



**Jenkins**

Parameterized Projects

# JENKINS

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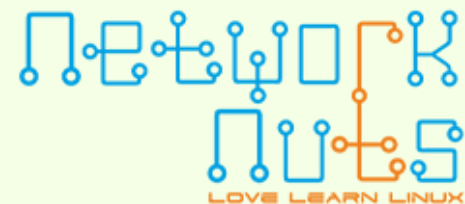
# PARAMETERIZED PROJECT

It is essential to configure the parameters of our project so that it is optimized to the task to be performed. A build parameter is a predefined value or a value configured before running a build.



This is important as it enables you to customize your builds to make them fit different scenarios and also secure your secrets compared to storing them on version control. Build jobs are used to process related tasks, such as deploying applications to a server or running integration tests.

We can make use of build parameters to customize our build to make it run differently depending on what we pass in as the parameter prior to running the build.




# Running Parameterized Project

Go to Jenkins dashboard, select New Item on the top left of the dashboard. Give some name to project, choose freestyle and OK.

### Enter an item name


projectparameter

» Required field




#### Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any tool. This can be even used for something other than software build.




#### Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.



#### Multi-configuration project

Suitable for projects that need a large number of different configurations, such as testing on multiple platform-specific builds, etc.



#### Folder

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

OK

Give some description, if you wish and "select" - "This project is parameterized"

projectparameter ▶

**General** Source Code Management Build Triggers Build Environment Build Post-build Actions

Description

This is a para-meterized project|

[Plain text] [Preview](#)

☐ Discard old builds

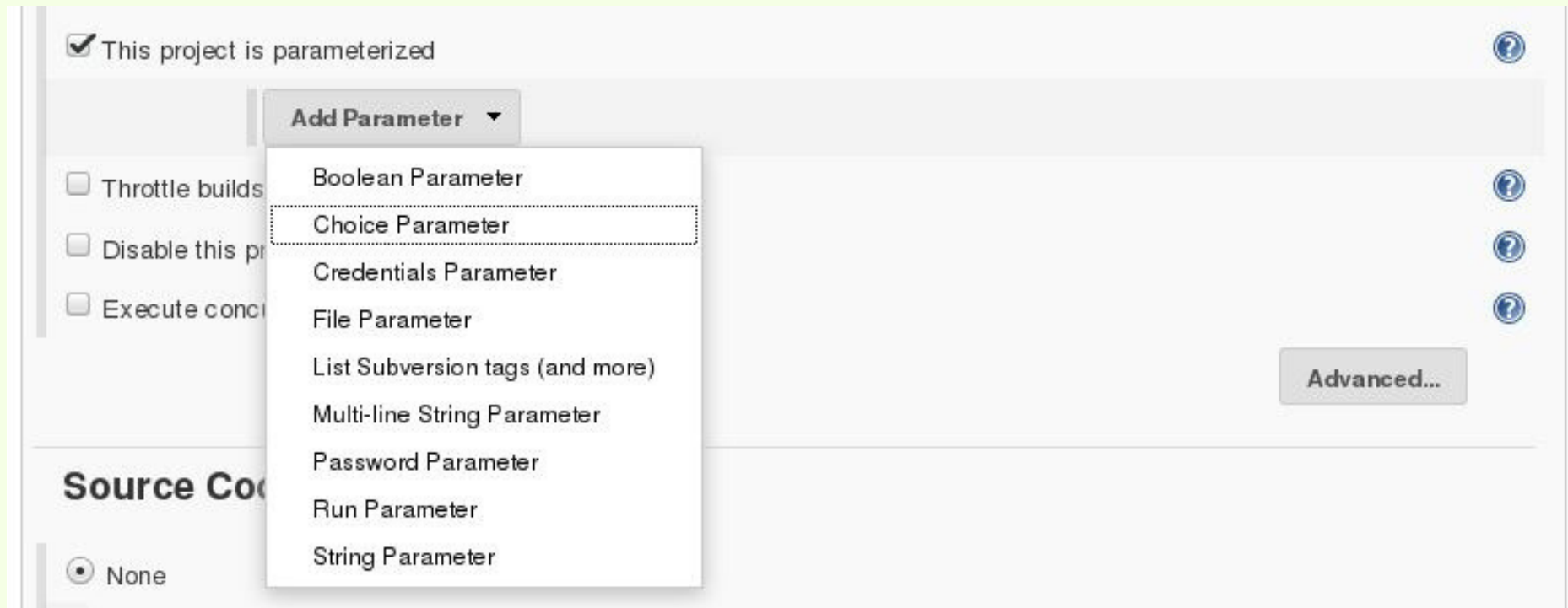
☐ GitHub project

☐ This build requires lockable resources

☒ This project is parameterized

Add Parameter ▼

Click on "Add Parameter" and you can see types of values allowed. Select "String Parameter" for this lab.



Supply any name, valone, in our case. Any default value and some description.

☒ This project is parameterized

**String Parameter**

Name

valone

Default Value

Welcome to Network Nuts - Jenkins Training

Description

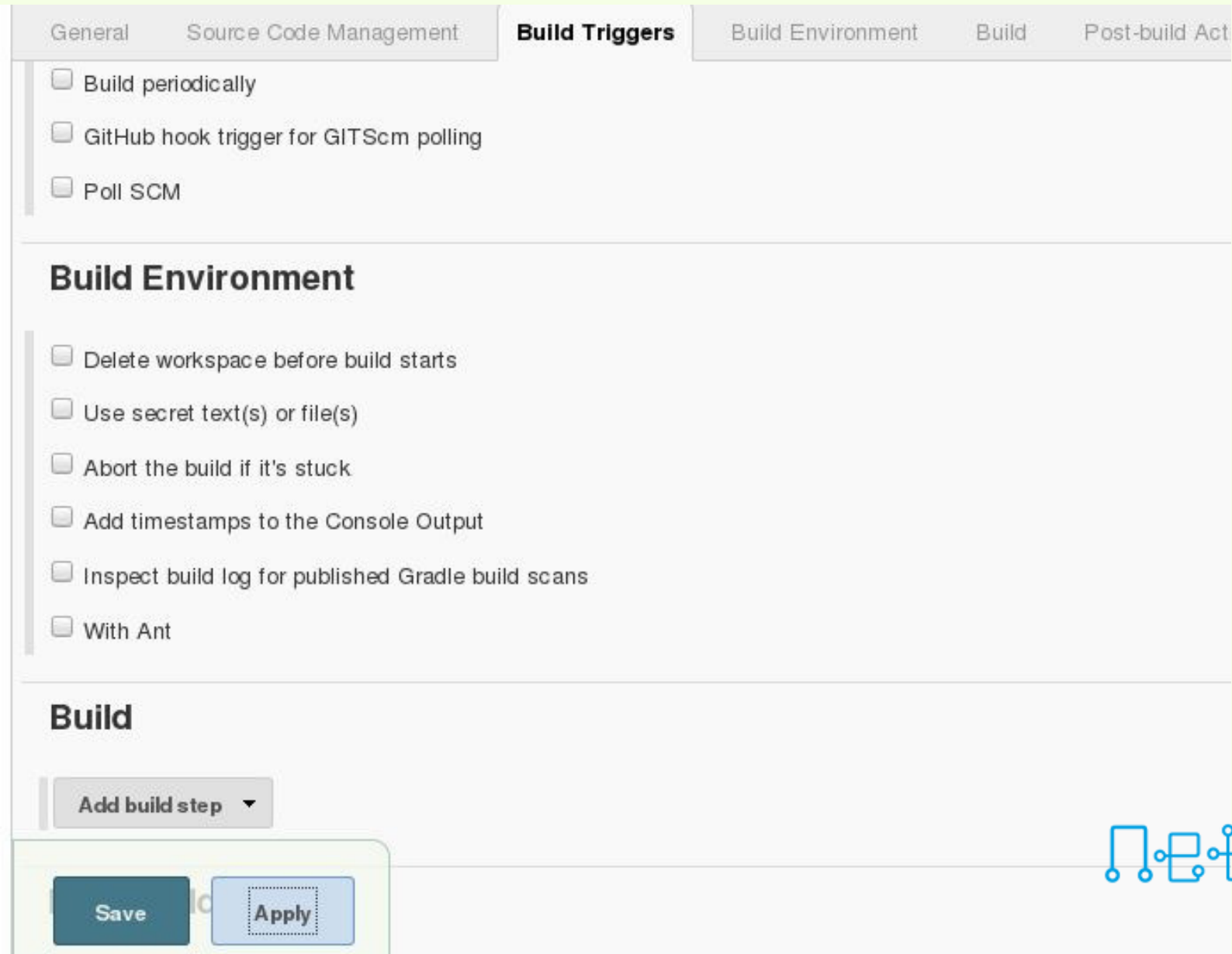
Custom parameter for the lab

[Plain text] [Preview](#)

☐ Trim the string

Add Parameter ▼

In the "Build" section select "Add build step"



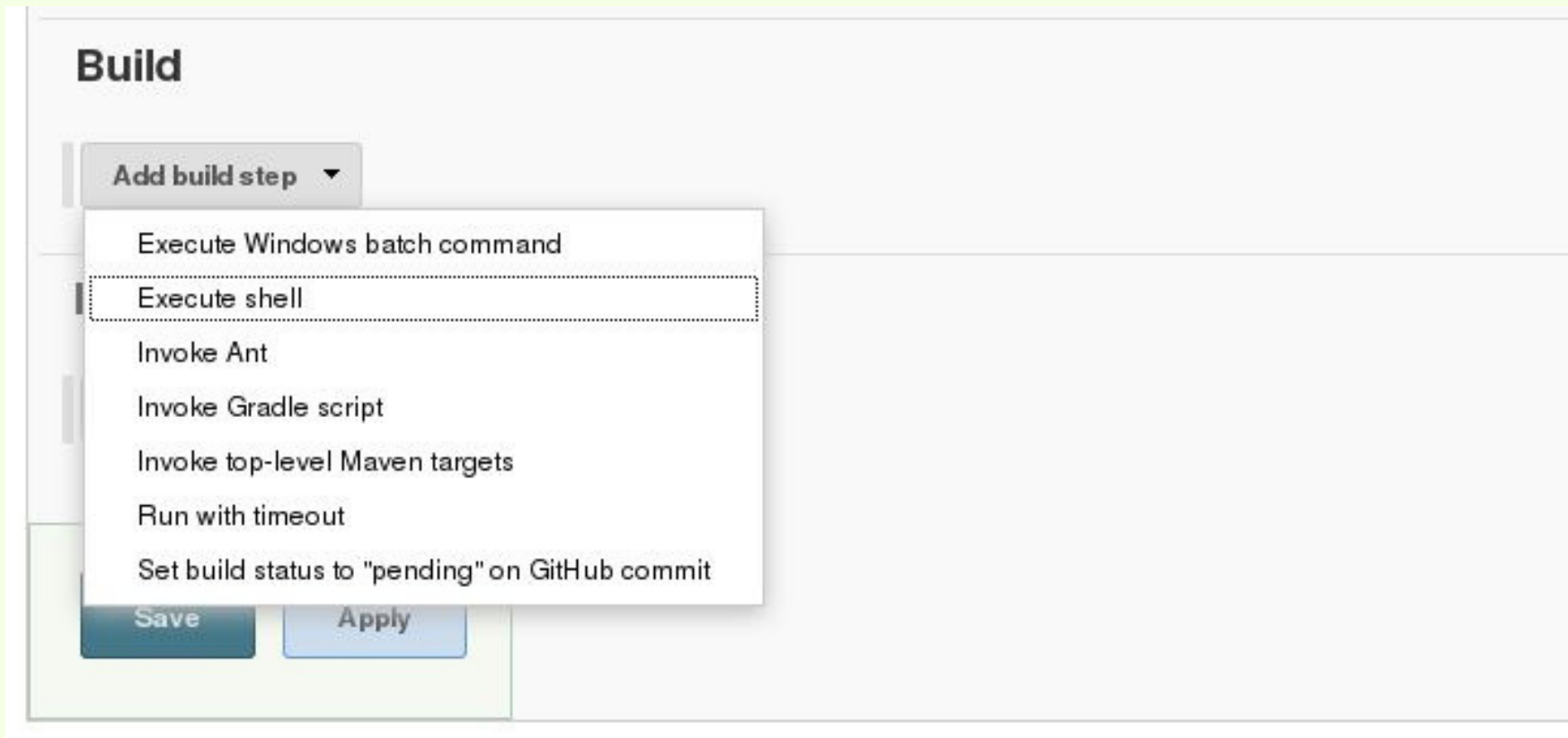
The screenshot shows the Jenkins configuration interface with the following sections:

- General**: Contains three unchecked checkboxes: "Build periodically", "GitHub hook trigger for GITScm polling", and "Poll SCM".
- Build Triggers**: The active tab, containing the same three unchecked checkboxes as the General section.
- Build Environment**: Contains six unchecked checkboxes: "Delete workspace before build starts", "Use secret text(s) or file(s)", "Abort the build if it's stuck", "Add timestamps to the Console Output", "Inspect build log for published Gradle build scans", and "With Ant".
- Build**: Contains a button labeled "Add build step" with a dropdown arrow.

At the bottom of the configuration page, there are two buttons: "Save" and "Apply".



You can see all the build step types permitted. We will choose "Execute shell".



As we just want to display the value supplied we will simply use echo statement.

## Build

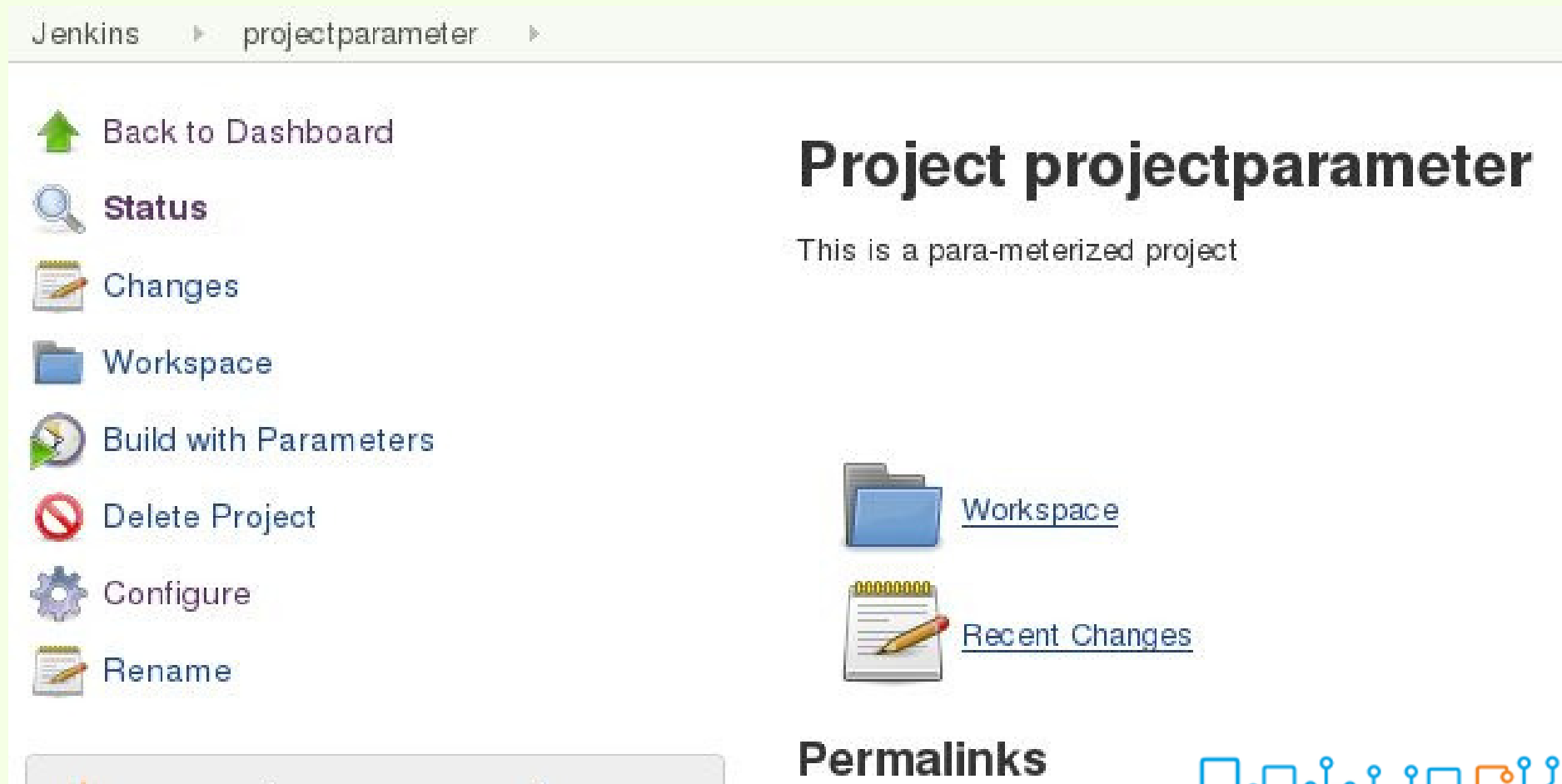


### Execute shell

Command `echo "$valone"`

See [the list of available environment variables](#)

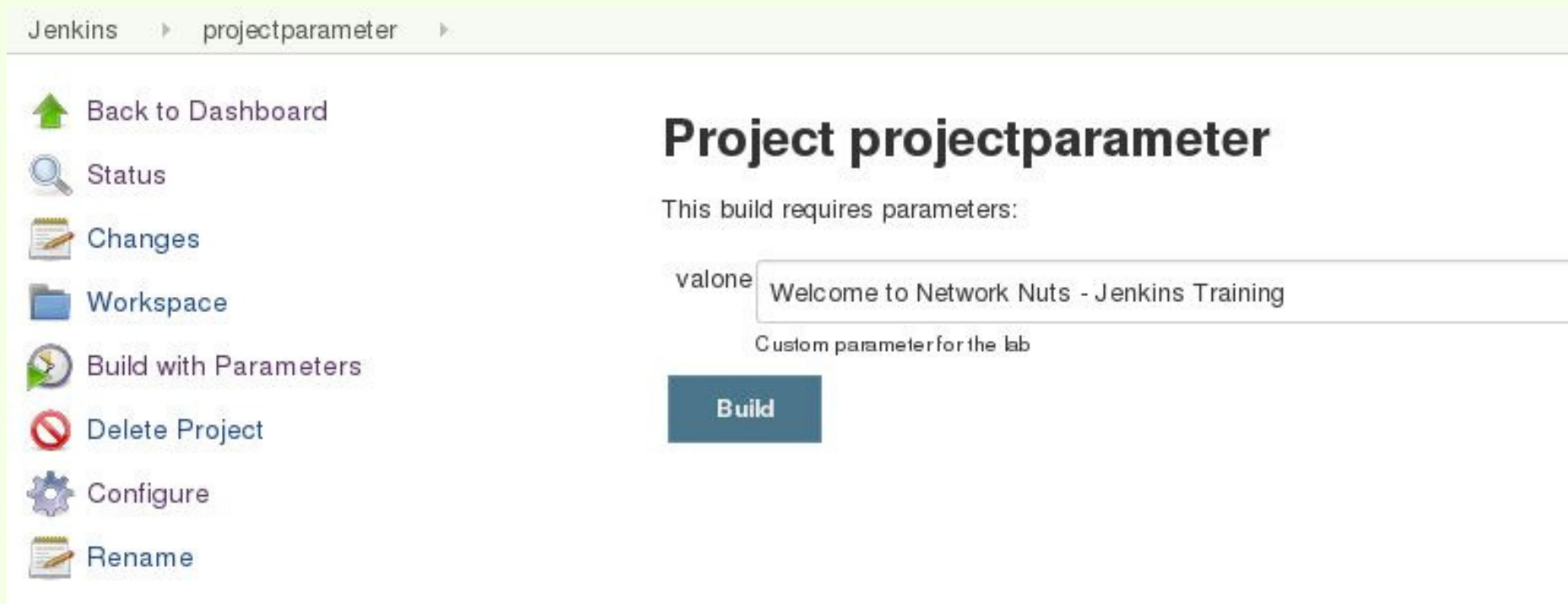
Click on Apply and Save. You can see your project on the dashboard. Now we have to choose "Build with Parameters" for this project build.



The screenshot shows the Jenkins web interface for a project named 'projectparameter'. The breadcrumb navigation at the top reads 'Jenkins > projectparameter'. On the left sidebar, there is a list of actions: 'Back to Dashboard' (green arrow icon), 'Status' (magnifying glass icon), 'Changes' (notepad icon), 'Workspace' (blue folder icon), 'Build with Parameters' (green play button icon), 'Delete Project' (red prohibition sign icon), 'Configure' (gear icon), and 'Rename' (notepad icon). The main content area has the title 'Project projectparameter' and a subtitle 'This is a para-meterized project'. Below the subtitle, there are two links: 'Workspace' (with a blue folder icon) and 'Recent Changes' (with a notepad icon). At the bottom of the main content area, the word 'Permalinks' is visible.



As you build, the project will show you the "valone" parameter and its default value. For this build we are going ahead with default value.



The screenshot shows the Jenkins web interface for a project named 'projectparameter'. On the left is a sidebar with navigation links: 'Back to Dashboard' (green arrow icon), 'Status' (magnifying glass icon), 'Changes' (notepad icon), 'Workspace' (blue folder icon), 'Build with Parameters' (circular arrow icon), 'Delete Project' (red circle with slash icon), 'Configure' (gear icon), and 'Rename' (notepad icon). The main content area has a breadcrumb 'Jenkins > projectparameter' at the top. Below it is the title 'Project projectparameter'. A message states 'This build requires parameters:'. A parameter named 'valone' is shown with a text input field containing 'Welcome to Network Nuts - Jenkins Training'. Below the input field is the text 'Custom parameter for the lab'. At the bottom of the main area is a blue 'Build' button.

Jenkins > projectparameter

[Back to Dashboard](#)

[Status](#)

[Changes](#)

[Workspace](#)

[Build with Parameters](#)

[Delete Project](#)

[Configure](#)

[Rename](#)

## Project projectparameter

This build requires parameters:

valone

Custom parameter for the lab

**Build**

The build will be a success. We can check the console output by clicking on "#1" under "Build History"

The screenshot shows the Jenkins web interface for a project named 'projectparameter'. On the left is a sidebar with navigation links: 'Back to Dashboard' (green arrow), 'Status' (magnifying glass), 'Changes' (notepad), 'Workspace' (folder), 'Build with Parameters' (play button), 'Delete Project' (red circle with slash), 'Configure' (gear), and 'Rename' (notepad). The main content area has the title 'Project projectparameter' and a subtitle 'This is a para-meterized project'. Below this are links for 'Workspace' (folder icon) and 'Recent Changes' (notepad icon). A 'Permalinks' section lists five links: 'Last build (#1), 20 sec ago', 'Last stable build (#1), 20 sec ago', 'Last successful build (#1), 20 sec ago', and 'Last completed build (#1), 20 sec ago'. At the bottom left is a 'Build History' panel with a search bar containing 'find' and a table showing a single build entry: a blue circle icon, the text '#1', and the timestamp 'Mar 31, 2019 2:43 AM'.

Back to Dashboard

Status

Changes

Workspace

Build with Parameters

Delete Project

Configure

Rename

## Project projectparameter

This is a para-meterized project

Workspace

Recent Changes

### Permalinks

- [Last build \(#1\), 20 sec ago](#)
- [Last stable build \(#1\), 20 sec ago](#)
- [Last successful build \(#1\), 20 sec ago](#)
- [Last completed build \(#1\), 20 sec ago](#)

**Build History** [trend](#)

find x

**#1** Mar 31, 2019 2:43 AM

Selecting "Console Output", we can see the default value - Welcome to Network Nuts - Jenkins Training

Jenkins > projectparameter > #1

 Back to Project

 Status

 Changes

 **Console Output**

 View as plain text

 Edit Build Information

 Delete build '#1'

 Parameters




## Console Output


Started by user [alok srivastava](#)  
Building in workspace /var/lib/jenkins/workspace/projectparameter  
[projectparameter] \$ /bin/sh -xe /tmp/jenkins3133276245137629434.sh  
+ echo 'Welcome to Network Nuts - Jenkins Training'  
Welcome to Network Nuts - Jenkins Training  
Finished: SUCCESS





Now build the project one more time, and this time change the default value.


Jenkins > projectparameter >


 Back to Dashboard


 Status

 Changes

 Workspace

 Build with Parameters

 Delete Project

 Configure

## Project projectparameter

This build requires parameters:

valone

Custom parameter for the lab

**Build**

Build will be a success like earlier. This time we are getting the new output, not the default one.

Jenkins ▸ projectparameter ▸ #2

 [Back to Project](#)

 [Status](#)

 [Changes](#)

 **[Console Output](#)**

 [View as plain text](#)

 [Edit Build Information](#)

 [Delete build '#2'](#)

 [Parameters](#)



## Console Output

Started by user [alok srivastava](#)  
Building in workspace /var/lib/jenkins/workspace/projectparameter  
[projectparameter] \$ /bin/sh -xe /tmp/jenkins1012571409413211093.sh  
+ echo 'Summer Time. We guys needs - bike, beach, beer and bae'  
Summer Time. We guys needs - bike, beach, beer and bae  
Finished: SUCCESS