Using VectorCAST Server Edition with a FLEXlm License Server

Version 1.0

2022-07-01

Application Note AN-ACT-1-008

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Restrictions Public Document

Abstract Using VectorCAST Server Edition with a FLEXlm License Server

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1 Overview

VectorCAST Server Edition licenses are designed to be used within a CI/CT/CD environment or in another server infrastructure. These licenses allow customers to automate environment building, instrumenting, test execution, and report generation and support parallelization of these tasks.

VectorCAST Server Edition licenses are designed to be run from the command line and cannot be used with the GUI version of VectorCAST. The GUI version of VectorCAST is only supported with the Desktop Edition.

VectorCAST uses license management software to enable the licensed features of VectorCAST. FLEXlm or FlexNet Publisher (FNP) is one of the licensing technologies used by Vector for VectorCAST. This App Note will cover using VectorCAST with a FLEXlm license manager.

VectorCAST has several Server Edition offerings. The VectorCAST/QA Server Edition allows for the automation of instrumentation (including parallel instrumentation), test execution, report generation, and any other tasks that can be done from the command line. VectorCAST/C++ and VectorCAST/Ada Server Editions allow automation of the building of unit test environments, executing tests, generating reports, and any other tasks that can be done from the command line. The VectorCAST/C++ and VectorCAST/Ada Server Edition licenses allow for unit test environments to be built and executed in parallel.

VectorCAST is shipped with two native command line applications called `clicast` and `manage` for use in CI/CT. These are native Windows and Linux applications. Either command line application can include the flag '`--ci`' to indicate that one of the Server Edition licenses is to be used, rather than one of the Desktop Edition licenses. Alternatively, the environment variable VCAST_USE_CI_LICENSES can be set and the '`--ci`' flag on the command line is not needed. The environment variable method is the recommended way to identify the command should use a Server Edition license.

Server Edition Licenses are supported with VectorCAST 2020 SP2 or later.

CI/CT is implemented with a scripting language with commands run on the command line. For CI/CT, VectorCAST will also be run via a command line interface using the commands `clicast` and `manage`. Several different scripting languages are in use for CI/CT. Examples of scripting languages used in CI/CT are Python, Groovy, BASH and even Windows CMD batch scripts. Any of these scripting languages will work with VectorCAST if they can call the native Windows or Linux applications for VectorCAST (`clicast` and/or `manage`).

Creating the scripts to implement a particular use case is like creating any other types of scripts. Each step in the script needs to be verified for the correct and intended action. Creating a script for a particular use case takes some effort to setup initially. Please contact VectorCAST support for help in creating a script to accomplish the use case you have in mind.

2 Use Cases

The following use cases will be shown:

- Use Case: Methods for Selecting to Use a Server Edition License
- Use Case: Using a Server Edition License with Jenkins

2.1 Use Case: Methods for Selecting to Use a Server Edition License

There are two methods for selecting to use a Server Edition license with the VectorCAST command line commands: `clicast` and `manage`.

2.1.1 Environment Variable Method (recommended)

Using an environment variable to select using the Server Edition License:

- Set the `VCAST_USE_CI_LICENSES` environment variable
  - On Windows: `set VCAST_USE_CI_LICENSES=1`
  - On Linux: `export VCAST_USE_CI_LICENSES=1`

Once the environment variable is set this way, all future VectorCAST command line commands in the script will request a Server Edition license to execute.

2.1.2 Command Line Option Method

Using a command line option to select using the Server Edition License:

- Include `--ci` in the call to the command line interface (`clicast` or `manage`)
  - The `--ci` must be added to every call to `clicast` or `manage`
  - `--ci` cannot be passed to vpython, hence it is recommended to use the environment variable method

```
%VECTORCAST_DIR%\clicast --ci -lc -e L1_HAL_MODEL-u L1_RxTx -s c_isr -t Gen_Err Execute Run
```

Figure 1 Example using a DOS command script

2.2 Use Case: Using a Server Edition License with Jenkins

A Jenkins Pipeline is a user-defined model of a continuous delivery (CD) system for your software.

In the Jenkins Plugins Index, there is a VectorCAST plugin to setup a Jenkins VectorCAST Pipeline. This plugin allows the user to create Pipeline Jobs to build and execute VectorCAST Projects. A VectorCAST Pipeline Job is a model based on configuration information the user provides during the initial setup of the Pipeline Job. This Use Case will show how to configure a Jenkins VectorCAST Pipeline Job to use a Server Edition license.

NOTE: Within the Jenkins configuration menus, Server Edition licenses are referred to as Continuous Integration Licenses.

If a pipeline has not been created yet, check the box that enables Continuous Integration Licenses to configure the pipeline to use Server Edition licenses as shown in Figure 2.

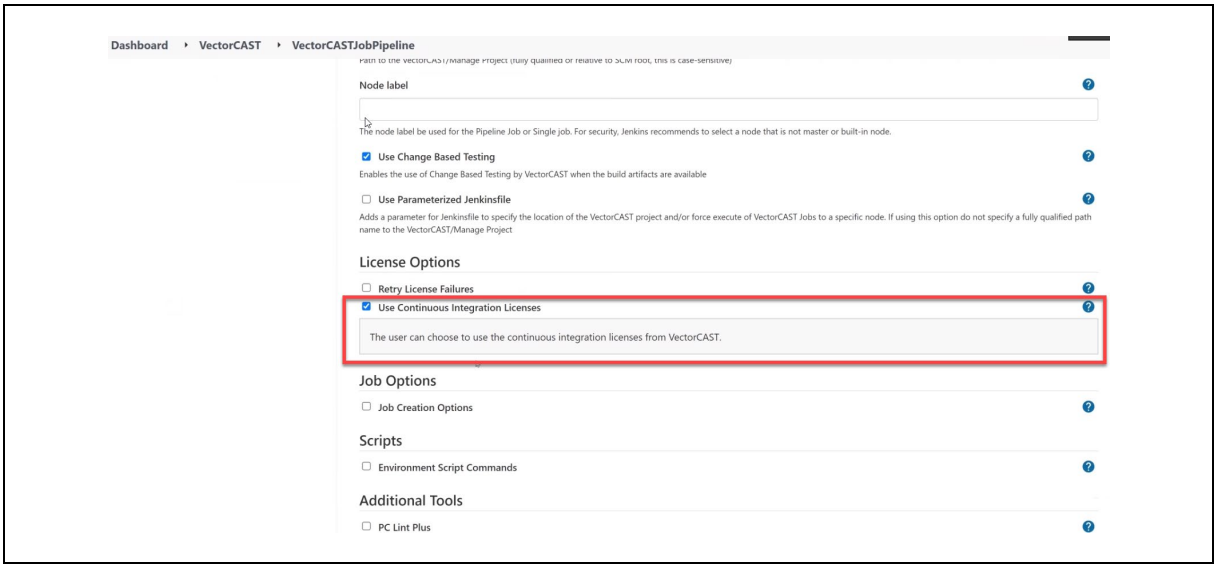

Figure 2 Enable Server Edition License

If pipeline has already been created, modify the script in Jenkins. Find the variable `VC_UseCILicense` and put "`--ci`" in quotes as shown in Figure 3.

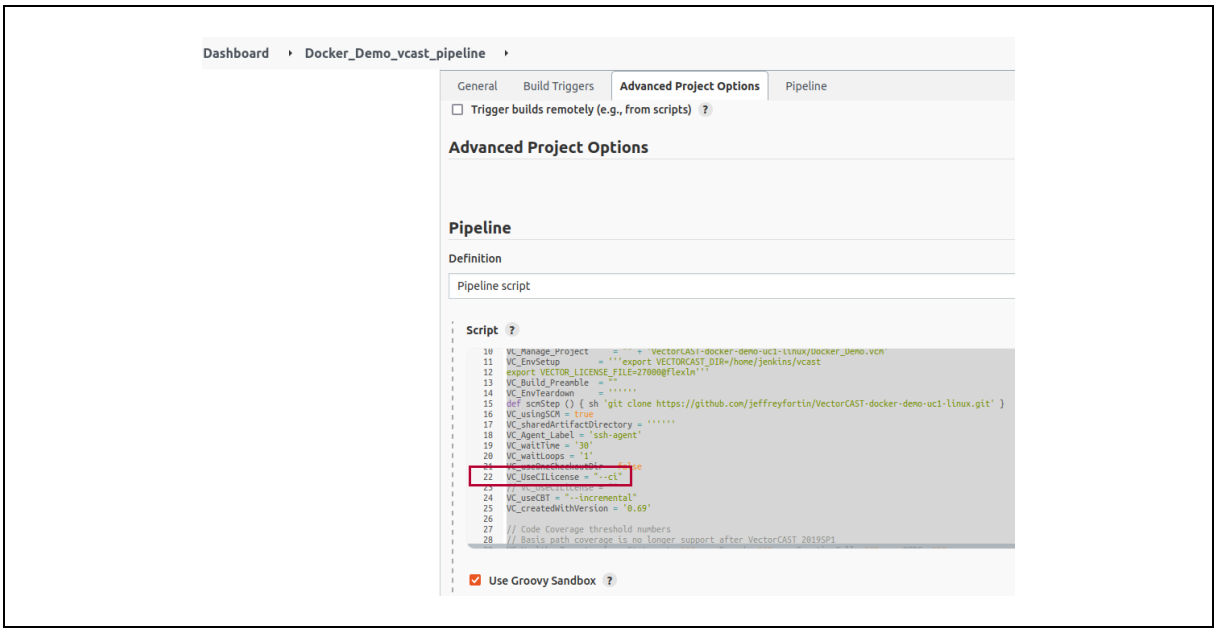

Figure 3 Modify Script in Jenkins

3 Additional Resources

Some additional resources you may find helpful:

- VectorCAST Jenkins Pipeline Plugin Articles Overview
- Jenkins Pipeline (jenkins.io)

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5 Contacts

For a full list with all Vector locations and addresses worldwide, please visit http://vector.com/contact/.