# Lab9 Walkthrough

## Virtual Network Automation:

Located in the virtual\_network\_automate.py, there is functionality to create virtual networks that have connection to the public network

Example:

A screenshot of a computer program

AI-generated content may be incorrect.A screenshot of a computer

AI-generated content may be incorrect.

## VM Automation:

Located in the vm\_automate.py, there is functionality to create virtual machines that are connected to a given internal network and is automatically given a floating ip.

Example:

A computer screen shot of a black screen

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## Security Group Automation:

Located in the security\_automate.py, there is functionality to create a security group for a specific virtual machine. I then have added functionality for adding certain services like ICMP, TCP, UDP, etc.

Example:

A screenshot of a computer program

AI-generated content may be incorrect. **A screenshot of a group rules

AI-generated content may be incorrect.**

## FRR BGP Docker Automation:

Located in the frr\_automate.py, there is functionality to create a docker container with FRR and adds it to a docker bridge network. It then applies a simple eBGP peering configuration with the SDN BGP Docker container:

Example:

**A screenshot of a computer program

AI-generated content may be incorrect.A computer screen shot of a number

AI-generated content may be incorrect.**

## RYU BGP Docker Automation:

Located in the ryu\_automate.py, there is functionality to create a docker container with Ryu controller and adds it to a docker bridge network. It then applies a simple eBGP peering configuration with the FRR BGP docker container.

Example:

A screenshot of a computer program

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AI-generated content may be incorrect.