# Your One Stop Solution To Using Python For Network Automation Programmability

Network automation is the use of software to configure, manage, and monitor networks. It can be used to automate a wide range of tasks, from simple tasks like changing the IP address of a device to complex tasks like deploying new network services. Python is a powerful and versatile language that is well-suited for network automation. It is easy to learn and use, and it has a large number of libraries and tools that make it easy to automate network tasks.

**Mastering Python Networking: Your one-stop solution to using Python for network automation, programmability, and DevOps, 3rd Edition** by Eric Chou

★★★★☆ 4.6 out of 5

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## The Benefits of Using Python for Network Automation

There are many benefits to using Python for network automation. Some of the most important benefits include:

- **Ease of use:** Python is a very easy language to learn and use. It has a simple syntax and a large number of built-in functions and libraries that make it easy to get started with network automation.

- **Versatility:** Python can be used to automate a wide range of network tasks. It can be used to configure, manage, and monitor networks. It can also be used to develop new network services.

- **Extensibility:** Python is a very extensible language. It has a large number of libraries and tools that make it easy to extend its functionality. This makes it easy to add new features to your network automation scripts.

## Getting Started with Python for Network Automation

If you are new to Python, there are a few things you need to do to get started with network automation. First, you need to install Python on your computer. You can download Python from the official Python website. Once you have installed Python, you need to install a few libraries that will help you with network automation. These libraries include:

- **Netmiko:** Netmiko is a library that provides a consistent interface to a wide range of network devices. It makes it easy to send commands to devices and receive the output.

- **Paramiko:** Paramiko is a library that provides SSH2 protocol support for Python. It makes it easy to connect to network devices over SSH and execute commands.

- **Nornir:** Nornir is a library that provides a simple and powerful way to manage network devices. It makes it easy to group devices, run commands on devices, and collect the output.

Once you have installed these libraries, you can start writing Python scripts to automate network tasks. For example, the following script shows how to use Netmiko to send a command to a network device and receive the output:

```
import netmiko # Connect to the device net_connect = netmiko.ConnectHand
```

This script will connect to a network device at IP address 192.168.1.1, send the command "show ip interface brief", and print the output.

Python is a powerful and versatile language that is well-suited for network automation. It is easy to learn and use, and it has a large number of libraries and tools that make it easy to automate network tasks. If you are looking for a way to automate your network, Python is a great choice.

In addition to the information provided in this article, you can find more resources on using Python for network automation on the following websites:

- Python documentation
- Netmiko documentation
- Paramiko documentation
- Nornir documentation

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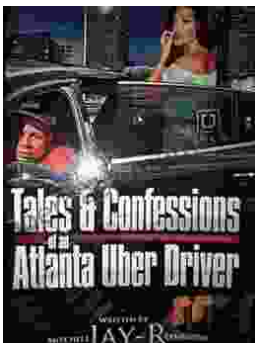
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