

## Required and Recommended Windows Server 2022 Settings

This document explains how to configure the required and the recommended settings for the Cornerstone\* Software when used with the **Microsoft\* Windows\* Server 2022 operating system**. These steps apply to Cornerstone\* Software version 9.2 or later.

### Recommended server roles

Perform the following tasks to enable recommended server roles:

- Install and configure Active Directory with a user for each workstation.
- Install and configure the dynamic host configuration protocol (DHCP).
- Install and configure the domain name system (DNS).
- Configure Group Policy with the following settings:
  - Disable **Power Save Settings**.
  - Disable **Windows Firewall (Private & Domain Networks)**.
  - Disable **Screen Saver**.
- Enable Remote Desktop Services (if applicable):
  - Install and configure Remote Desktop Services (formerly known as Terminal Services). To install the Remote Desktop Session Host role service, follow the guidelines in Microsoft KB2833839 at [support.microsoft.com/kb/2833839](https://support.microsoft.com/kb/2833839)
  - Install Remote Desktop Licensing, and set the licensing mode to **Per Device**. Each thin-client (terminal) requires a Remote Desktop License.
  - Network your printers via IP address, and disable printer pass-through on the server.  
**Note:** If printer pass-through is not disabled, it will cause issues with printing and with Cornerstone Software in general.

### Required options in Windows Settings

1. To open the Windows\* Settings window:
  - a. Click the **Windows** icon .
  - b. Click the **Settings** icon .
2. To disable Windows default printer management:
  - a. Click **Devices**.
  - b. On the left, click **Printers & scanners**.
  - c. Clear the **Let Windows Manage My Default Printer** checkbox (you may need to scroll to find this option).
  - d. Click the **Home** icon  to redisplay the Windows Settings window.
3. To set up automatic updates:
  - a. Click **Update & Security**.
  - b. Click **Change active hours**, and then set the time range when you typically use this device.
  - c. Click **Save**.
  - d. Click **Advanced options**.

- e. Under Update options, select **Receive updates for other Microsoft products when you update Windows**.
  - f. Click **Delivery Optimization**, and then select **On** and **PCs on my local network**.
  - g. Click the Home icon  to redisplay the Windows Settings window.
4. Set network location to private:
    - a. Click **Network & Internet**.
    - b. For Ethernet connections, on the left, click **Ethernet**, click your Ethernet network name, and then select **Private**.  
OR  
For wireless connections, on the left, click **Wi-Fi**, click your wireless network name, and then select **Private**.
    - c. Close the Windows Settings window.

## Required options in Control Panel

1. In the search box at the bottom-left corner of your screen, type **Control Panel** and press **Enter**.
2. To enable file sharing:
  - a. Click **Network and Sharing Center**, and then, on the left, click **Change advanced sharing settings**.
  - b. In the Private and Domain sections:
    - Select the **Turn on file and printer sharing** option.
    - Clear the **Turn on automatic setup of network connected devices** option.
  - c. Click **Save changes**.
3. To disable network card power-save settings:
  - a. On the left, click **Change adapter settings**.
  - b. Right-click the connected network connection and select **Properties**.
  - c. Click the **Configure** button, and then click the **Power Management** tab.
  - d. Clear the **Allow the computer to turn off this device to save power** checkbox.  
**Note:** This checkbox may not be present on some systems.
  - e. Click the **Advanced** tab.
  - f. Under Property, select **Energy Efficient Ethernet**.
  - g. Click the down-arrow under **Value** and select **Off**.
  - h. Click **OK**, and then close the Network Connections window.
  - i. Click **Back**  to redisplay the Control Panel.
4. To disable power save settings:
  - a. Click **Power Options**, and then, on the left, click **Create a power plan**.
  - b. Select **High Performance**.
  - c. In the **Plan Name** box, type *IDEXX Power*.
  - d. Click **Next**, and then click **Create**.
  - e. On the IDEXX Power row, click **Change plan settings**, and then click **Change advanced power settings**.
  - f. In the Power Options window, expand **Hard Disk**, and then expand **Turn off hard disk after**.
  - g. Click **Setting** and set the **Setting (Minutes)** option to **0** (zero).  
OR  
If applicable, set the **On battery (minutes)** option to **0** (zero).
  - h. Click **OK**, click **Back** , and then click **Control Panel Home** to redisplay the Control Panel window.

- To disable the Windows\* firewall:

**Note:** IDEXX recommends a hardware firewall and Trend Micro\* Worry-Free\* Business Security Services, which includes a software firewall. IDEXX does not support and will not configure other firewalls.

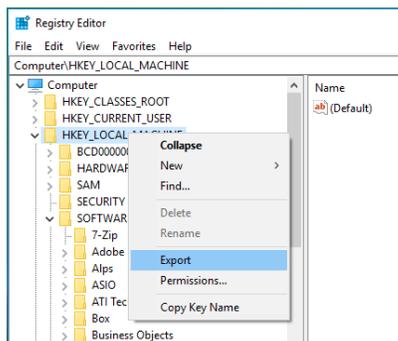
- Click **Windows Defender Firewall**.
- On the left, click **Turn Windows Defender Firewall on or off**.
- Under both Domain network settings and Private network settings, select **Turn Off Windows Firewall (not recommended)**.
- Click **OK**, and then close the Windows Firewall window (which also closes the Control Panel).

## Required options in the Windows registry

**Note:** The following changes to the Windows\* registry are required for computers used as dedicated or peer-to-peer servers. Workstations or terminal services servers that do **not** run the Cornerstone database and Cornerstone services do not require this change.

**IMPORTANT:** Changes to the Windows registry may cause unintended consequences that could result in the need to reload the operating system. Contact Cornerstone Support if you need help backing up or modifying the Windows registry as described below.

- To open the Windows registry:
  - In the Search box in the lower-left corner of the desktop, type **Regedit** and press **Enter**.
  - If a User Account Control prompt appears, click **Yes**.
- To back up the Windows registry:
  - In the left pane of the Registry Editor, right-click the **HKEY\_LOCAL\_MACHINE** key and select **Export**.



- In the Export Registry File window, under Save in, select **This PC > Local Disk C: > Windows > Temp**.
  - In the **Name** field, type an easily identifiable name for the exported registry file (for example, IDEXX Cornerstone Settings).
  - Ensure the **Selected Branch** option is selected in the Export Range area and that the branch being exported is **HKEY\_LOCAL\_MACHINE**.
  - Click **Save**. The Export may take several seconds.
  - Browse to **C:\Windows\Temp**, and verify that the exported registry file is there.
- To increase the memory allowance for noninteractive services (desktop heap memory):
    - From the HKEY\_LOCAL\_MACHINE subtree, go to the following key:  
**\System\CurrentControlSet\Control\Session Manager\SubSystems**
    - Select the **Windows** value.
    - From the **Edit** menu, select **Modify**.
    - Under **Value data**, increase the third **SharedSection** parameter to **2048**.  
In other words, SharedSection uses the **xxx,yyy,zzz** format to specify the system and desktop heaps; the **zzz** value must be **2048**.

## Recommended options in Windows Settings

1. To open the Windows Settings window:
  - a. Click the **Windows** icon .
  - b. Click the **Settings** icon .
2. To disable screen saver:
  - a. Click **Personalization**.
  - b. On the left, click **Lock screen**, and then select **Screen saver settings**.
  - c. Select **None** from the drop-down list and click **OK**.
  - d. Click the **Home** icon  to redisplay the Windows Settings window.
3. To add critical system icons to the desktop:
  - a. Click **Personalization**.
  - b. On the left, click **Themes**.
  - c. On the right, under Related Settings, click **Desktop icon settings**.
  - d. Check **Computer**, **Recycle Bin**, **User's Files**, and **Network**, and then click **OK**.
  - e. Click the **Home** icon  to redisplay the Windows Settings window.
4. To set the size of text, apps, and other items:
  - a. Click **System**.
  - b. Under **Scale and layout**, select **100% (Recommended)** from the drop-down list.
5. Close the Windows Settings window.

## Recommended options in Control Panel

1. To open the Control Panel window, in the search box at the bottom-left corner of your screen, type **Control Panel** and press **Enter**.
2. Click **File Explorer Options**, and then click the **View** tab.
3. To show extensions for known file types, clear the **Hide extensions for known file types** checkbox.
4. To show hidden files, folders, and drives, under **Hidden files and folders**, select the **Show hidden files, folders, and drives** option.
5. To disable the sharing wizard, clear the **Use Sharing Wizard (Recommended)** checkbox.
6. Click **OK**.
7. Close the Control Panel window.

For assistance, call Cornerstone Support at **1-800-695-2877**.