



Advanced Configuration

This chapter provides a comprehensive list of the client adapter's advanced configuration parameters, defaults, and ranges. The chapter also provides instructions on how to configure the client adapter in a home network.

The following topics are covered in this chapter.

- [Overview, page 5-2](#)
- [Setting Enterprise Parameters, page 5-3](#)
- [Setting System Parameters, page 5-3](#)
- [Setting Network Security Parameters, page 5-5](#)
- [Setting RF Network Parameters, page 5-9](#)
- [Setting Home Networking Parameters, page 5-13](#)
- [Setting Advanced Infrastructure Parameters, page 5-16](#)
- [Setting Advanced Ad Hoc Parameters, page 5-18](#)

Overview

The ACU enables you to change the configuration parameters of your client adapter. The adapter's parameters are organized into two main categories depending on your network's configuration:

- **Enterprise parameters**—Use these parameters to configure your client adapter for use in an enterprise network, such as that found in a large organization:
 - **System parameters**—Prepare the client adapter for use in a wireless network
 - **Network security parameters**—Control the level of security provided to your wireless network



Note

See [Chapter 4, “Enabling Security Features,”](#) for instructions on setting network security parameters.

- **RF network parameters**—Control how the client adapter transmits and receives data
- **Advanced infrastructure parameters**—Control how the client adapter operates within an infrastructure network
- **Advanced ad hoc parameters**—Control how the client adapter operates within an ad hoc (peer-to-peer) network
- **Home networking parameters**—Use these parameters to prepare your client adapter to operate in a home network.



Note

Despite their name, the home networking parameters are not limited to use in a home network. For instance, these parameters, which are confined to one screen, provide a convenient way to minimally configure the client adapter.

[Table 5-1](#) enables you to quickly locate the instructions for modifying the client adapter's parameters.

Table 5-1 *Locating Configuration Instructions*

Parameter Category	Page Number
Enterprise	5-3
System	5-3
Network security	5-5
RF network	5-8
Advanced infrastructure	5-13
Advanced ad hoc	5-18
Home networking	5-20

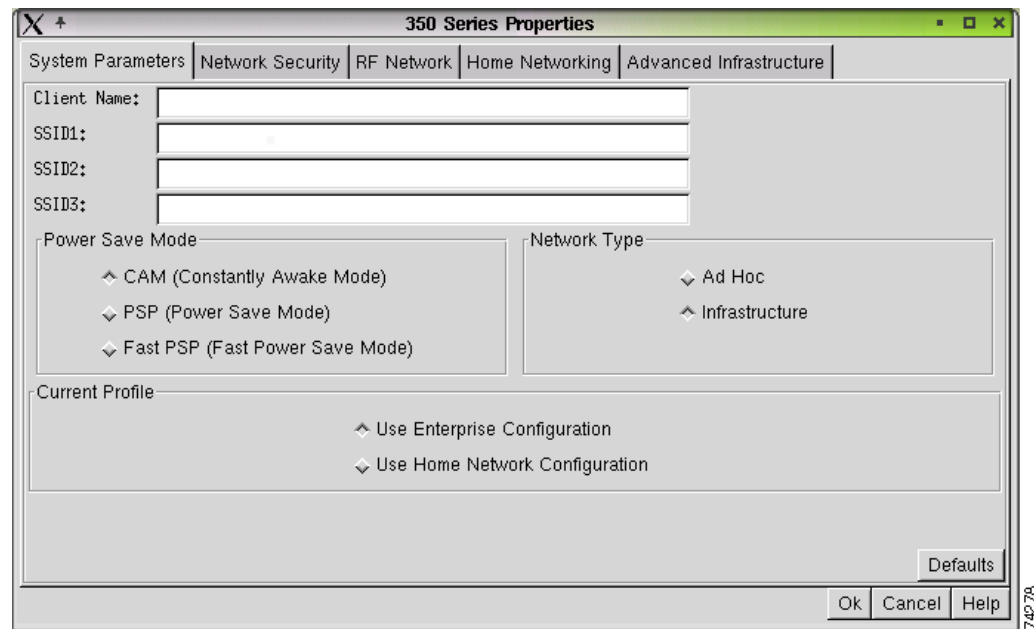
Setting Enterprise Parameters

The parameters in this section can be used to configure your client adapter for use in an enterprise network. If you are planning to use your client adapter in a home network, go to the [“Specifying a Home Network Configuration”](#) section on page 5-16.

Setting System Parameters

The System Parameters screen ([Figure 5-1](#)) enables you to set parameters that prepare the client adapter for use in a wireless network. To access this screen, select **Edit Properties** from the Commands pull-down menu and click the **System Parameters** tab.

Figure 5-1 Systems Parameters Screen



[Table 5-2](#) lists and describes the client adapter’s system parameters. Follow the instructions in the table to initially set or change any parameters.

Table 5-2 System Parameters

Parameter	Description
Client Name	<p>A logical name for your workstation. It enables an administrator to determine which devices are connected to the access point without having to memorize every MAC address. This name is included in the access point's list of connected devices.</p> <p>Range: Up to 16 characters.</p> <p>Note Each computer on the network should have a unique client name.</p>
SSID1	<p>The service set identifier (SSID) identifies the specific wireless network that you want to access.</p> <p>Range: Up to 32 characters (case sensitive).</p> <p>Note If you leave this parameter blank, your client adapter can associate to any access point on the network that is configured to allow broadcast SSIDs (refer to the AP Radio Hardware page in the access point's configuration screen). If the access points with which you wish to communicate are not configured to allow broadcast SSIDs, the value of this parameter must match the SSID of the access points. Otherwise, you will not be able to access the network.</p>
SSID2	<p>An optional SSID that identifies a second distinct network and enables you to roam to that network without having to reconfigure your client adapter. See the note below.</p> <p>Range: Up to 32 characters (case sensitive).</p>
SSID3	<p>An optional SSID that identifies a third distinct network and enables you to roam to that network without reconfiguring your client adapter. See the note below.</p> <p>Range: Up to 32 characters (case sensitive).</p>
Note	<p>If your client adapter's firmware version is earlier than 4.04, your optional SSIDs, which are set by the SSID2 and SSID3 parameters, are effective only for access points that are configured to allow broadcast SSIDs (see the AP Radio Hardware page in the access point's configuration screen). To take full advantage of the optional SSID feature, upgrade your firmware to version 4.04 or later.</p>

Table 5-2 System Parameters (continued)

Parameter	Description						
Power Save Mode	Sets your client adapter to its optimum power consumption setting. The adapter can only be set to CAM (Constantly Awake Mode). No other options are available. Note CAM mode keeps the client adapter powered up continuously so there is little lag in message response time. This mode consumes the most power but offers the highest throughput.						
Network Type	Specifies the type of network in which your client adapter is installed. Default: Infrastructure						
	<table border="1"> <thead> <tr> <th>Network Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Ad Hoc</td> <td>Often referred to as <i>peer to peer</i>. Used to set up a small network between two or more devices. For example, an ad hoc network could be set up between computers in a conference room so that users can share information in a meeting.</td> </tr> <tr> <td>Infrastructure</td> <td>Used to set up a connection to a wired Ethernet network (through an access point).</td> </tr> </tbody> </table>	Network Type	Description	Ad Hoc	Often referred to as <i>peer to peer</i> . Used to set up a small network between two or more devices. For example, an ad hoc network could be set up between computers in a conference room so that users can share information in a meeting.	Infrastructure	Used to set up a connection to a wired Ethernet network (through an access point).
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Infrastructure	Used to set up a connection to a wired Ethernet network (through an access point).						

Click **OK** at the bottom of the System Parameters screen to save any changes.

Setting Network Security Parameters

The Network Security screen (see [Figure 5-2](#)) enables you to set parameters that offer varying degrees of security for the data that is passed throughout your wireless network. To access this screen, select **Edit Properties** from the Commands pull-down menu, and click the **Network Security** tab.

Figure 5-2 Network Security Screen

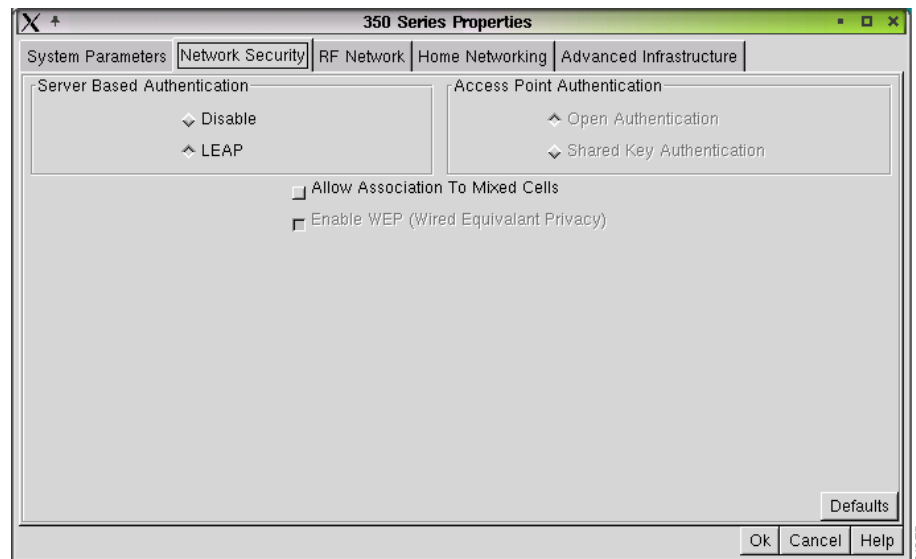


Table 5-3 lists and describes the client adapter’s network security parameters. Follow the instructions in the table to initially set or to change any parameters



Note See Chapter 4, “Enabling Security Features,” for instructions on setting network security parameters.

Table 5-3 Network Security Parameters

Parameter	Description						
Server Based Authentication	<p>Disables or enables LEAP (also referred to as <i>EAP - Cisco Wireless</i>) for your client adapter after LEAP is enabled initially through the Set LEAP Username and Password screen.</p> <p>Note See the “Enabling LEAP” section on page 4-7 for more information on server-based authentication.</p> <p>Default: Disable</p> <table border="1"> <thead> <tr> <th>Server Based Authentication Option</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>None</td> <td>Disables LEAP for your client adapter.</td> </tr> <tr> <td>LEAP</td> <td> <p>Enables LEAP for your client adapter.</p> <p>Note In ad hoc networks, you cannot enable LEAP.</p> </td> </tr> </tbody> </table>	Server Based Authentication Option	Description	None	Disables LEAP for your client adapter.	LEAP	<p>Enables LEAP for your client adapter.</p> <p>Note In ad hoc networks, you cannot enable LEAP.</p>
Server Based Authentication Option	Description						
None	Disables LEAP for your client adapter.						
LEAP	<p>Enables LEAP for your client adapter.</p> <p>Note In ad hoc networks, you cannot enable LEAP.</p>						

Table 5-3 Network Security Parameters (continued)

Parameter	Description						
Access Point Authentication	Defines how your client adapter attempts to authenticate to an access point. Default: Open Authentication						
	<table border="1"> <thead> <tr> <th>Authentication</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Open Authentication</td> <td>Allows your client adapter, regardless of its WEP settings, to authenticate and attempt to communicate with an access point.</td> </tr> <tr> <td>Shared Key Authentication</td> <td>Allows your client adapter to communicate only with access points that have the same WEP keys. The access point sends a known unencrypted <i>challenge packet</i> to the client adapter, which encrypts the packet and sends it back to the access point. The access point attempts to decrypt the encrypted packet and sends back to the client adapter an authentication-response packet that shows the success or the failure of the decryption.</td> </tr> </tbody> </table>	Authentication	Description	Open Authentication	Allows your client adapter, regardless of its WEP settings, to authenticate and attempt to communicate with an access point.	Shared Key Authentication	Allows your client adapter to communicate only with access points that have the same WEP keys. The access point sends a known unencrypted <i>challenge packet</i> to the client adapter, which encrypts the packet and sends it back to the access point. The access point attempts to decrypt the encrypted packet and sends back to the client adapter an authentication-response packet that shows the success or the failure of the decryption.
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	Open Authentication	Allows your client adapter, regardless of its WEP settings, to authenticate and attempt to communicate with an access point.					
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<p>Note If LEAP is enabled on your client adapter, Open Authentication is the only available option.</p>							
<p>Note The Shared Key Authentication option is available only if the client adapter is assigned a WEP key and WEP is enabled. See the “Entering a New WEP Key” section on page 4-3 for instructions on setting a WEP key and the Enable WEP parameter in Table 5-3 for instructions on enabling WEP.</p>							

Table 5-3 Network Security Parameters (continued)

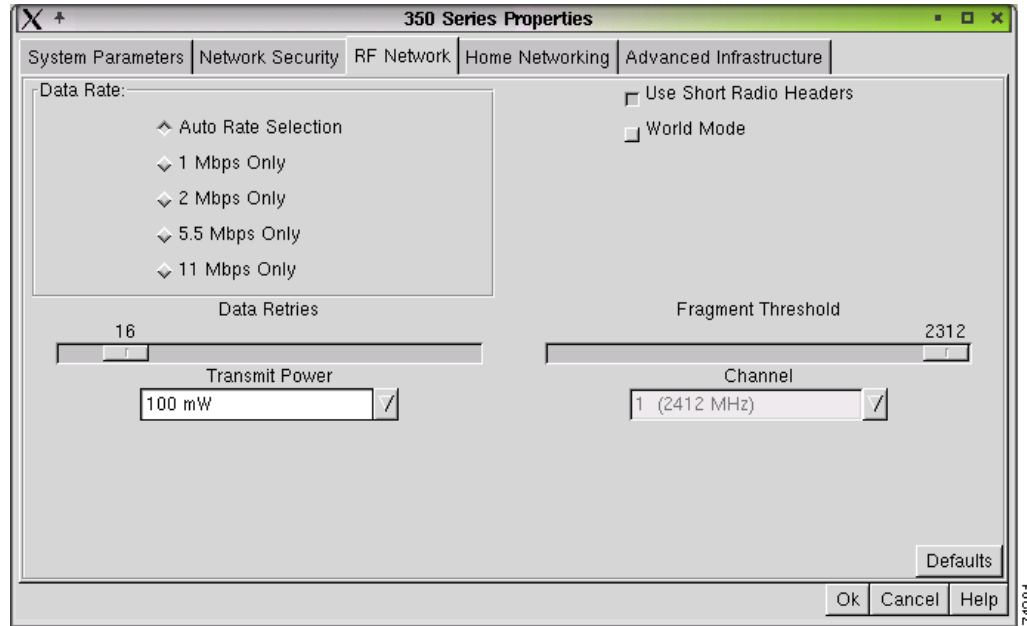
Parameter	Description
Allow Association To Mixed Cells	<p>If your network's access points are set to communicate with either WEP-enabled or WEP-disabled clients (that is, if the Use of Data Encryption by Stations parameter on the AP Radio Data Encryption screen is set to Optional), you must select this check box in order to associate using WEP. If this setting is not enabled, your client adapter cannot establish a connection with the access point.</p> <p>Default: Deselected</p> <p>Note This parameter has no affect if the adapter is not using WEP and is communicating with mixed cells.</p> <p>Note For security reasons, we recommend that both WEP-enabled and WEP-disabled clients not be allowed in the same cell because broadcast packets are sent unencrypted, even to clients running WEP.</p>
Enable WEP (Wired Equivalent Privacy)	<p>Enables or disables WEP for your client adapter. This parameter can be used in two ways:</p> <ul style="list-style-type: none"> • If you set a WEP key, you must select this check box to enable WEP for your client adapter. See the “Entering a New WEP Key” section on page 4-3 for instructions on setting a WEP key. • If LEAP is enabled for your client adapter and the adapter is authenticated to an EAP-enabled RADIUS server and you are using WEP, you must enable WEP. See the Server Based Authentication parameter in Table 5-3. <p>Default: Deselected</p> <p>Note LEAP is usable with or without WEP, and WEP is not enabled automatically when LEAP is selected.</p>

Click **OK** at the bottom of the Network Security Parameters screen to save any changes.

Setting RF Network Parameters

The RF Network screen (see [Figure 5-3](#)) enables you to set parameters that control how and when the client adapter transmits and receives data. To access this screen, select **Edit Properties** from the Commands pull-down menu and click the **RF Network** tab.

Figure 5-3 RF Network Parameters Screen



[Table 5-4](#) lists and describes the client adapter's RF network parameters. Follow the instructions in the table to initially set or to change any parameters.

Table 5-4 RF Network Parameters

Parameter	Description												
Data Rate	<p>Specifies the rate at which you want your client adapter to transmit or receive packets to or from access points (in infrastructure mode) or other clients (in ad hoc mode).</p> <p>We recommend Auto Rate Selection for infrastructure mode; setting a specific data rate is recommended for ad hoc mode.</p> <p>Default: Auto Rate Selection</p> <table border="1"> <thead> <tr> <th>Data Rate</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Auto Rate Selection</td> <td>Uses the 11-Mbps data rate when possible but drops to lower rates when necessary.</td> </tr> <tr> <td>1 Mbps Only</td> <td>Offers the greatest range but the lowest throughput.</td> </tr> <tr> <td>2 Mbps Only</td> <td>Offers less range but greater throughput than the 1 Mbps Only option.</td> </tr> <tr> <td>5.5 Mbps Only</td> <td>Offers less range but greater throughput than the 2 Mbps Only option.</td> </tr> <tr> <td>11 Mbps Only</td> <td>Offers the greatest throughput but the lowest range.</td> </tr> </tbody> </table> <p>Note Your client adapter's data rate must be set to Auto Rate Selection or must match the data rate of the access points (in infrastructure mode) or the other clients you wish to communicate with (in ad hoc mode). Otherwise, your client adapter might not be able to associate to them.</p>	Data Rate	Description	Auto Rate Selection	Uses the 11-Mbps data rate when possible but drops to lower rates when necessary.	1 Mbps Only	Offers the greatest range but the lowest throughput.	2 Mbps Only	Offers less range but greater throughput than the 1 Mbps Only option.	5.5 Mbps Only	Offers less range but greater throughput than the 2 Mbps Only option.	11 Mbps Only	Offers the greatest throughput but the lowest range.
Data Rate	Description												
Auto Rate Selection	Uses the 11-Mbps data rate when possible but drops to lower rates when necessary.												
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5.5 Mbps Only	Offers less range but greater throughput than the 2 Mbps Only option.												
11 Mbps Only	Offers the greatest throughput but the lowest range.												
Use Short Radio Headers	<p>Selecting this check box sets your client adapter to use short radio headers. However, the adapter uses short radio headers regardless of how the access point is configured. Short radio headers improve throughput performance; long radio headers ensure compatibility with clients and access points that do not support short radio headers.</p> <p>Default: Deselected</p>												
World Mode	<p>Selecting this check box enables the client adapter to assume the legal transmit power level and channel set of the access point to which it is associated. This parameter is available only in infrastructure mode and is designed for users who travel between countries because it allows the adapter to be used in different regulatory domains.</p> <p>Default: Deselected</p> <p>Note When World Mode is enabled, only the transmit power levels supported by the country of operation's regulatory agency are available.</p>												

Table 5-4 RF Network Parameters (continued)

Parameter	Description
Channel	<p>Specifies which frequency your client adapter uses as the channel for communications. These channels conform to the IEEE 802.11 standard for your regulatory domain.</p> <ul style="list-style-type: none"> In infrastructure mode, this parameter is set automatically and cannot be changed. The client adapter listens to the entire spectrum, selects the best access point to associate to, and uses the same frequency as that access point. In ad hoc mode, the channel of the client adapter that is originating the ad hoc cell must be configured. Immediately after being configured, the client card scans the spectrum for an ad hoc cell already established with the same SSID. If it finds one, it uses the channel of that cell. If the client does not find a pre-established cell within the timeout period, it establishes one at the configured frequency. <p>Range: Dependent on regulatory domain. Example: 1 to 11 (2412 to 2462 MHz) in North America.</p> <p>Default: Dependent on regulatory domain. Example: 6 (2437 MHz) in North America.</p> <p>Note See Appendix A, “Technical Specifications,” for a list of channel identifiers, channel center frequencies, and regulatory domains for each channel.</p>
Transmit Power	<p>Defines the level at which your client adapter transmits power. This value must not be higher than that allowed by your country’s regulatory agency (FCC in the U.S., DOC in Canada, ETSI in Europe, MKK in Japan, and so on). When World Mode is enabled, only the transmit power levels supported by the country of operation’s regulatory agency are available.</p> <p>Range: 1, 5, 15, 20, 30, 50, or 100 mW (30 mW is the maximum power level supported by 340 series client adapters).</p> <p>Default: The maximum level allowed by your country’s regulatory agency.</p> <p>Note 15 mW is supported only by 340 series client adapters, 20 and 100 mW is supported only by 350 series client adapters.</p> <p>Note Reducing the transmit power level conserves battery power but decreases radio range.</p>

Table 5-4 RF Network Parameters (continued)

Parameter	Description
Data Retries	<p>Defines the number of times a packet is resent if the initial transmission is unsuccessful.</p> <p>Range: 1 to 128</p> <p>Default: 16</p> <p>Note If your network protocol performs its own retries, set this to a smaller value than the default. This way notification of a <i>bad</i> packet is sent up the protocol stack quickly so that the application can retransmit the packet if necessary.</p>
Fragment Threshold	<p>Defines the threshold above which an RF data packet is split up or fragmented. If one of those fragmented packets experiences interference during transmission, only that specific packet needs to be resent.</p> <p>Throughput is generally lower for fragmented packets because the fixed packet overhead consumes a higher portion of the RF bandwidth.</p> <p>Range: 256 to 2312</p> <p>Default: 2312</p> <p>Note An advantage of a large packet size is increased throughput while the disadvantage is the potential for more retries, which reduce the throughput depending on prevailing conditions. For example, if a nearby microwave oven is sending out interference spikes for every 700 bytes of transmission time, a fragment size of 500 byte packets might be able to straddle the interference. However, a packet size of 2048 bytes could be interrupted halfway through its transmission, and would have to be retransmitted. If a 2048 byte packet were retransmitted 2 or 3 times, the net throughput would be lower than if a 500 byte packet been used.</p>

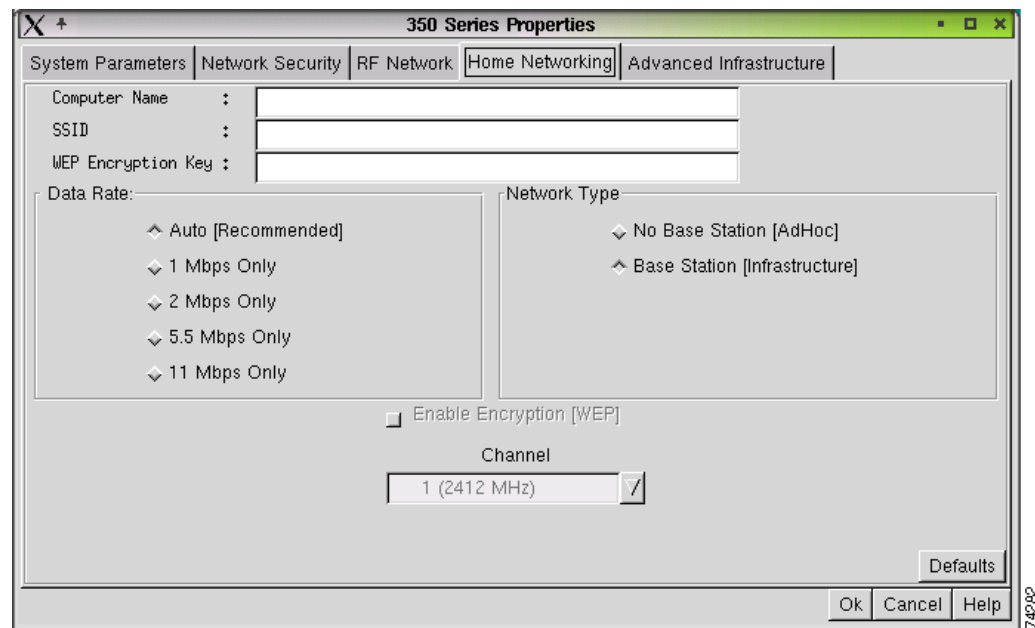
Click **OK** at the bottom of the RF Network screen to save any changes.

Setting Home Networking Parameters

The parameters in this section configure your client adapter for use in a home (non-enterprise) network. If you are planning to use your client adapter in an enterprise network, go to the [“Setting Enterprise Parameters” section on page 5-3](#).

The Home Networking screen (see [Figure 5-4](#)) enables you to set parameters that prepare the client adapter to operate in a home network. To access this screen, select **Edit Properties** from the Commands pull-down menu and click the **Home Networking** tab.

Figure 5-4 Home Networking Parameters Screen



[Table 5-5](#) lists and describes the client adapter’s home networking parameters. Follow the instructions in the table to initially set or to change any parameters.

Click **OK** at the bottom of the Home Networking Parameters screen to save any changes.

Table 5-5 Home Networking Parameters

Parameter	Description												
Computer Name	<p>The client name for the home network. It is a logical name for your workstation. It enables you to determine which devices are connected to the <i>base station</i> (the home equivalent of an access point) without having to memorize every MAC address. This name is included in the base station's list of connected devices.</p> <p>Range: Up to 16 characters</p> <p>Note Each computer on the home network must have a unique computer name.</p>												
SSID	<p>The service set identifier (SSID) enables you to access the home network.</p> <p>Range: Up to 32 characters (case sensitive)</p> <p>Note Only one SSID can be set in a home network, and each device on the network must use the same SSID.</p>												
WEP Encryption Key	<p>The WEP key for the home network. See the “WEP” section on page 4-2 for information on WEP keys.</p> <p>Range: Up to 13 characters (case sensitive in ASCII format)</p> <p>Note Only one WEP key can be set in a home network, and each device on the network must use the same key.</p>												
Enable Encryption (WEP)	<p>Selecting this check box enables WEP for your client adapter. This check box is inaccessible until you set an encryption key by using the WEP Encryption Key parameter.</p> <p>Default: Deselected</p> <p>Note When WEP is enabled, 40-bit client adapters cannot be used with the Cisco Aironet 340 Series Base Station.</p>												
Data Rate	<p>Specifies the rate at which your client adapter transmits or receives packets to or from other devices on the home network.</p> <p>Default: Auto</p> <table border="1"> <thead> <tr> <th>Data Rate</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Auto</td> <td>Uses the 11-Mbps data rate when possible but drops to lower rates when necessary.</td> </tr> <tr> <td>1 Mbps Only</td> <td>Offers the greatest range but the lowest throughput.</td> </tr> <tr> <td>2 Mbps Only</td> <td>Offers less range but greater throughput than the 1 Mbps Only option.</td> </tr> <tr> <td>5.5 Mbps Only</td> <td>Offers less range but greater throughput than the 2 Mbps Only option.</td> </tr> <tr> <td>11 Mbps Only</td> <td>Offers the greatest throughput but the lowest range.</td> </tr> </tbody> </table>	Data Rate	Description	Auto	Uses the 11-Mbps data rate when possible but drops to lower rates when necessary.	1 Mbps Only	Offers the greatest range but the lowest throughput.	2 Mbps Only	Offers less range but greater throughput than the 1 Mbps Only option.	5.5 Mbps Only	Offers less range but greater throughput than the 2 Mbps Only option.	11 Mbps Only	Offers the greatest throughput but the lowest range.
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11 Mbps Only	Offers the greatest throughput but the lowest range.												

Table 5-5 Home Networking Parameters (continued)

Parameter	Description						
	<p>Note If the Network Type parameter is set to Base Station, the 1, 2, 5.5, and 11 Mbps options cannot be selected.</p> <p>Note If the Network Type parameter is set to No Base Station, your client adapter's data rate must match the data rate of the other devices on the home network. Otherwise, your client adapter might not be able to associate to them.</p>						
Network Type	<p>Specifies the type of network in which your client adapter is installed.</p> <p>Default: Base Station</p> <table border="1"> <thead> <tr> <th>Network Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>No Base Station (Ad Hoc)</td> <td>Also referred to as <i>peer to peer</i>. Used to set up a small network between two or more devices. For example, a network without a base station could be set up between computers in a room so that information can be shared.</td> </tr> <tr> <td>Base Station (Infrastructure)</td> <td>Used to set up a connection to a wired Ethernet network (through a base station).</td> </tr> </tbody> </table>	Network Type	Description	No Base Station (Ad Hoc)	Also referred to as <i>peer to peer</i> . Used to set up a small network between two or more devices. For example, a network without a base station could be set up between computers in a room so that information can be shared.	Base Station (Infrastructure)	Used to set up a connection to a wired Ethernet network (through a base station).
Network Type	Description						
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Base Station (Infrastructure)	Used to set up a connection to a wired Ethernet network (through a base station).						
Channel	<p>Specifies which frequency your client adapter uses as the channel for communications. These channels conform to the IEEE 802.11 standard for your regulatory domain.</p> <ul style="list-style-type: none"> If your home network uses a base station, this parameter or is disabled because it is set automatically and cannot be changed. The client adapter uses the same frequency as the base station. If your home network does not use a base station, the channel of the client adapter must be set to match the channel used by the other clients with which you wish to communicate. <p>Range: Dependent on regulatory domain Example: 1 to 11 (2412 to 2462 MHz) in North America.</p> <p>Default: Dependent on regulatory domain Example: 6 (2437 MHz) in North America.</p> <p>Note See Appendix B, "Channels, Power Levels, and Antenna Gains," for a list of channel identifiers, channel center frequencies, and regulatory domains for each channel.</p>						

Go to the ["Specifying a Home Network Configuration"](#) section on page 5-16 for instructions on activating a home network configuration.

Specifying a Home Network Configuration

After you have set the parameters to prepare your client adapter for use in a home network, you must specify a home network configuration. To do so, follow these instructions.

- Step 1 Select **Edit Properties** from the Commands pull-down menu, and click the **System Parameters** tab. The System Parameters screen appears (see [Figure 5-1](#)).
- Step 2 Select **Use Home Network Configuration** under Current Profile or Default Profile.
- Step 3 Click **OK** to save this setting.

Setting Advanced Infrastructure Parameters



Note

You can set advanced infrastructure parameters only if your client adapter is set to operate in an infrastructure network. See the Network Type parameter in [Table 5-2](#).

The Advanced Infrastructure screen (see [Figure 5-5](#)) enables you to set parameters that control how the client adapter operates within an infrastructure network. To access this screen, select **Edit Properties** from the Commands pull-down menu, and click the **Advanced Infrastructure** tab.

Figure 5-5 Advanced Infrastructure Parameters Screen

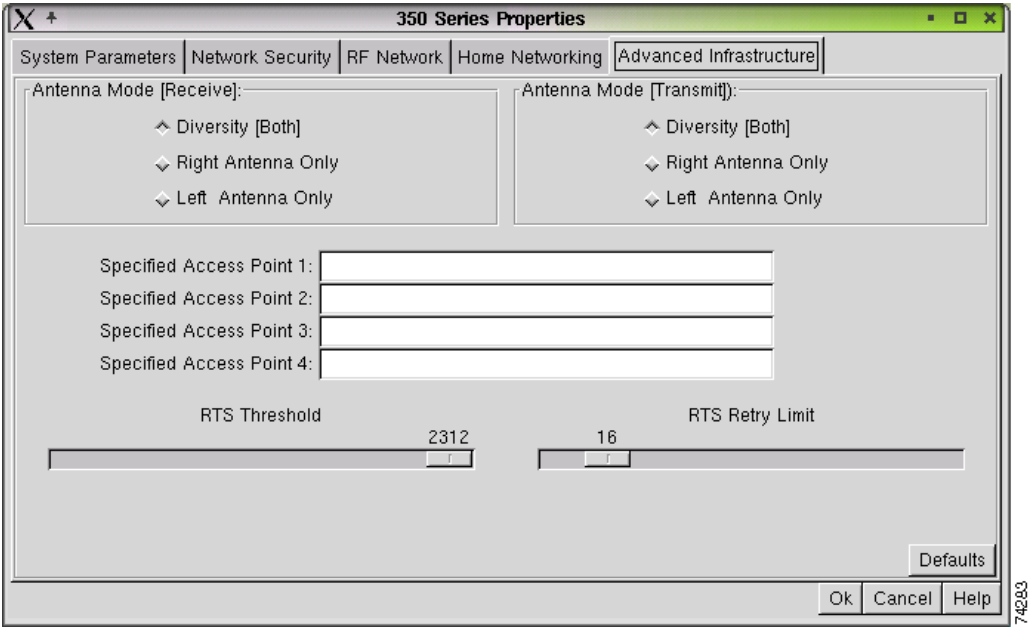


Table 5-6 lists and describes the client adapter's advanced infrastructure parameters. Follow the instructions in the table to initially set or to change any parameters.

Table 5-6 Advanced (Infrastructure) Parameters

Parameter	Description
Antenna Mode (Receive)	<p>Specifies the antenna that your client adapter uses to receive data:</p> <ul style="list-style-type: none"> PC card—The PC card's integrated, permanently attached antenna operates best when used in diversity mode. Diversity mode allows the card to use the better signal from its two antenna ports. <p>Range: Diversity (Both), Right Antenna Only, Left Antenna Only</p> <p>Default: Diversity (Both)</p> <ul style="list-style-type: none"> LM card – The LM card is shipped without an antenna; however, an antenna can be connected through the card's external connector. If a snap-on antenna is used, we recommend diversity mode. Otherwise, select the mode that corresponds to the antenna port to which the antenna is connected. <p>Range: Diversity (Both), Right Antenna Only, Left Antenna Only</p> <p>Default: Diversity (Both)</p> <ul style="list-style-type: none"> PCI client adapter—The PCI client adapter must use the Right Antenna Only option <p>Default: Right Antenna Only</p>
Antenna Mode (Transmit)	<p>Specifies the antenna that your client adapter uses to transmit data. See the Antenna Mode (Receive) parameter above for information on the options available for your client adapter.</p>
Specified Access Point 1- 4	<p>Specifies the MAC addresses of up to four preferred access points with which you want to associate. If the specified access points are not found or you roam out of range, you might associate to another access point.</p> <p>You can enter the MAC addresses of the access points in the edit boxes or choose not to specify access points by leaving the boxes blank.</p> <p>Default: No access points specified</p> <p>Note This parameter should be used only for access points that are in repeater mode. For normal operation, leave these fields blank because specifying an access point slows down the roaming process.</p>

Table 5-6 Advanced (Infrastructure) Parameters (continued)

Parameter	Description
RTS Threshold	<p>Specifies the size of the data packet used as a threshold value for the RF protocol to issue request-to-send (RTS) packets.</p> <p>Setting this parameter to a small value causes RTS packets to be sent more often. When this occurs, more of the available bandwidth is consumed and the throughput of other network packets is reduced, but the system recovers faster from interference or collisions, which can be caused from a high multipath environment characterized by obstructions or metallic surfaces.</p> <p>Range: 0 to 2312</p> <p>Default: 2312</p> <p>Note Refer to the IEEE 802.11 standard for more information on the RTS/CTS mechanism.</p>
RTS Retry Limit	<p>Specifies the number of times the client adapter resends a request-to-send (RTS) packet if it does not receive a clear-to-send (CTS) packet from the previously sent RTS packet.</p> <p>Setting this parameter to a large value decreases the available bandwidth whenever interference is encountered but makes the system more immune to interference and collisions, which can be caused from a high multipath environment characterized by obstructions or metallic surfaces.</p> <p>Range: 1 to 128</p> <p>Default: 16</p> <p>Note Refer to the IEEE 802.11 standard for more information on the RTS/CTS mechanism.</p>

Click **OK** at the bottom of the Advanced (Infrastructure) screen to save any changes.

Setting Advanced Ad Hoc Parameters



Note

You can set advanced ad hoc parameters only if your client adapter is set to operate in an ad hoc network. See the Network Type parameter in [Table 5-2](#).

The Advanced Ad Hoc screen (see [Figure 5-6](#)) enables you to set parameters that control how the client adapter operates within an ad hoc network. To access this screen, select **Edit Properties** from the Commands pull-down menu, and click the **Advanced Ad Hoc** tab.

Figure 5-6 Advanced Ad Hoc Parameters Screen

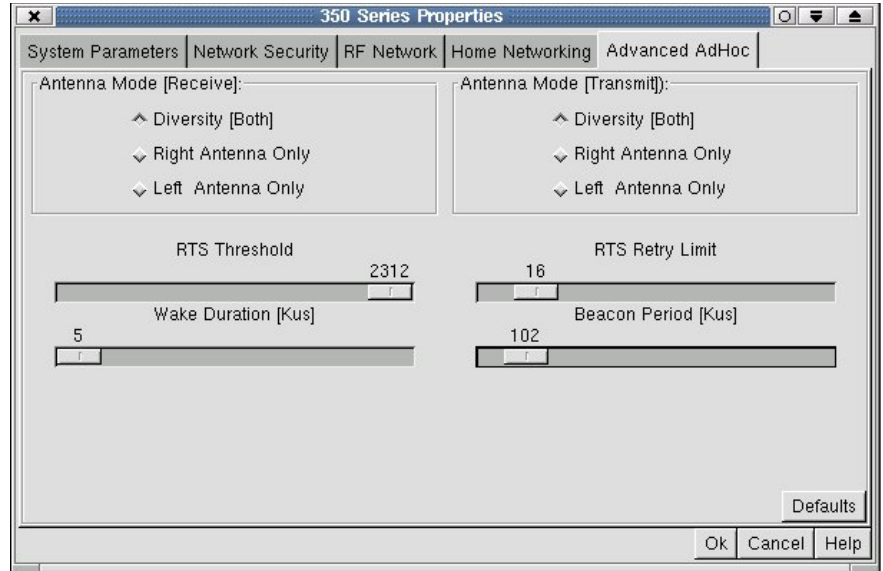


Table 5-7 lists and describes the client adapter's advanced ad hoc parameters. Follow the instructions in the table to initially set or change any parameters.

Table 5-7 Advanced (Ad Hoc) Parameters

Parameter	Description
Antenna Mode (Receive)	<p>Specifies the antenna that your client adapter uses to receive data.</p> <ul style="list-style-type: none"> PC card—The PC card's integrated, permanently attached antenna operates best when used in diversity mode. Diversity mode allows the card to use the better signal from its two antenna ports. <p>Range: Diversity (Both), Right Antenna Only, Left Antenna Only</p> <p>Default: Diversity (Both)</p> <ul style="list-style-type: none"> LM card—The LM card is shipped without an antenna; however, an antenna can be connected through the card's external connector. If a snap-on antenna is used, we recommend diversity mode. Otherwise, select the mode that corresponds to the antenna port to which the antenna is connected. <p>Range: Diversity (Both), Right Antenna Only, Left Antenna Only</p> <p>Default: Diversity (Both)</p> <ul style="list-style-type: none"> PCI client adapter—The PCI client adapter must use the Right Antenna Only option <p>Default: Right Antenna Only</p>
Antenna Mode (Transmit)	<p>Specifies the antenna that your client adapter uses to transmit data. See the Antenna Mode (Receive) parameter above for information on the options available for your client adapter.</p>

Table 5-7 Advanced (Ad Hoc) Parameters (continued)

Parameter	Description
RTS Threshold	<p>Specifies the size of the data packet that the low-level RF protocol issues to a request-to-send (RTS) packet.</p> <p>Setting this parameter to a small value causes RTS packets to be sent more often. When this occurs, more of the available bandwidth is consumed and the throughput of other network packets is reduced, but the system is able to recover faster from interference or collisions, which can be caused from a high multipath environment characterized by obstructions or metallic surfaces.</p> <p>Range: 0 to 2312</p> <p>Default: 2312</p> <p>Note Refer to the IEEE 802.11 standard for more information on the RTS/CTS mechanism.</p>
RTS Retry Limit	<p>Specifies the number of times the client adapter resends a request-to-send (RTS) packet if it does not receive a clear-to-send (CTS) packet from the previously sent RTS packet.</p> <p>Setting this parameter to a large value decreases the available bandwidth whenever interference is encountered but makes the system more immune to interference and collisions, which can be caused from a high multipath environment characterized by obstructions or metallic surfaces.</p> <p>Range: 1 to 128</p> <p>Default: 16</p> <p>Note Refer to the IEEE 802.11 standard for more information on the RTS/CTS mechanism.</p>
Wake Duration (Kmus)	<p>Specifies the amount of time following a beacon that the client adapter stays awake to receive announcement traffic indication message (ATIM) packets, which are sent to the adapter to keep it awake until the next beacon.</p> <p>Range: 5 to 60 Kmus</p> <p>Default: 5 Kmus</p> <p>Note Kmus is a unit of measurement in software terms. $K = 1024$, $\mu = 10^{-6}$, and $s = \text{seconds}$, so $K\mu s = .001024$ seconds, 1.024 milliseconds, or 1024 microseconds.</p>
Beacon Period (Kmus)	<p>Specifies the duration between beacon packets, which are used to help clients find each other in ad hoc mode.</p> <p>Range: 20 to 976 Kmus</p> <p>Default: 100 Kmus</p>

Click **OK** at the bottom of the Advanced (Ad Hoc) screen to save any changes.