PYTHON
FOR NETWORK ENGINEERS

By: Martin Grandjean
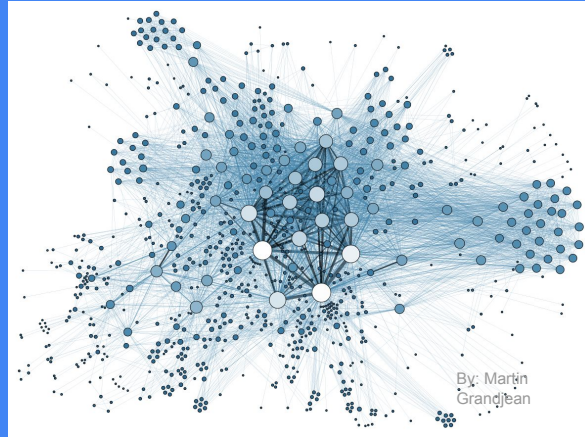
Ansible Network Automation

Bradley Fernando
January 15th, 2021
Certificate of Participation

```python
def configure_bgp(net_connect, file_name=''):
    """Configure BGP on device."""
    try:
        output = net_connect.send_config_from_file(config_file=file_name)
        if net_connect.device_type == 'cisco_xr_ssh':
            output += net_connect.commit()
        return output
    except IOError:
        print "Error reading file: {}".format(file_name)


def main():
    start_time = datetime.now()
    print

    for a_device in device_list:
        as_number = a_device.pop('as_number')
        net_connect = ConnectHandler(**a_device)
        net_connect.enable()
        print "{}: {}".format(net_connect.device_type, net_connect.find_prompt())
        if check_bgp(net_connect):
            print "BGP currently configured"
            remove_bgp_config(net_connect, as_number=as_number)
        else:
            print "No BGP"

        # Check BGP is now gone
        if check_bgp(net_connect):
            raise ValueError("BGP configuration still detected")

        # Construct file_name based on device_type
        device_type = net_connect.device_type
        file_name = 'bgp_' + device_type.split("_ssh")[0] + '.txt'

        # Configure BGP
        output = configure_bgp(net_connect, file_name)
        print output
        print

    # Let BGP get established
    time.sleep(3)
```