# Integration of Salt and SaltGUI

This document provides a detailed guide to integrate **Salt** with **SaltGUI** for managing and monitoring Salt environments.

## Table of Contents:

1. [Overview](#overview)
2. [Prerequisites](#prerequisites)
3. [Configuring Salt Master for SaltGUI](#configuring-salt-master-for-saltgui)
4. [Installing SaltGUI](#installing-saltgui)
5. [Accessing SaltGUI](#accessing-saltgui)
6. [SaltGUI Overview and Usage](#saltgui-overview-and-usage)
7. [Troubleshooting](#troubleshooting)
8. [Useful Links](#useful-links)

## Overview

**SaltStack** (Salt) is an open-source tool for automation and configuration management. **SaltGUI** is a web-based user interface to monitor and control Salt from a browser. This guide describes how to install and configure SaltGUI in an existing Salt environment.

## Prerequisites

Before starting, ensure that the following prerequisites are met:

* A Salt master is already set up and running.
* A Salt minion setup (preferably on the same machine as the master for testing).
* Access to a terminal with root/sudo privileges.

## Configuring Salt Master for SaltGUI

1. **Enable the Salt REST API on the Salt master**: Open the Salt master configuration file (/etc/salt/master) and add the following lines:

yaml

Copy code

rest\_cherrypy:

port: 8000

host: 0.0.0.0

disable\_ssl: True

webhook\_disable\_auth: True

cors\_origin: '\*'

external\_auth:

pam:

saltuser:

- .\*

- '@wheel'

- '@runner'

- '@jobs'

1. **Create a User for SaltGUI**: You can use pam authentication to allow a user to log into SaltGUI. Create the user:

bash

Copy code

sudo useradd -m saltuser

sudo passwd saltuser

1. **Restart Salt Services**: Restart both the Salt master and Salt API services to apply the changes:

bash

Copy code

sudo systemctl restart salt-master

sudo systemctl restart salt-api

## Installing SaltGUI

1. **Install Python dependencies** (if not already installed):

bash

Copy code

sudo apt-get install python3-pip

sudo pip3 install tornado cherrypy

1. **Install SaltGUI**: Clone the SaltGUI repository from GitHub:

bash

Copy code

git clone https://github.com/saltstack/salt-gui.git

1. **Move the SaltGUI files to the proper directory**:

bash

Copy code

sudo mv salt-gui /srv/saltgui

1. **Install additional Salt dependencies**: SaltGUI requires a few additional Salt packages:

bash

Copy code

sudo apt-get install salt-api

## Accessing SaltGUI

1. **Start SaltGUI**: SaltGUI will automatically run once you start the Salt master and API. To access it, open your web browser and navigate to:

arduino

Copy code

http://<salt-master-ip>:8000

1. **Login**: Use the saltuser credentials you created to log in.
   * Username: saltuser
   * Password: The password you set.

## SaltGUI Overview and Usage

Once logged into SaltGUI, you can:

* **Monitor Minions**: See all connected minions and their status.
* **Run Jobs**: Execute commands on one or multiple minions.
* **View Events**: See the event bus in real-time.
* **Manage Keys**: Accept or reject minion keys.
* **View and Run States**: Access the available states and run them on minions.

Common operations can be run using the GUI interface, which simplifies the process of managing Salt environments.

## Troubleshooting

* **Issue: SaltGUI is not accessible**
  + Ensure that the Salt API service is running (sudo systemctl status salt-api).
  + Check the firewall settings to ensure that port 8000 is open.
* **Issue: Cannot log in with saltuser**
  + Verify the user exists with cat /etc/passwd | grep saltuser.
  + Ensure saltuser is configured correctly in /etc/salt/master.

## Useful Links

* SaltStack Official Documentation
* [SaltGUI GitHub Repository](https://github.com/saltstack/salt-gui)