

ITA\_System Configuration / Environment Construction Guide

Terraform-driver

*－*Version 1.10*－*

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※”Exastro IT Automation” is written as ”ITA” in this document.

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# Introduction

This document explains the system configuration and environment construction for operating Terraform optional function (referred to as Terraform driver hereafter) in ITA.

To use the ITA Terraform driver, it is assumed that the basic ITA functions have been built. Please refer to "System Configuration/Environment Construction Guide - Basics" for constructing ITA basic function.

# Function

The Terraform driver provides the following functions.

Table 1-1-1. Function name

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Function | Application | WEB/AP | BackYard |
| 1 | Terraform driver | Generates an execution plan and execute the construction bases on the coded infrastructure configuration in ITA via Terraform.  In addition, it is possible manage coded access policies based on Policy as Code. | ◎ | ◎ |

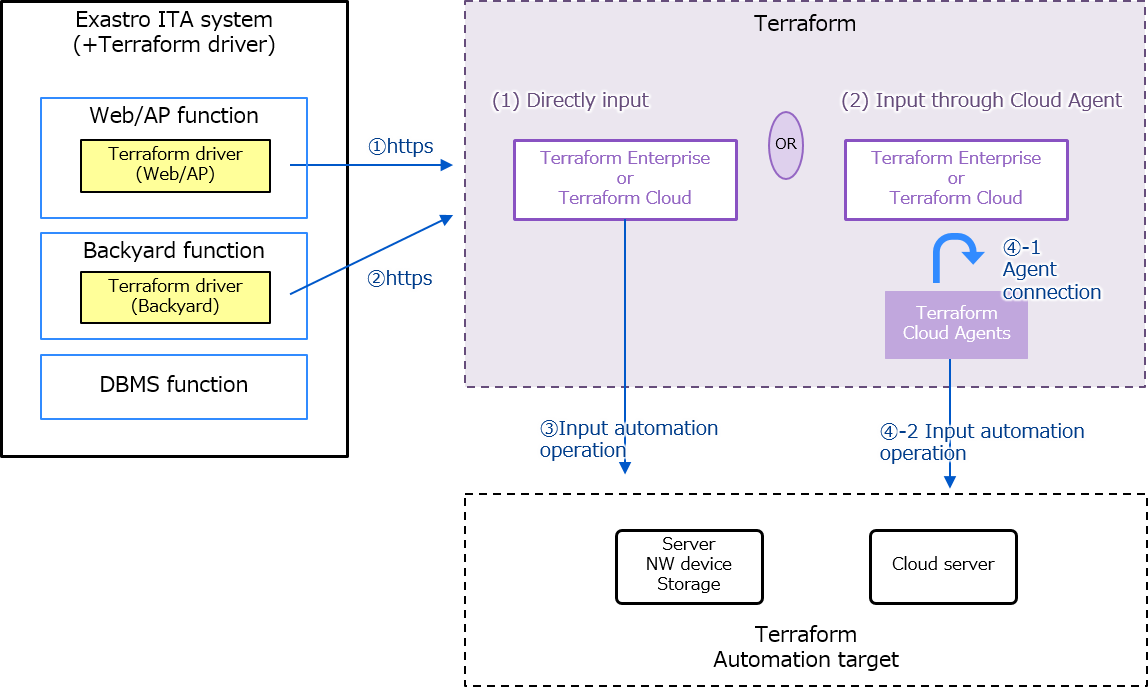
# System configuration

The system configuration for Terraform Driver is the same as the ITA System.

In order to use Terraform, the user will need to use a Terraform Enterprise server different from the ITA Server. The user can also use the cloud service, Terraform Cloud.

If the target of Terraform's automated configuration execution is on-premises where direct communication from the cloud is not possible, the configuration could be submitted using Terraform Cloud Agents.

※The following diagram illustrates a Terraform configuration. The ITA system is not included in the diagram.

For more information, see "Exastro-ITA\_System\_Configuration\_Environment\_Construction\_Guide\_Basic".

## 2.2　System connection requirements

The table below contains the connection requirements for the different services in this system configuration

For more information regarding the connection requirements for the ITA System, please see   
“Exastro-ITA\_System\_Configuration\_Environment\_Construction\_Guide\_Basic”.

Table 2.2Connection requirements list

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Connection No.※1** | **FROM** | **TO** | **Protocol**  **[Port number ※2]** | **Main application** |
|  | ITA server  (Web/AP function) | Terraform  ※3 | https [443/tcp] | ・Registers Organization/Workspaces to Terraform from ITA  ・Gathers Organization/Workspace/Policy/PolicySet information from ITA. |
| ② | ITA server  (Backyard function) | Terraform  ※3 | https  [443/tcp] | Gathers information and runs Plan/PolicyCheck/Apply to Terraform Enterprise. |
| ③ | Terraform  ※3 | Target device | Any  (Differs depending on the Terraform provider） | Runs commands and inputs API commands to the Target device/Cloud service from Terraform. |
| ④-1 | Terraform Cloud Agents | Terraform  ※3 | https  [443/tcp] | Connects Terraform and Terraform Cloud through API. |
| ④-2 | Terraform Cloud Agents | Target device | Any  (Differs depending on the Terraform provider） | Runs commands and inputs API commands to the Target device/Cloud service from Terraform. |

※1 Describe the connection number linked to the number in the diagram above " 2.1 System configuration".

※2 Describe a standard port number.

※3 "Terraform" in this document means either "Terraform Enterprise" or "Terraform Cloud.

# System requirements

Since Terraform driver (ITA side) is based on system requirements of ITA system, please refer to "System Configuration/Environment Construction Guide - Basics". This section describes the requirements for BackYard.

●Version

Table 3‑1. Terraform Enterprise system requirements

|  |  |  |
| --- | --- | --- |
| **Package** | **Version** | **Remarks** |
| Terraform Enterprise | 202110-1 (576) or later |  |

Table 3‑2.Terraform Cloud system requirements

|  |  |  |
| --- | --- | --- |
| **Package** | **Version** | **Remarks** |
| Terraform Cloud | - | Terraform Cloud must be running the latest version. |

●BackYard

**Table 3-1. Linux commands required for Terraform backyard**

|  |  |
| --- | --- |
| **Command** | **Remarks** |
| tar |  |
| zip |  |

Python Library

Table 3‑4. Terraform driver system requirements

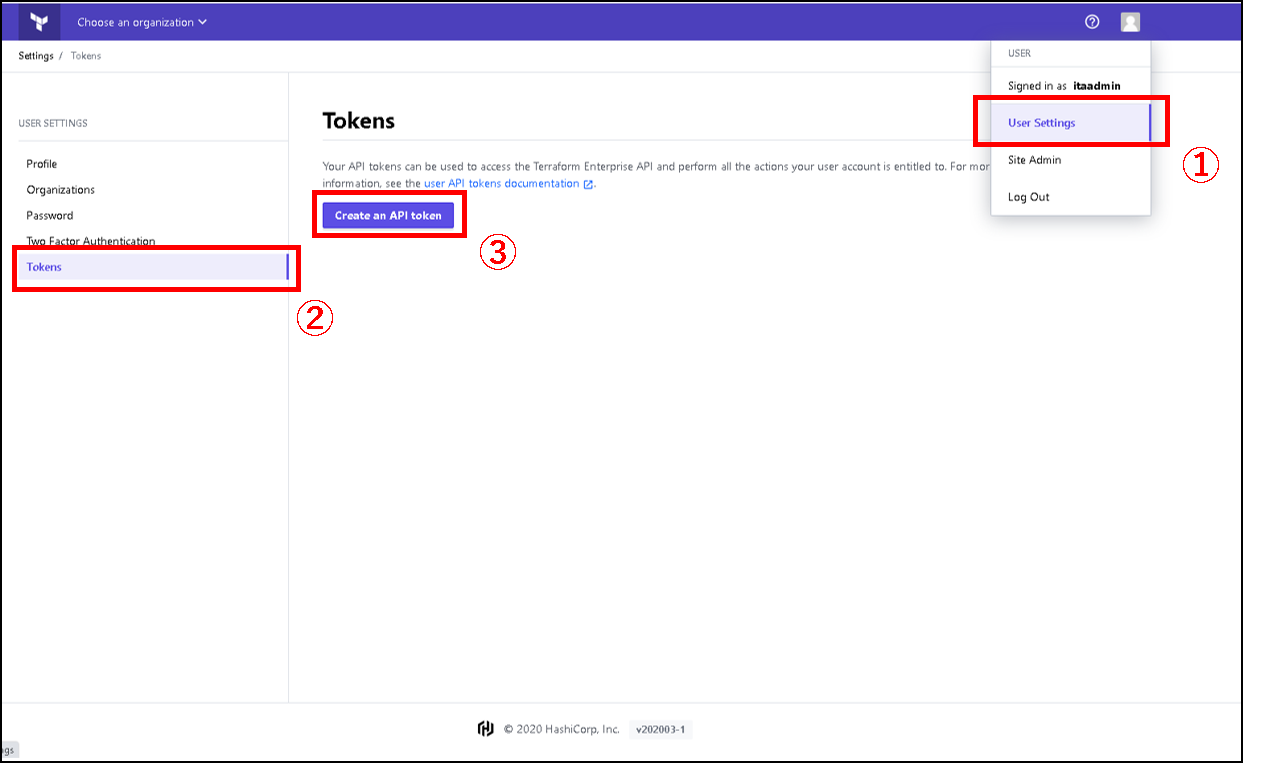
|  |  |  |
| --- | --- | --- |
| **名称** | **Requirements** | **Remarks** |
| python-hcl2 | Python3.6 or later | Both WebAP Server and BackYard server is required. |

# Terraform initial setting

## Prepare required resource

In order to link Terraform from Terraform driver, you need to create an user token.

Log in to Terraform from a browser, then click [User Setting] → [Tokens] → [Create an API token] to create API token.



The created user token should be set to “Interface information” of Terraform console in ITA.  
Please refer to “User Instruction manual Terraform-driver” for details.