How To Install Hyper-V In Windows Server on 2016/2019/2022

Hyper-V, a hypervisor developed by Microsoft, serves as a robust platform for efficiently handling virtual machines on Windows Server. It plays a crucial role in contemporary IT setups, offering a straightforward means of deploying and overseeing virtualized workloads. This blog post guides you through the entire procedure of installing Hyper-V on your Windows Server 2019/2022, covering everything from prerequisites to step-by-step instructions and optimal practices for setting up and overseeing virtual machines.

Hyper-V stands out as an advanced hypervisor technology, empowering users to generate and manage numerous virtual machines (VMs) on a sole physical server operating Windows Server. This technology allows for the coexistence of multiple operating systems on a single machine, each benefiting from its dedicated resources, applications, and environment. The platform facilitates the dynamic allocation and supervision of CPU, memory, and storage resources, in addition to the configuration of virtual networks and switches. Its widespread adoption in contemporary cloud environments and data centers is attributed to its cost-effectiveness in hardware utilization, enhancing business agility and scalability.

Benefits of Utilizing Hyper-V:

- Server Consolidation: Hyper-V enables the seamless operation of multiple virtual machines on a single physical server, facilitating workload consolidation and significant reduction in hardware costs.
- Cost-Effective: Packaged with Windows Server, Hyper-V presents a cost-effective solution in comparison to proprietary hypervisors like Oracle VM Server, Citrix Hypervisor, and IBM PowerVM.
- Enhanced Security: Hyper-V ensures heightened security through virtual machine isolation, providing a secure environment for your workloads.
- High Availability and Disaster Recovery: Hyper-V incorporates features such as live migration and replication, delivering high availability and effective disaster recovery mechanisms for virtual machines.
- Scalability: Supporting the evolving requirements of organizations, Hyper-V facilitates easy expansion and scalability to accommodate growing workloads.
- Flexibility: Hyper-V offers the versatility necessary to address the unique needs of your organization, providing a flexible and adaptable virtualization solution.

Installation Requirements:
Prior to initiating the installation process, ensure the presence of the following:

- A 64-bit processor with Second Level Address Translation (SLAT) support.
- A minimum of 4GB of RAM.
- Adequate disk space to accommodate both the operating system and virtual machines.
- Virtualization support activated in the BIOS or UEFI.
- The server should be fully updated with the latest security and critical updates. It is advisable to execute Windows Update and verify the installation of all available updates before Hyper-V installation.
- Possession of administrative privileges on the server is necessary to carry out the Hyper-V installation.
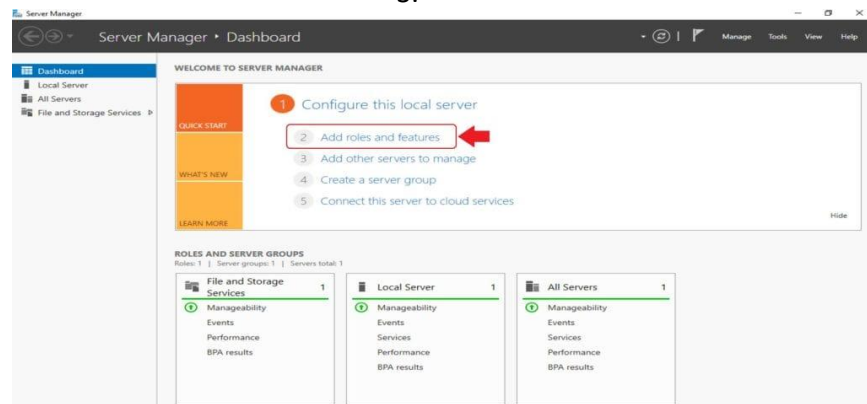
Installing Hyper-V

1. Initiate the process by launching Server Manager. Click **Start** and then **Server Manager**
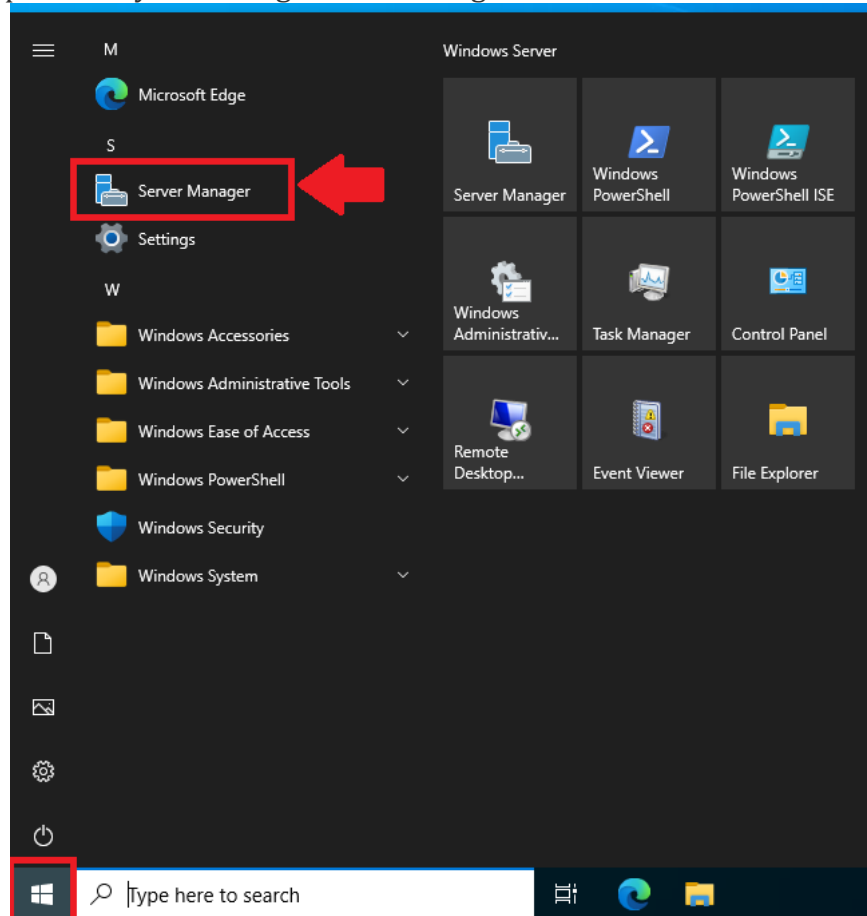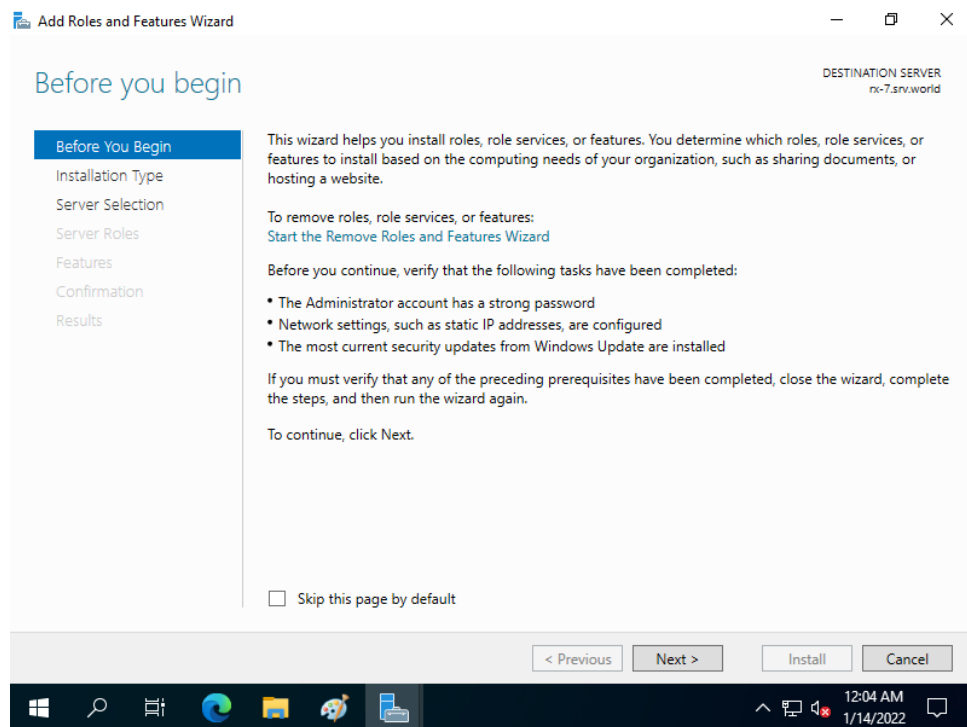

2. Once Server Manager is open, Click **Add Roles and Features.** This action initiates the Add Roles and Features wizard.
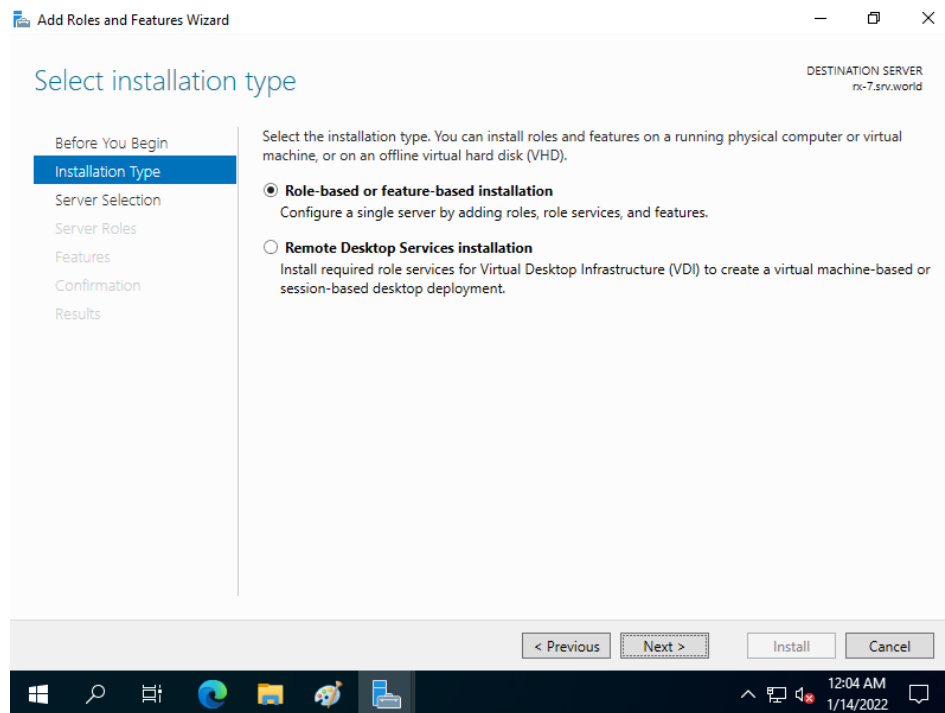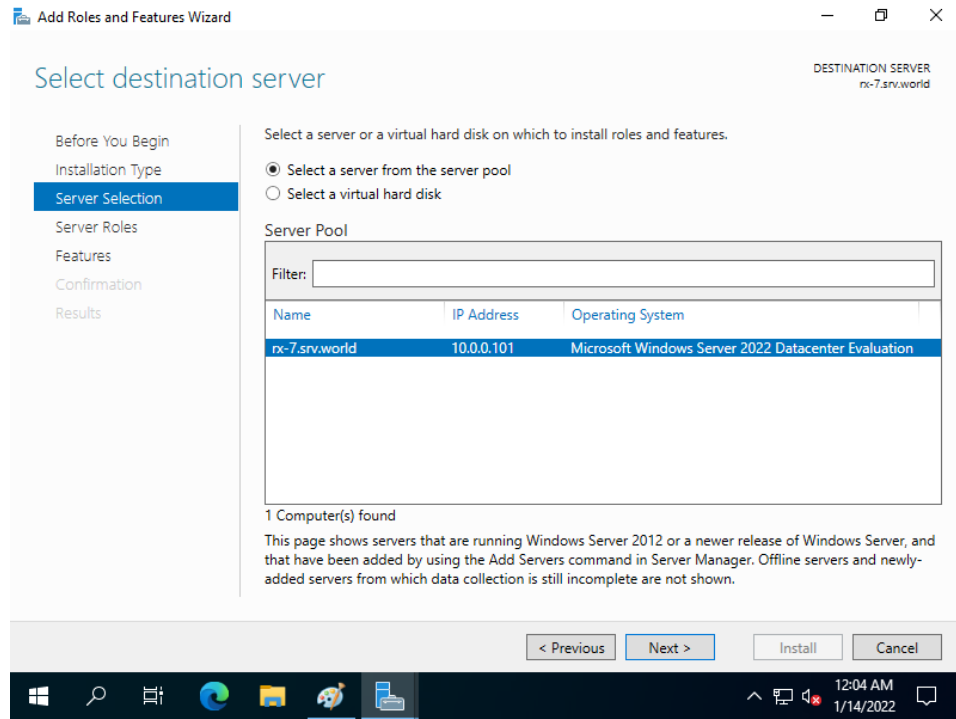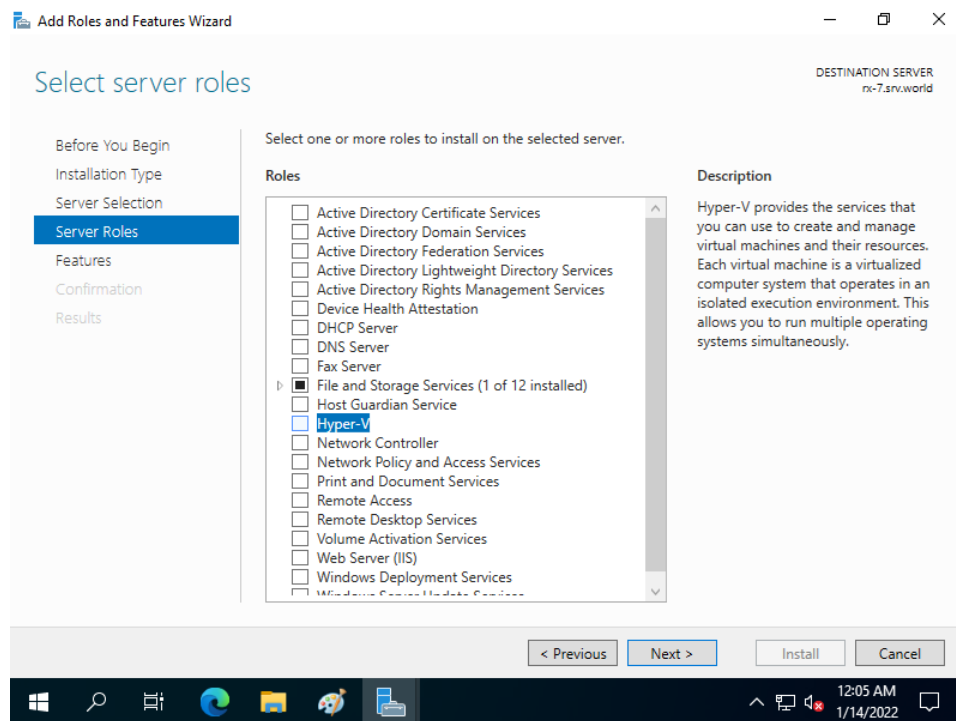
3.

[3]   Click [Next] button.
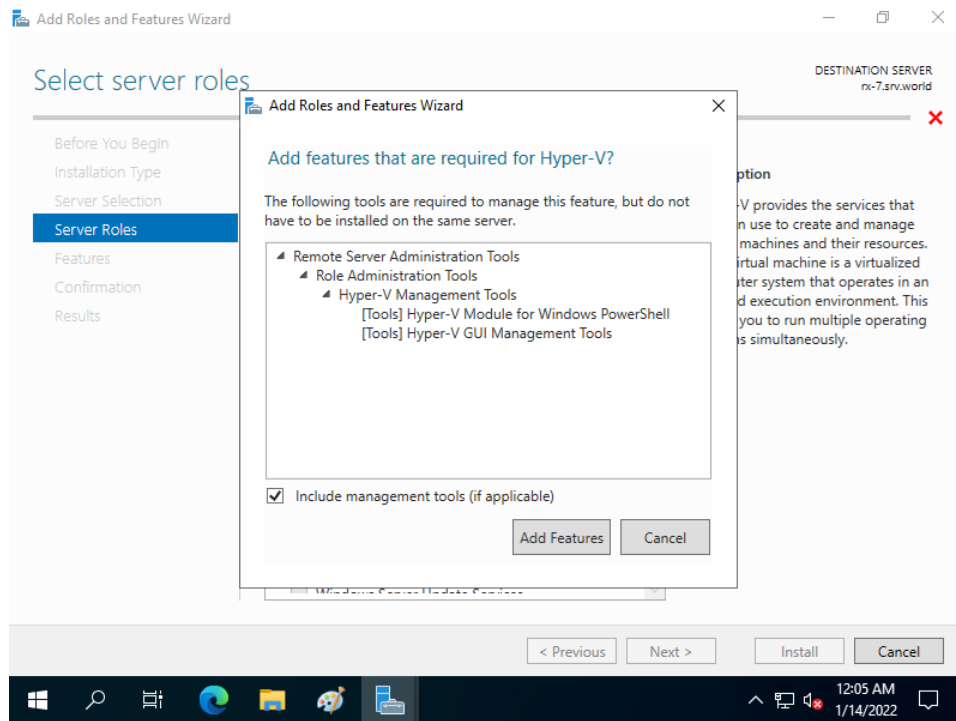

[4]   Select [Role-based or feature-based installation].
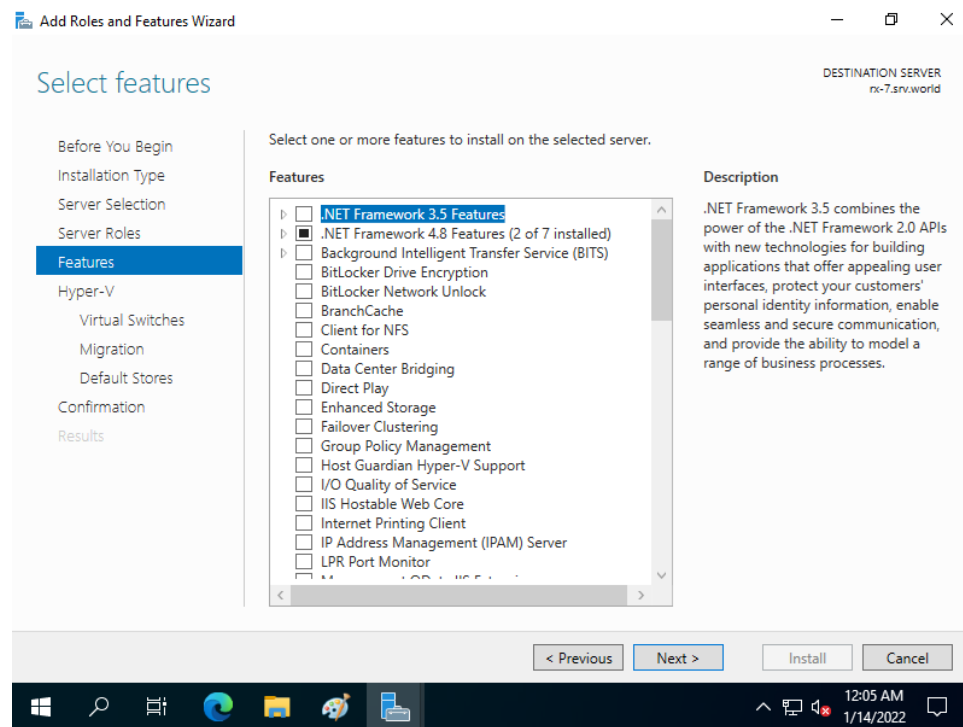

[5]   Select a Host which you'd like to add services.
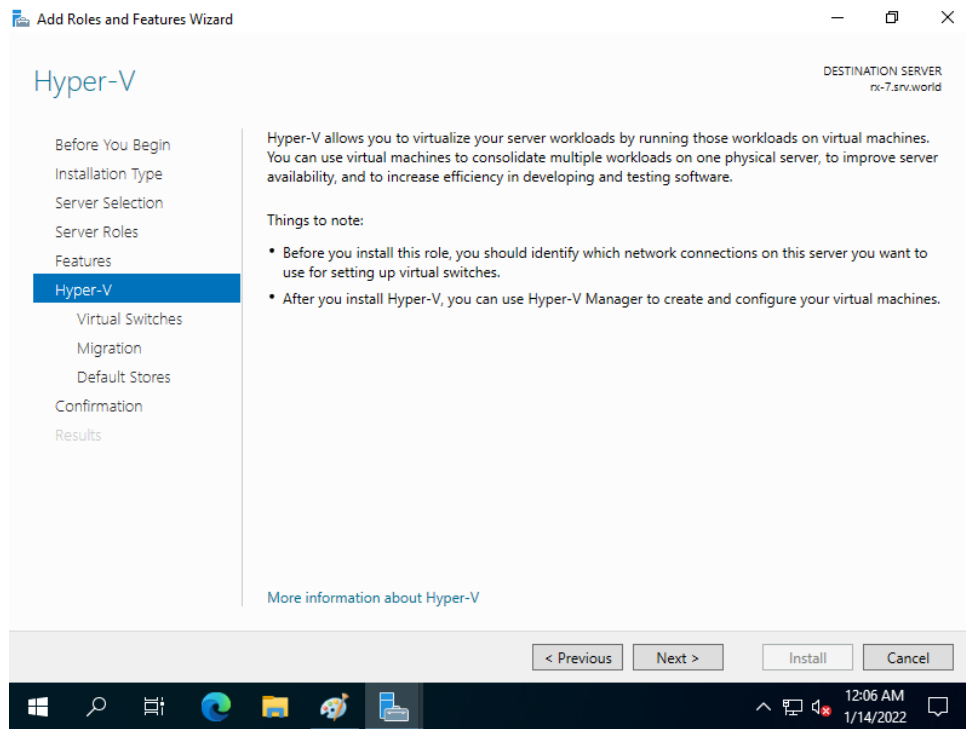
[6]   Check a box [Hyper-V].

[7]   Addtional features are required to add Hyper-V. Click [Add Features] button and proceed to Next.
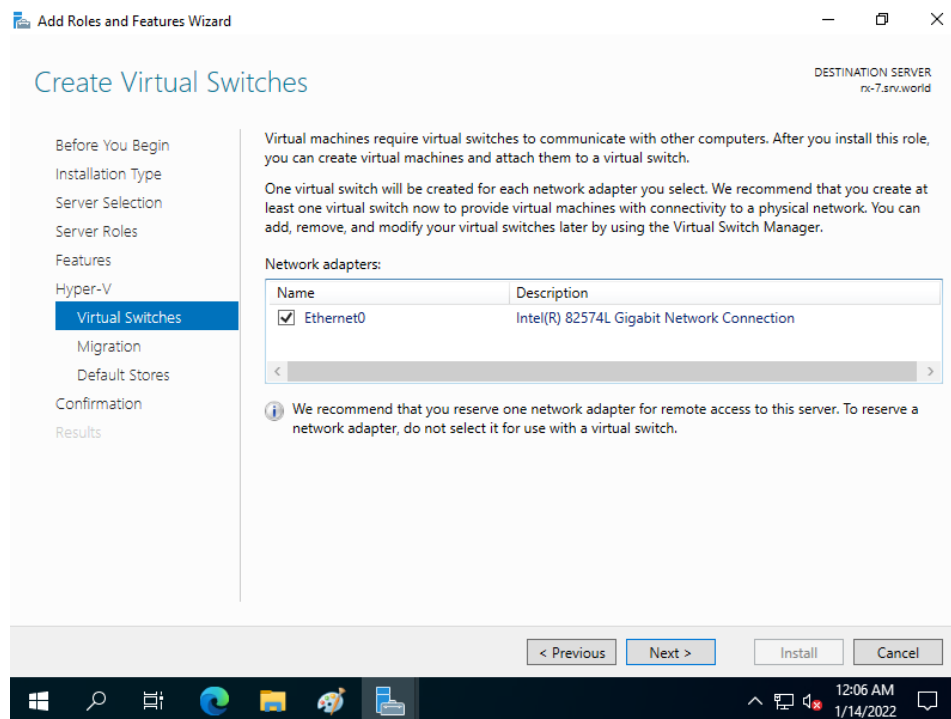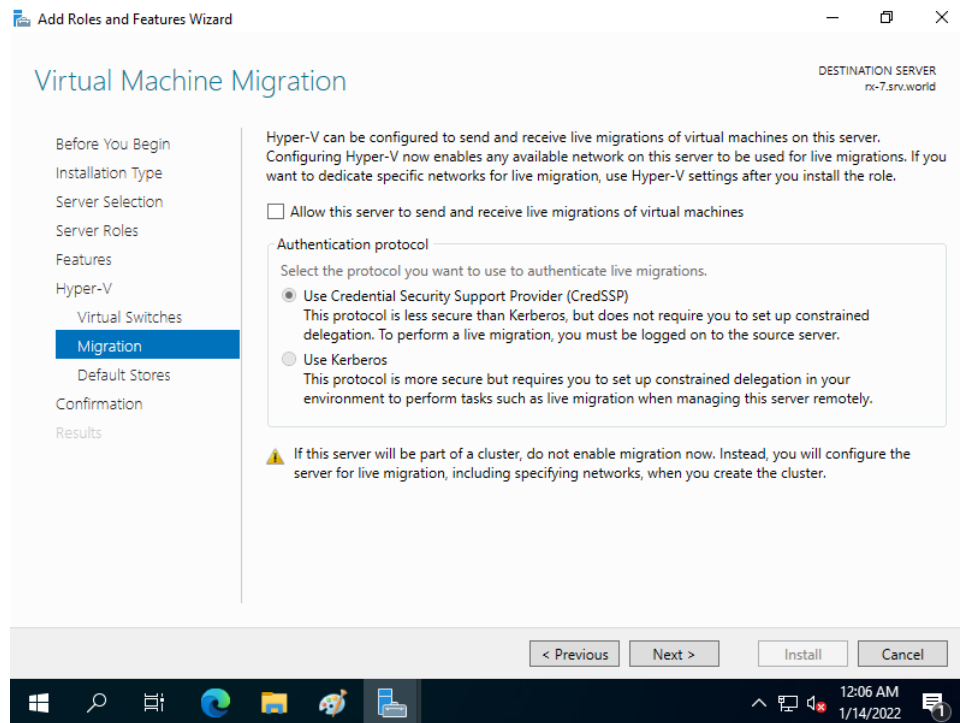
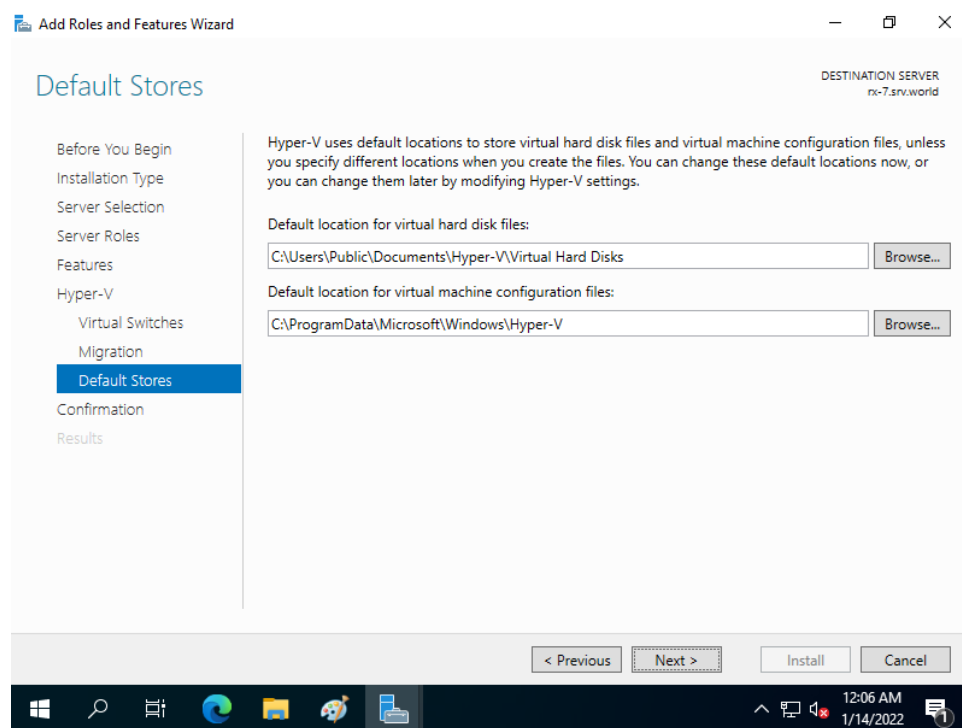[8] Click [Next] button.

[9] Click [Next] button.

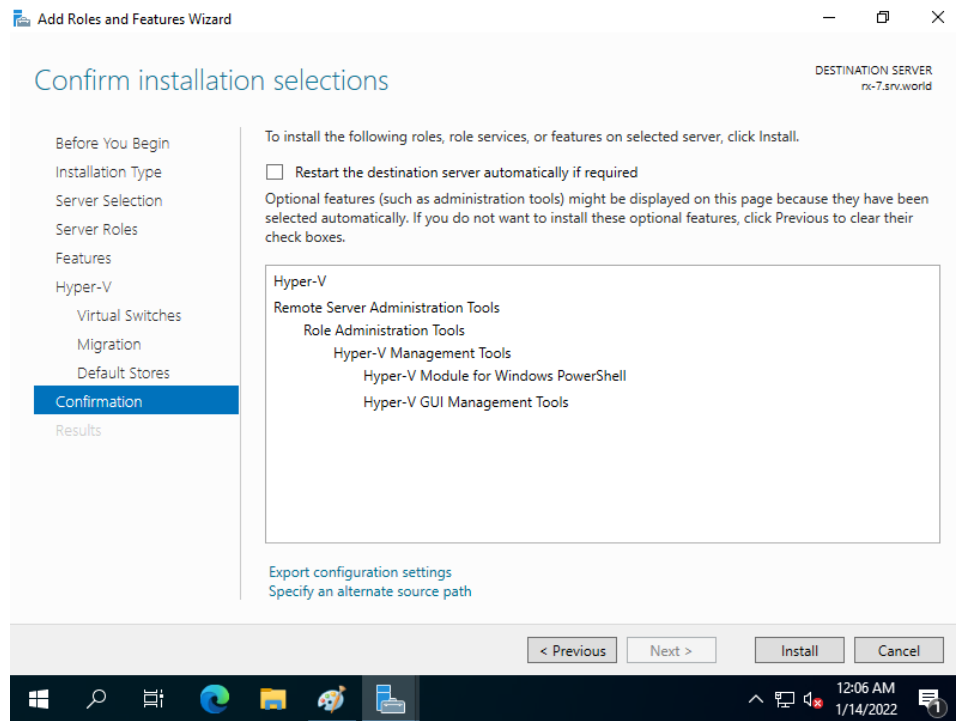[10]   This is the section to create Virtual Switches. Select a Network adapter for it.

[11]   This is the section for Migration for Virtual Machines. On this example, keep default and proceed Next.
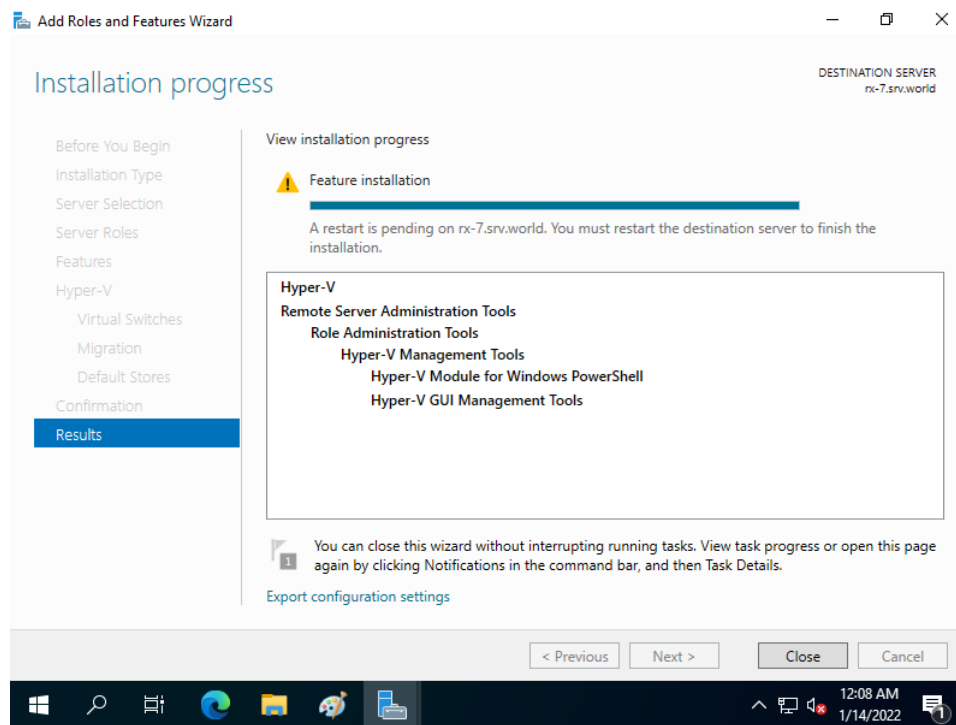
[12] This is the section to specify the location of Virtual Machines' configuration. On this example, keep default and proceed Next.

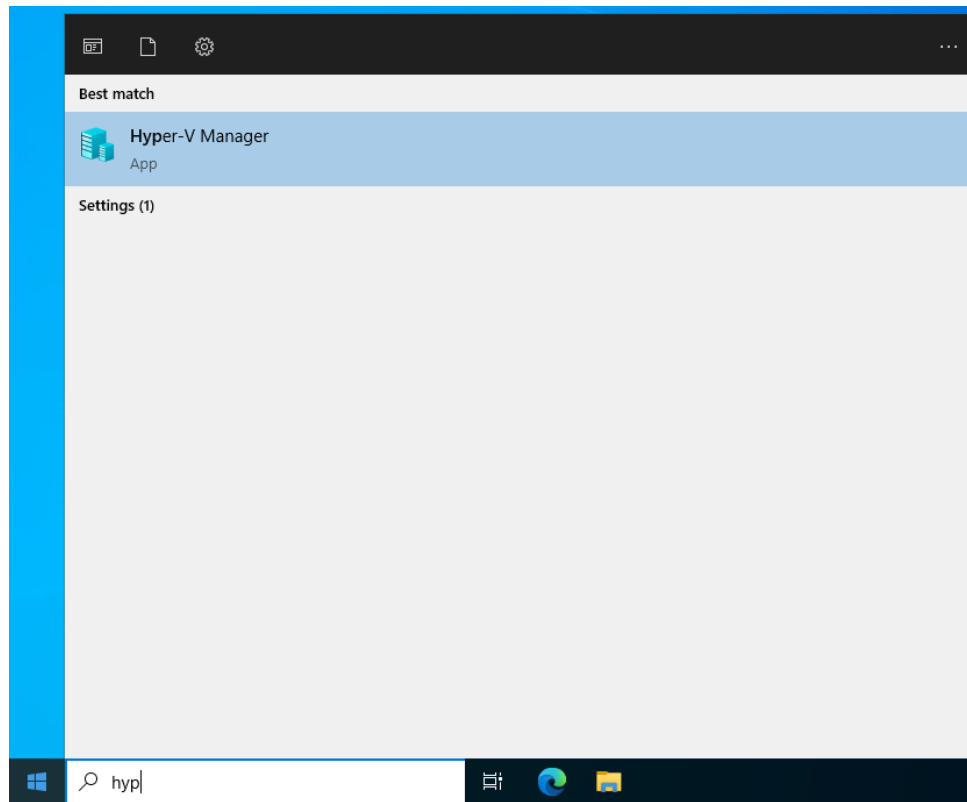[13] Click [Install] button to begin installation.

[14]   After finishing installation, Click [Close] button and restart Computer.

[15] Restart the host.

With the steps outlined above successfully accomplished, you are now prepared to begin utilizing Hyper-V on your Windows Server 2016, 2019 or 2022.

You can open **Hyper-V** by clicking on **Start** then typing hyper-v.

The Hyper-V management console will open .