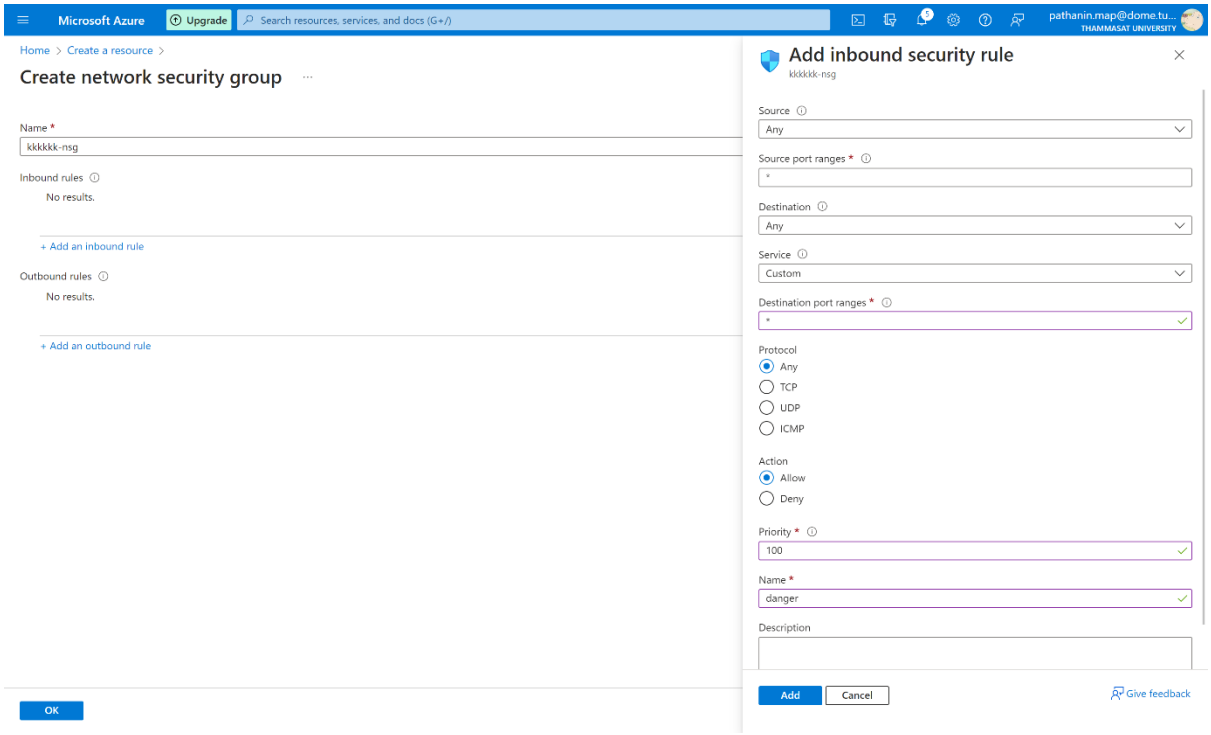
Create Virtual Machine

1. Launch Resource Creation:
    - Begin by selecting **Create a resource**.
2. Initiate Virtual Machine Setup:
    - Navigate to **Virtual machine** and click **Create**.
3. Define Essential Information:
    - Provide a suitable name for both the Resource group and the Virtual machine itself.
    - Choose the **Region** that aligns with your location.
    - For **Availability zone**, select **No infrastructure redundancy required**.
    - Opt for **Standard** security type.
    - Select the **image**; for this tutorial, we'll use Windows 10 Pro.
4. Establish User Credentials:
    - Create a robust username and password combination.
5. Configure Inbound Ports:
    - For **public inbound ports,** select **allow selected ports**.
    - Under **Select inbound ports**, specifically choose **RDP (3389)**.
    - Select **Next:disk** to Proceed to the Next step for Disk configuration (optionally review settings).
    - Subsequently, advance to the Networking step by selecting **Next:networking**.
6. Manage Network Security Group:
    - Within the NIC network security group section, select **Advanced**.
    - Under **configure network security group**, opt to **Create new**.
7. Customize Inbound Rules:
    - Under **inbound rules** remove any existing rules present.
    - Initiate the creation of a new inbound rule by clicking **+Add**.
    - Within the new rule configuration, specify the following:
        - Source: Any
        - Source port ranges: * (all)
        - Destination: Any
        - Service: Custom
        - Destination port ranges: * (all)
        - Protocol: Any
        - Action: Allow
        - Priority: 100 (adjust as needed, avoiding overly high or low values)
        - Name: Assign a descriptive name for the rule
    - Finalize the rule creation by clicking **Add**.



8. Complete Virtual Machine Deployment:
    - select **review+create**, then select **create**.

Create Log Analytics Workspace

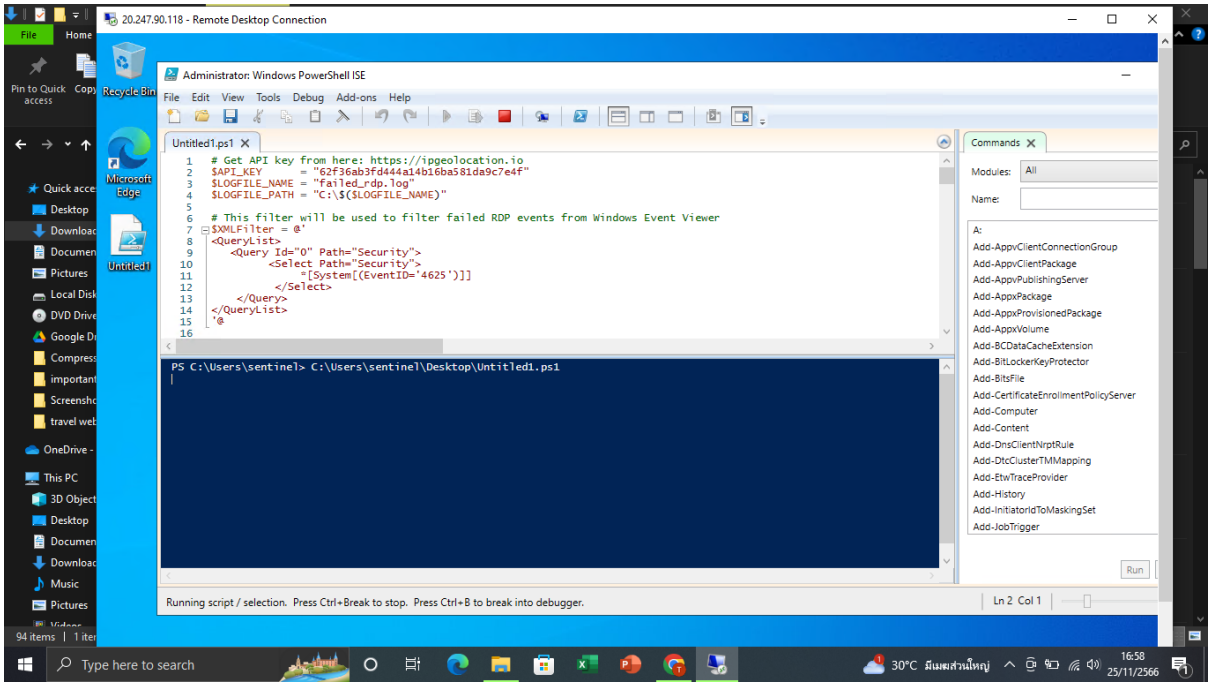
1. Initiate Log Analytics Workspace Creation:
    - Begin by searching for **Log Analytics** workspace and clicking **Create**.
2. Select Resource Group:
    - Choose the existing resource group you previously created for this lab.
3. Provide Instance Details:
    - Assign a descriptive name to your Log Analytics workspace.
    - Select the region that aligns with the region of your virtual machine.
    - Click **Review + create** and then **Create** to initiate the workspace deployment.
4. Enable Microsoft Defender for Cloud:
    - Search for **Microsoft Defender for cloud** and navigate to the **Getting started** section.
    - Select the Log Analytics workspace you just created (you might need to scroll down to locate it).
    - Under **Select defender plan**, activate the **Servers** plan.

Create Microsoft Sentinel

1. Initiate Microsoft Sentinel Setup:
    - Search for **Microsoft Sentinel** and initiate its creation by clicking **Create**.
2. Choose Resource Group and Provide Details:
    - Select the **resource group** you're currently using for the lab.
    - Within **Instance details**, assign a descriptive name to your workspace and choose the appropriate region.
    - Click **Review + create**, followed by **Create** to establish the workspace.
3. Configure Data Connectors:
    - In **Microsoft Sentinel**, navigate to **Configuration** and select **Data connectors**.
    - Search for **Windows security event** and click **Manage**.
    - Select either **Security events via legacy agent** or **Windows security events via MMA** as your preferred method (this tutorial utilizes the legacy agent).
    - Proceed by clicking **Open connector page**.
4. Stream All Security Events:
    - Under **Instructions**, locate the option to Select which events to stream.
    - Enable **All events** to ensure comprehensive coverage.
    - Apply the configuration changes by clicking **Apply changes**.

Logging RDP-Attack Events

1. Retrieve Virtual Machine's Public IP Address:
    - Navigate to **Virtual machines** and select the VM designated for this lab.
    - Under the Overview tab, locate and copy the public IP address for subsequent use.
2. Establish Remote Desktop Connection:
    - On your physical PC, launch **Remote Desktop Connection**.
    - Enter the copied VM's public IP address in the **Computer** field and your VM's username in the **Username** field.
    - Click **Connect** and provide your VM's credentials when prompted by the Windows Security window.
3. Implement Failed Login Tracking:
    - Within your VM, open **PowerShell ISE**.
    - Paste the code from https://github.com/joshmadakor1/Sentinel-Lab/blob/main/Custom_Security_Log_Exporter.ps1 (or write your own in C#) to log failed login attempts into a log file.
    - Prior to running the code:
        - Obtain an API key from ipgeolocation.io.
        - Replace the existing API key placeholder within the code with your obtained key.
    - Execute the code to initiate logging.



- Wait for events to occur.

4. Gather Log Data:
   - Access the log file and copy its contents.
   - Return to your physical PC and paste the copied data into a text editor.
   - Save the text file for subsequent use.
5. Create Custom Log Table in Log Analytics Workspace:
   - Access Microsoft Azure and navigate to **Log Analytics workspaces**.
   - Select your workspace and proceed to **Table** tab.
   - Initiate table creation by choosing **Create with MMA-based**.
6. Utilize Sample Log and Specify Delimiter:
   - Use the saved log file from your PC as the **Sample log**.
   - Click **Next**.
   - For **Record delimiter,** select **new line**.
   - Click **Next**.
7. Define Collection Paths:
   - Under **Collection paths**:
     - Type **Windows** as the type.
     - Refer back to your VM to obtain the exact log file path.
     - Paste the path into the corresponding field.
   - Click **Next**.
8. Name the Custom Log Table:
   - Assign a descriptive name to your custom log table.
   - Click **Next**, followed by **Create**.

```
FAILED_RDP_CL
|extend username = extract(@"username:([^,]+)",1,RawData),
timestamp = extract(@"timestamp:([^,]+)",1,RawData),
latitude = extract(@"latitude:([^,]+)",1,RawData),
longitude = extract(@"longitude:([^,]+)",1,RawData),
sourcehost = extract(@"sourcehost:([^,]+)",1,RawData),
state = extract(@"state:([^,]+)",1,RawData),
label = extract(@"label:([^,]+)",1,RawData),
destination = extract(@"destinationhost:([^,]+)",1,RawData),
country = extract(@"country:([^,]+)",1,RawData)
|where destination != "samplehost"
|where sourcehost != ""
|summarize eventCount = count() by
timestamp,label,country,state,sourcehost,username,destination,longitude,latitude
```

- The newly created table will be searchable within your workspace.

9. Query the Log Table:
    - Navigate to **Logs** tab.
    - Construct a query using the log table name and **securityEvents**.
    - Execute the query to verify data visibility (allow some time for results to populate if necessary).

Create Mapping Visualization

1. Create a Workbook in Microsoft Sentinel:
    - Search for **Microsoft Sentinel** and select your workspace.
    - Navigate to **Workbook** section and click **Add** workbook.
2. Add a Query:
    - Click **Add** and then **Add query**.
3. Extract and Visualize Data:
    - Paste the provided code into the query editor to extract relevant information from the raw log table into a refined format.

    - Under **Visualization**, select **Map** to geographically represent the data.
    - Click **Run query** to execute the query and generate the map visualization.

12. Observe Attack Coordination Map:

- The resulting map will visually depict attack coordination patterns, aiding in threat identification and analysis.