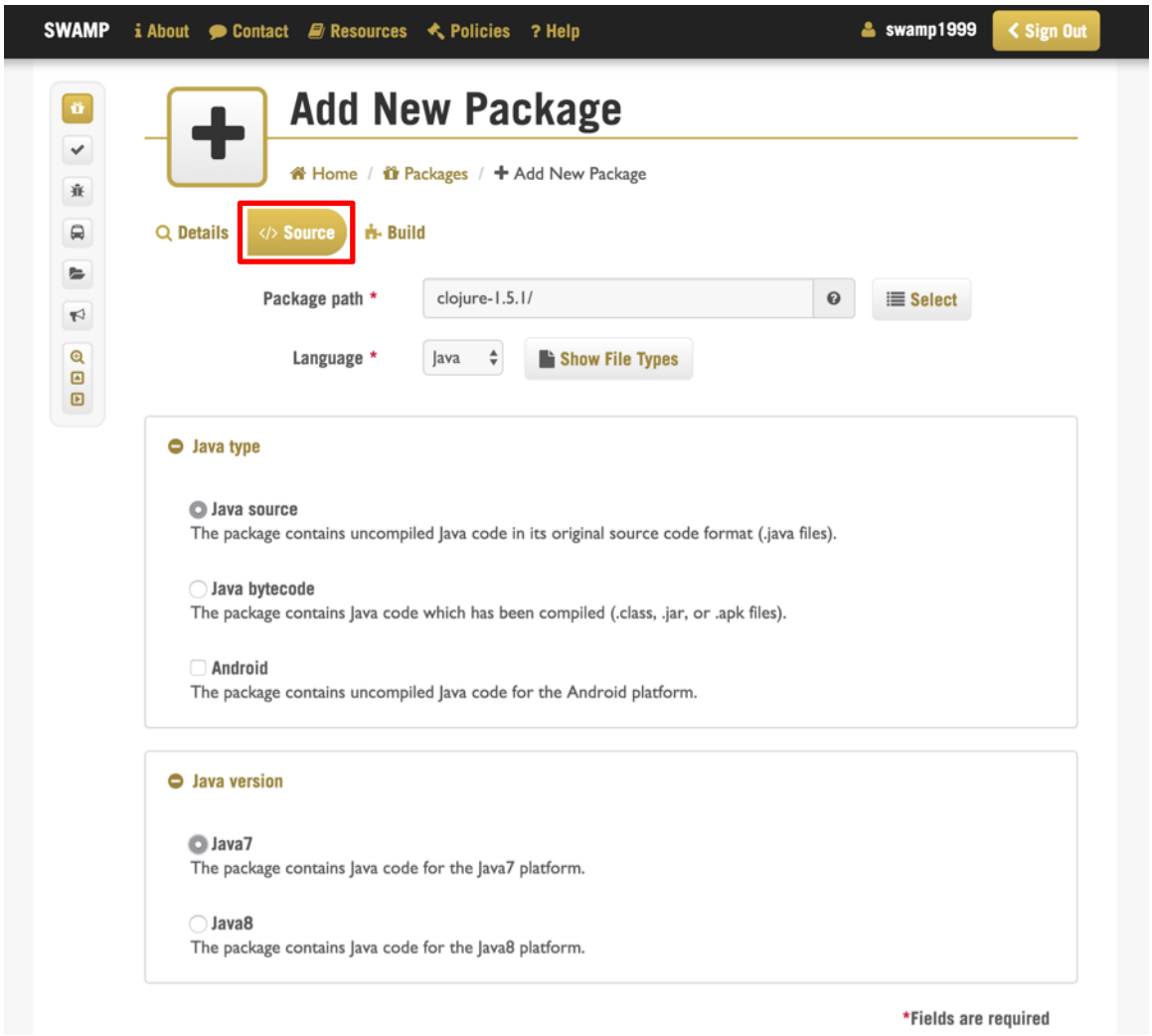


C/C++, Advanced Settings

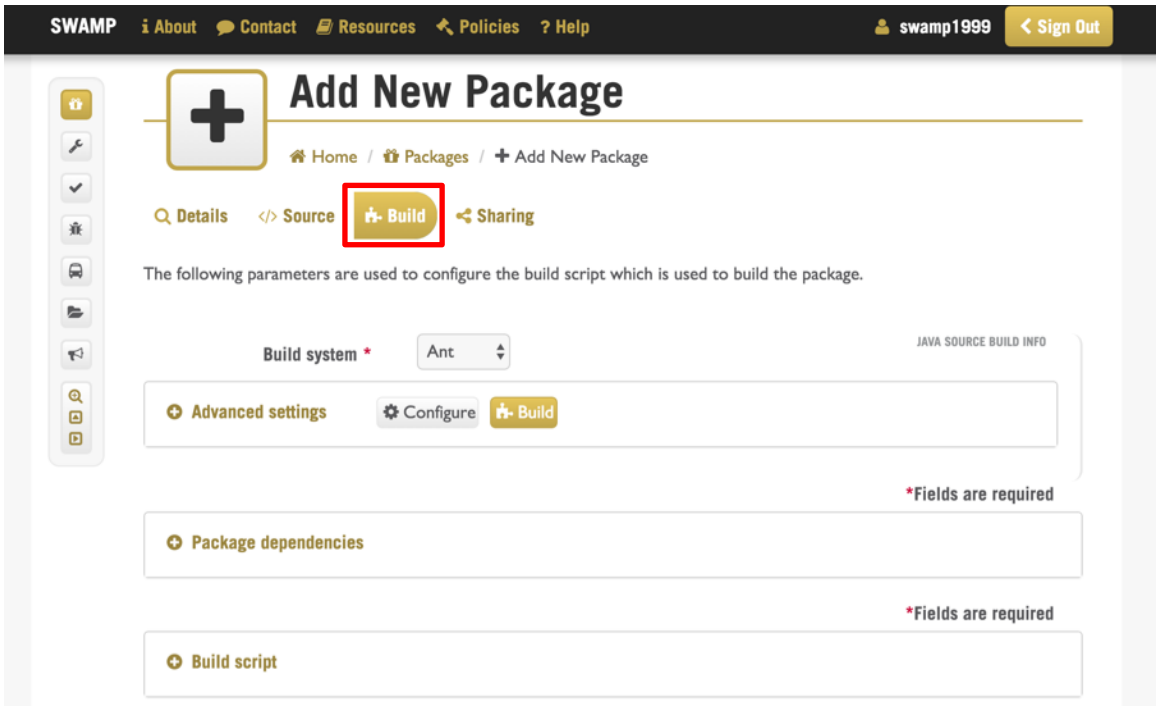
Uploading a New Java Source Package



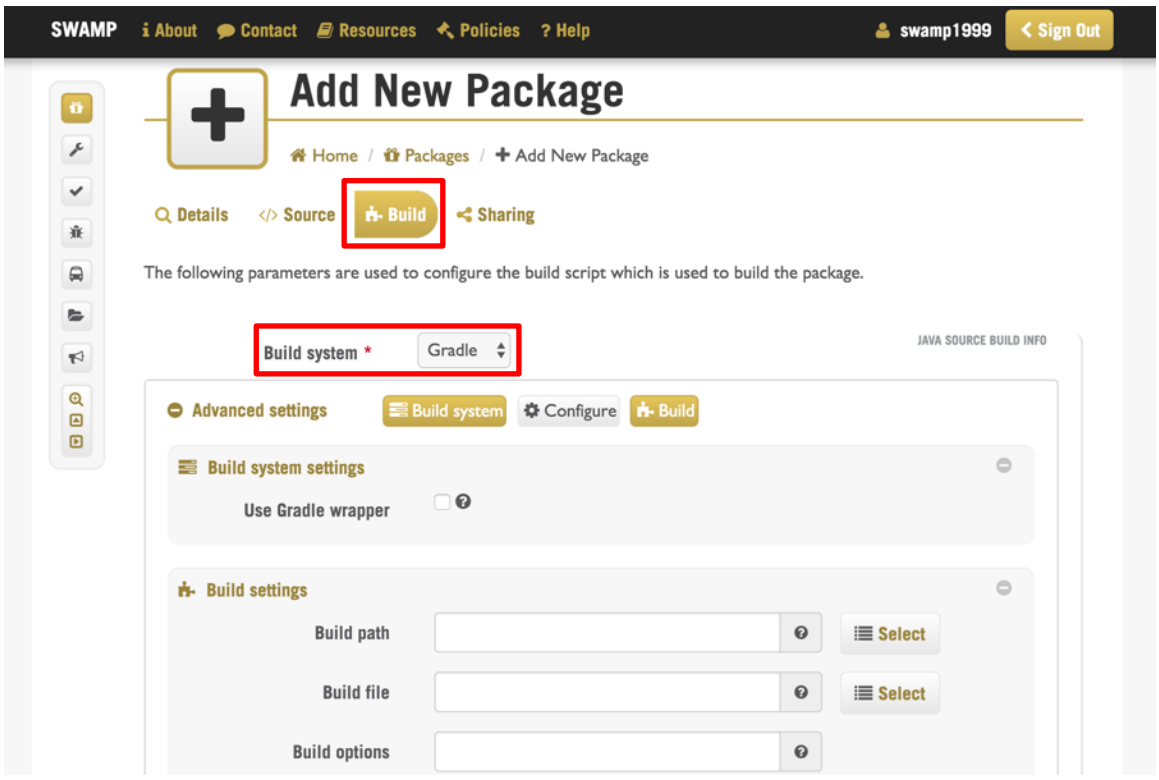
Java Source, Details Tab



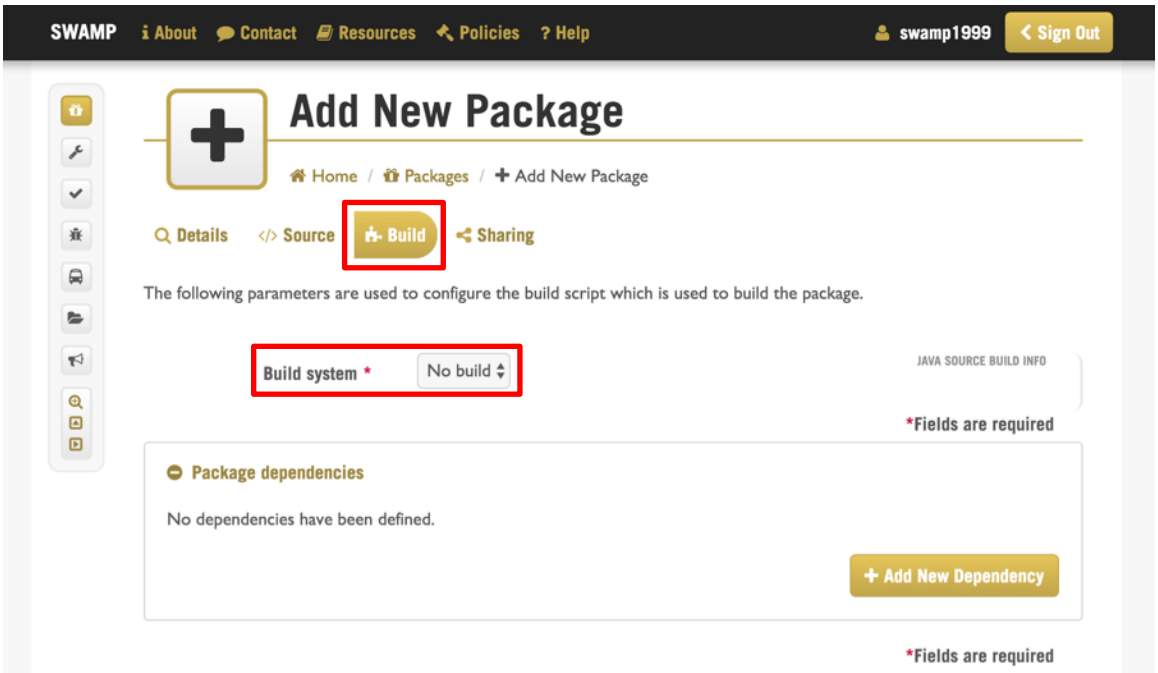
Java Source, Source Tab



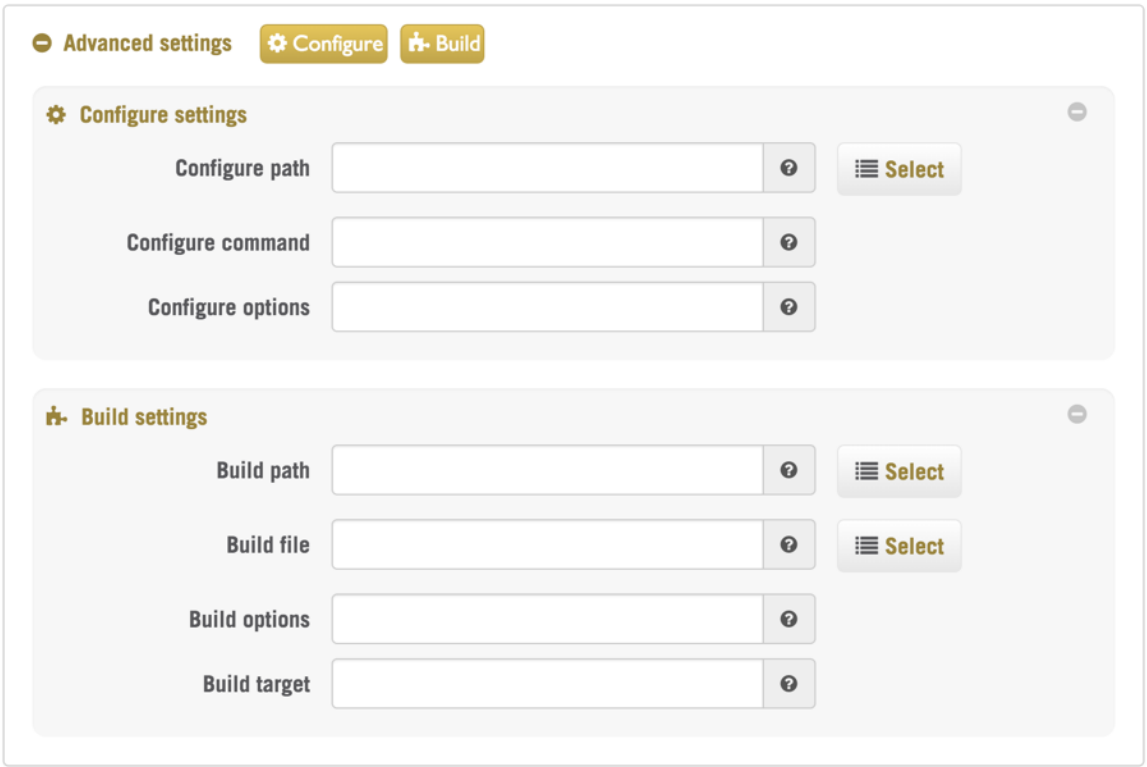
Java Source Defaulted "Ant" Build System, Build Tab



Java Source "Gradle" Build System, Build Tab

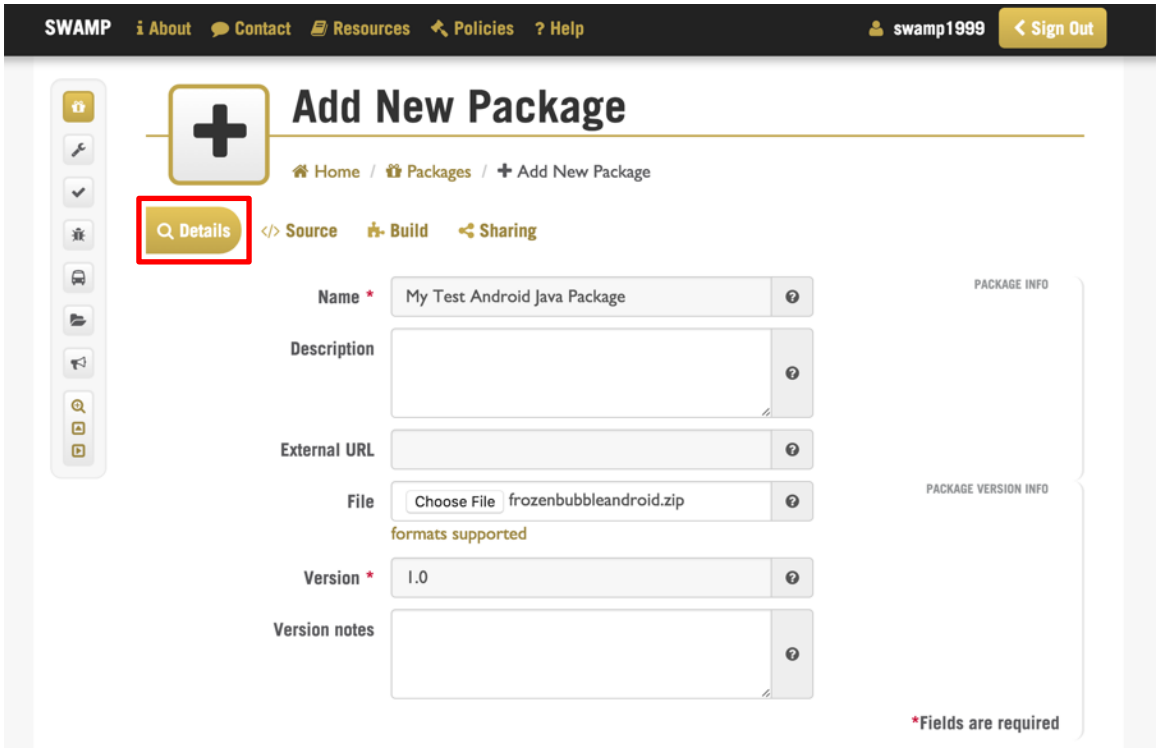


Java Source "No Build" Build System, Build Tab

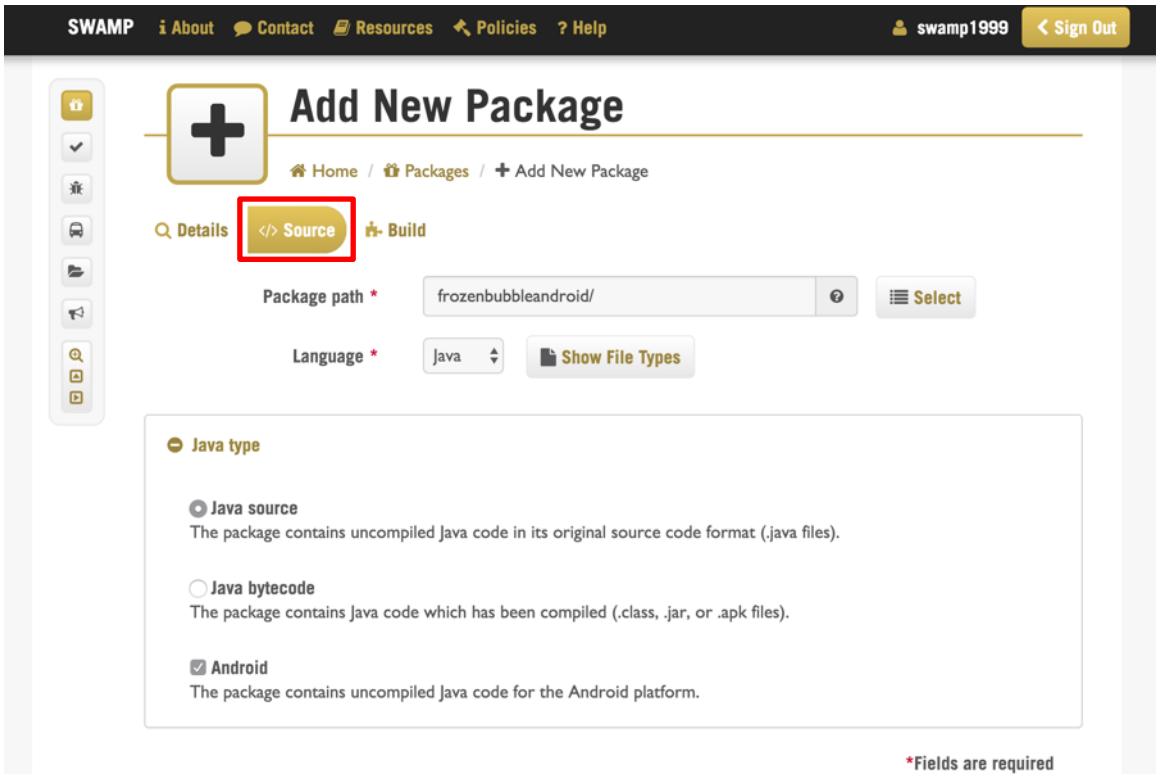


Java Source, Advanced Settings

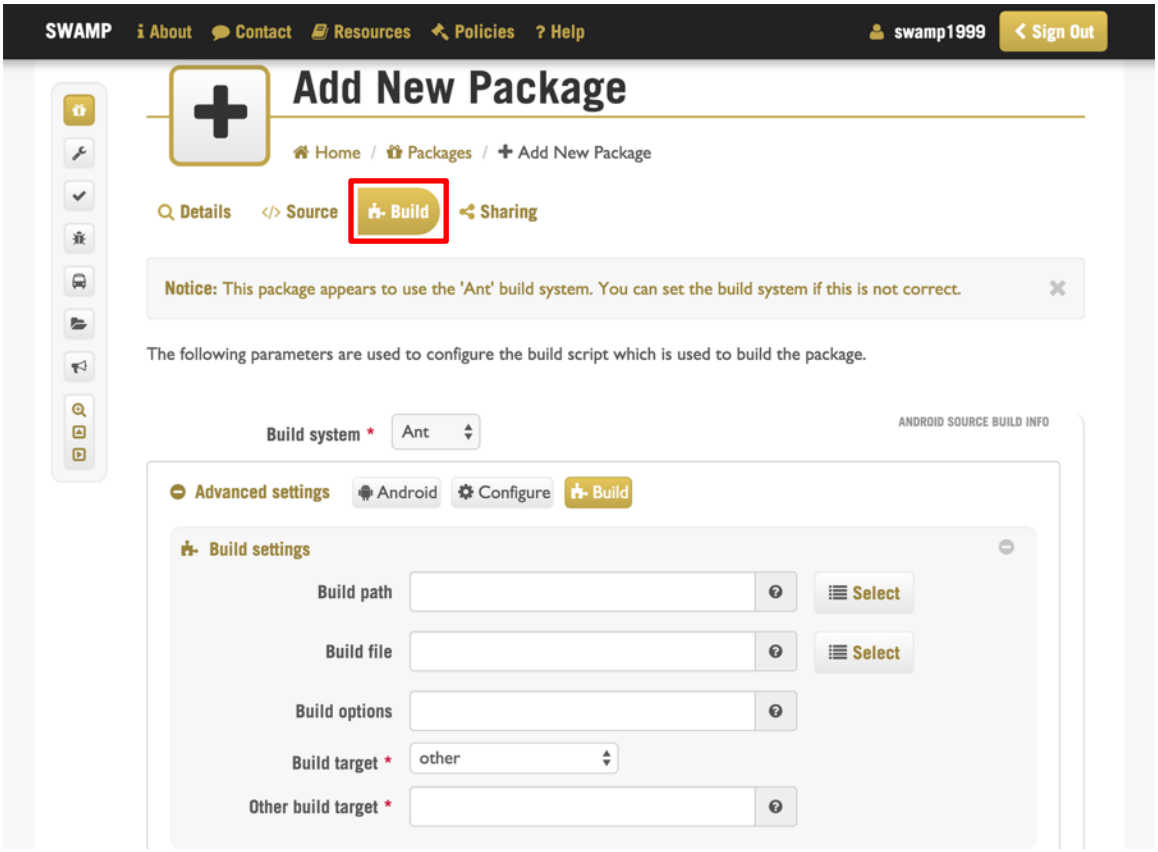
Uploading a New Android Java Source Package



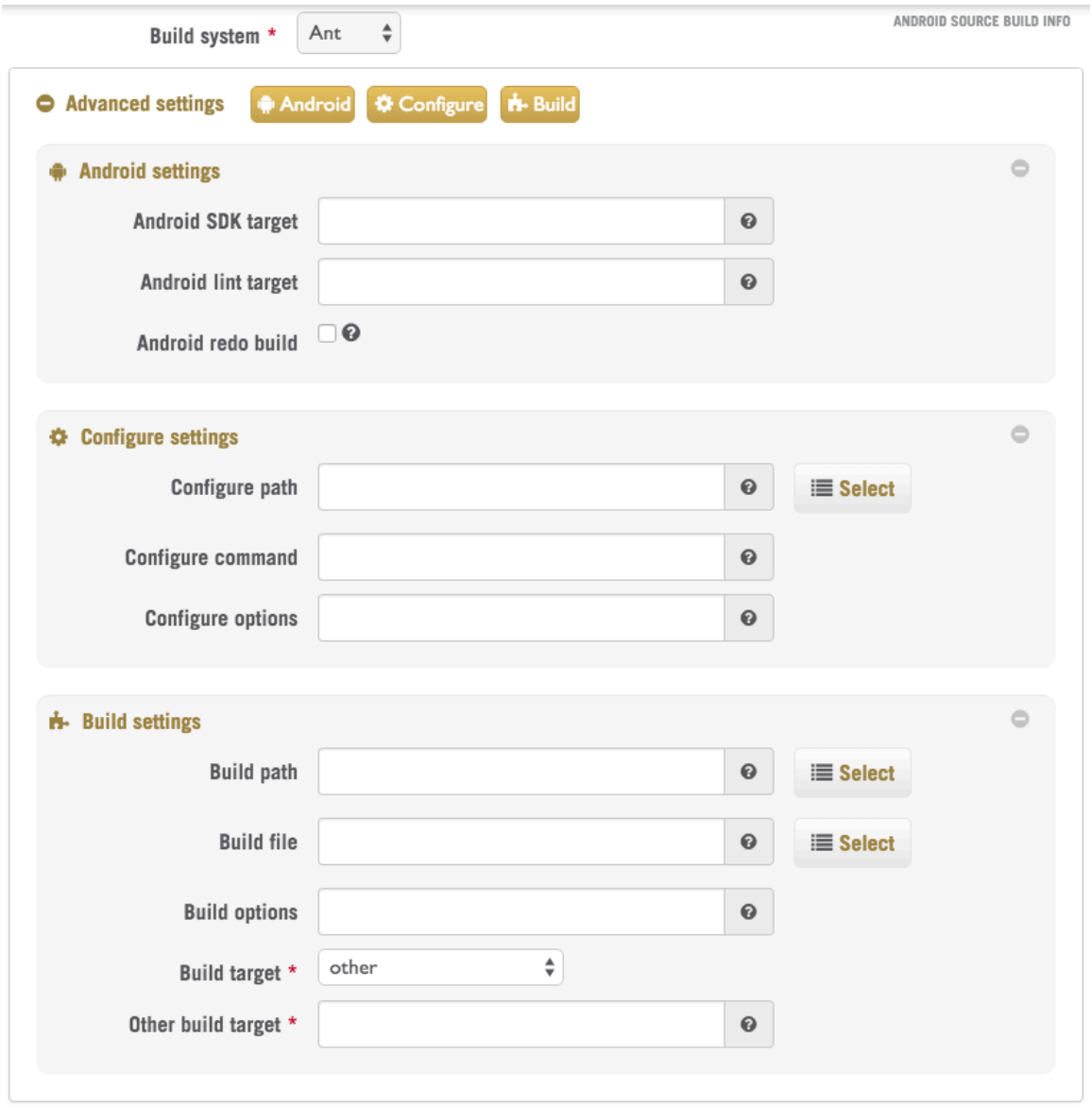
Android Java Source, Details Tab



Android Java Source, Source Tab



Android Java Source Defaulted "Ant" Build System, Build Tab



Android Java Source "Ant" Build System, Advanced Settings

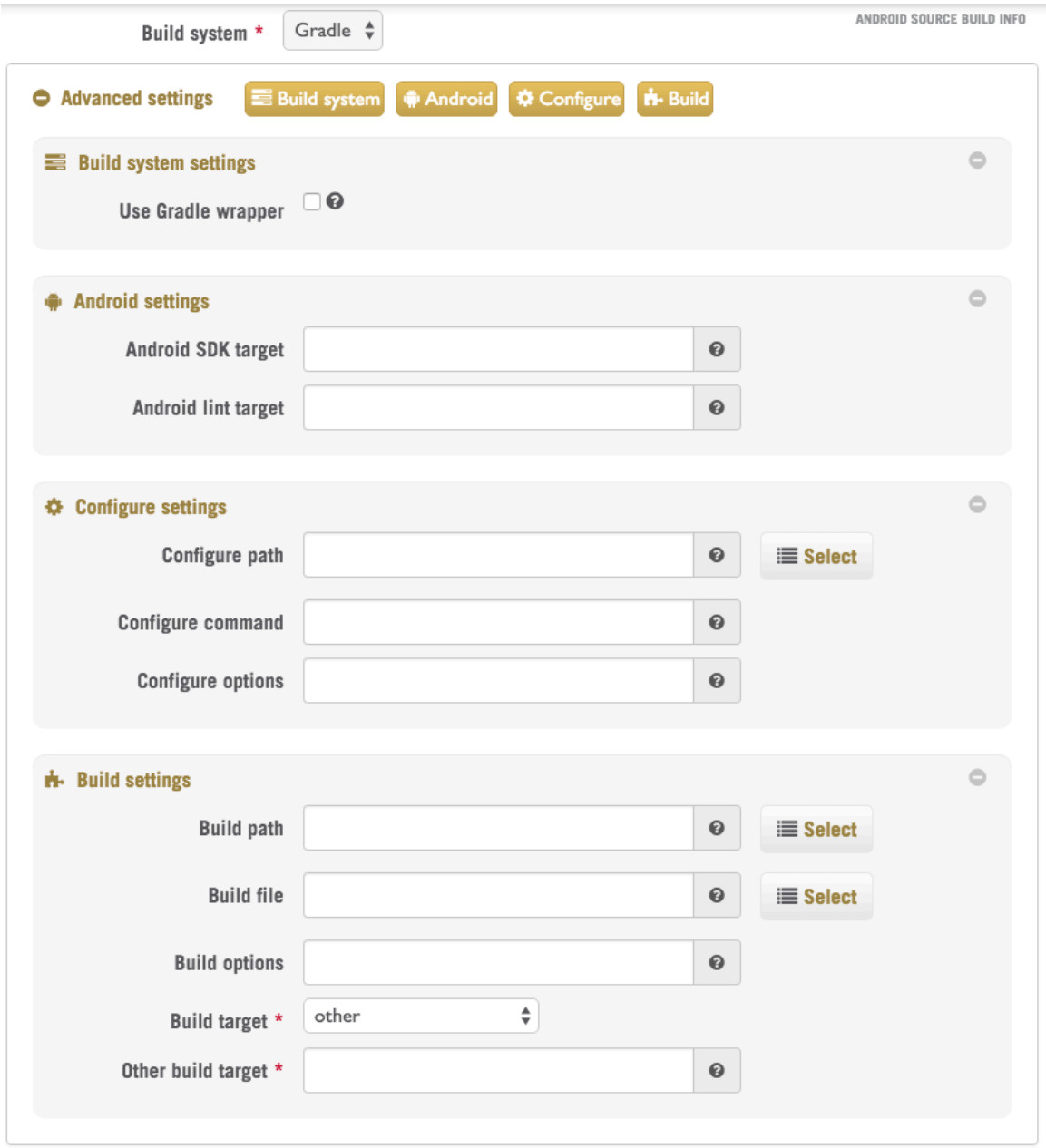
Android SDK target: A string describing the target Android SDK version (Optional)

Android lint target: The appropriate lint target. The SWAMP uses the android standard target of 'lint'. Use if the android build disables this normal lint target, if android lint fails, if a specific lint target per build command is required, or to see different lint target output in the SWAMP. (Optional)

Android redo build: Check to attempt to infer the manifest file and redo the build from the package contents (Optional)

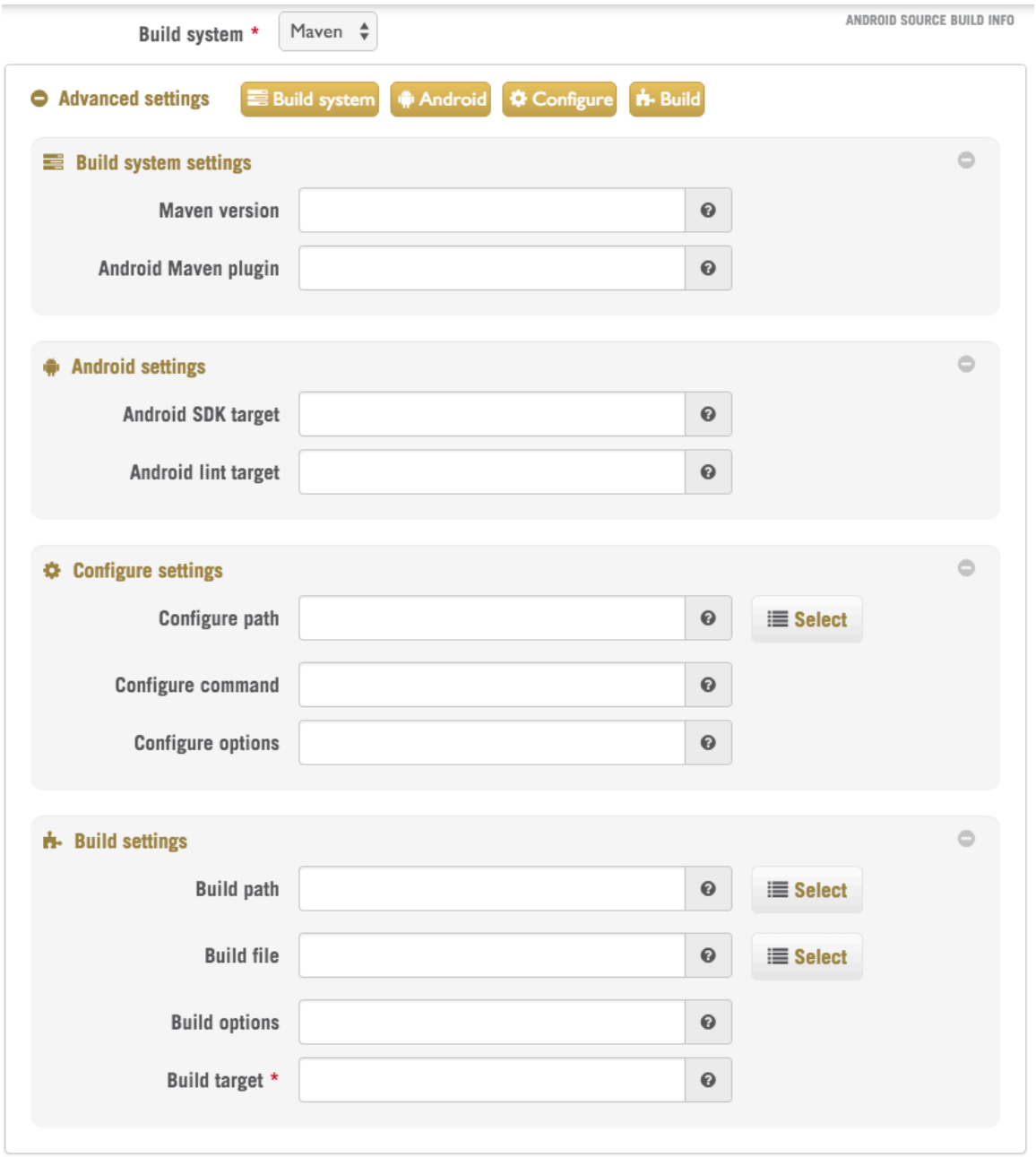
Build target: The name of the target created during the build. Options include: release, debug, other.

Other build target: The name of the target created during the build. This field only appears with “other” as the **Build target**.



Android Java Source “Gradle” Build System, Advanced Settings

Use Gradle wrapper: The standard way to make a Gradle package use a specific version of Gradle, if required. (Optional)



Android Java Source "Maven" Build System, Advanced Settings

Maven version: A string describing the version of Maven to use. May need to be specified if the package requires a particular version of Maven to compile correctly. (Optional)

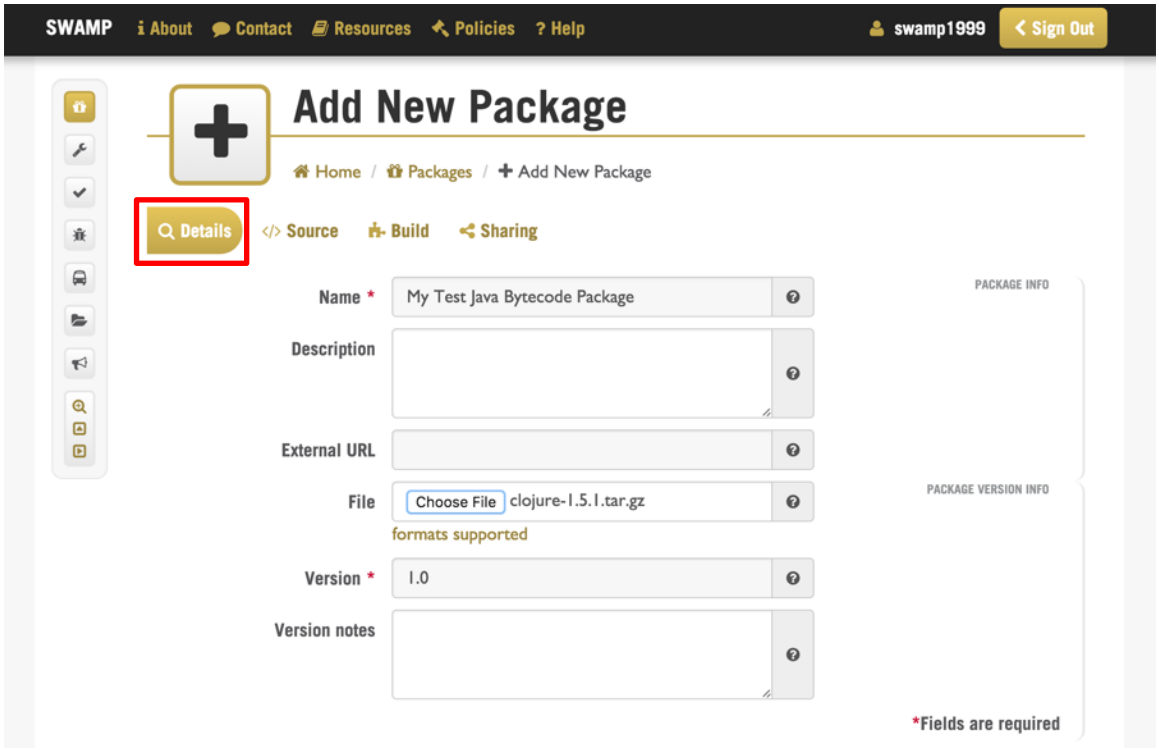
Android Maven plugin: A string describing the version of Android Maven plugin to use. The version used at build-time may be upgraded to be compatible with the Android SDK. (Optional)

Android SDK target: A string describing the target Android SDK version (Optional)

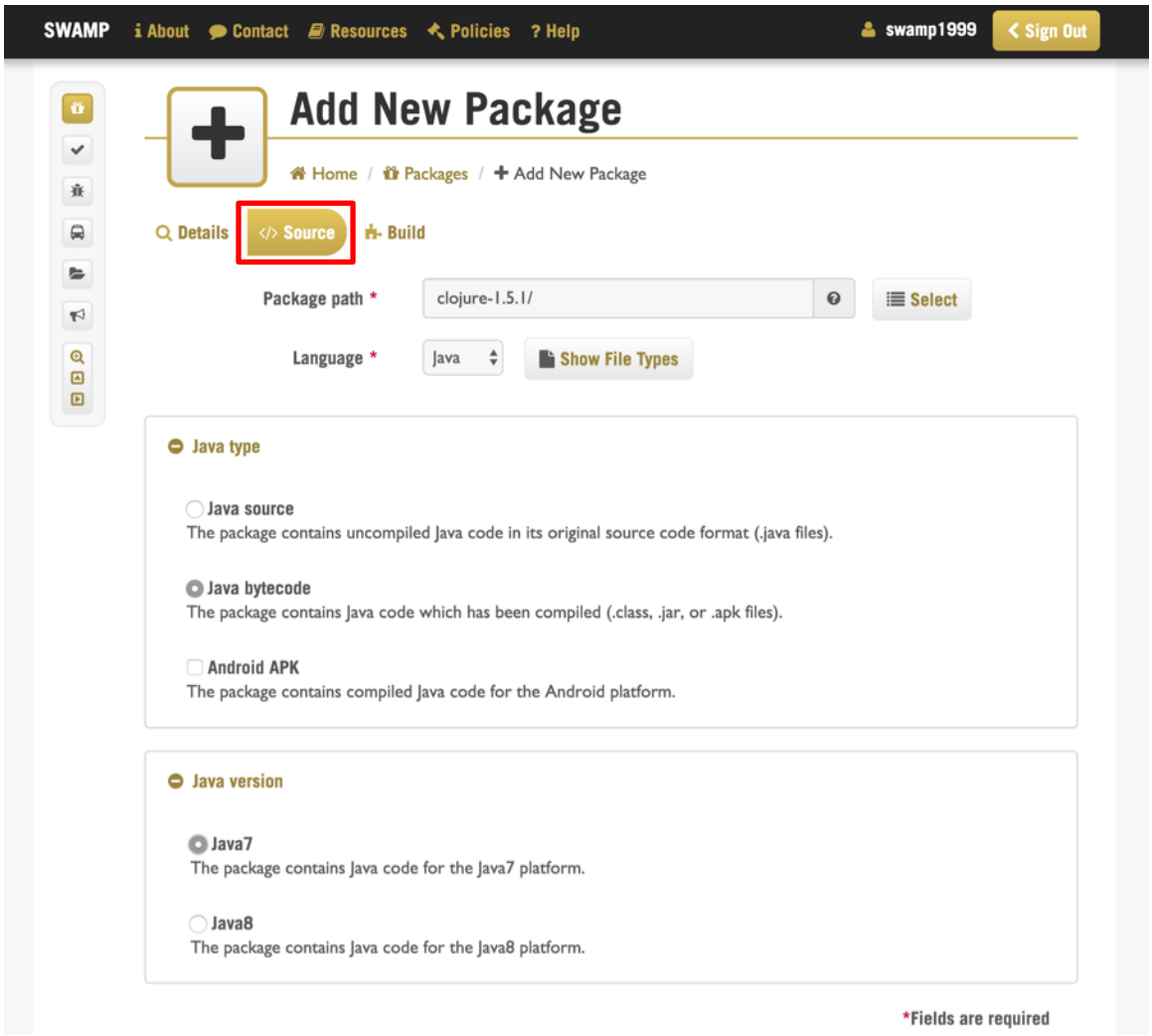
Android lint target: The appropriate lint target. The SWAMP uses the android standard target of 'lint'. Use if the android build disables this normal lint target, if android lint fails, if a specific lint target per build command is required, or to see different lint target output in the SWAMP. (Optional)

Build target: The name of the target created during the build.

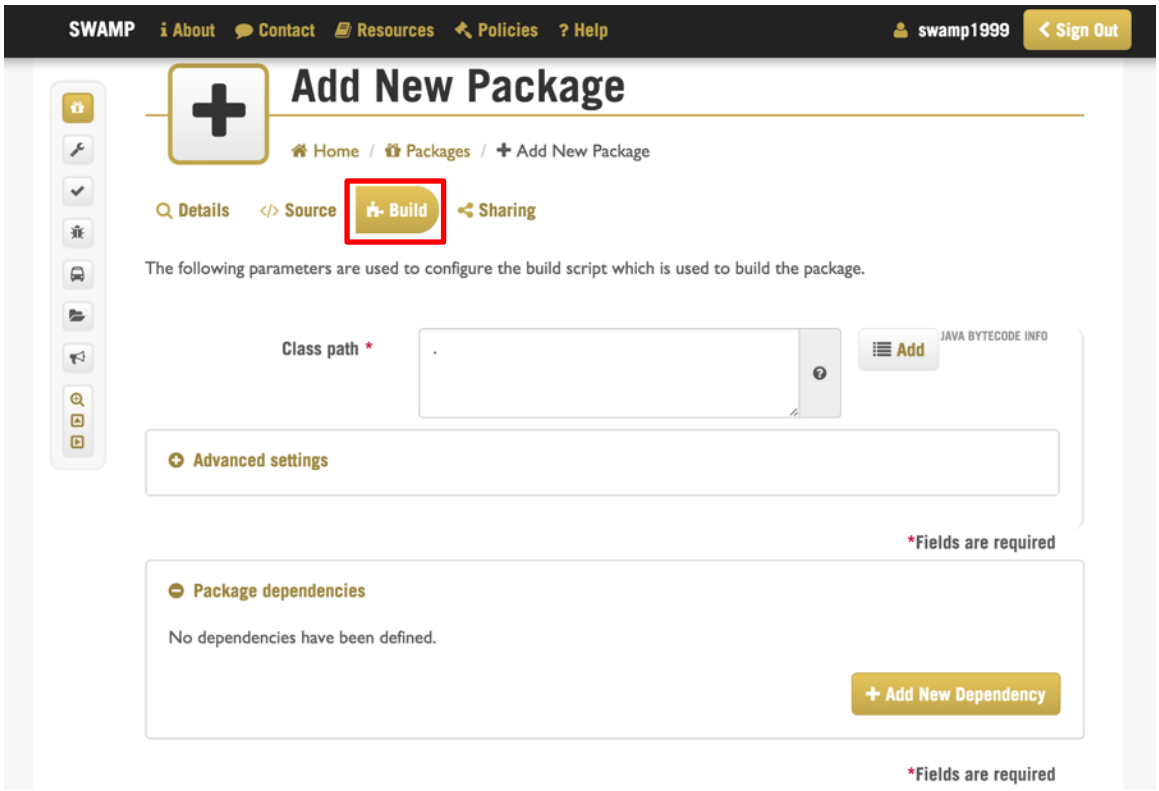
Uploading a New Java Bytecode Package



Java Bytecode, Details Tab

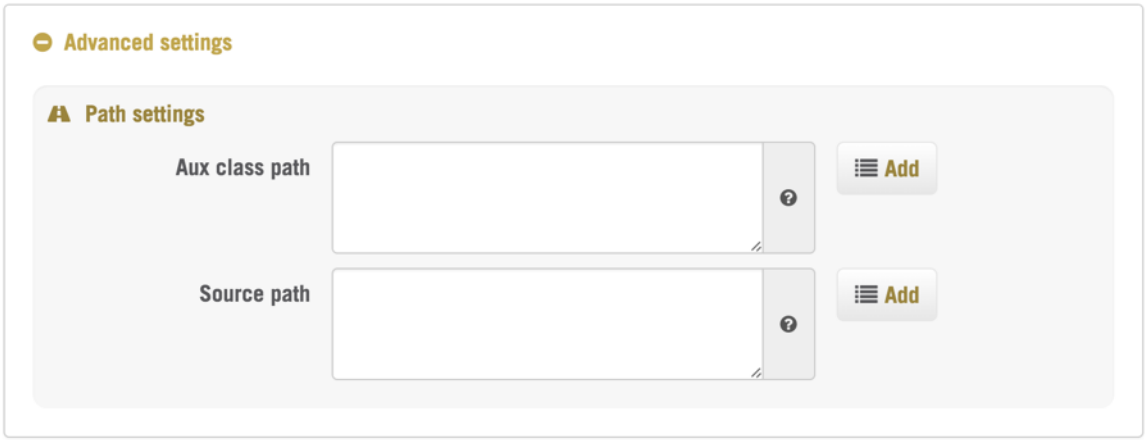


Java Bytecode, Source Tab



Java Bytecode, Build Tab

Class path: A ':' separated list of paths to Java archive files (jar, zip, war, ear files), class files, or directories containing class files that are to be assessed. For a directory, all class files in the directory tree are assessed. A directory path can end with a wildcard character '*' to assess all jar files in the directory. These paths are relative to the package path.



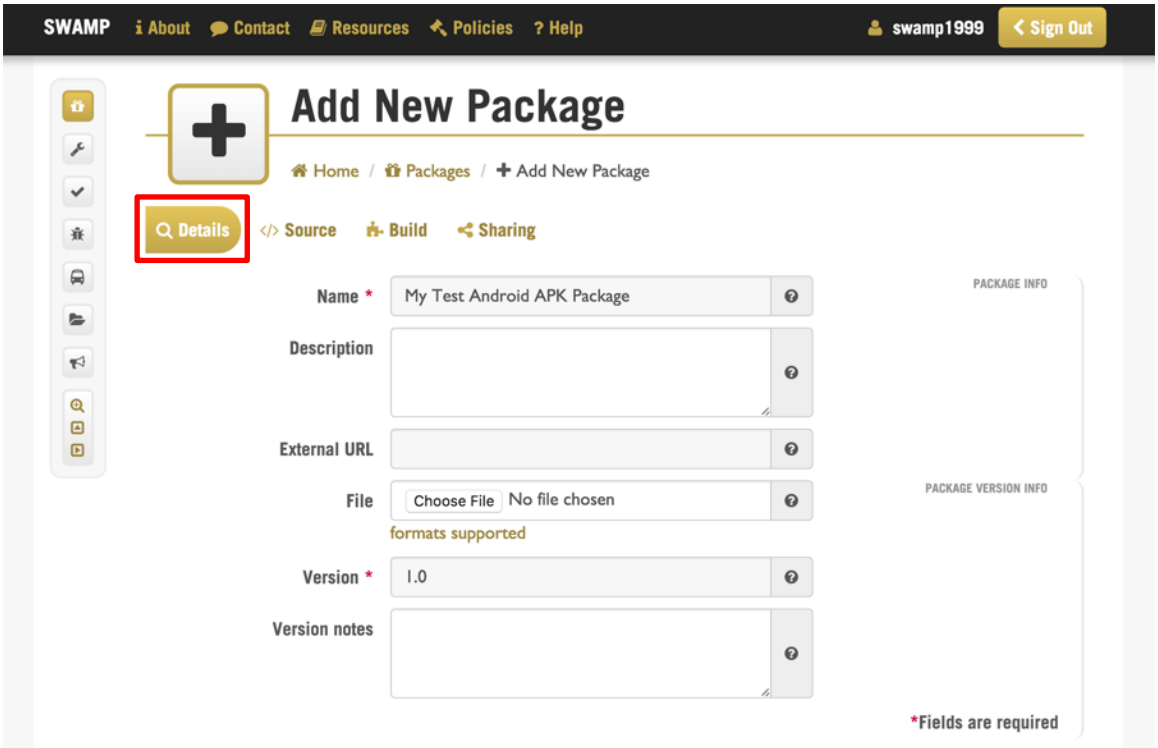
Java Bytecode, Advanced Settings

Aux class path: A ':' separated list of paths to Java archive files (jar, zip, war, ear files), class files, or directories containing

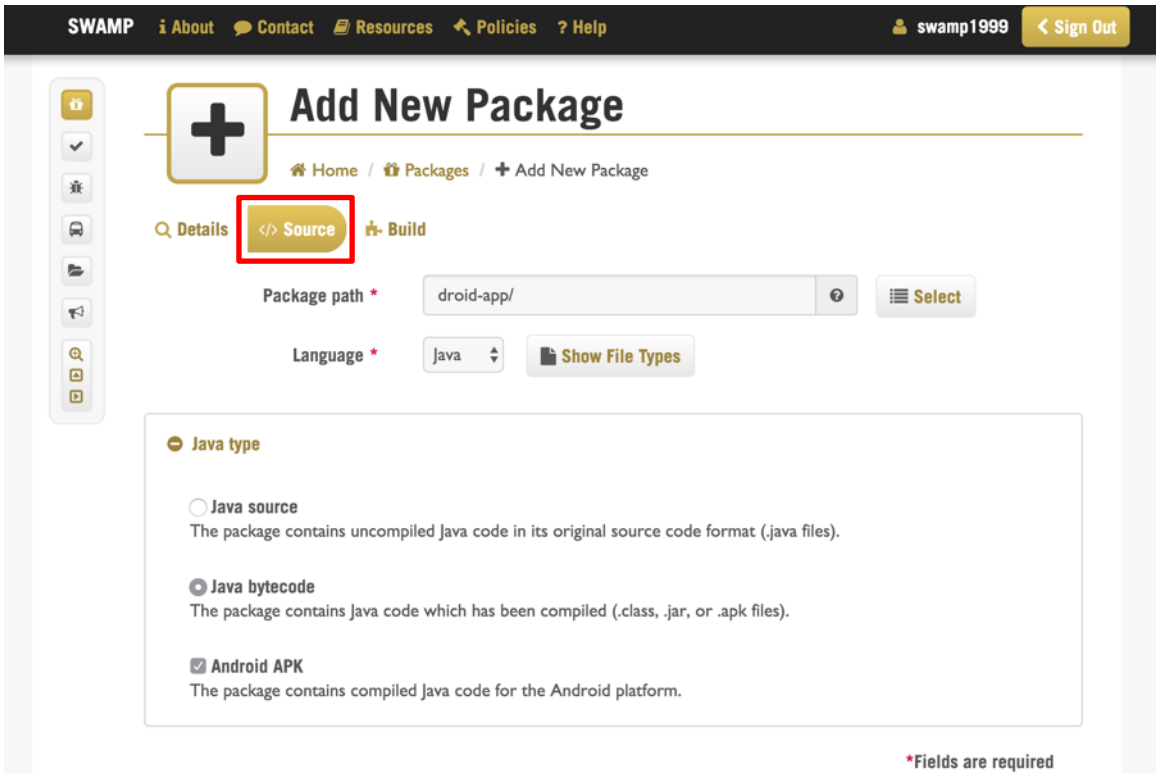
class files that are referenced by the bytecode in the package-classpath. These files are not assessed by a swa-tool. For a directory, all class files in the directory tree are assessed. A directory path can end with a wildcard character '*' to include all jar files in the directory. These paths are relative to the package path.

Source path: A ':' separated list of paths to directories containing source files for the bytecode in the classpath. For the source information to be present in the assessment reports, the bytecode in package-classpath must be compiled with debugging information (see javac -g option). These paths are relative to the package path.

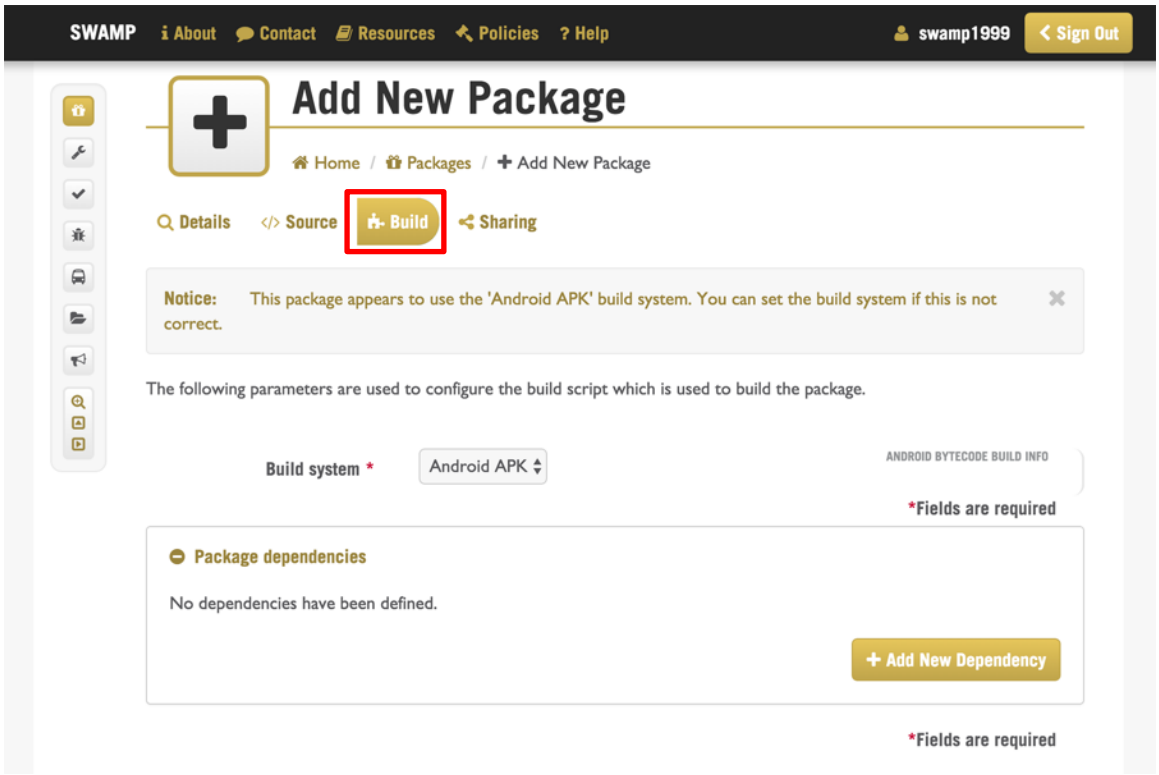
Uploading a New Android APK Java Bytecode Package



Android APK Java Bytecode, Details Tab

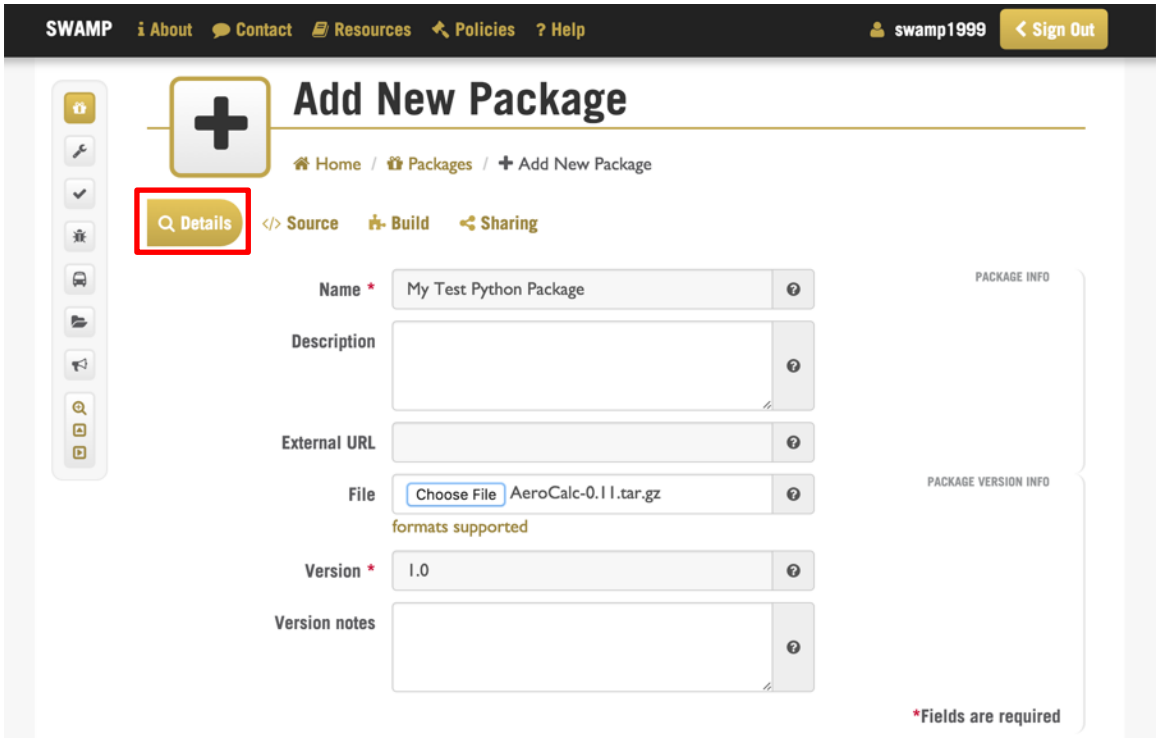


Android APK Java Bytecode, Source Tab

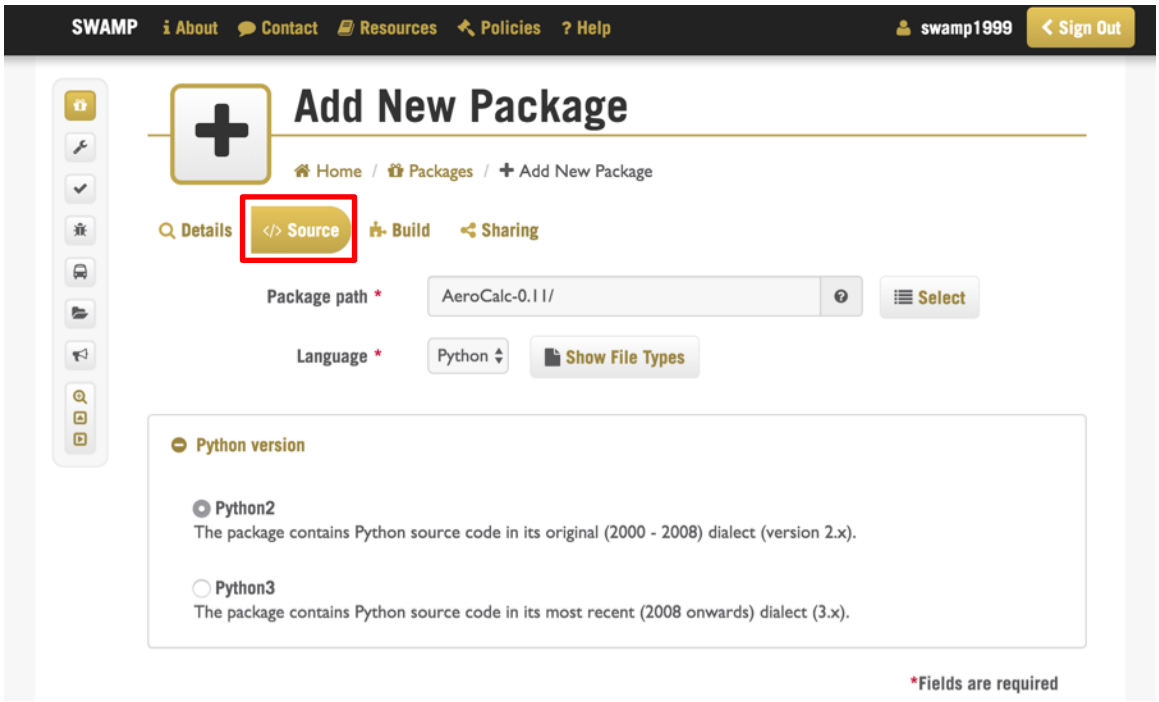


Android APK Java Bytecode, Build Tab

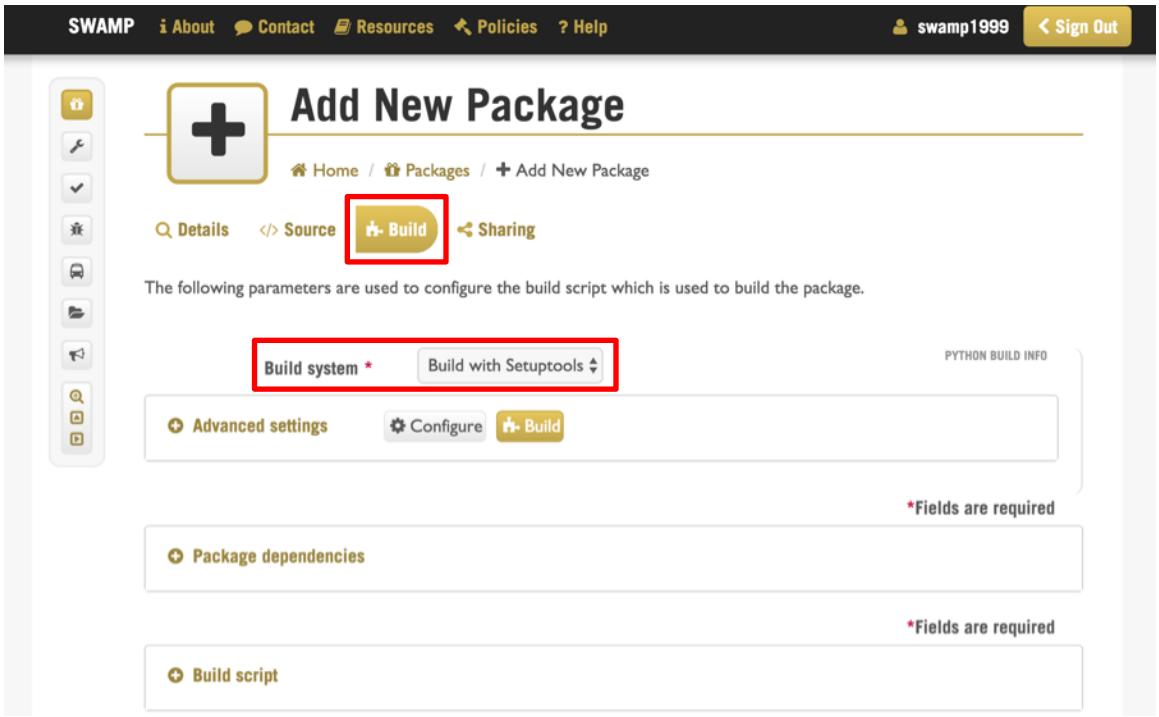
Uploading a New Python Package



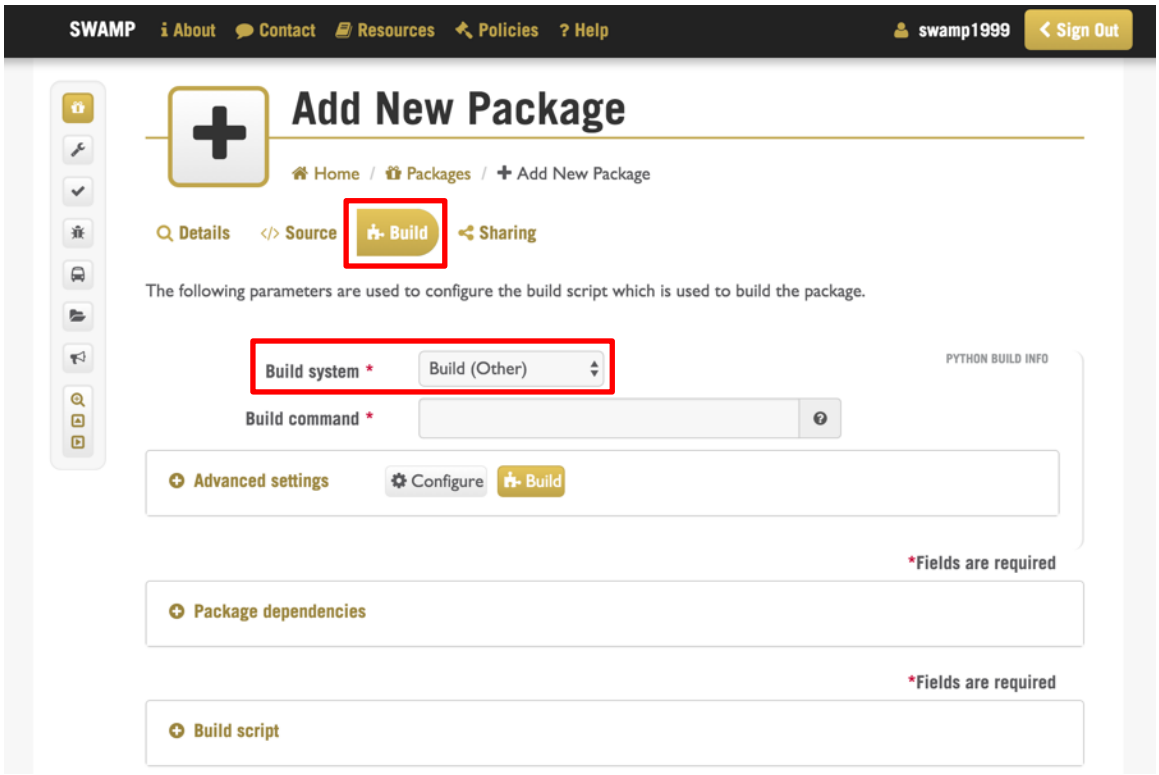
Python, Details Tab



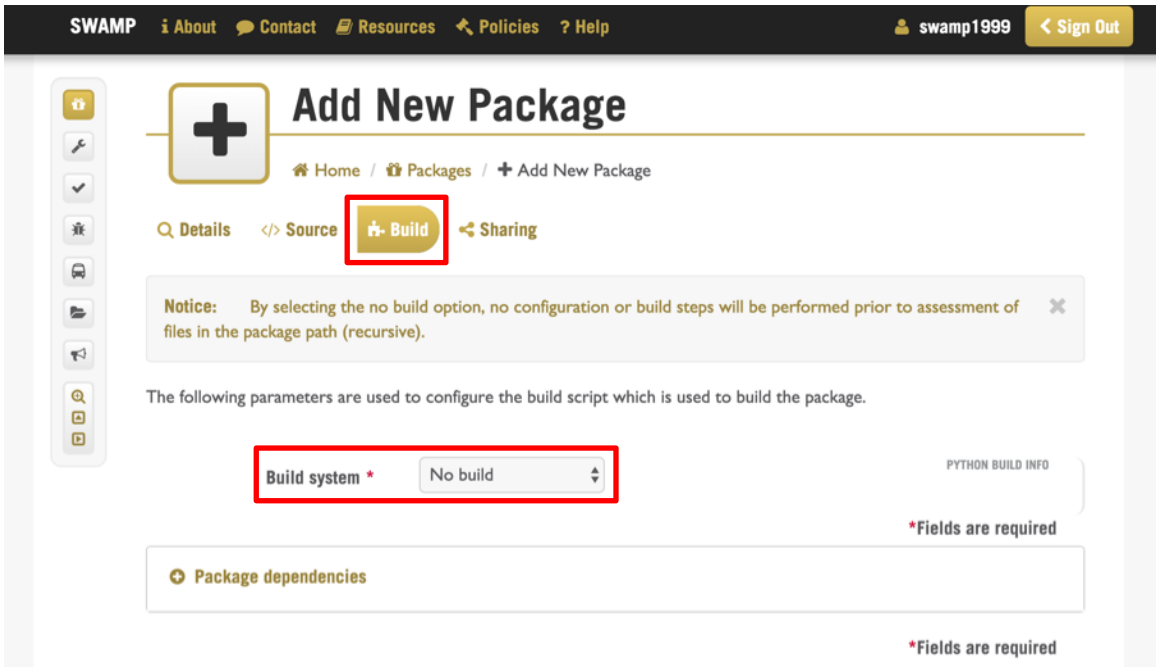
Python, Source Tab



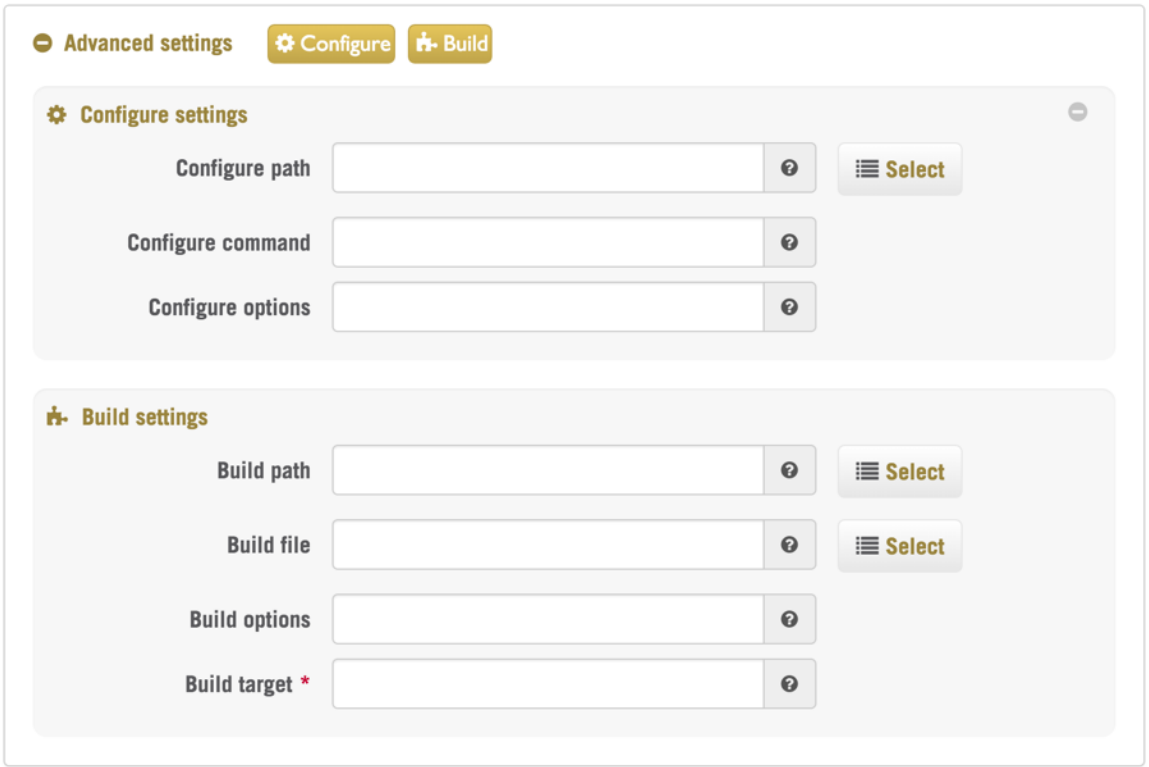
Python Defaulted "Build with Setuptools" Build System, Build Tab



Python "Other" Build System, Build Tab

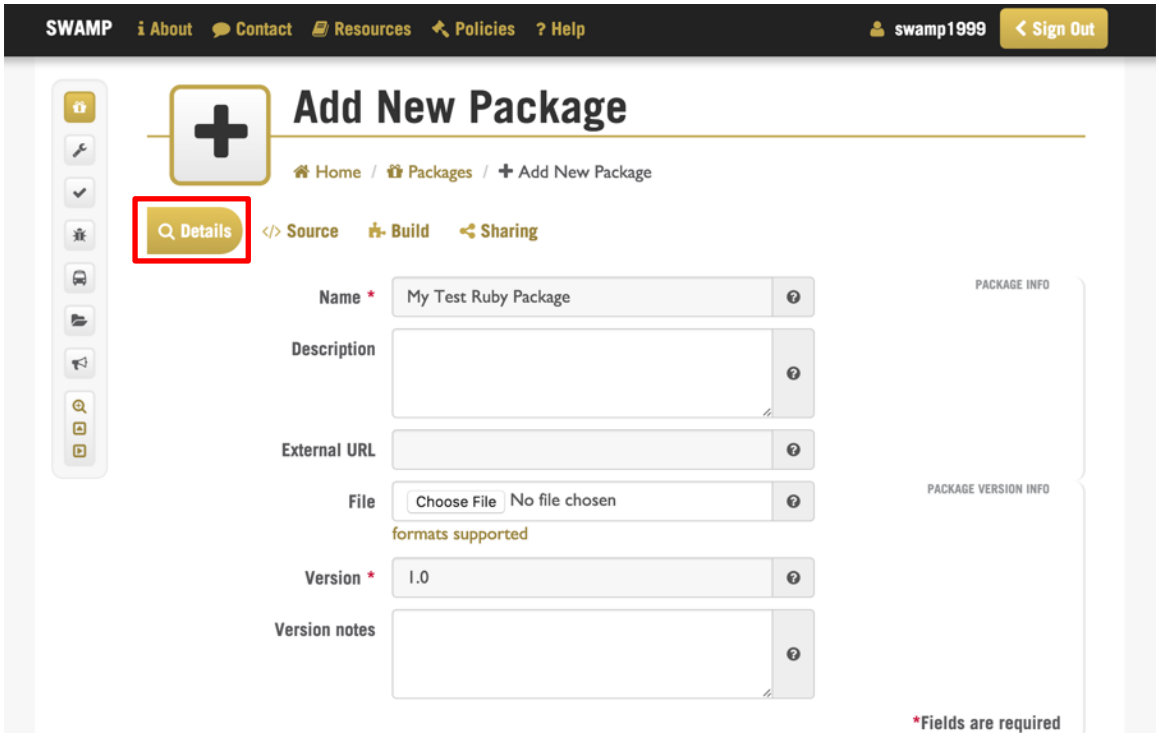


Python "No Build" Build System, Build Tab

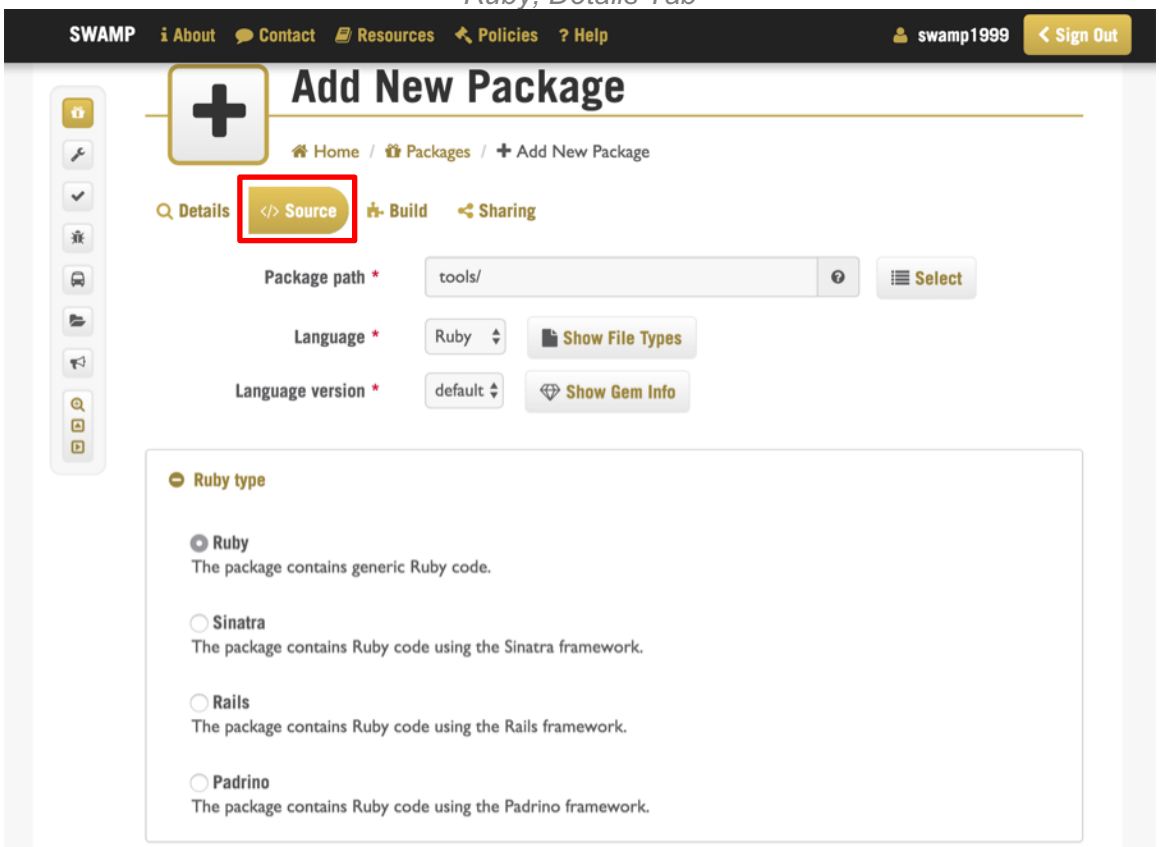


Python, Advanced Settings

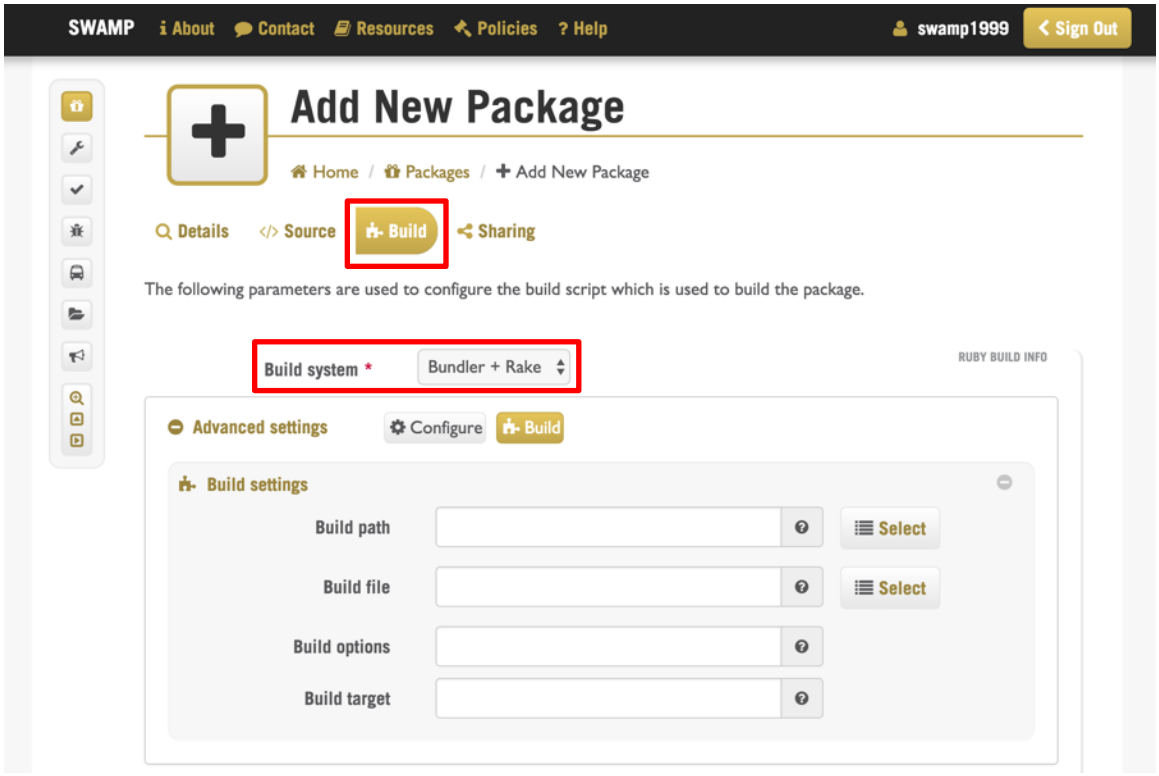
Uploading a New Ruby Package



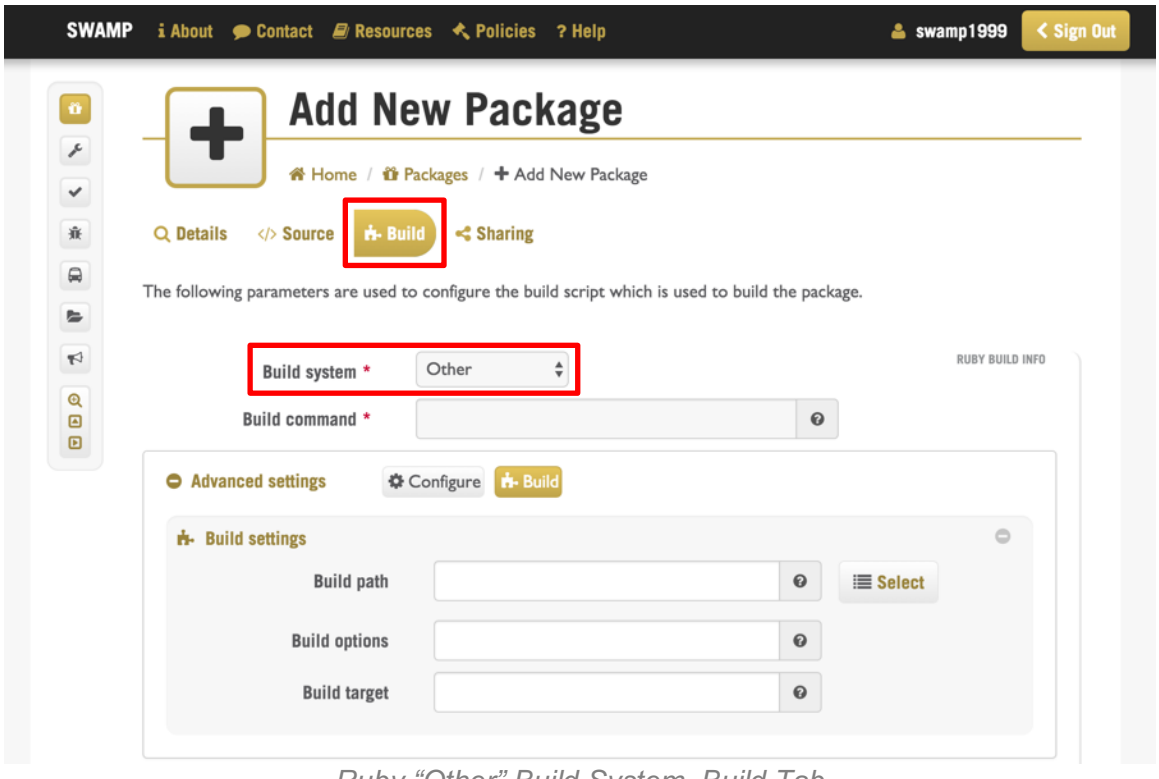
Ruby, Details Tab



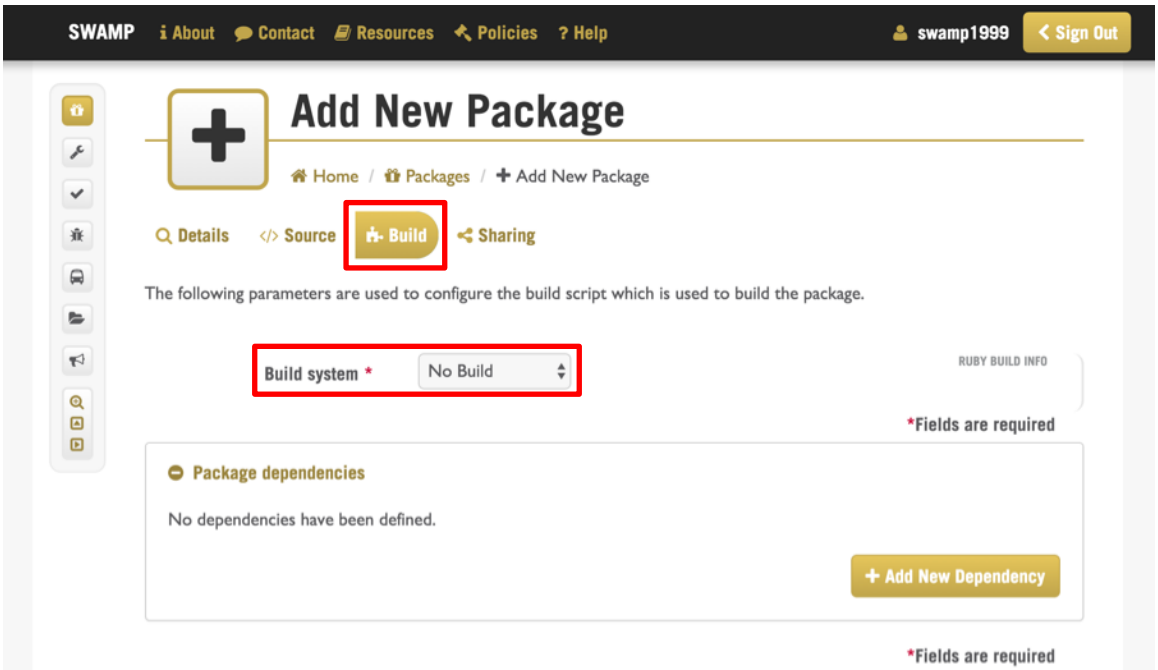
Ruby, Source Tab



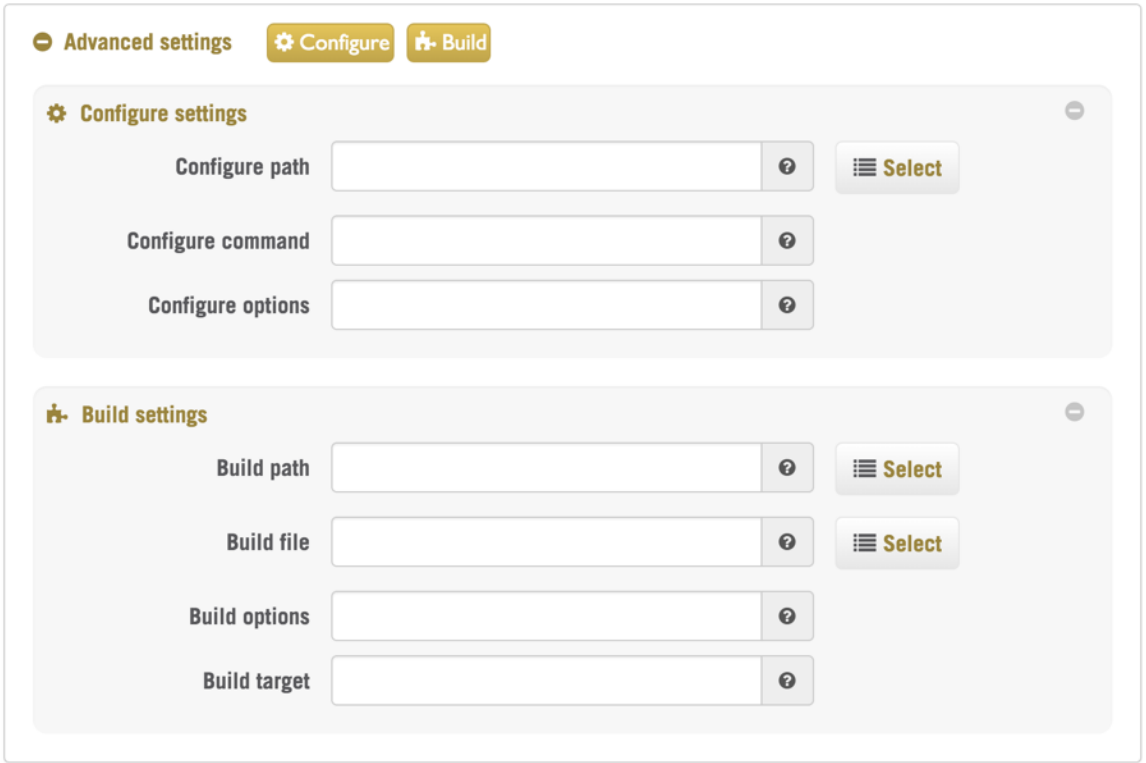
Ruby Defaulted "Bundler + Rake" Build System, Build Tab



Ruby "Other" Build System, Build Tab



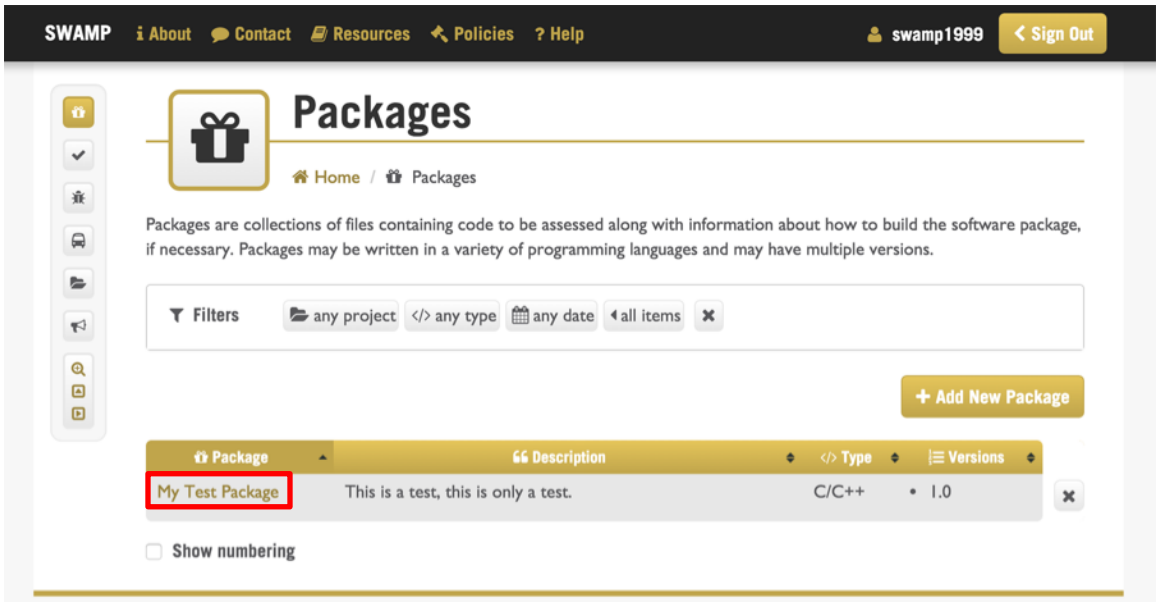
Ruby "No Build" Build System, Build Tab



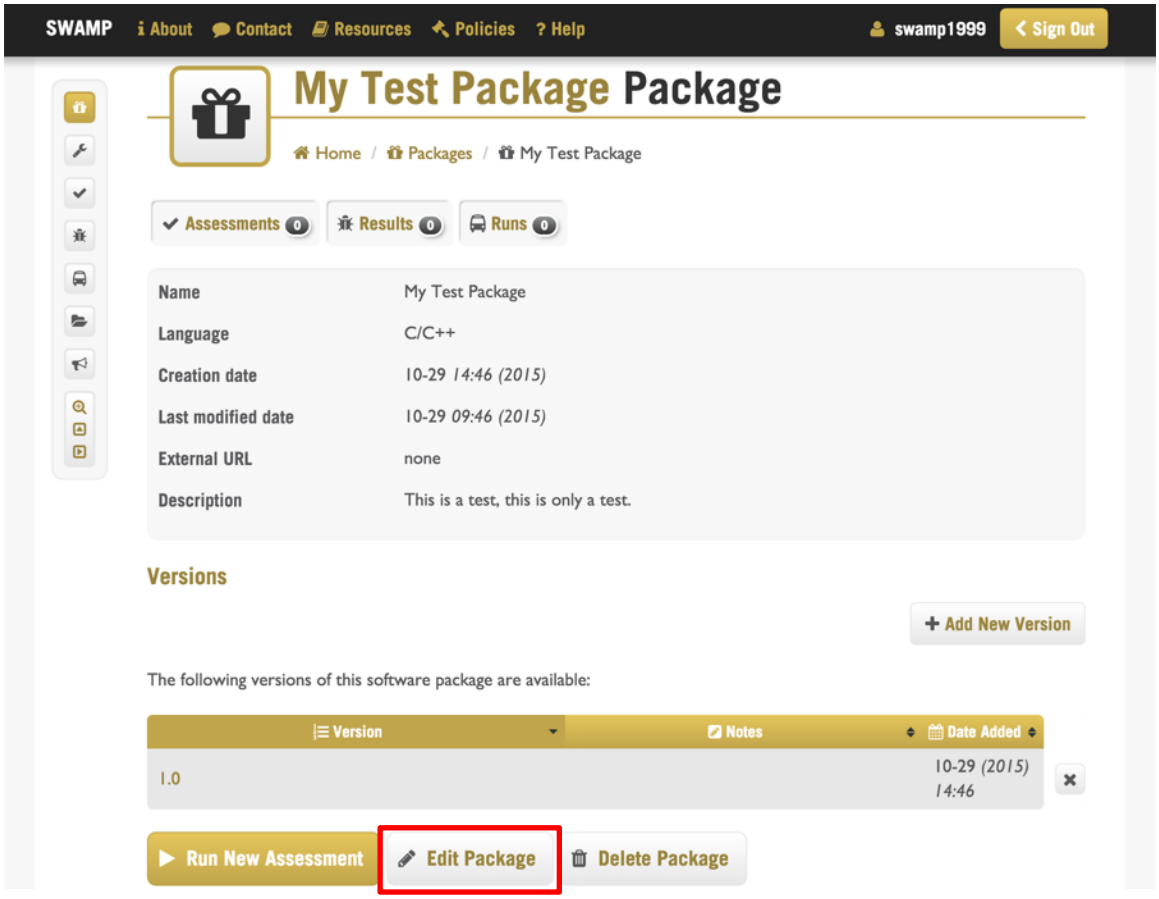
Ruby, Advanced Settings

Editing a Software Package

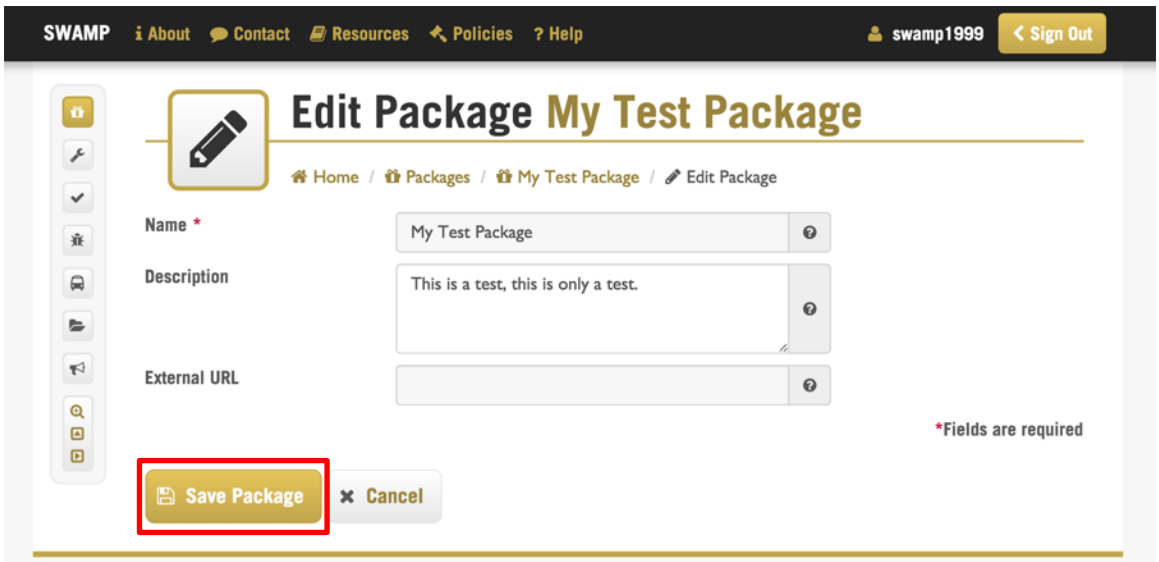
1. From the **Packages** page, select the name of a Software Package in the Package column to edit.



2. Select **Edit Package**.

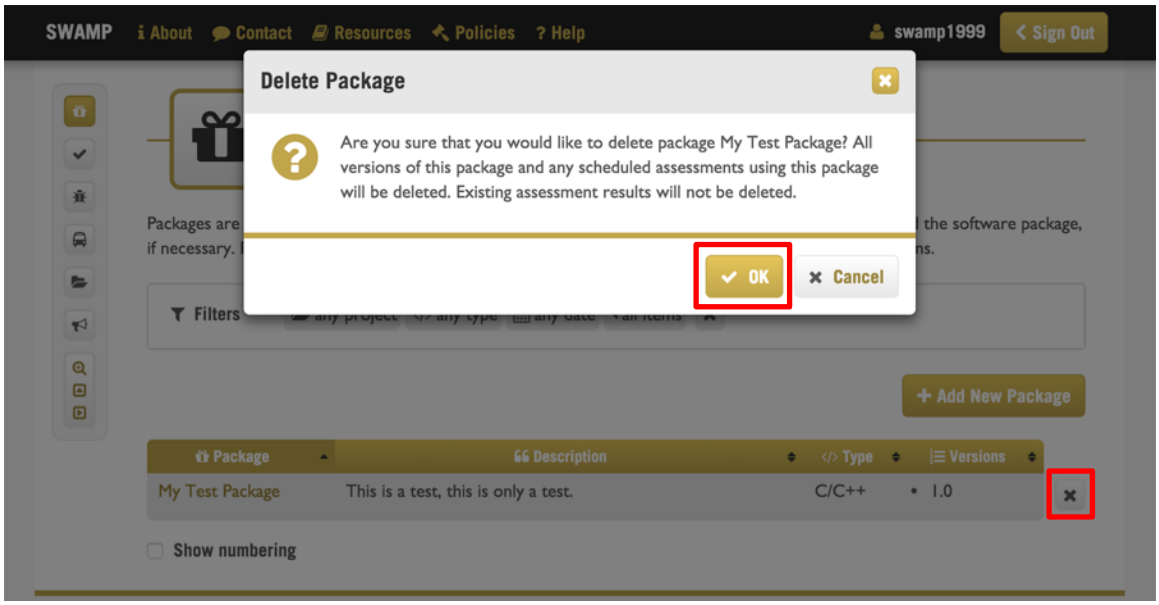


3. From this screen, you can change the name of the Software Package, edit the description, or add an External URL. Make your changes, and select **Save Package**.

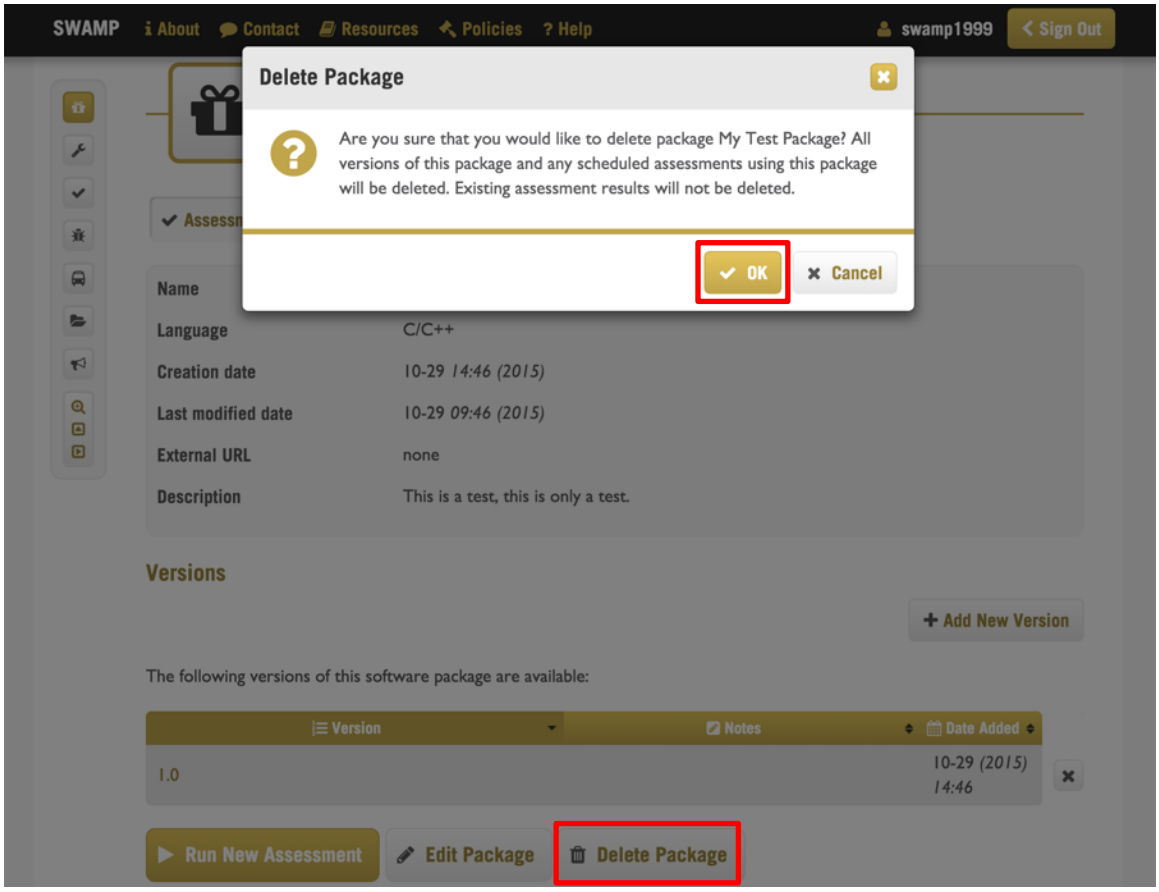


Deleting a Software Package

You may delete Software Packages that you have created. From the Packages page, select the **X** next to the Versions column. Then select **OK**.



Alternatively, you can delete a Software Package from within that Package. Select **Delete Package**, and then select **OK**.

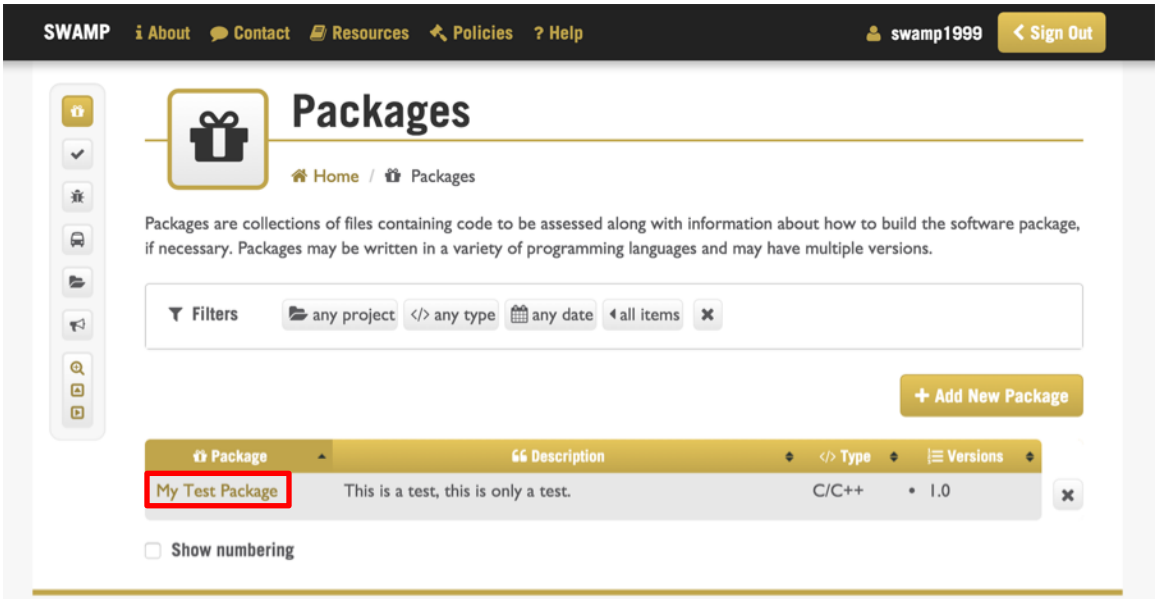


Adding, Viewing and Editing, or Deleting a Software Package Version

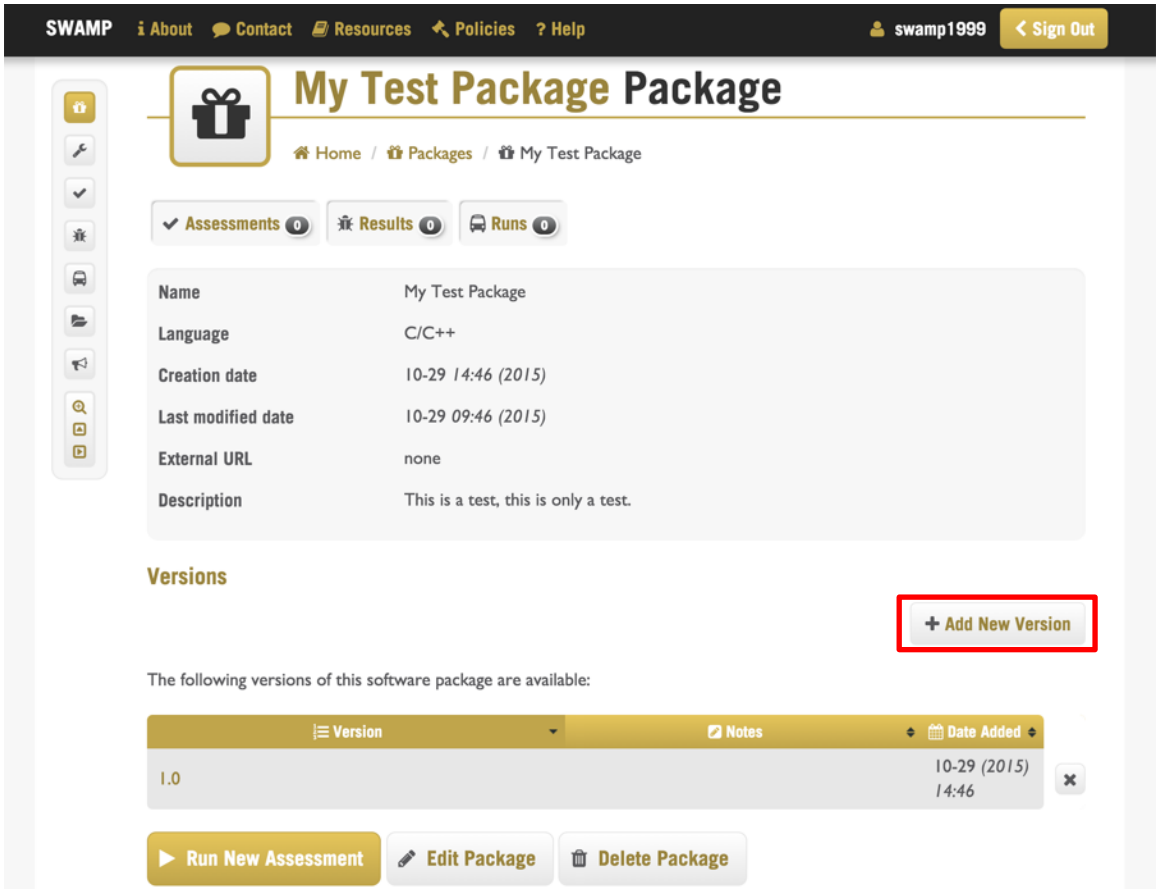
Adding a Version of a Software Package

From the Packages page, you can view your Software Packages. Within a Software Package, you can view or add a version.

1. From the **Packages** page, select the name of a Software Package in the Package column.

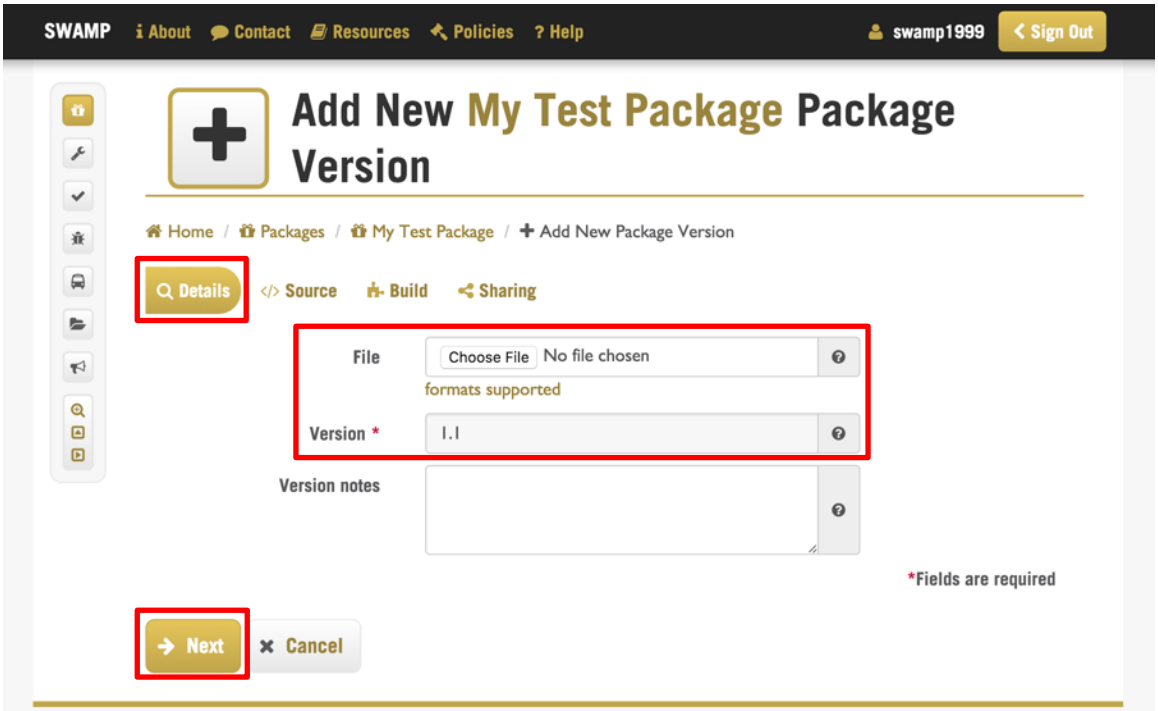


2. From within your Software Package, select **Add New Version**.



3. On the Details tab of the **Add New Package Version** screen, upload a new version of your package and specify the **Version**.

   ******Note:** When choosing a file to upload, hover your mouse over **formats supported** to view the supported file types.*



File: Software Package to upload

Version: Revision of the uploaded software

Version notes: A text description of the package version (Optional)

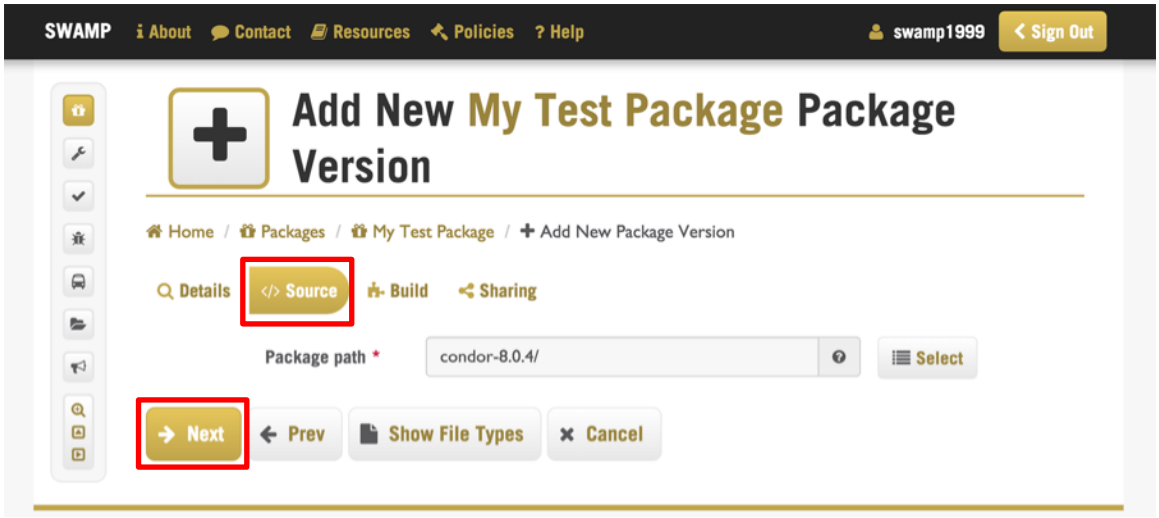
4. Select **Next**, and your package will begin to upload. A progress bar will appear across the bottom of the screen.

5. After your file has successfully uploaded, you will be on the **Source** tab.

   The SWAMP will automatically review your file to determine an appropriate **Package path**. It may take a few moments to populate this field.

   Verify that the correct **Package path** has been chosen, and make changes, if needed, by choosing **Select**.

   Once this information is correct, select **Next**.

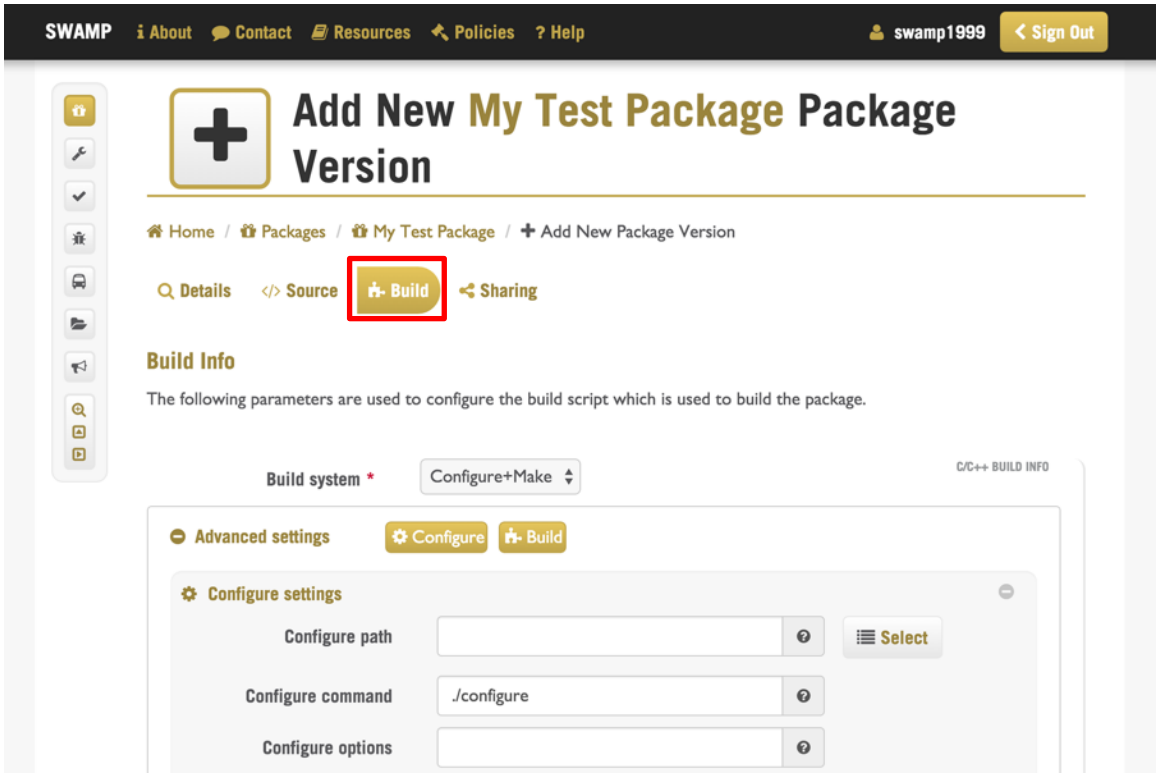


Package path: The name of the top level directory that is produced when the archive file is unarchived. This field is required.

******Note:*** *Use the* ***Select*** *button to make changes to the* ***Package path****. In the* ***Select Package Path*** *window, only directories/folders appear by default. To view all files, check* ***Show all files****.*

6. On the **Build** tab, the SWAMP will automatically review your file to determine an appropriate **Build system**. It may take a few moments for a value to populate into this field.

   Verify that the correct value has been chosen, and make changes, if needed.

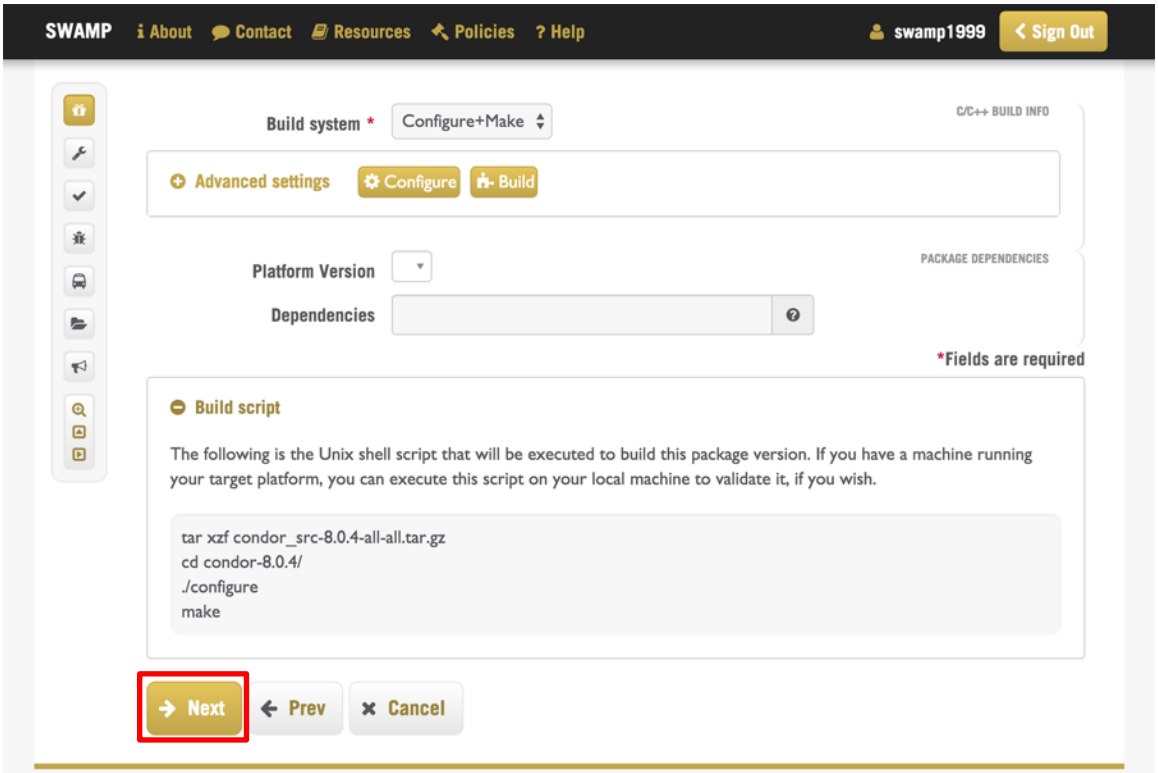


7. Review the **Build script** to ensure the correct script will be executed.

   The **Build script** can be changed by filling out the optional fields under **Advanced Settings**. Use the **Select** button to choose a new path or file. Refer to the Upload a Software Package, Advanced Settings on pages 69-72 of this User Manual.

   Select **Next**.

   ******Note:** Only directories/folders appear by default. You may need to check **Show all files**. Selected build files are identified by a puzzle icon and gold font.*

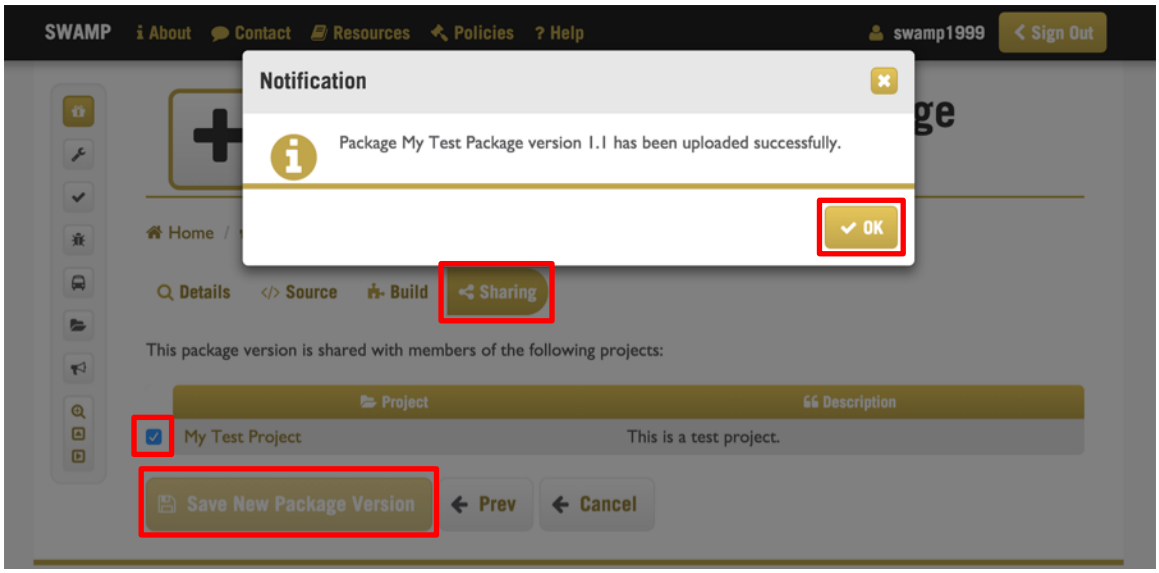


8. You will now be on the **Sharing** tab.

   If you are not a Project Owner or have not been invited to a Project, select **Save New Package Version**. By default, this package version will be shared with your My Project.

   If you are a Project Owner with your own Projects or have been invited to a Project, you may share this package version with one or more Projects. Check the box to the left of a Project, and select **Save New Package Version**.

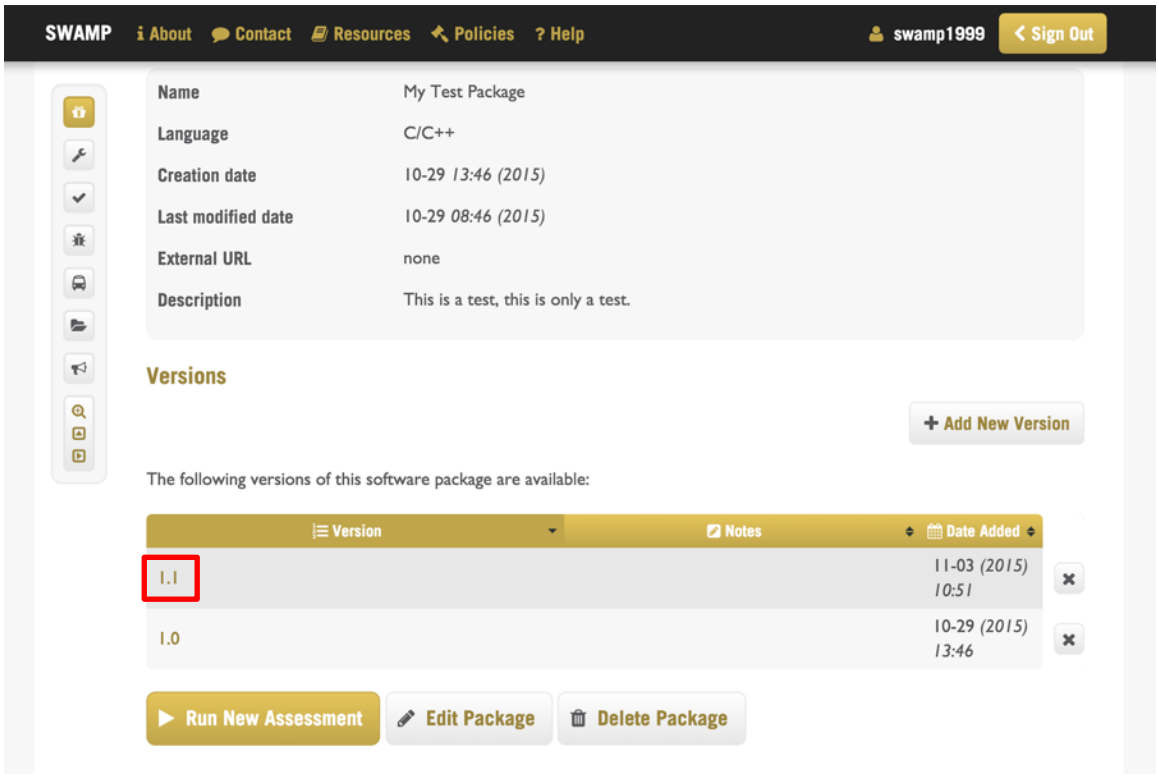
   You will receive a notification once the Package upload is complete. Select **OK**.



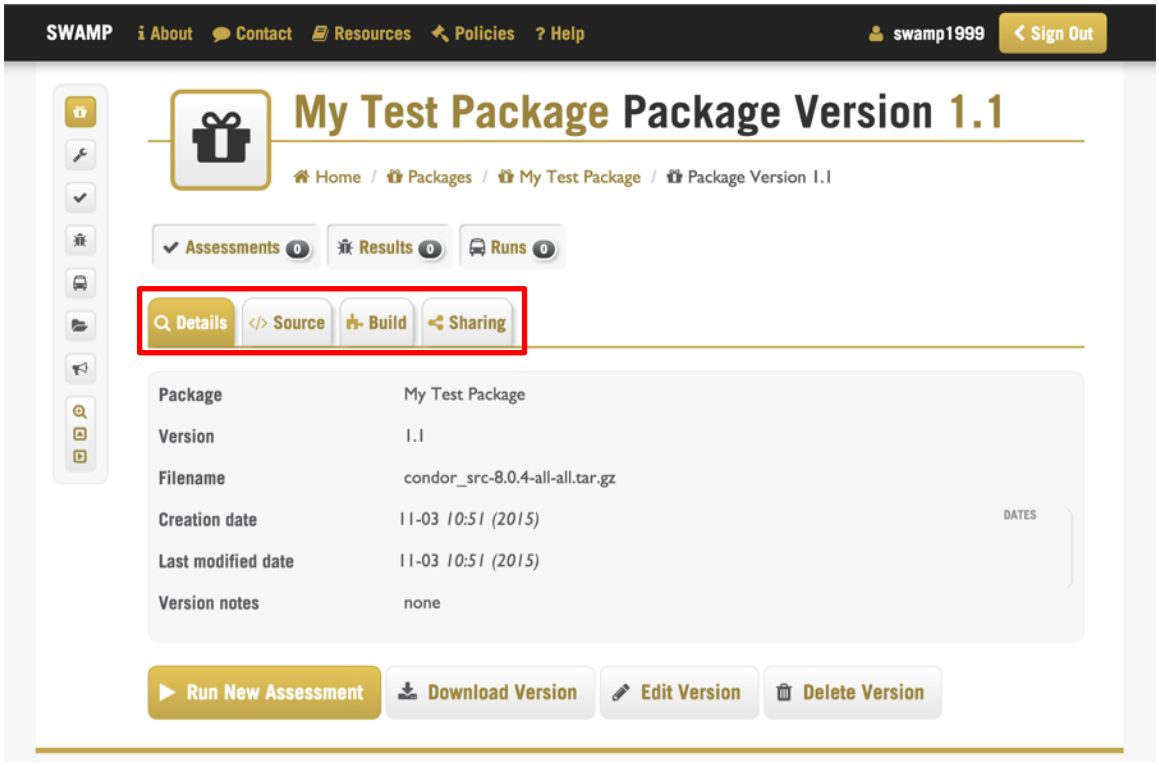
Viewing and Editing a Version of a Software Package

1. From within your Software Package, you will see all uploaded versions.

   Select a version of your Software Package from the Version column to view more information about that version.



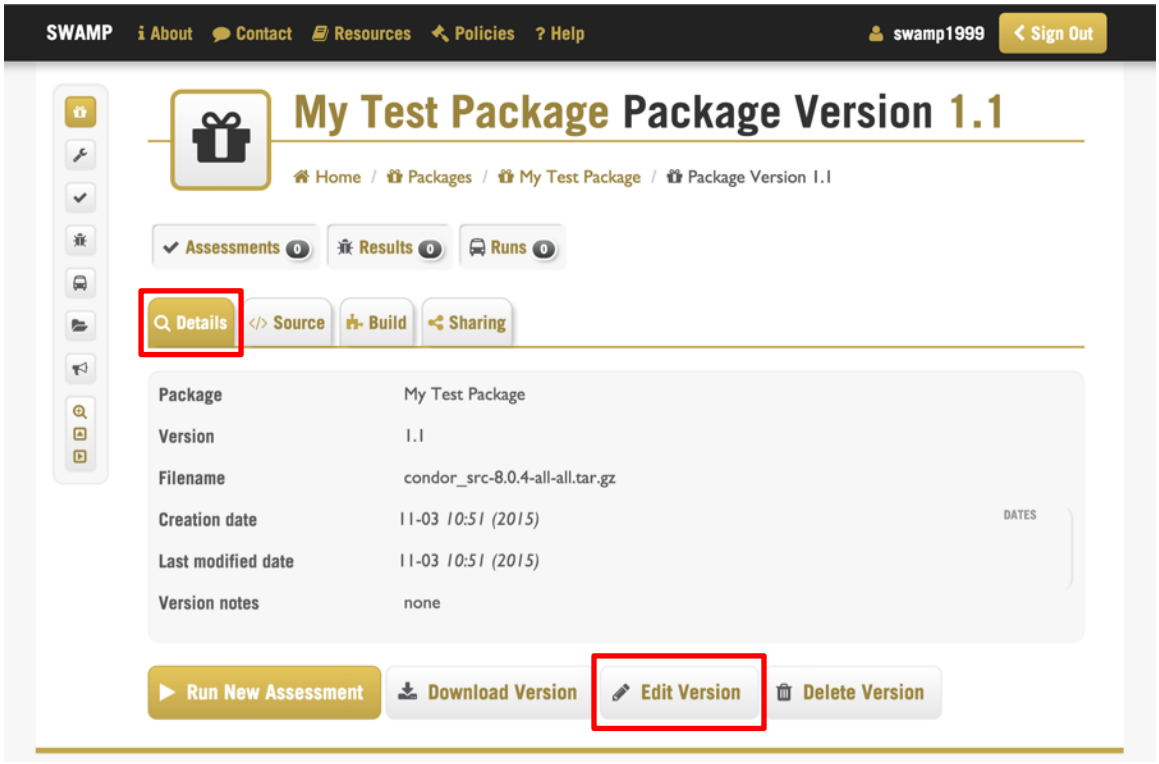
2. From within a package version, use the tabs to view and edit the Details, Source, Build, and Sharing information.

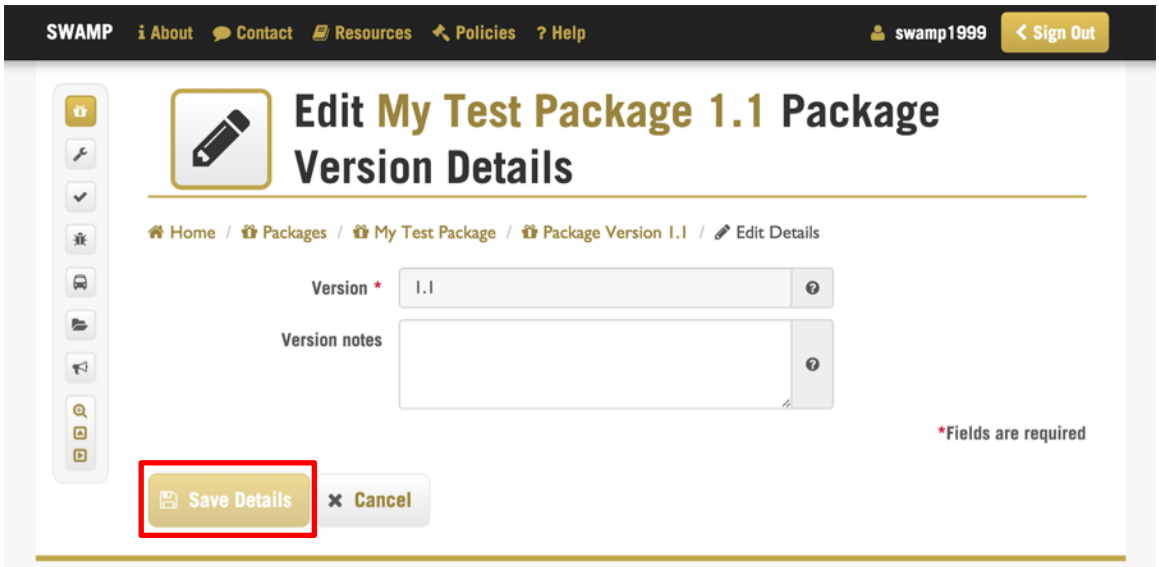


3. On the Details tab, select **Run New Assessment** to run an assessment using this version of your Software Package. You will then be prompted to select a tool and platform. Refer to Part 4 of this User Manual for how to run an Assessment.

   Select **Download Version** to download this version of the Software Package.

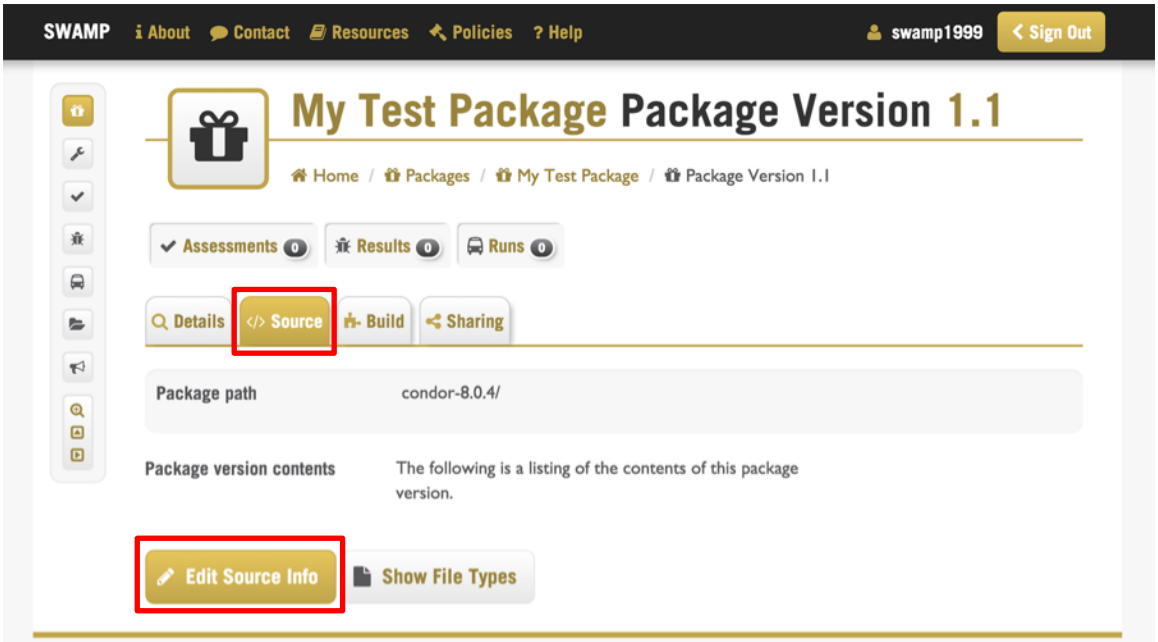
   Select **Edit Version** to modify the Version and Version notes shown on the Details tab. Select **Save Details** after making changes.

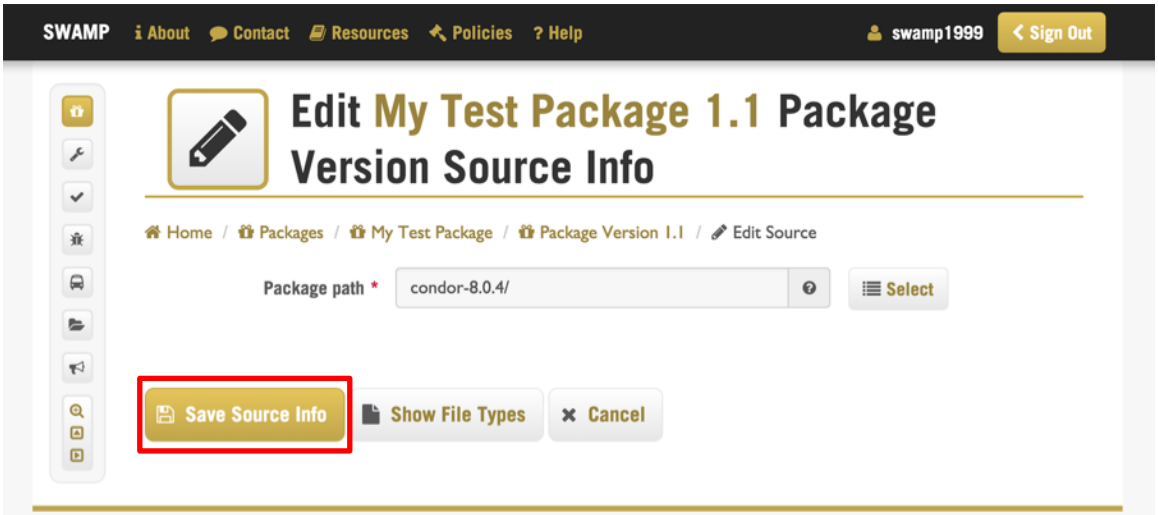




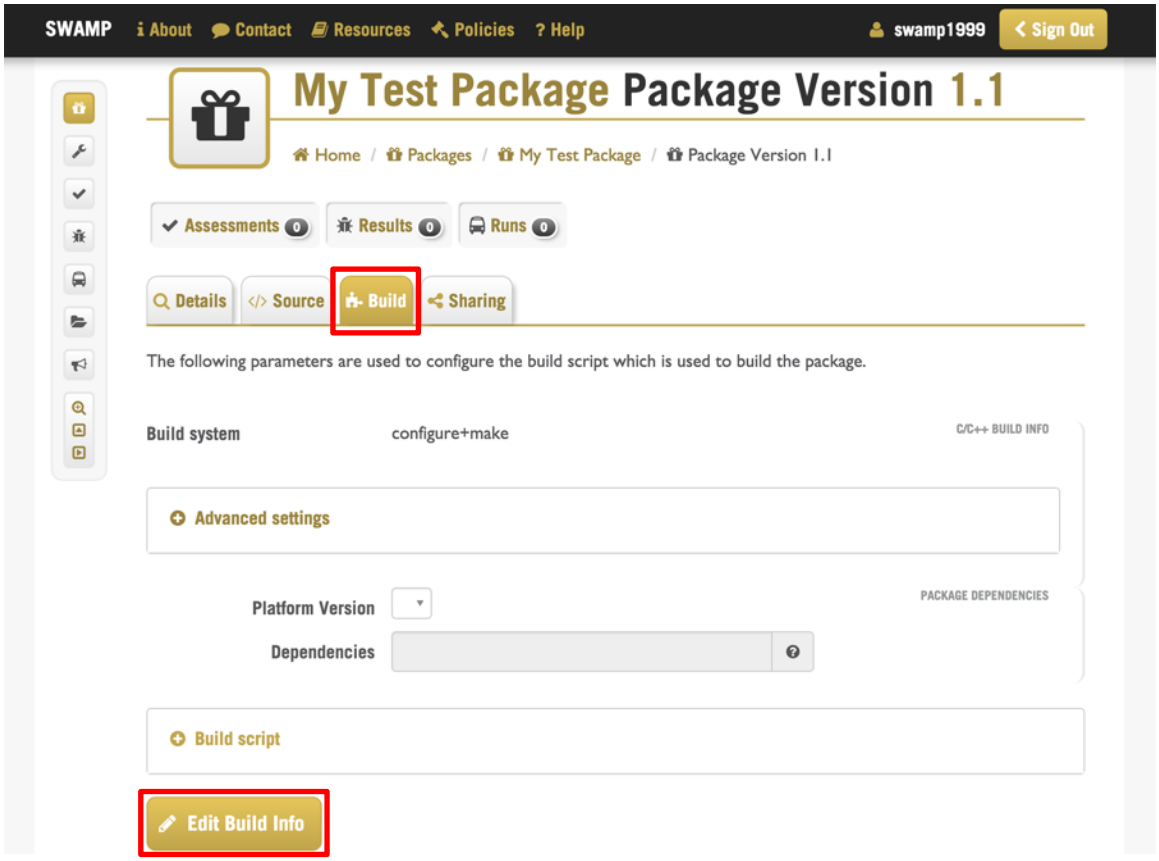
4. On the **Source** tab, select **Edit Source Info** to choose a new **Package path**. Select **Save Source Info** after making changes.

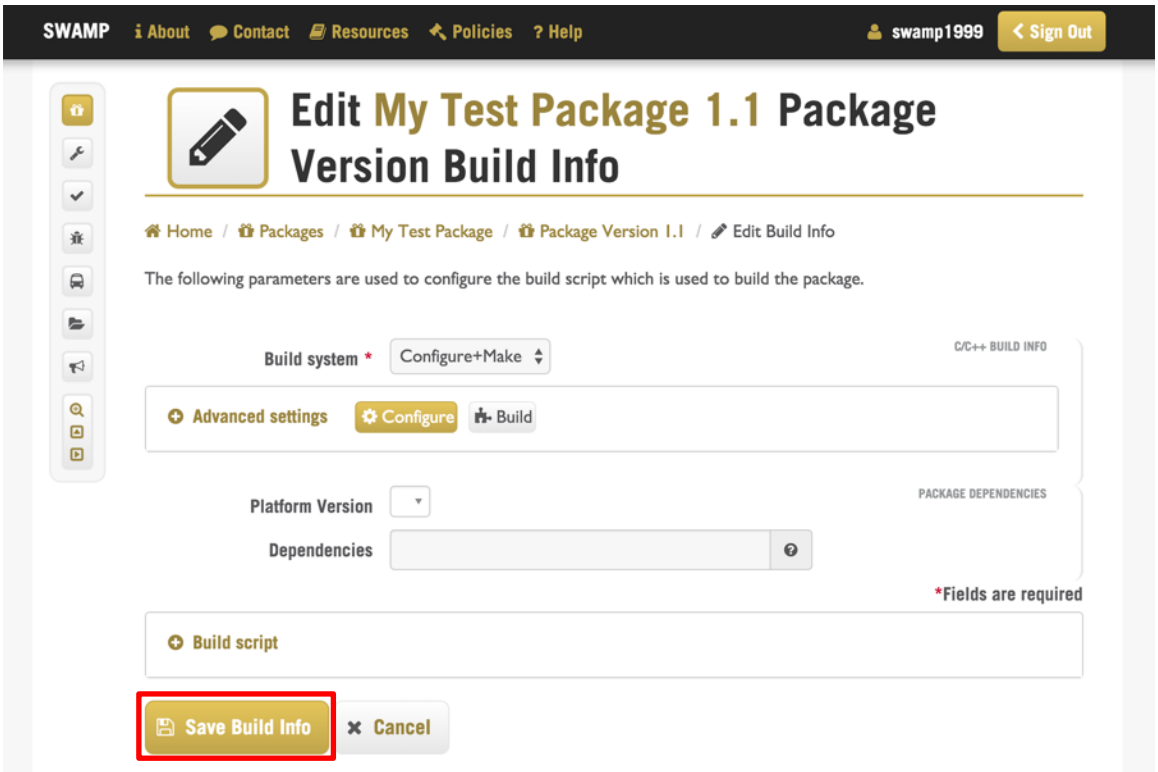
   Select **Show File Types** to view the list of file types contained in this package version within the selected Package path.



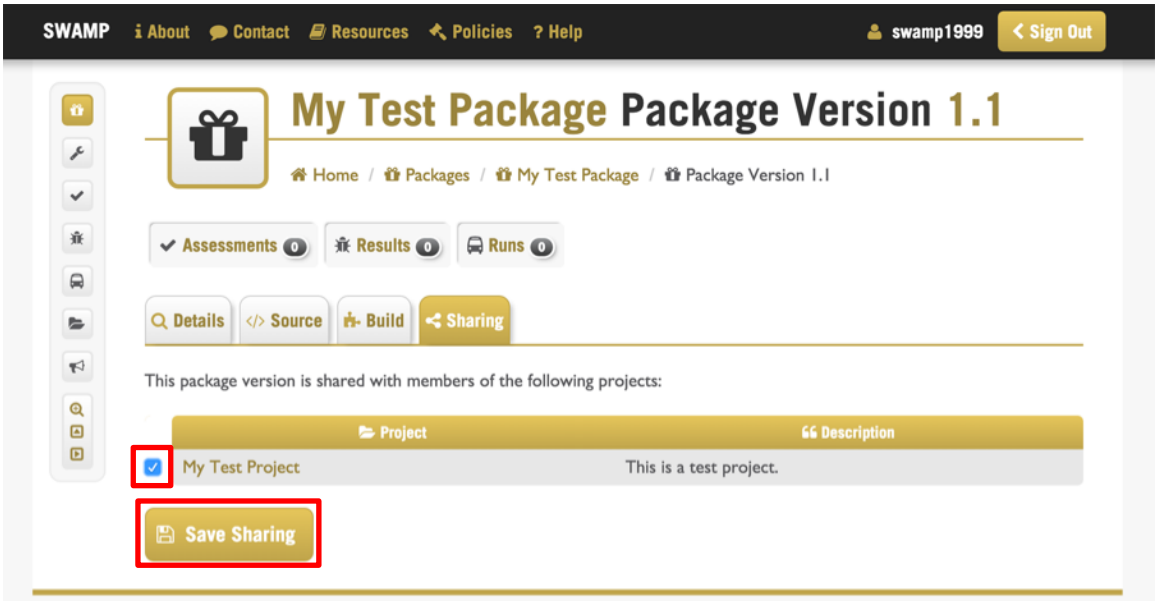


5. On the **Build** tab, select **Edit Build Info** to choose a new **Build system** or **Platform Version**, to add **Dependencies**, or to change the **Build script** using the **Advanced settings**. Select **Save Build Info** after making changes.



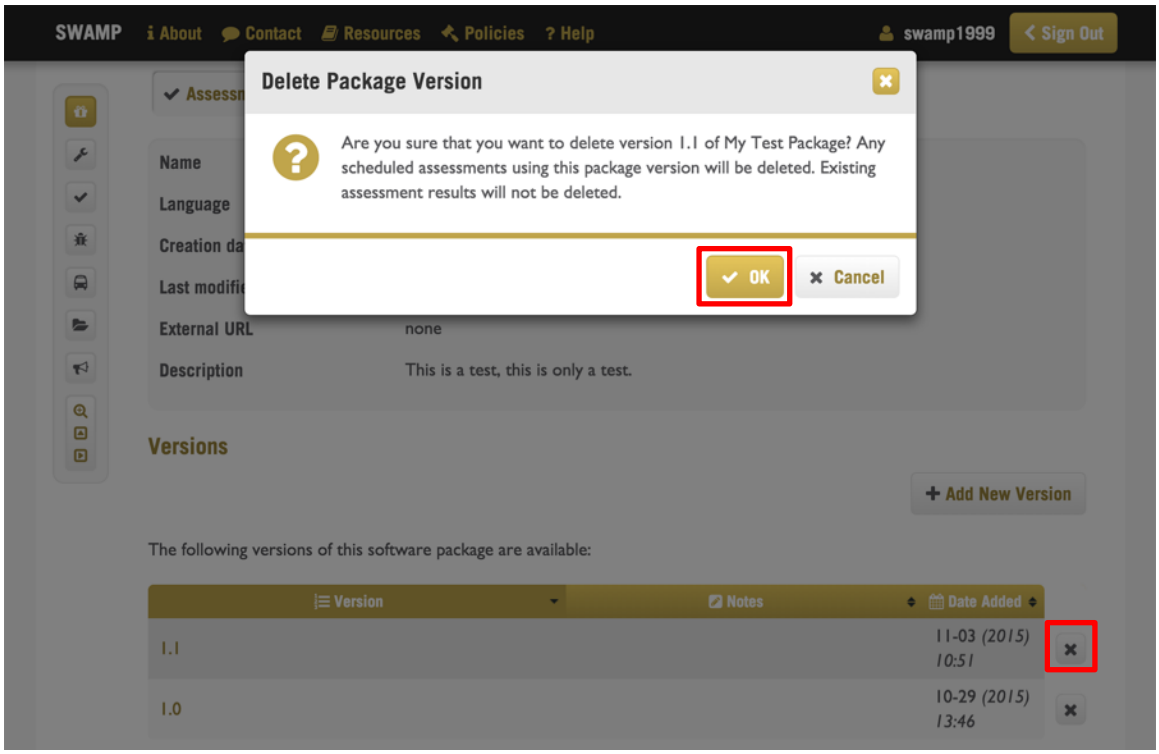


6. On the **Sharing** tab, check or uncheck the box next to a Project to share or unshare this package version with that Project. Select **Save Sharing** after making changes.

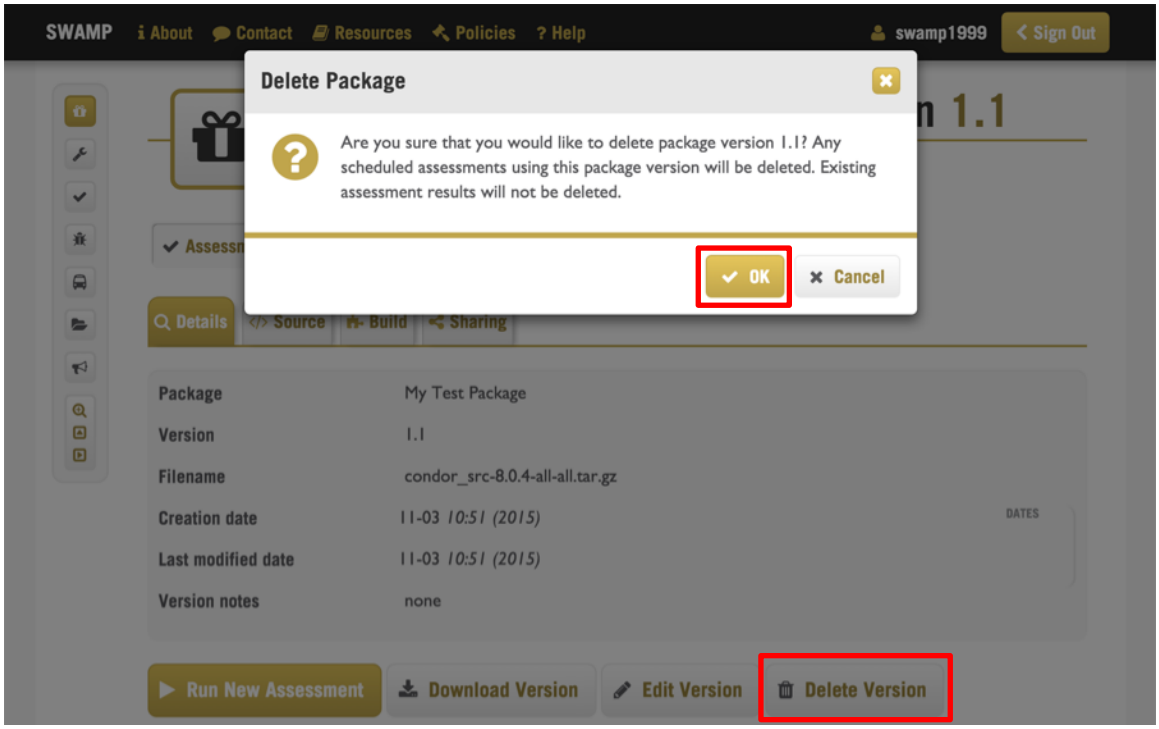


Deleting a Version of a Software Package

You may delete versions of Software Packages. From within your Software Package, select the **X** next to the Date Added column for that version. Then select **OK**.

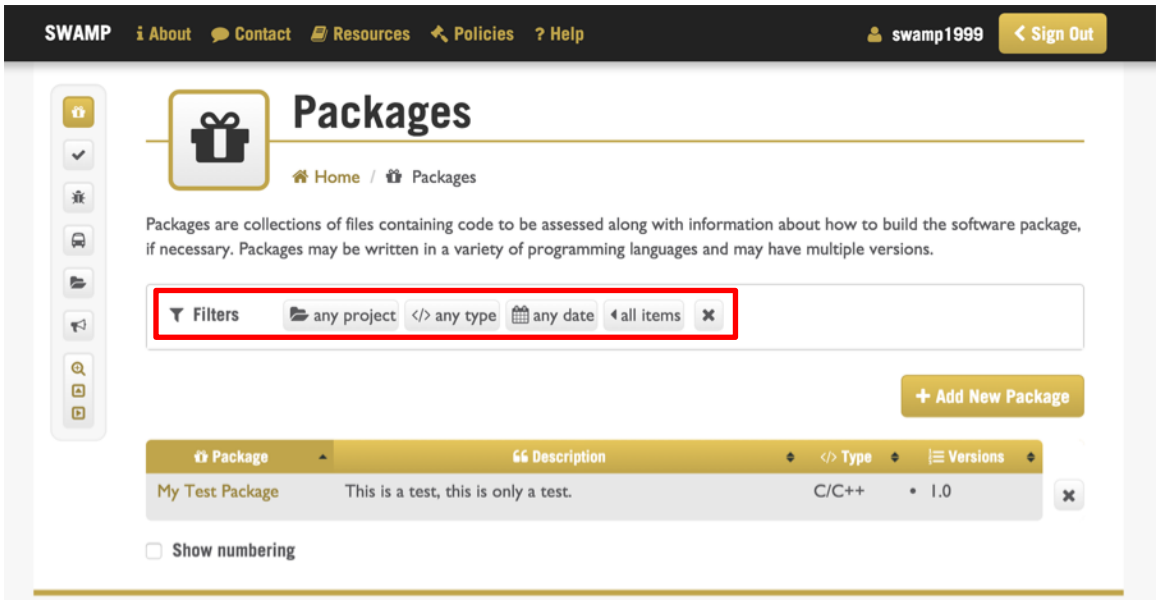


Alternatively, you can delete a version of a Software Package from within that version. Select **Delete Version**, and then select **OK**.

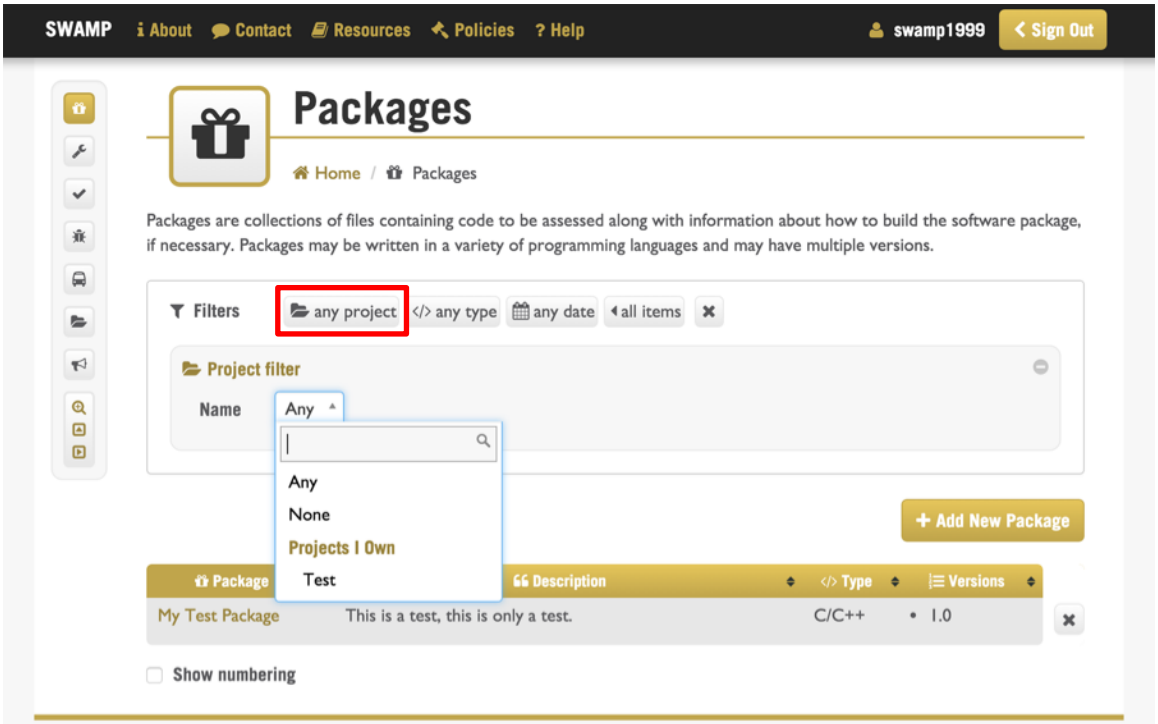


Package Filters

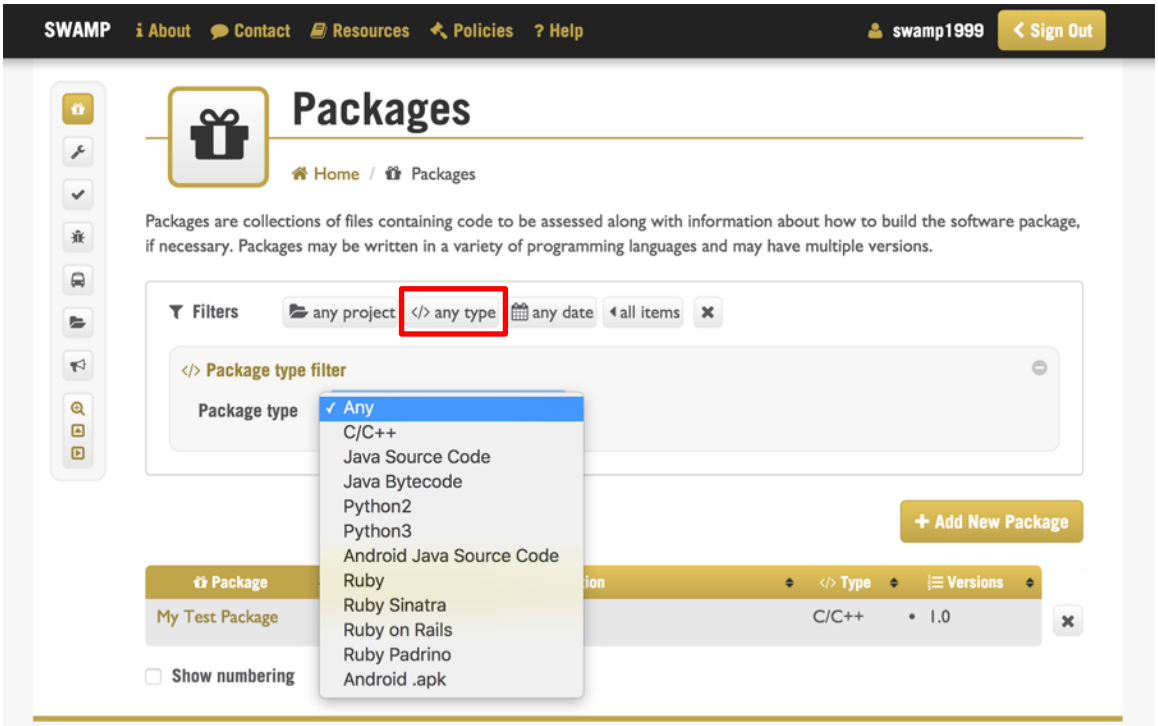
Filters on the Package page allow you to easily find a Package based upon its Project, Type, or Date. You may choose more than one option. Each additional filter chosen will further restrict the set of returned Packages.



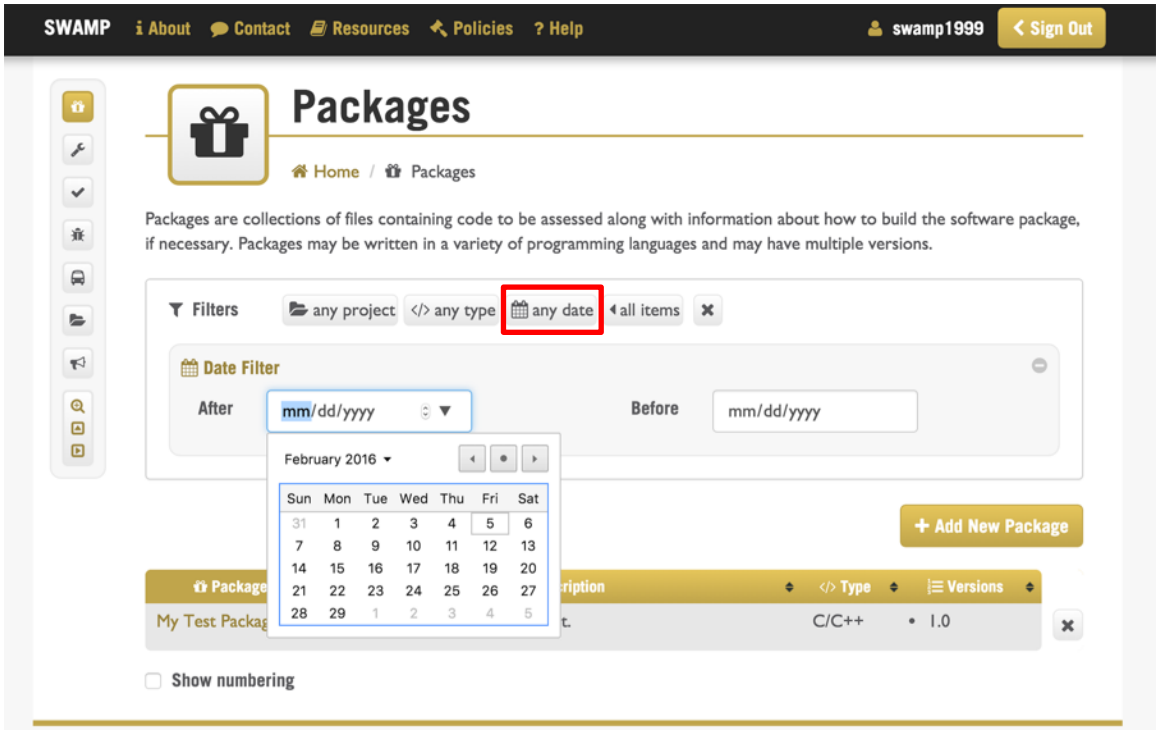
Select the Project filter to find Packages contained in Any, None, or a specific Project. In this case, None means your My Project.



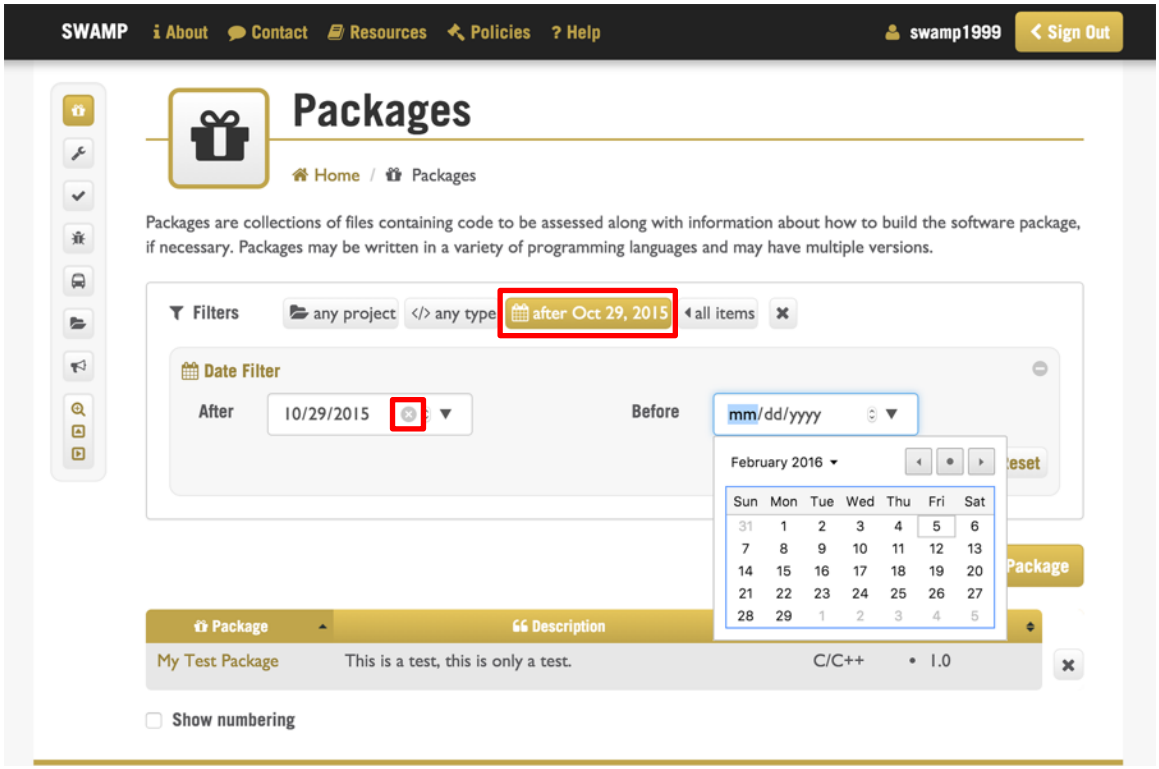
Select the Type filter to find Packages based upon their package type.



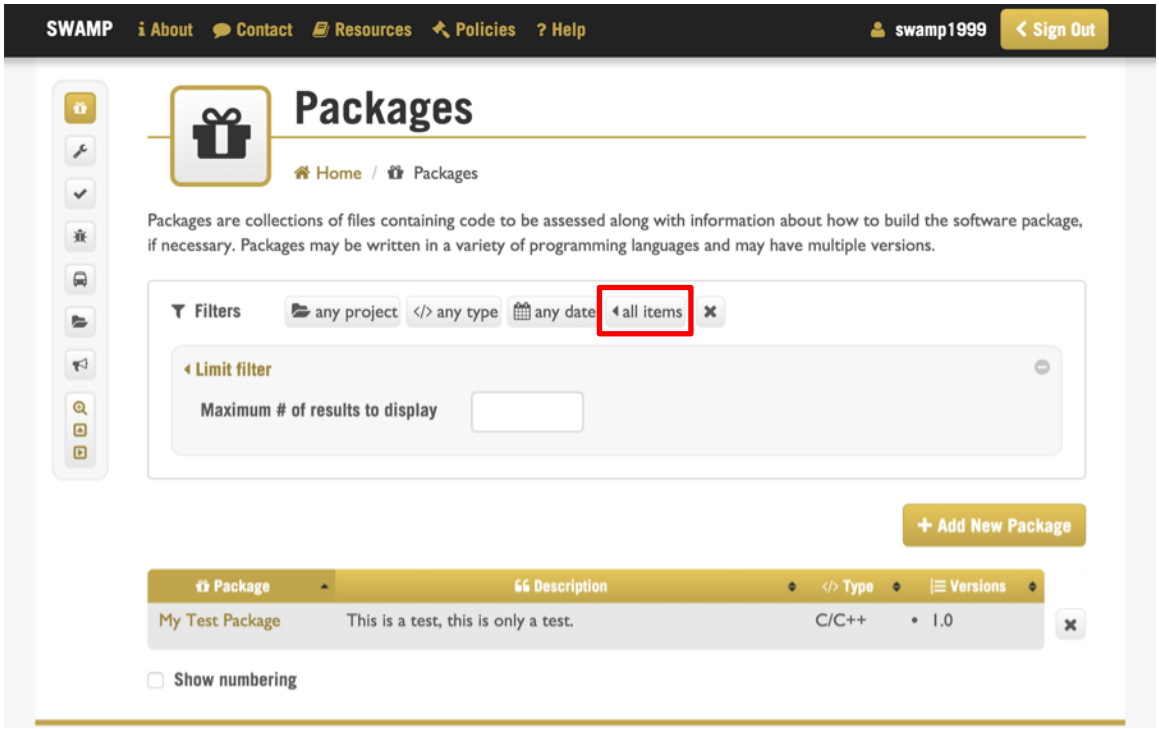
Select the Date filter to find Packages based upon the Date Added. Enter a date in the After or Before field. Dates assume a time of 12:00 AM or midnight.



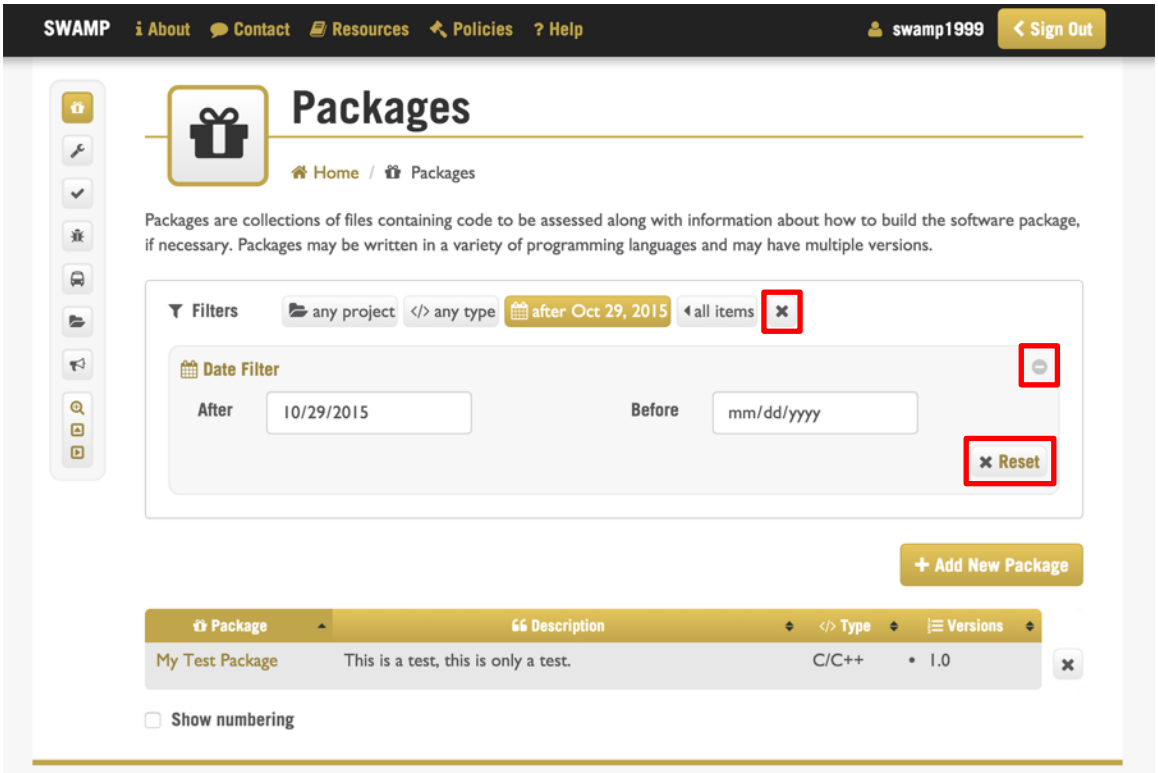
To enter a date range, click the Date filter again and add the other date. To clear a date, select the X within the date field.



Select the Limit filter to limit the number of Packages displayed.



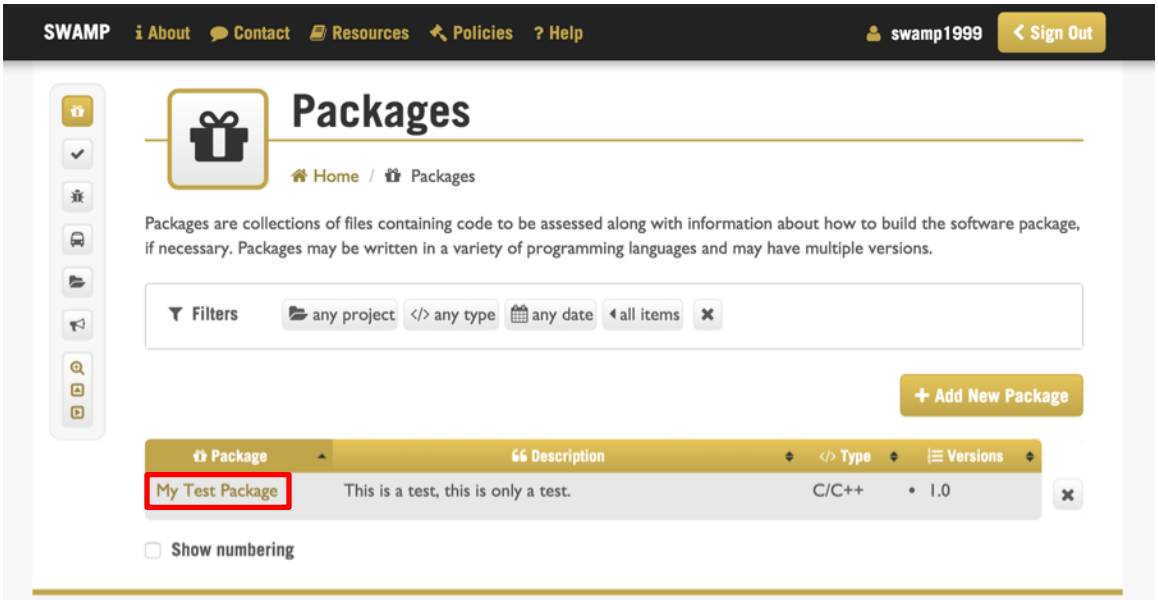
Select "**-**" to minimize or close an open filter. Multiple filters may be open simultaneously.
To reset the values for a single filter, open the filter, and select **Reset**.
To reset the values for all filters, select the **X**. Select **OK** to confirm the reset.



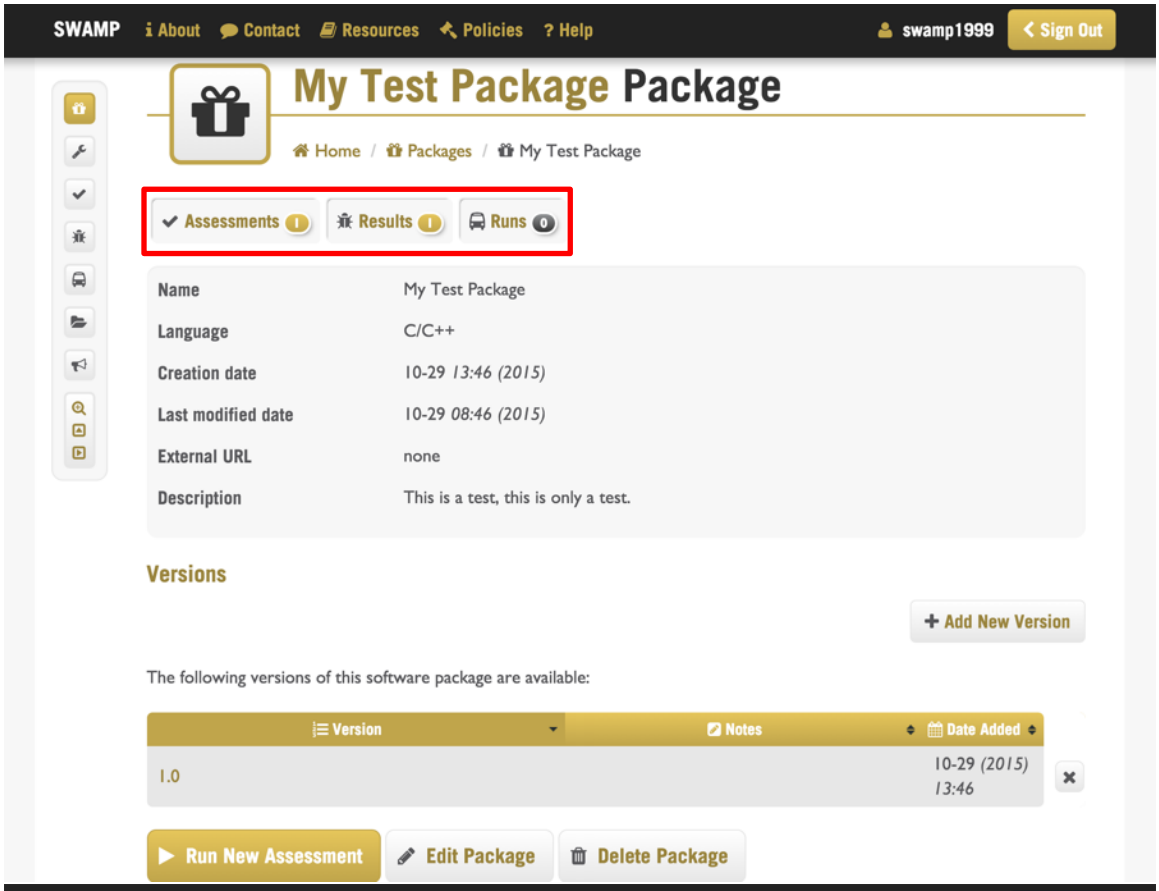
Navigating from Within a Package or Package Version

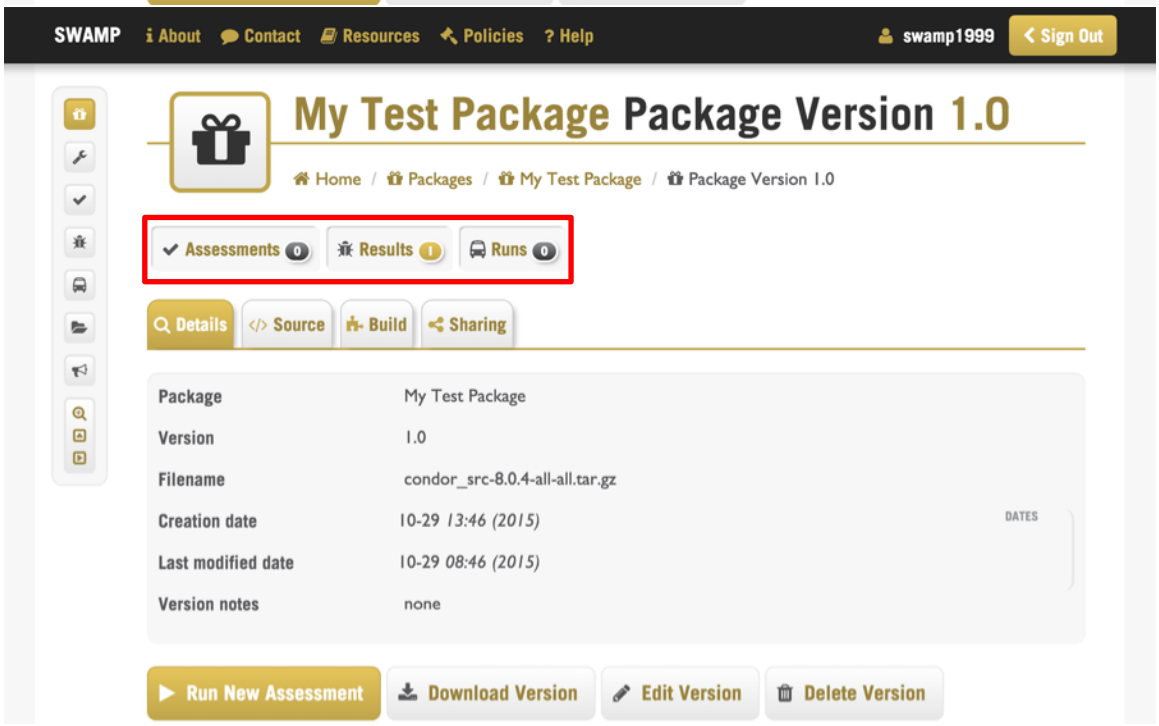
From within a Software Package or a version of a Software Package, you can easily view Assessments, Results, and Runs associated with that Package or version.

1. From the **Packages** page, select the name of a Software Package in the Package column.



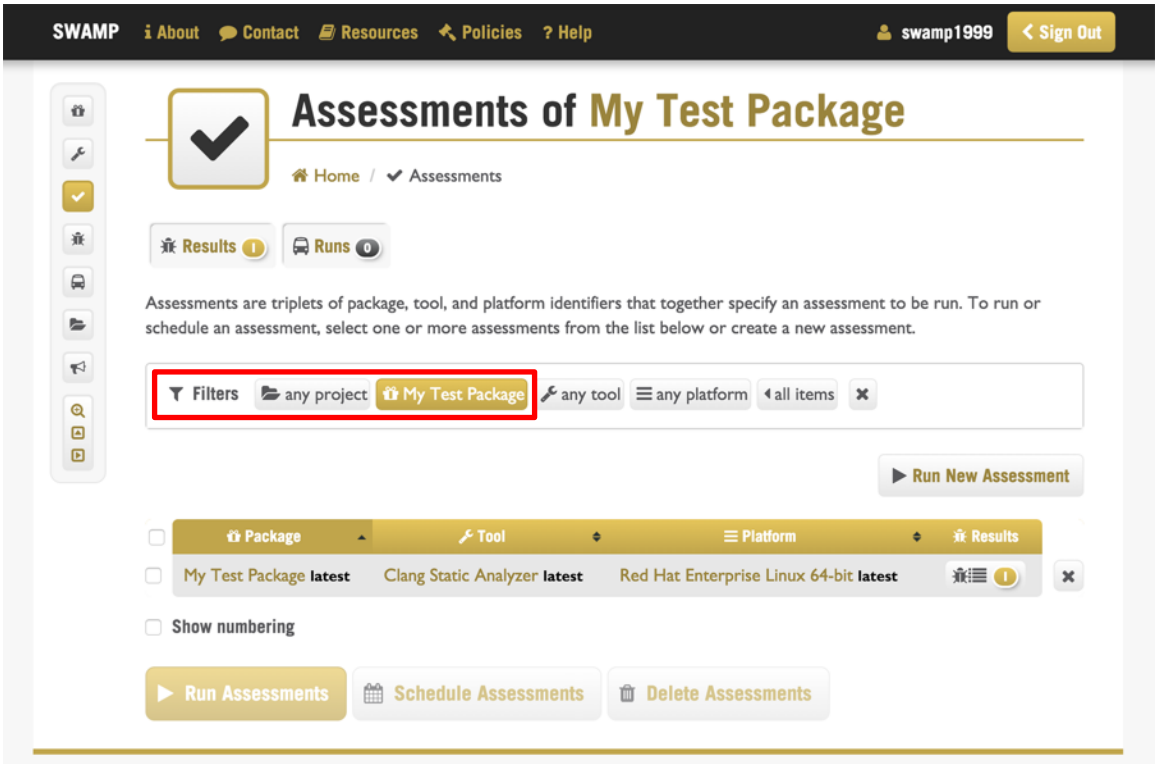
2. From within a specific Software Package or version, buttons located at the top of the page take you to the Assessments, Results, or Runs pages.





3. On those pages, the Package filter is set to the name of your Software Package or version, so only those items relevant to that specific Package or version are shown.

   For example, selecting the Assessments button takes you to the Assessments page. On the Assessments page, the Package filter is set so that only those Assessments associated with “My Test Package” are shown.



4. To return to your Package or version page, you will need to use the back button within your browser to preserve any filters set on that page. Alternatively, you can use the Navigation Bar to return to the Package page and select the name of your Package and then the version.

Part 4: Assessments

Managing Assessments

An **Assessment** is a "triplet" that specifies one Tool to assess one Software Package on one operating system Platform.

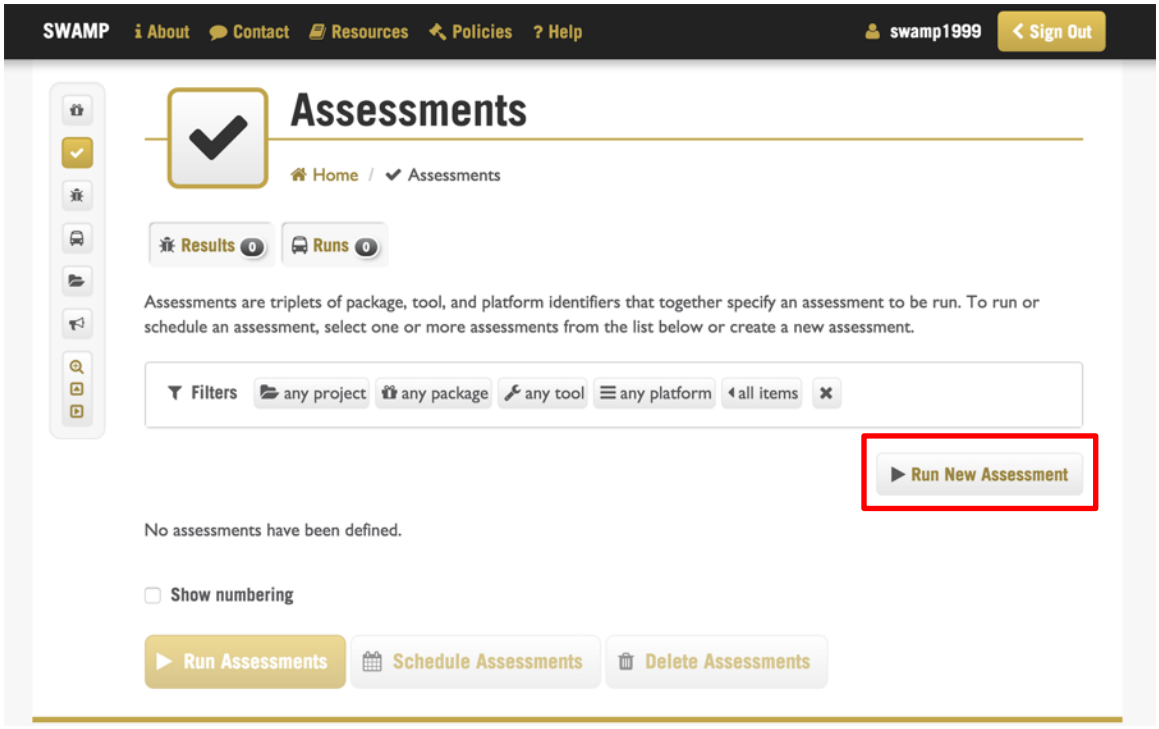
On the **Assessments** page, you will perform two main functions: creating an assessment you wish to perform and scheduling your assessment to run.

Creating a New Assessment

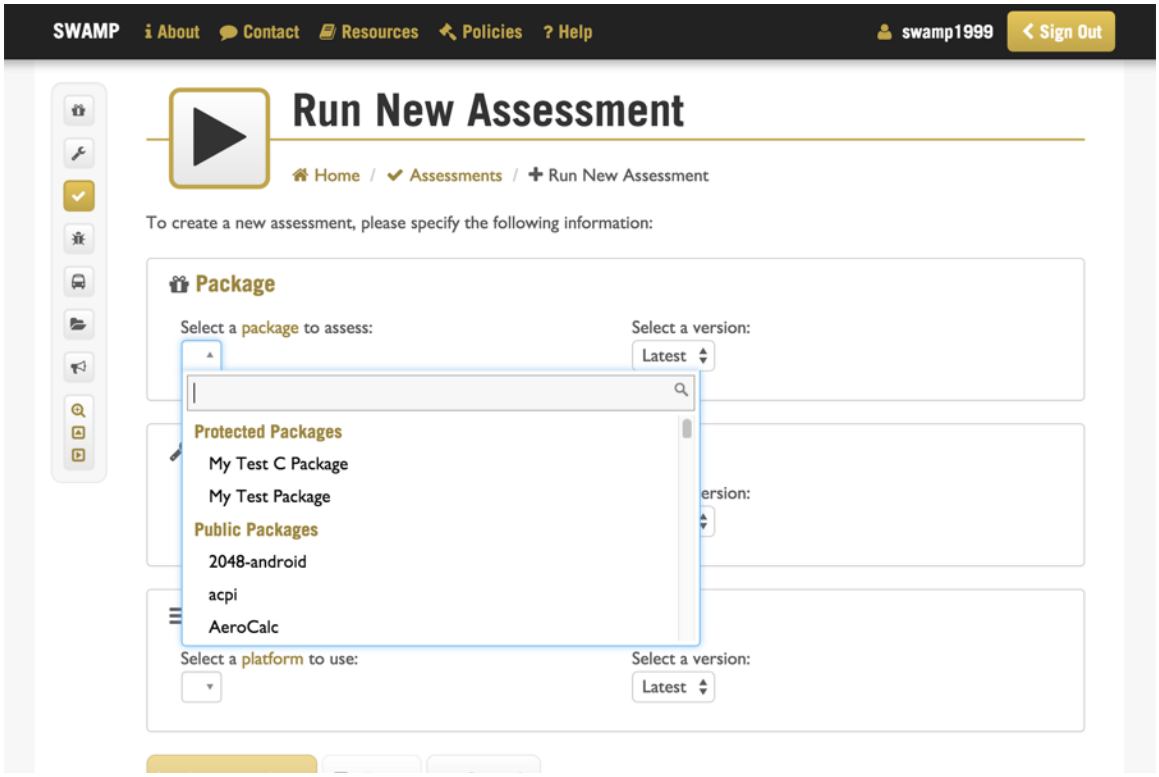
Creating an Assessment requires a Software Package. Refer to Part 3 of this User Manual for how to upload a Software Package. You may also choose to run an Assessment using a curated package available in the SWAMP. Refer to Part 7 of this User Manual to learn more about the Resources available in the SWAMP.

1. Sign in to your SWAMP account to get to your **Home** screen, and select **Assessments**.

2. Select **Run New Assessment**.



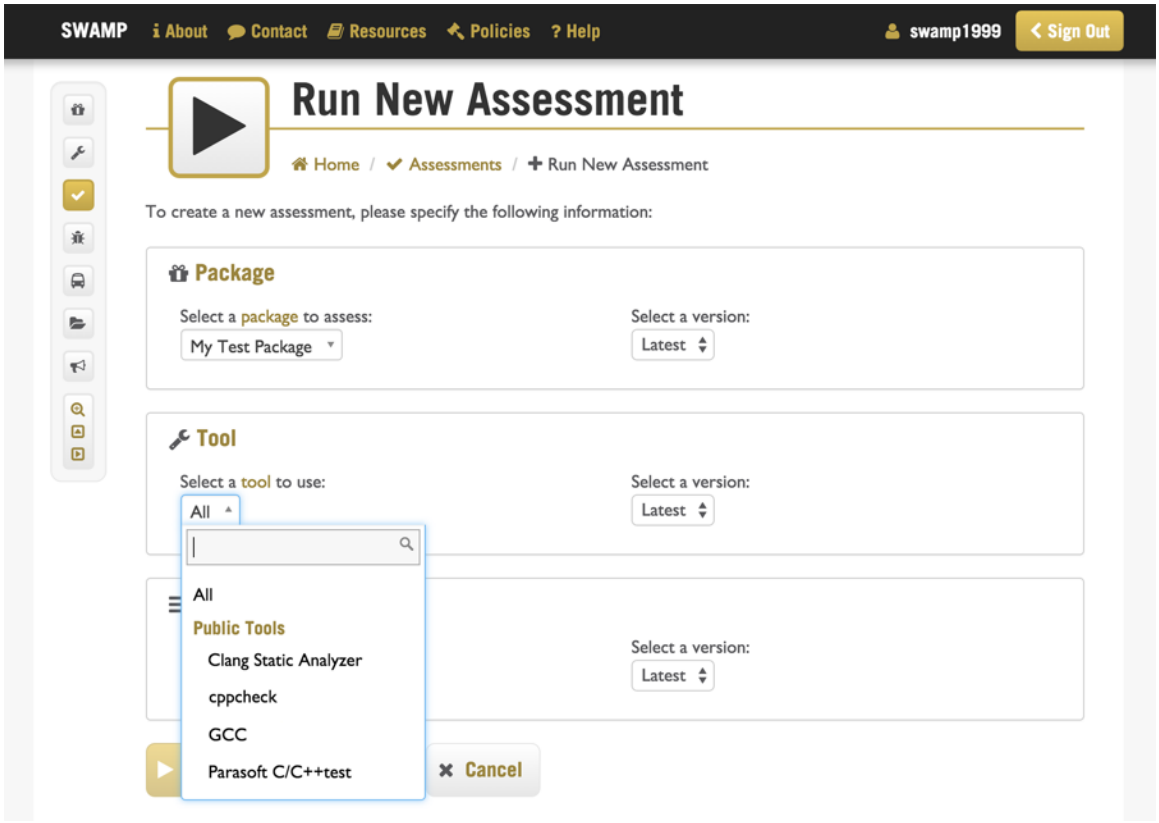
3. Select a Package. Software Packages which you have uploaded appear under Protected Packages. Curated packages available in the SWAMP appear under Public Packages. Use the search bar to quickly find a desired Package. You may select a specific Package version; the latest version is selected by default.

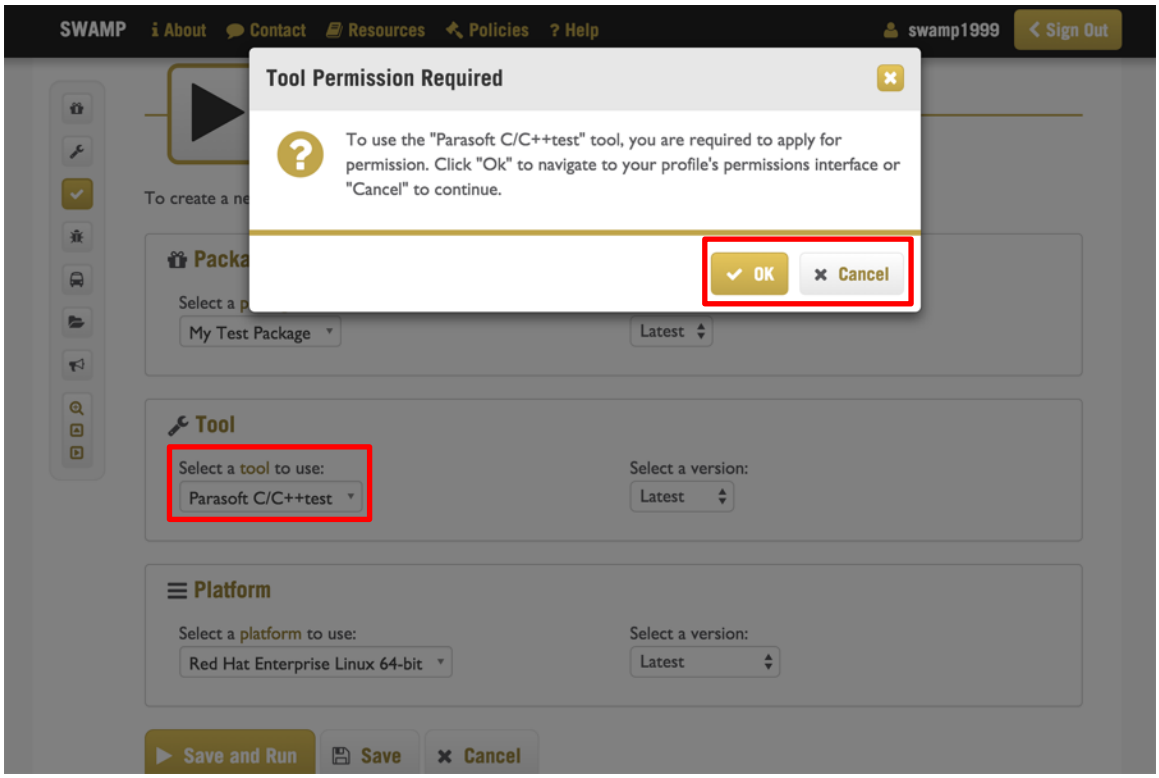


4. Select an assessment Tool. The list of Tools is populated based upon the language of your Package. The search feature allows you to quickly find a desired Tool. You may also select a specific Tool version; the latest version is selected by default.

   By default, All is selected, meaning all of the tools that are compatible with the language of your Package and for which you have permission to use. Only the latest version of each tool is allowed with the All tools option.

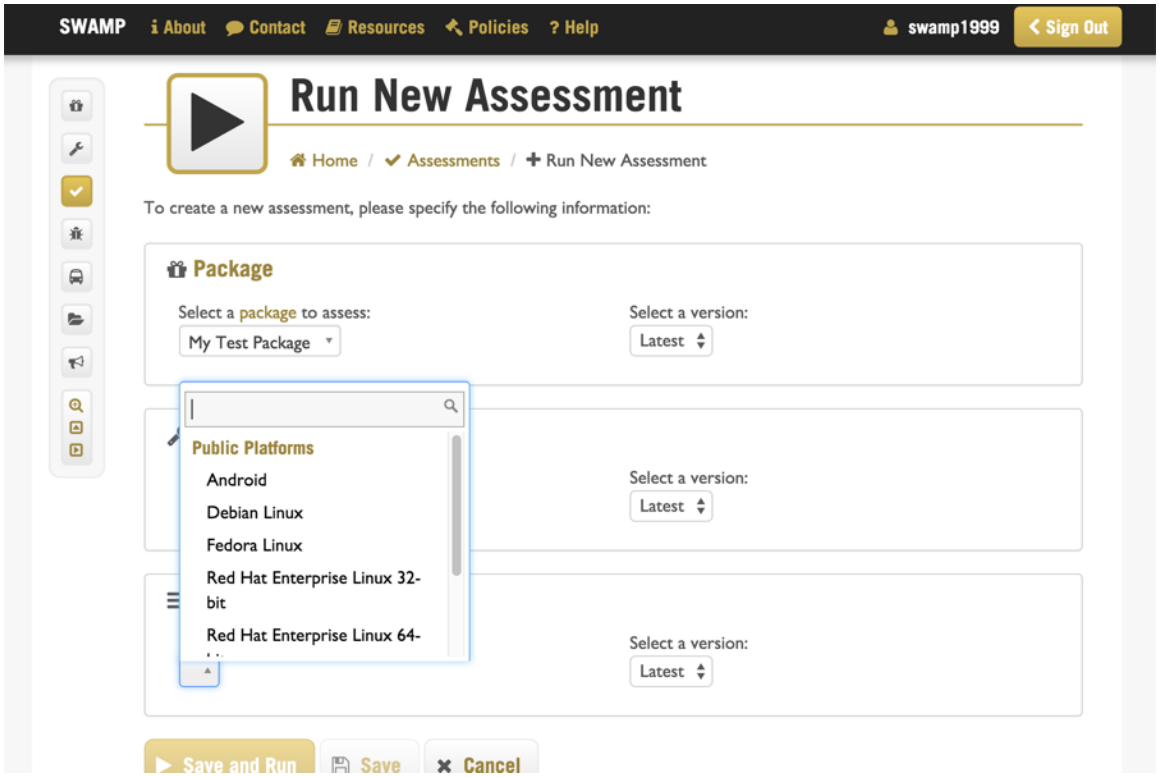
   ******Note:*** *If you select a tool from a commercial vendor and do not yet have permission to use it, you will be prompted to apply for permission or select a different tool when you attempt to Save or Save and Run the Assessment.*




SWAMP
About
Contact
Resources
Policies
Help
swamp1999
Sign Out
Tool Permission Required
To use the "Parasoft C/C++test" tool, you are required to apply for permission. Click "Ok" to navigate to your profile's permissions interface or "Cancel" to continue.
OK
Cancel
To create a ne
Packa
Select a p
My Test Package
Latest
Tool
Select a tool to use:
Parasoft C/C++test
Select a version:
Latest
Platform
Select a platform to use:
Red Hat Enterprise Linux 64-bit
Select a version:
Latest
Save and Run
Save
Cancel

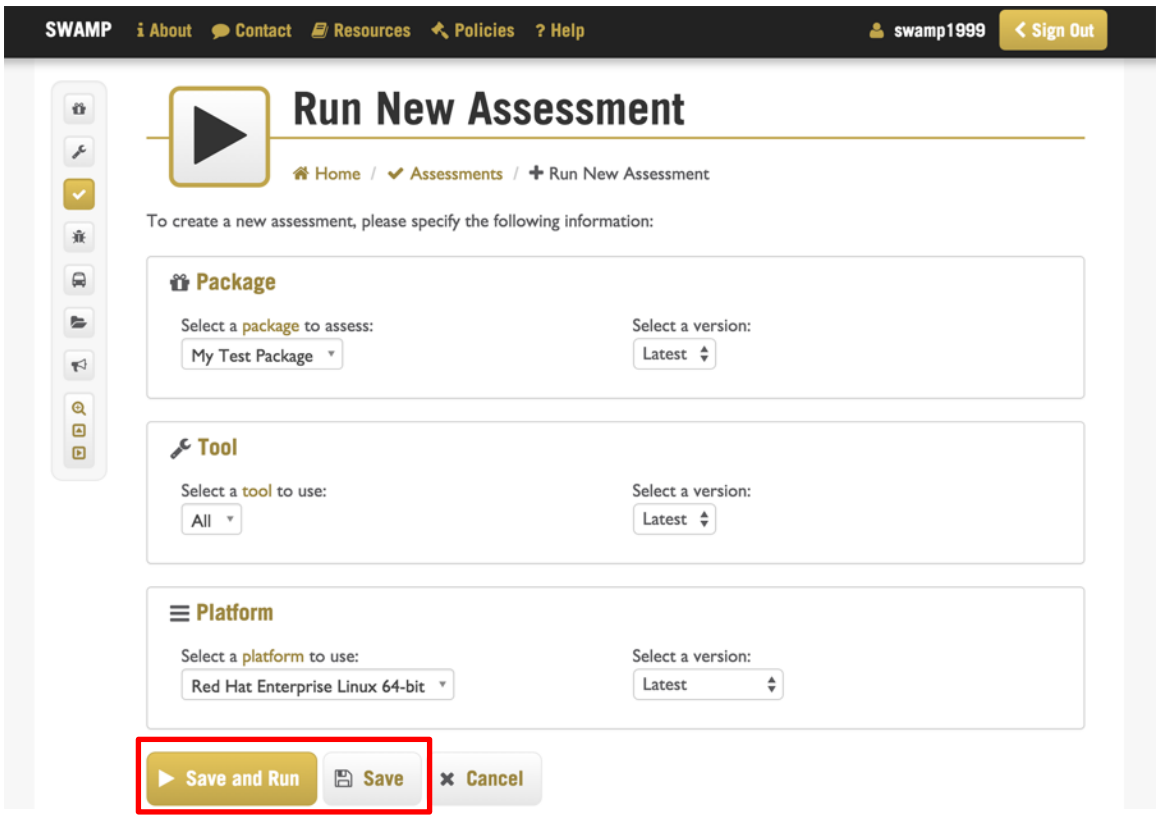
5. Select an operating system Platform. Use the search bar to quickly find a desired Platform. You may select a specific Platform version; the latest version is selected by default.

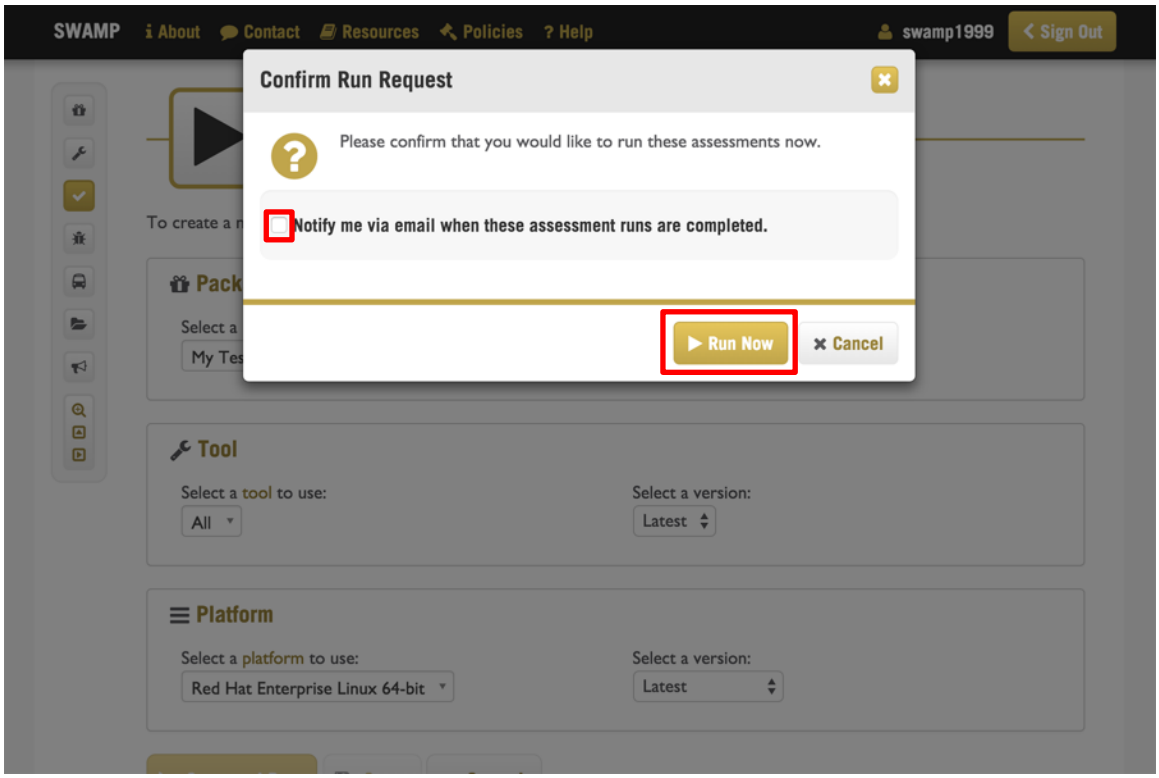
   The presence of the Platform section and the list of Platforms is populated based upon the language of your Package. Platform selection is only available for C/C++ Packages. By default, Java Packages use Red Hat Enterprise Linux 64-bit, Python and Ruby Packages use Scientific Linux 64-bit, and Android Packages use Android on Ubuntu 64-bit.

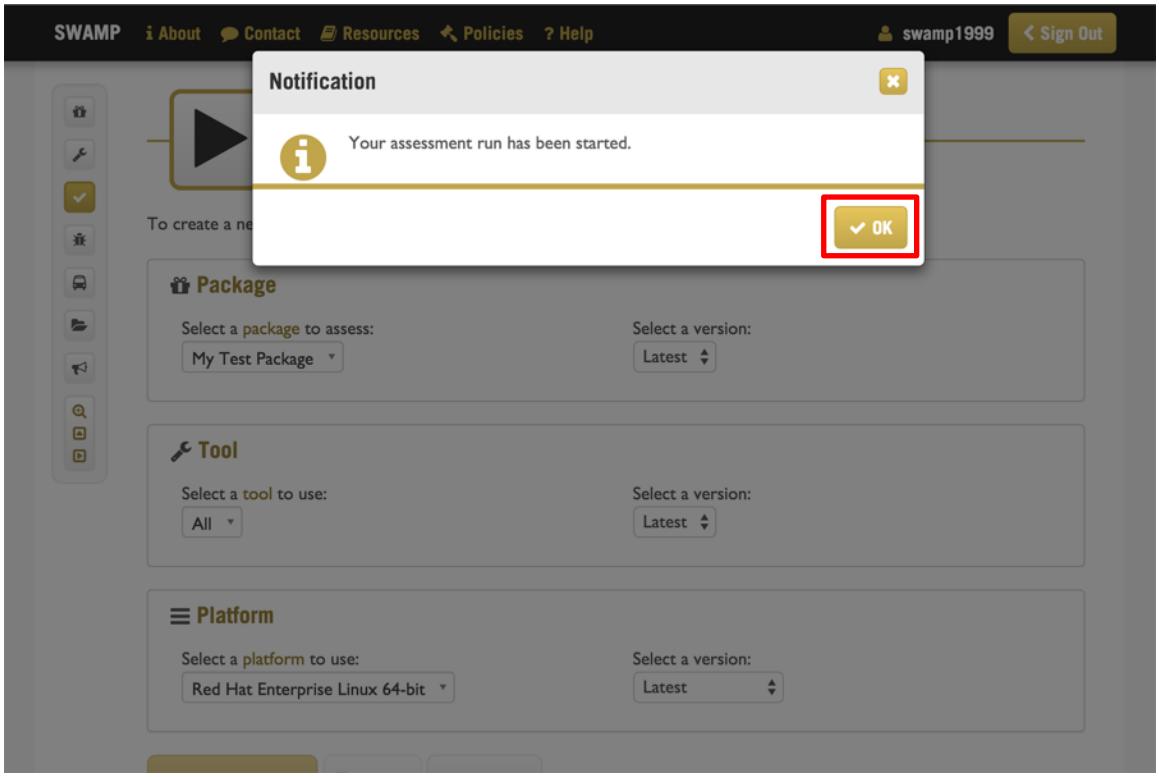


6. Select **Save** to save your Assessment and return to the **Assessments** page. The Package Filter will be set to the name of the Software Package which was just selected for Assessment.

   Select **Save and Run** to save and immediately run your Assessment. Check the box if you would like to be notified via email once your Assessment completes. Select **Run Now** to run the Assessment, then select **OK**. You will then be taken to the **Results** page to view the Results of your Assessment.




SWAMP
About
Contact
Resources
Policies
Help
swamp1999
Sign Out
Confirm Run Request
Please confirm that you would like to run these assessments now.
Notify me via email when these assessment runs are completed.
Run Now
Cancel
Tool
Select a tool to use:
All
Select a version:
Latest
Platform
Select a platform to use:
Red Hat Enterprise Linux 64-bit
Select a version:
Latest


SWAMP
About
Contact
Resources
Policies
Help
swamp1999
Sign Out
Notification
Your assessment run has been started.
OK
Package
Select a package to assess:
My Test Package
Select a version:
Latest
Tool
Select a tool to use:
All
Select a version:
Latest
Platform
Select a platform to use:
Red Hat Enterprise Linux 64-bit
Select a version:
Latest

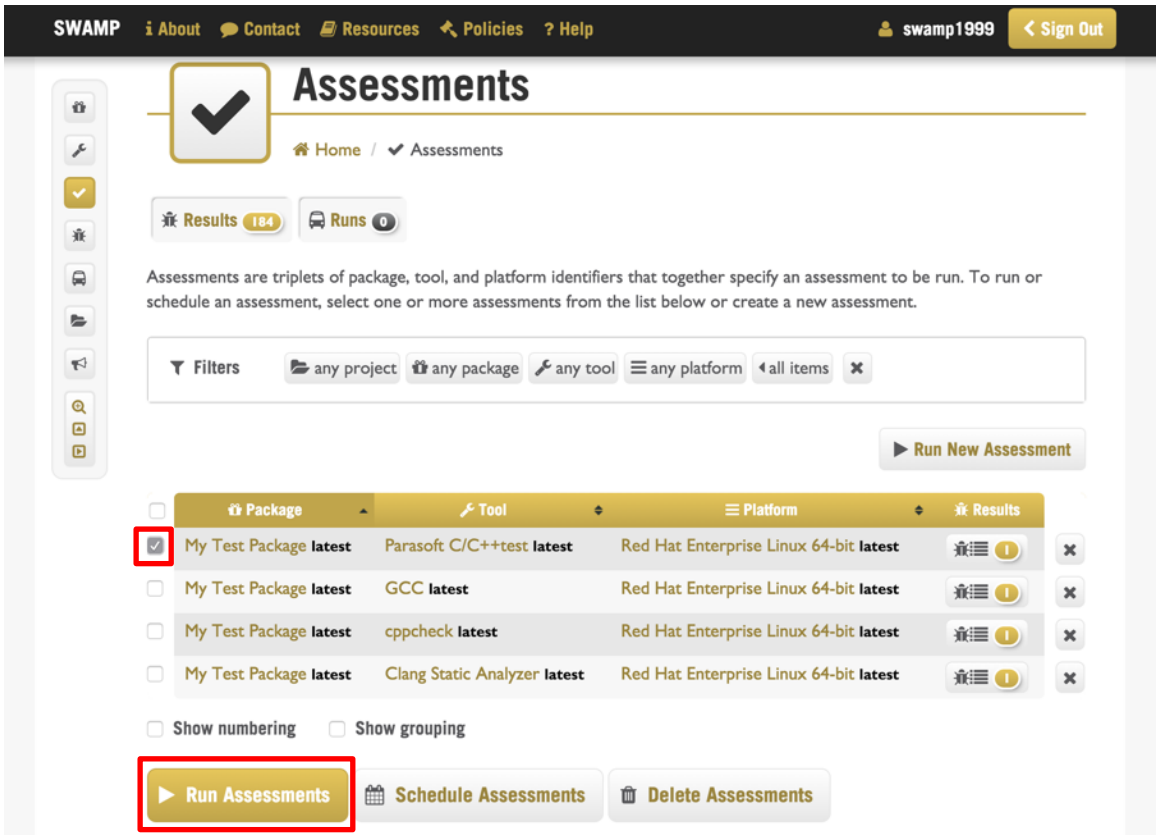
Running Assessments

From the Assessments page, you can easily run one or more Assessments that were previously created or saved.

1. Check the box next to the Assessment(s) you wish to run.

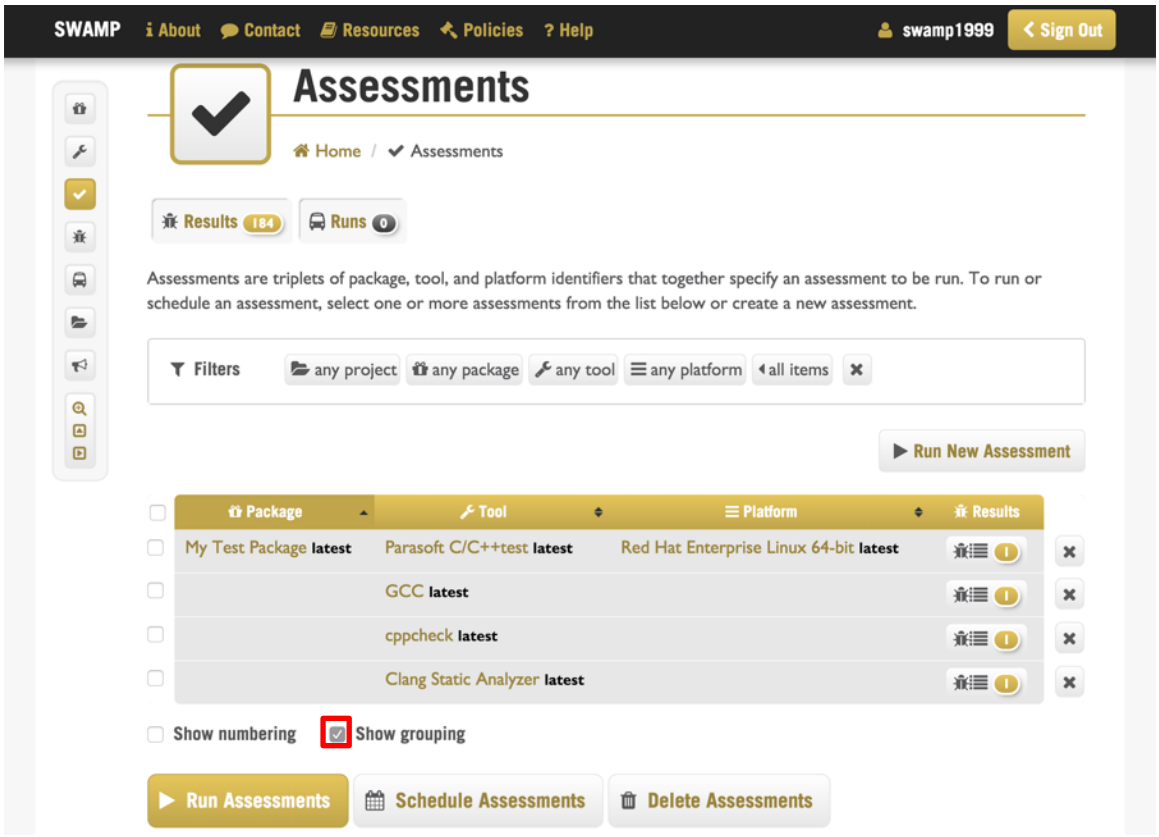
***Note:** *Shift+click will allow you to select a range of check boxes.*

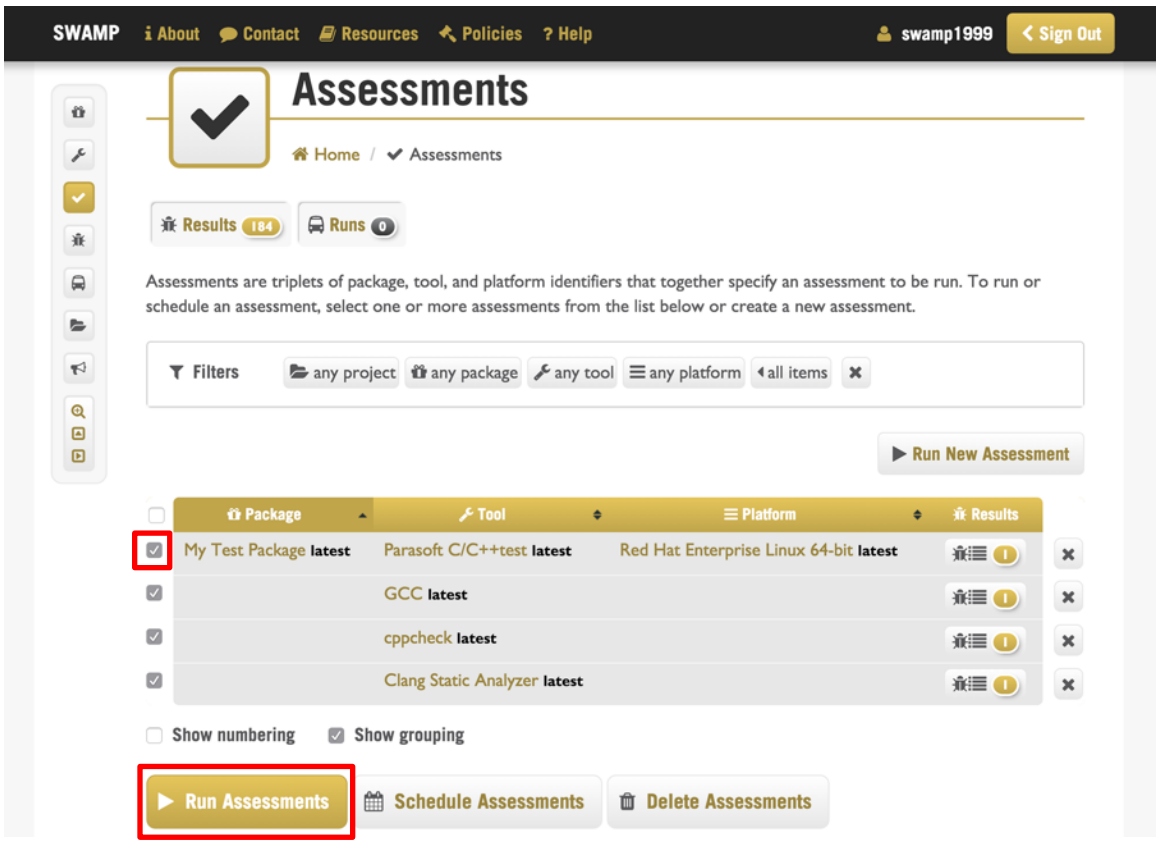
2. Select **Run Assessments** to start a one-time assessment run.



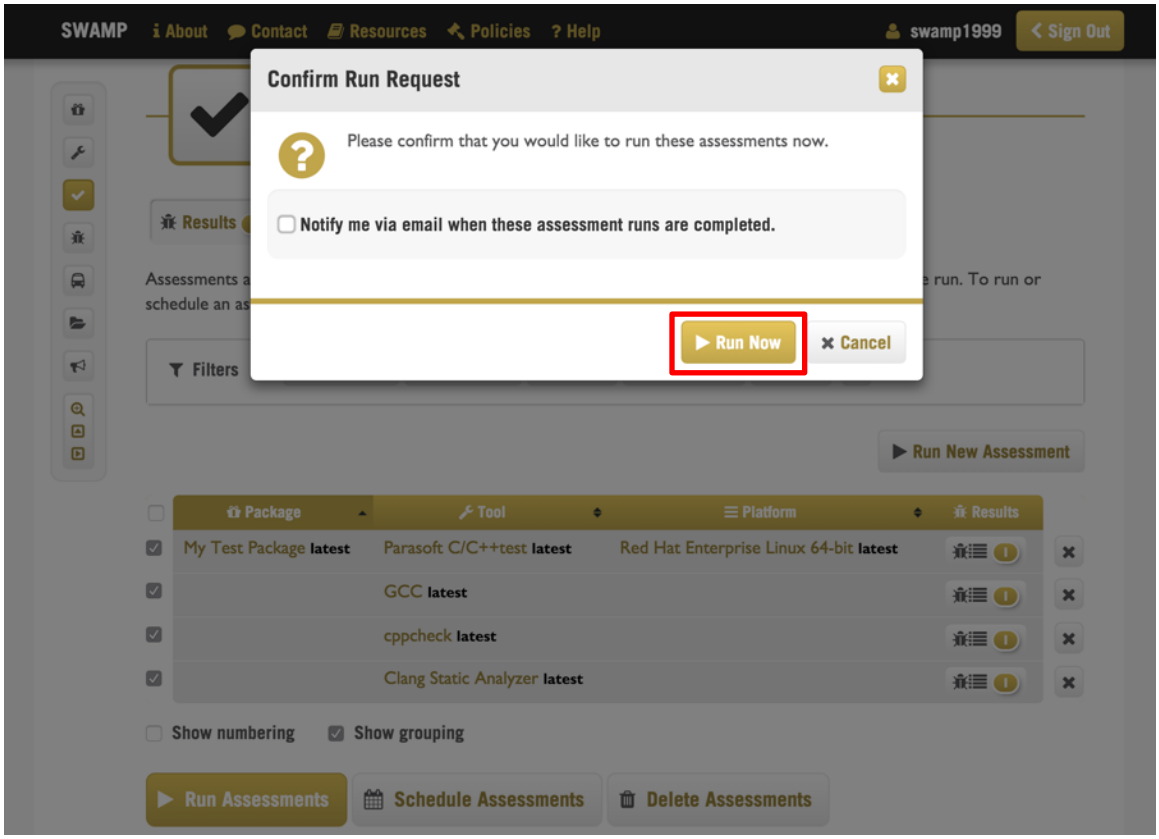
***Note:** *If you created several Assessments using different tools for a given Software Package (for example, using the All tools option described on page 129), you can easily view and select them all at once. Check the box to **Show grouping** to sort these related Assessments together.*

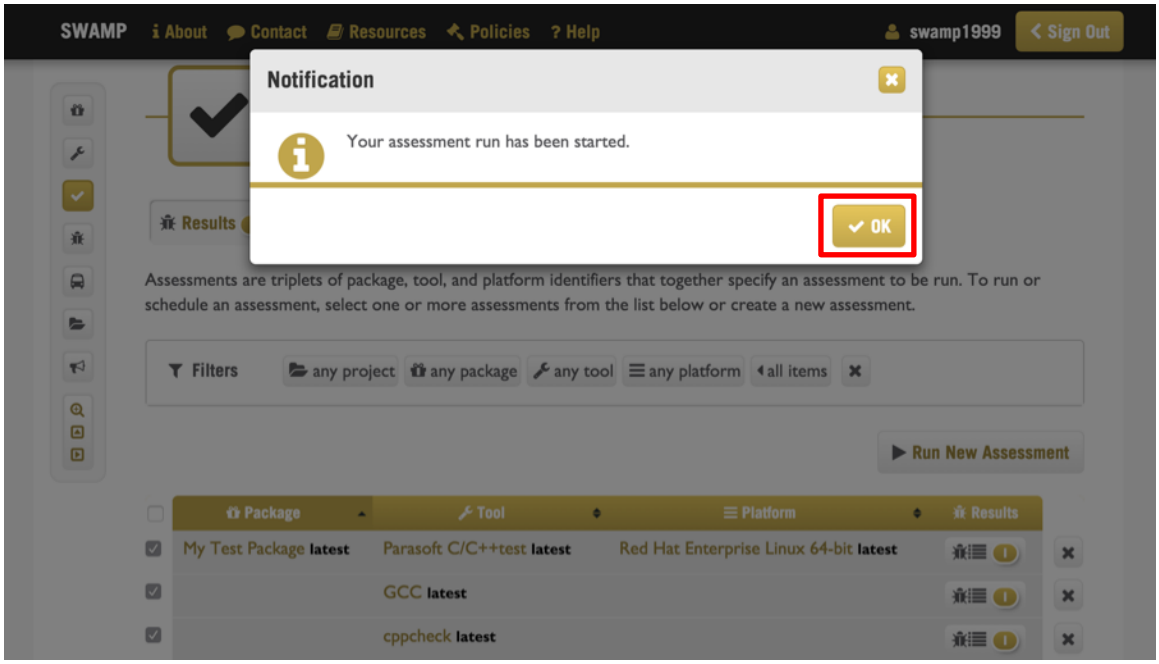
In this view, checking the box next to the first Assessment in the group will also select all related Assessments below it, allowing you to easily Run Assessments using every tool selected for that Package at once. Notice that the related Assessments share the same background shading. Also, subsequent values in the table are left blank to indicate that they have the same value as the first row/Assessment in the group.


SWAMP
About
Contact
Resources
Policies
Help
swamp1999
Sign Out
Assessments
Home / Assessments
Results 184
Runs 0
Assessments are triplets of package, tool, and platform identifiers that together specify an assessment to be run. To run or schedule an assessment, select one or more assessments from the list below or create a new assessment.
Filters
any project
any package
any tool
any platform
all items
Run New Assessment
Package
Tool
Platform
Results
My Test Package latest
Parasoft C/C++test latest
Red Hat Enterprise Linux 64-bit latest
GCC latest
cppcheck latest
Clang Static Analyzer latest
Show numbering
Show grouping
Run Assessments
Schedule Assessments
Delete Assessments


SWAMP
About
Contact
Resources
Policies
Help
swamp1999
Sign Out
Assessments
Home / Assessments
Results 184
Runs 0
Assessments are triplets of package, tool, and platform identifiers that together specify an assessment to be run. To run or schedule an assessment, select one or more assessments from the list below or create a new assessment.
Filters
any project
any package
any tool
any platform
all items
Run New Assessment
Package
Tool
Platform
Results
My Test Package latest
Parasoft C/C++test latest
Red Hat Enterprise Linux 64-bit latest
GCC latest
cppcheck latest
Clang Static Analyzer latest
Show numbering
Show grouping
Run Assessments
Schedule Assessments
Delete Assessments

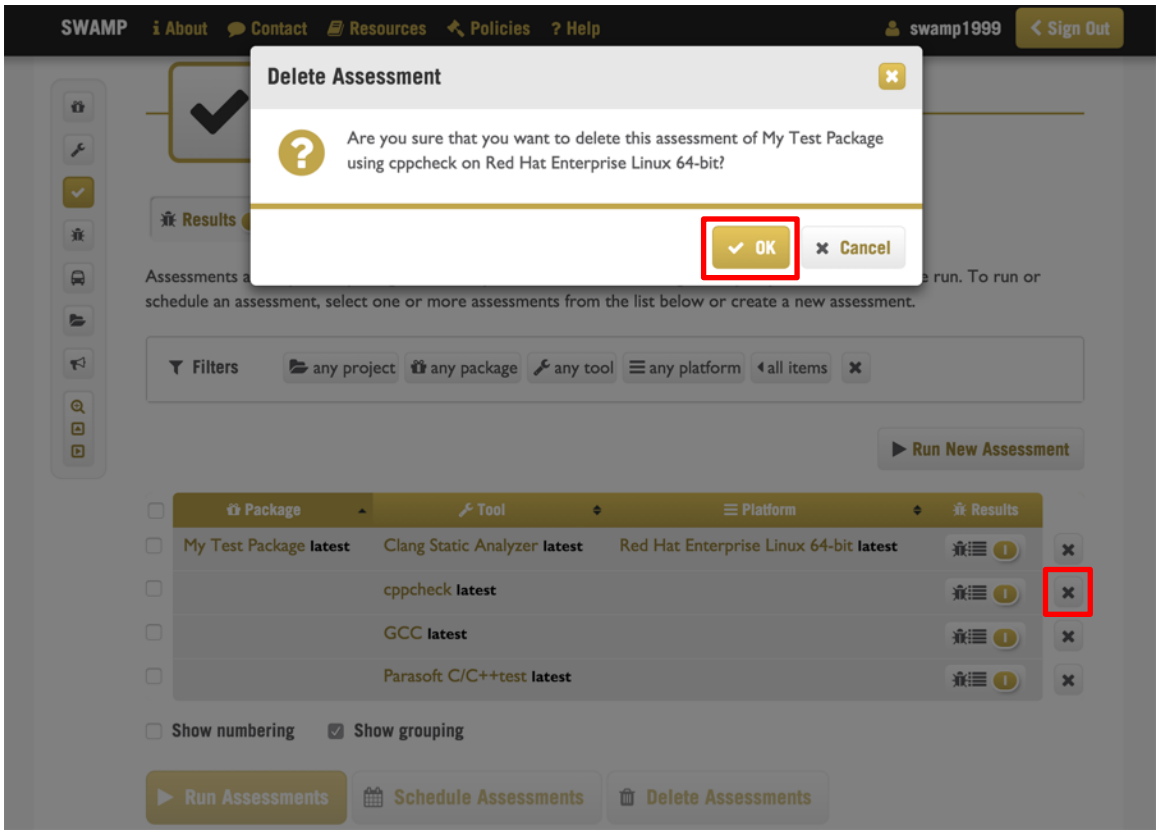
3. Check the box if you would like to be notified via email once your Assessment completes. Select **Run Now** to run the Assessment, then select **OK**. You will then be taken to the **Results** page to view the Results of your Assessment.





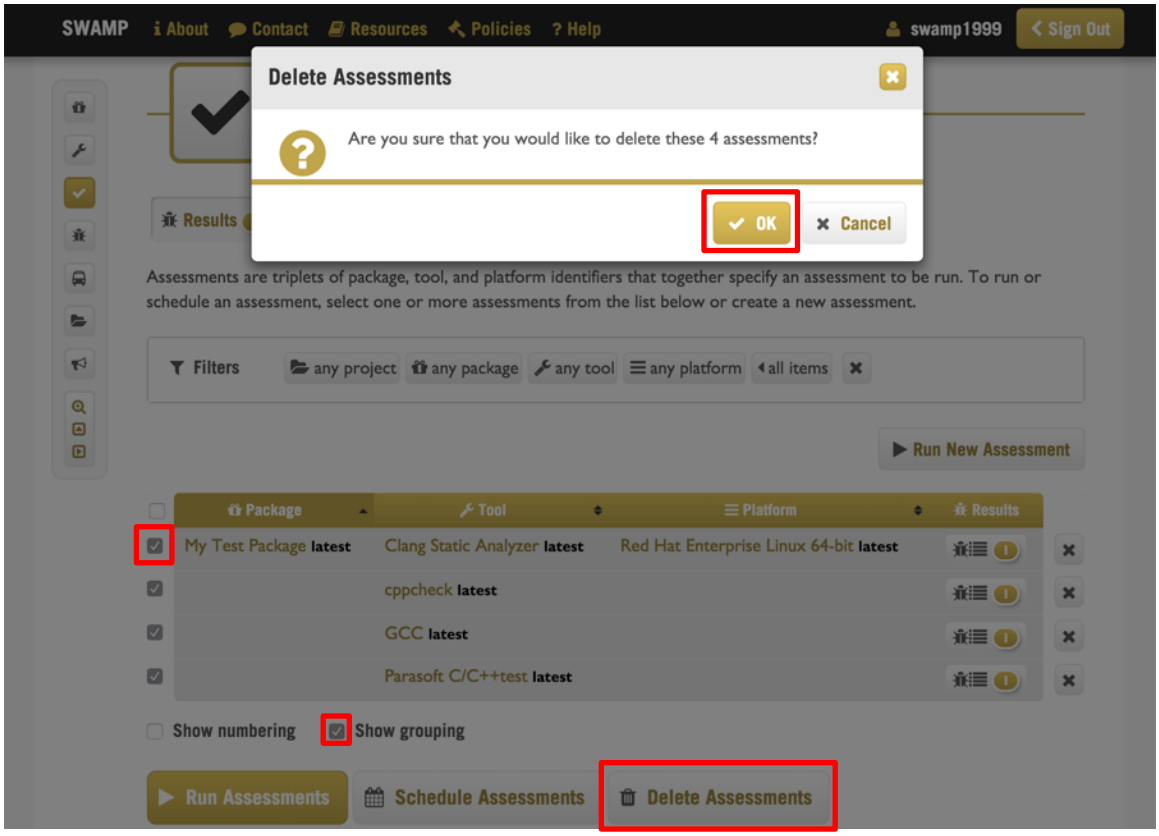
Deleting Assessments

You may delete Assessments that you have created. On the Assessments page, select the **X** to the right of an individual Assessment you wish to delete. Then select **OK**.



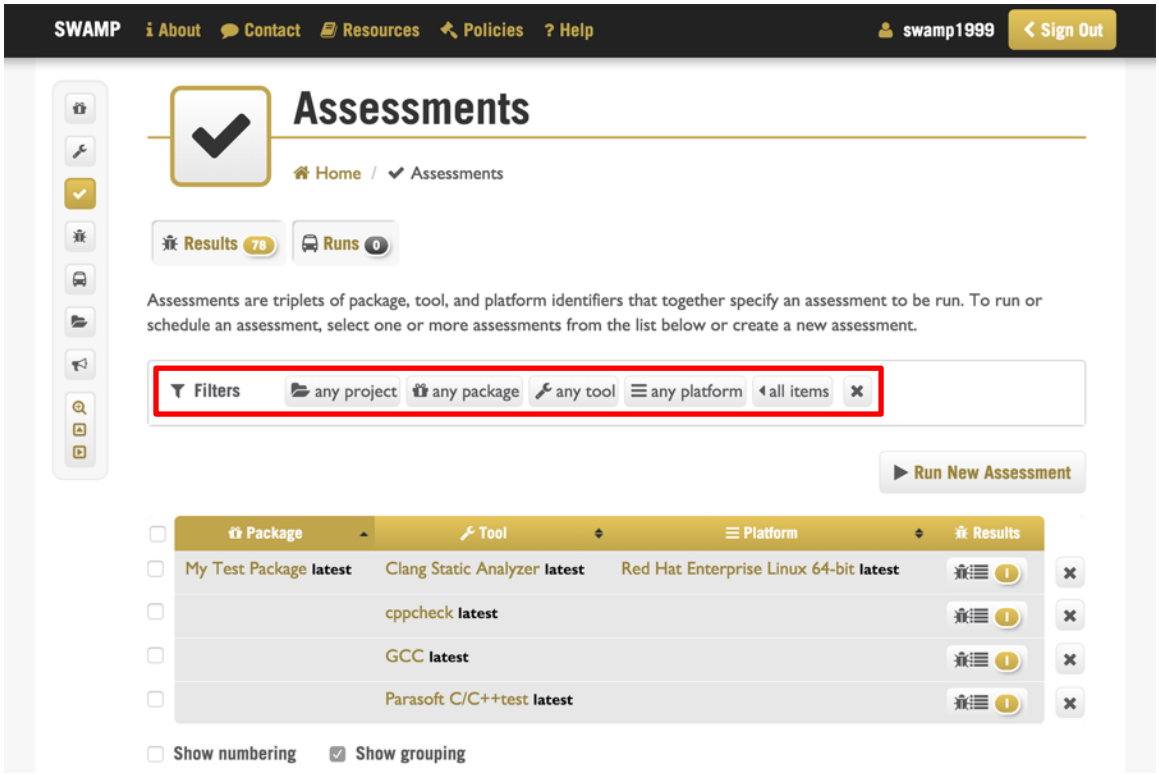
Alternatively, you can check the box next to one or more Assessments. Select **Delete Assessments**, and then select **OK**.

****Note:** If **Show grouping** is enabled, checking the box next to the first Assessment in the group will also select all related Assessments below it, allowing you to easily delete all related Assessments for that Package at once.*

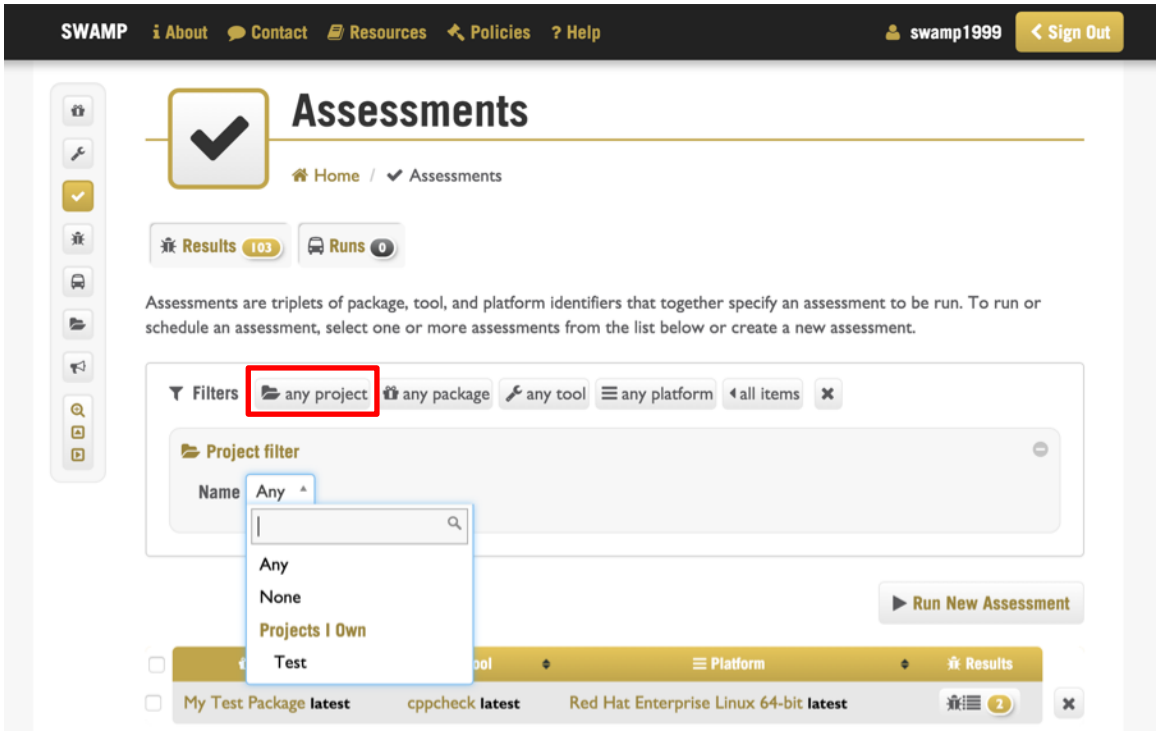


Assessment Filters

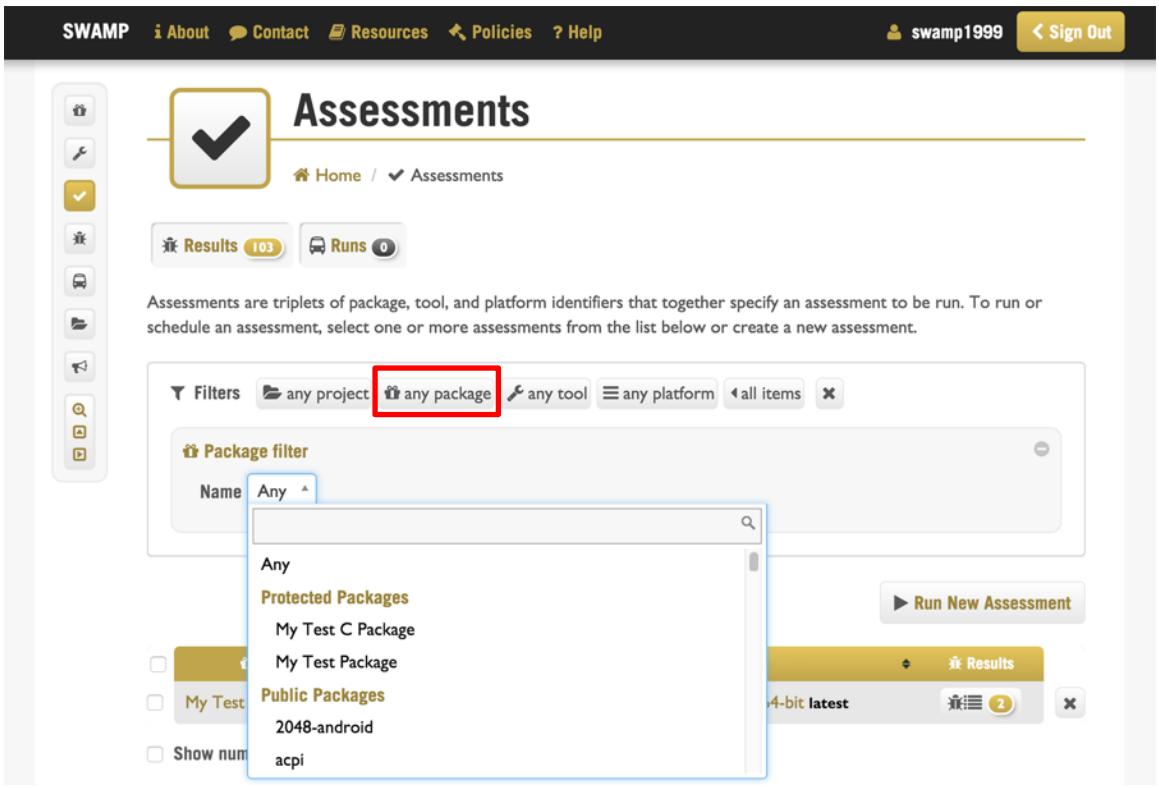
As Assessments are saved, run, and scheduled, it may become difficult to quickly find the Assessments you wish to view. Filters on the Assessments page allow you to easily find an Assessment based upon its Project, Package, Tool, or Platform. You may choose more than one option. Each additional filter chosen will further restrict the set of returned Assessments.



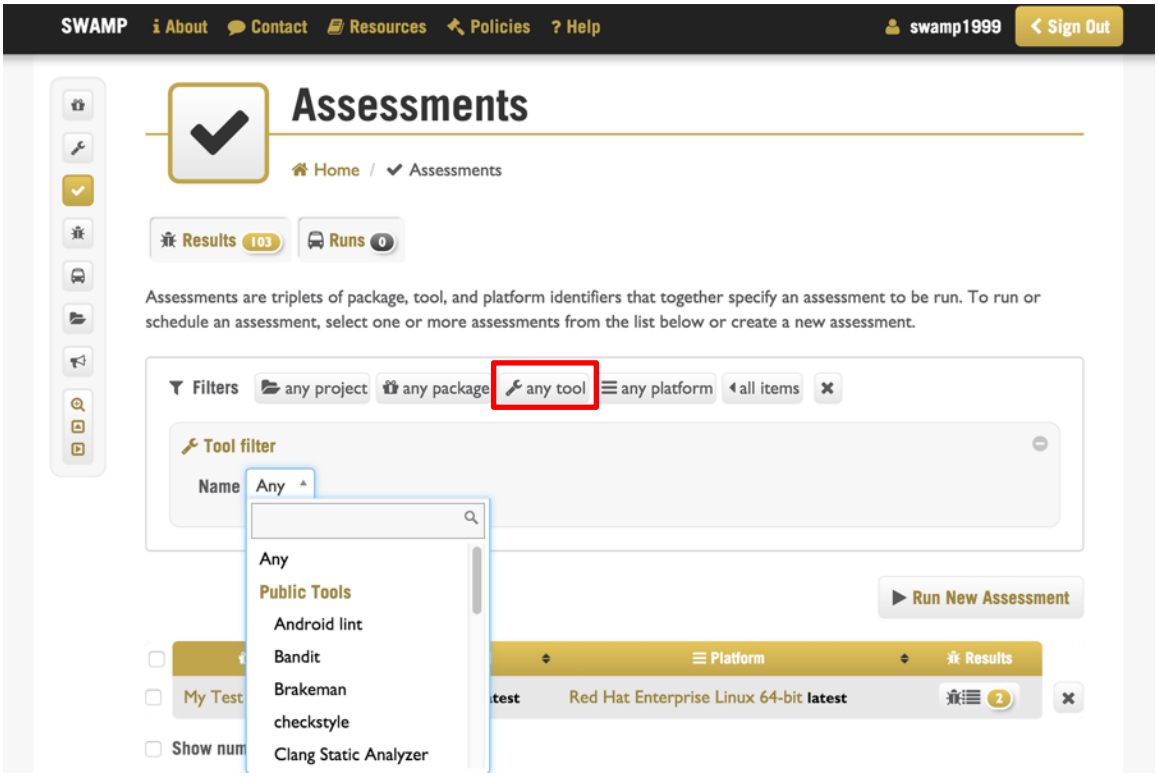
Select the Project filter to find Assessments from Any, None, or a specific Project. In this case, None means your My Project.



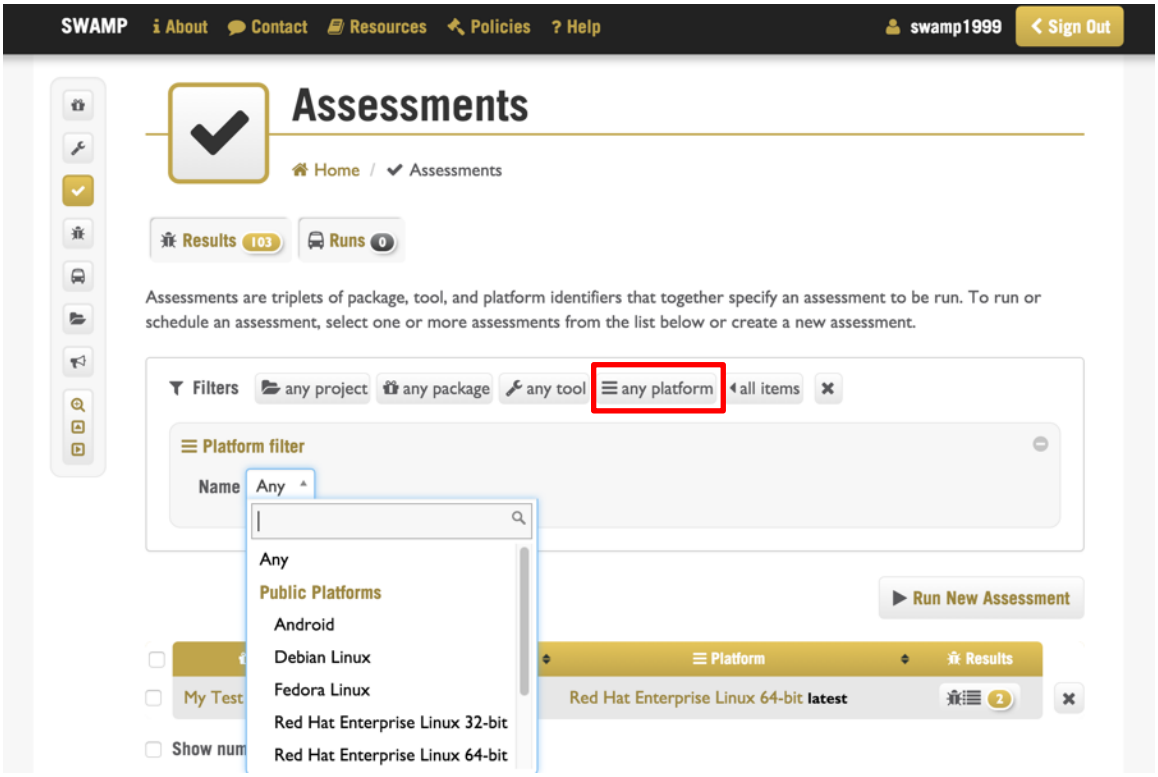
Select the Package filter to find Assessments for a specific Package.



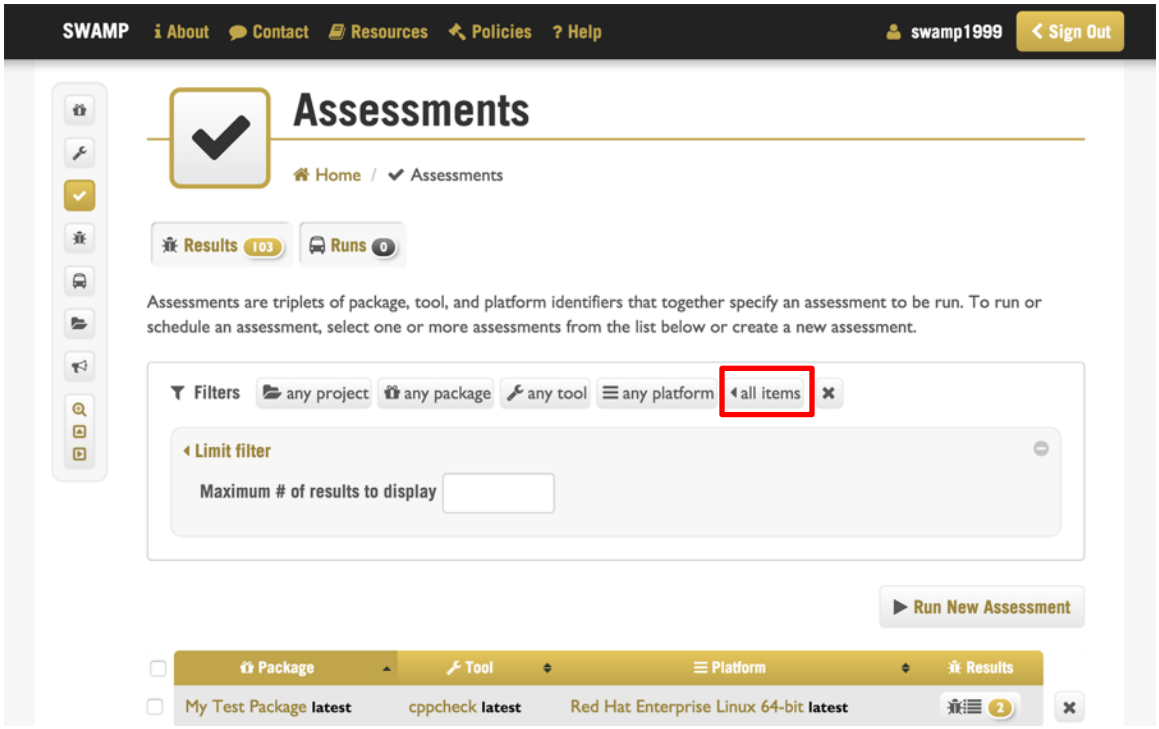
Select the Tool filter to find Assessments using a specific Tool.



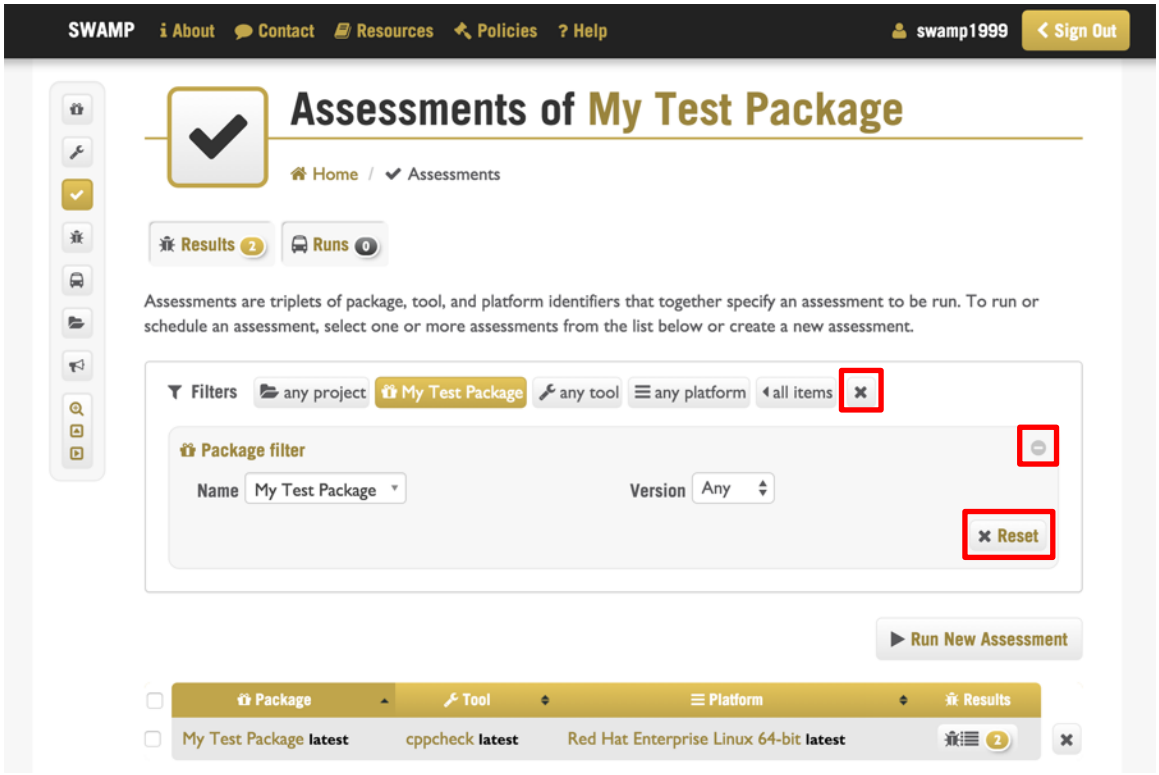
Select the Platform filter to find Assessments run on a specific Platform.

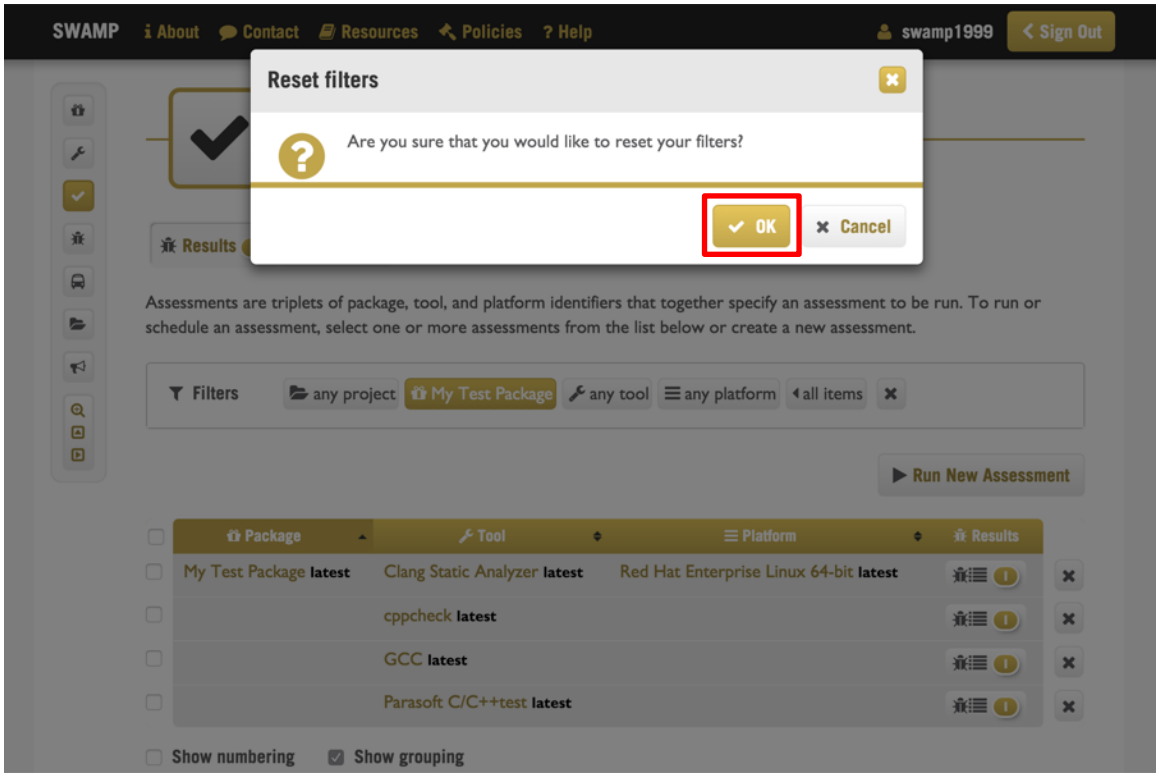


Select the Limit filter to limit the number of Assessments displayed.



Select "**-**" to minimize or close an open filter. Multiple filters may be open simultaneously.
To reset the values for a single filter, open the filter, and select **Reset**.
To reset the values for all filters, select the **X**. Select **OK** to confirm the reset.





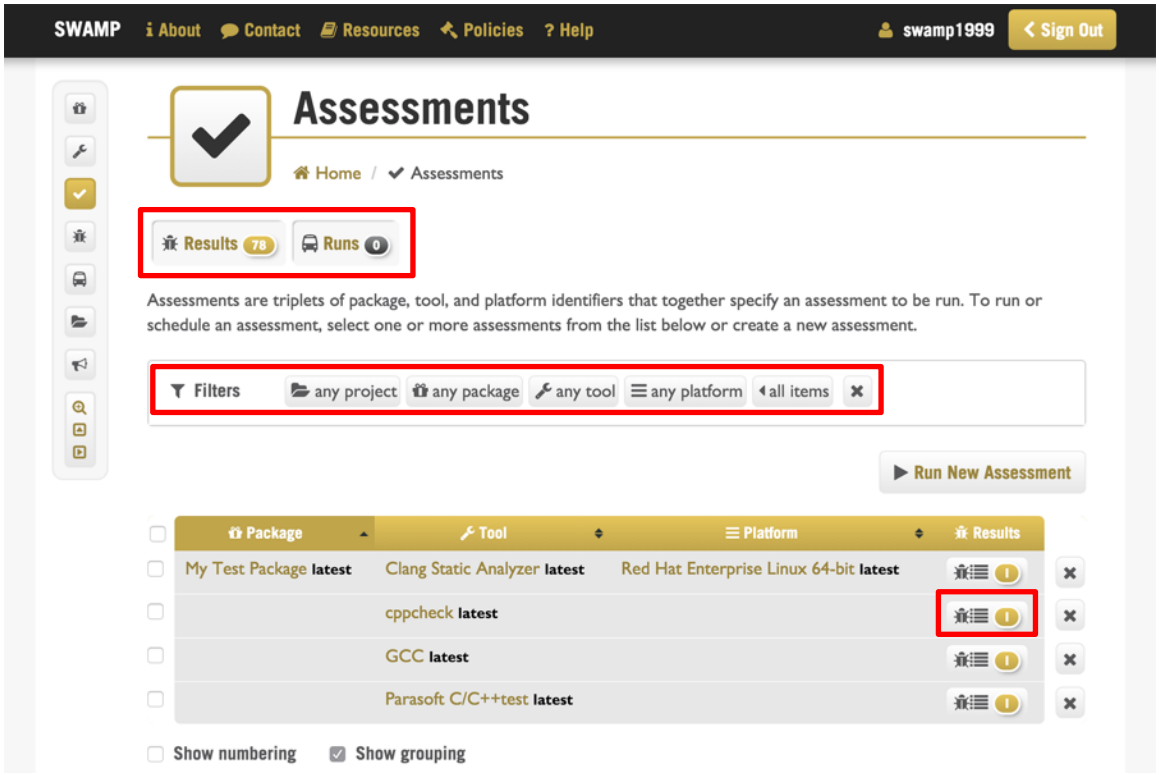
Navigating Within Assessments

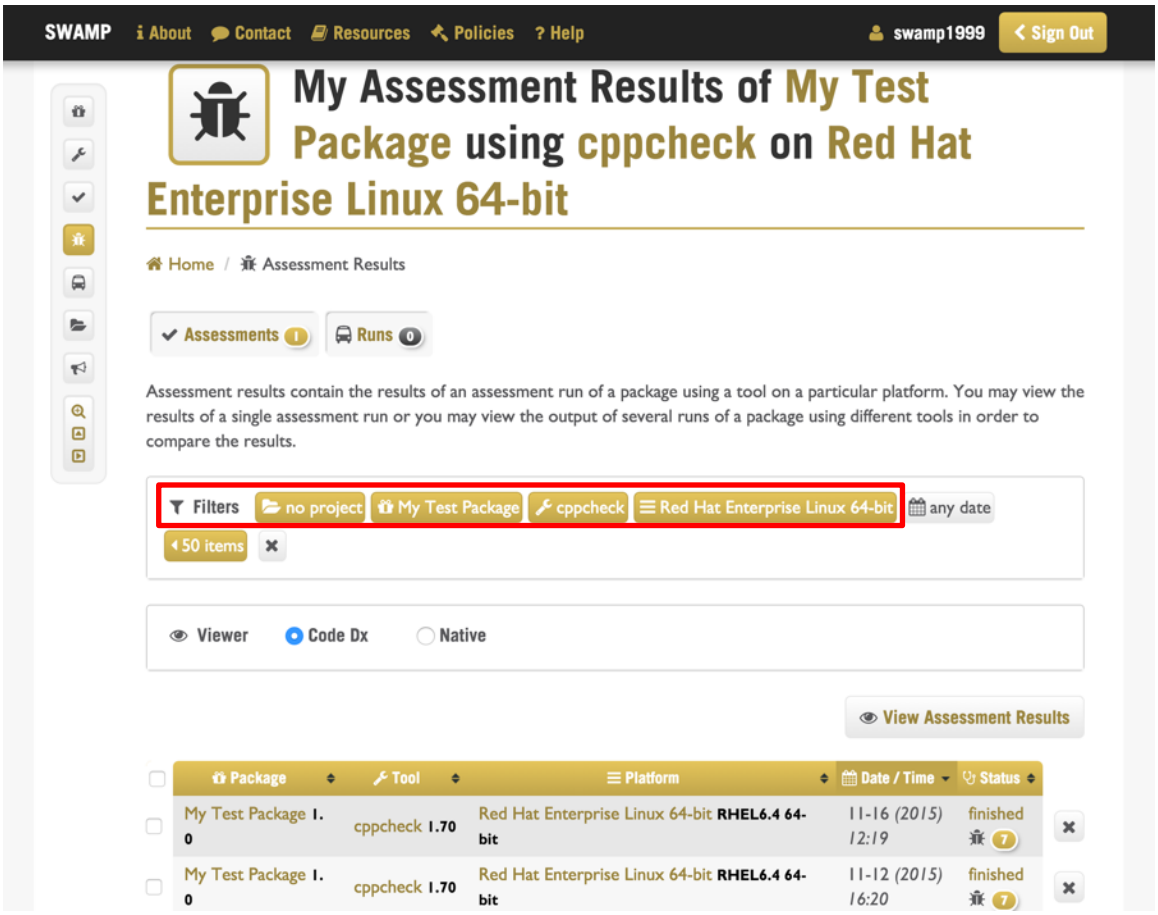
From the Assessments page, you can easily view Assessment Results and Scheduled Assessment Runs.

1. On the **Assessments** page, buttons located at the top of the page take you to the Results and Runs pages.

   By default, no filters will be set when you arrive on the Results or Runs pages. If you set one or more of the Filters on the Assessments page, those filter settings will be preserved on the Results or Runs pages, narrowing the list of Results or Runs displayed.

   Selecting the Results button in the Results column will take you to the Results page. On the Results page, the Project, Package, Tool, and Platform filters will be set so that only those Results for that Assessment “triplet” are shown.





2. To return to your Assessments page, you will need to use the back button within your browser to preserve any filters set on that page. Alternatively, you can use the Navigation Bar to return to the Assessments page with no filters set.

Scheduling Recurring Assessments

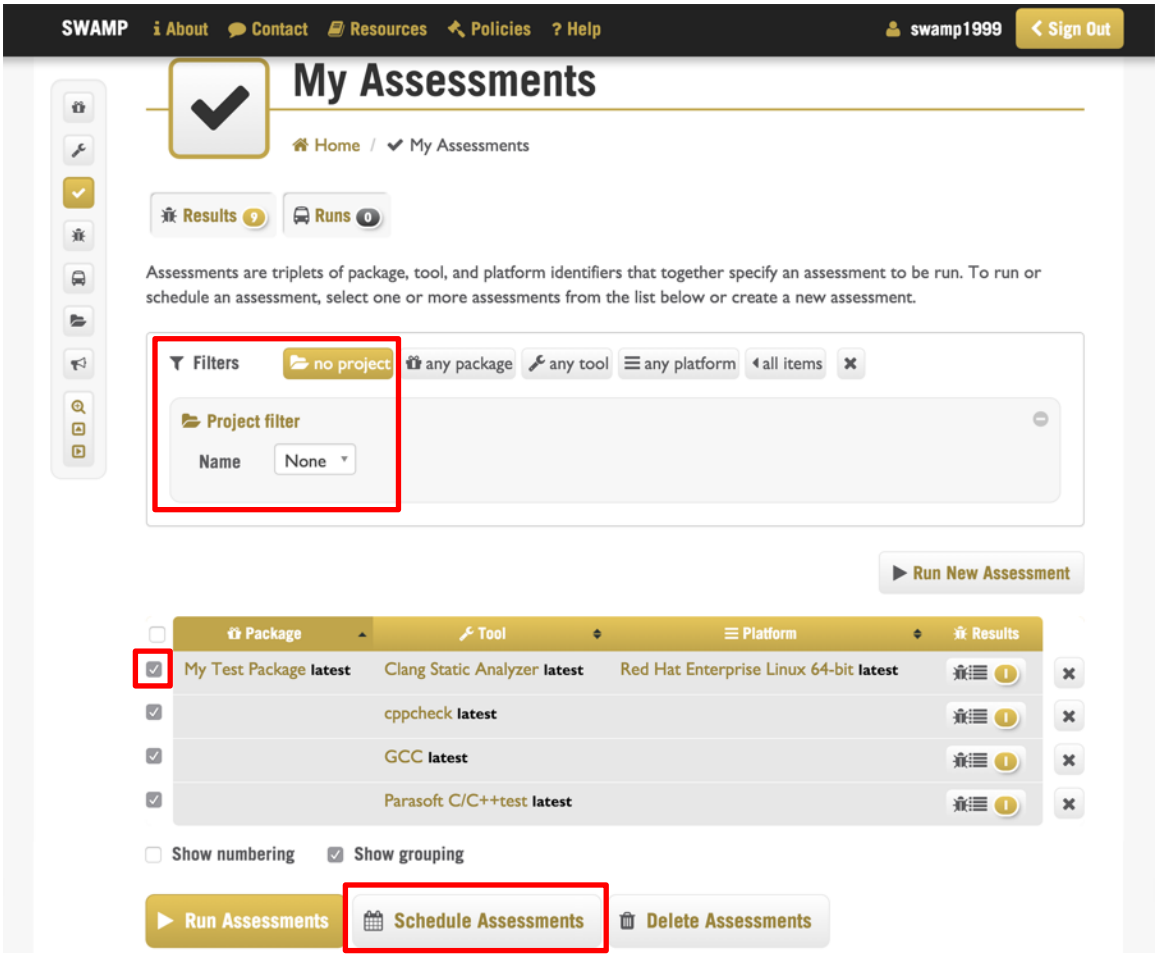
In addition to running an Assessment a single time, you may schedule Assessments to recur on a daily, weekly, or monthly basis.

1. After you have defined an Assessment on the Assessments page, select None or a specific Project using the Project filter. In this case, None means your My Project. If you do not select a project, you will be prompted to do so.

2. Check the box next to the Assessment(s) you would like to schedule.

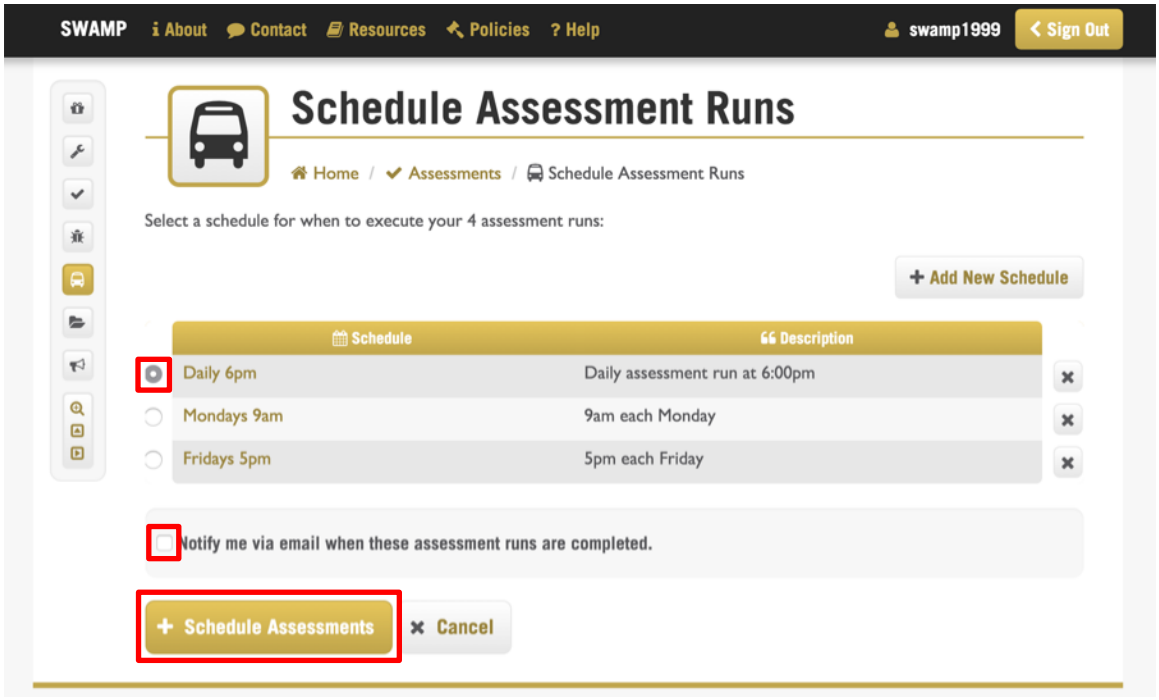
   ****Note:** If **Show grouping** is enabled, checking the box next to the first Assessment in the group will also select all related Assessments below it, allowing you to easily schedule all related Assessments for that Package at once.*

3. Select **Schedule Assessments**.

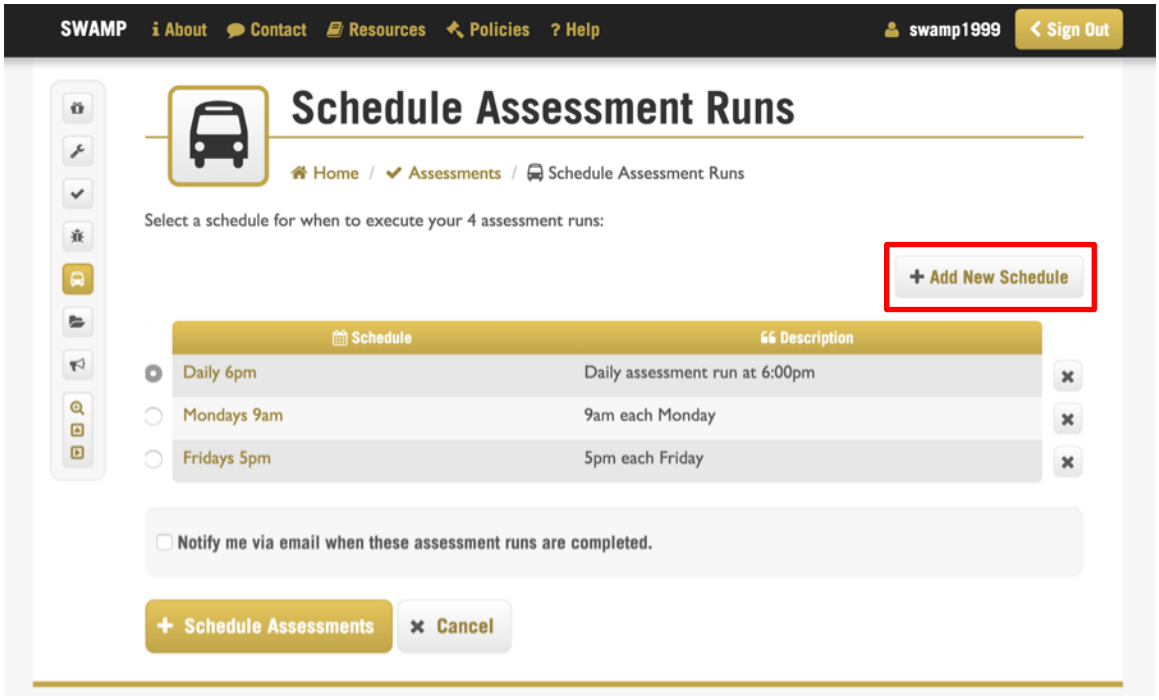


4. You will then be taken to the Schedule Assessment Runs page. Refer to Part 5 of this User Manual for more information about Scheduled Runs.

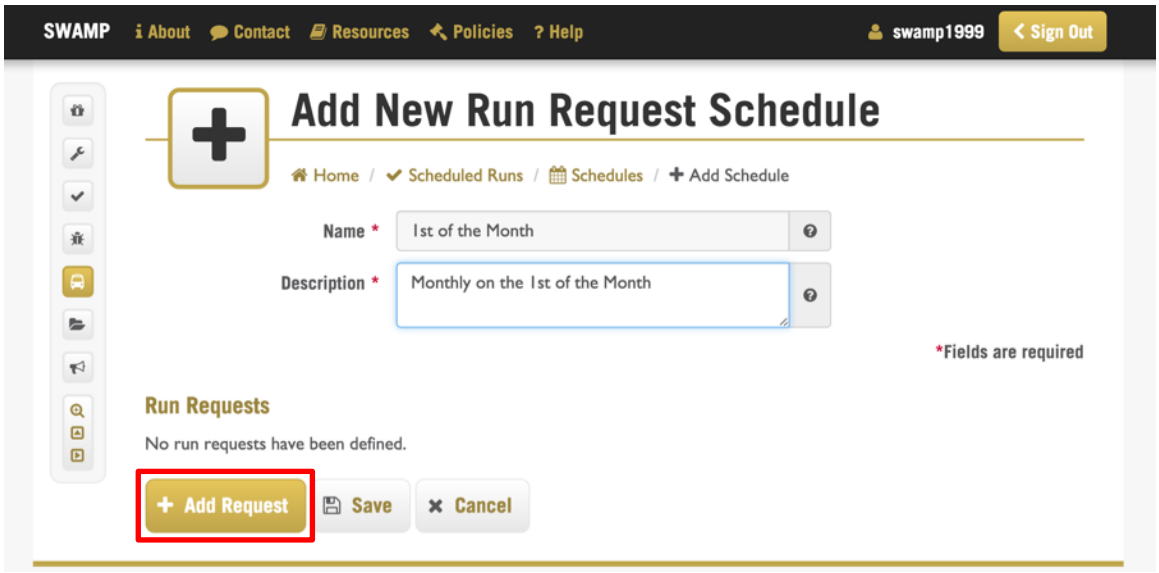
5. If you have already created a Scheduled Run, select an option to the left of the Schedule column, and check the box if you would like to be notified via email once your Assessment completes. Then select **Schedule Assessments**. You will then be taken to the Scheduled Runs page.



6. If you would like to create a new schedule, select **Add New Schedule**.



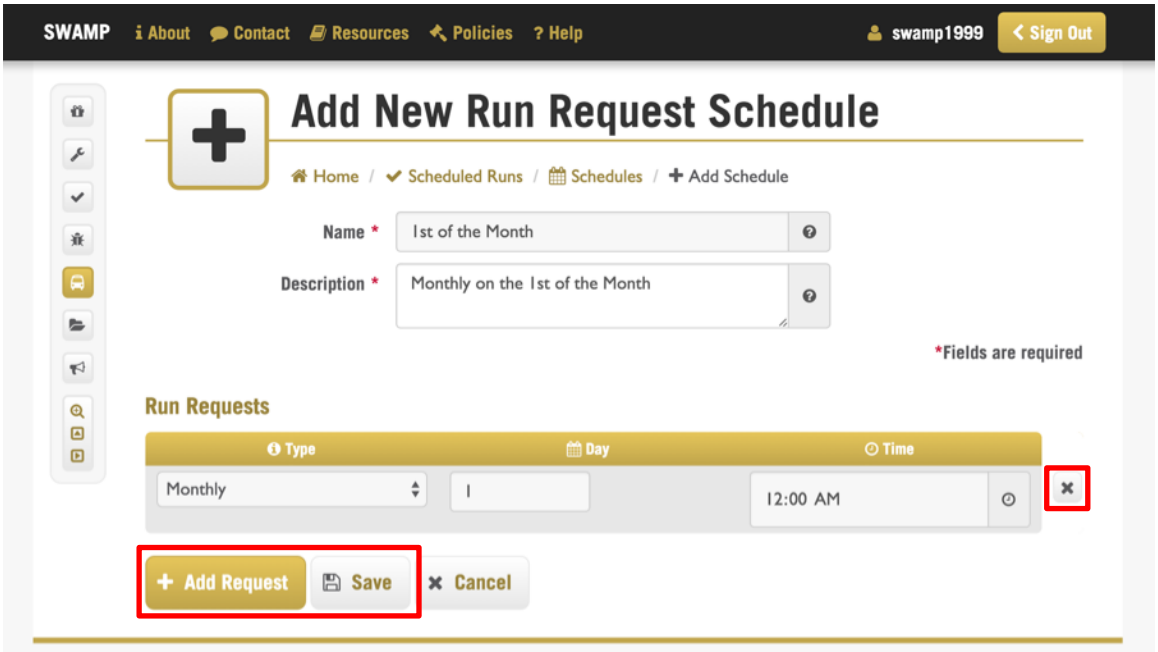
7. Give your schedule a meaningful name and description so that it is easy to select in the future. Select **Add Request**.



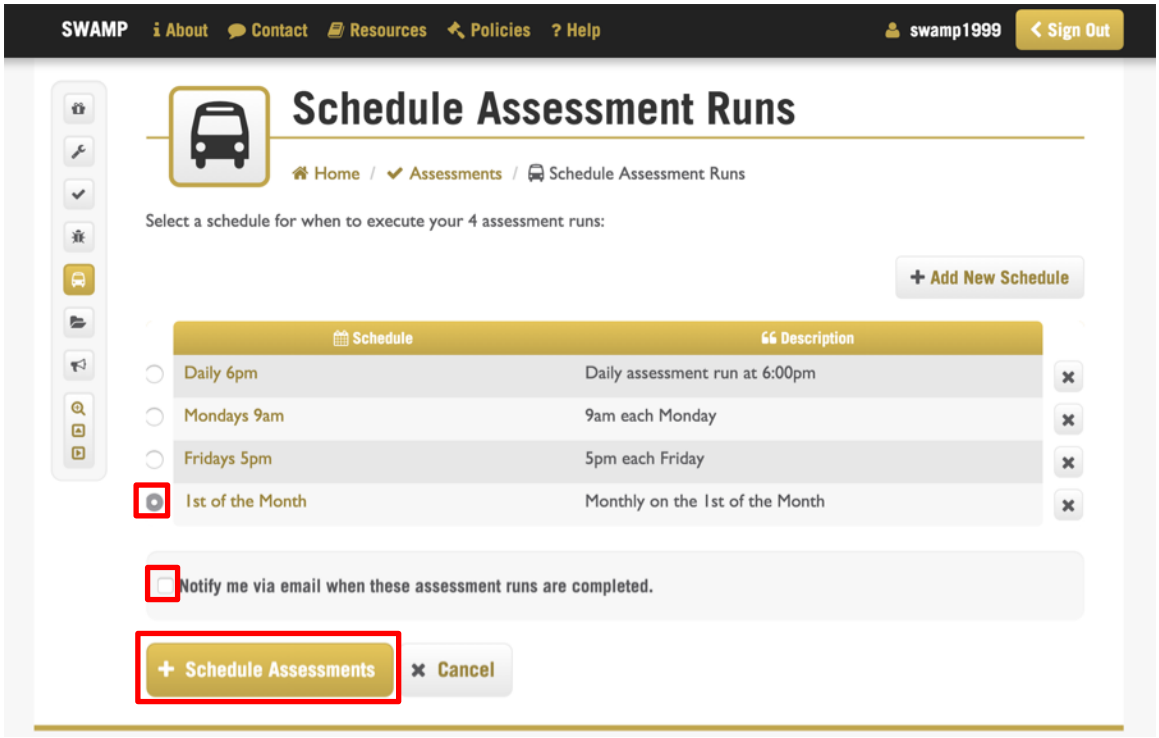
8. Create the desired schedule in the Run Requests section. The options are Daily at a given Time, Weekly on a given Day of the week at a given Time, or Monthly on a given Day of the month at a given Time.

   Select **Add Request** to add multiple schedule items. Select the **X** next to the Time column to remove a schedule item. Then select **OK**.

   When finished, select **Save**.



9. You will then see the list of available schedules. Select the option to the left of the Schedule column to choose your newly created schedule, and check the box if you would like to be notified via email once your Assessment completes. Then select **Schedule Assessments**. You will then be taken to the Scheduled Runs page.



Part 5: Runs

Scheduled Runs

A **Run** is a request to execute one or more Assessments either as soon as possible or at a scheduled time.

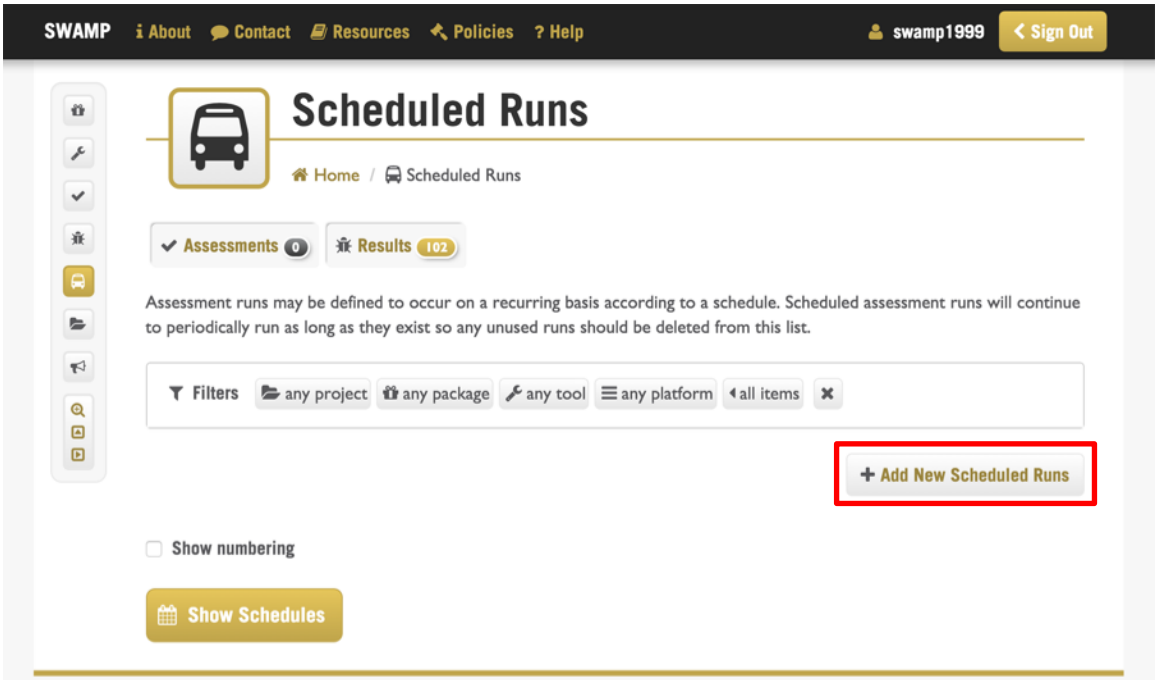
From the Scheduled Runs page, you can view scheduled Assessments and view, create, and modify existing schedules.

Adding New Scheduled Runs

Creating a Scheduled Run requires an Assessment "triplet." Refer to Part 4 of this User Manual for how to create an Assessment.

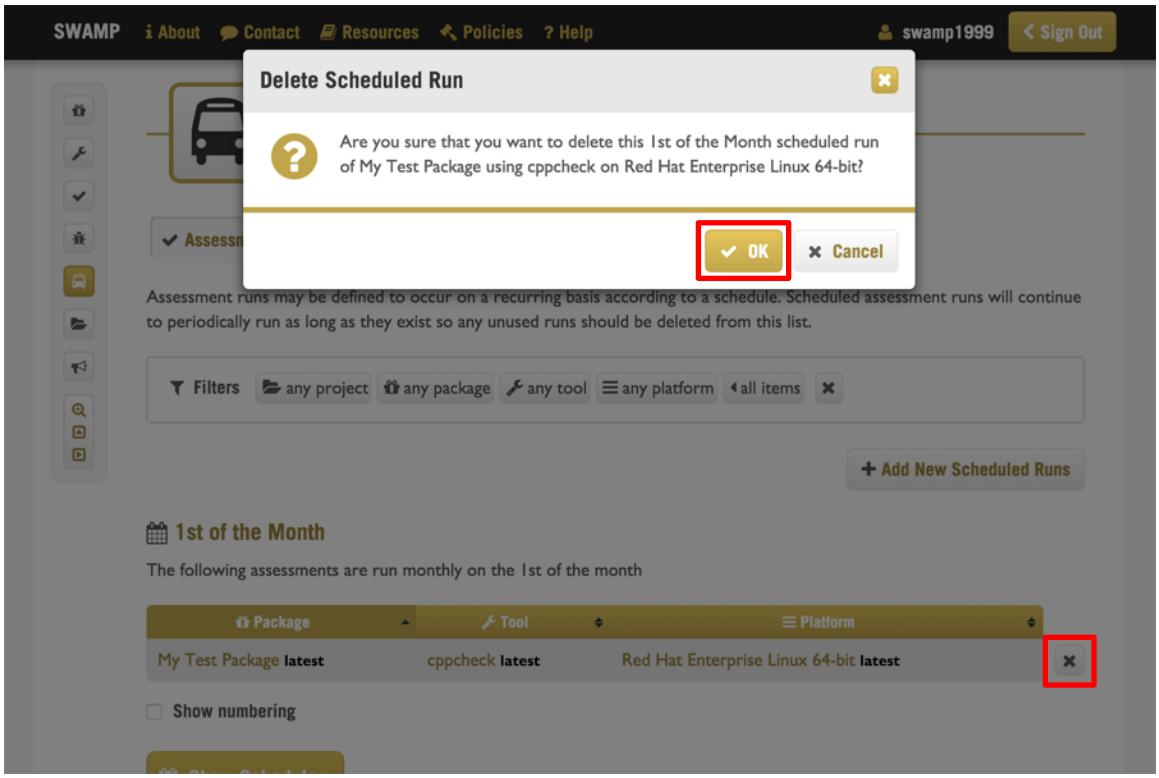
1. Sign in to your SWAMP account to get to your **Home** screen, and select **Runs**.

2. Select **Add New Scheduled Runs**. You will be taken to the Assessments page. Refer to Part 4 of this User Manual for how to create or select an Assessment.



Deleting a Scheduled Run

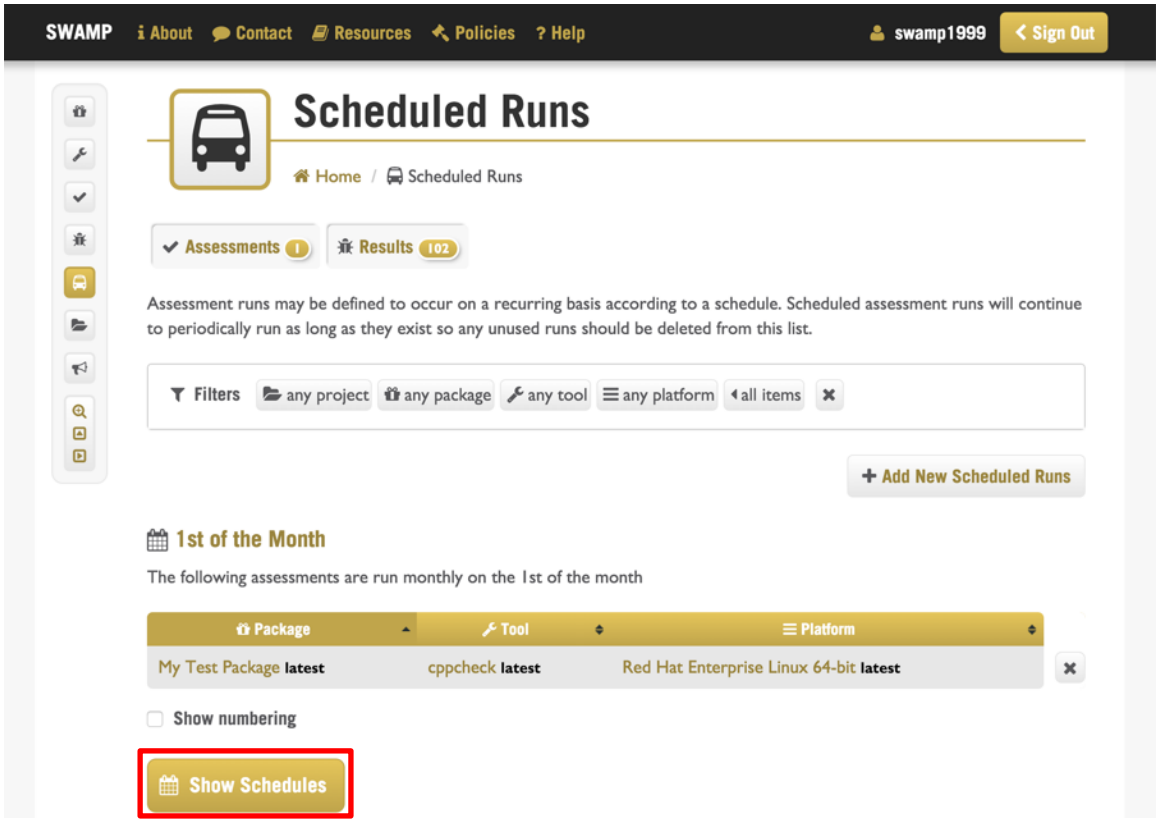
From the Scheduled Runs page, you can delete Scheduled Assessment Runs. Select the **X** next to the Platform column. Then select **OK**.



Schedules

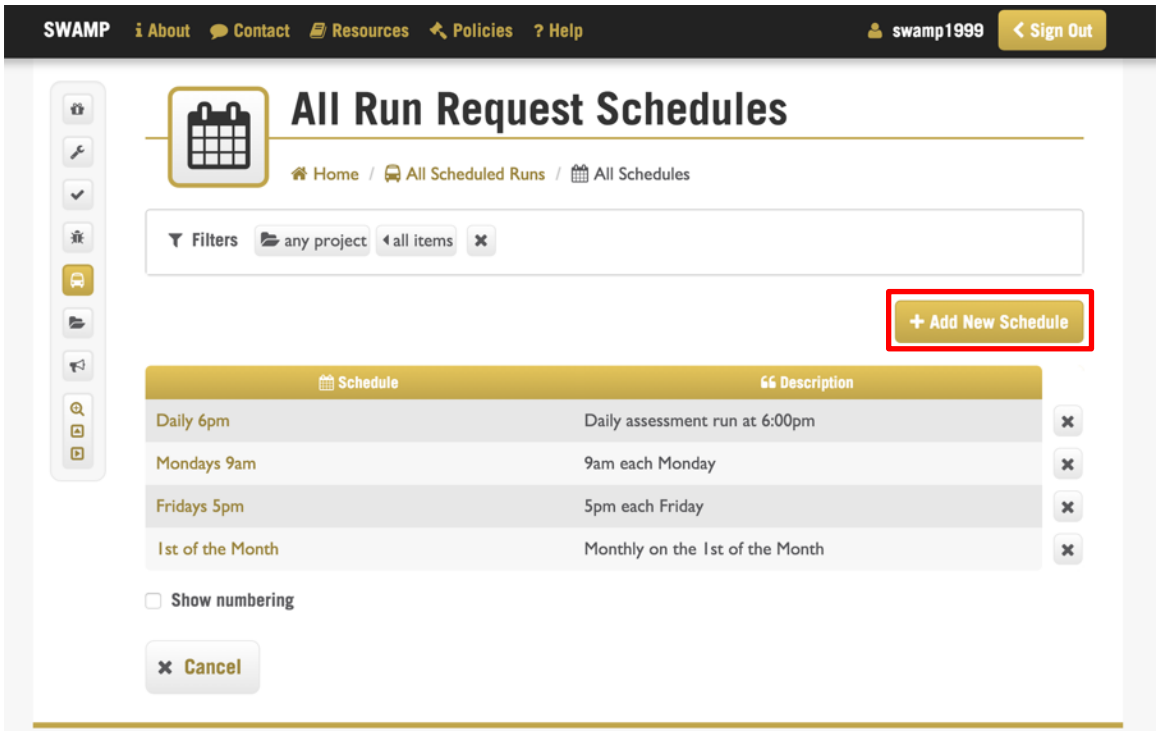
Schedules are templates that define when and how often an Assessment should Run.

From the Scheduled Runs page, select **Show Schedules** to go to the All Run Request Schedules page. This page allows you to view all schedules. You can also easily add, edit, or delete schedules.



Adding a Schedule

1. On the All Run Request Schedules page, select **Add New Schedule** to create a new schedule.

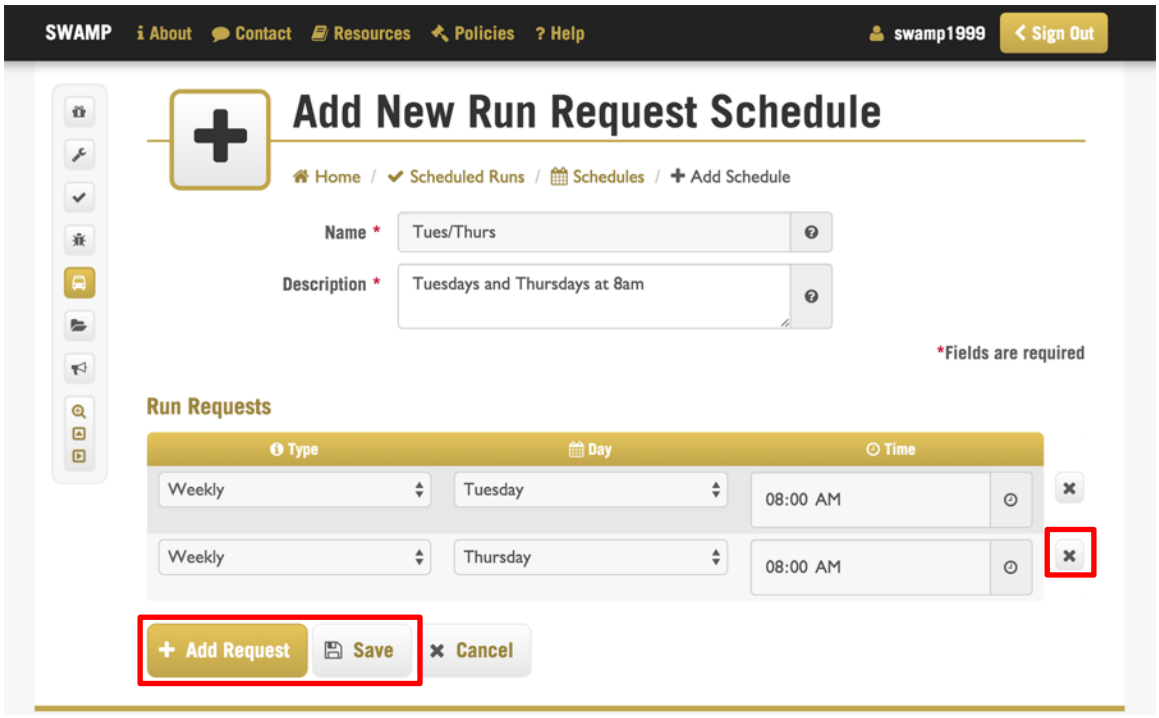


2. Give your schedule a meaningful name and description so that it is easy to select in the future. Select **Add Request**.

   Create the desired schedule in the Run Requests section. The options are Daily at a given Time, Weekly on a given Day of the week at a given Time, or Monthly on a given Day of the month at a given Time.

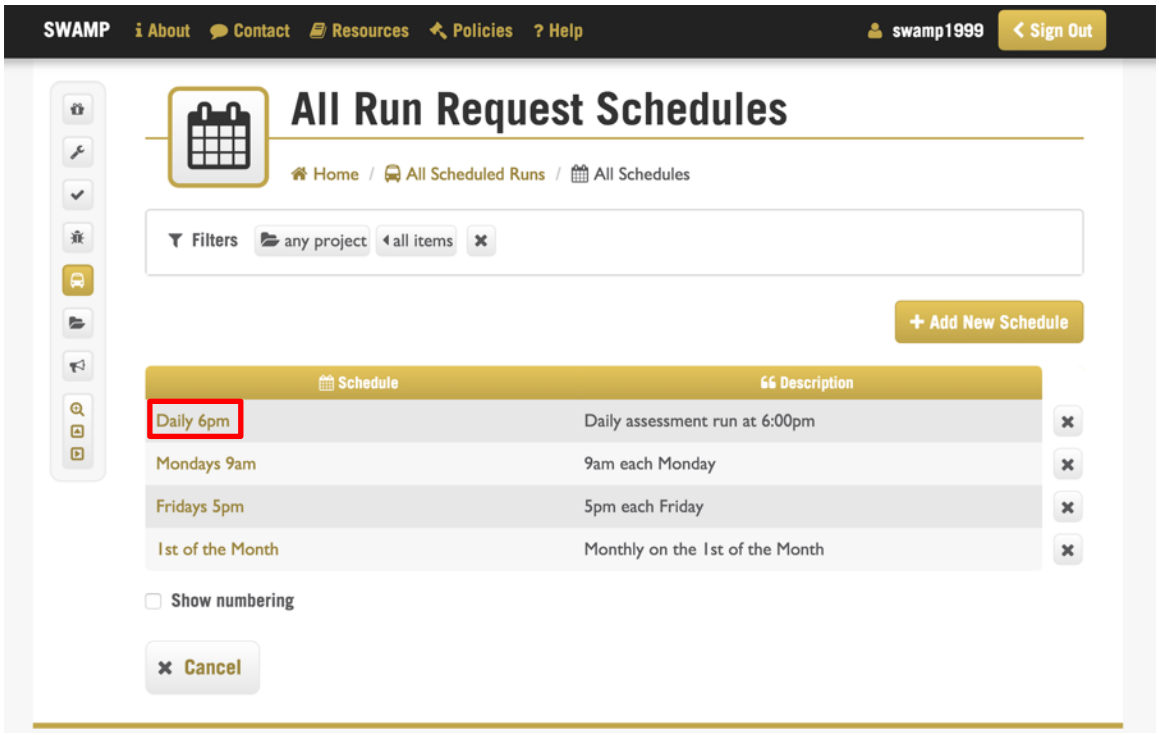
   Select **Add Request** to add multiple schedule items. Select the **X** next to the Time column to remove a schedule item. Then select **OK**.

   When finished, select **Save**.

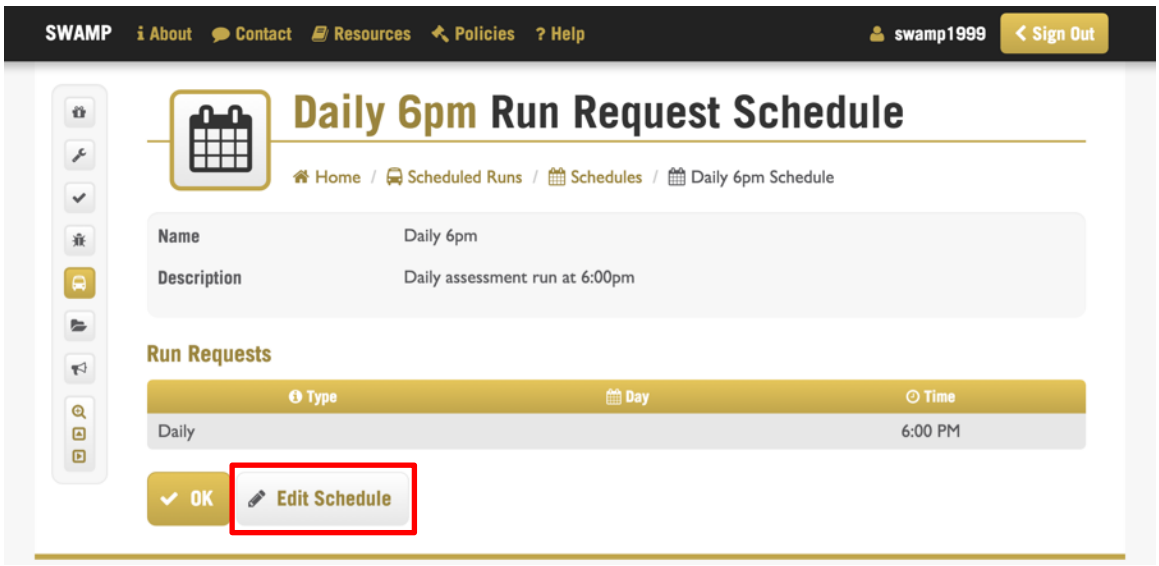


Editing a Schedule

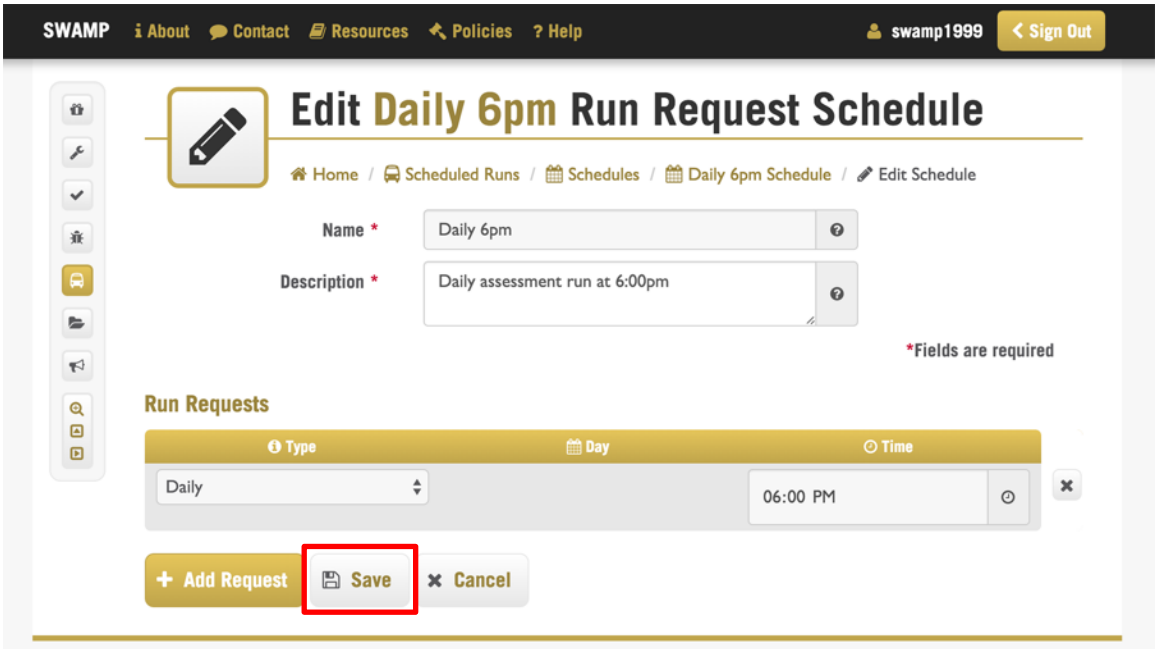
1. On the All Run Request Schedules page, you can edit an existing schedule by selecting the name of a schedule in the Schedule column.



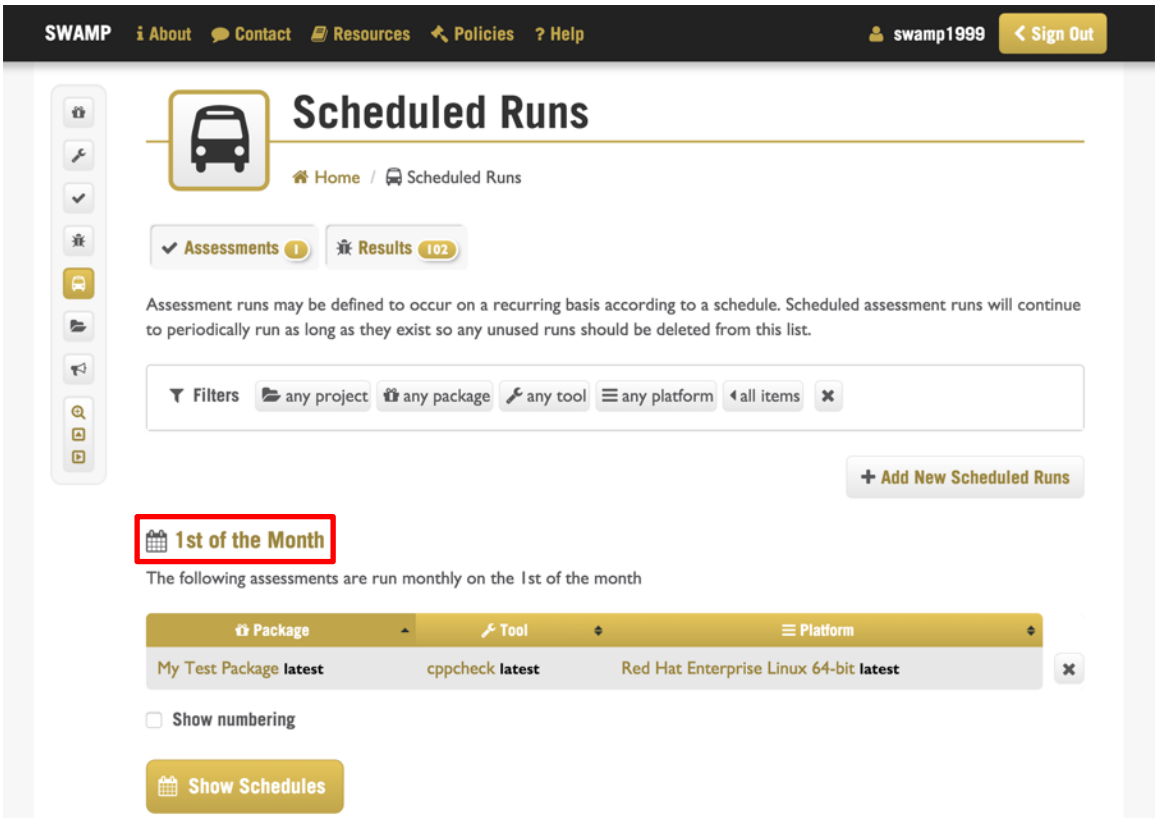
2. Select **Edit Schedule**.



3. Modify the schedule, and select **Save**.

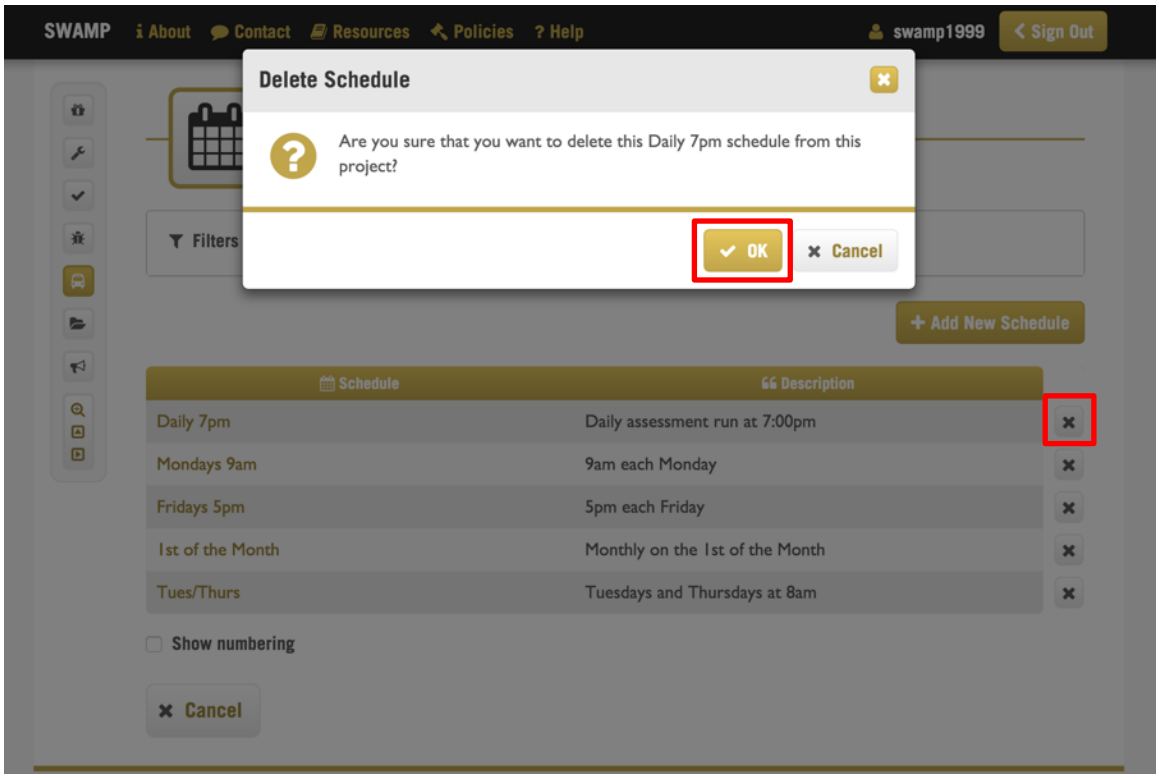


Alternatively, you can edit a schedule directly from the Scheduled Runs page. Select the name of a schedule to open the editing screen.



Deleting a Schedule

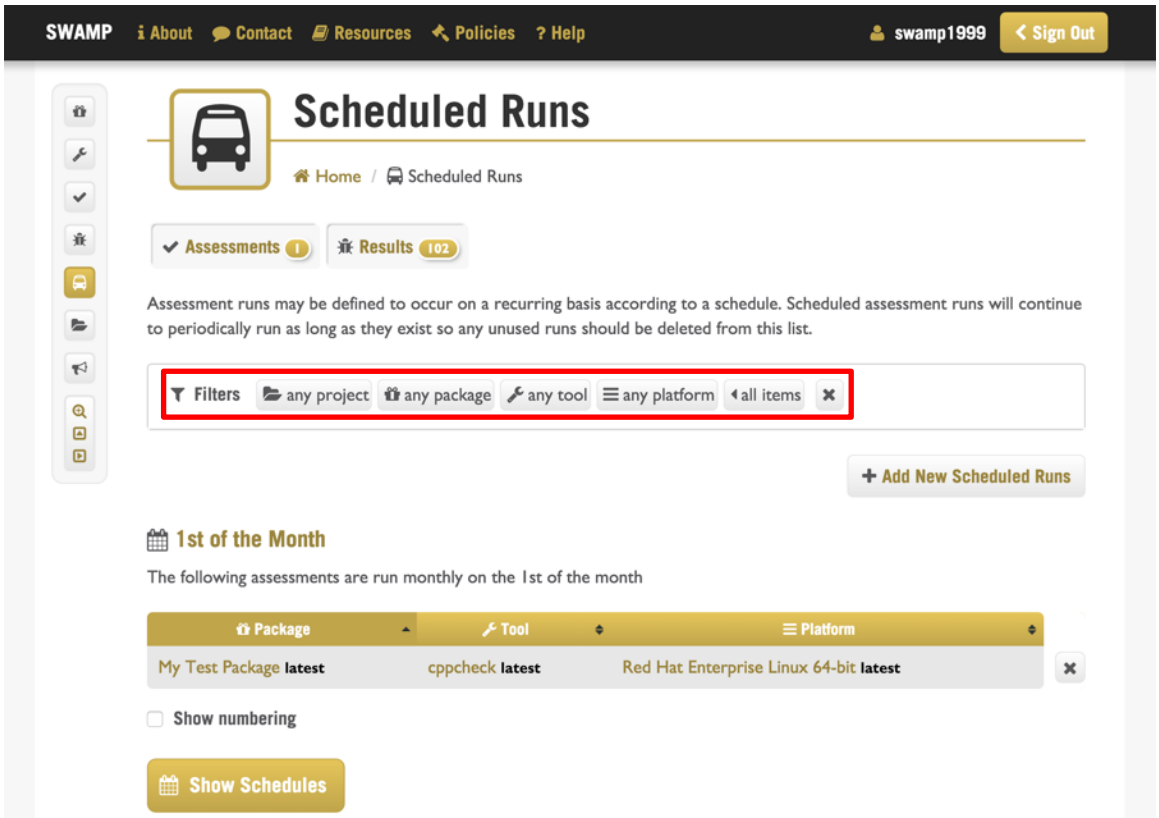
On the All Run Request Schedules page, you can delete a schedule by selecting the **X** next to the Description column. Then select **OK**.



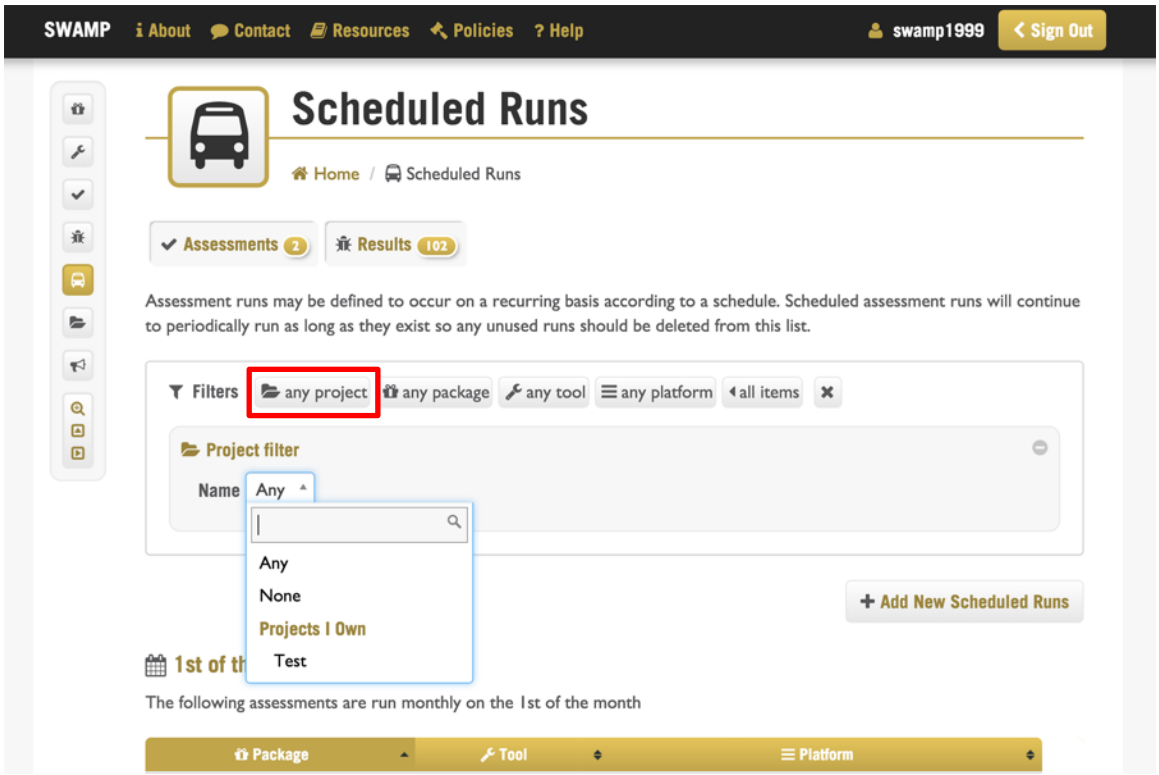
Run and Schedule Filters

Run Filters

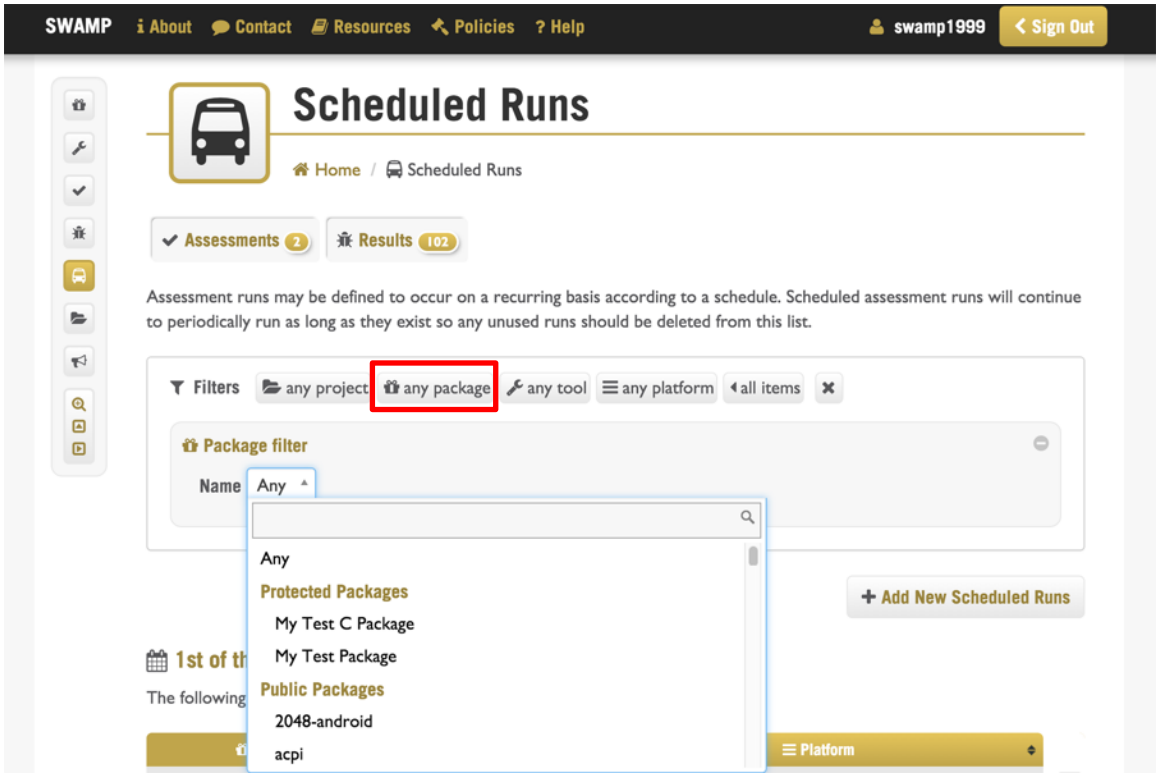
Filters on the Scheduled Runs page allow you to easily find a Run based upon its Project, Package, Tool, or Platform. You may choose more than one option. Each additional filter chosen will further restrict the set of returned Runs.



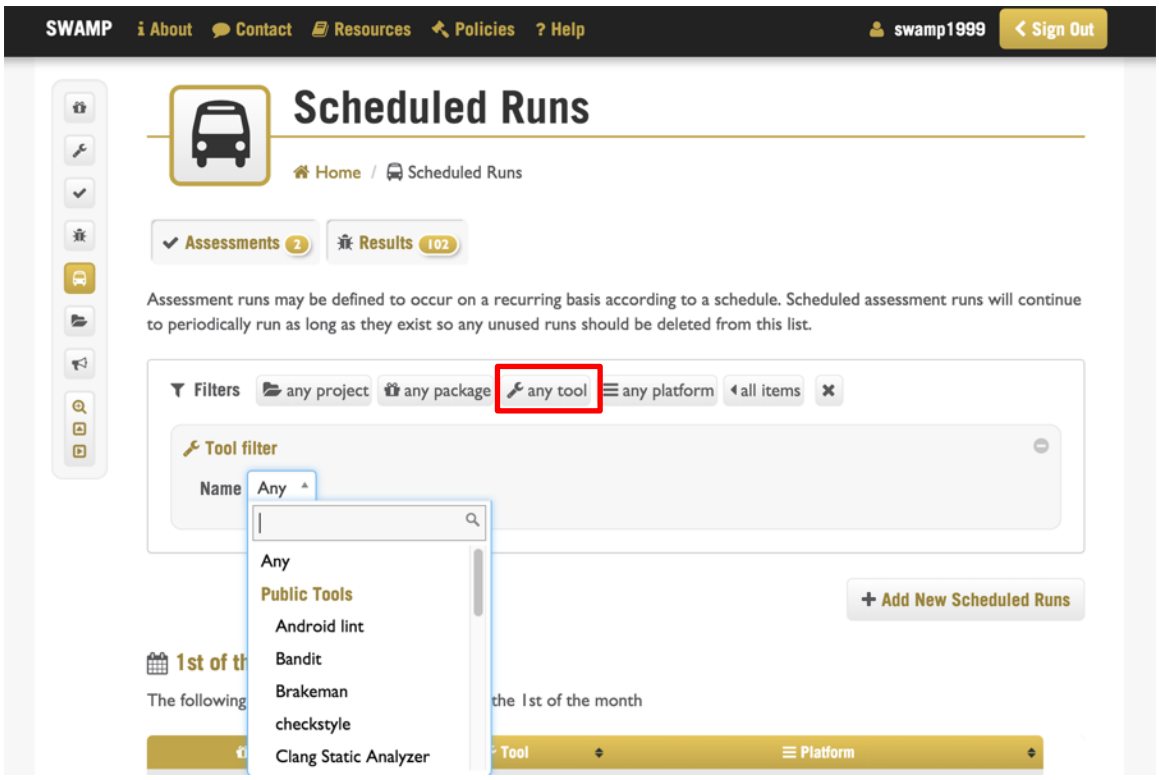
Select the Project filter to find Runs from Any, None, or a specific Project. In this case, None means your My Project.



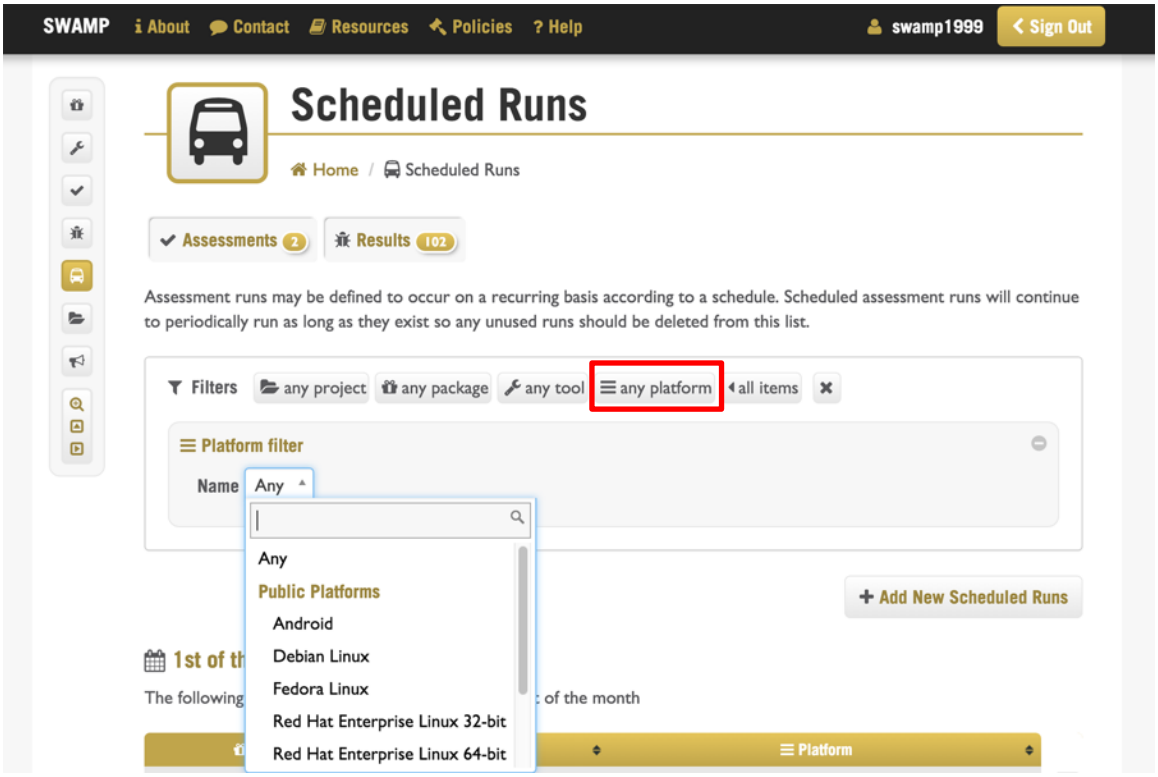
Select the Package filter to find Runs for a specific Package.



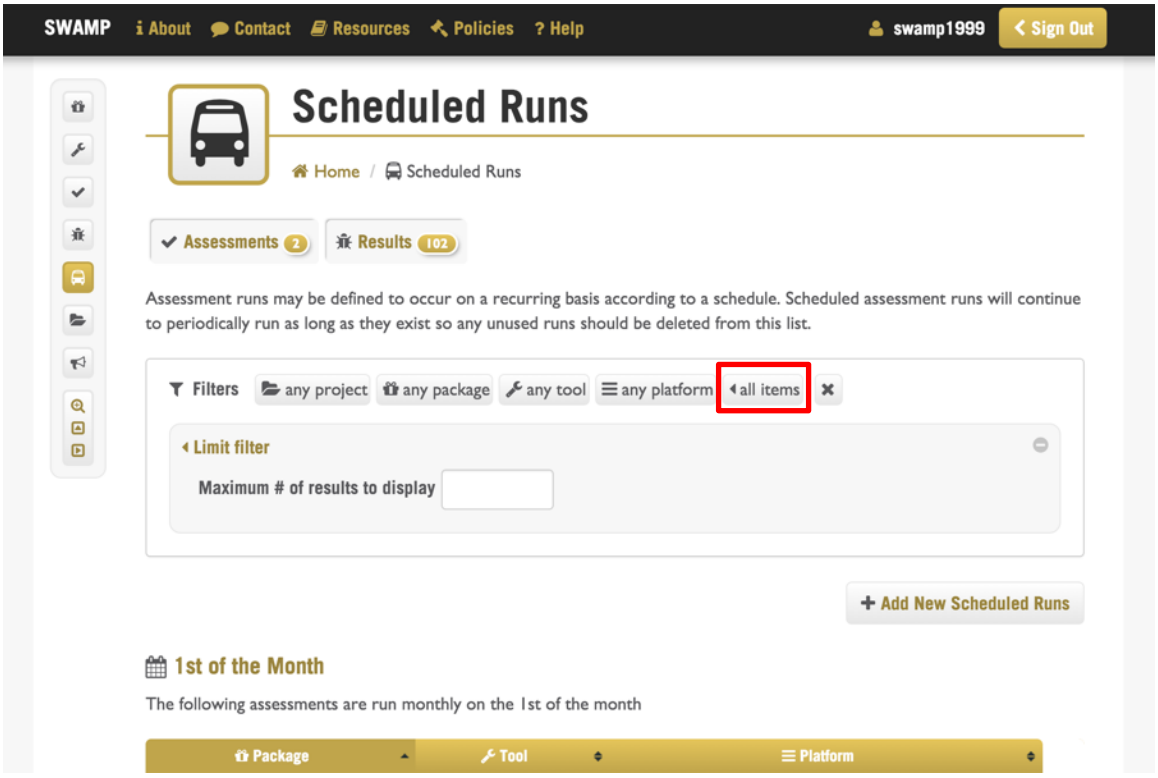
Select the Tool filter to find Runs using a specific Tool.



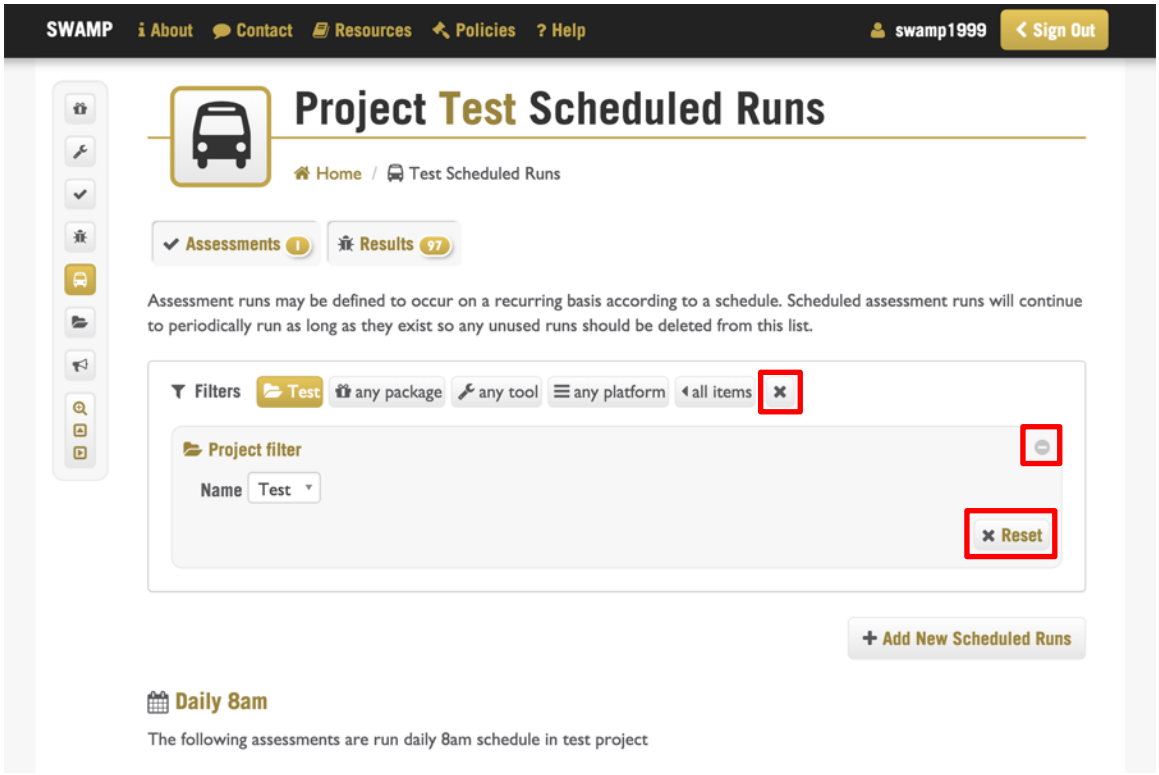
Select the Platform filter to find Runs on a specific Platform.

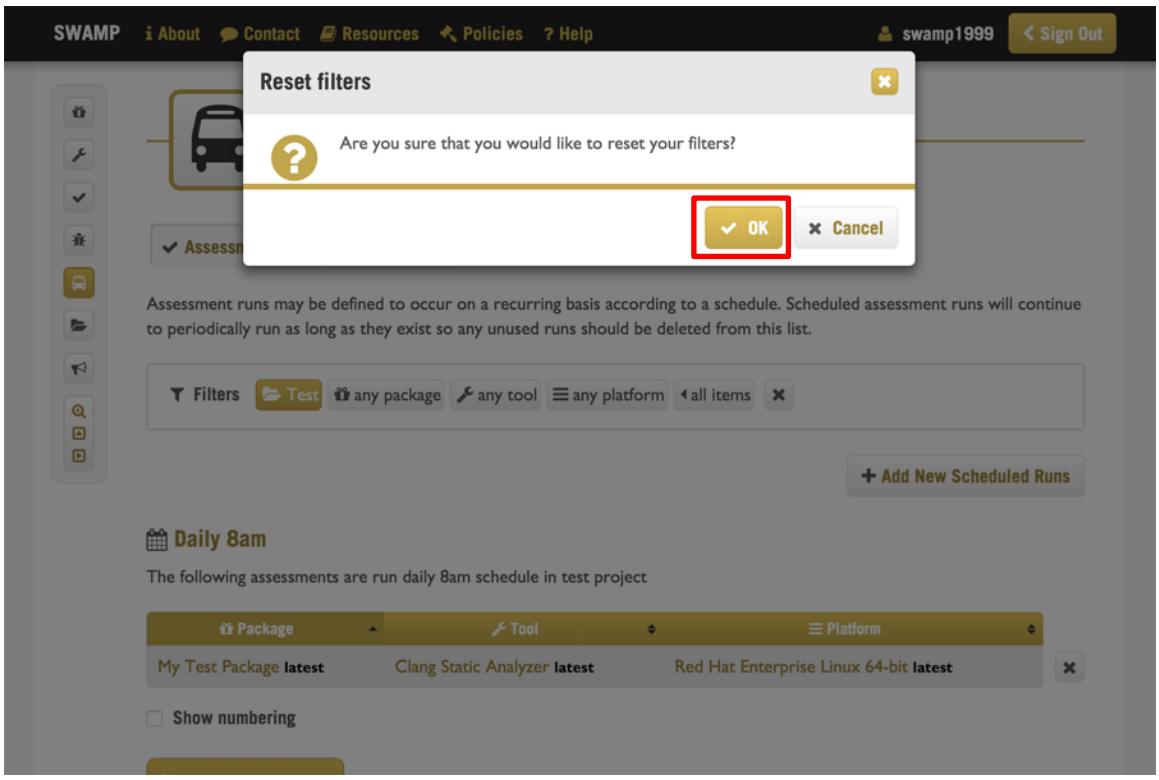


Select the Limit filter to limit the number of Runs displayed.



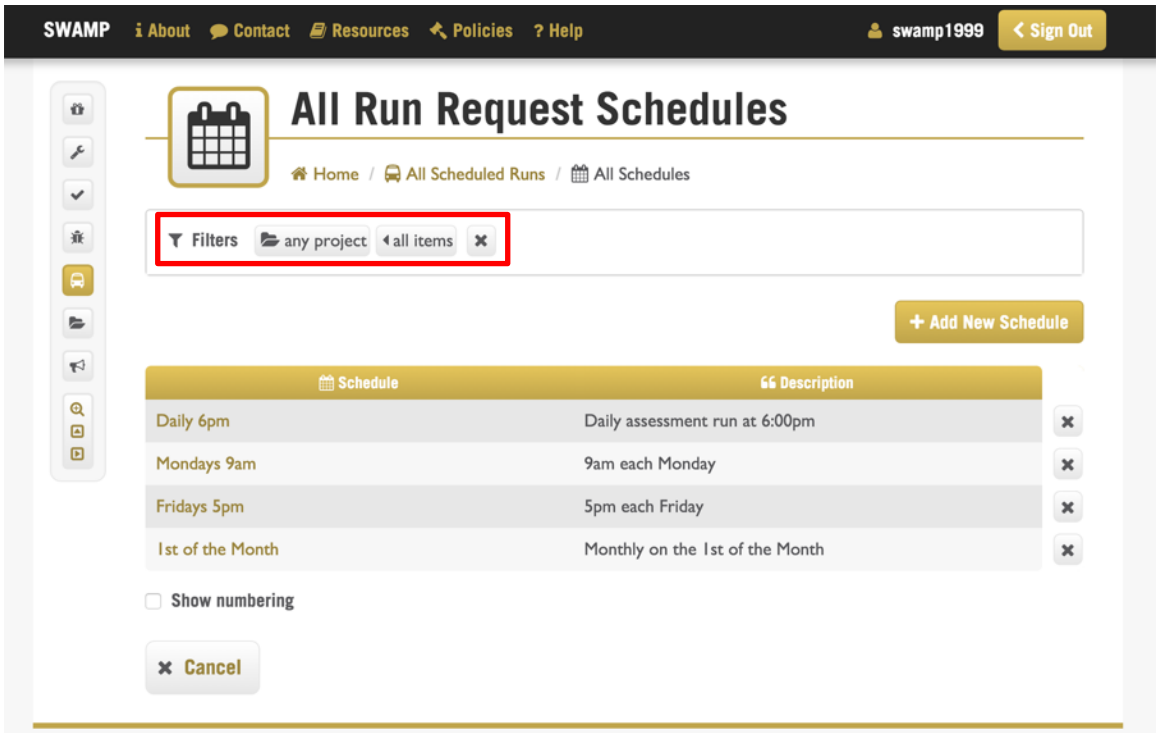
Select "**-**" to minimize or close an open filter. Multiple filters may be open simultaneously.
To reset the values for a single filter, open the filter, and select **Reset**.
To reset the values for all filters, select the **X**. Select **OK** to confirm the reset.



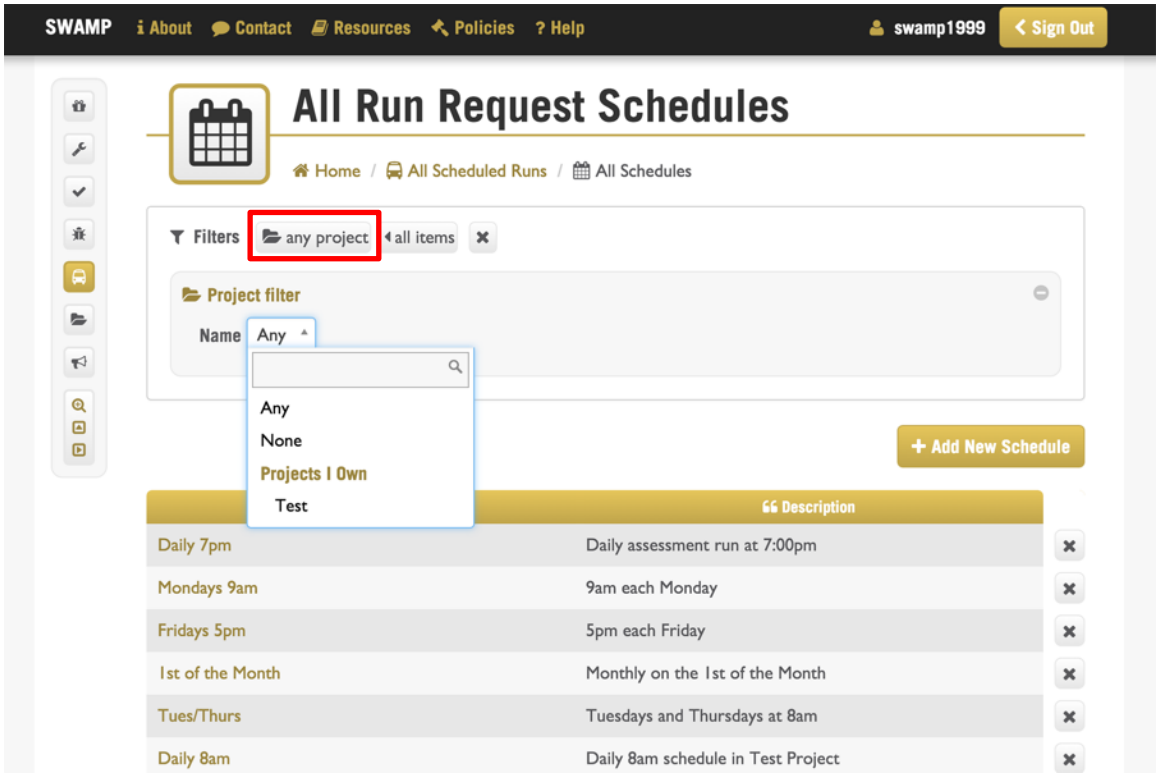


Schedule Filters

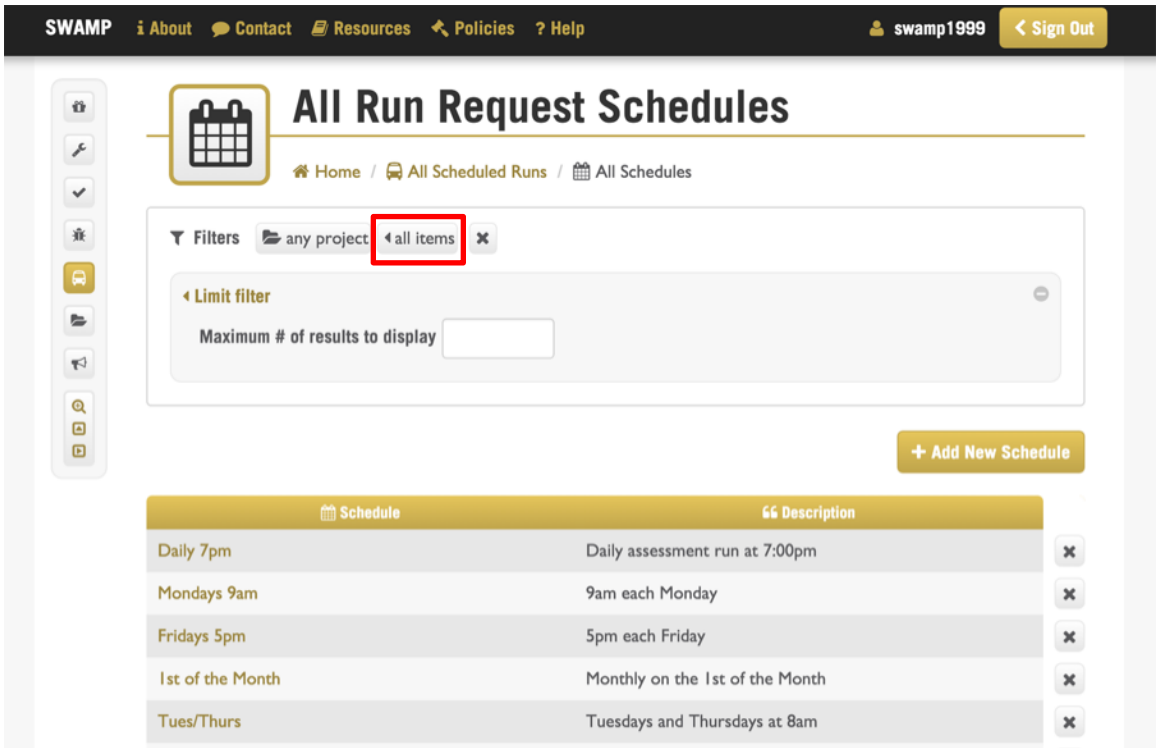
Filters on the All Run Request Schedules page allow you to easily find a Schedule based upon its Project.



Select the Project filter to find Schedules from Any, None, or a specific Project. In this case, None means your My Project.



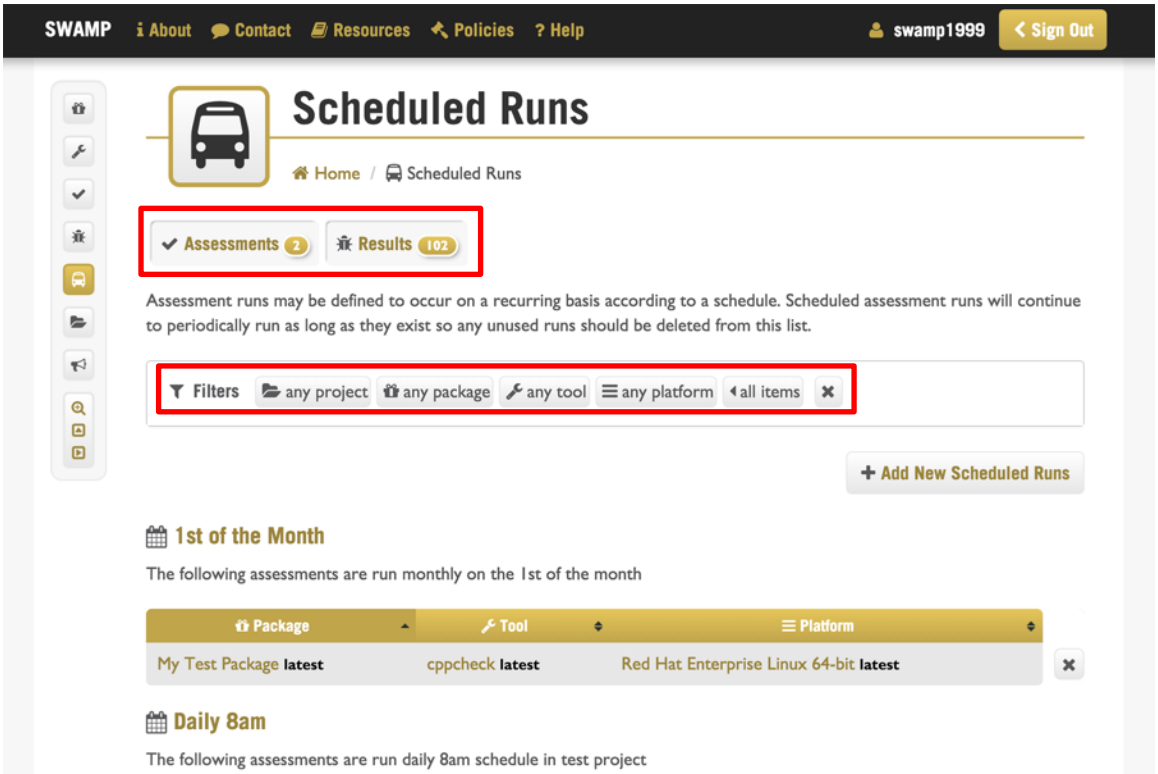
Select the Limit filter to limit the number of Schedules displayed.



Navigating Within Runs

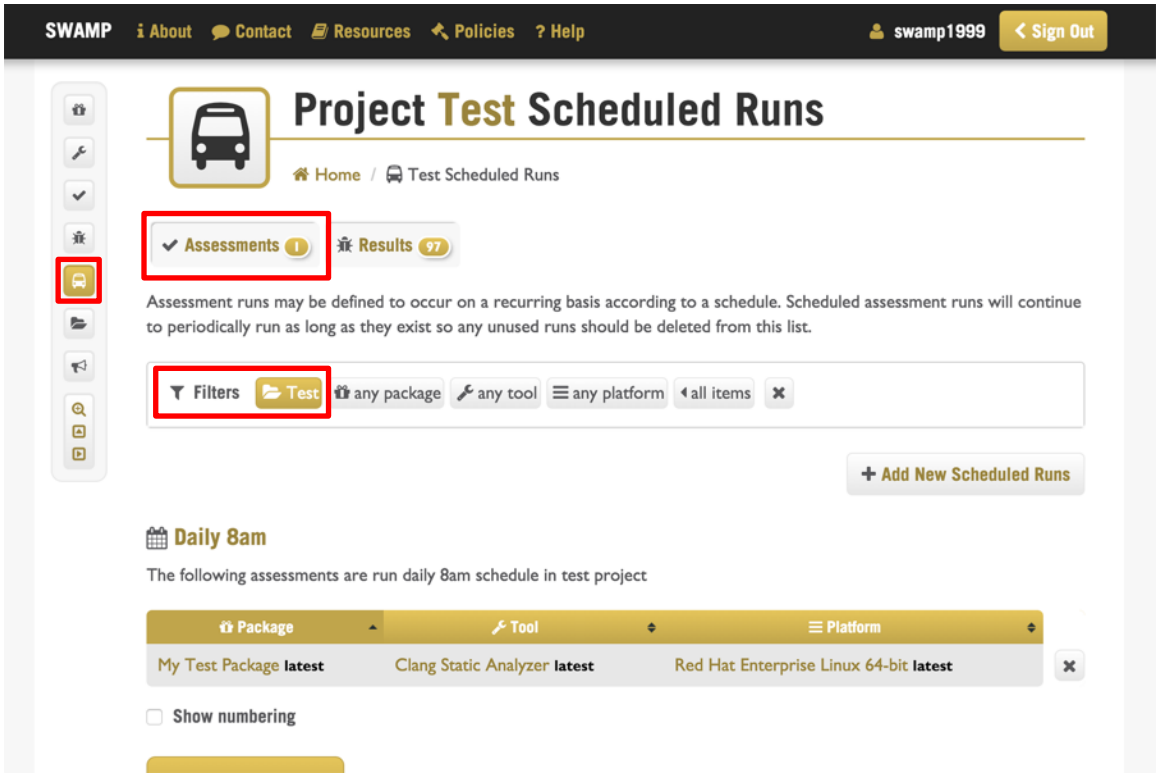
On the **Scheduled Runs** page, buttons located at the top of the page take you to the Assessments and Results pages.

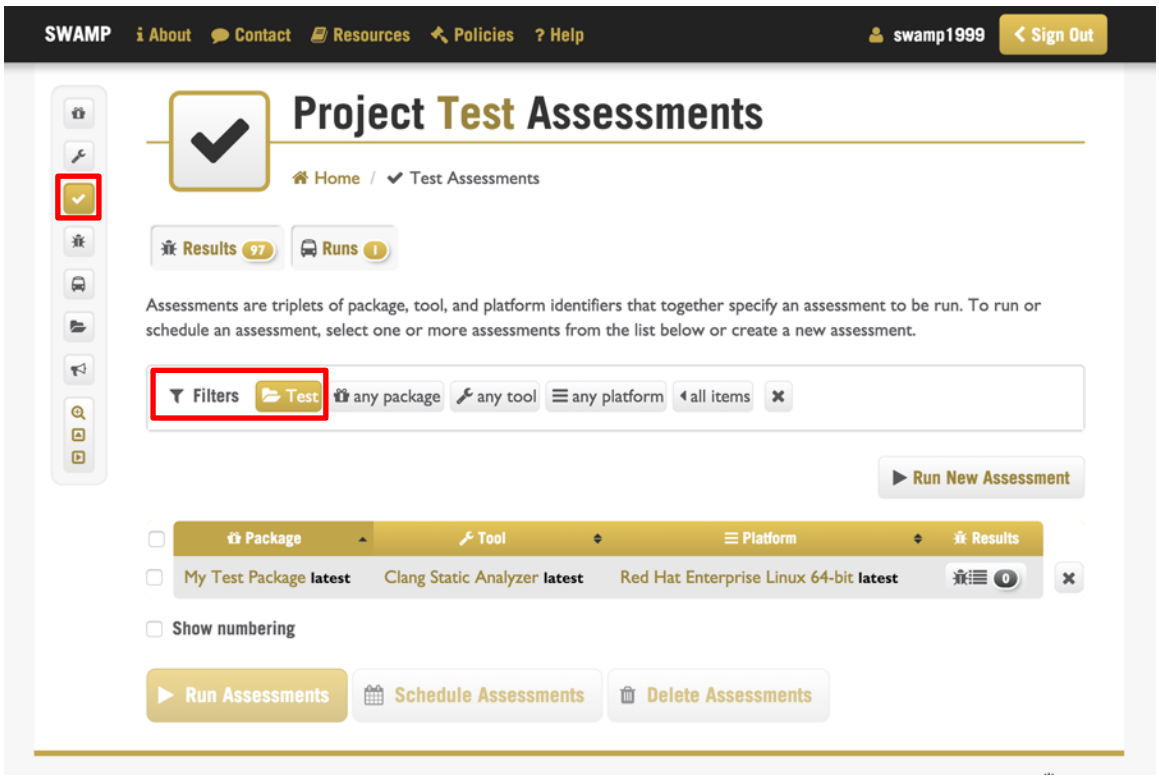
By default, no filters will be set when you arrive on the Assessments or Results pages.



If you set one or more of the Filters on the Scheduled Runs page, those filter settings will be preserved on the Assessments or Results pages, narrowing the list of Assessments or Results displayed.

For example, if you select “Test” in the Project filter on the Scheduled Runs page and select the Assessments button, the Project filter will also be set to “Test” on the Assessments page.





To return to your Scheduled Runs page, you will need to use the back button within your browser to preserve any filters set on that page. Alternatively, you can use the Navigation Bar to return to the Scheduled Runs page with no filters set.

Part 6: Results

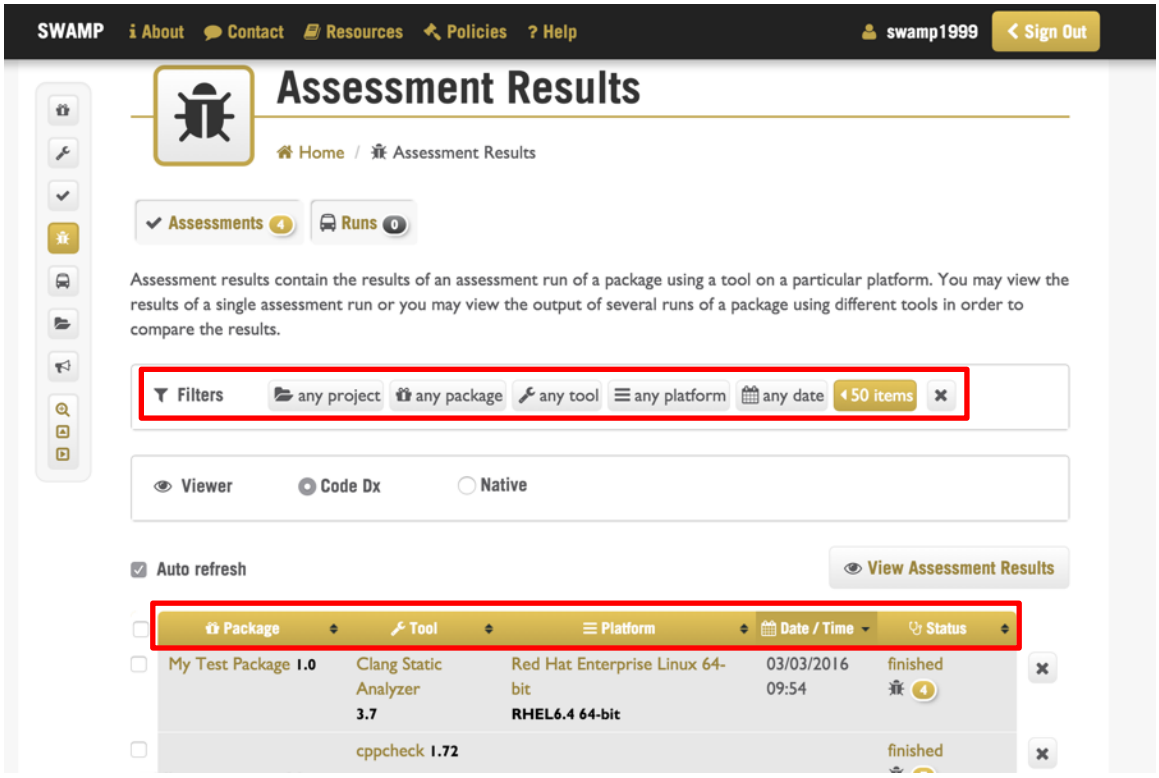
Assessment Results

After an Assessment is run in the SWAMP, the results of the assessment Tool on the chosen Software Package and Platform are available on the Assessment Results page.

1. Sign in to your SWAMP account to get to your **Home** screen, and select **Results**.

2. The **Assessment Results** page displays a list of all of your currently running and completed Assessment Runs.

   By default, the list is organized by most recent activity and the Limit filter is set to display 50 results. You may apply different filters or click a column header on the results table to sort the results differently.



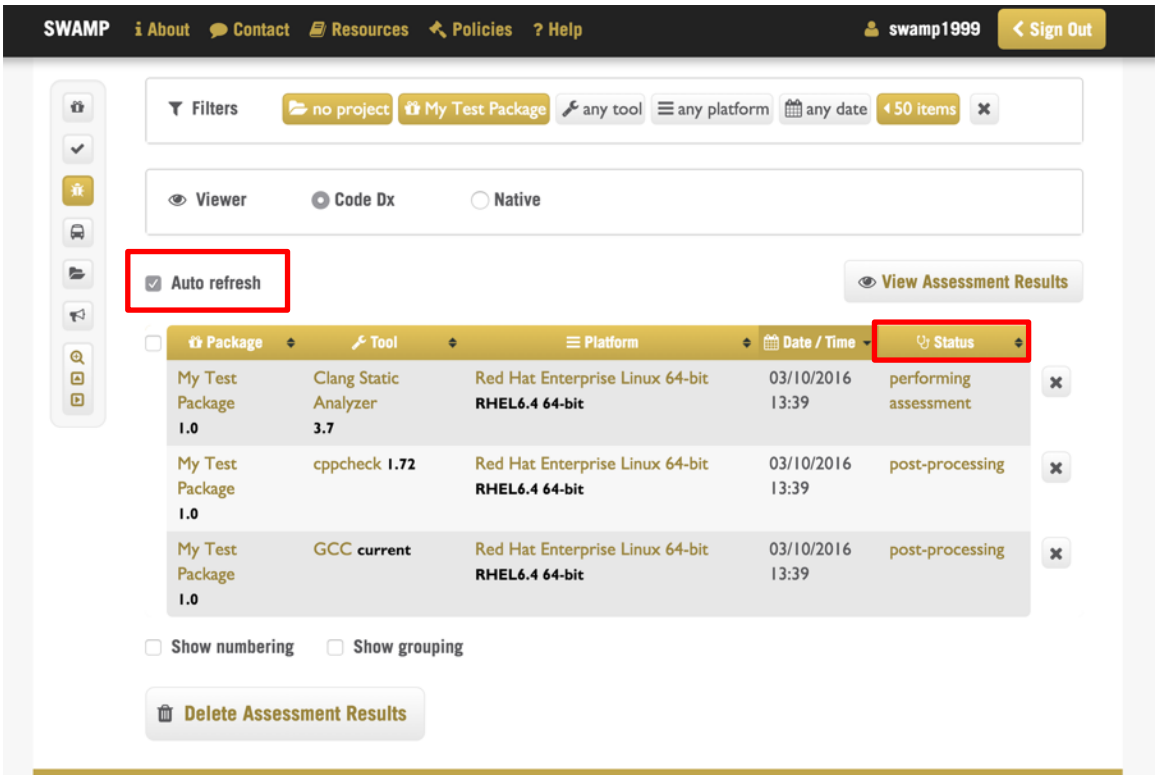
Assessment Run Status

While running, Assessments in the SWAMP may proceed through any number of the following states, viewable in the Status column on the Results page:

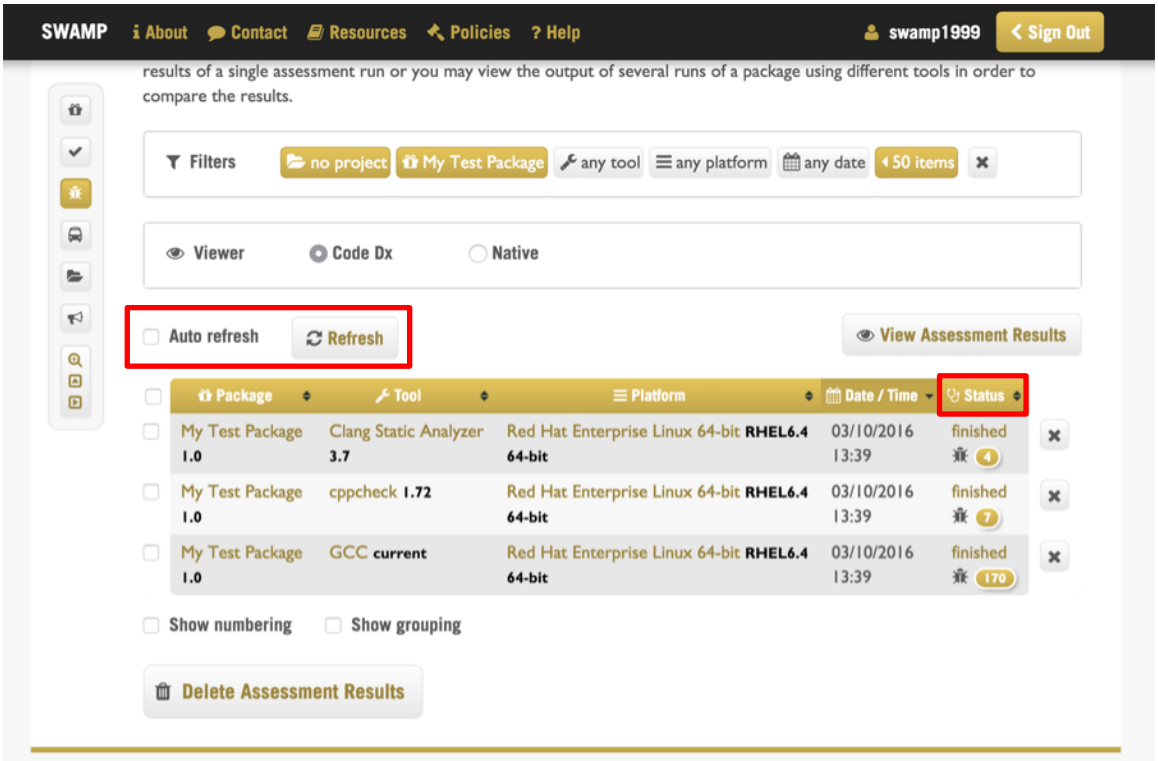
1. **Scheduled**: The Scheduled state happens after you create a Run for the Assessment.
2. **Enqueued**: The system begins to process a Scheduled Run.
3. **Running**: The Assessment has begun processing.
4. **Submitted to HTCondor**: The Assessment job has been submitted to HTCondor for execution.
5. **Starting virtual machine**: The system is setting up the environment for the Assessment.
6. **Performing assessment**: The Assessment is being executed.
7. **Post-Processing**: The Assessment has finished and results are being processed.
8. **Saving Results**: The Results are being saved.
9. **Finished:** The scheduled Run has completed successfully, and Assessment Results are available.

10. **Finished with errors:** Your build has failed due to an incorrect Build System and/or incompatibilities between the Software Package and the selected Platform.
11. **Unable to run, queued** or **Unable to start VM:** There are incompatibilities between the chosen Platform and Software Package.
12. **Invalid**: Assessment failed to launch after being scheduled, possibly due to the Package, Tool, or Platform not being shared with the Project or the Project or User Account being disabled.
13. **Error**: The Assessment was unable to be processed.
14. **Waiting for resources**: Resources are being determined to run the Assessment.

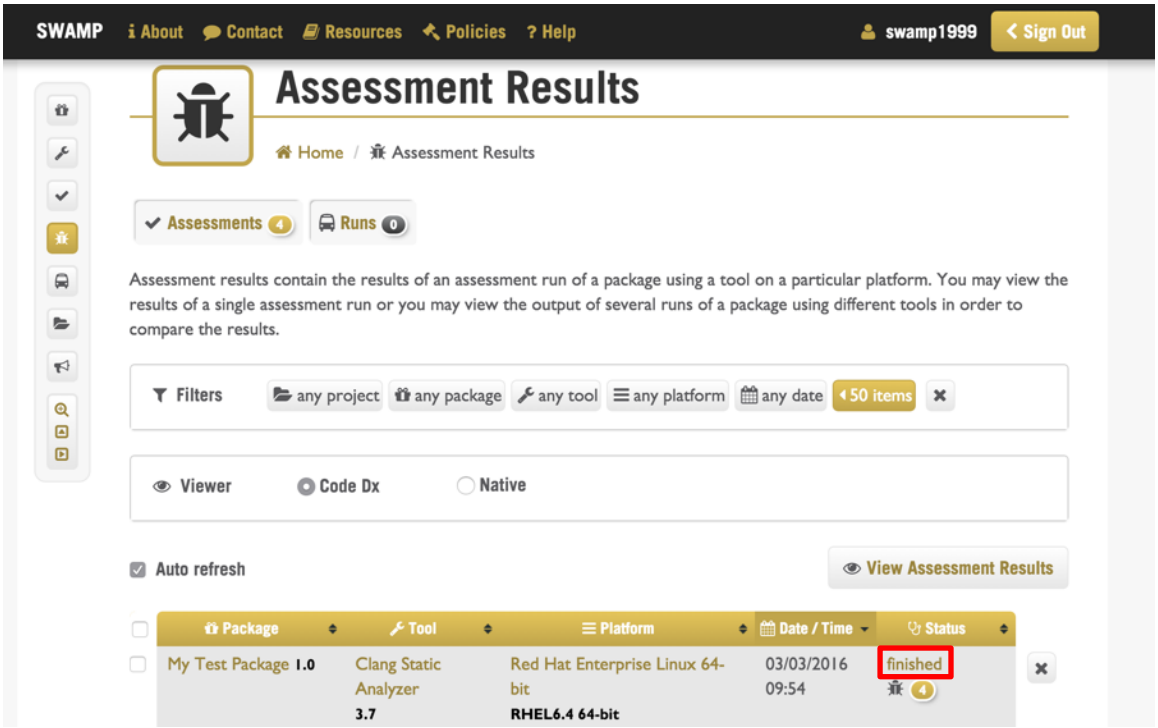
By default, the **Auto refresh** setting is enabled, refreshing the Assessment Results table every few seconds. For Assessments that are actively running, the Status column will update to reflect the current status.



To disable automatic refreshing, uncheck the box for Auto refresh. Select the Refresh button to manually refresh the Assessment Results table.

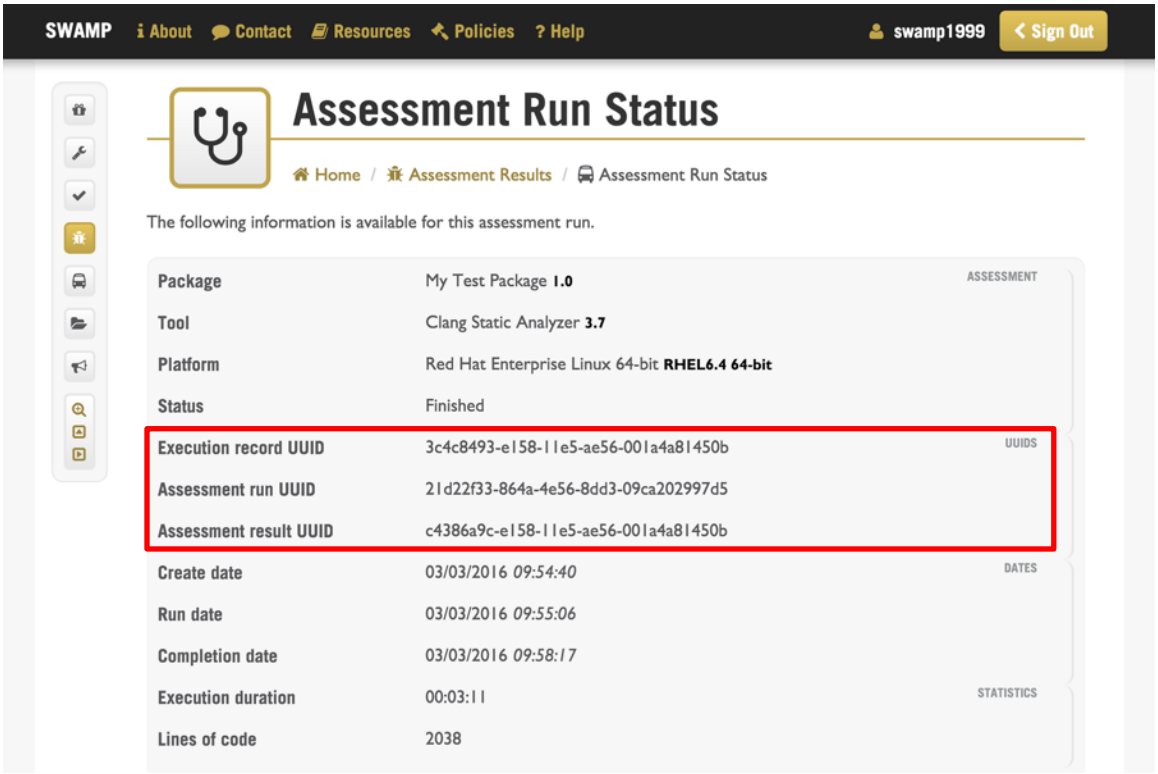


To view details about an Assessment, click the name of the status in the **Status** column to go to the Assessment Run Status page.



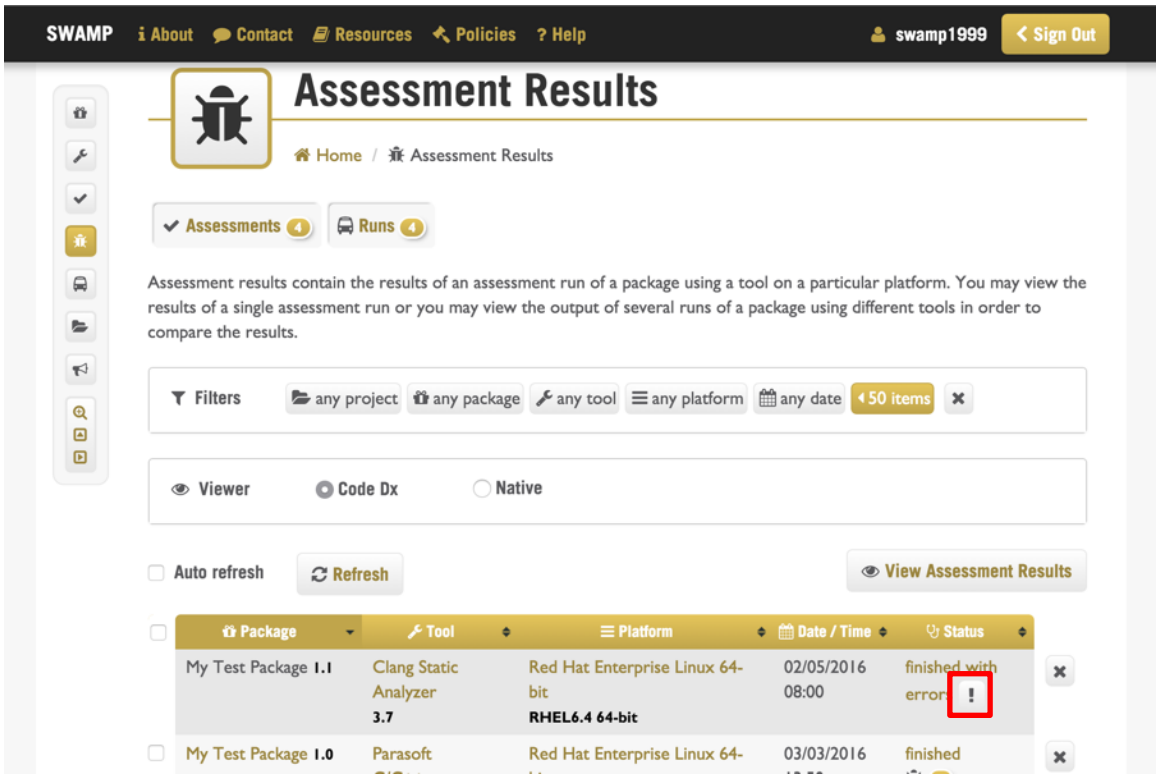
UUID (Universal Unique IDentifier)

The Assessment Run Status page contains details about an Assessment, including UUIDs (Universal Unique IDentifiers). The UUIDs assigned to each Assessment Run, Assessment Result, and Execution Record help SWAMP support staff address support tickets without requiring personal information. If you submit a support ticket, UUID information may be requested.



Viewing an Error Report

In the event that an Assessment finishes with errors, an error report is available for troubleshooting. On the Assessment Results page, select the **!** button in the Status column for an assessment that "finished with errors."



****Note:** *When an Assessment has "finished with errors" the results cannot be viewed in the SWAMP. (There is no check box on the left of the Package column to select the results for viewing.) You must review the error report, address the problem with the package, and re-run the assessment. Contact the SWAMP if additional support is needed.*

The Failed Assessment Report contains information to help you address problems with the Software Package. Refer to Part 7 of this User Manual for more information about Troubleshooting, or contact the SWAMP if additional support is needed.

Failed Assessment Report

- Error messages from assessment
- Standard out
- Standard error
- Version information
- Download all failed results as a single file

Error messages from assessment

Failing Step	Error Message
configure	./configure failed exec error (No such file or directory) at /mnt/in/build_assess_driver line 929.

Standard out

FILE: build/configure_stdout.out from out/build.tar.gz

Standard error

FILE: build/configure_stderr.out from out/build.tar.gz
Can't exec "./configure": No such file or directory at /mnt/in/build_assess_driver line 708.

Version information

Component	Version
SWAMP	1.24.1244
ruby-assess	0.9.4
c-assess	1.0.4
java-assess	2.1.7
python-assess	1.0.4
resultparser	2.1.7

Report generated: Fri Mar 4 18:40:36 2016

Viewing Results

The SWAMP supports multiple results viewers.

1. The SWAMP's **Native** viewer provides a basic, HTML-based summary.

2. **CodeDx**™ is a third-party, integrated results viewer. More information about CodeDx™ is available at http://securedecisions.com/products/codedx/.

To view the Results of your Assessments, you will need to select a results viewer along with Assessment Results.

1. Select the option for the desired results viewer, CodeDx or Native.

***Note:** Results from the RevealDroid tool can only be viewed using the SWAMP's Native viewer.*

2. Check the box to the left of the Package column corresponding to one or more finished Assessments. Only Assessment runs marked "finished" in the Status column can be viewed with a results viewer.

***Note:** Assessment Results are associated with Projects. To view multiple Assessment Results in the same CodeDx viewer, the Package name and version must match.*

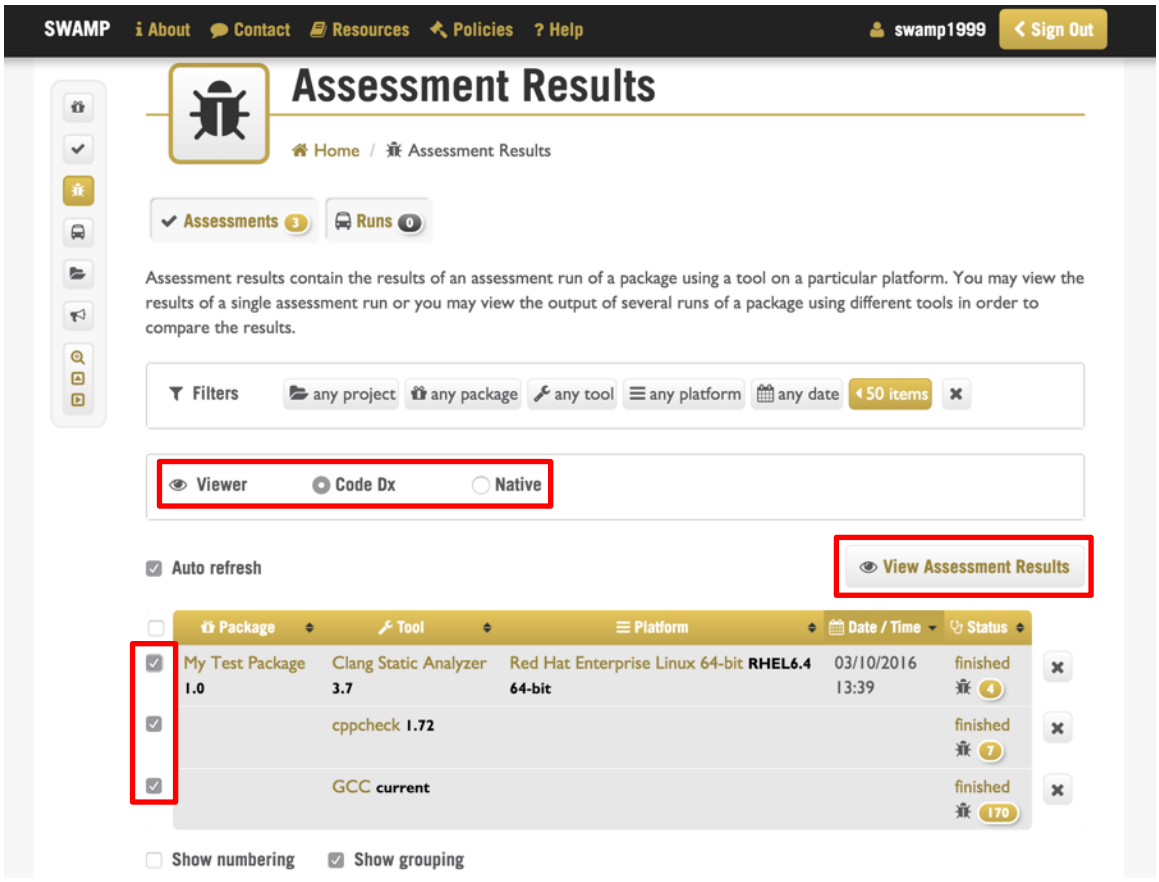
***Note:** Shift+click will allow you to select a range of check boxes.*

***Note:** If you created several Assessments using the All tools option described on page 129, you can easily select all of the related Assessment Results at once. Check the box to **Show grouping** to sort these related Assessment Results together.*

In this view, checking the box next to the first Result in the group will also select all related Results below it, allowing you to easily select and view all related Results for that Package at once. Notice that the related Results share the same background shading. Also, subsequent values in the table are left blank to indicate that they have the same value as the first row/Result in the group.

3. Select **View Assessment Results**.

***Note:** If you have already viewed Assessment Results in CodeDx, you do not need to re-select the Results to view them again; this will prevent re-loading the same Results into CodeDx. Simply select the CodeDx viewer and **View Assessment Results** without selecting individual Results. You will receive a notification about launching CodeDx with the Results that you previously viewed. Currently, CodeDx will hold up to 5 different Assessment Results for each Project and preserve status changes and annotations saved in previous sessions.*



4. The Results will open in a new window.

***Note:** *If you do not see your Results, make sure that your browser's pop-up blocker is not blocking the window. It is recommended that you allow pop-ups from https://www.mir-swamp.org.*

Native Viewer

If you choose to view multiple Results using the Native viewer, a separate window will open to display the Results identified by each assessment Tool.

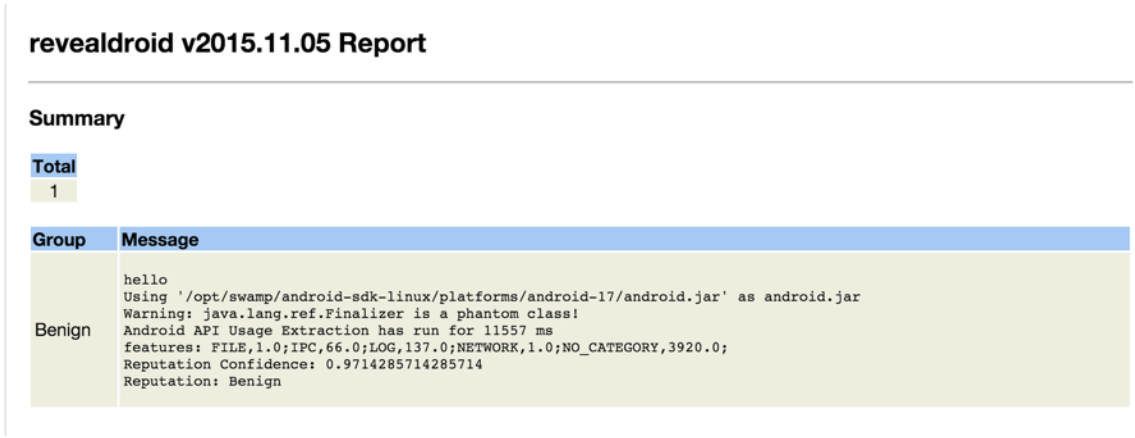
Cppcheck 1.70 Report

Summary

Total	error	warning	style	performance	portability	information
7	2	1	0	0	4	0

Severity	File	Line	Message
error	snappy-c-master/scmd.c	152	Resource leak: fd
portability	snappy-c-master/snappy.c	244	'iv.iov_base' is of type 'void *'. When using void pointers in calculations, the behaviour is undefined.
portability	snappy-c-master/snappy.c	273	'iov.iov_base' is of type 'void *'. When using void pointers in calculations, the behaviour is undefined.
portability	snappy-c-master/snappy.c	294	'iov.iov_base' is of type 'void *'. When using void pointers in calculations, the behaviour is undefined.
error	snappy-c-master/map.c	28	Memory leak: map
warning	snappy-c-master/sgverify.c	180	%d in format string (no. 4) requires 'int' but the argument type is 'unsigned int'.
portability	snappy-c-master/sgverify.c	44	'p' is of type 'void *'. When using void pointers in calculations, the behaviour is undefined. Arithmetic

Results from the RevealDroid tool can only be viewed using the Native viewer.



revealdroid v2015.11.05 Report

Summary

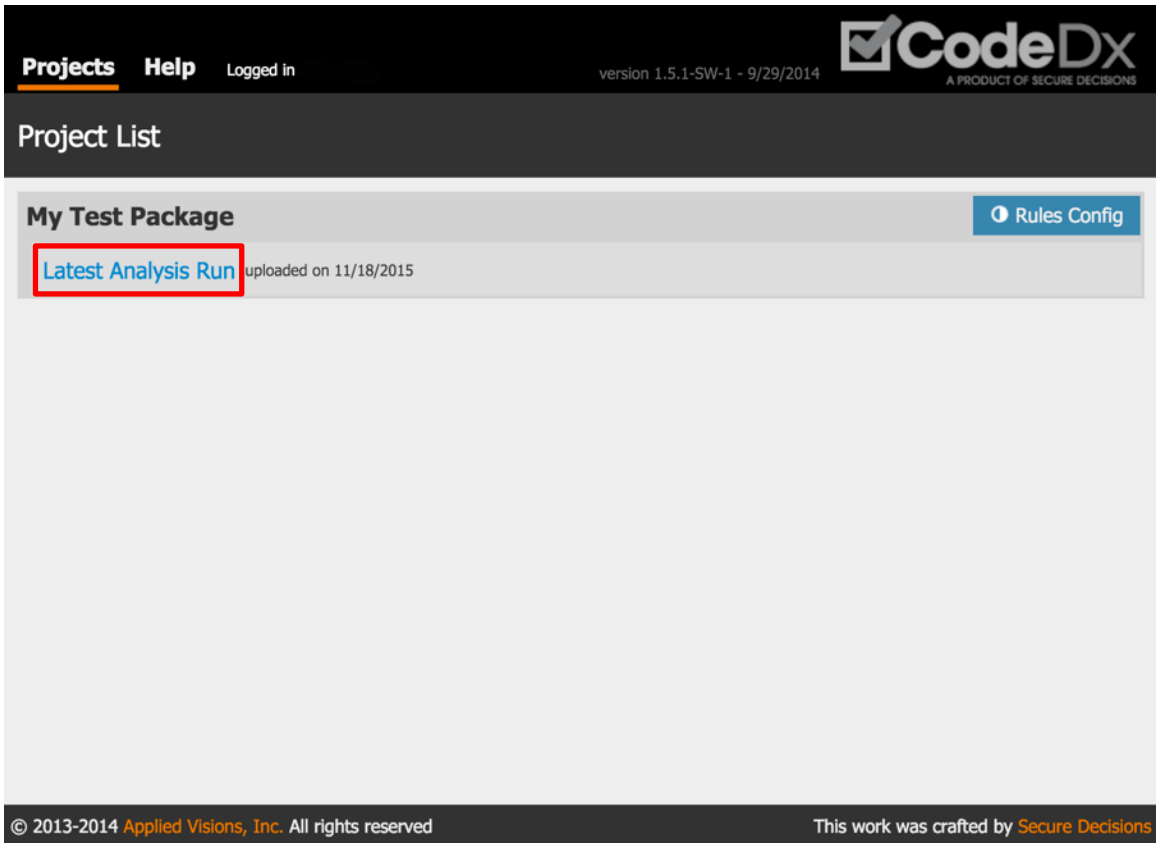
Total
1

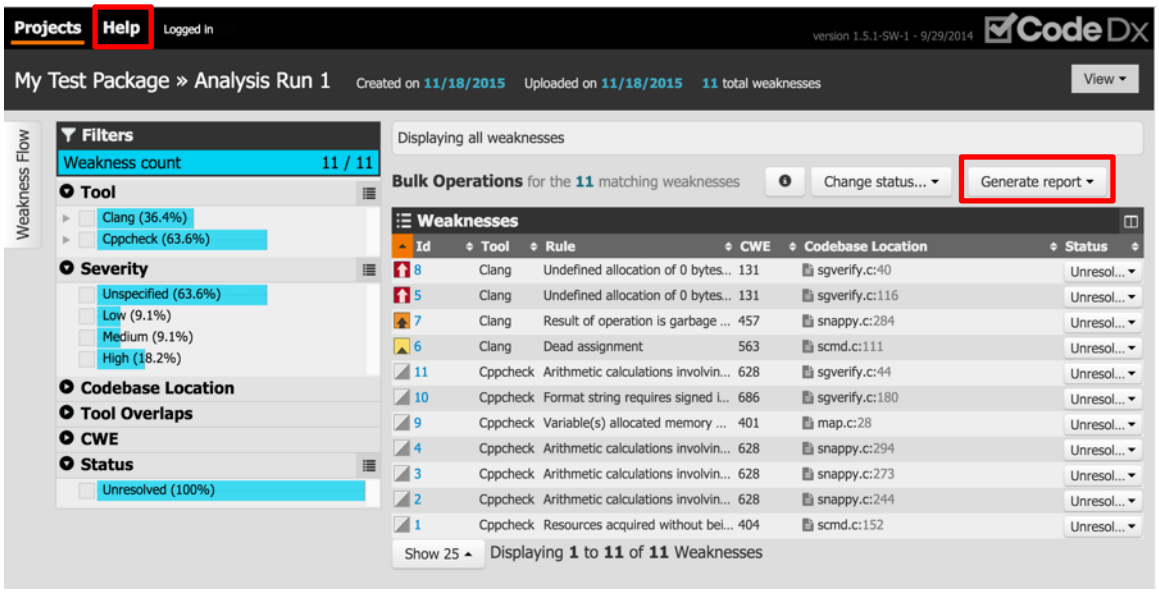
Group	Message
Benign	hello Using '/opt/swamp/android-sdk-linux/platforms/android-17/android.jar' as android.jar Warning: java.lang.ref.Finalizer is a phantom class! Android API Usage Extraction has run for 11557 ms features: FILE,1.0;IPC,66.0;LOG,137.0;NETWORK,1.0;NO_CATEGORY,3920.0; Reputation Confidence: 0.9714285714285714 Reputation: Benign

CodeDx Viewer

If you choose to view multiple Results using CodeDx, the Results from all assessment Tools will be viewable together in a single CodeDx window.

On the CodeDx Project List page, select **Latest Analysis Run** to open your results.



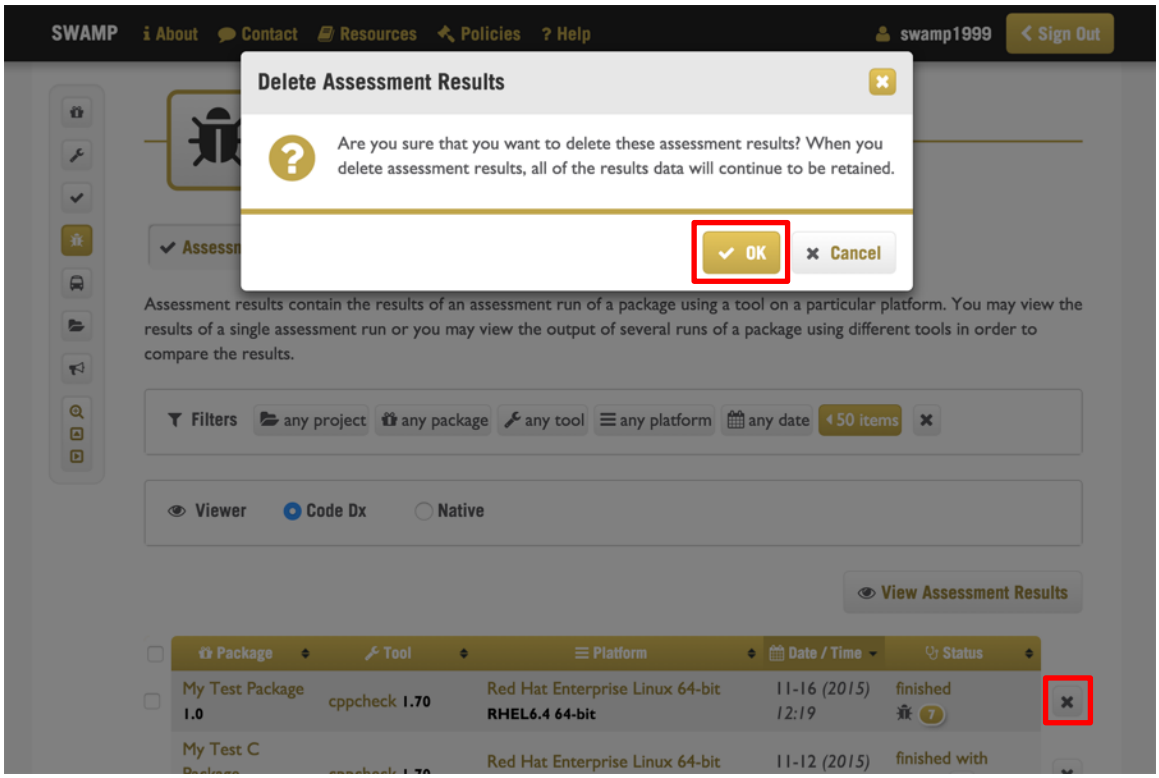


For more information about using the CodeDx Viewer, select **Help** to open the CodeDx User Guide to Sections 6 – Analysis Results and 7 – Weakness Details.

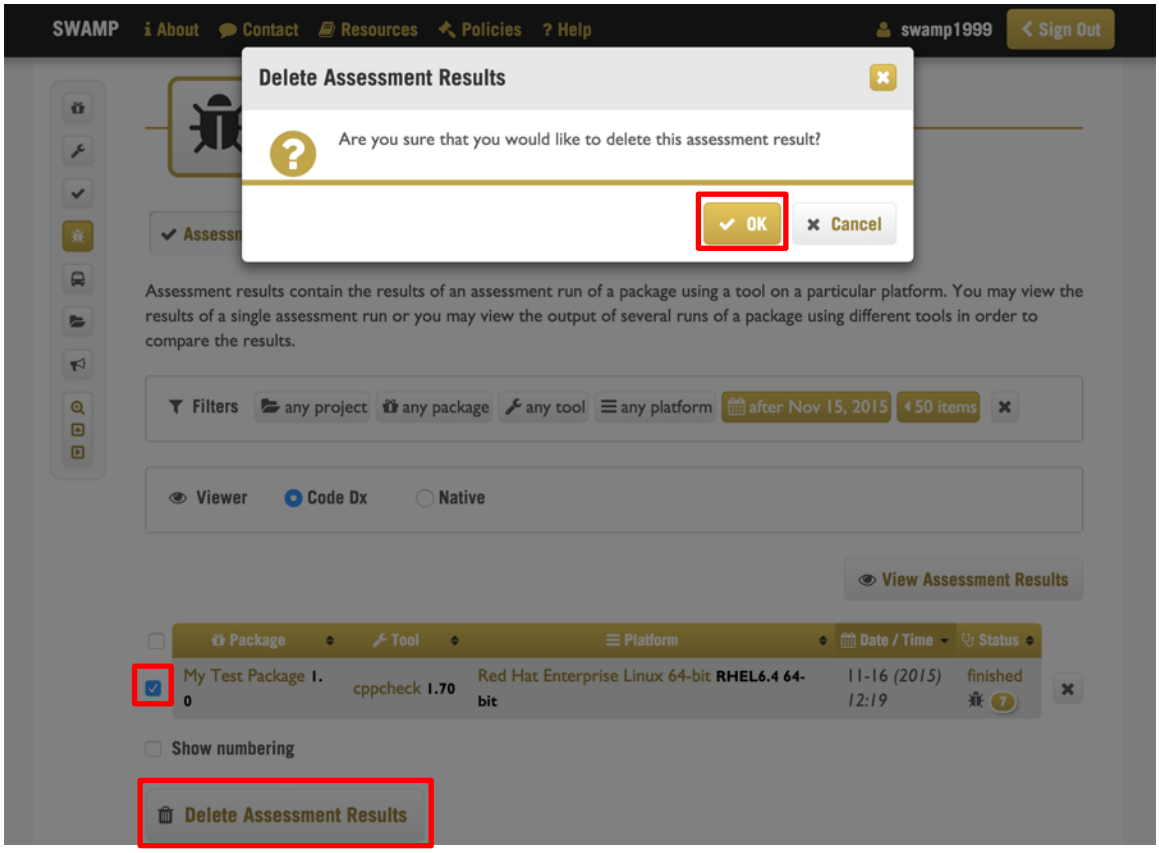
Select **Generate report** to download the assessment results as a CSV, PDF, or XML.

Deleting Results

You may delete Results that you have created. On the Assessment Results page, select the **X** to the right of a Result you wish to delete. Then select **OK**.

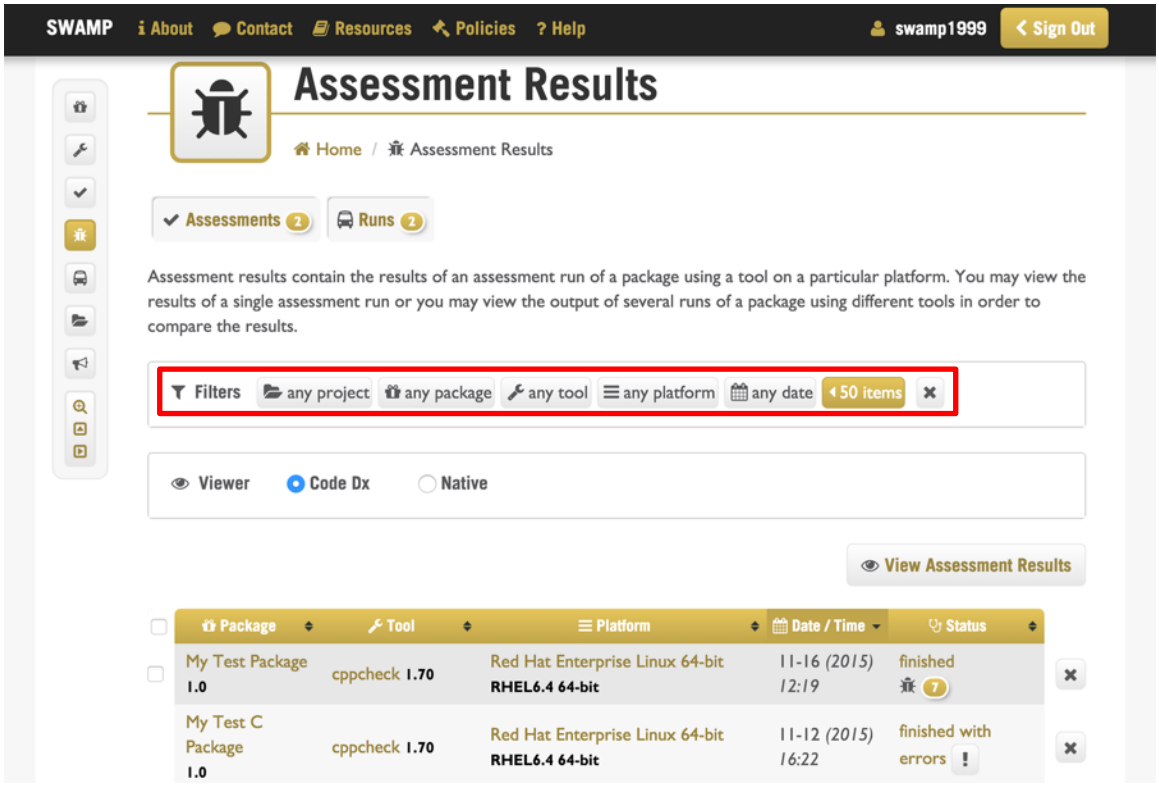


Alternatively, you can check the box to the left of one or more Results. Select **Delete Assessment Results**, and then select **OK**.

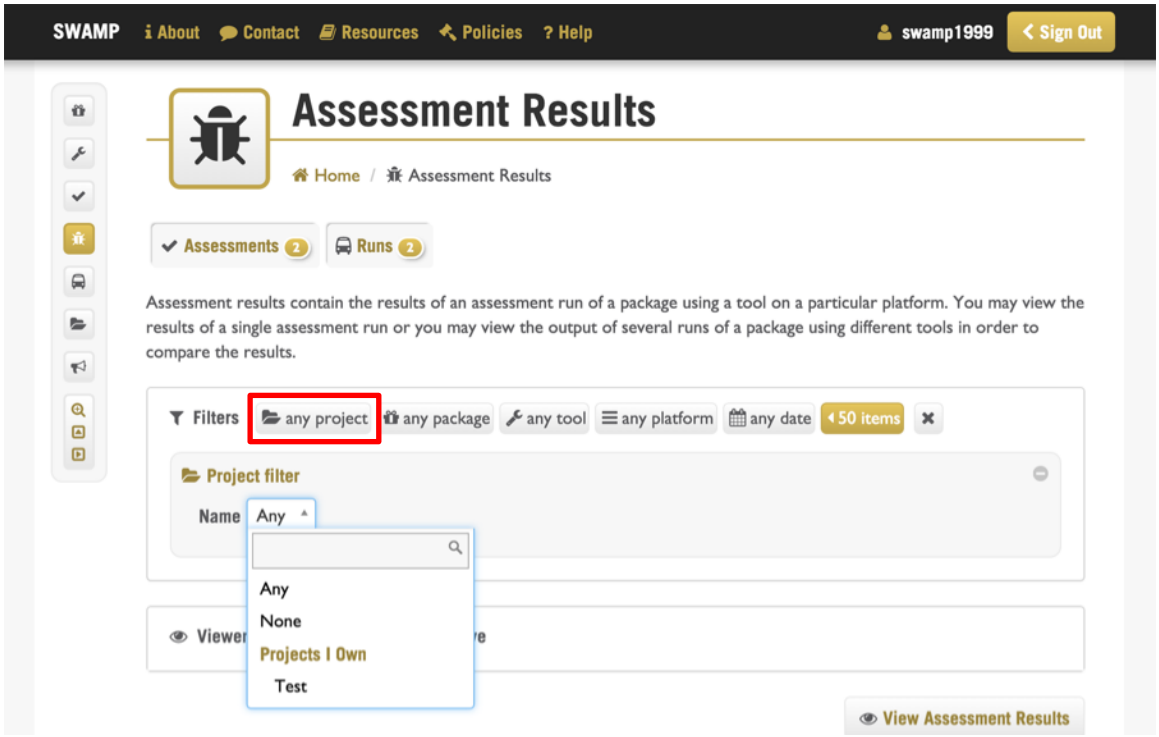


Result Filters

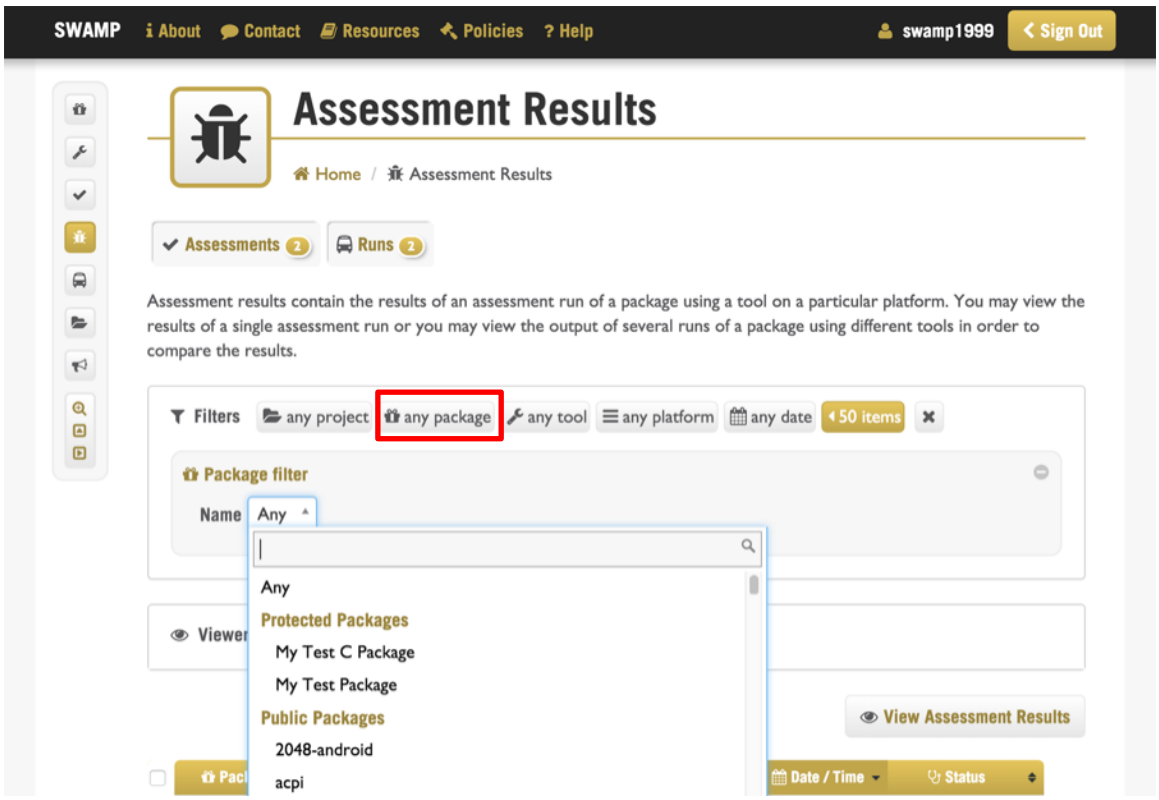
As Assessments are run and Results are generated, it may become difficult to quickly find the Assessment Results you wish to view. Filters on the Assessment Results page allow you to easily find Results based upon a Project, Package, Tool, Platform, or Date. You may choose more than one option. Each additional filter chosen will further restrict the set of returned Results.



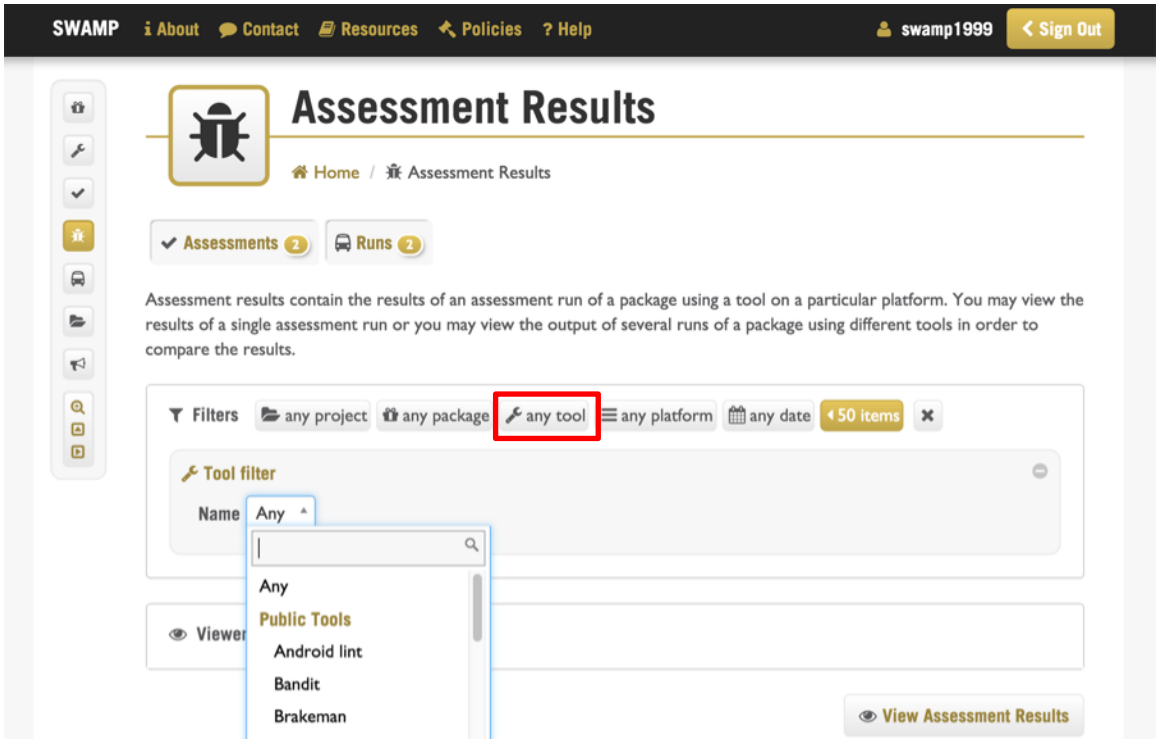
Select the Project filter to find Results from Any, None, or a specific Project. In this case, None means your My Project.



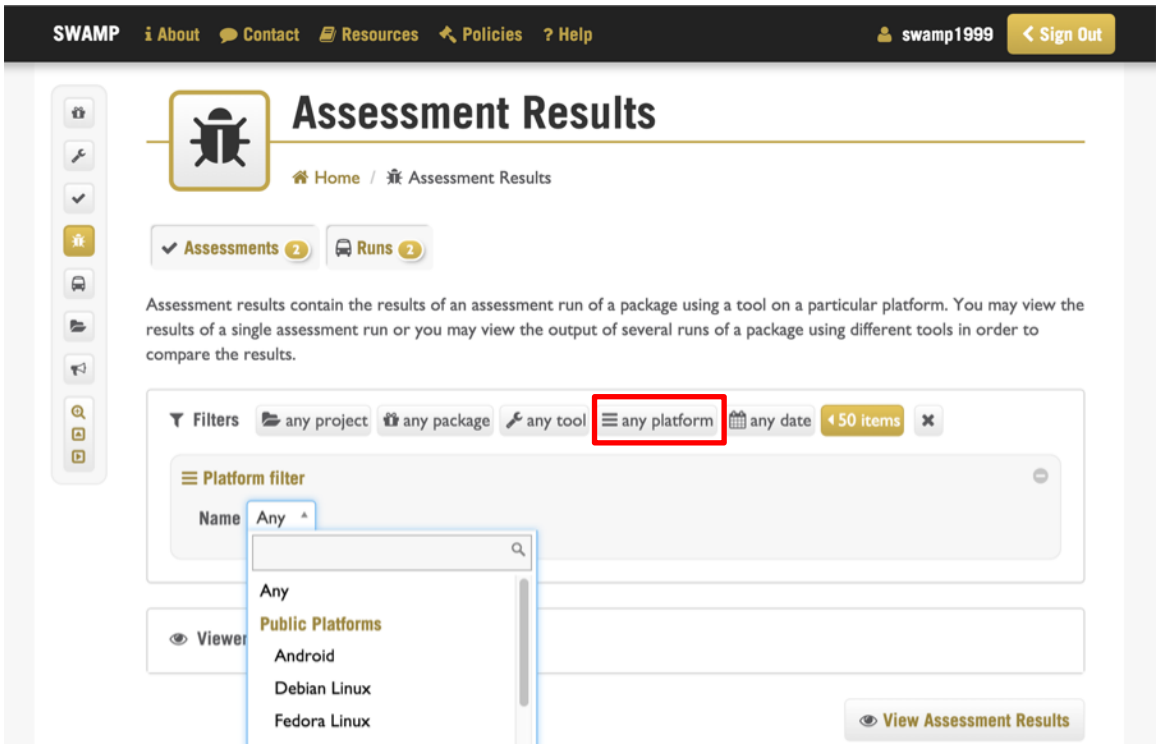
Select the Package filter to find Results for a specific Package.



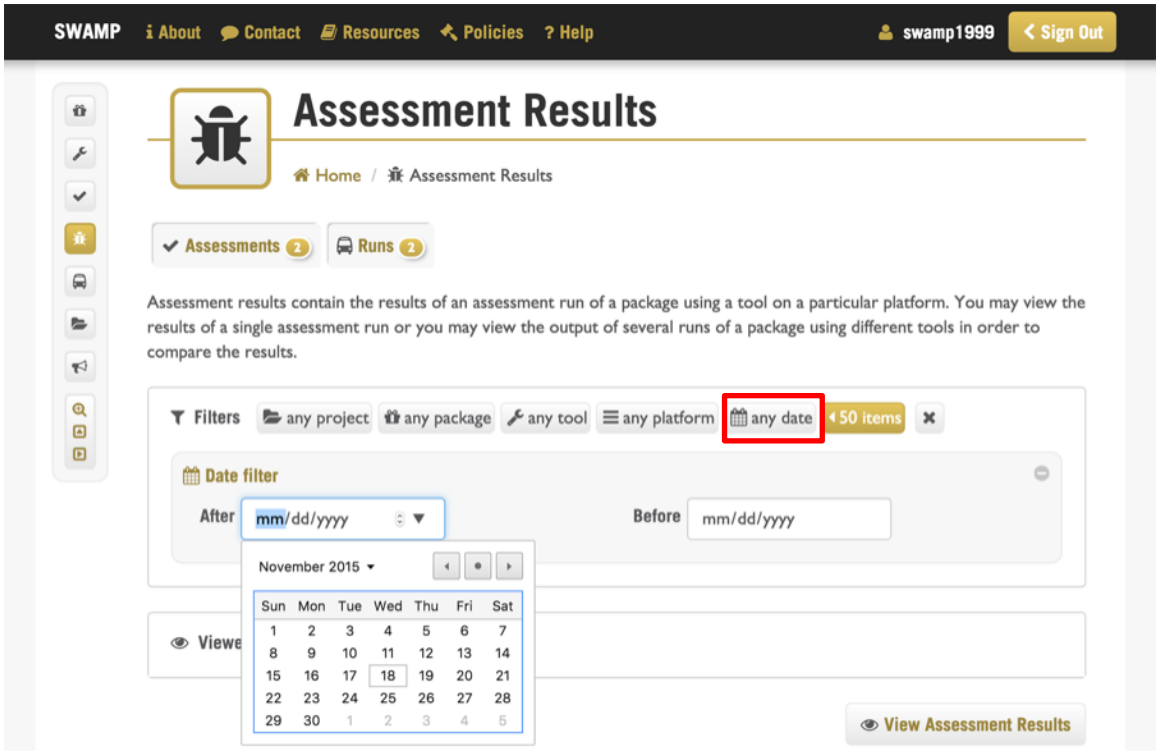
Select the Tool filter to find Results using a specific Tool.



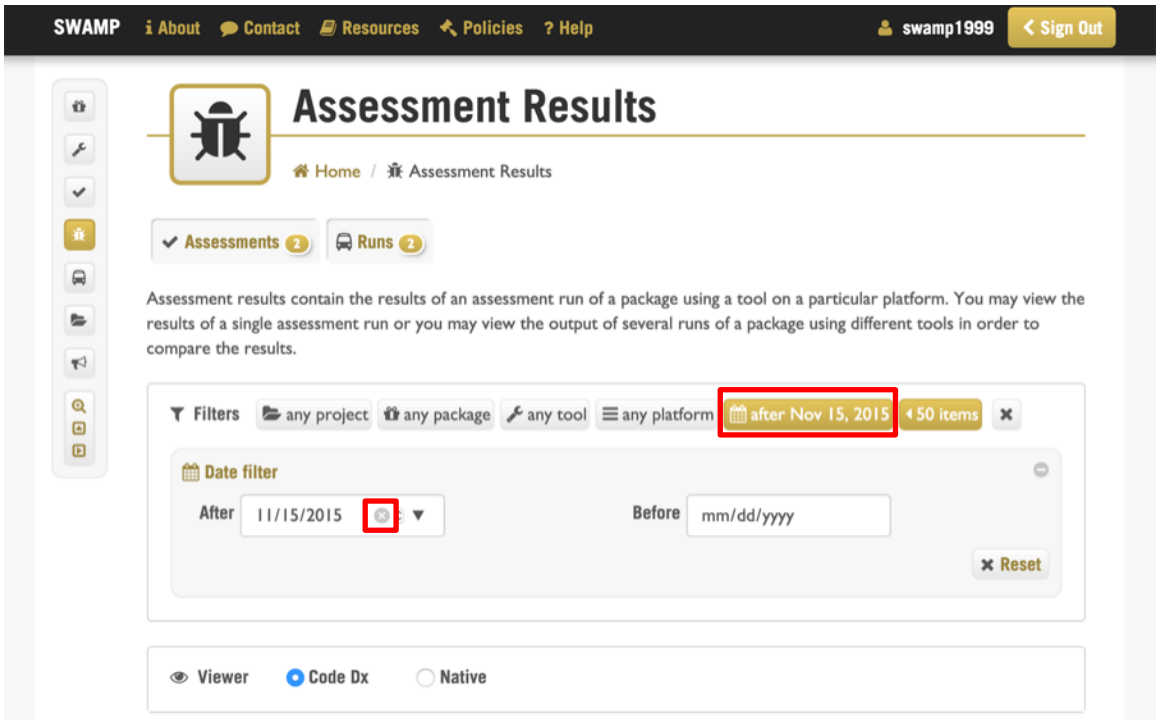
Select the Platform filter to find Results run on a specific Platform.



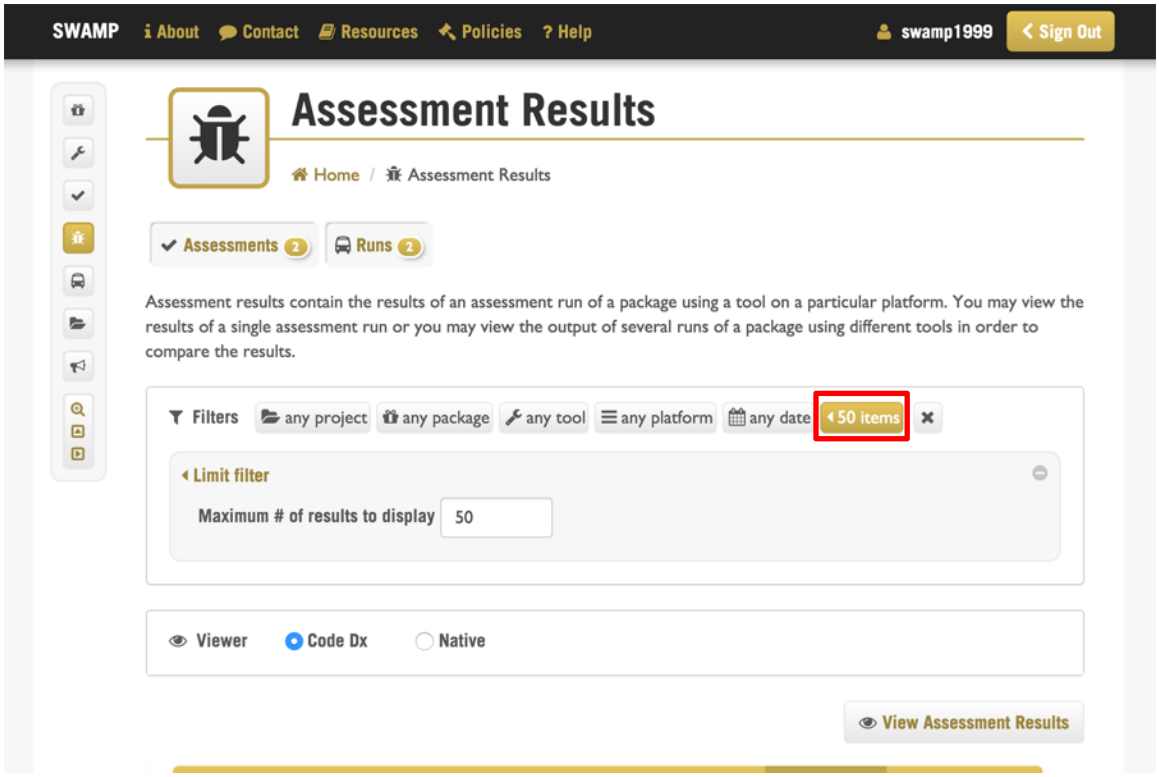
Select the Date filter to find Results based upon the Date/Time of the Assessment Run. Enter a date in the After or Before field. Dates assume a time of 12:00 AM or midnight.



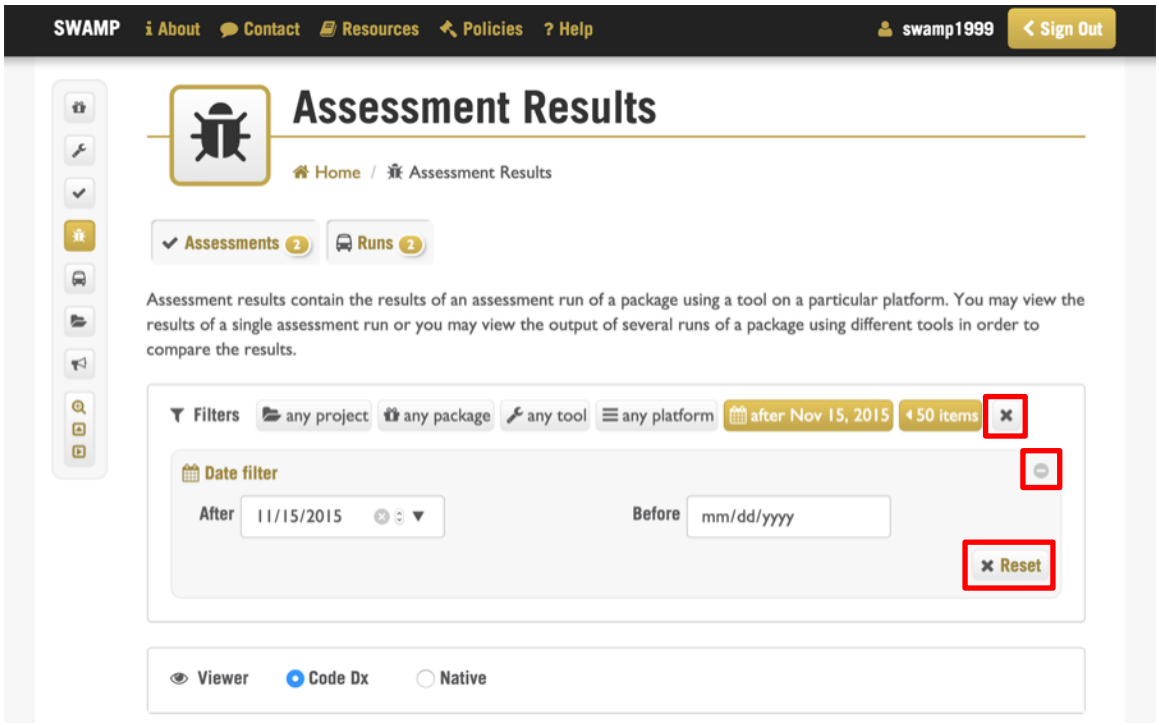
To enter a date range, click the Date filter again and add the other date. To clear a date, select the X within the date field.



Select the Limit filter to limit the number of Assessments displayed.



Select "**-**" to minimize or close an open filter. Multiple filters may be open simultaneously.
To reset the values for a single filter, open the filter, and select **Reset**.
To reset the values for all filters, select the **X**. Select **OK** to confirm the reset.

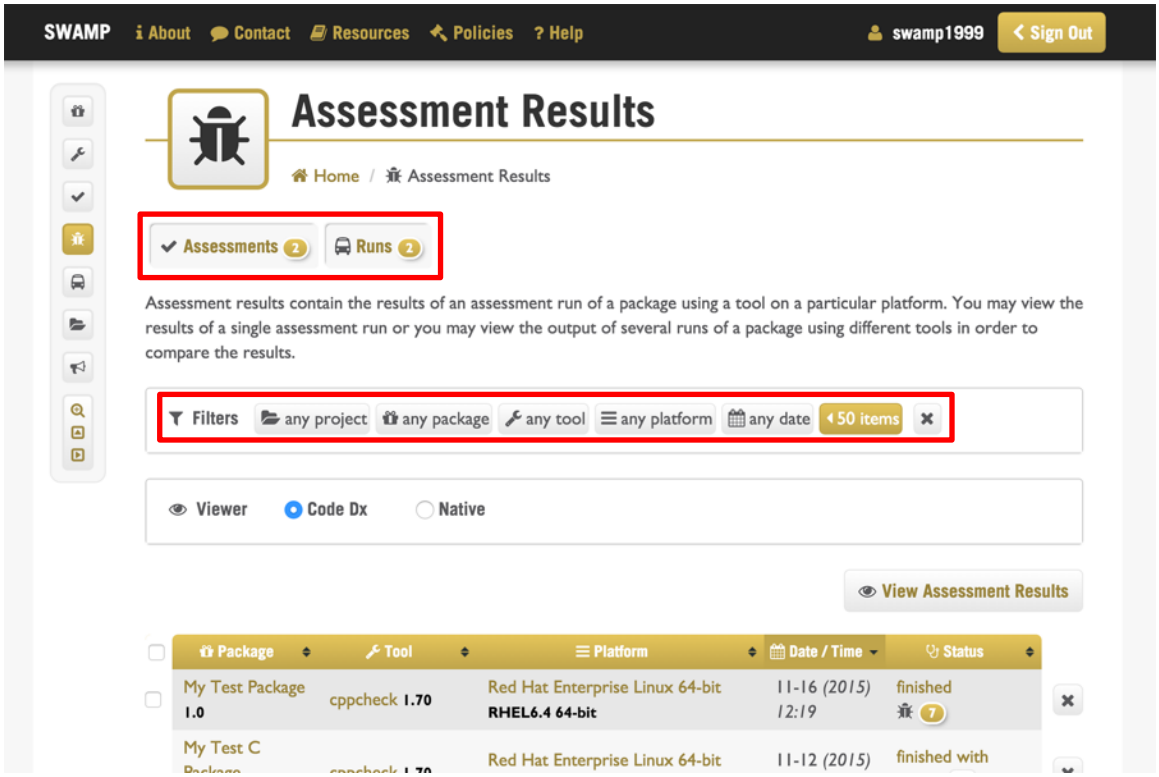


Navigating Within Results

From the Assessment Results page, you can easily view Assessments and Scheduled Assessment Runs.

1. On the **Results** page, buttons located at the top of the page take you to the Assessments and Runs pages.

   By default, no filters will be set when you arrive on the Assessments or Runs pages. If you set one or more of the Filters on the Results page, those filter settings will be preserved on the Assessments or Runs pages, narrowing the list of Assessments or Runs displayed.



2. To return to your Results page, you will need to use the back button within your browser to preserve any filters set on that page. Alternatively, you can use the Navigation Bar to return to the Results page with no filters set.

Part 7: Helpful Resources

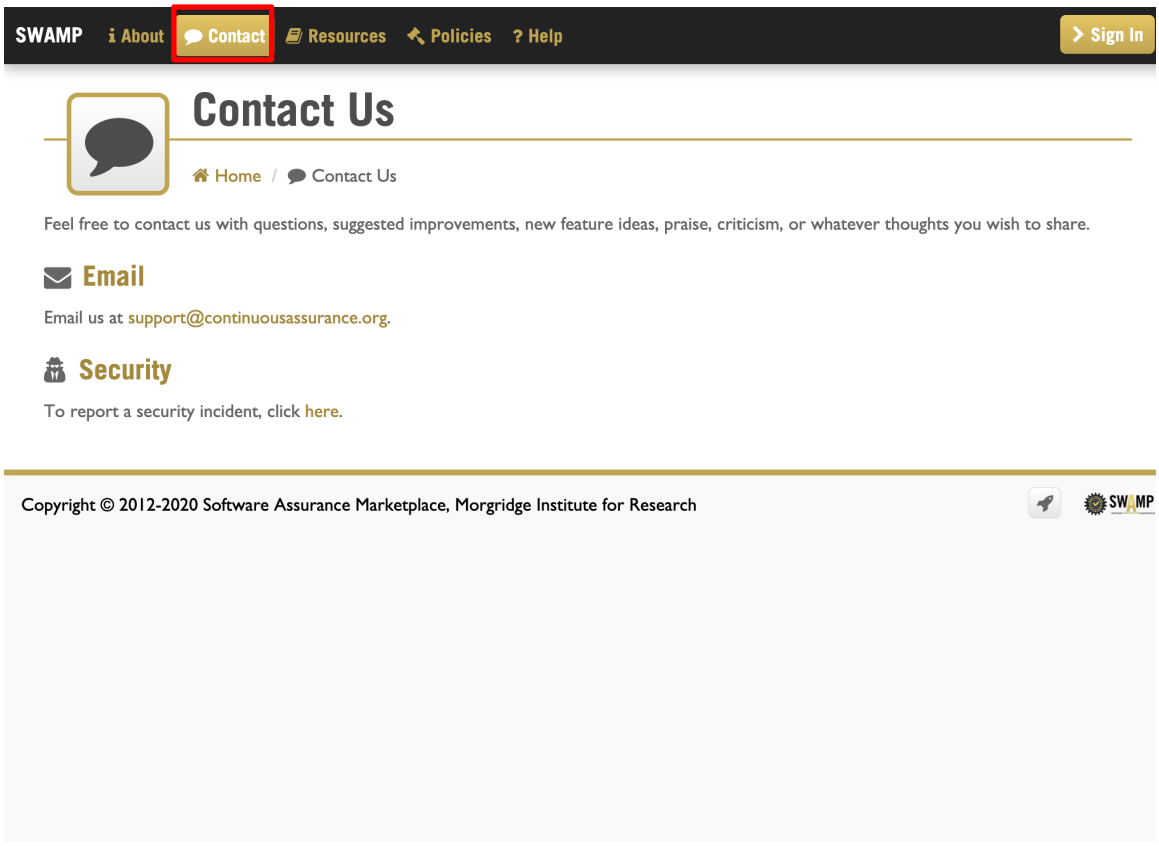
Contact

The **Contact** tab allows you to contact the SWAMP with questions or feedback. You can also report a security incident.

Enter the required information and select **Submit**.

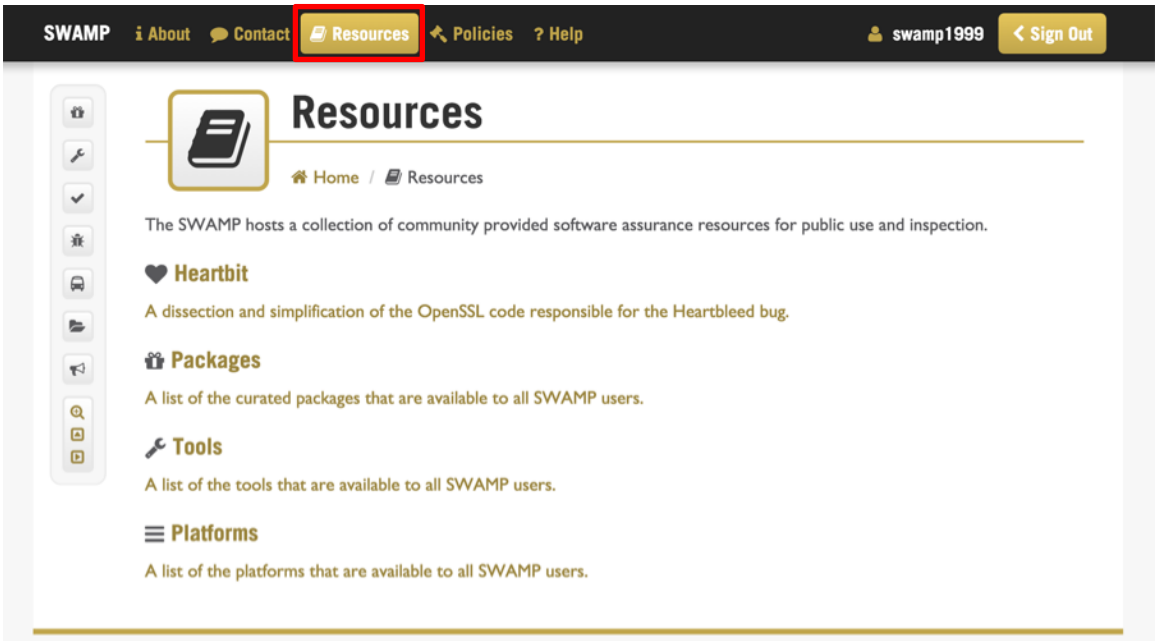
***Note:** *If you are signed in to your SWAMP account, your contact information will automatically populate into the form. If you do not have a SWAMP account or have not signed in to your SWAMP account, you will need to enter your name and email address if you would like us to respond to your inquiry.*

SWAMP Support will review your submission and respond as soon as possible.



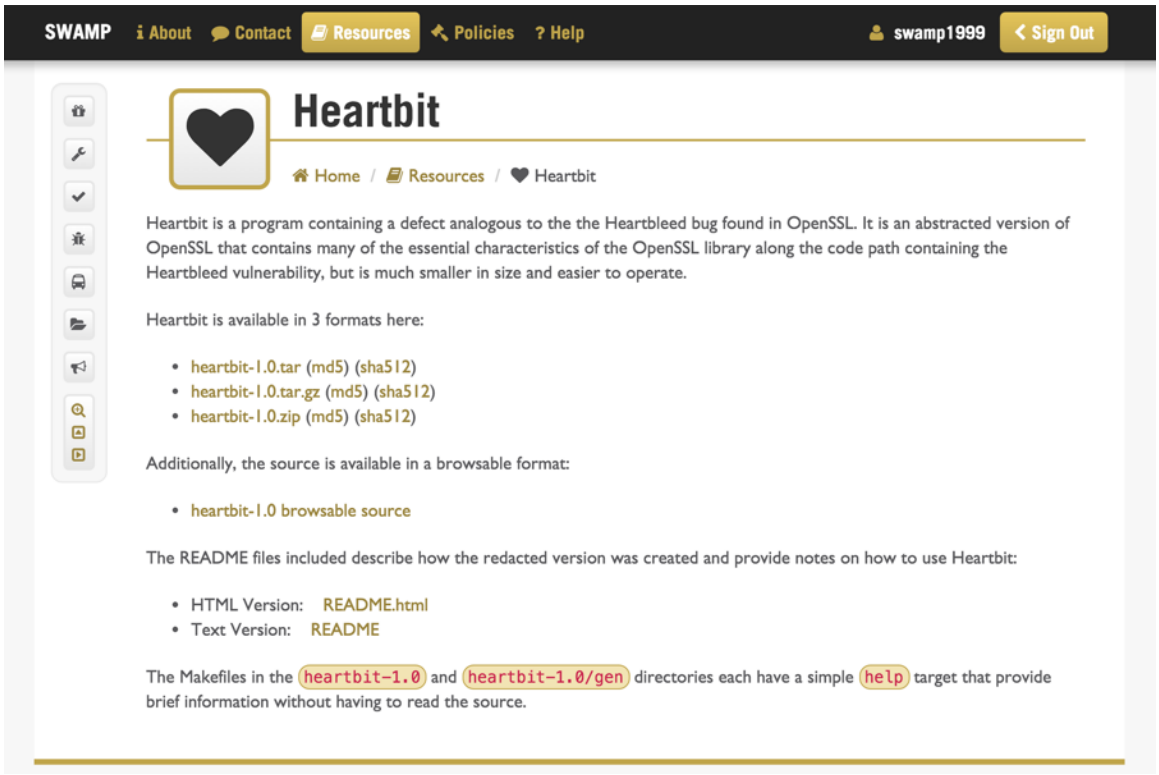
Resources

The **Resources** tab contains useful information about the curated packages available in the SWAMP, as well as the supported tools and platforms.



Heartbit

In response to the Heartbleed bug, SWAMP hosts the **Heartbit** package, a program containing an analogous defect using a smaller, abstracted version of OpenSSL. It is available from the Heartbit page.



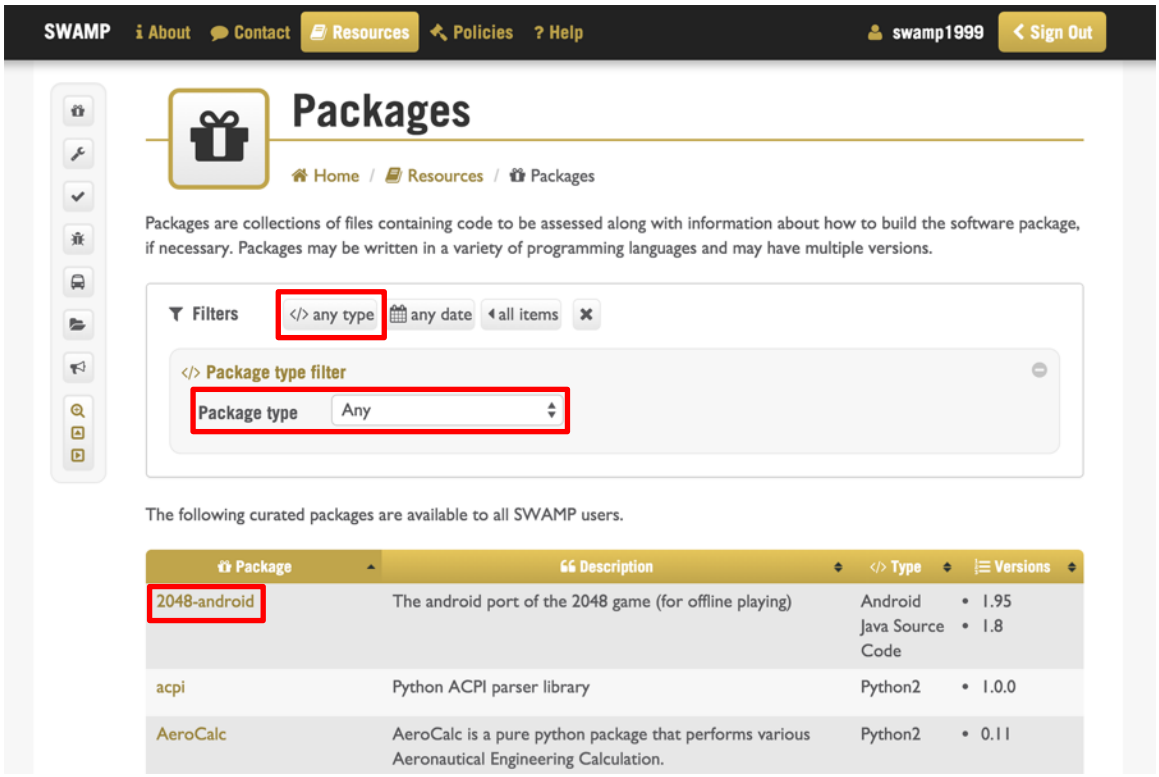
Curated Packages

A complete list of the curated packages that are available to SWAMP users can be found under the **Resources** tab.

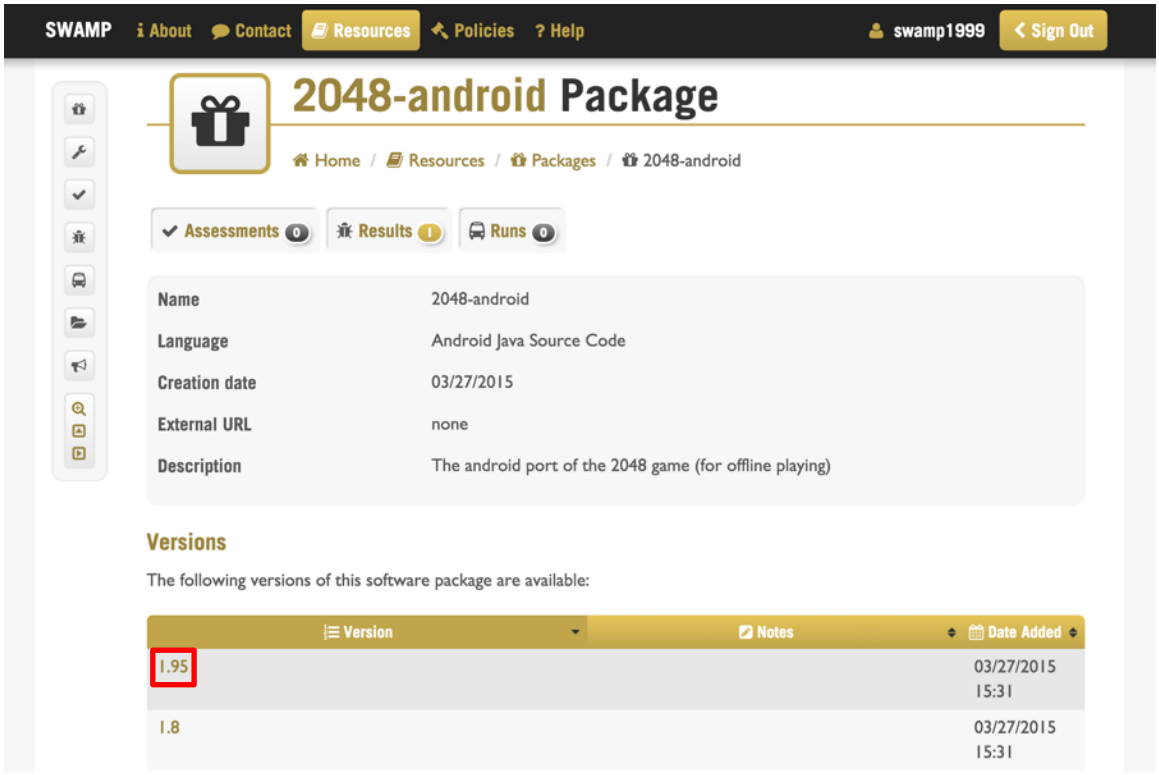
Filters are available to narrow the results by package type.

For more information, click the name of a curated package in the Package column.

******Note:*** *You must sign in to your SWAMP account to access this additional information.*

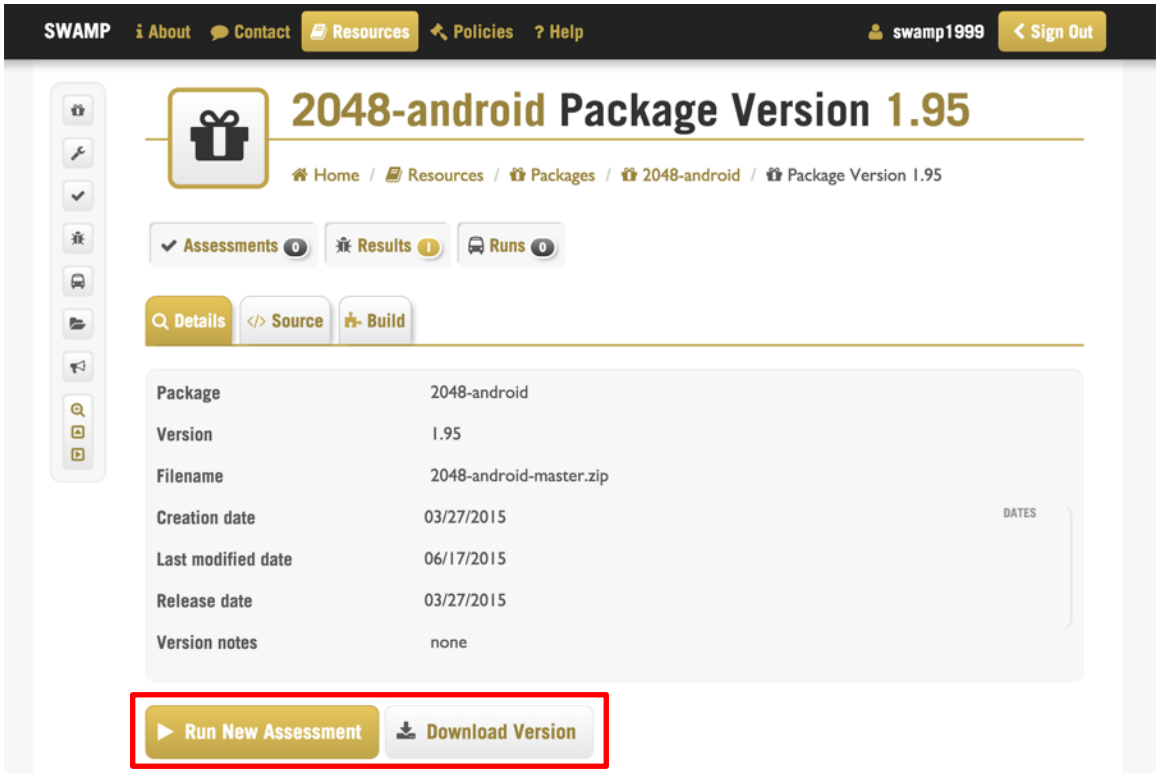


From the package screen, click the name/number in the Version column to open details about that version of the curated package.



Select **Run New Assessment** to run an assessment using this package in the SWAMP. You will then be prompted to select a tool and platform. Refer to Part 4 of this User Manual for how to run an Assessment.

Select **Download Version** to download this version of the curated package.

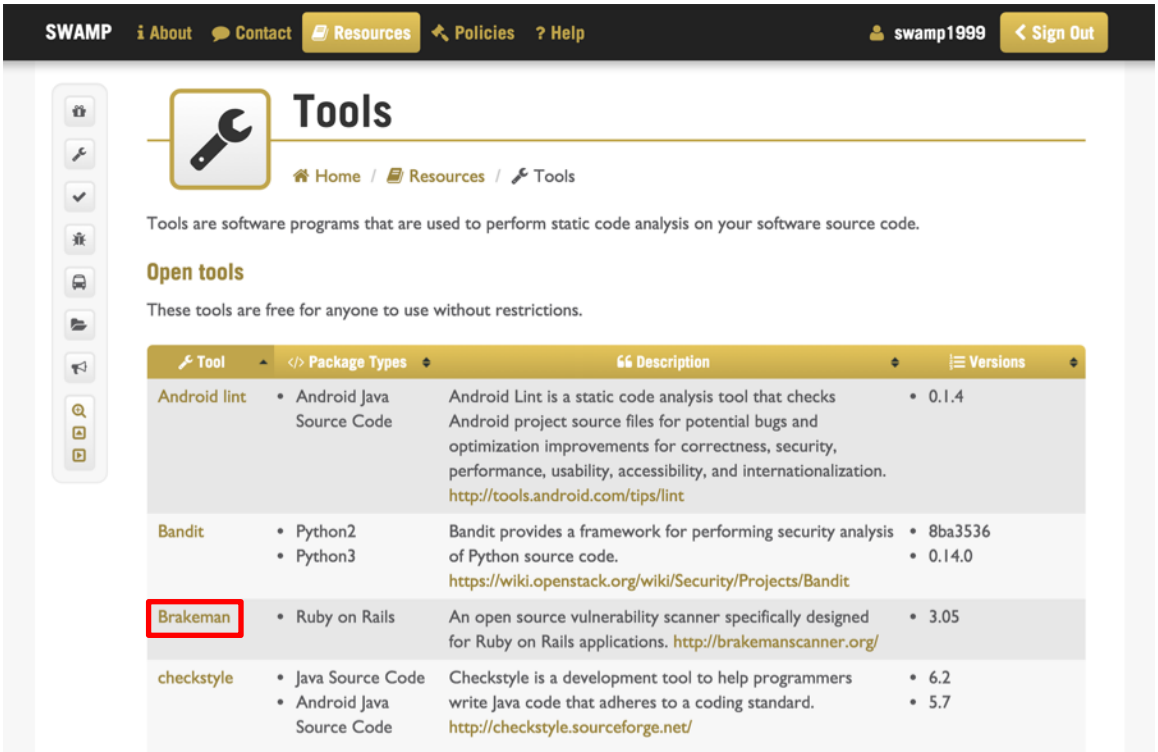


Tools

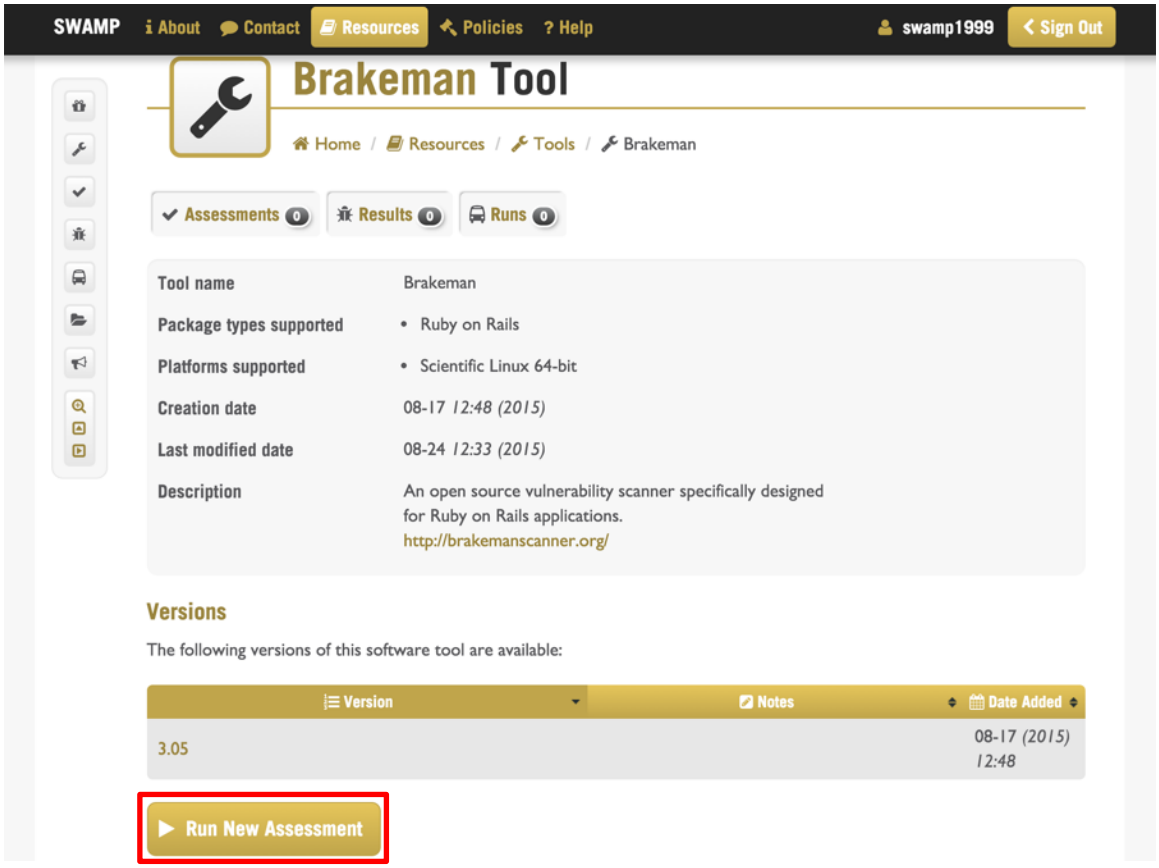
A complete list of the supported tools available to SWAMP users can be found under the **Resources** tab.

For more information, click the name of a tool in the Tool column.

****Note:** *You must sign in to your SWAMP account to access this additional information.*



Select **Run New Assessment** to run an assessment using this tool in the SWAMP. You will then be prompted to select a package and platform. Refer to Part 4 of this User Manual for how to run an Assessment.

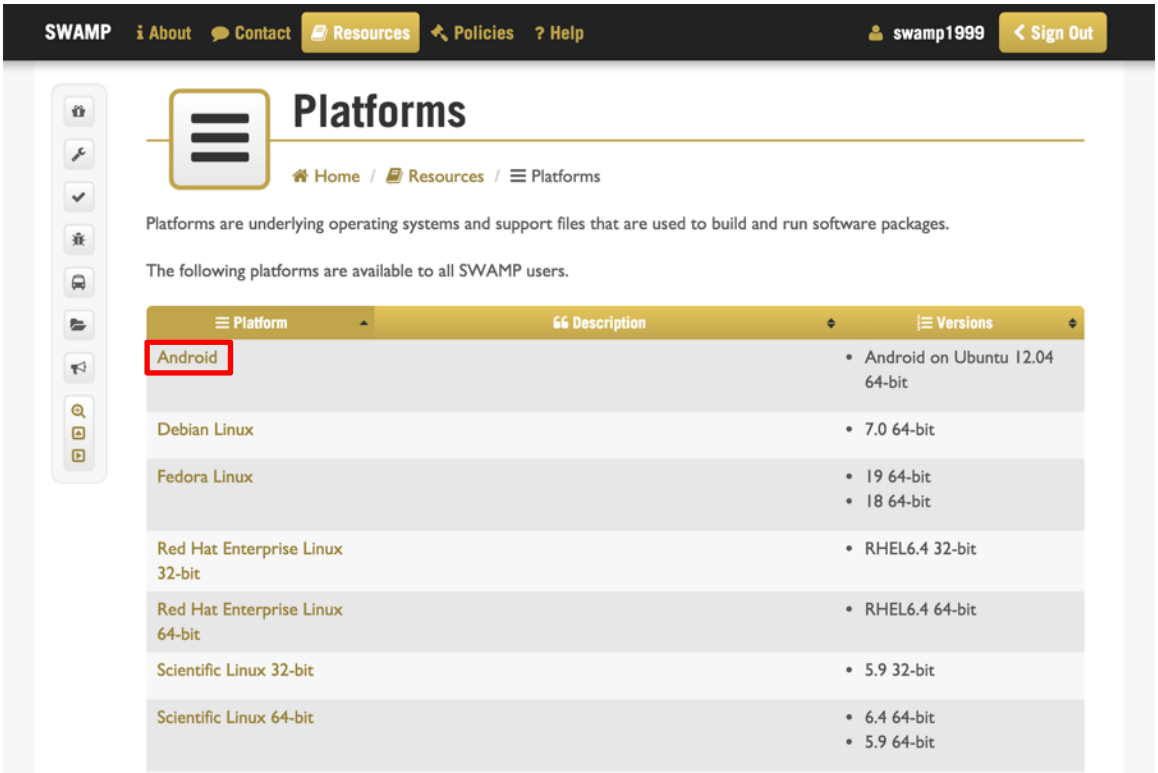


Platforms

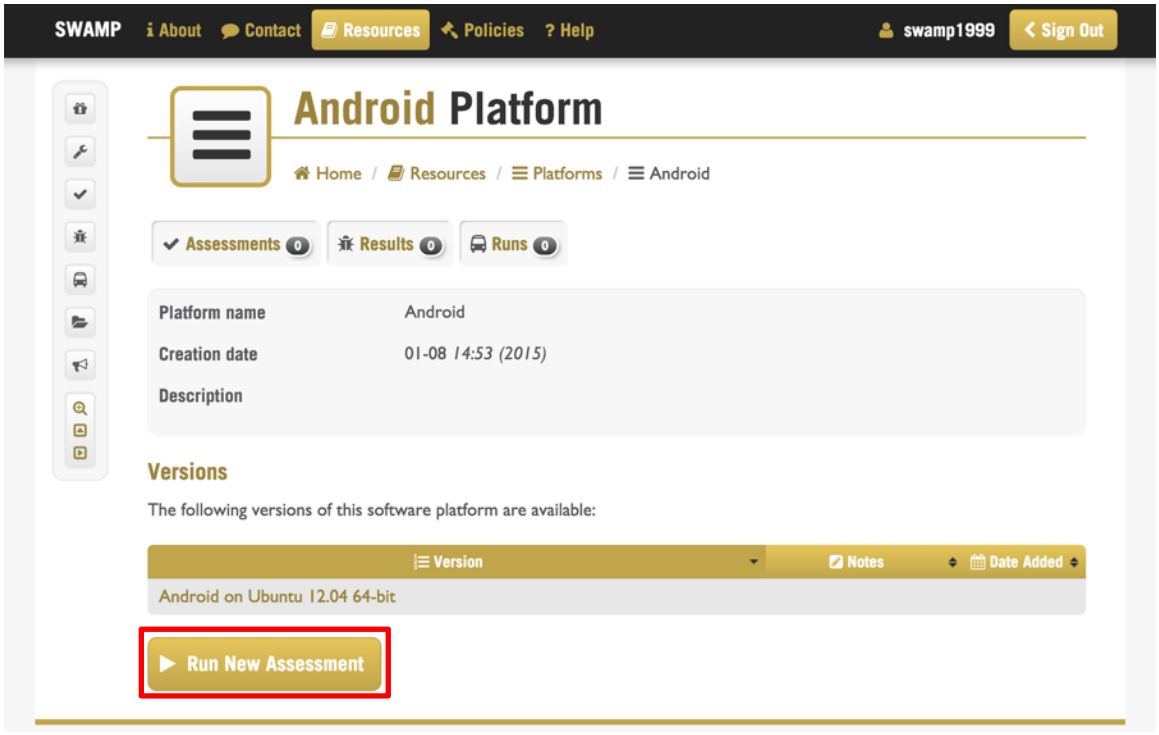
A complete list of the supported platforms available to SWAMP users can be found under the **Resources** tab.

For more information, click the name of a platform in the Platform column.

****Note:** *You must sign in to your SWAMP account to access this additional information.*

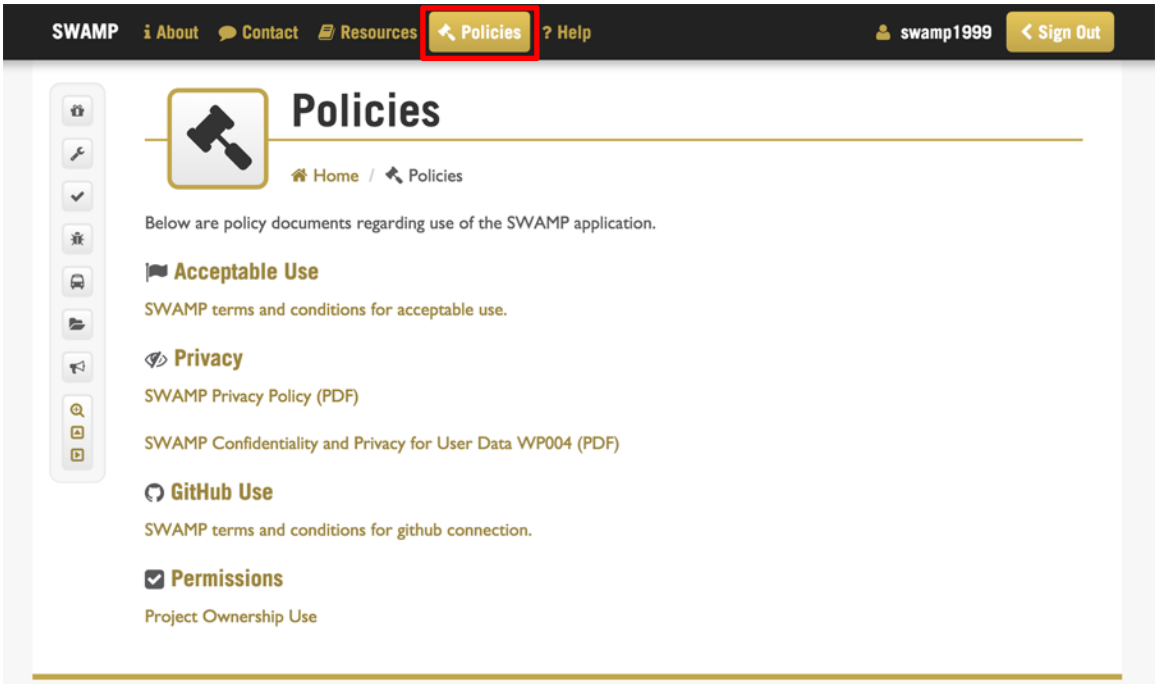


Select **Run New Assessment** to run an assessment using this platform in the SWAMP. You will then be prompted to select a package and tool. Refer to Part 4 of this User Manual for how to run an Assessment.



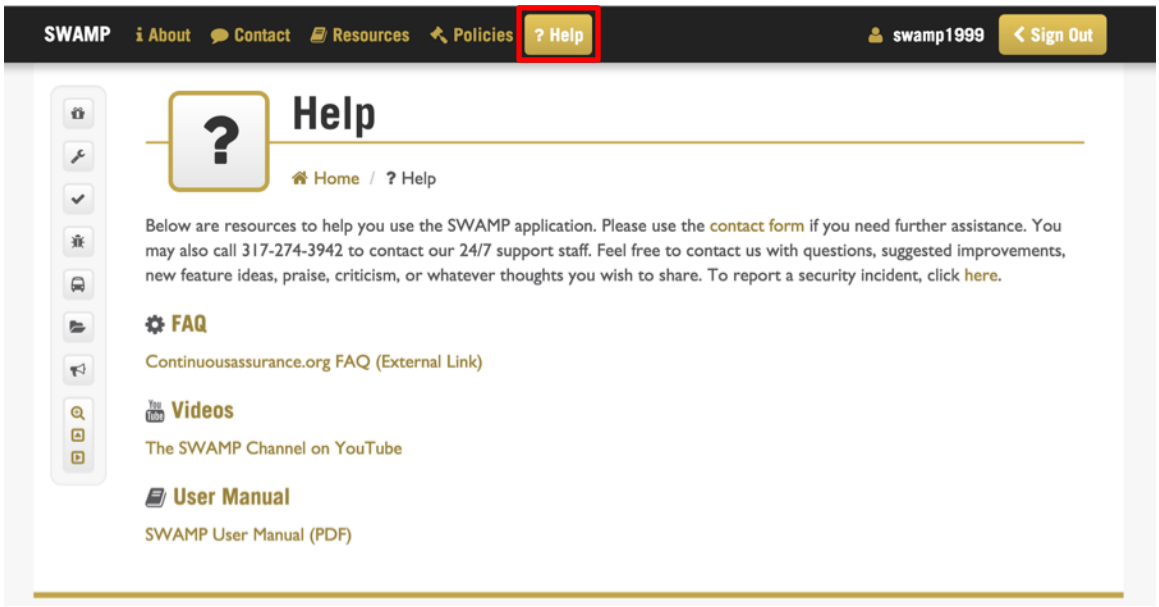
Policies

The **Policies** tab contains documents regarding the use of the SWAMP.



Help

The **Help** tab contains resources to help you use the SWAMP.



Troubleshooting

The information below has been provided to assist with troubleshooting. Contact the SWAMP if additional support is needed.

Assessment Status

After an Assessment has completed, the status of the run will be displayed.

Status field indicates, "**Finished with errors**."

The build has failed due to an incorrect Build System and/or the selected package is not compatible with the selected platform.

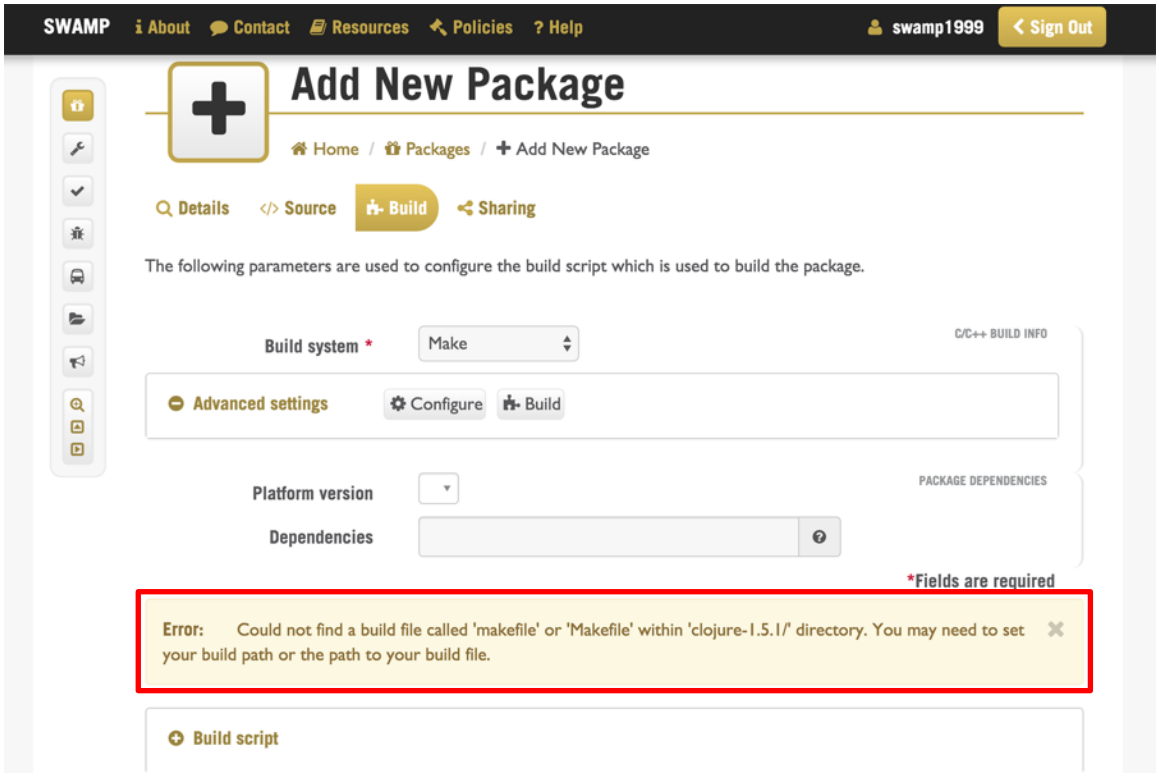
1. Check to make sure the correct **Build System** is chosen.
2. Check to make sure the selected **Package** and **Platform** are correct and compatible.
3. From the Assessment Results page, select the **!** button in the Status column to view errors in the Failed Assessment Report. You can download the .tar ball file and view error messages and version information to determine where the Assessment failed.

Status field indicates, "**Unable to run**, **queued**, or **Unable to start VM**."

The selected **Package** and selected **Platform** are incompatible.

1. Check to make sure a compatible **Package** and **Platform** have been selected.

Below is a picture of a **Build** screen from adding a new **Package** or adding a new **Version** of a **Package**. If the build path/system is incorrect, an error message will be displayed.



Submitting a Support Ticket

1. Obtain the Unique Universal Identifiers (UUIDs) for a support ticket. (Refer to page 170 of this User Manual for how to obtain the UUIDs.)

    a. Select **Results** to open the **Assessment Results** page.

    b. Select the text in the **Status** column for your result.

    c. The **Assessment Run Status** page contains the **Assessment run UUID**.

2. Navigate to https://ticket.continuousassurance.org to submit a support ticket.

Glossary

Assessment: Specifies one Tool to assess one Software Package on one operating system Platform.

Assessment Tool: An assessment Tool analyzes a Software Package to find weaknesses that could lead to security vulnerabilities. One person owns an assessment Tool.

Continuous Software Assurance: A process that affirms software functions as intended, free from vulnerabilities intentionally or unintentionally inserted into the code. This is achieved through continuous assessments.

Execution Record: Displays statistics about the scheduled Assessment.

Owner: A User that has requested ownership privileges and has been vetted by a SWAMP Administrator, who owns a Project and/or Software Package, (Future Option: assessment Tool).

Platform: The operating system environment in which an Assessment occurs.

Project: A person or group of people working together for a common purpose, for example to create better assessment Tools, and/or to mitigate weaknesses in Software Packages.

Project Member: A person who has accepted an invitation to join a SWAMP Project. Project Members are able to create Assessments, schedule Runs, and view assessment Results.

Run: A request to execute one or more Assessments as soon as possible after the requested time. Project Members can schedule Runs to occur daily, weekly, or monthly or that are a combination of daily, weekly, or monthly times.

Software Package: A software component or system used by others. A set of files containing related software or source code that needs to be assessed for vulnerabilities or security issues.

User: A person who has registered to use the Software Assurance Marketplace.