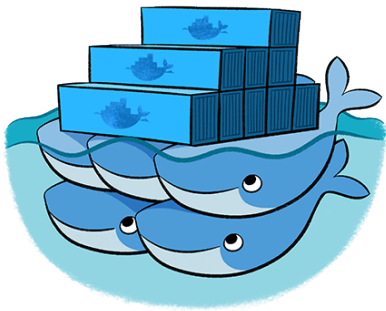


Getting Started

- [Step by Step Beginners Setup Guide for Authelia](#)

Step by Step Beginners Setup Guide for Authelia



This article provides detailed instructions on integrating Authelia as a middleware with Traefik. Using Docker labels for configuration, this setup allows Traefik to query Authelia for authorization on every web request. Authelia validates session cookies and access permissions for secure resource control. The information is partially sourced from

Brynn Crowley, referencing his [setup guide](#).

Prerequisites

- [Docker Swarm](#)
- [GlusterFS & Keepalived](#)
- [Traefik Reverse Proxy](#)

Important Notes

Configuration uses Docker labels directly in `docker-compose.yml` to configure the Traefik Middleware.

Examples use a *whoami* application for demonstration.

Advanced configurations (e.g., SMTP) are available in [Authelia documentation](#).

Step-by-Step Guide

Step 1: Create Folders in the GlusterFS

```
mkdir -p /mnt/glustermount/data/authelia_data/  
mkdir -p /mnt/glustermount/data/authelia_data/logs  
mkdir -p /mnt/glustermount/data/authelia_data/config  
mkdir -p /mnt/glustermount/data/authelia_data/secrets
```

Step 2: Create External Network for Traefik Proxy (if not already done)

Create the `management_net` network:

```
docker network create -d overlay management_net
```

Step 3: Configure User Database

Create a basic user database:

```
nano mkdir -p /mnt/gluster mount/data/authelia_data/config/users.yml
```

Paste this Content:

```
users:
  authelia: ## Username
    displayname: 'Authelia User'
    ## WARNING: This is a default password for testing only!
    ## IMPORTANT: Change this password before deploying to production!
    ## Generate a new hash using the instructions at:
    ## https://www.authelia.com/reference/guides/passwords/#passwords
    ## Password is 'authelia'
  password:
    '$6$rounds=50000$BpLnfgDsc2WD8F2q$Zis.ixdg9s/UOjYrs56b5QEZFIZECu0qZVNsIYxBaNj7uclL.nlxVCT5tqh8KH
    G8X4tlwCFm5r6NTOZZ5qRFN/'
    email: 'authelia@authelia.com'
  groups:
    - 'admin'
    - 'dev'
```

The current password listed is `authelia`. It is important you [Generate](#) a new password hash.

Step 3.1: Generate Password Hash (Optional)

```
docker run --rm -it authelia/authelia:latest authelia crypto hash generate argon2
```

Step 4: Create Secrets

First provide needed Rights:

```
chown 8000:8000 /mnt/gluster mount/data/authelia_data/secrets/ && chmod 0700
/mnt/gluster mount/data/authelia_data/secrets/
```

Then Create Secret Files:

```
docker run --rm -u 8000:8000 -v /mnt/glustermount/data/authelia_data/secrets:/secrets
docker.io/authelia/authelia sh -c "cd /secrets && authelia crypto rand --length 64 session_secret.txt
storage_encryption_key.txt jwt_secret.txt"
```

Step 5: Create Basic Authelia Configuration

```
server:
  address: 'tcp4://:9091'

log:
  level: debug
  file_path: '/var/log/authelia/authelia.log'
  keep_stdout: true

identity_validation:
  elevated_session:
    require_second_factor: true
  reset_password:
    jwt_lifespan: '5 minutes'
    jwt_secret: '{{ secret "/secrets/jwt_secret.txt" | mindent 0 "|" | msquote }}'

totp:
  disable: false
  issuer: 'aeoneros.com'
  period: 30
  skew: 1

password_policy:
  zxcvbn:
    enabled: true
    min_score: 4

authentication_backend:
  file:
    path: '/config/users.yml'
  password:
    algorithm: 'argon2'
```

argon2:
 variant: 'argon2id'
 iterations: 3
 memory: 65535
 parallelism: 4
 key_length: 32
 salt_length: 16

access_control:
 default_policy: 'deny'
 rules:
 - domain: 'traefik.aeoneiros.com'
 policy: 'one_factor'
 - domain: 'whoami-secure.aeoneiros.com'
 policy: 'two_factor'

session:
 name: 'authelia_session'
 secret: {{ secret "/secrets/session_secret.txt" | mindent 0 "|" | msquote }}
 cookies:
 - domain: 'aeoneiros.com'
 authelia_url: 'https://auth.aeoneiros.com'

regulation:
 max_retries: 4
 find_time: 120
 ban_time: 300

storage:
 encryption_key: {{ secret "/secrets/storage_encryption_key.txt" | mindent 0 "|" | msquote }}
 local:
 path: '/config/db.sqlite3'

notifier:
 disable_startup_check: false
 filesystem:
 filename: '/config/notification.txt'

Step 6: Create Docker Compose

It is important to know that Traefik needs to wait for Authelia to startup. That's what the `depends_on` function is for.

Otherwise Traefik will not notice the Authelia Middleware and maybe provide an Error.

```
version: '3.3'

services:
  traefik:
    user: 0:0 #Container being started with Root rights
    image: 'traefik:latest'
    security_opt:
      - 'no-new-privileges=true'
    restart: 'unless-stopped'
    depends_on:
      - authelia
    ports:
      # The Web UI (enabled by --api.insecure=true in traefik.toml)
      - '8080:8080'
      # The Available Ports (forward your router's incoming ports to the ports on the host)
      - '80:80'
      - '443:443'
    networks:
      management_net:
        aliases:
          - 'auth.domain.com'
      authelia: {}
  volumes:
    # So that Traefik can listen to the Docker events (read-only)
    - '/var/run/docker.sock:/var/run/docker.sock:ro'
    # LetsEncrypt ACME Configuration
    - '/mnt/glustermount/data/traefik_data/acme.json:/le/acme.json'
    # Mount for Traefik AccessLog
    - '/mnt/glustermount/data/traefik_data/access.log:/access.log'
    # (STATIC CONFIG)
    - './traefik/config/traefik.yml:/traefik.yml:ro'
    # (DYNAMIC CONFIG)
    - './traefik/config/dynamic.yml:/dynamic.yml:ro'
```

environment:

- TZ=Europe/Zurich

deploy:

mode: replicated

replicas: 1

labels:

- 'traefik.enable=true'
- 'traefik.http.routers.traefik.rule=Host(`traefik.domain.com`)'
- 'traefik.http.routers.traefik.service=api@internal'
- 'traefik.http.services.traefik.loadbalancer.server.port=8080'
- 'traefik.http.routers.traefik.tls.certresolver=leresolver'
- 'traefik.http.routers.traefik.entrypoints=websecure'
- 'traefik.http.routers.http-catchall.rule=hostregexp(`{host:.+}`)'
- 'traefik.http.routers.http-catchall.entrypoints=web'
- 'traefik.http.routers.http-catchall.middlewares=redirect-to-https'
- 'traefik.http.middlewares.redirect-to-https.redirectscheme.scheme=https'
- #Authelia Integration
- 'traefik.http.routers.dashboard.middlewares=authelia@docker'

authelia:

image: 'authelia/authelia:4.38'

container_name: 'authelia'

volumes:

- '/mnt/glustermount/data/authelia_data/secrets:/secrets:ro'
- '/mnt/glustermount/data/authelia_data/config:/config'
- '/mnt/glustermount/data/authelia_data/logs:/var/log/authelia/'

networks:

authelia: {}

management_net: {}

labels:

Expose Authelia through Traefik

traefik.enable: 'true'

traefik.docker.network: 'authelia'

traefik.http.routers.authelia.rule: 'Host(`auth.domain.com`)'

traefik.http.routers.authelia.entrypoints: 'websecure'

traefik.http.routers.authelia.tls.certresolver: 'leresolver'

traefik.http.services.authelia.loadbalancer.server.port: '9091'

Setup Authelia ForwardAuth Middlewares

traefik.http.middlewares.authelia.forwardAuth.address: 'http://traefik_authelia:9091/api/authz/forward-auth'


```

traefik.http.middlewares.authelia.forwardAuth.trustForwardHeader: 'true'
traefik.http.middlewares.authelia.forwardAuth.authResponseHeaders: 'Remote-User,Remote-
Groups,Remote-Name,Remote-Email'
environment:
  TZ: 'Europe/Zurich'
  X_AUTHELIA_CONFIG_FILTERS: 'template'

whoami-secure:
  image: 'traefik/whoami'
  restart: 'unless-stopped'
  container_name: 'whoami-secure'
  depends_on:
    - authelia
  labels:
    traefik.enable: 'true'
    traefik.http.routers.whoami-secure.rule: 'Host(`whoami-secure.domain.com`)'
    traefik.http.routers.whoami-secure.entrypoints: 'websecure'
    traefik.http.routers.whoami-secure.middlewares: 'authelia@docker'
    traefik.http.services.whoami-secure.loadbalancer.server.port: '80'
    traefik.http.routers.whoami-secure.tls.certresolver: 'leresolver'
  networks:
    management_net: {}
networks:
  management_net:
    external: true # Primary network for management
authelia:

```

Step 7: Start the Stack

You can either do that with the provided Command or start the Stack with Portainer.

```
docker compose up -d
```

Step 8: Verify Setup

- Check container status: `docker compose ps`
- Access Traefik dashboard: <https://traefik.domain.com>

- Test authentication: <https://whoami-secure.domain.com>

Now you are ready to Setup with further Configuration.

It is possible to add Authelia Middleware to your Custom Applications by adding: `traefik.http.routers.YOUR-APPLICATION.middlewares: 'authelia@docker'`

Troubleshooting

- Check logs: `docker logs authelia`
- Ensure secret files exist and have correct permissions.
- Check Official Docs: <https://www.authelia.com/configuration/prologue/introduction/>

Further Configuration

Check out other Posts in my Wiki about setting up SMTP for example.

<https://wiki.aeoneros.com/books/authelia/chapter/configuration>