



# TFE Technical Enablement

## E1 Training Course



# TFE Technical Enablement

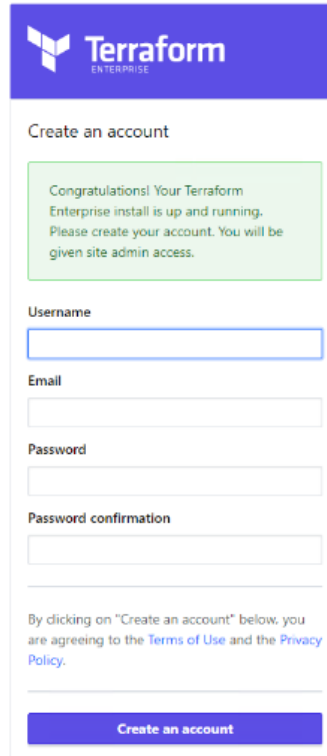
## TFE Configuration Overview



# Post TFE Installation



Congratulations on finishing your Terraform Enterprise Installation! Now that we have a *vanilla* installation ready



The screenshot shows the 'Create an account' page of Terraform Enterprise. At the top is a purple header with the Terraform logo and the word 'ENTERPRISE'. Below the header, the text 'Create an account' is displayed. A green message box contains the text: 'Congratulations! Your Terraform Enterprise install is up and running. Please create your account. You will be given site admin access.' Below this, there are four input fields: 'Username', 'Email', 'Password', and 'Password confirmation'. At the bottom, there is a blue button labeled 'Create an account'. A disclaimer at the bottom states: 'By clicking on "Create an account" below, you are agreeing to the [Terms of Use](#) and the [Privacy Policy](#).'

# Post Install Checklist



- Initial Administrators
- User Management
  - SSO/SAML
  - IdP Configuration
- Admin account recovery

# Automating Initial User Creation



- After Terraform Enterprise is installed, the initial admin user must then be created to begin using the product.
- Normally this user is created by opening the application from the installer dashboard.
- The user can also be created using [an API](#) if desired

# SAML Single Sign On



SAML is an XML-based standard for authentication and authorization. Once configured it allows operators to use an existing directory service to manage access to TFE.

Terraform Enterprise supports the SAML 2.0 and works with:

- ADFS
- Azure Active Directory
- Okta
- OneLogin

# SSO and SAML



- SAML requires the configuration of two parties:
  - The Identity Provider (IdP).
  - The Service Provider (SP), which is also sometimes referred to as Relying Party (RP).
- Terraform Enterprise is configured as the Service Provider.
- Terraform can use SAML assertions to sync team membership from the directory service.
  - Any team names that don't match existing teams exactly are ignored; Terraform Enterprise does not automatically create new teams

# SAML Attributes



- **Username Attribute Name:**
  - (default: Username) The name of the SAML attribute that determines the TFE username for a user logging in via SSO.
- **Site Admin Attribute Name:**
  - (default: SiteAdmin) The name of the SAML attribute that determines whether a user has site-admin permissions.
- **Team Attribute Name:**
  - (default: MemberOf) The name of the SAML attribute that determines team membership.



# Quick Tips for Troubleshooting



- Disable SAML Single Sign-On
  - Before starting, disable SAML SSO by going to `https://<TFE HOSTNAME>/app/admin/saml` and unchecking the Enable SAML Single Sign-On checkbox. It's best to start from a clean setup.
- Create a non-SSO admin account for recovery
  - Before proceeding with troubleshooting, create a non-SSO admin account that can be used to log in if admin access gets revoked for other admins. The email address assigned to this user should not be one that will be used for SAML.
- Reconfigure SAML SSO with SAML Debugging enabled
  - Login failures will now cause the SAML XML from the IdP to be printed on the login screen.

# Admin Account Recovery



- Admin account should always be available if SSO issues prevent logging in.
- If Admin account info is lost a new one user be created from the Rails console. Full procedure [here](#).
- Be aware of who has shell access to the TFE host.

```
[root@tfe ~]# sudo docker exec -ti ptf_atlas /usr/bin/init.sh /app/scripts/wait-for-token -- bash -ic 'cd /app && bin/rails c'
INFO: Vault token retrieval timeout not yet reached
INFO: Decrypting token
2021-09-16 00:13:47 [INFO] Raven 2.7.2 configured not to capture errors: DSN not set
2021-09-16 00:13:50 [WARN] Creating scope :most_used. Overwriting existing method Tag.most_used.
2021-09-16 00:13:50 [WARN] Creating scope :least_used. Overwriting existing method Tag.least_used.
2021-09-16 00:13:50 [DEBUG] AdminSettings::General Load (0.4ms) SELECT "admin_settings_general".* FROM "admin_settings_general" ORDER BY "admin_settings_general"."id" ASC LIMIT $1 [["LIMIT", 1]]
2021-09-16 00:13:50 [DEBUG] AdminSettings::General Load (0.4ms) SELECT "admin_settings_general".* FROM "admin_settings_general" ORDER BY "admin_settings_general"."id" ASC LIMIT $1 [["LIMIT", 1]]
Loading production environment (Rails 6.0.4.1)
irb(main):001:0> User.create!(email: "example@email.com", username: "example", password: "huntertwo!", is_admin: true)
2021-09-16 00:14:23 [DEBUG] {:msg=>"SettingStorage::Postgres failed to look up setting 'basic.base_domain'"}
=> #<User id: 2, email: "example@email.com", username: "example", is_admin: true, created_at: "2021-09-16 00:14:23", updated_at: "2021-09-16 00:14:23", suspended_at: nil, two_factor_delivery: nil, two_factor_sms,
, two_factor_verified_at: nil, two_factor_enabled_at: nil, is_service_account: false, used_recovery_codes_encrypted: nil, last_auth_through_saml: nil, external_id: "user-dZKiPGCeTuVusXZJ", accepted_terms_at: nil,
oarding status: nil, service_account_type: nil, admin_role: nil, used_recovery_codes: []>
irb(main):002:0> |
```

# Chapter Summary



- Initial Administrators
- User Management
  - SSO/SAML
- Admin account recovery

# Reference links



- [Post Install Config](#)
- [SSO/SAML Configuration](#)
- [Post Configuration Troubleshooting](#)



# Lab: TFE – Manual Installation

Complete labs 3 through 6

<https://play.instruqt.com/hashicorp-chip-te/tracks/tfe-manual-install>

