Configure Network Level Authentication for Remote Desktop Services Connections

Applies To: Windows Server 2008 R2

Network Level Authentication is an authentication method that can be used to enhance RD Session Host server security by requiring that the user be authenticated to the RD Session Host server before a session is created.

Network Level Authentication completes user authentication before you establish a remote desktop connection and the logon screen appears. This is a more secure authentication method that can help protect the remote computer from malicious users and malicious software. The advantages of Network Level Authentication are:

- It requires fewer remote computer resources initially. The remote computer uses a limited number of resources before authenticating the user, rather than starting a full remote desktop connection as in previous versions.

- It can help provide better security by reducing the risk of denial-of-service attacks.

To use Network Level Authentication, you must meet the following requirements:

- The client computer must be using at least Remote Desktop Connection 6.0.

- The client computer must be using an operating system, such as Windows 7, Windows Vista, or Windows XP with Service Pack 3, that supports the Credential Security Support Provider (CredSSP) protocol.

- The RD Session Host server must be running Windows Server 2008 R2 or Windows Server 2008.

Use the following procedure to configure Network Level Authentication for a connection.

Membership in the local **Administrators** group, or equivalent, is the minimum required to complete this procedure. Review details about using the appropriate accounts and group memberships at http://go.microsoft.com/fwlink/?LinkId=83477.

To configure Network Level Authentication for a connection

1. On the RD Session Host server, open Remote Desktop Session Host Configuration. To open Remote Desktop Session Host Configuration, click **Start**, point to **Administrative Tools**, point to **Remote Desktop Services**, and then click **Remote Desktop Session Host Configuration**.

2. Under **Connections**, right-click the name of the connection, and then click **Properties**.

3. On the **General** tab, select the **Allow connections only from computers running Remote Desktop with Network Level Authentication** check box.

   If the **Allow connections only from computers running Remote Desktop with Network Level Authentication** check box is selected and is not enabled, the **Require user authentication for remote connections by using Network Level Authentication** Group Policy setting has been enabled and has been applied to the RD Session Host server.

4. Click **OK**.

The Network Level Authentication setting for an RD Session Host server can also be set in the following ways:

- During the installation of the RD Session Host role service in Server Manager, on the **Specify Authentication Method for Remote Desktop Session Host** page in the **Add Roles Wizard**.

- On the **Remote** tab in the **System Properties** dialog box on an RD Session Host server.

  If the **Allow connections from computers running any version of Remote Desktop (less secure)** is not selected and is not enabled, the **Require user authentication for remote connections by using Network Level Authentication** Group Policy setting has been enabled and has been applied to the RD Session Host server.

  To configure the Network Level Authentication setting by using the **Remote** tab in the **System Properties** dialog box on an RD Session Host server, see **Change Remote Connection Settings**.

- By applying the **Require user authentication for remote connections by using Network Level Authentication** Group Policy setting.

  This Group Policy setting is located in **Computer Configuration\Policies\Administrative Templates\Windows Components\Remote Desktop Services\Remote Desktop Session Host\Security** and can be configured by using either the Local Group Policy Editor or the Group Policy Management Console (GPMC). Note that the Group Policy setting will take precedence over the setting configured in Remote Desktop Session Host Configuration or on the **Remote** tab.

To determine whether a computer is running a version of Remote Desktop Connection that supports Network Level Authentication, start Remote Desktop Connection, click the icon in the upper-left corner of the **Remote Desktop Connection** dialog box, and then click **About**. Look for the phrase **Network Level Authentication supported** in the **About Remote Desktop Connection** dialog box.

For more information about Remote Desktop Services, see the Remote Desktop Services page on the Windows Server 2008 R2 TechCenter (http://go.microsoft.com/fwlink/?LinkId=138055).

For more information about Group Policy settings for Remote Desktop Services, see the Remote Desktop Services Technical Reference (http://go.microsoft.com/fwlink/?LinkId=138134).

Additional references

- Configure Security Settings for Remote Desktop Services Connections

Community Additions