CommView® Remote Agent for WiFi

Help Documentation

Introduction

About CommView Remote Agent for WiFi

CommView Remote Agent for WiFi is an application for remote WLAN traffic monitoring. It allows CommView for WiFi users to capture network traffic on any computer where Remote Agent for WiFi is running, regardless of the computer's physical location. This application allows you to ensure better wireless network visibility within an office or building by collecting data from multiple locations and to provide a means of remote network monitoring and troubleshooting, eliminating the need to be physically present on site.

After the installation and simple configuration, CommView Remote Agent for WiFi is ready to accept connections from CommView for WiFi. Once the connection is established and the authentication is successful, CommView Remote Agent for WiFi is ready to capture packets and transmit them to CommView for WiFi. The transmitted packets are compressed to save bandwidth and encrypted to ensure safe transmission over insecure network channels.

CommView Remote Agent for WiFi is an indispensable tool for networking, software, and security professionals that offers a wide range of solutions, such as monitoring large WLANs or remote software and network troubleshooting.

This application requires a compatible wireless network adapter. For the list of supported adapters, please visit our [Web site](#).

What's New

Version 2.7

- Added support for a few new adapters.
- Added compatibility with the latest CommView for WiFi version.

Version 2.6

- Windows 8 support

Version 2.5

- Support for USB adapters: Ubiquiti SR71-USB (802.11 a/b/g/n), Proxim ORiNOCO 8494 (802.11 a/b/g/n), TP-Link TL-WN821N (802.11 b/g/n), NETGEAR WN111 v2 (802.11 b/g/n).

Version 2.4

- New wireless adapters supported (Windows Vista or 7 required): Intel 3945, 4965, 5100, 5150, 5300, 5350.

Version 2.3

- New operating systems supported: Windows XP 64-bit Edition, Windows Vista 64-bit Edition, Windows Server 32-bit and 64-bit Editions.

Version 2.2

- Support for 802.11n.
- Support for cards based on the latest Atheros chipsets.

Version 2.1

- Windows Vista support.

**Version 2.0**

- The initial release.

Using the Program

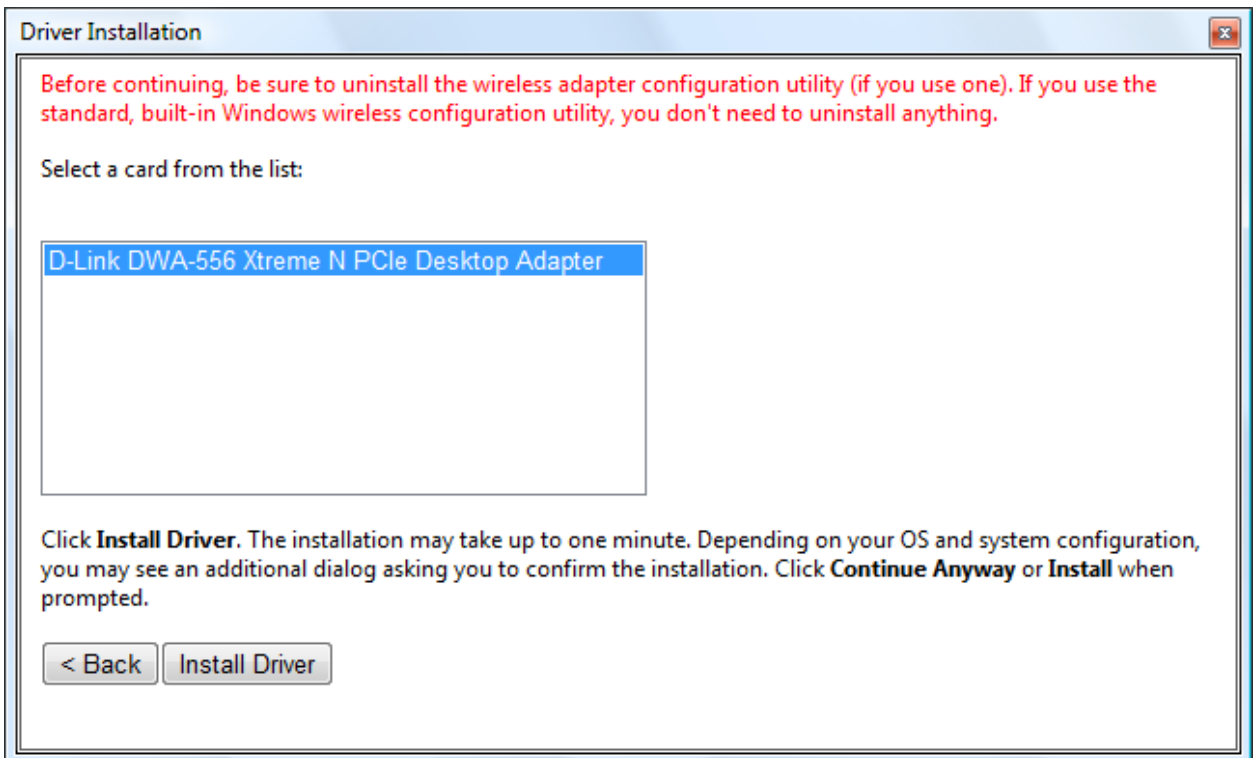## Installation and Configuration

CommView Remote Agent for WiFi should be installed on a computer that has a compatible wireless adapter (to be used for monitoring) and Ethernet adapter (to be used for the connection between Remote Agent and CommView for WiFi). You must have administrative privileges to install the program, although such privileges are no longer required after the initial installation and configuration. You must NOT install both CommView for WiFi and CommView Remote Agent for WiFi on the same computer.
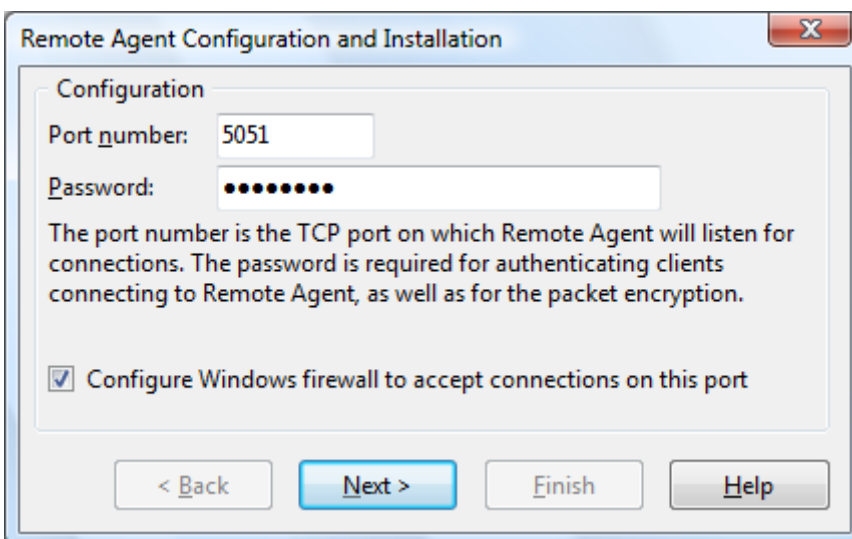
Installation

To install the program, run SETUP.EXE and follow the instructions on the screen. The first step is installing the special driver for your compatible wireless adapter. The Driver Installation Guide will guide you through the installation process; you will need to scroll down to the bottom of the page shown below and click **Next** to initiate the driver installation process. The driver can be installed automatically by the application (recommended) or manually, using Device Manager.
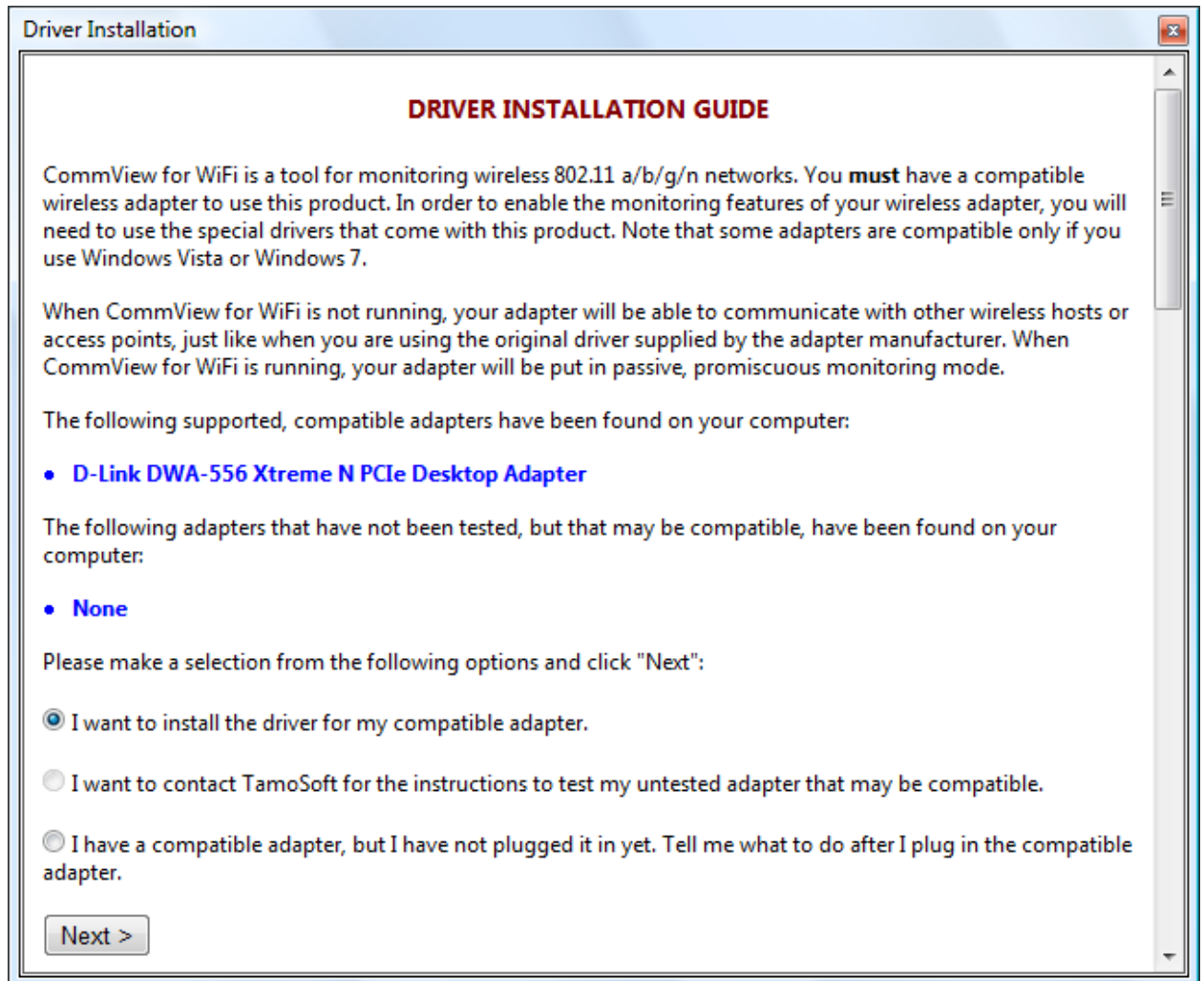
If a compatible wireless adapter is found on your system, the final screen will allow you to install the driver for it, as shown below:

Driver Installation

Before continuing, be sure to uninstall the wireless adapter configuration utility (if you use one). If you use the standard, built-in Windows wireless configuration utility, you don't need to uninstall anything.

Select a card from the list:

D-Link DWA-556 Xtreme N PCIe Desktop Adapter

Click **Install Driver**. The installation may take up to one minute. Depending on your OS and system configuration, you may see an additional dialog asking you to confirm the installation. Click **Continue Anyway** or **Install** when prompted.

< Back   Install Driver

If driver installation has completed successfully, you will see an Installation and Configuration window that will prompt you to enter two initial settings. You should select a TCP port number and password. The TCP port number (5051 by default) will be used by the program to accept client connections from CommView for WiFi. The password is required for client authentication and subsequent packet encryption. Be sure to choose a long, hard-to-guess password, using alphanumeric upper and lower case characters; because if somebody guesses your password, he/she will be able to gain access to the network traffic captured by the computer on which you have installed CommView Remote Agent for WiFi.

Remote Agent Configuration and Installation

Configuration

Port number: 5051

Password: ••••••••

The port number is the TCP port on which Remote Agent will listen for connections. The password is required for authenticating clients connecting to Remote Agent, as well as for the packet encryption.

☑ Configure Windows firewall to accept connections on this port

< Back   Next >   Finish   Help

Click **Next** to continue, and the program will install the remaining components and launch CommView Remote Agent for WiFi for the first time.

Interface

Once the installation and initial configuration have been completed, the program's icon should appear in the system tray as shown below. Clicking on the icon will bring up an application window that displays the program status – the port number that CommView Remote Agent for WiFi listens on, the IP address of a client that is currently connected to it, packet transmission statistics, and buffer utilization.
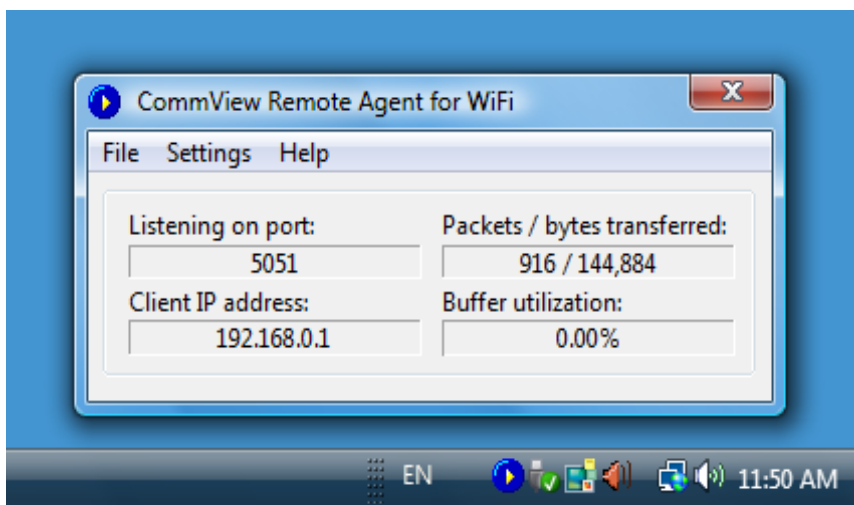
Main Menu

File

Start/Resume Service – starts or resumes the CommView Remote Agent for WiFi service if it has been stopped or paused.
Stop Service – stops the service.
Pause Service – pauses the service.
Exit – closes the CommView Remote Agent for WiFi console. Please note that the service continues to run and accept connections from CommView for WiFi.

Settings

Change Port – allows you to change the port number that the application listens on.
Change Password – allows you to change the connection password.
Language – allows you to change the interface language.

Help

Contents – opens the help documentation.
About – shows information about the program.

Note: CommView Remote Agent for WiFi can accept only one client connection at any given time.

Controlling the Program

CommView Remote Agent for WiFi is a **service application**. This means that it starts automatically when the computer is booted up and runs even if no one is logged on to the system. The service can be controlled using the **File** menu described above. Additionally, as with any other service application, it can be controlled using Control Panel => Administrative Tools => Services. There you can also change the start-up mode (automatic/manual).

Monitoring Traffic

This chapter describes how to use CommView for WiFi to connect to CommView Remote Agent for WiFi and capture traffic remotely. To monitor wireless network traffic using remote computers, you need to have CommView Remote Agent for WiFi running on the remote host and CommView for WiFi running on your computer. It is assumed that Remote Agent is already installed and running (see the previous chapter for instructions) and that you are already familiar with CommView for WiFi and know how to use it. If you have no experience with CommView for WiFi, please download it and familiarize yourself with it prior to using CommView Remote Agent for WiFi.

Using CommView for WiFi to Connect to CommView Remote Agent for WiFi

To switch to remote monitoring mode, click **File** => **Remote Monitoring Mode**. An additional toolbar will appear in the CommView for WiFi main window next to the main toolbar. If you are behind a firewall or proxy server, or using a non-standard Remote Agent port, you may need to click on the **Advanced Network Settings** button to change the port number and/or enter SOCKS5 proxy server settings. The **Advanced Network Settings** dialog also allows you to define whether Remote Agent will apply the filtering rules locally, or send all the captured traffic to CommView for WiFi; this will be discussed in detail later in this chapter.
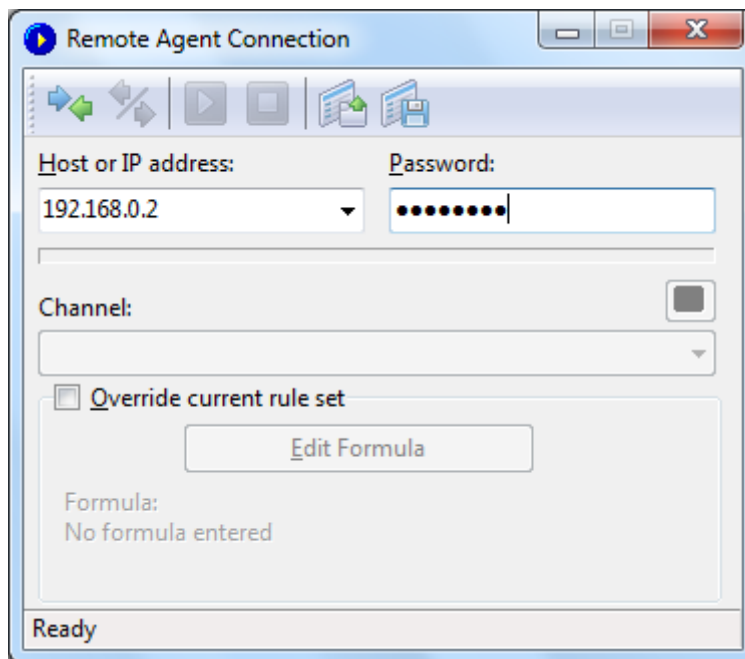

Click on the **New Remote Agent Connection** button to establish a new connection, or click on the **Load Remote Agent Profile** toolbar button to load a previously saved Remote Agent connection profile. A previously saved profile may also be loaded from the New Remote Agent Connection window.

A Remote Agent Connection window will appear. Enter the IP address of the computer running CommView Remote Agent for WiFi into the IP address input area, enter the connection password and click on the **Connect** button. If the password is correct, a connection will be established. You will then see the *Link Ready* message in the status bar and the channel selection box will list the channels supported by the wireless adapter installed on the remote computer. In addition to the channel list, a special **Scanner Mode** item will be added as the first item on the list.

If you select **Scanner Mode**, the remote wireless adapter will cycle through the available channels, capturing data from each of them for several seconds. The small button located on the right side of the window, just above the channel selection box, allows you to adjust the scanner settings. Click on this button to select the channels to be monitored in Scanner Mode and set the interval, i.e. the number of seconds per channel. Note that for Intel wireless adapters, the interval cannot be below 4 seconds due to technical limitations.
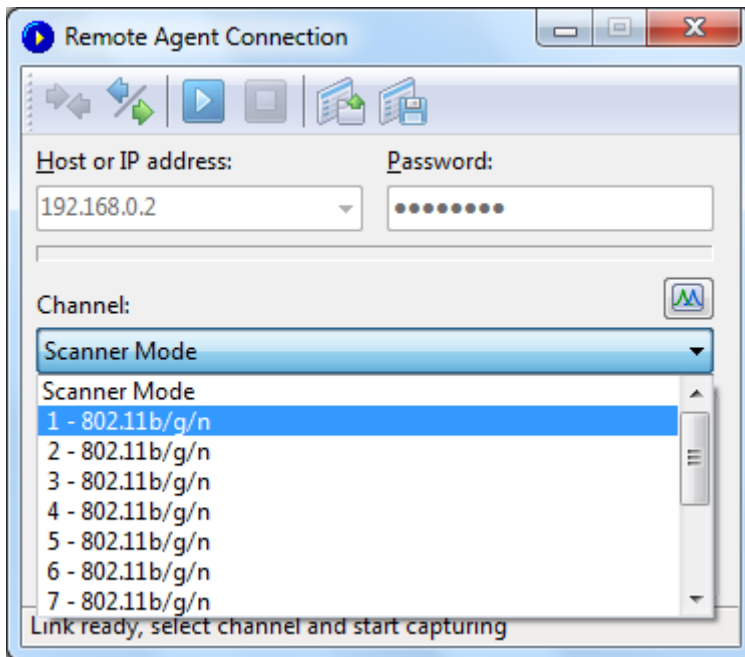
Now is the best time to configure the capturing rules using the **Rules** tab in the CommView for WiFi main window. You can also apply a custom set of capturing rules to this connection and override the current rules defined in CommView by checking the **Override current rule set** box, clicking on the **Edit Formula** button and entering the rules formula in the field below. The formula syntax is the same as the one used in Advanced Rules. Once you're ready to start monitoring, select the channel from the list and click the **Start Capture** toolbar button. CommView for WiFi allows you to save the Remote Agent Connection settings as a connection profile for quick and easy access in the future. Click on the **Save Remote Agent profile** toolbar button in the New Remote Agent Connection window and enter a name for the file.
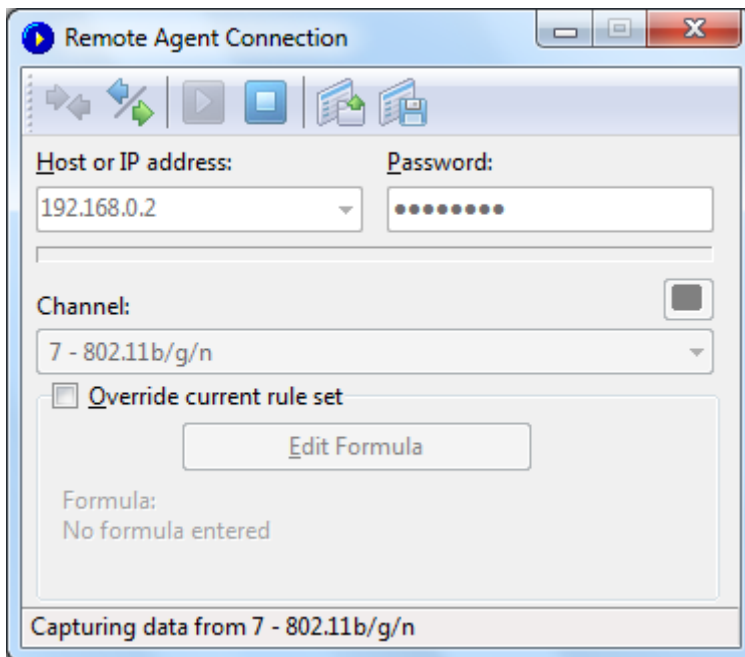
CommView for WiFi will start to capture the remote adapter's traffic as if it's your local network traffic; there is virtually no difference between using CommView for WiFi locally or remotely. When you are done with remote monitoring, just click on the **Stop Capture** toolbar button. You can then change the channel or disconnect from Remote Agent by clicking the **Disconnect** toolbar button. To return to the standard mode, click **File** => **Remote Monitoring Mode**, and the additional toolbar will disappear.

Please note that CommView for WiFi can work with multiple Remote Agents simultaneously. You can open several remote connections, each having its own settings and an independent set of rules and collect the traffic from remote WLANs in one CommView for WiFi instance.

How to Use CommView Remote Agent for WiFi Efficiently

The key to efficient Remote Agent usage is ensuring that enough bandwidth is available to transfer the data collected by Remote Agent to CommView for WiFi. As mentioned before, Remote Agent should be installed on a computer that has a compatible wireless adapter (to be used for monitoring) and Ethernet adapter (to be used for the connection between Remote Agent and CommView for WiFi).

By default, Remote Agent sends all the collected packets back to CommView for WiFi, regardless of the capturing rules that may be configured in CommView for WiFi. This is done for providing correct statistical data and decryption, as well as the means for correct identification of wireless nodes. Since a fully loaded WiFi network has a bandwidth of 54 Mbit/s (or even 300 Mbit/s with newer 802.11n hardware), it's important that the wired link between Remote Agent and CommView for WiFi be capable of handling this bandwidth. In a modern office environment, where Gigabit networks are common, a single Gigabit adapter can easily receive data from a dozen Remote Agents.

There are situations where a fast connection is problematic. For example, a high bandwidth connection may not be available if you're monitoring a remote WLAN over the Internet. Even a T3 connection (4.5 Mbit/s) is insufficient to transfer all packets from a moderately loaded WLAN. In such situations, you can change the default setting and make Remote Agent filter the packets before they are transferred to CommView for WiFi. The **Advanced Network Settings** button on the additional remote monitoring toolbar in the main CommView for WiFi window allows you to enable the **Minimize bandwidth** option. When this option is enabled, the current CommView for WiFi rule set is periodically sent to Remote Agent. This rule set is then applied locally, so that only those packets that pass the rules are sent back to CommView for WiFi. In this mode, the **Nodes** may not display any nodes, and the **Channels** tab will not show full per-channel statistics, so use this mode only when you have limited bandwidth, but still need access to the packets from a remote WLAN.

For the same bandwidth reasons, it is highly recommended to NOT use a wireless connection for exchanging data between Remote Agent and CommView for WiFi. It's also a bad idea because the monitoring wireless adapter would pick up the packets sent by the wireless adapter being used for communicating with CommView for WiFi if they operate on the same or close channels. This will simply cause the snowball effect.

If CommView Remote Agent for WiFi captures more data than it can send to CommView for WiFi, it uses an internal buffer to store the packets that cannot be sent immediately. The buffer size is 5 Mbytes. The **Buffer utilization** indicator in the Remote Agent window shows the current status of the buffer. For example, if the program has buffered 2.5 Mbytes of data, the buffer utilization is 50%. If/when the buffer utilization reaches 100%, the program stops buffering data and discards captured packets until some buffer space is free.

Security

CommView Remote Agent for WiFi was made with security in mind. It can be accessed only by using a password that is never transmitted in plain text and that is ensured by using a challenge-response protocol with a secure hash function. If the authentication is successful, all transmitted traffic is compressed and then encrypted with the same password. Please take precautions to keep your password secret. Once it is revealed to an unauthorized person, that person will have broad capabilities to study your network and intercept network traffic on the remote computer.

Information

How to Purchase CommView Remote Agent for WiFi

This program is a 30-day evaluation version; please visit our Web site for pricing and ordering information.

As a registered user, you will receive:

- Fully functional, unrestricted copy of the software
- Free updates that will be released within 1 year from the date of purchase
- Information on updates and new products
- Free technical support

Please note that CommView Remote Agent for WiFi **is licensed per computer, not per user**. A single computer license grants you the right to install and use CommView Remote Agent for WiFi on one computer. If you need to install the program on multiple computers, you need to purchase a multi-computer license. You will also need at least one licensed copy of CommView for WiFi to connect to CommView Remote Agent for WiFi.

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