

# The registration process

Every Wazuh Agent send data to Wazuh Manager via secure way called OSSEC message protocol this encrypts messages using a pre-shared key. Initially when you successfully install a new Wazuh Agent this cannot comunicate with Wazuh Manager for lack of the pre-shared key.

The registration process consists of a mechanism to create a trust relationship between the Manager and a Agent, this process could be done in a Manager itself or with a registration service, this service it listen on the Manager, a Agent could request a pre-shared key using some credentials and it will reply with the pre-shared key and store the new Agent in local database.

Another aproach is using the RESTful API, this is just a wrapper for local registration on Wazuh Manager.

## Agent keys

The manager uses the file `/var/ossec/etc/client.keys` to store the registration record of each agent, which includes ID, name, IP, and key. Example:

```
001 Server1 any e20e0394dca71bacdea57d4ca25d203f836eca12eeca1ec150c2e5f4309a653a
002 ServerProd 192.246.247.247 b0c5548bed537daddb4da698424d0856c3d4e760eaced803d58c07ad1a95f4c
003 DBServer 192.168.0.1/24 8ec4843da9e61647d1ec3facab542acc26bd0e08ffc010086bb3a6fc22f6f65b
```

The agents also have the file `/var/ossec/etc/client.keys` containing only their own registration record. Example for `Server1` agent:

```
001 Server1 any e20e0394dca71bacdea57d4ca25d203f836eca12eeca1ec150c2e5f4309a653a
```

### Basic data for registering an agent

In order to register an agent, it is necessary to provide the name and the IP of the agent.

There are several ways to set the agent IP:

- **Any IP:** Allow the agent to connect from any IP address. Example: `Server1` has `any` IP.
- **Fixed IP:** Allow the agent to connect only from the specified IP. Example: `ServerProd` has the IP `192.246.247.247`.
- **Range IP:** Allow the agent to connect from the specified range of IPs. Example: `DBServer` has the IP range `192.168.0.1/24`.

Some registration methods automatically detect the IP of the agent during the registration process.

## Registration methods

Here are three ways to register an agent:

Type	Method	Description
Manually	Using the command line	Register an agent manually using manage_agents binary.
Automatically	Using the registration service	Register an agent automatically using ossec-authd binary.
	Using the RESTful API	Register an agent by scripting (bash, python, powershell) and the API.

