

Tidal Enterprise Orchestrator: Understanding Expect Statements

Document ID: 113228

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Introduction

This document provides information on how to work with and understand expect templates in the Terminal Adapter.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- The basics behind TEO and the Terminal Adapter
- A basic understanding of regular expressions

Components Used

The information in this document is based on Tidal Enterprise Orchestrator (TEO) 2.1 or later and its Terminal Adapter.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

What are Expect Statements?

The first component in understanding expect templates is to understand how the Terminal Adapter communicates with the end component. The terminal adapter in TEO uses SSH protocol and acts as a SSH client in order to connect to the end component. After any command is issued, TEO captures the output of the SSH client type screen and uses Regular Expressions in order to attempt and find a match in the defined

expect statements.

For commonly used devices, such as Unix/Linux and Cisco IOS®, these set of statements are already pre-defined in TEO. However, an end user might need to update them or even create their own set to better interact with their end components. In TEO 2.2 or later you can go to the Terminal Adapter and define and customize your own expect templates, which can expand the list of devices on your terminal setup. Expect templates are similar to the pre-defined set of expect statements that are defined for Unix/Linux and Cisco IOS.

Understanding a Basic Expect

When looking at the base Prompt Expect for Cisco IOS, it is defined as `^[Target.PromptPrefix].*>` . This means once a command is run on that target and the command is finished, TEO looks for something to match to that regular expression. If a match is found TEO reports back that the activity was successful because the command was issued and the basic prompt has returned. Imagine using a SSH console manually. A user types in a command, then issues the command and waits for the command to finish and for the next prompt to show. In this case, the `^` starts a line in a regular expression, then looks for anything put in the prompt prefix configuration of the target. It then looks for `.*` characters (or any number of characters) and for the `>` character which is the ending prompt character in IOS. If you had a prompt that normally looks similar to `"MyPrompt(>)"` , you can do a regular expression of `^MyPrompt.*>` to match it. There are other variations of that which work fine, but just as an example.

How to Change Expect Statements

Complete these steps:

Note: This can be done on the target itself or at each individual activity, which depends on the proper usage.

1. On Terminal or Unix/Linux targets, right click **Properties** and select the **Advanced** tab. From here you can select common device pattern sets or define custom patterns.
2. From the Execute Terminal Command activity, select the **Expect** tab in order to further define expect statements for that activity only.

Related Information

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Updated: Sep 13, 2011

Document ID: 113228
