

# **HP ALM Robot**

Software Version: 13.00

## **User Guide**

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Software Release Date: October, 2015

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# Welcome to This Guide

Welcome to the HP Application Lifecycle Management (ALM) Robot, a mass upgrade tool that streamlines and automates the ALM upgrade process, enabling a user to upgrade any number of ALM projects. Using the tool results in a shorter upgrade process and resource savings.

ALM empowers IT to manage the core application life cycle, from requirements through deployment, granting application teams the crucial visibility and collaboration needed for predictable, repeatable, and adaptable delivery of modern applications.

## Upgrade Issues

When a new version of ALM is released, it is necessary to upgrade all projects created in ALM to be compatible with the new version of the product. ALM project upgrade is a challenging and complicated process, especially for a large number of projects. Today, each project is upgraded separately. This is a long process that requires much time, knowledge, and resources. The upgrade process is highly complex, involving many components using a multilingual environment, different databases, and different operating systems. ALM works with multiple environments and deployments, such as Windows, Linux, SQL, and Oracle. The user must be aware of the characteristics of each specific environment, and a change in environment adds another layer of complication to the upgrade process.

The user must input a large amount of information prior to starting the process, such as user name and password, machine information, database information, and application details. The biggest challenge is not collecting the information, but ensuring that it is correct and complete. Due to the lack of validation of the input information, the process often fails and the user must start again after manually resolving the problem and correcting the information. Often, the user must turn to third parties for assistance in solving the problem and gathering the necessary information. This adds extra time to the process.

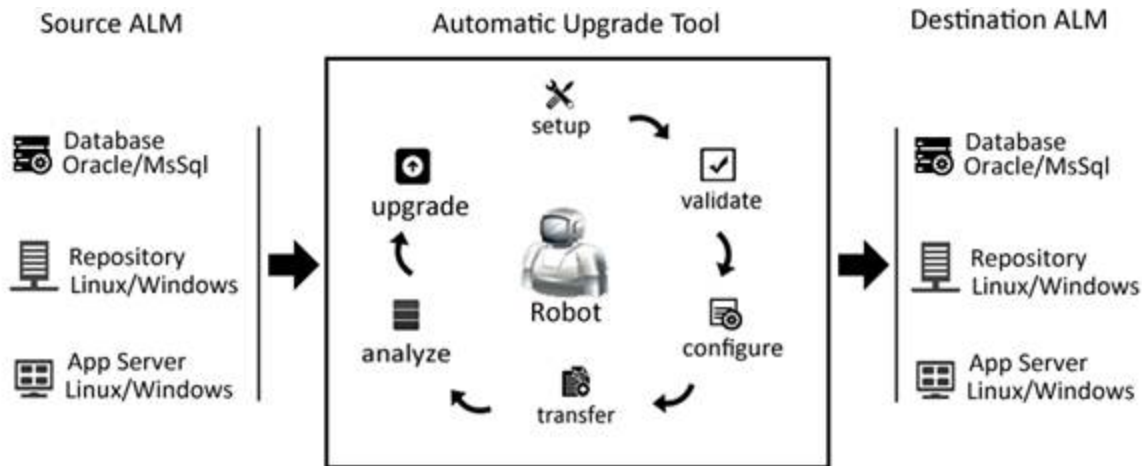
## Our Solution

ALM Robot was developed by the Customer Success team as an innovative solution to automate and streamline the upgrade process.

ALM Robot uses existing ALM APIs to automate and streamline the upgrade process. ALM Robot automates the system validations to determine system readiness before starting the process. The tool identifies missing or incorrect information, which the user can update before the process begins, avoiding errors that cause the process to fail. The tool provides a wizard that aggregates every piece of information required for the process. The user cannot continue without filling in the mandatory data. The last step of the wizard is the system validation engine, which performs dozens of automated validations, such as permissions, machine availability, and ALM availability, that the user may not be familiar with and that can lead to failure. After validating the user information, the tool upgrades the projects concurrently, considerably reducing the upgrade time and resources.

To summarize, the tool guides the user through the process until all information is sufficient and in place. After that, the tool automates thousands of manual operations (the number of manual operations is dependent on the number of projects being upgraded), significantly shortening the process time and reducing the resources needed to work on the process.

The following diagram shows the ALM System Architecture and the ALM Robot process:



This guide explains how to install and use ALM Robot. For additional information on project upgrades, refer to the *HP Application Lifecycle Management Installation and Upgrade Guide*.

**Note:** ALM Robot is based on the ALM support matrix, and supports upgrades from version 10 and later. Upgrades must be planned based on the upgrade process for each ALM version. For additional information on project upgrade versions, refer to the Upgrade Versions section of the *HP Application Lifecycle Management Installation and Upgrade Guide*.

## How This Guide is Organized

This guide contains the following chapters:

Chapter	Description
<a href="#">"Prerequisites" on page 8</a>	Lists the ALM Robot prerequisites.
<a href="#">"Installing ALM Robot" on page 9</a>	Describes how to install ALM Robot.
<a href="#">"Running ALM Robot" on page 14</a>	Describes how to run ALM Robot.

# Chapter 1: Prerequisites

Following are the prerequisites needed to install and run ALM Robot:

- Full version .NET4 Framework (not client profile).
- ALM Robot can only be run on a Windows operating system.

**Note:** ALM Robot does not work with Windows 2003.

- ALM Robot can only be run by a user with administrator privileges.
- You must have read/write permission (user and password) for the source and destination file system machines.
- You must have admin rights (user and password) for the source and destination database servers.
- You must configure the destination database in ALM before running ALM Robot.
- You must refer to the actual ALM address, not the Load Balancer address, when running ALM Robot.
- You must create a **Robot** domain with a **RobotTemp** project in the destination ALM server. This is your target database that ALM Robot uses to restore the projects in the destination ALM server.
- ALM Robot uses the operating system's copying mechanism to copy the repository to the destination location. Large repository files require a long amount of time to copy, either manually prior to running ALM Robot or using ALM Robot.
- If you select **Upgrade a copy of the existing schema** during the ALM installation, ALM Robot only works when the existing schema is copied to the same database.
- Site Admin components must be registered on the machine before running ALM Robot. To register the components, log in to ALM Site Administration.
- [Optional] SMTP server for status report emails.

**Note:** For the most up-to-date supported environments, refer to the HP Software Web site using the following URL: <https://hpln.hp.com/page/alm-qc-enterprise-technical-specifications>.

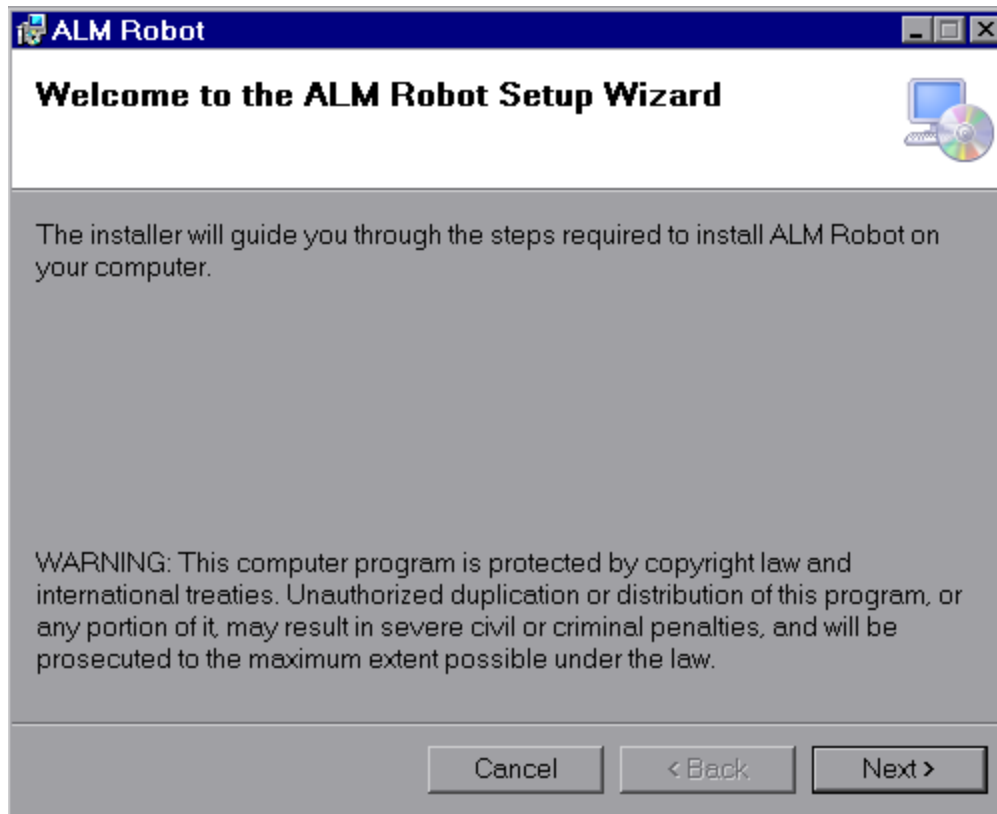


## Chapter 2: Installing ALM Robot

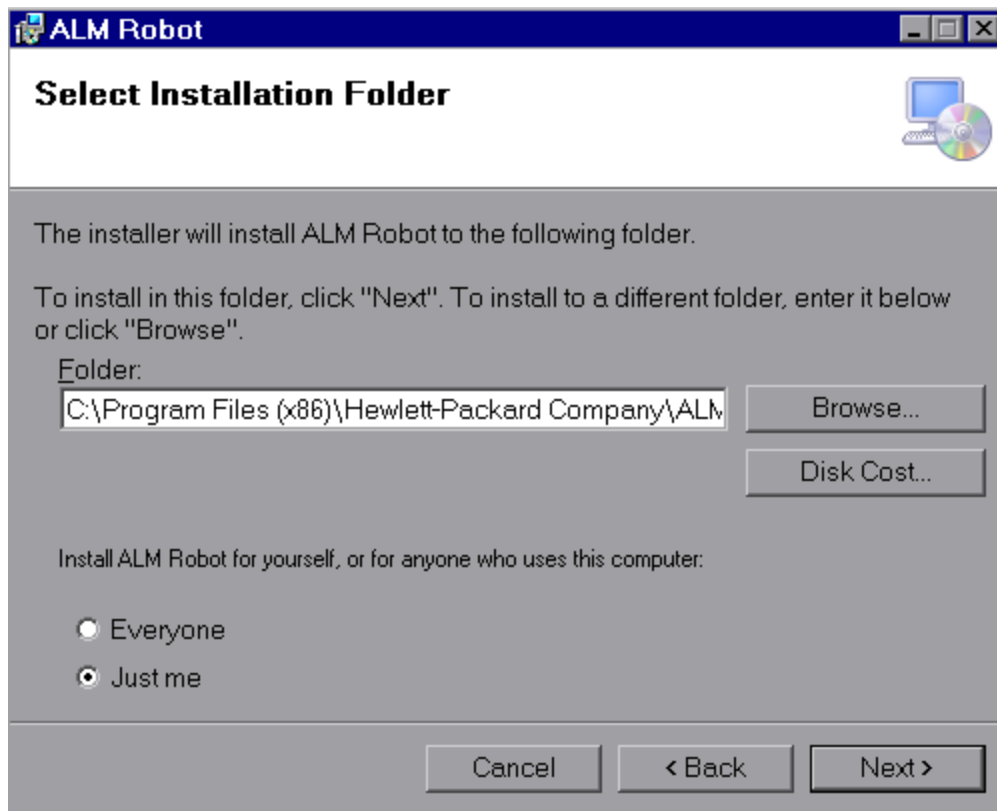
ALM Robot is installed as a standalone tool.

### To install ALM Robot:

1. Open the .msi file. The ALM Robot Setup wizard opens.

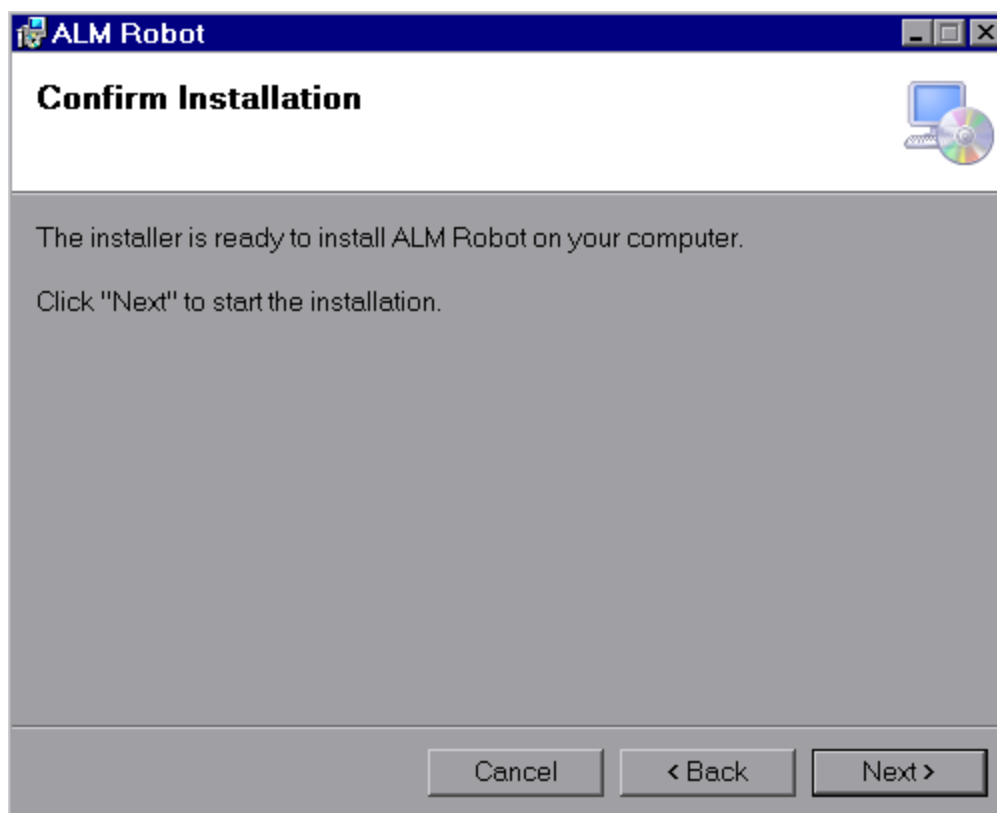


2. Click **Next**. The Select Installation Folder screen opens.

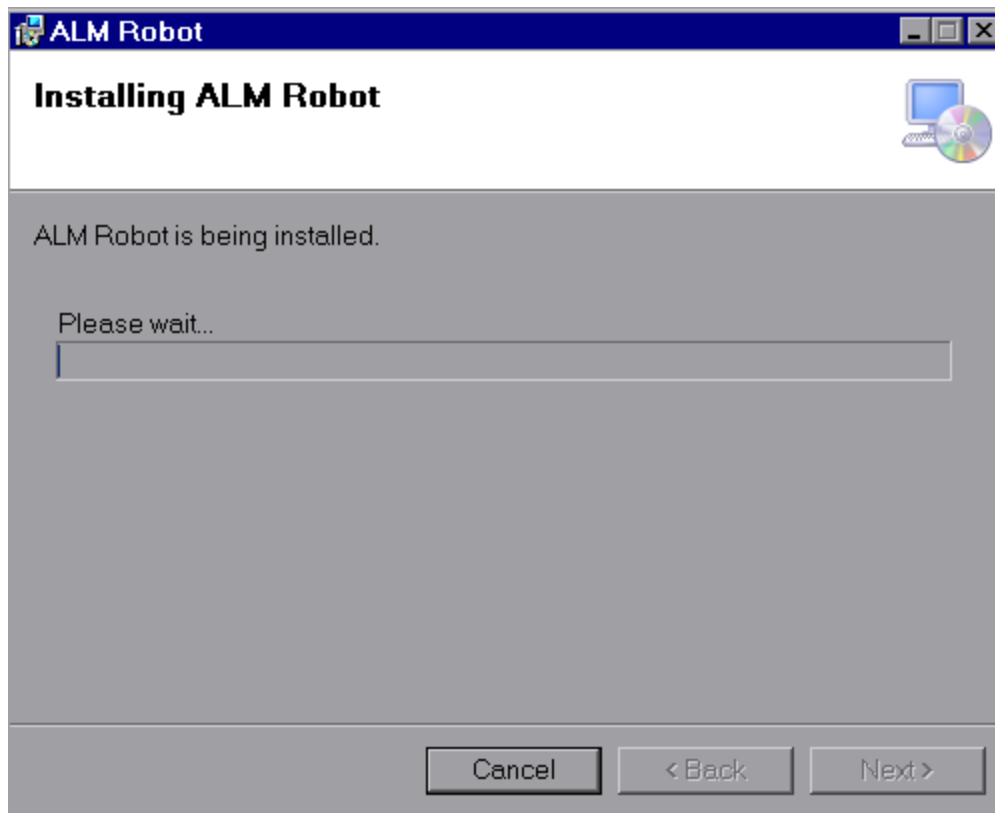


Enter the name of the ALM Robot installation folder, or use the default folder. Select whether ALM Robot is installed only for the current user or for every user on this machine.

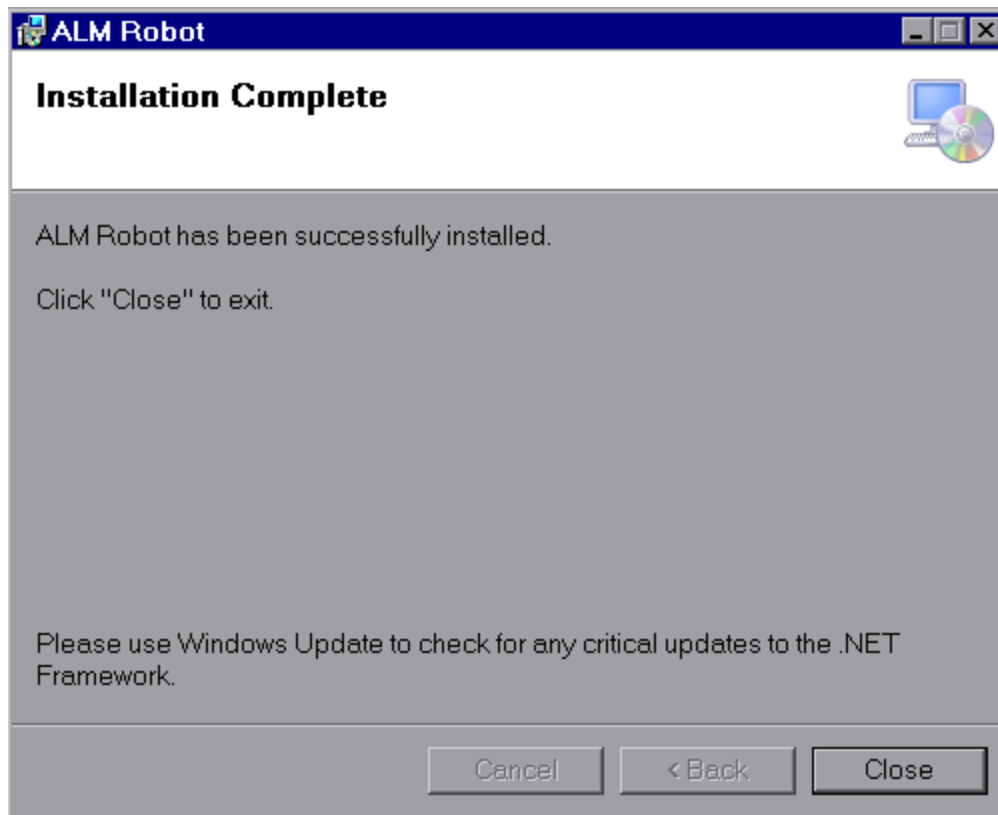
3. Click **Next**. The Confirm Installation screen opens.



4. Click **Next**. The Installation Progress screen opens.



5. When the installation is complete, the Installation Complete screen opens.



Click **Close** to close the setup wizard.

**Note:** After installing, use Windows Update to install the latest updates to the .NET Framework.

# Chapter 3: Running ALM Robot

When you upgrade to a new version of ALM, you can run ALM Robot to perform many project upgrade tasks.

This chapter includes:

- [About ALM Robot](#) ..... 15
- [The ALM Robot Wizard](#) ..... 15
- [Running ALM Robot](#) ..... 23

## About ALM Robot

All input to ALM Robot is encrypted.

ALM Robot performs the following upgrade tasks on all projects, except for Lab Management projects:

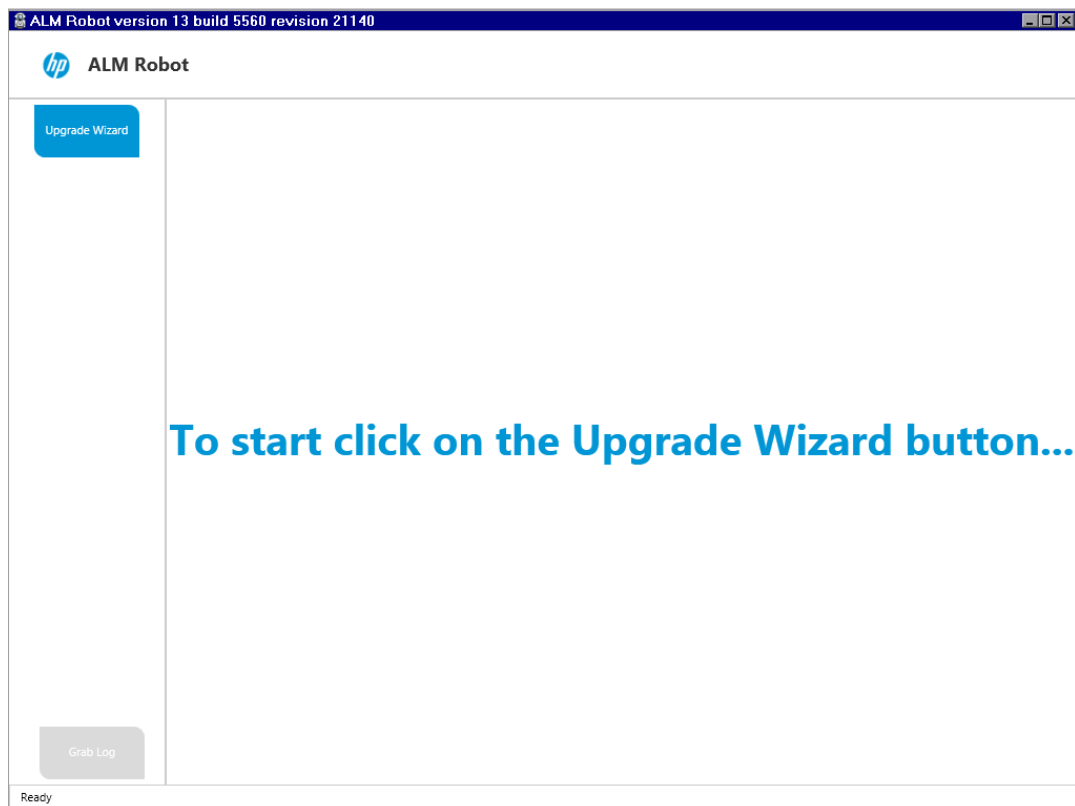
- Copy the repository
- Restore the project
- Verify the project
- Repair the project
- Upgrade the project
- Support pre-upgrade, post-upgrade, and rollback steps
- Send a summary report via email

## The ALM Robot Wizard

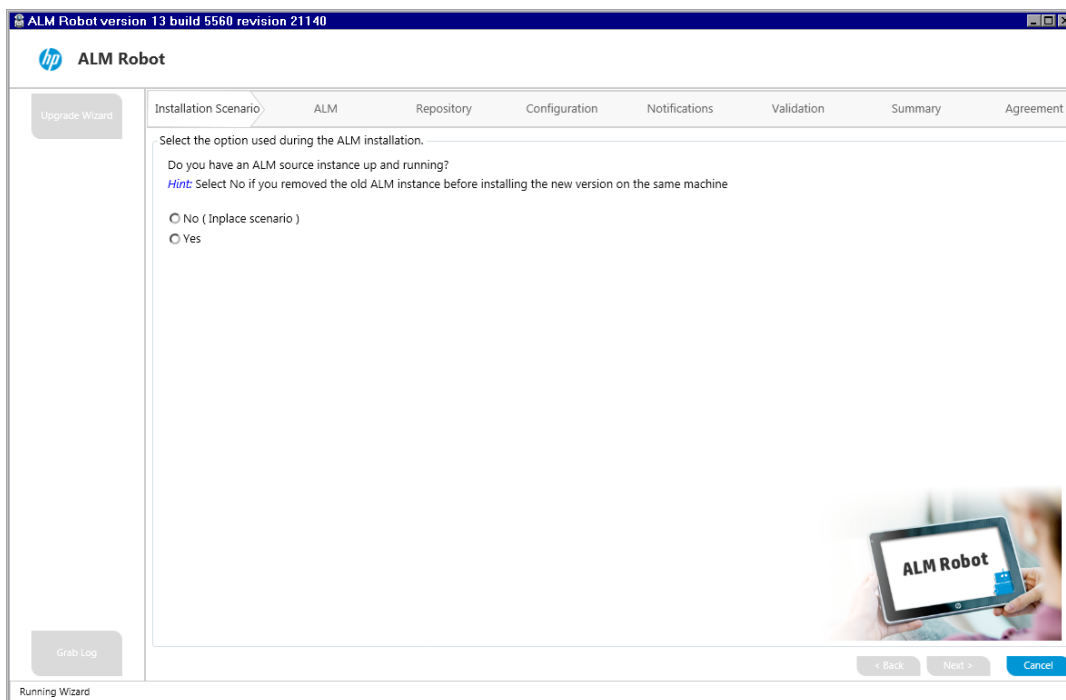
Before ALM Robot can perform any upgrade processes, you must determine the specific upgrade scenario.

**To run the ALM Robot wizard:**

1. From the Start menu, open ALM Robot. The ALM Robot main screen appears.

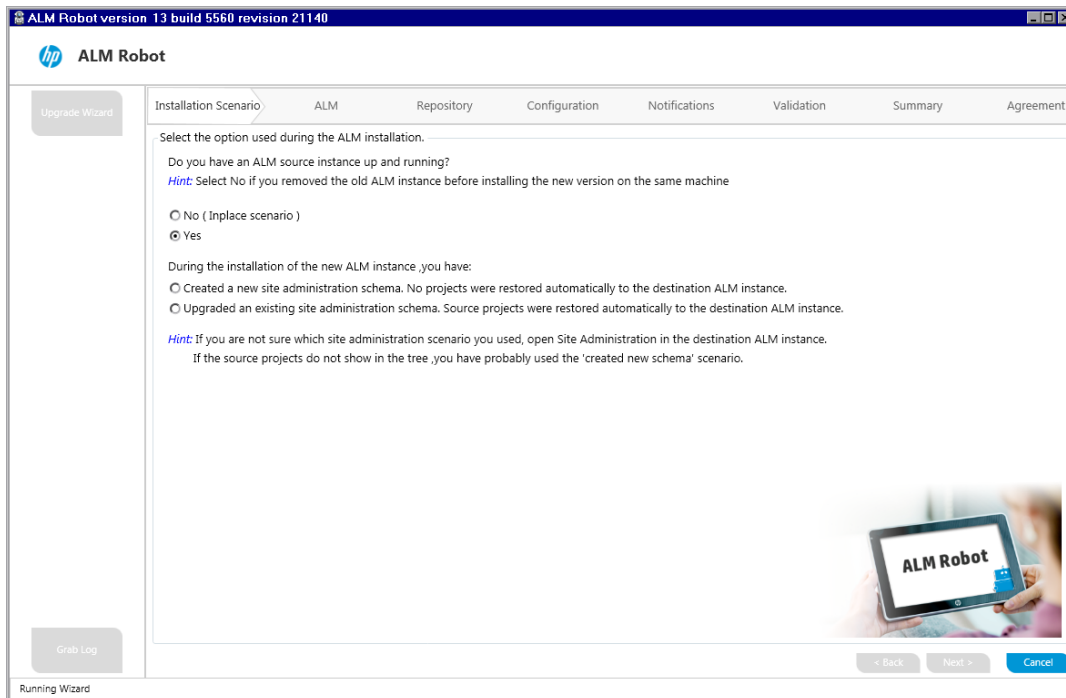


2. Click **Upgrade Wizard**. The Installation Scenario screen opens.



Select whether there is an ALM source instance. If you removed the source instance before installing the new version of ALM on the same machine, select **No**.

If you select **Yes**, the screen expands.



Select the method used for the new site administration database schema during the installation.



3. Click **Next**. The ALM screen opens.

The screenshot shows the ALM Robot installation wizard window. The title bar reads "ALM Robot version 13 build 5560 revision 21140". The window has a sidebar on the left with "Upgrade Wizard" and "Grab Log" buttons. The main area has a tabbed interface with "Installation Scenario", "ALM", "Repository", "Configuration", "Notifications", "Validation", "Summary", and "Agreement". The "ALM" tab is active, showing the "Specify source and destination ALM instances" section. This section contains two identical groups of input fields for "Source QC/ALM Instance" and "Destination ALM Instance". Each group includes a "Saved Aliases" dropdown menu, an "Instance Alias" text field, a "Url" text field, a "Site Admin User" text field, and a "Site Admin Password" text field. To the right of each "Instance Alias" field is an orange information icon. At the bottom right of the main area is a small image of a tablet displaying the ALM Robot logo. At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel". The status bar at the bottom left says "Running Wizard".

Click the **Saved Aliases** down arrow to select a previously created **Instance Alias**, or enter the following information for the source and destination instances:

**Note:** To delete a saved alias, right-click on the alias and click **Delete**.

- **Instance Alias.** The instance name.
- **Url.** The URL of the machine.
- **Site Admin User.** The user name of the instance's site administrator.
- **Site Admin Password.** The password of the instance's site administrator. The password can be blank.

**Note:** If you selected **No** on the Installation Scenario screen, the source instance is not updatable.

4. Click **Next**. The Repository screen opens.

Select **Preserve timestamp** to preserve the original file timestamp.

**Note:** This increases the time for copying the repository.

Click the down arrow to select the operating system, **Windows** or **Other**.

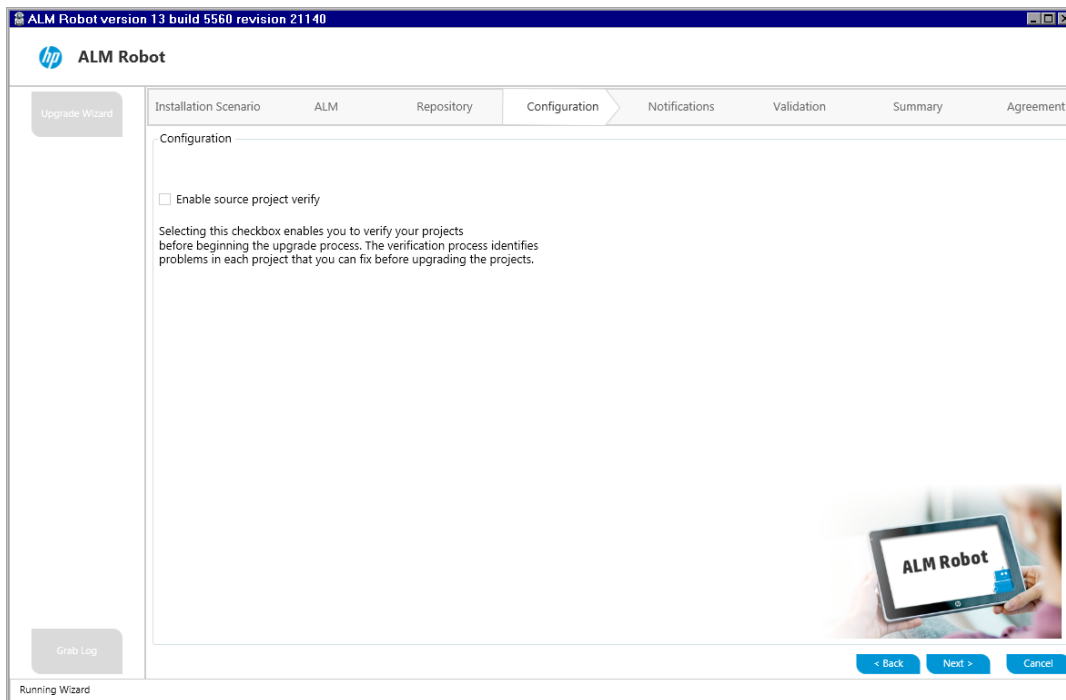
Click the **Saved Aliases** down arrow to select a previously created **Instance Alias**, or enter the following information for the source and destination repository machines:

**Note:** To delete a saved alias, right-click on the alias and click **Delete**.

- **Instance Alias.** The instance name.
- **Host.** The machine name.
- **User.** The name of a user who can connect to this machine. For **Windows** machines, enter the domain and user.
- **Password.** The user's password.

**Note:** If you selected **No** on the Installation Scenario screen, the source repository is not updatable.

5. Click **Next**. The Configuration screen opens.

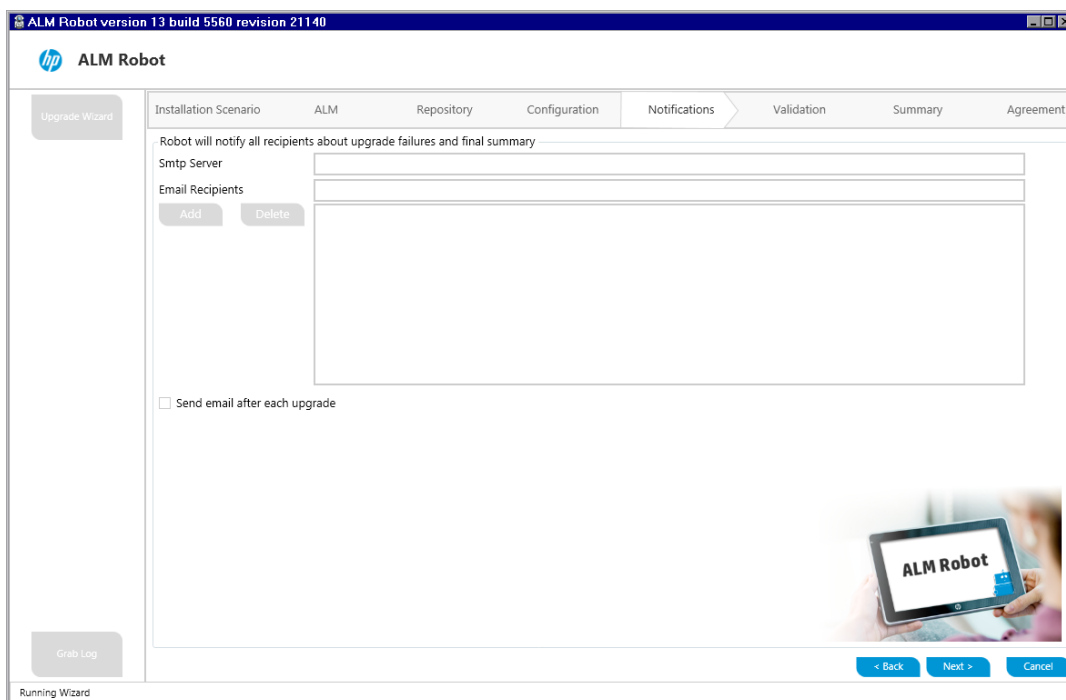


The screenshot shows the ALM Robot Configuration screen. The title bar indicates "ALM Robot version 13 build 5560 revision 21140". The main window has a sidebar with "Upgrade Wizard" and "Grab Log" buttons. The top navigation bar includes "Installation Scenario", "ALM", "Repository", "Configuration" (selected), "Notifications", "Validation", "Summary", and "Agreement". The "Configuration" section contains a checkbox labeled "Enable source project verify". Below the checkbox, a text block explains: "Selecting this checkbox enables you to verify your projects before beginning the upgrade process. The verification process identifies problems in each project that you can fix before upgrading the projects." At the bottom right, there are buttons for "< Back", "Next >", and "Cancel". A small image of a tablet displaying "ALM Robot" is visible in the bottom right corner.

Select **Enable source project verify** to verify your projects before beginning the upgrade process.

**Note:** By default, this checkbox is selected.

6. Click **Next**. The Notifications screen opens.



The screenshot shows the ALM Robot Notifications screen. The title bar indicates "ALM Robot version 13 build 5560 revision 21140". The main window has a sidebar with "Upgrade Wizard" and "Grab Log" buttons. The top navigation bar includes "Installation Scenario", "ALM", "Repository", "Configuration", "Notifications" (selected), "Validation", "Summary", and "Agreement". The "Notifications" section contains a text block: "Robot will notify all recipients about upgrade failures and final summary". Below this, there are input fields for "Smtp Server" and "Email Recipients". The "Email Recipients" field has "Add" and "Delete" buttons. At the bottom, there is a checkbox labeled "Send email after each upgrade". At the bottom right, there are buttons for "< Back", "Next >", and "Cancel". A small image of a tablet displaying "ALM Robot" is visible in the bottom right corner.

Enter the following information:

- **Smtp Server.** The Smtp server.
- **Email Recipients.** Enter the email address and click **Add** to add each address to the list of email addresses that will receive notifications during the process. Select an email address and click **Delete** to remove the address from the list of recipient email addresses.

Select **Send email after each upgrade** to send notifications to the email recipients after each project upgrade.

7. Click **Next**. The Validation screen opens.

Validation	Status	Comment
Check that correct SA api is registered	Not validated	
Source ALM server connection	Not validated	
Destination ALM server connection	Not validated	
Source file repository connection	Not validated	
Destination file repository connection	Not validated	
Lab project upgrade status	Not validated	
Product version test	Not validated	
Verify sending notification **	Not validated	

\*\* Non mandatory field

Validate

< Back   Next >   Cancel

Click **Validate**. ALM Robot validates your configuration.

Validation	Status	Comment
Check that correct SA api is registered	✓	No issues
Source ALM server connection	✓	No issues
Destination ALM server connection	✓	No issues
Source file repository connection	✓	No issues
Destination file repository connection	✓	No issues
Lab project upgrade status	✓	No issues
Product version test	✓	No issues
Verify sending notification **	✗	<a href="#">User Action</a> The SMTP host was not specified.


\*\* Non mandatory field

Validate

Grab Log

Running Wizard

< Back Next > Cancel

The currently running validation is marked with a . As each validation completes, it is marked with one of the following:

- **Green check mark.** The validation completed successfully.
- **Red X.** The validation failed. Next to each red X is a **User Action** link. Click the link for more information on the validation failure and any corrective action.

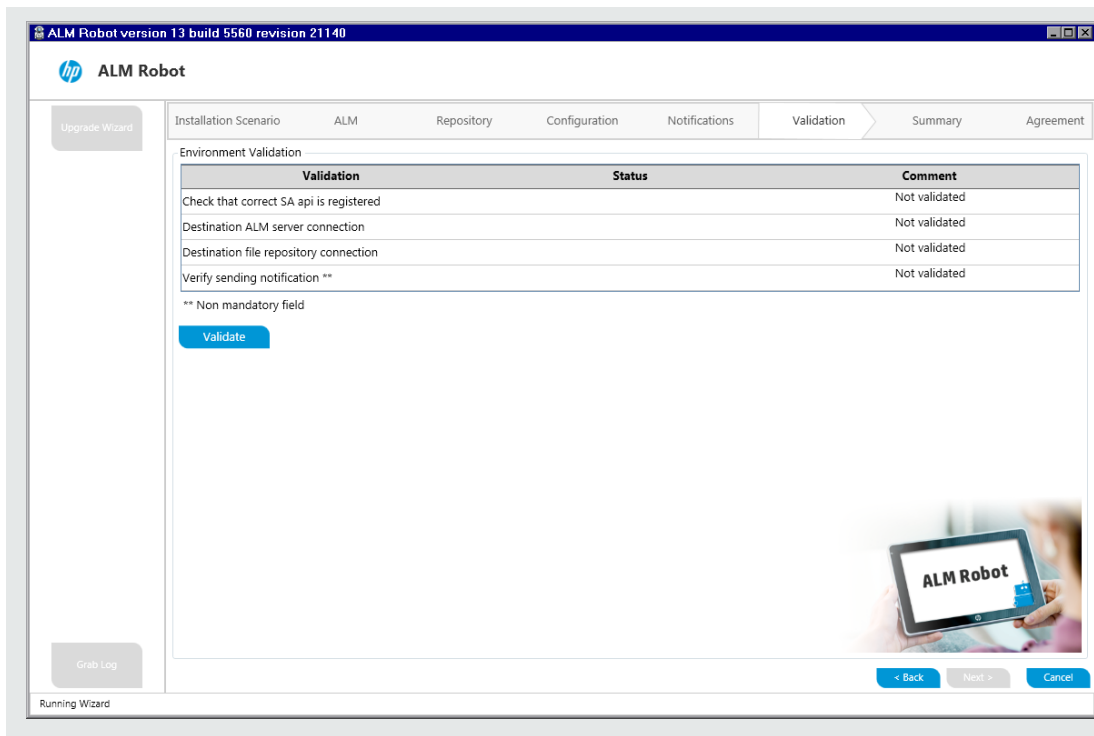
Once the source and destination ALM servers and repositories are valid, the **Grab Log** button is enabled. Click **Grab Log** to open a **Save As** window. Browse to the desired location and enter the file name of your log file. ALM Robot creates the log file and appends the ALM Robot build version to the file name.

**Note:** If ALM Robot has no permission to access the location, you are prompted to enter your user credentials. If ALM Robot cannot save the log file to the location, an error message is generated.

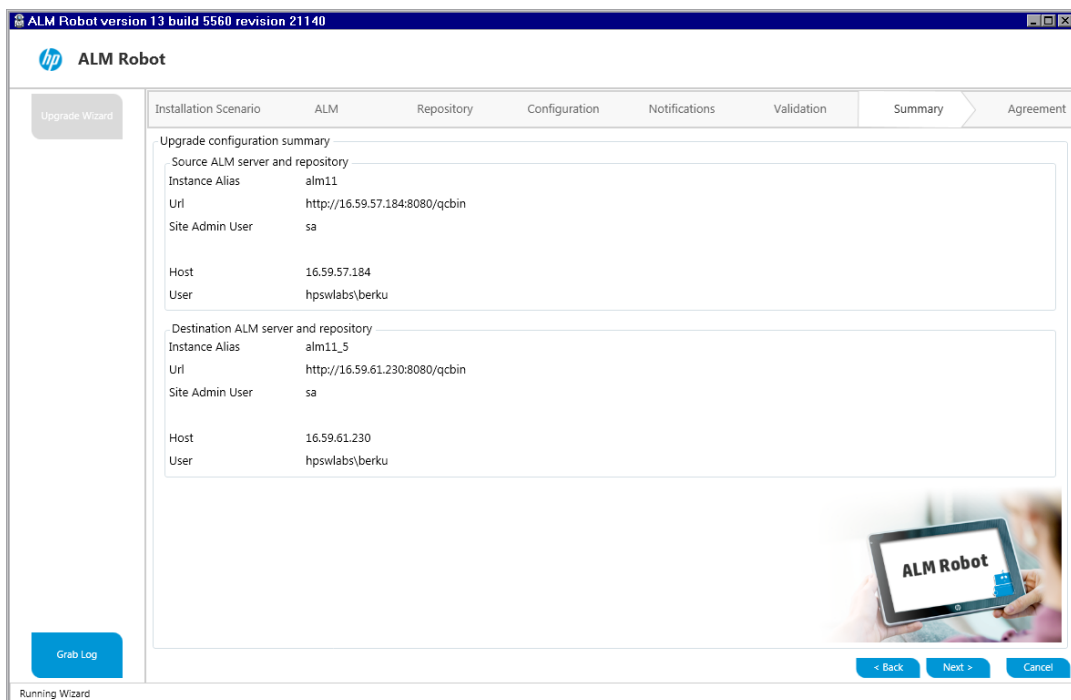
Once all required validations successfully complete, the **Next** button is enabled.

**Note:** **Verify sending notification** is not a required validation.

**Note:** If you selected **No** on the Installation Scenario screen, only the following validations are performed:

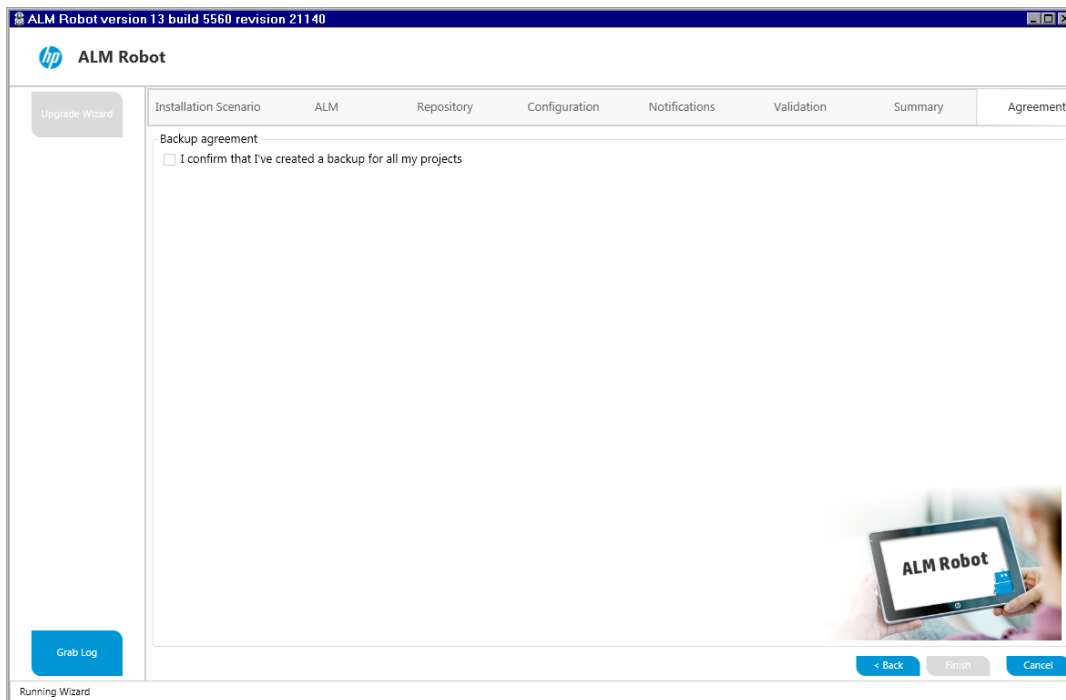


8. Click **Next**. The Summary screen opens.



If any details are incorrect, click **Back** to return to the appropriate screen and continue from there.

9. Click **Next**. The Agreement screen opens.



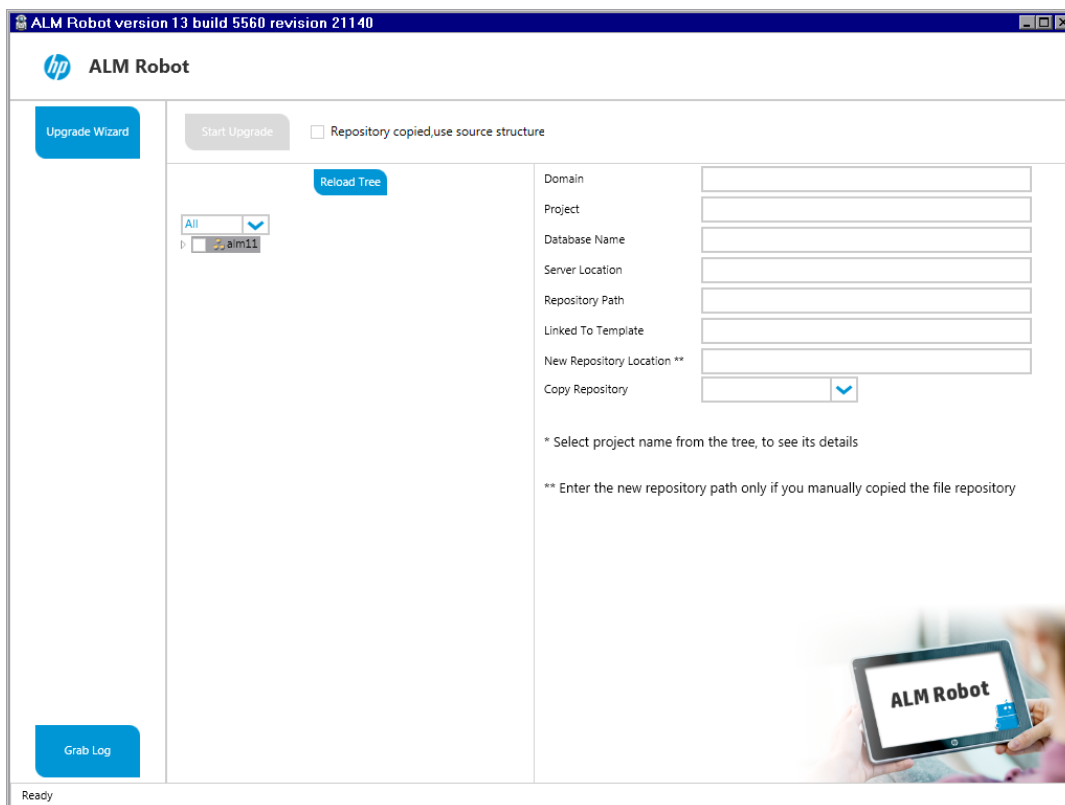
Your projects must be backed up before ALM Robot begins the upgrade process. Select the checkbox to confirm that you have backed up all your projects before starting the upgrade process. Click **Finish**.

## Running ALM Robot

Once you have determined and validated your specific upgrade scenario via the ALM Robot Wizard, you can run ALM Robot.

### To run ALM Robot:

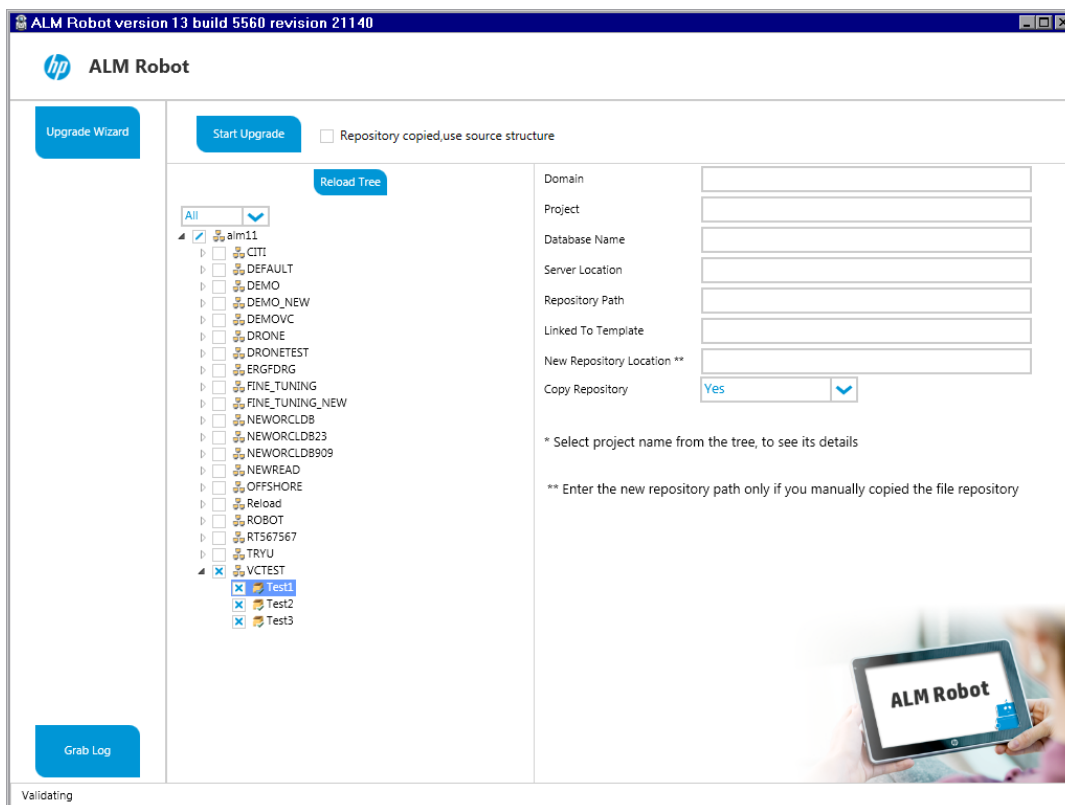
1. Connect to the current server. After clicking **Finish** in the ALM Robot Wizard Summary screen, ALM Robot connects to the current server. Once the connection is established, the main ALM Robot screen opens.



**Note:** Whenever you open ALM Robot you must click **Upgrade Wizard**. If you have already run the ALM Robot Wizard, a message appears that a previous configuration file exists. Click **Yes** to open the ALM Robot Wizard Validation screen, and click **Validate** to validate your configuration. Once the validation is successfully completed, click **Next** to open the ALM Robot Wizard Summary screen. Click **Finish** to connect to the current server.

2. Expand the root project. Click a specific project to see the details. Click the down arrow to display:
  - **All** projects
  - The projects on each **DataBase**
  - Projects by active and inactive **Status**
  - **Template** and regular projects



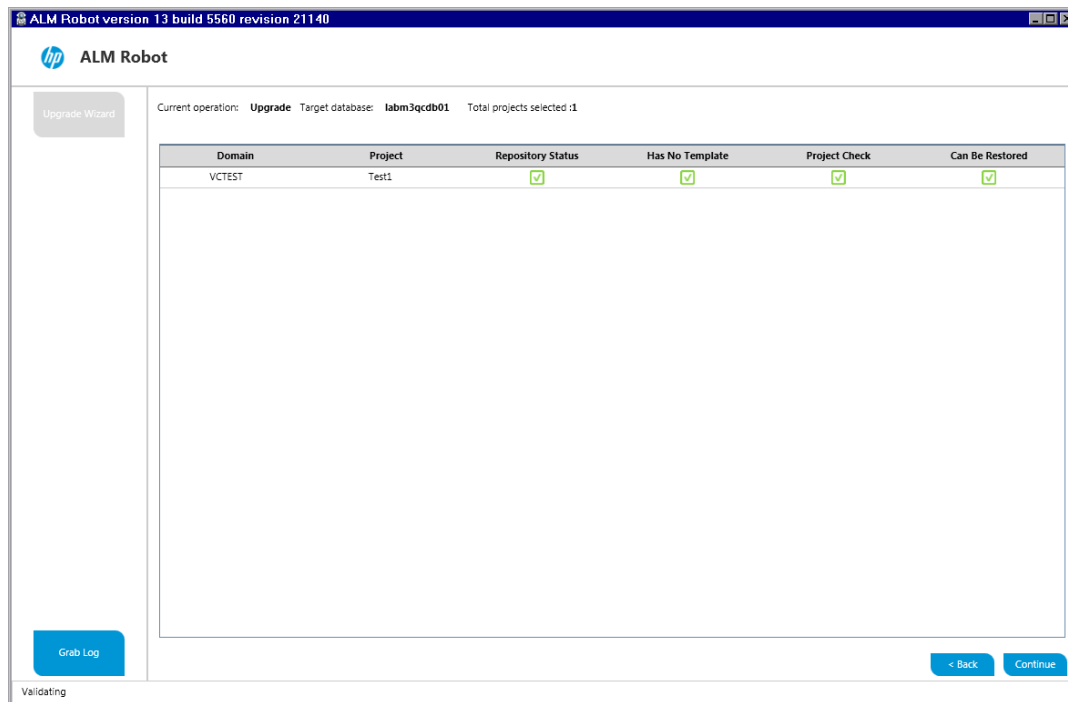


Enter the following information for each project:

- **New Repository Location.** Enter the new repository path only if you manually copied the file repository.
- **Copy Repository.** Click the down arrow to select whether to copy the repository.

Alternatively, select **Repository copied, use source structure** if the repository was copied manually to the Source Repository path. No repositories will be copied for any projects.


3. Select the projects you want to upgrade, and click **Start Upgrade**. ALM Robot begins the upgrade process.





**Note:** You can select an individual project or multiple projects. Selecting a domain selects all the projects in the domain. Selecting the root project selects all the projects under all the domains.

ALM Robot verifies that each selected project:

- **Repository Status.** Repository exists and is accessible.
- **Has no template.** Is not associated with a template project.
- **Project check.** Does not exist on the destination instance.
- **Can be restored.** Can be restored after the upgrade process.

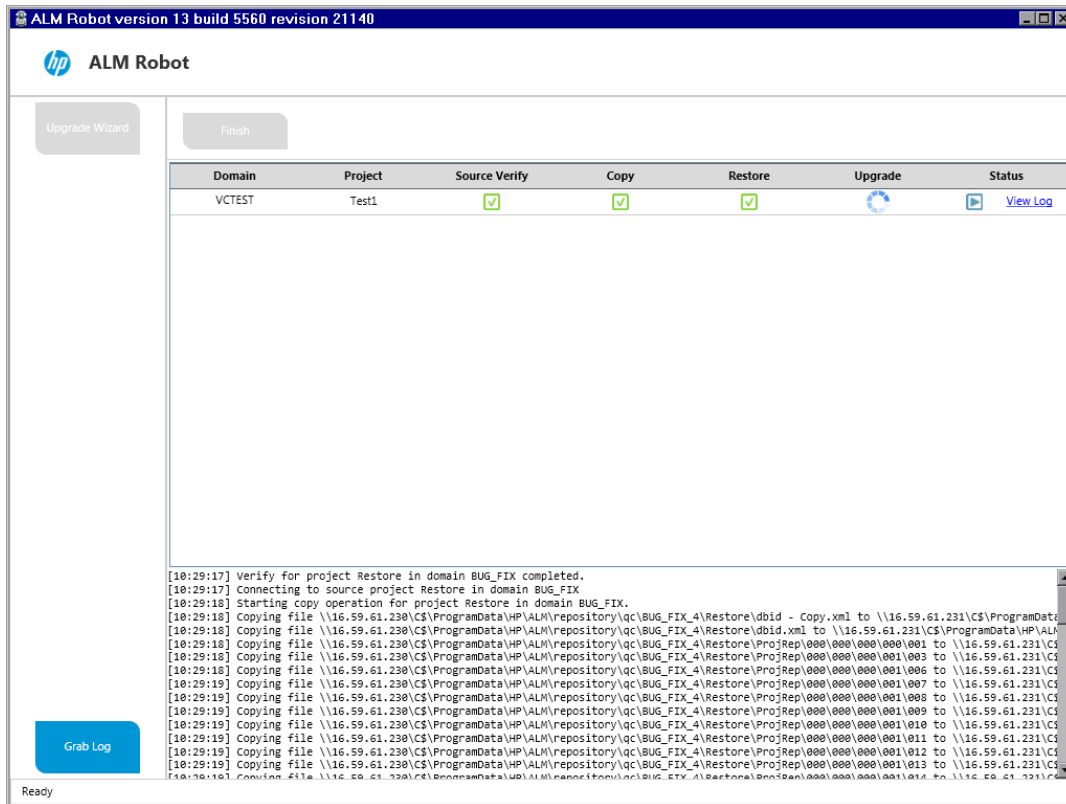
The currently running project in the upgrade verification process is marked with a . As each project completes, it is marked with one of the following:

- **Green check mark.** The project completed successfully.
- **Yellow question mark.** The project completed successfully, but warning messages were generated.
- **Red X.** The project failed.

If the project is associated with a template project, a red X is displayed with a **handled** link ([Handled](#) ). You must first upgrade the template project. Once the template project is upgraded, click **Handled**. The red X is changed ([Handled](#) .

4. To modify your selection, click **Back** to return to the main ALM Robot screen.

- Once all selected projects are validated, click **Continue**. ALM Robot begins the upgrade process.



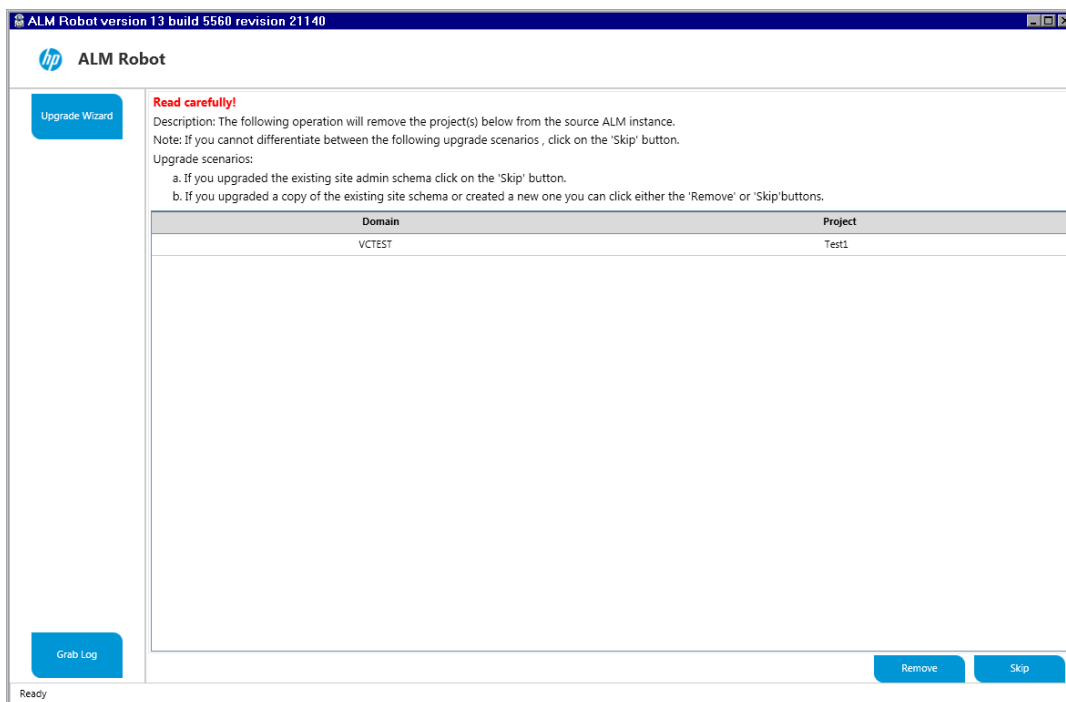
Click **View Log** to view the log showing the current status of the upgrade process.

The currently running function in the upgrade process is marked with a . As each function completes, it is marked with one of the following:

- **Green check mark.** The function completed successfully.
- **Yellow question mark.** The function completed successfully, but warning messages were generated.
- **Red X.** The function failed, stopping the entire upgrade process for this project.

The bottom of the screen shows the progression of the upgrade process. Each upgrade activity is shown.

- Once the upgrade process is complete, click **Finish**. The Remove screen opens, showing all projects that have successfully been upgraded.



Click **Remove** to remove the projects from the source ALM instance or click **Skip** to keep the projects in the source ALM instance.

**Note:** Only click **Remove** if you upgraded a copy of the existing schema or created a new schema. Otherwise, click **Skip**.

7. Once you have removed or skipped all the projects, you return to the main ALM Robot screen.
8. Once ALM Robot finishes, you can review the process logs and the results reports for each function. These are located under the folder where you installed ALM Robot.

