



# Parasoft Environment Manager Plugin for Jenkins

## Introduction

The Parasoft Environment Manager plugin for Jenkins lets you easily provision environments (and optionally replicate environments to different Virtualize servers) from Jenkins jobs. This enables you to automatically provision environments into the specific states needed for automated, continuous testing across your software delivery pipeline. For example, you could automatically provision a functional testing environment and execute functional tests upon each code checkin, then later reconfigure that environment for performance testing and execute core performance tests versus that new environment. If you're spinning up Virtualize server instances via Docker or other container technologies, this plugin can also dynamically deploy the environments and associated assets to each of those instances.

## Prerequisites

- Environment Manager 2.7.4 or higher
- Virtualize 9.9.4 or higher

## Installation

1. Download the Parasoft Environment Manager Plugin for Jenkins (from Parasoft Marketplace).
2. Go to **Manage Jenkins**.
3. Go to **Manage Plugins**.
4. In the **Advanced** tab, upload the plugin (the .hpi file).

## Configuration

Each Jenkins server communicates with one Environment Manager. Multiple Jenkins servers can communicate with the same Environment Manager.

1. Go to **Manage Jenkins**.
2. Go to **Configure System**.
3. Scroll down to the Environment Manager Builder area and enter your Environment Manager URL, username, and password. You can click **Test Connection** to ensure that Jenkins is successfully communicating with Environment Manager.

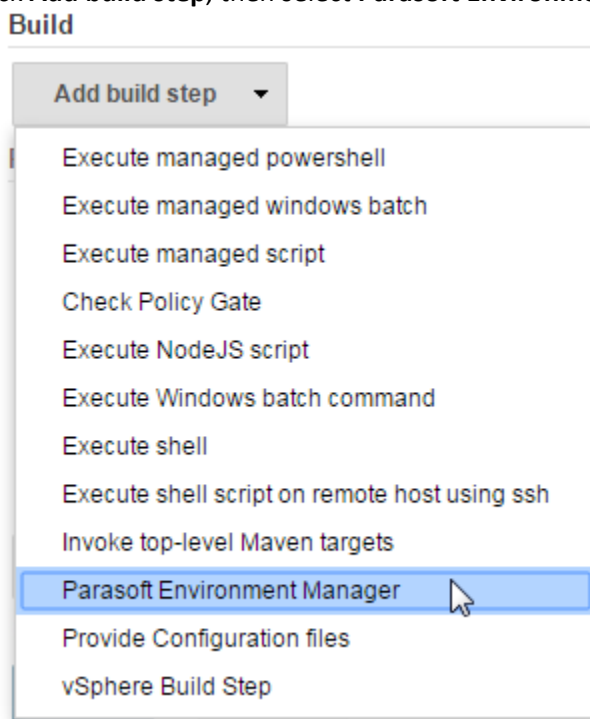
### Environment Manager Builder

URL	<input type="text" value="http://emdemo.parasoft.com:8080/em"/>
	<small>Specify the Environment Manager URL</small>
username	<input type="text" value="admin"/>
password	<input type="password" value="....."/>
<input type="button" value="Test Connection"/>	

## Adding an Environment Manager Build Step to a Jenkins Job

You can add any number of Environment Manager build steps to a Jenkins job.

1. Open the job you want to configure.
2. Go to **Configure**.
3. Scroll down to the Build area.
4. Click **Add build step**, then select **Parasoft Environment Manager**.



Several new fields will display.

#### Build

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##### Parasoft Environment Manager

System

Environment

Instance

- ☐ Copy the environment and assets before provisioning
- ☐ Abort on provisioning failure

5. Specify the system, environment, and instance that you want to provision (and optionally replicate to a new Virtualize server).

#### Build

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##### Parasoft Environment Manager

System

Environment

Instance

6. If you want to replicate the environment and associated assets (virtual assets, proxies, JDBC controllers, etc.) to a new Virtualize server before provisioning:
  - a. Check **Copy the environment and assets before provisioning**.
  - b. (Optional) Specify a name for the new environment. If this field is empty, a name will be assigned automatically.
  - c. Specify the target Virtualize server. See the guidelines below for help selecting and configuring one of the available options.
7. If you want the job to stop if the provisioning fails, check **Abort on provisioning failure**.

## Choosing Between the Various Copying Options

This plugin provides three different copying options to suit various needs. The first option requires the Virtualize server to be registered with Environment Manager when the job executes; the second and third will wait for the Virtualize server to be registered, and is thus the preferred option when you're dynamically deploying Virtualize servers via Docker or other container technologies.

[If the Virtualize server is already registered with Environment Manager](#)

To copy to a Virtualize server that is already registered with Environment Manager, enable **To a Virtualize server registered with EM**, then select the desired server under **Virtualize server**. If this server is not registered with Environment Manager at the time the job executes, the job will fail.

☒ Copy the environment and assets before provisioning

New environment name

☒ To a Virtualize server registered with EM

Virtualize server

[If the Virtualize Server is not yet registered with Environment Manager \(e.g., it will be spun up via Docker or other automated processes\)](#)

In this case, you can configure the build step to wait for a Virtualize server with the specified host (IP) or Virtualize server name, then perform the copy operation once that server is registered with Environment Manager. To achieve this, select **To a Virtualize server matching host** or **To a Virtualize server matching name**, then specify the expected host IP or server name (the name it will use to register with Environment Manager).

☒ Copy the environment and assets before provisioning

New environment name

☐ To a Virtualize server registered with EM

Virtualize server

☐ To a Virtualize server matching host

Virtualize host

☒ To a Virtualize server matching name

Virtualize name

☒ Copy the environment and assets before provisioning

New environment name

Virtualize server ☐ To a Virtualize server registered with EM

Virtualize host ☒ To a Virtualize server matching host

Virtualize name ☐ To a Virtualize server matching name

#### [If the Virtualize server has a dynamic IP](#)

As long as the Virtualize server has a consistent name, you can configure the build step to copy to the Virtualize server with the specified name (e.g., the name it uses to register with Environment Manager). If the named Virtualize server is not yet registered with Environment Manager, the build step will wait for it, then perform the copy operation once that server is registered.

☒ Copy the environment and assets before provisioning

New environment name

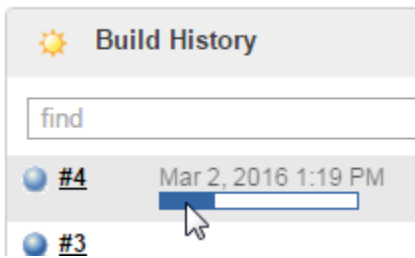
Virtualize server ☐ To a Virtualize server registered with EM

Virtualize host ☐ To a Virtualize server matching host

Virtualize name ☒ To a Virtualize server matching name

## Reviewing the Build Step's Progress and Results

To view the console output for an in-progress job, click the progress bar in the Build History area.



This opens a page with status details and links to the associated Environment Manager host and environments.

## Console Output

Progress:  

```
Started by user Cynthia Dunlop  
Building on master in workspace /var/lib/jenkins/jobs/Deploy to Docker/workspace  
Copying environment: EM Demo ParaBank  
  copied 3 of 3 virtual assets...  
  copied 4 of 4 message proxies...  
Successfully copied to environment: MyNewEnv  
Executing provisioning action on http://emdemo.parasoft.com:8080/em  
System: ParaBank  
Environment: MyNewEnv  
Environment Instance: All Real  
Provisioning event id: 2  
Running step #1  
Completed provisioning event with id: 2  
See http://emdemo.parasoft.com:8080/em/environments/29 for details  
Finished: SUCCESS
```

To see details on a completed job, use the **Console Output** pull-down in the Build History area.

