ASSIGNMENT- 10

CC proxy

Setup CC proxy in Azure VM

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CLOUD INFRA

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1. Introduction

Purpose

This document provides a step-by-step guide to setting up CC Proxy in an Azure Virtual Machine (VM). It aims to help users understand the configuration and management of a proxy server within the Azure environment.

Overview of CC Proxy

CC Proxy is a popular proxy server software that supports various protocols, including HTTP, HTTPS, FTP, and more. It enables users to control internet access, manage bandwidth, and provide network security.

Use Cases

- **Access Control**: Restricting access to specific websites or internet services.
- **Bandwidth Management**: Controlling the bandwidth usage for different users.
- **Security**: Enhancing network security by monitoring and filtering traffic.

Client name	Proxy server support
Windows Desktop	Yes
Web client	Yes
Android	No
iOS	Yes
macOS	Yes
Windows Store	Yes

Proxies don't make Azure Virtual Desktop more secure because the traffic is already encrypted. To learn more about connection security, see Connection security. Most proxy servers aren't designed for supporting long running WebSocket connections and may affect connection stability.

Proxy server scalability also causes issues because Azure Virtual Desktop uses multiple long-term connections. If you do use proxy servers, they must be the right size to run these connections. If the proxy server's geography is far from the host, then this distance will cause more latency in your user connections.

More latency means slower connection time and worse user experience, especially in scenarios that need graphics, audio, or low-latency interactions with input devices. If you must use a proxy server, keep in mind that you need to place the server in the same geography as the Azure Virtual Desktop Agent and client.

2. Prerequisites

Azure Subscription

Ensure you have an active Azure subscription to create and manage virtual machines and other resources.

Azure VM Configuration

- A virtual machine with a Windows operating system.
- Sufficient CPU, memory, and storage based on the expected load.

CC Proxy Software

- CC Proxy installation file, which can be downloaded from the official website.

3. Setting Up Azure VM

Creating an Azure VM

1. Log in to the Azure portal.
2. Navigate to "Create a resource" > "Virtual Machine".
3. Fill in the necessary details such as VM name, region, image (Windows OS), size, and administrator account.
4. Configure networking options and open necessary ports.
5. Review and create the VM.

Configuring Networking

- Ensure that the VM has a public IP address.
- Open required ports for CC Proxy (e.g., port 808 for HTTP proxy).

Installing Required Software

- Install the latest updates for the Windows operating system.
- Install any necessary dependencies such as .NET Framework.

4. Installing and Configuring CC Proxy

Downloading CC Proxy

1. Visit the official CC Proxy website.
2. Download the latest version of the CC Proxy installation file.

Installing CC Proxy

1. Run the downloaded installation file.

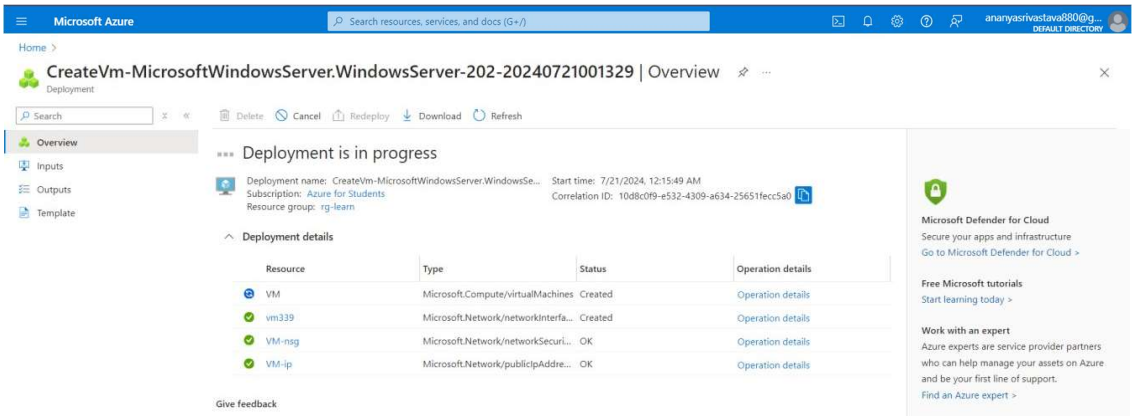
2. Follow the on-screen instructions to complete the installation.

Initial Configuration

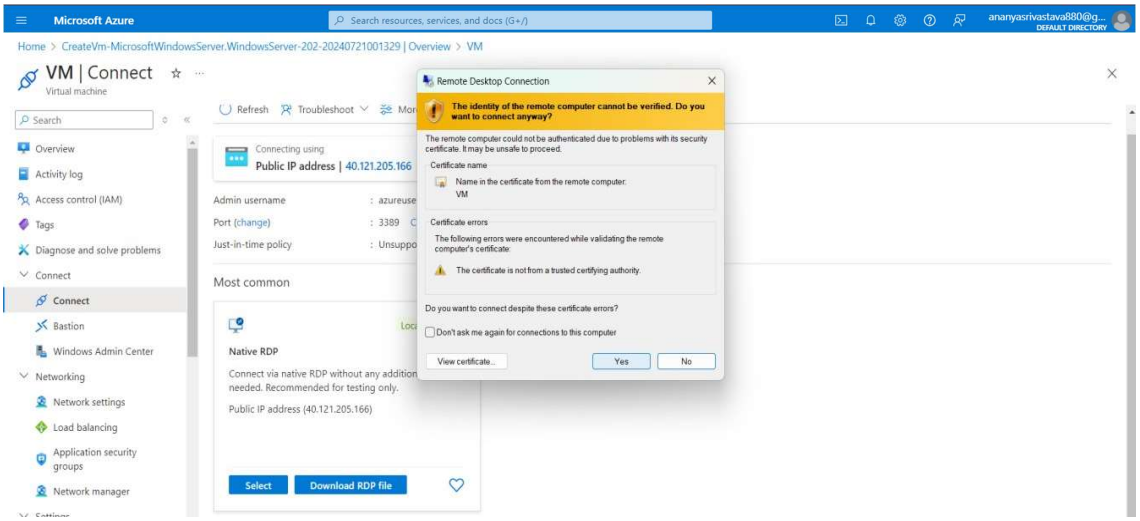
1. Launch CC Proxy.
2. Configure the basic settings such as proxy port and cache directory.

6. Configuring CC Proxy Settings

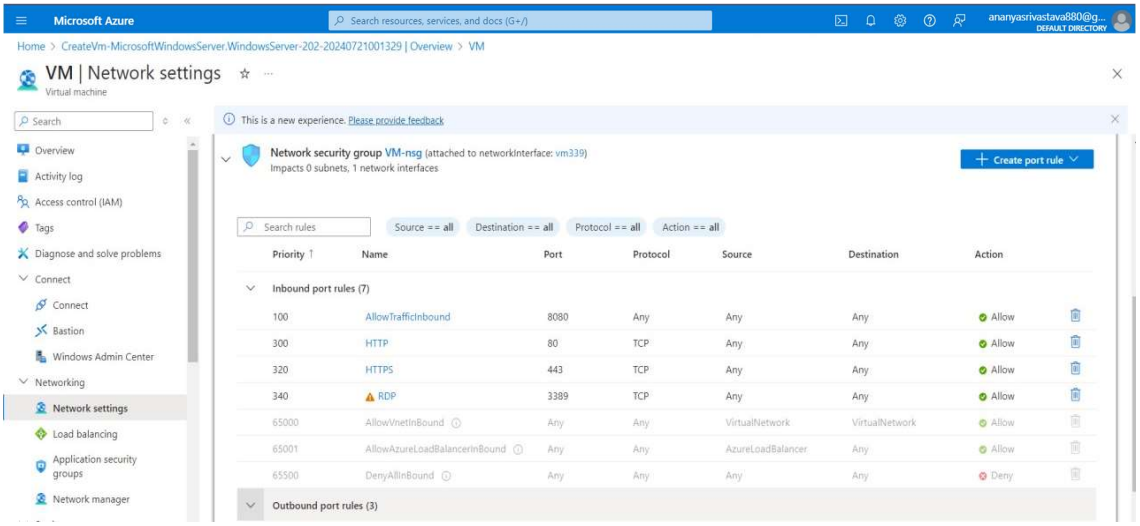
1. Create a Virtual Machine



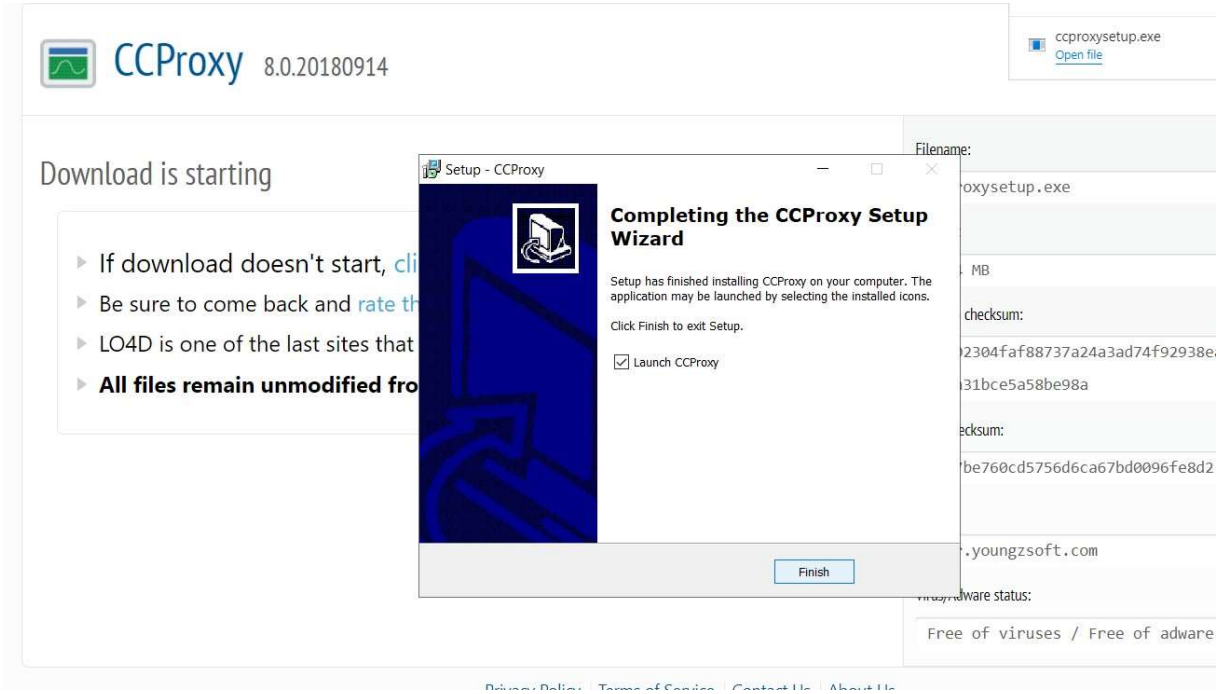
Connect to the VM (using RDP)



Configure Firewall and Network Security Groups (NSGs)



Download and Install CCProxy on VM



6. Testing and Verification

Testing Proxy Connection

1. Configure a client device to use the proxy server.
2. Test internet access through the proxy.

Verifying Internet Access

1. Ensure that users can access the internet as per the configured rules.
2. Test access to allowed and blocked sites.

Troubleshooting Common Issues

- Check network settings and firewall rules.
- Verify CC Proxy configuration and logs.

7. Security Considerations

Securing the Proxy Server

- Use strong passwords for all accounts.
- Regularly update the proxy software and operating system.

Configuring Firewall Rules

- Allow only necessary ports and block all others.

- Restrict access to the proxy server from untrusted networks.

Monitoring and Logging

- Enable logging to monitor proxy usage.
- Regularly review logs for any suspicious activity.

8. Best Practices

Performance Optimization

- Optimize proxy server settings for better performance.
- Regularly clear cache and temporary files.

Regular Maintenance

- Keep the proxy software and OS up to date.
- Perform regular backups of the proxy server configuration.

Backup and Recovery

- Set up automated backups.
- Ensure you have a recovery plan in case of a failure.

9. Conclusion

Summary

Setting up CC Proxy in an Azure VM provides a robust solution for managing internet access and enhancing network security. By following this guide, users can effectively configure and manage a proxy server in the Azure environment.

Future Enhancements

- Explore additional features of CC Proxy.
- Integrate with other Azure services for enhanced functionality.

10. References

- https://learn.microsoft.com/en-us/azure/architecture/networking/architecture/hub-spoke?tabs=cli

- https://learn.microsoft.com/en-us/azure/cyclecloud/how-to/runningbehind-proxy?view=cyclecloud-8#proxy-setup