

# Logging into a machine using SSH via Vault

Since 2022, ISW is migrating to a more secure setup. Instead of sharing passwords via a Password Manager, we now use Vault to create OTP or sign ssh keys to give temporary access to a machine. This gives a lot security benefits, old members for example can no longer access those systems.

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## What is supported?

To see if the machine supports Vault login, go to the correct documentation page in the [sysadmin documentation](#) wiki. On the "Information" table you should see an entry which states the available Vault authentication methods. If a `role` is specified, you will need to use that role to login.

<b>Vault authentication</b>	OTP + Signed SSH Keys
	Role: <code>kubernetes</code>

In this example, both OTP and SSH keys are supported. However you can only use the `kubernetes` role when signing in.

## Logging in via OTP's

This login method is the most complex, it uses an extra helper for PAM to see if a password should be allowed. You can generate a password that can only be used once to login on the device.

More information is available at <https://www.vaultproject.io/docs/secrets/ssh/one-time-ssh-passwords>.

## Manually

To receive an OTP you will need to ask Vault,

```
vault write ssh/creds/ROLE username=USERNAME ip=IP_ADDRESS
```

You will receive an output which has a `key` value. This is the OTP. You can now SSH to the machine and use that password to login.

```
➤ ~ vault write ssh/creds/kubernetes ip=172.20.247.14
Key      Value
-----
ip       172.20.247.14
key      7077ed62-04a8-77e3-3f6d-f385bbf1f8cb
key_type otp
port     22
username isw
➤ ~ ssh isw@172.20.247.14
Password:
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-97-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
```

## Automatically

You can let Vault sign you in automatically, without a need to copy and paste a password:

```
vault ssh -role ROLE -mode otp USERNAME@IP_ADDRESS
```

```
➤ ~ vault ssh -role kubernetes -mode otp isw@172.20.247.14
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-97-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
```

## Signed SSH Keys

More information is available at <https://www.vaultproject.io/docs/secrets/ssh/signed-ssh-certificates>.