

Information and Network Security

Practical No – 06

Configure Internet Protocol Security (IPSEC)

Aim : To Configure IPSec on network devices to provide secure communication and protect against unauthorized access and attacks.

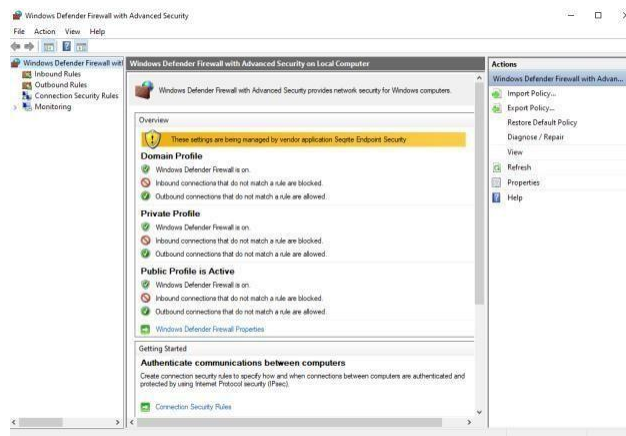
About this task:

Historian supports encryption based on Internet Protocol Security to secure traffic between various Historian components and collectors without the need to use VPN or other security protocols.

Procedure:

1. Run `wf.msc.`

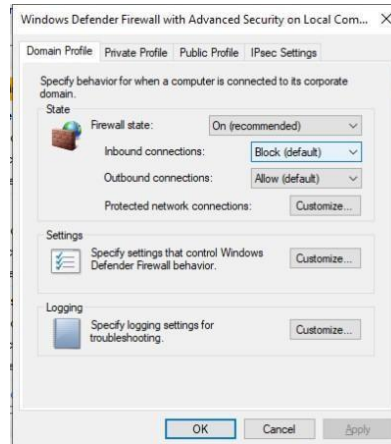
The **Windows Defender Firewall with Advanced Security** window appears.



2. Create a security method:
 - a. Select **Actions > Properties**.

The **Windows Defender Firewall with Advanced Security on Local Computer** window appears.

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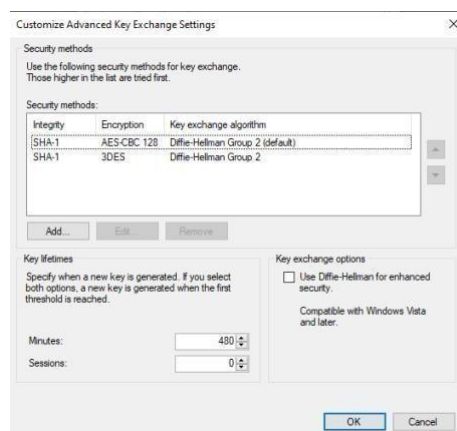
- b. Select **IPsec Settings > Customize**.

The **IPsec Defaults** window appears.



- c. Under **Key exchange (Main Mode)**, select **Advanced > Customize**.

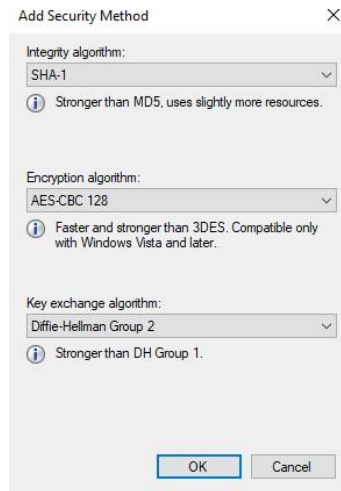
The **Customize Advanced Key Exchange Settings** window appears.



- d. Select **Add**

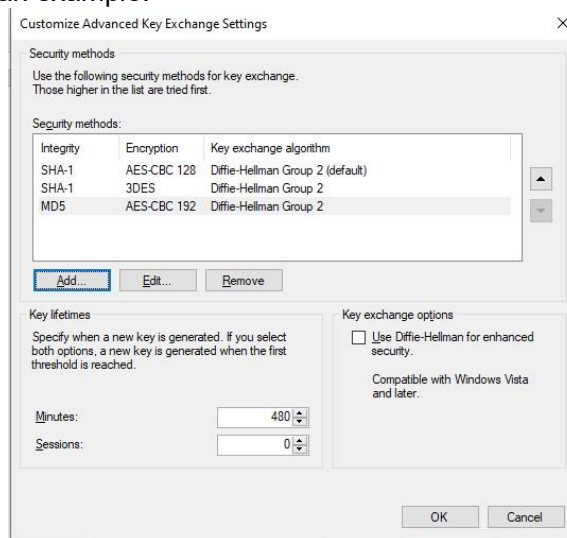
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The **Add Security Method** window appears.



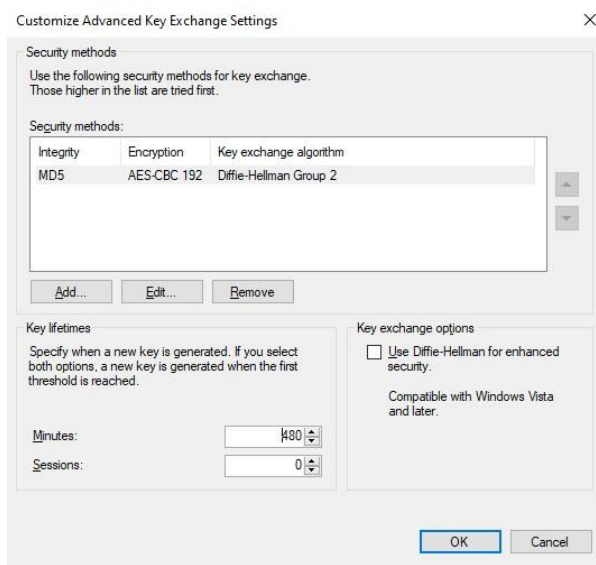
Name: Swapnil

- e. Select the algorithms that you want to use for each purpose. The following image shows an example.



- f. Move the security method that you have added to the top of the list. We recommend that you remove the other methods.

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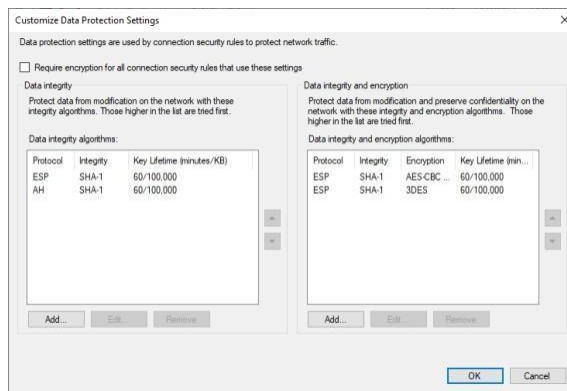
g. Select **OK**.

3. Add integrity and encryption algorithms:

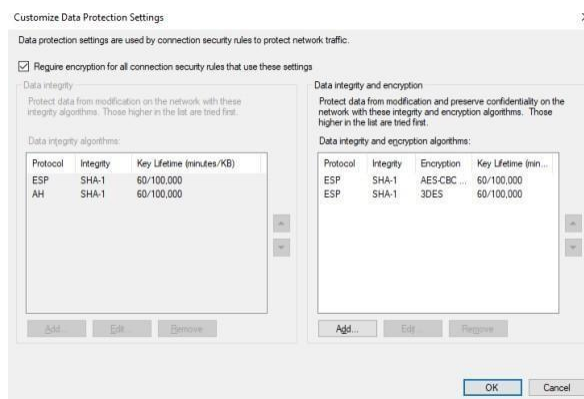
- a. In the **Customize IPsec Defaults** window, under **Data protection (Quick Mode)**, select **Advanced > Customize**.

The **Customize Data Protection Settings** window appears.

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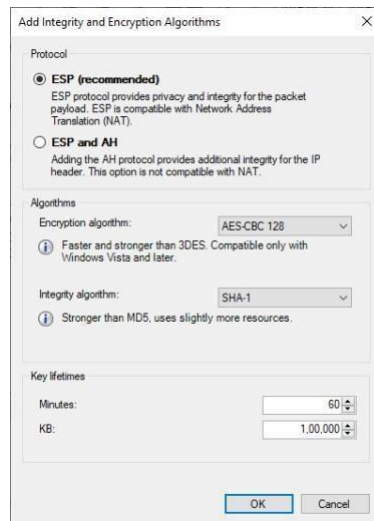


- b. Select the **Require encryption for all connection and security rules that use these settings** check box.



- c. Under **Data integrity and encryption**, select **Add**.
The **Add Integrity and Encryption Algorithms** window appears.

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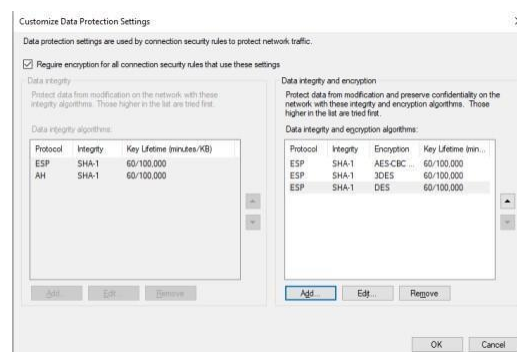


- d. Under **Protocol**, ensure that **ESP** is selected.



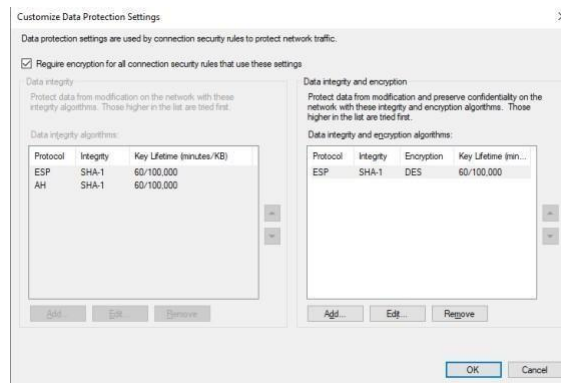
- e. Select the algorithms that you want to use for each purpose, and then select **OK**.

The algorithms that you have selected appear in the list.



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- f. Move the algorithms to the top of the list. We recommend that you remove the remaining items in the list.



- g. Select **OK**.