# PAM Deployment

Procedure to deploy PAM


- Deployment procedure
- Configuration
  - Network discovery
  - Password vault
  - PAM Rules
  - PAM Policies
  - How to enable WinRM?

# Deployment procedure

# Introduction

PAM is the process that determines who has access to what types of information as it creates an integrated view of risk, threats, and controls.

Implementing a policy of least privilege minimizes unnecessary privilege allocation to ensure access to sensitive data is available only to those users who really need it.

Soffid provides a complete PAM solution. So, we want to describe in detail the Soffid PAM solution deployment procedure.

# Prerequisites

First of all, you should install and config the Soffid PAM solution. To do that, you need to install the Jump servers and then configure them on Soffid Console.

> A jump server, jump host or jump box is a system on a network used to access and manage devices in a separate security zone. A jump server is a hardened and monitored device that spans two dissimilar security zones and provides a controlled means of access between them. (*)

You can follow the defined steps in the PAM Install & config book.

# Deployment procedure

## 1. Networks

`Main Menu > Administration > Resources > Networks`

You need to add your company networks or the networks you want to manage, on Soffid Console. To do that you need to create those networks on the Networks page.

Once you have created your networks, you could continue with the next step.

> You can find more information on the Networks page.

# 2. Config Network discovery

`Main Menu > Administration > Resources > Network discovery`

When you open the Network discovery page, Soffid will display all the networks create on Soffid Console.

The network discovery process can be launched for each network, to do that, you need to configure the potential administrator accounts to connect to the hosts for each network.

You can add one or more potential administrator accounts to try to connect to the network hosts. These can be new accounts or existing accounts on Soffid. Also, you can remove accounts from the accounts to probe list. If you remove an account from the list, that account will continue to exist on Soffid.

> You can find more information on the Network discovery page.

Once you have configured the Network discovery parameter for a network, you could execute the process to begin to search or you could schedule the process execution.

# 3. Launch Network discovery

`Main Menu > Administration > Resources > Network discovery`

The Network discovery process is an unattended process. You could launch it, and it will be working until it will finish, even you close your Soffid session.

The Network discovery process could be a long process, depending on the network size, the number of hosts, and the firewalls as well.

> You can find more information on the Network discovery page.

## 3.1. Agent definition

When the network discovery process is launched, as the process finds hosts, it will try to connect to them using the defined credentials. When it gets to connect to the host with one credential, it will not try again with others.

If it gets to connect to the host, it will create automatically a Soffid agent with the proper attributes and connector parameters, also with the necessary account metadata.

## 3.2. Accounts / Account protected services

Then, the reconciliation process of the created agent will be launched and it will try to recover the information about the accounts defined on the host. Also, it will try to recover the information about the account protected services.

## 3.4. Entry points

The Network discovery process will create, in possible cases, a new entry point to the host with the basic attributes, and the proper executions to run it.

That entry point will display on the Application access tree page.

# 4. Password vault

`Main Menu > Administration > Resources > Password vault`

When the network discovery process finishes, it will be really important to determine what are the critical accounts. Those critical accounts should be located in protected storage, the Password vault.

On the password vault, you can locate the accounts, especially the critical account used to access critical systems. Password vault allows you to handle the access control list to these accounts, here you can define who are the owners, the managers, and the SSO users.

You need to configure in the right way the control access list, to allow only the proper users to change and view the passwords.

> You can find more information on the Password vault page.

# 5. Authorization processes

Soffid allows you to define and add approval processes to manage the use of critical accounts, where the manager or authorized user will approve or deny using them.

To define and configure approval workflows, you can use the Soffid BPM editor

Main Menu > Administration > Configure Soffid > Workflow settings > BPM editor

> You can visit the BPM Editor book to find more information.

One you have defined the approval process, you need to establish the relationship between the workflow and the account or accounts, to do that you need to configure the XACML Policy Management and the XACML PEP configuration.

# 6. XACML

> For detailed information about XACML, you can visit the XACML book.

## 6.1. XACML Policy Management

Using XACML Soffid can be able to add more complex and restricted rules to the authorizations. Here you can define policy sets and policies to describe general access control requirements.

Also, you can define some obligations as actions that have to be returned with response XACML. Here you can indicate the use of an authorization process.

Main Menu > Administration > Configure Soffid > Security settings > XACML Policy Management

## 6.2. XACML PEP configuration

You will need to enable and configure the Password vault Policy Enforcement Point (PEP). That is the way that Soffid provides to establish the relationship between the Authorization processes and the Password vault.

Be in mind, you only can configure one Password vault PEP, the policy set that you define, can contain more policy sets and policies to cover all your company needs.

Main Menu > Administration > Configure Soffid > Security settings > XACML PEP configuration

# 7. PAM policies and PAM rules

Using PAM all the sessions will be recorded (Screen, KeyBoard, Clipboard, and File transfers).

Soffid allows you to configure policies based on rules, so when each one of the rules is fulfilled, one or more actions will be triggered according to the configuration.

The available actions are to close the session, lock the account, open an issue on a ticketing system and notify the breaking rule. You can find more information visiting the and the.

## 7.1. PAM rules

`Main Menu > Administration > Configure Soffid > Security settings > PAM rules`

You can define rules to detect commands executed on a server. When a user launches a command defined on a rule, Soffid will detect it.

> For detailed information about PAM Rules, you can visit the PAM Rules page.

## 7.2. PAM policies

`Main Menu > Administration > Configure Soffid > Security settings > PAM policies`

You can define policies made up of several rules. For each rule, you could select the action to perform when Soffid detects that rule is accomplished.

On the Password Vault page, you can assign a PAM policy to each folder, depending on your needs.

> For detailed information about PAM Policies, you can visit the PAM Policies page.

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(*) https://en.wikipedia.org/wiki/Jump_server

# Configuration

# Network discovery

## Description

The Network discovery tool will be in charge to scan the networks to find the hosts and retrieve information about user accounts. Network discovery can detect system accounts as well.

First of all, you need to create the networks that you want to scan. Visit the Networks page for more information. Then, on the Network discovery page, you need to configure for each network, the accounts and passwords of potential administrators to connect to the host and retrieve the information. And finally, you need to start the process execution or you can schedule the execution of the network discovery task.

The operating system of machines can be Windows or Linux and it is not necessary to install any additional software on those machines.

> When the Network discovery process is finished, it is **recommended to launch the Reconciliation process of the agents** created by the process to detect the **Account protected services.** To know how to run the Renconciliation process you can visit the Agents page.

> Once the machines and accounts, both user and system, have been discovered, the critical accounts must be located in the password vault. You can visit the Password vault page for more information.

## How Network discovery works?

The **Network Discovery** is the tool in charge to scan the network to discover the hosts of the network. For each host discovered, the **Nmap** utility gets the info about the ports and the protocols used. Also, that process gets the IP Address and the operating system.  All the recover information will be saved on Soffid database. The discovery proxy server works as a proxy to connect to the target systems.

When the discovery manager discovers a host, it gets the host information and then, through discovery proxy server, it attempts to connect to the host using the accounts defined on the accounts to probe list.

- If it can not connect to the host, it will attempt with the next host discovered.
- If it gets to connect to the host, then it will create automatically a Soffid agent with the proper attributes and connector parameters, also with the necessary account metadata.

Then, the reconciliation process of the created agent, will be launched and it will try to recover the information about the accounts defined on the host. Also, it will try to recover the information about the account protected services. The recover information will be saved on Soffid database.

# Screen overview

https://www.youtube.com/embed/pXtYazC80Vs?rel=0

# Standard attributes

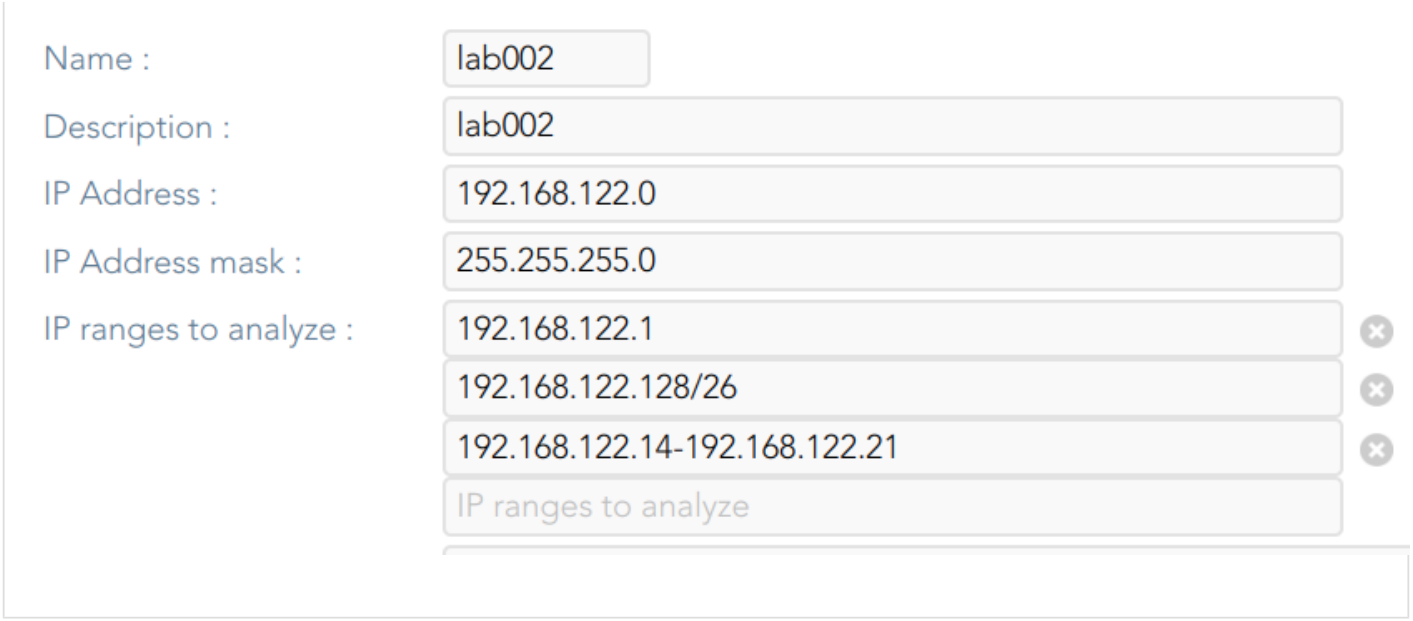
# Network attributes

## Basic

Those attributes are readOnly, you can update them on the Networks page.

- **Name**: network name.
- **Description**: a brief description.
- **IP Address**: IP range of this network.
- **IP address mask**: IP mask of this network.
- **IP ranges to analyze**: allows you to set the range of IPs to scan

| Image |
| --- |



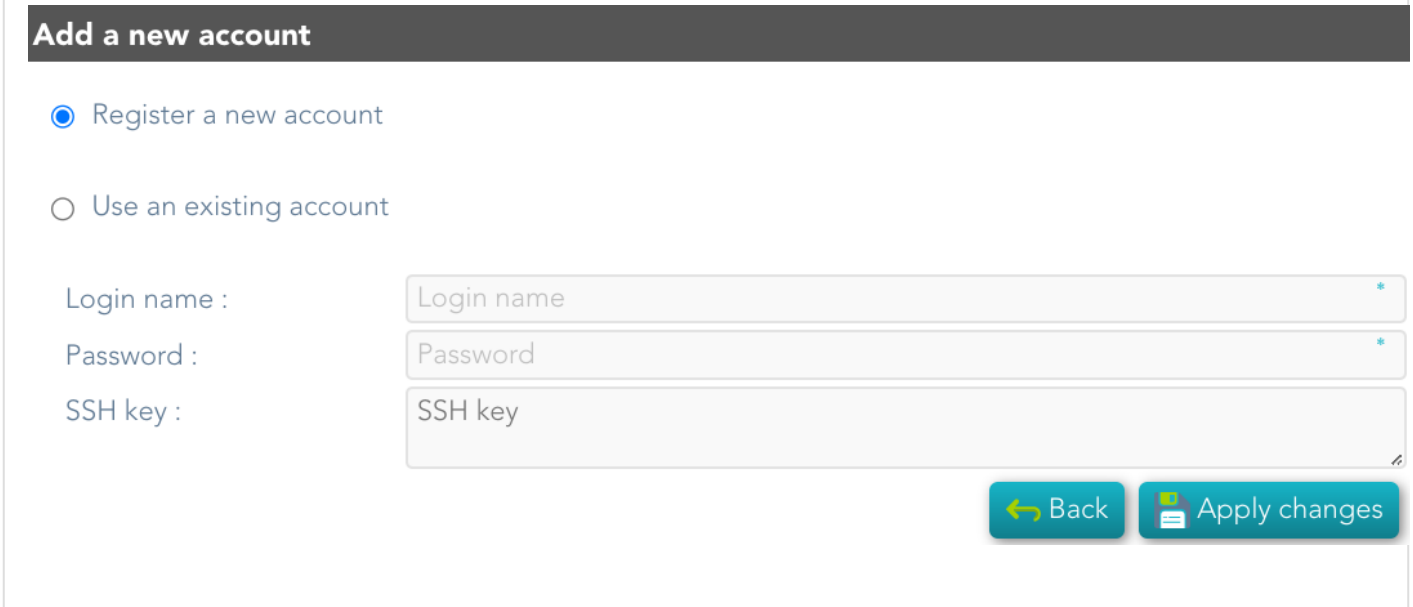

## Server

- **Server**: list of available sync servers.

## Accounts to probe

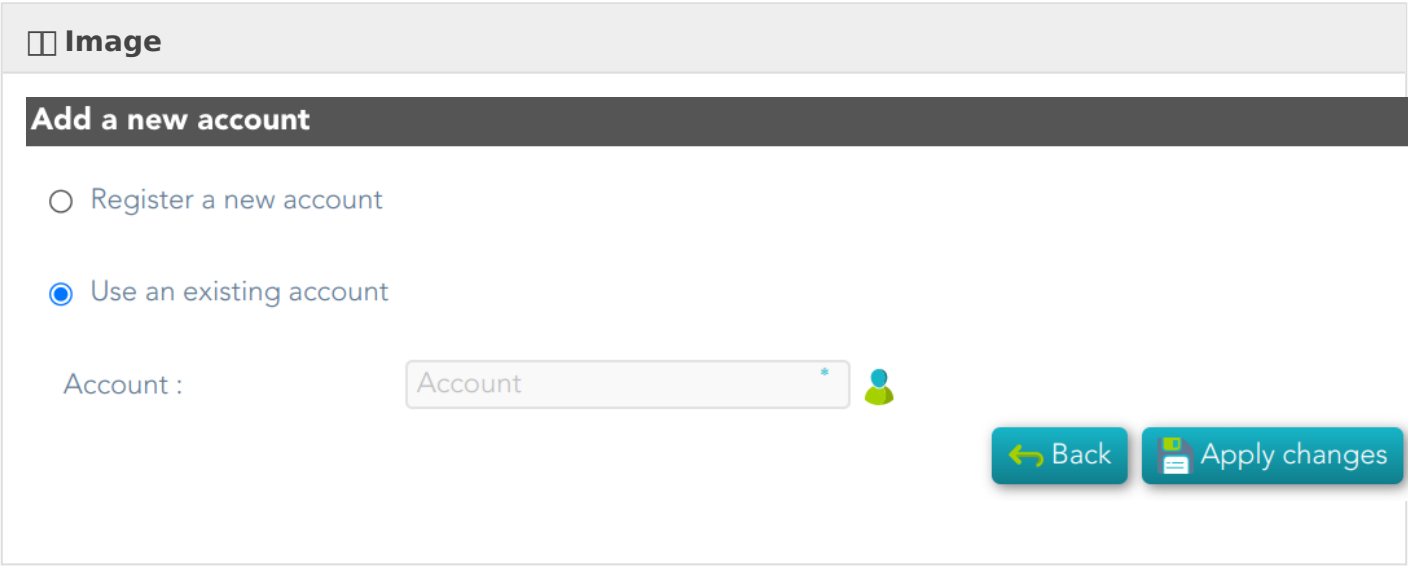
- **Accounts to probe:** list of potential administrators accounts to connect to the hosts. You can register a new account or use an existing account.
  - **Register new account**: you need to define the login name and the password of the new account.
    - Login name
    - Password
    - SSH key

**Image**



- **Use an existing account**: you need to select an existing account on the system.

**Image**




When you register a new account, that will be created as an unmanaged account.

## Schedule

- **Enabled**: if it is selected (value is Yes), a task will be created and performed on schedule defined.
- **Task description**: a brief description of the task
- **Month**: number of the month (1-12) when the task will be performed.
- **Day**:  number of the day (1-31) when the task will be performed.
- **Hour**: hour (0-23) when the task will be performed.
- **Minute**: minute (0-59) when the task will be performed.
- **Day of week**: number of the day (0-6 where 0 means Sunday) of the week when the task will be performed.
- **Server**: you must select the sync server where the agent will be run.

For each value of month, day, hour, minute, or day of the week:

- * means any month, day, hour, minute, or day of the week. e.g. */5 to schedule every five minutes.
- A single number specifies that unit value: 3
- Some comma separated numbers: 1,3,5,7
- A range of values: 1-5

## Current execution

- **Start now**: this allows you to launch the task execution.

## Last execution

- **Status**: The available status for a task is:

    - Done (green light): task finished.
    - Pending (yellow light): the task has been started but it has not finished yet.
    - Error (red light): task could not be executed.
- **Start date**: start date and time of the last execution.
- **End date**: end date and time of the last execution.
- **Execution log**: log trace. Allows you to download the log file.

## Previous executions

List the information about the previous executions:

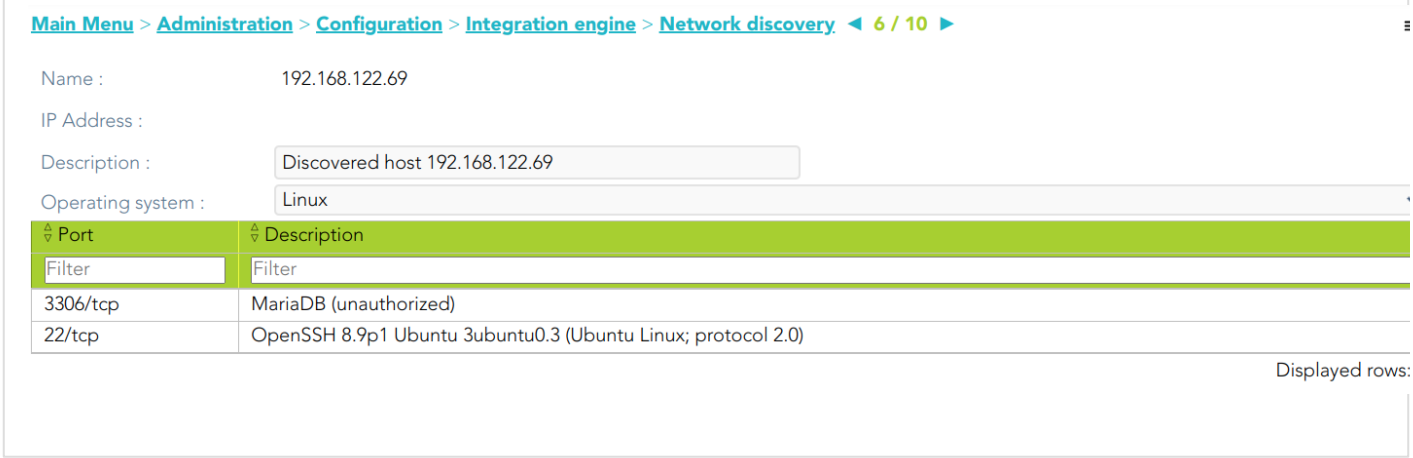
- **Start date**: start date and time of the execution.
- **Status**: status of the execution.
- **Execution**: log of the execution. Allows you to download the log file.

# Machine attributes

By clicking the machine record, you can check the following information:

- **Name**
- **IP Address**
- **Description**
- **Operating system**
- **Port /Protocol List**:
    - Port
    - Description

**Image**



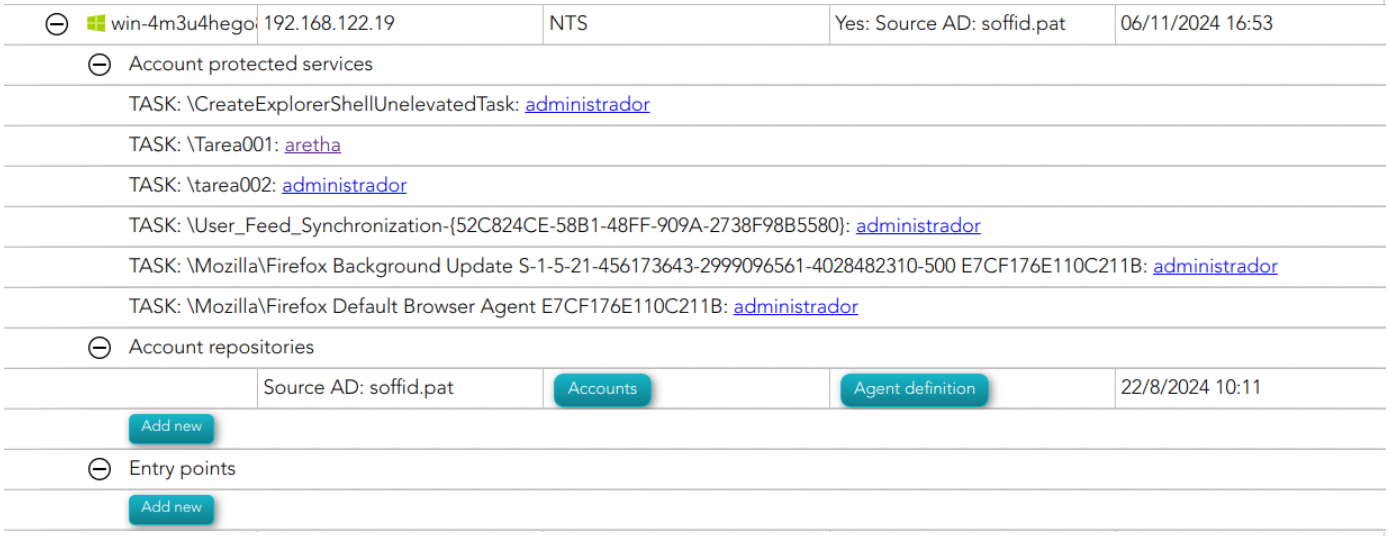

## Machine details

If you display the contents of a machine from which the information has been obtained, you could check and manage information about:

- Protected services per account
- Account repositories
- Entry points

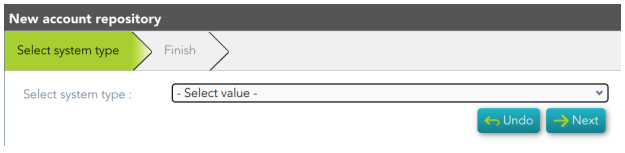
> It may be necessary to perform the **Reconciliation process of the proper agent** in order to obtain the information from the Account protected services

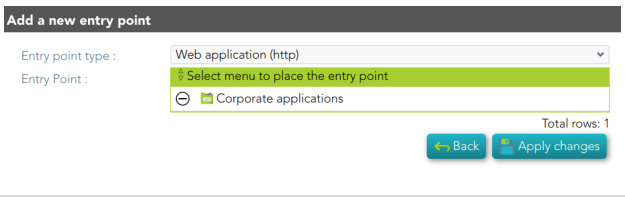
**Image**




# Actions

## Network discovery query

| | |
|---|---|
| **Add new account repository** | Allows you to create a new agent.<br>You must select the System type and the login name and password. When the agent is created, if the connection is successful, the reconciliation process will be executed.<br>**Image**<br> |
| **Agent definition** | Allows you to browse to the agent definition. |
| **Accounts** | Allows you to browse the accounts page and the accounts, which belong to this system, will be displayed |

| | |
|---|---|
| **Add new entry point** | Allows you to create a new entry point.<br>You must select the Entry point type and the pale to locate it. Once the entry point is created, you can connect to the target system. Bear in mind, that if you need to create an account to connect, when you set the password to this account, the system (agent) must be in No ReadOnly mode.<br>**Image**<br> |
| **Entry point definition** | Allows you to browse to the entry point definition. |

# Network discovery detail

| | |
|---|---|
| **Apply changes** | Allows you to save the data of network detail. To save the data it will be mandatory to fill in the required fields. |
| **Undo** | Allows you to undo any changes made. |

## Accounts to probe

| | |
|---|---|
| **Add** | Allows you to add a new administrator potential account to connect to the machines of the network.  To add a new account, first of all, you need to click the add button (+) and close the accounts to probe list. Then you will need to choose if you want to add an existing account or register a new account.<br><br>save the data of a new network or update the data of a specific network. To save the data it will be mandatory to fill in the required fields |
| **Delete** | Allows you to delete one or more accounts of the accounts to probe. You need to select one or more records and next click the button with the subtraction symbol (-). |

# Schedule

| | |
|---|---|
| **Start now** | Allows you to launch the task execution. |

# Previous execution

| | |
|---|---|
| **Logs** | Allows you to download the log files of previous executions. |

# Machine

| | |
|---|---|
| **Delete** | Allows you to delete the machine and the PAM connectors for the device. Soffid will display a message to confirm the deletion process. |

# Password vault

# Description

> Soffid provides a protected storage, to save and manage accounts for multiple applications, that is the Password vault. Here you can save the accounts and passwords to access to critical systems and to your applications as well. Password vault allows you to handle the access control list to these accounts. Sometimes these accounts can be used by a specific user or a set of users.

The accounts are organized in folders depending on the permissión, and the criticality level, .... These accounts can be system accounts or user accounts.

The Password vault exposes a subset of accounts to some users. These accounts are available through the Self-services portal. You can visit My applications page for more information.

When a privileged account is being config, it will be able to assign a workflow or approval process to request in order to use that account. For more information visit the link How to apply policies.

Users can be authorized to manage their own personal accounts, **sso:manageAccounts.** For more info visit the Authorizations page.

# Folders

In the password vault, two kinds of folders are used: **personal folders** and **shared folders**, which depend on the Owners configuration you define.

On one hand, each user has their own personal folder. Inside this folder, the user can create accounts. That account will not be shared with any other user.

On the other hand, the shared folders could be used or managed by the owner/manager/SSO users.

# Accounts

Soffid allows you to create new accounts on a specific folder on the password vault page, to add a new account will be mandatory to fill in some attributes, like System, name, and login name. You can consult the existing accounts related to a folder. For each account, you can update or delete the account, view and set a password.

Also, you can create accounts on the Account page and assign the appropriate vault folder.

Soffid allows administrator users to configure a workflow to request permissions when a user try to change the password of a privileged account in the password vault. That process can be defined with the BPM Editor as an Account reservation type. For more information you can visit the BPM Editor book.

# Overview

https://www.youtube.com/embed/QOyvGTXo9dQ?rel=0

# Related objects

1. **Accounts**

# Standard attributes

## Folder attributes

- **Folder detail**
  - **Name**: folder name which will be displayed in My Applications.
  - **Description**: folder description.
  - **PAM policy**: when using PAM system, you could choose the policy that will comply with for each folder. When you define a policy for a folder, that policy will apply to all accounts hanging from this folder. For more information you can visit the Configure PAM page.
- **Owners**: allows you to handle the full privileged access control list.
  - **Owner users**: list of users who will be the folder owners.

    - **Owner groups**: list of groups, whose users will be the owners of the folder.
    - **Owner roles**: list of roles. Users who have been granted these permissions will be the owners of the folder.
- **Managers**
    - **Manager users**: list of users who can manage the folder. Those users can view the password depending on the password policy.
    - **Manager groups**: list of groups, whose users can manage the folder. Those users can view the password depending on the password policy.
    - **Manager roles**: list of roles. Users who have been granted these permissions can manage the folder. Those users can view the password depending on the password policy.
- **SSO users**
    - **Granted users**: list of users who can use the account of that folder.
    - **Granted groups**: list of groups, whose users can manage the account of that folder
    - **Granted roles**: list of roles. Users who have been granted these permissions can manage the account of that folder.
- **Browse folder**
    - **Users**: list of users who can browse the folder, but can not perform any action.
    - **Groups**: list of groups, whose users can browse the folder, but can not perform any action.
    - **Roles**: list of roles. Users who have been granted these permissions can browse the folder, but can not perform any action.

# Accounts attributes

## Actions Tab

This tab shows the read-only attributes of the user account:

- **Name**: user account name.
- **Description**: a brief description.
- **System**: target system to which the account will be connected.
- **Login name**: login name to connect to the target system.
- **Login URL**: URL to connect.
- **In use by**: user name who is using that account.

Also, this tab allows you to launch the connection to the target system, view the password, set the password to launch the connection, and unlock the use of that account. All those options depend on the account definition and user privileges.

## Basics Tab

This tab displais all the account attributes and allows you to update the account configuration.

Visit theAccount page to view more information about the standard attributes of an account.

# Actions

## Folders query actions

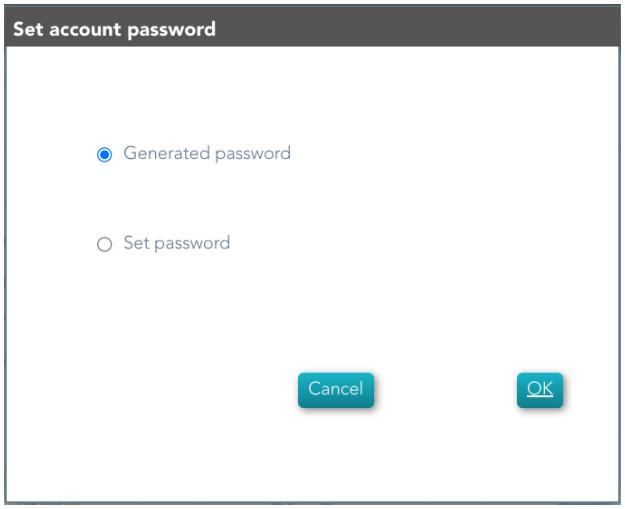
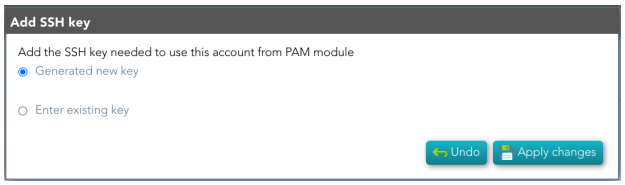
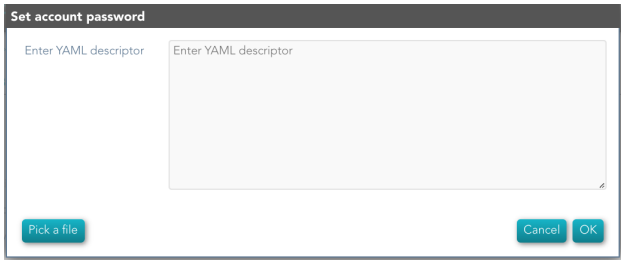
| | |
|---|---|
| **Query** | Allows you to query folders through, only Quick search is available. |
| **Add new** | Allows you to create a new folder. You can choose that option on the hamburger menu or by clicking the add button (+).<br>To add a new folder it will be mandatory to fill in the required fields.<br>A folder needs to have, at less, an owner to manage it. |

## Folder actions

| | |
|---|---|
| **Apply changes** | Allows you to save a new folder or update an existing folder. To save the data it will be mandatory to fill in the required fields. Be in mind that is important to indicate who are the owners of the folder. |
| **Undo** | Allows you to quit without saving any change made. |
| **Delete** | Allows you to delete a folder if you have the right permissions. To delete a folder you can click on the hamburger icon and then click the delete button (trash icon). Soffid will ask you for confirmation to perform that action, you could confirm or cancel the operation. |

## Account actions

| | |
|---|---|
| **Apply changes** | Allows you to save a new account. To save the data it will be mandatory to fill in the required fields. Be in mind that is important to indicate who are the owners of the folder. If the account exists on the system, you can assign the vault folder to the account window. |
| **Undo** | Allows you to quit without saving any change made. |
| **Delete** | Allows you to delete an account from a folder if you have the right permissions. To delete a host you can click on the hamburger icon and then click the delete button (trash icon). Soffid will ask you for confirmation to perform that action, you could confirm or cancel the operation. |

| | |
|---|---|
| **Set password** | This option depends on the credential type selected.<br>**Password**:<br>• Allows you to set a new password to the account or a SSH key.<br>• The password can be generated automatically, or you can set the password.<br>• It will be mandatory the password complies with the Password policies defined for the domain.<br>• If an account is unmanaged, the password will not be sent to the target system.<br>**Image**<br><br><br>**SSH key**:<br>• Allows you to generate a new key or enter an existing key.<br>**Image**<br><br><br>**Kubernetes key**:<br>• Allows you to add a YAML descriptor<br>**Image**<br><br> |

# How to apply policies

Soffid allows you to define policies and rules to apply to a specific folder or a set of folders. To do that is needed to install the XACML  addon and configure the proper policies and rules.

Also, you can config a workflow or approval process to request in order to use accounts saved on a folder.

It is mandatory to enable the Password Vault PEP and populate the information about the XACML policy set and the version which applies.

## Example

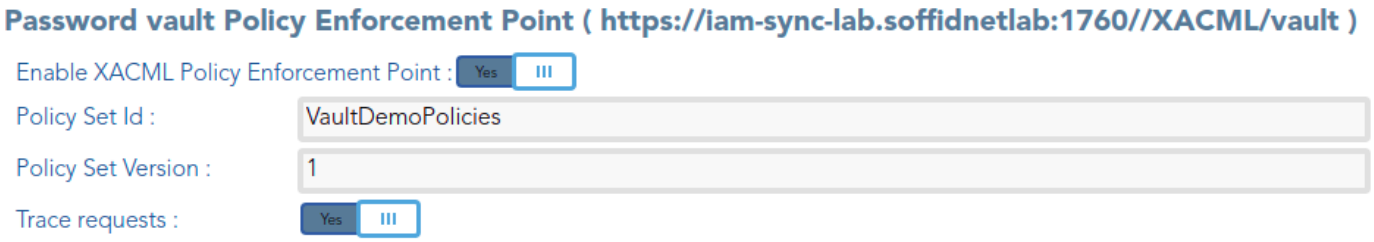
### XACML PEP config

It is mandatory to enable the Password Vault PEP and populate the information about the XACML policy set and the version which applies.

Password Vault:




XACML PEP config:




### XACML Policy Management

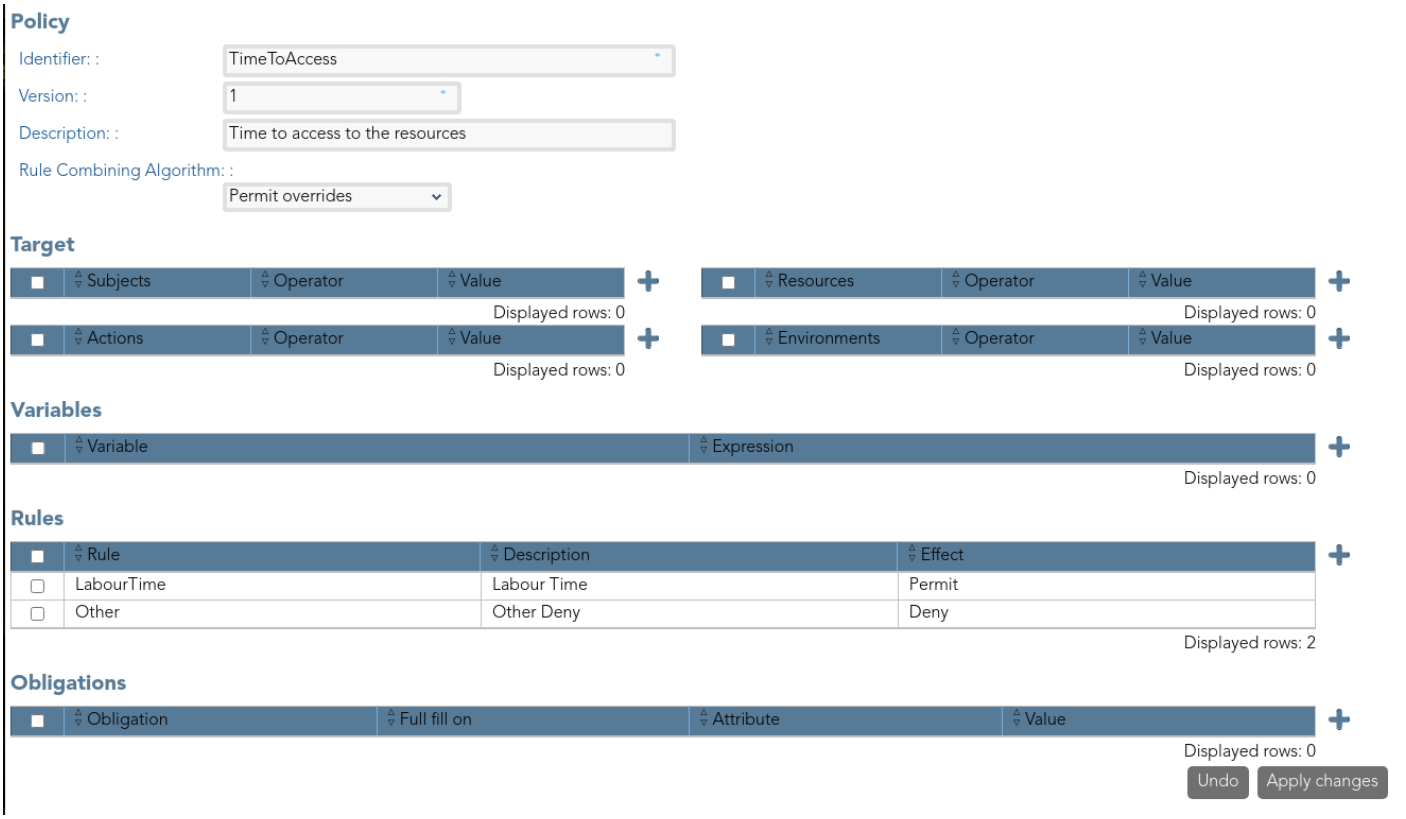
You need to configure the access to the folder "VaultFolder", that folder can contain other folders and accounts. It will be mandatory to config the access list, who are the owners, managers, and so on. You need to know if you need to config the control access list by accounts, by folders, or both.

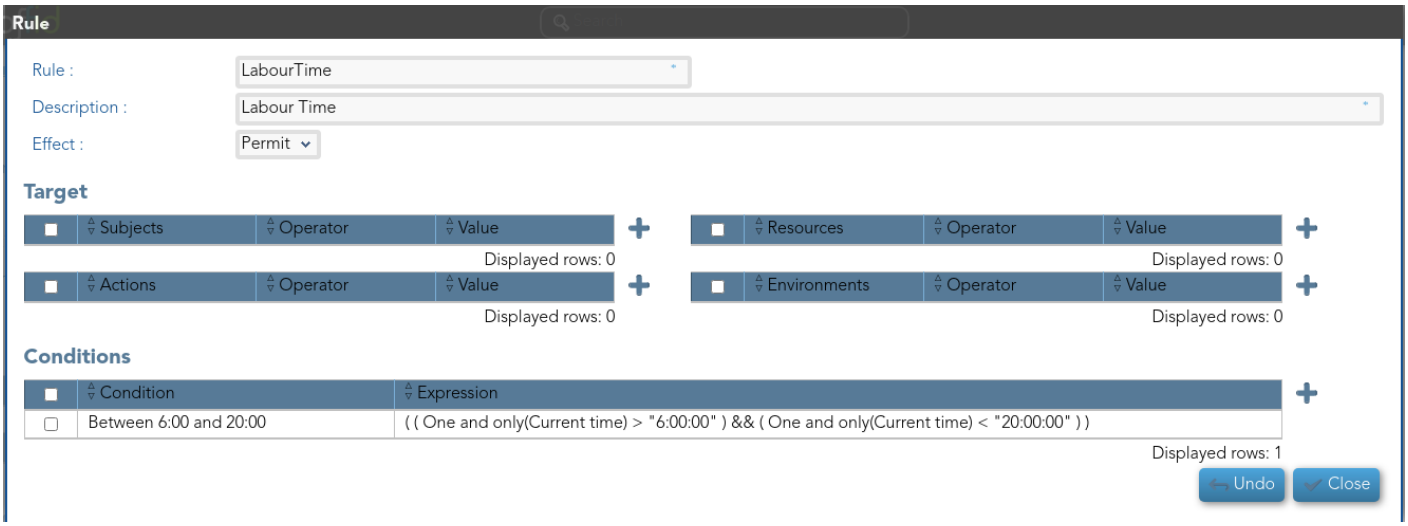
| | |
|---|---|
| demoFolder | demoFolder |
| soffid | administrator |
| patricia | patricia |
| subFolderDemo | subFolderDemo |

Create new folder | Create new account

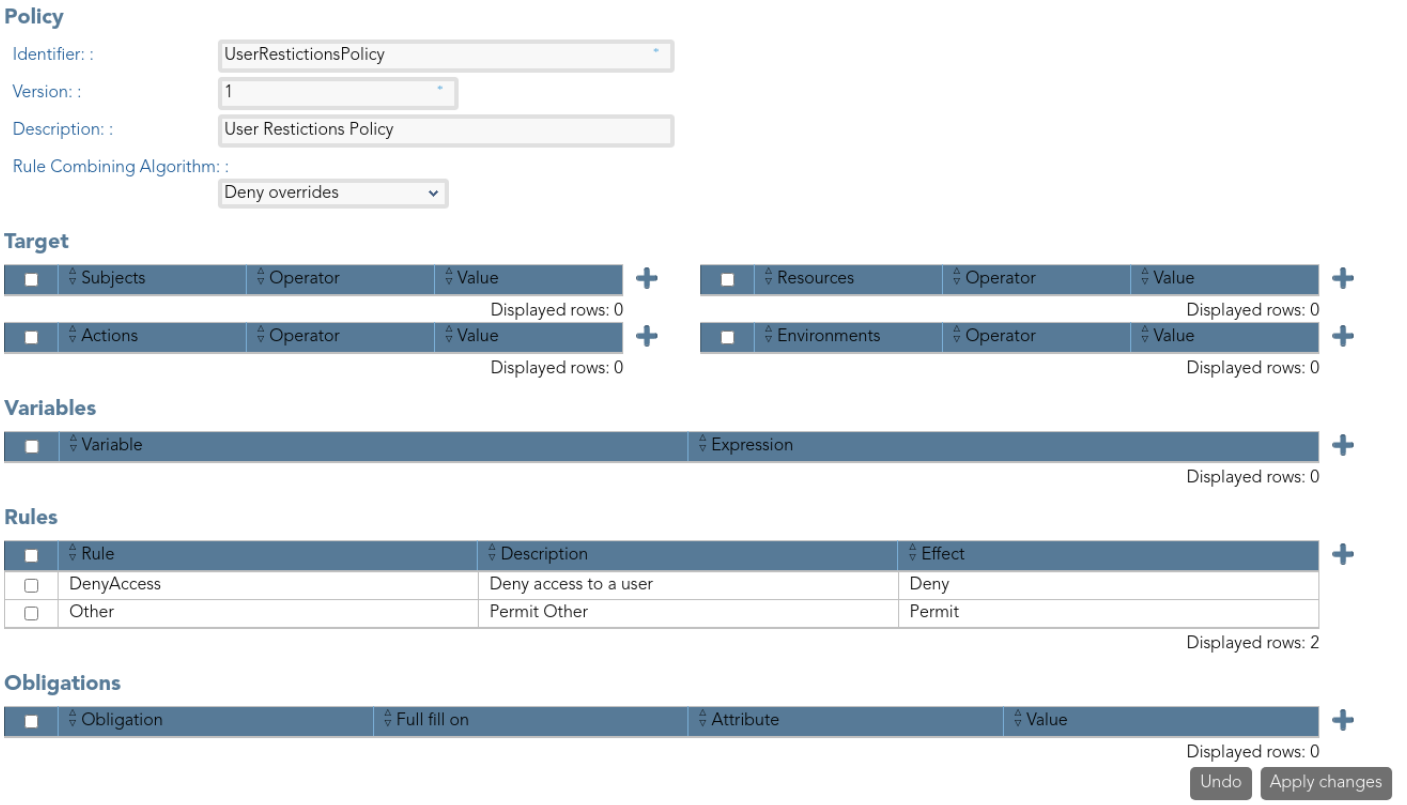
For instance, the policies you need to implement are the following:

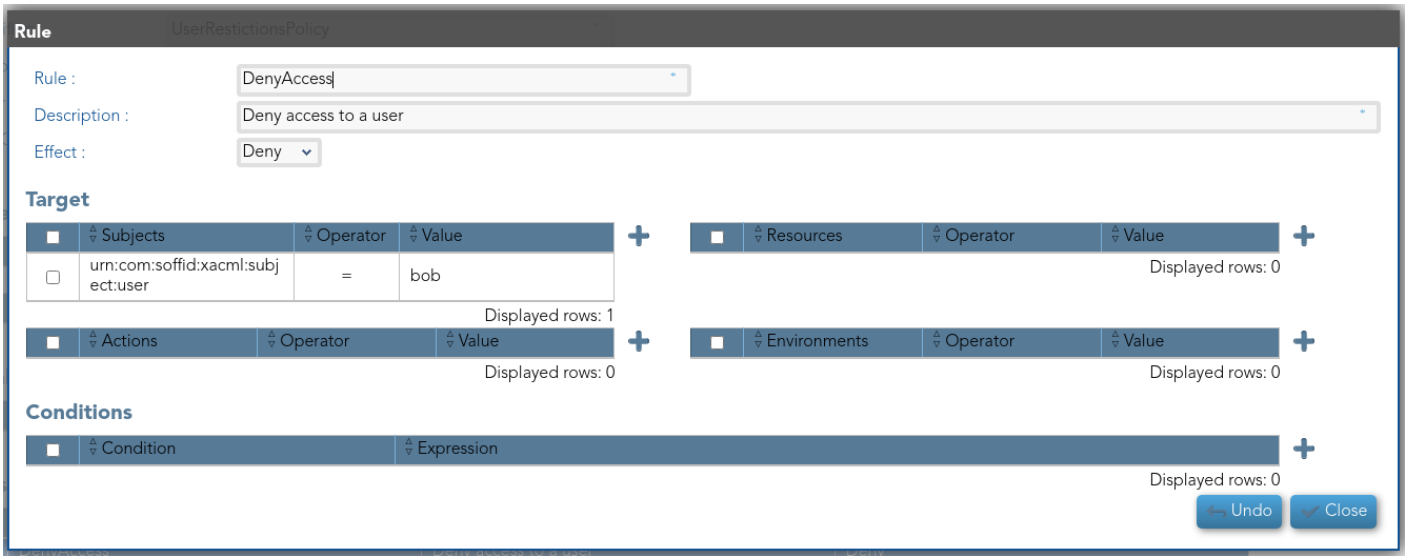
1. Only users between 6:00 and 18:00 could use the accounts inside the "demoFolder".




2.- User "bob" never could use the accounts of demoFolder.




3. Users with result permits, need the authorization to use the accounts.

You need to config the workflow that will be called, to config you need to include the bpm obligation on the policy. Also, you can include a message to the user, or other obligations.

### Policy

Identifier: : PAM

Version: : 1

Description: : PAM service

Rule Combining Algorithm: : Permit overrides

### Target

| Subjects | Operator | Value |
|---|---|---|

Displayed rows: 0

| Resources | Operator | Value |
|---|---|---|

Displayed rows: 0

| Actions | Operator | Value |
|---|---|---|

Displayed rows: 0

| Environments | Operator | Value |
|---|---|---|

Displayed rows: 0

### Variables

| Variable | Expression |
|---|---|

Displayed rows: 0

### Rules

| Rule | Description | Effect |
|---|---|---|
| Other | Other | Deny |
| Labourtime | Labour time | Permit |

Displayed rows: 2

### Obligations

| Obligation | Full fill on | Attribute | Value |
|---|---|---|---|
| urn:soffid:obligation:message | Permit | text | This is a protected system. Do not enter without authorization, please. |
| urn:soffid:obligation:bpm | Permit | process | Grant account |

---

> Visit the XACML Book for more information.

> Visit the BPM Editor Book for more information.

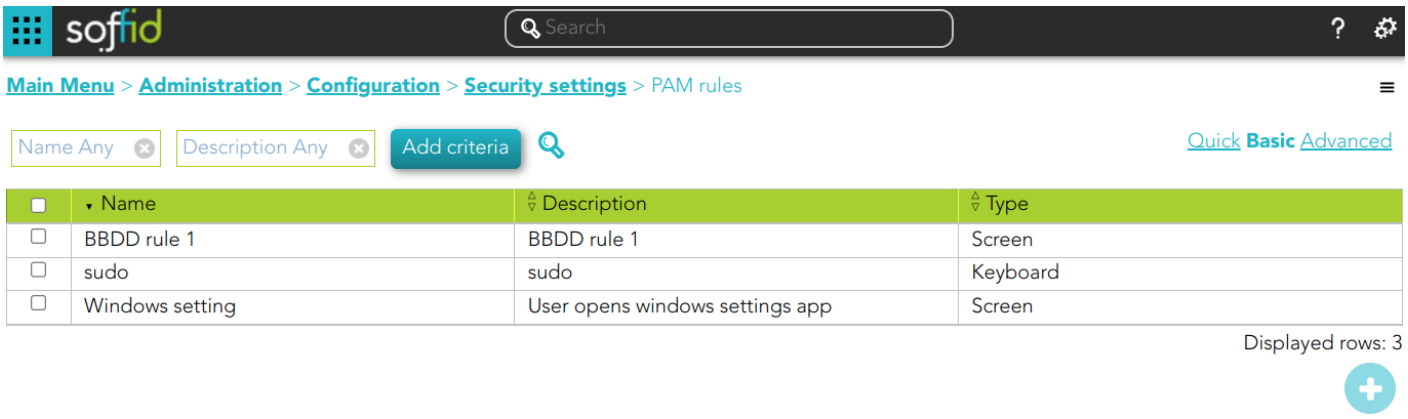
# PAM Rules

## Definition

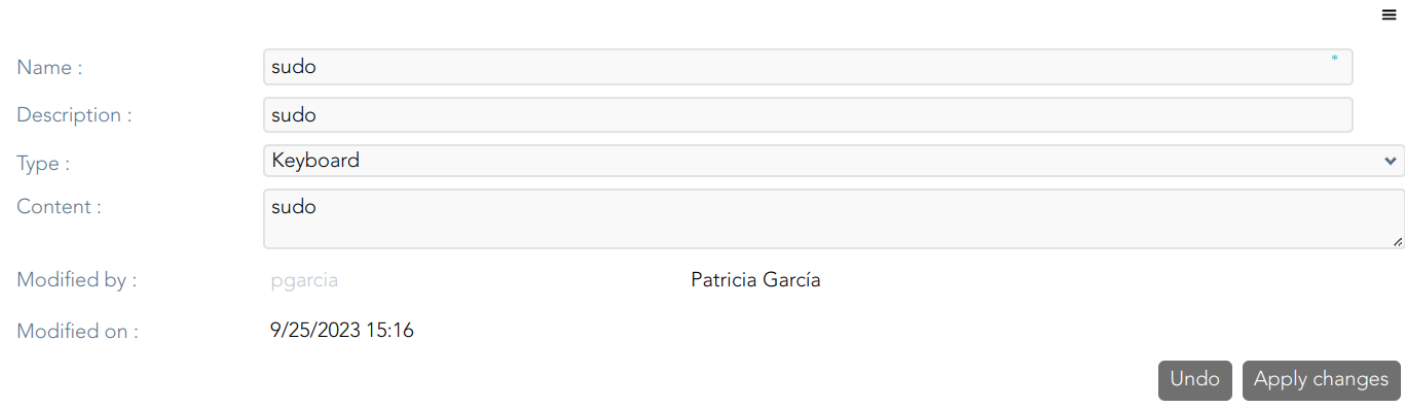
> Soffid allows you to define rules to detect commands executed on a server. When a user launches a command defined on a rule, Soffid will detect it.

To use those rules you need to define the PAM policies. For more information, you can visit the PAM policies page.

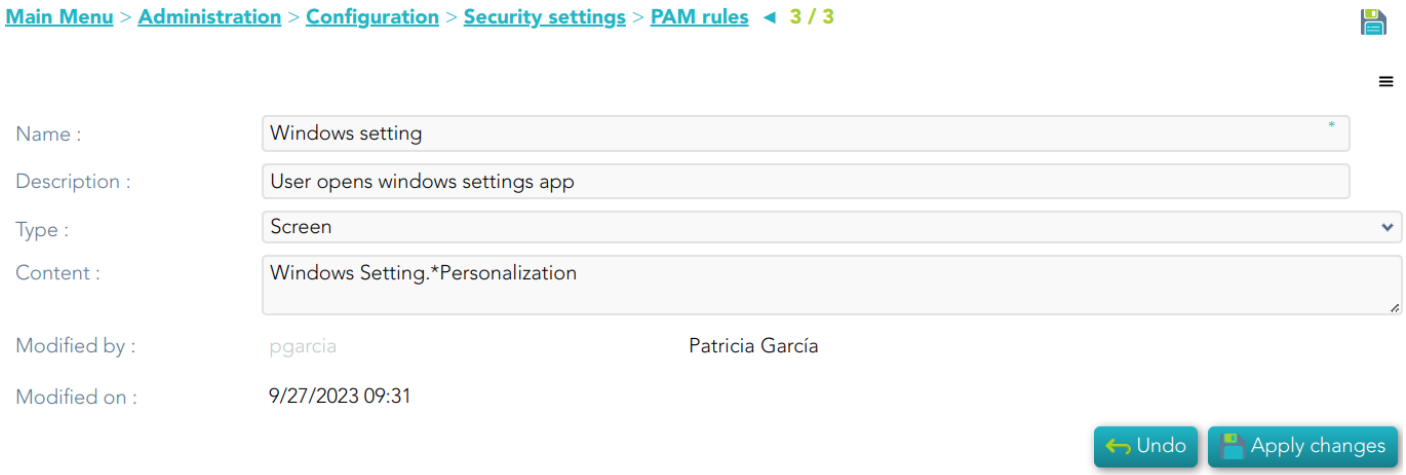
## Screen overview




### Keyboard example




## Screen example




## Keyboard example




# Standard attributes

- **Name**: name to identify the rule.
- **Description**: a brief description of the rule.
- **Type**: rule type.
  - **Keyboard**: Indicate the command typed in the terminal that you want to control.
  - **Screen**: Indicate the text displayed in the screen that you want to control.
- **Content**: the content of the rule that Soffid will detect. Be in mind, that Soffid will consider blanks, returns, and all characters you type.
- **Modified by**: user who modified that rule.
- **Modified on**: the date and time of the update.

# Actions

## PAM rules query

| | |
|---|---|
| **Query** | Allows you to query PAM rules through different search systems, Quick, Basic and Advanced. |
| **Add or remove columns** | Allows you to show and hide columns in the table. |
| **Add new** | Allows you to create a new PAM rule. You can choose that option on the hamburger menu or click the add button (+). To add a new PAM rule it will be mandatory to fill in the required fields. |
| **Delete** | Allows you to remove one or more PAM rules by selecting one or more records and next clicking the button with the subtraction symbol (-).<br>To perform that action, Soffid will ask you for confirmation, you could confirm or cancel the operation. |
| **Import** | Allows you to upload a CSV file with the PAM rules list to add or update PAM rules to Soffid.<br>First, you need to pick up a CSV file, that CSV has to contain a specific configuration. Then you need to check the content to be loaded, it is allowed to choose if you want or not to load a specific attribute. And finally, you need to select the mappings for each column of the CSV file to import the data correctly and click the Import button. |
| **Download CSV file** | Allows you to download a CSV file with the PAM rules information. |

## PAM rules detail

| | |
|---|---|
| **Apply changes** | Allows you to create a new configuration PAM rule or to update an existing one. To save the data it will be mandatory to fill in the required fields. |

| | |
|---|---|
| **Undo** | Allows you to quit without applying any changes made. |
| **Delete** | Allows you to delete a PAM rule. To perform that action, Soffid will ask you for confirmation, you could confirm or cancel the operation. |

# PAM Policies

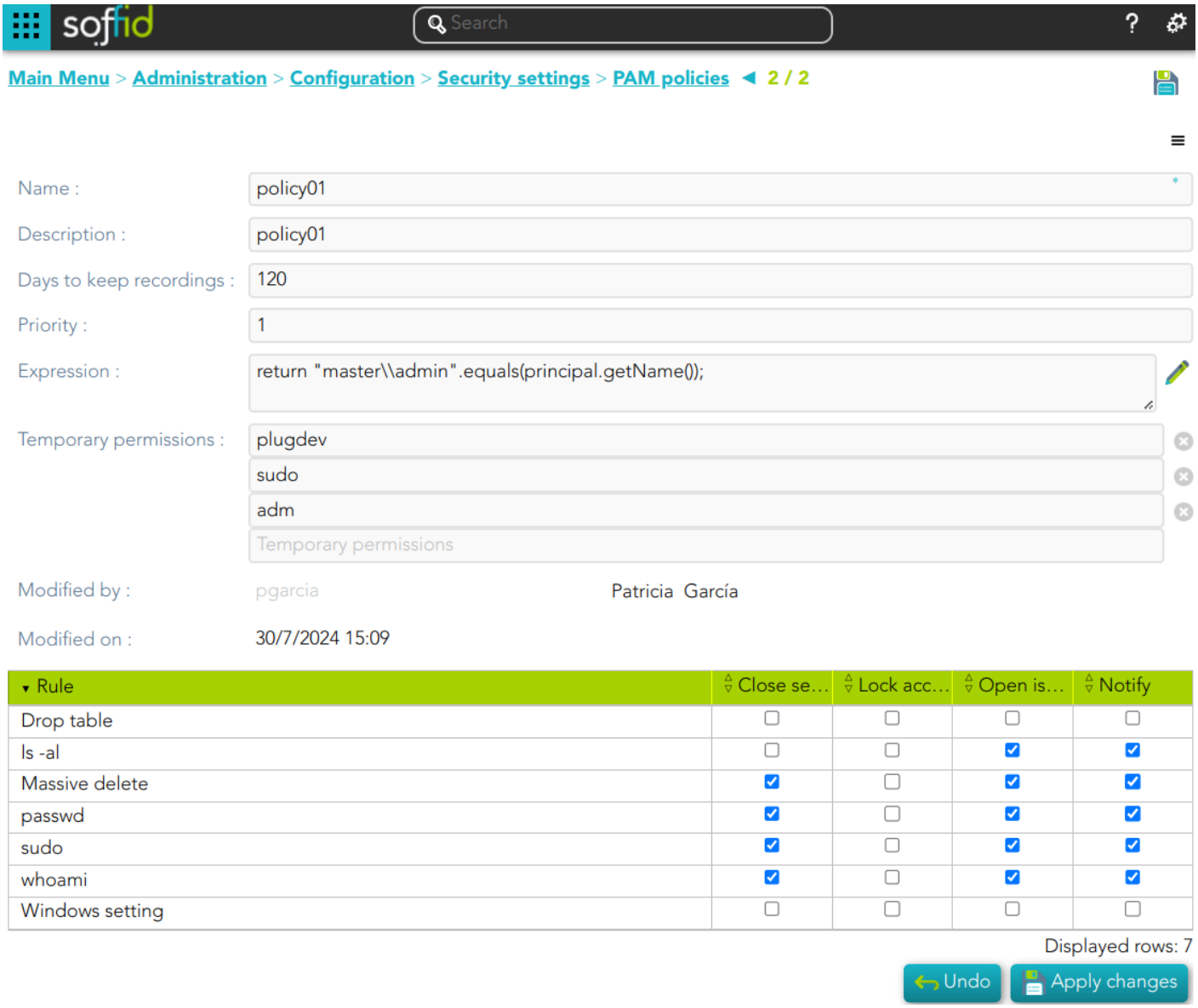
# Definition

**Privileged Access Management** (PAM) policies are a set of guidelines and controls that dictate how privileged access is granted, managed, and audited within an organization.

Soffid allows you to define policies, those policies can be made up of several rules. For each rule, you could select the action to perform when Soffid detects that rule is accomplished.

To use those policies you need to define how policies will be used by each folder in the password vault. For more information, you can visit the Password Vault page.

# Screen overview




# Standard attributes

- **Name**: name to identify the policy.
- **Description**: a brief description of the policy.
- **Days to keep recordings**: number of days that recordings will be kept.
- **Priority**: allows you to set the priority between the different PAM policies configured. When there are several policies, the policy to be applied is evaluated according to priority and expression.
- **Expression**: this expression is evaluated to determine the priority of the policy to be applied. When there are several policies, the policy to be applied is evaluated according to priority and expression.
- **Temporary permissions**: these permissions will be assigned to the user's account on the target system. The permissions will be maintained for the duration of the session. Once the session is over, the permissions will be revoked. The account must be a managed account.

- **Modified by**: user who modified that rule.
- **Modified on**: the date and time of the update.

When you save the standard attributes of a PAM policy and edit the policy again, the rule list will be shown. Here you can customize the policy depending on the existing rules.

- **Rule list**: show a list of the PAM rules defined. You can check/uncheck the available options. You can choose zero, one, or several:
  - **Close session**: when the rule is met, Soffid will close the session.
  - **Lock account**: when the rule is met, Soffid will lock the account.
  - **Open issue**: when the rule is met, Soffid will open a new  issue (*).
  - **Notify**: when the rule is met, Soffid will send a notification about the action.

> (*) You can visit the following page for more information about the issues: https://bookstack.soffid.com/books/soffid-3-reference-guide/page/issue-policies and https://bookstack.soffid.com/link/1153#bkmrk-pam-violation

> The PAM policies configuration is sent to the user-console.policies to the Store container. You can find this file at /opt/soffid/tomee/data/ips

**Image**




# Actions

# PAM rules query

| | |
|---|---|
| **Query** | Allows you to query PAM policies through different search systems, Quick, Basic and Advanced. |
| **Add or remove columns** | Allows you to show and hide columns in the table. |
| **Add new** | Allows you to create a new PAM policy. You can choose that option on the hamburger menu or click the add button (+).<br>To add a new PAM policy it will be mandatory to fill in the required fields. |
| **Delete** | Allows you to remove one or more PAM policies by selecting one or more records and next clicking the button with the subtraction symbol (-).<br>To perform that action, Soffid will ask you for confirmation, you could confirm or cancel the operation. |
| **Import** | Allows you to upload a CSV file with the PAM policies list to add or update PAM policies to Soffid.<br>First, you need to pick up a CSV file, that CSV has to contain a specific configuration. Then you need to check the content to be loaded, it is allowed to choose if you want or not to load a specific attribute. Finally, you need to select the mappings for each column of the CSV file to import the data correctly and click the Import button. |
| **Download CSV file** | Allows you to download a CSV file with the PAM policies information. |

# PAM rules detail

| | |
|---|---|
| **Apply changes** | Allows you to create a new configuration PAM policy or to update an existing one. To save the data it will be mandatory to fill in the required fields. |
| **Undo** | Allows you to quit without applying any changes made. |
| **Delete** | Allows you to delete a PAM policy. To perform that action, Soffid will ask you for confirmation, you could confirm or cancel the operation. |

# How to enable WinRM?

## Introduction

On this page we will describe the steps to follow to enable WinRM with the domain controller Group Policy for WMI monitoring.

## Step by Step

### Step 1: Create a Group Policy object

Fist of all, you need to create a Group Policy object for your domain.

1. From the start menu, open Control Panel.
2. Select **Administrative Tools**.
3. Select **Group Policy Management**.
4. From the menu tree, click **Domains > [your domain's name]**.
5. Right-click and select **Create a GPO in this domain, and Link it here**.
6. Input **Enable WinRM**.
7. Click **OK**.

### Step 2: Enable WinRM services

Secondly, it is necessary to enable WinRm services to allow remote management of the server through WinRM. You must edit the Group Policy  you just created.

1. Right-click on the new **Enable WinRM Group Policy Object and select Edit**.

2. From the menu tree, click **Computer Configuration > Policies > Administrative Templates: Policy definitions > Windows Components > Windows Remote Management (WinRM) > WinRM Service**.

3. Right-click on **Allow remote server management through WinRM** and click **Edit**.

4. Select **Enabled** to allow remote server management through WinRM.

5. Enter an asterisk (*) into each field.

6. Click **OK**.

# Step 3: Enable the service that goes the policy

1. From the Group Policy Management Editor window, click **Preferences > Control Panel Settings > Services**.

2. Right-click on **Services** and select **New > Service**.

3. Select **Automatic** as the startup.

4. Enter WinRM as the service name.

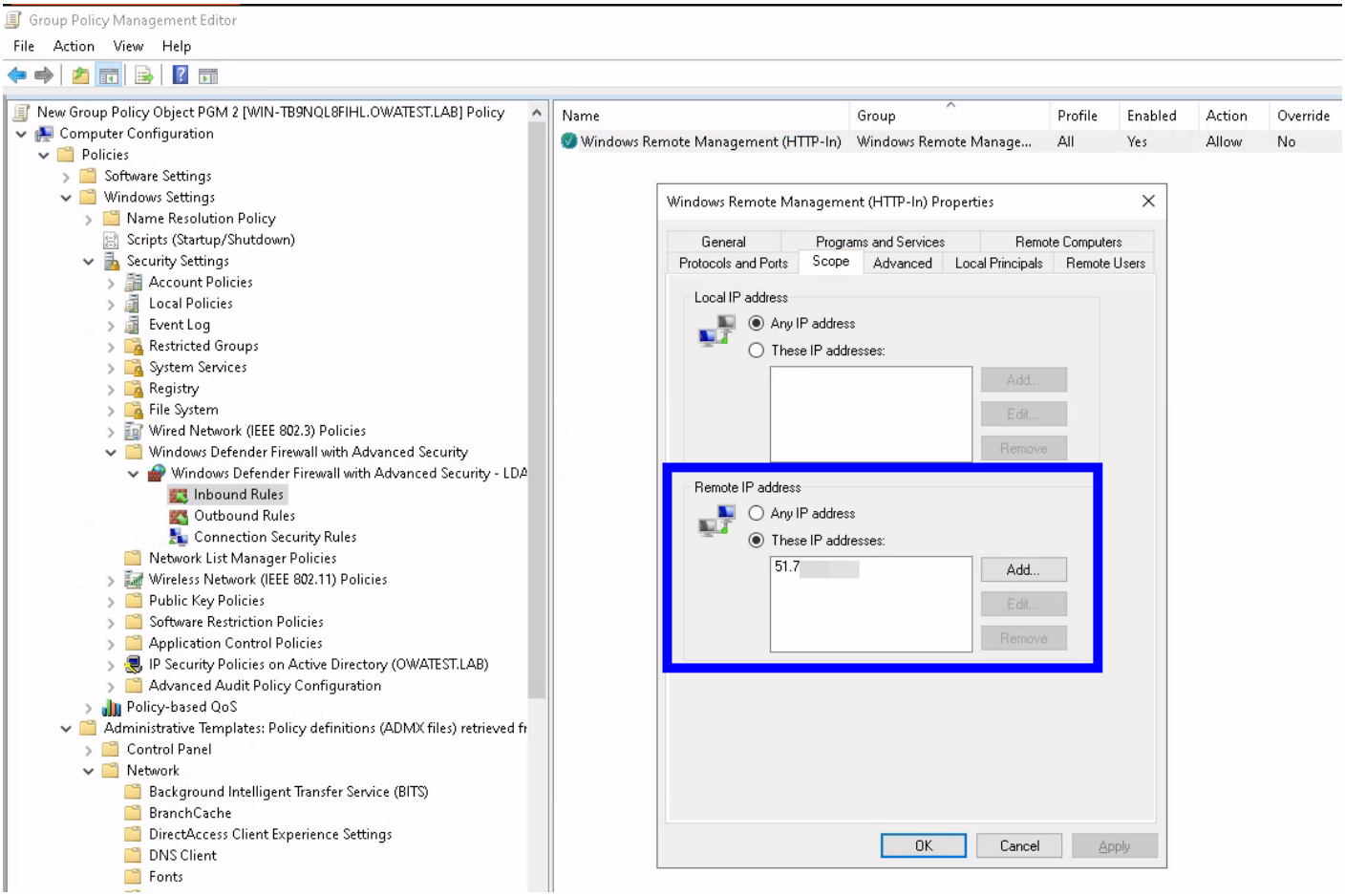
5. Select **Start service** as the service action.

6. All remaining details can stay on the defaults. Click **OK**.

# Step 4: Allow for inbound remote administration

You have to allow for inbound remote administration by updating the firewall rules

1. From the menu tree, click **Computer Configuration > Policies > Windows Settings > Security Settings > Windows Firewall with Advanced Security > Windows Firewall with Advanced Security > Inbound Rules**.
2. Right-click on **Inbound Rules** and click **New Rule**.
3. Select **Predefined**.
4. Select **Windows Remote Management** from the list of services.
5. Click **Next**.
6. Uncheck the **Public** rule. Leave the **Domain**, **Private** rule checked.
7. Click **Next**.
8. Leaving the defaults, click **Finish**.
9. Right-click on the new rule and click **Properties**.
10. Click the **Scope** tab.
11. Add the remote IP address




**12.** Click **OK**.

**13.** From the menu tree, click **Computer Configuration > Policies > Windows Settings > Security Settings > Network List Manager Policies**.

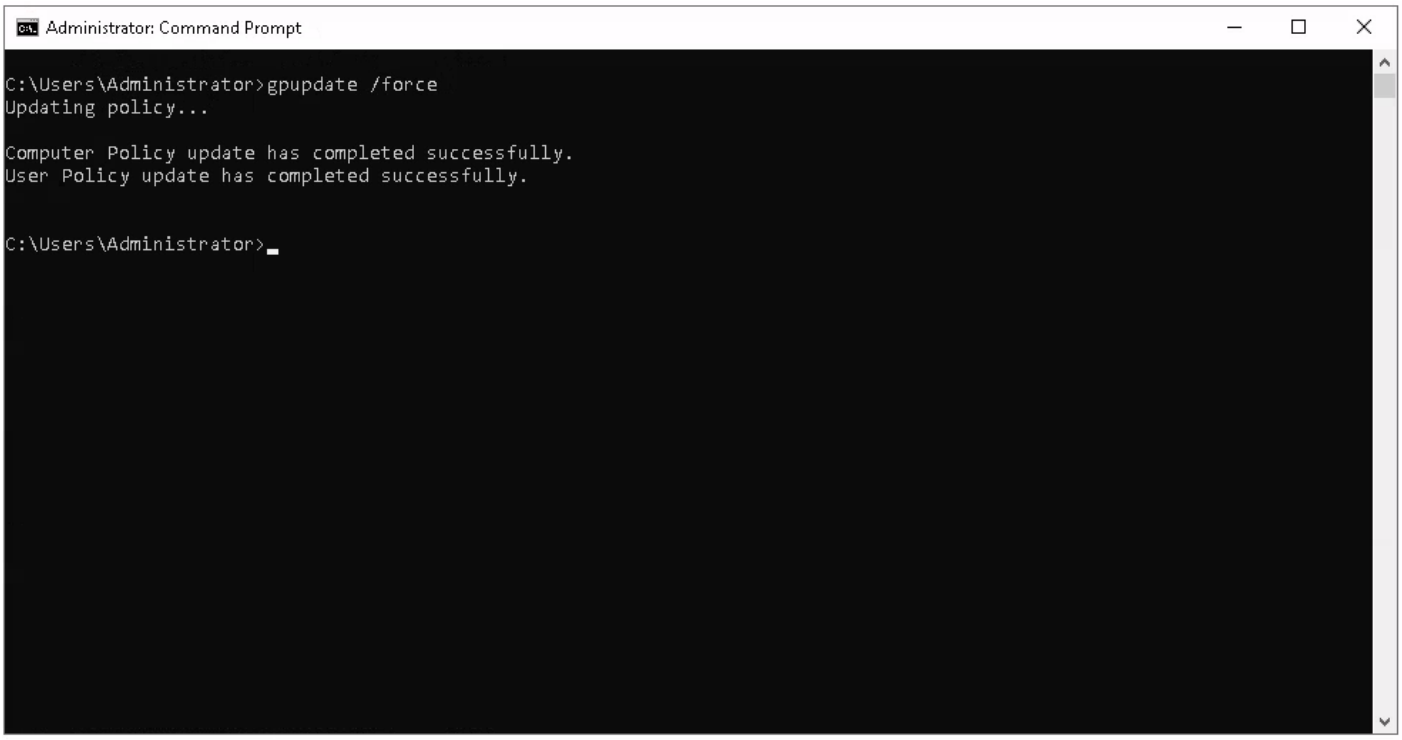
**14.** Right-click **Unidentified Networks** and click **Properties**.

**15.** Change the location type from Not configured to **Private**.

**16.** Click **OK**.

**17.** Close the Local Group Policy Editor window.

**18.** Run the **gpupdate /force** command to update the policy


Administrator: Command Prompt
C:\Users\Administrator>gpupdate /force
Updating policy...
Computer Policy update has completed successfully.
User Policy update has completed successfully.
C:\Users\Administrator>