

Configuring 24 x 7 Monitoring in WiFiLAN

A Tutorial



Version 1.0
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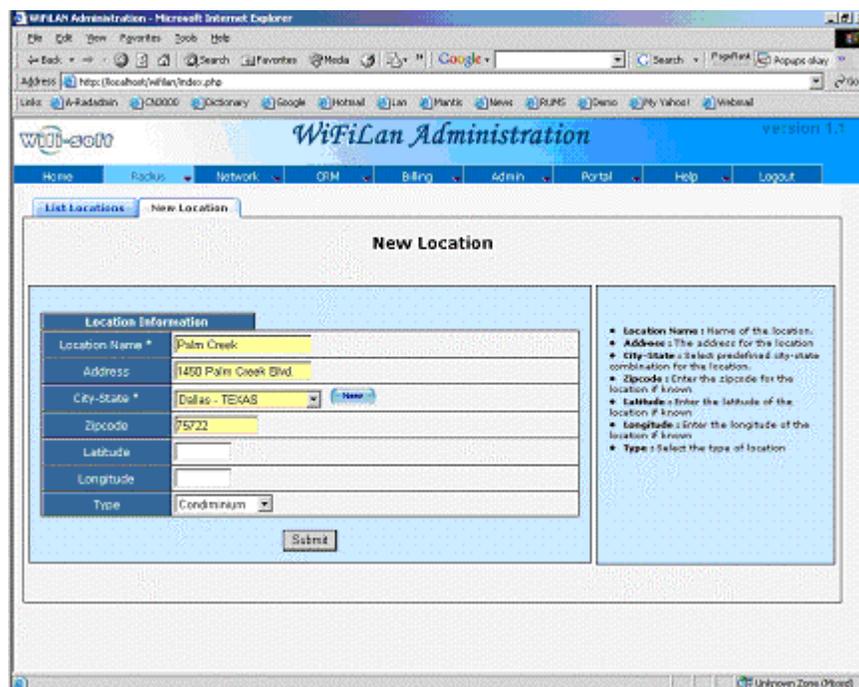
Introduction

Unlike wired networks, wireless networks are more sensitive to failures. Misaligned radio, channel interference, lightning strikes and improper wiring are some of the common causes for failure in WiFi networks. So, it is important that these network are monitored continuously and any outages be notified to the concerned parties to minimize the downtime.

WiFiLan not only supports round-the-clock monitoring of the remote gateways, but also monitors the devices (access points) attached to these gateways. It is able to monitor each and every node that participates in a WiFi network thus ensuring utmost reliability of your network.

Create New Location

Before creating monitoring entries for a new site, you need to create a location for that site. This will help you track your sites based on various locations. If required, city-state field is not present, then you can add a new entry by clicking the new button. Select the appropriate type of location and hit submit.



The screenshot shows the WiFiLan Administration web interface in Microsoft Internet Explorer. The browser address bar shows the URL: http://localhost/WiFiLan/index.php. The page title is "WiFiLan Administration" and the version is 1.3. The navigation menu includes Home, Radius, Network, CRM, Billing, Admin, Portal, Help, and Logout. The main content area is titled "New Location" and contains a form for adding a new location. The form has the following fields:

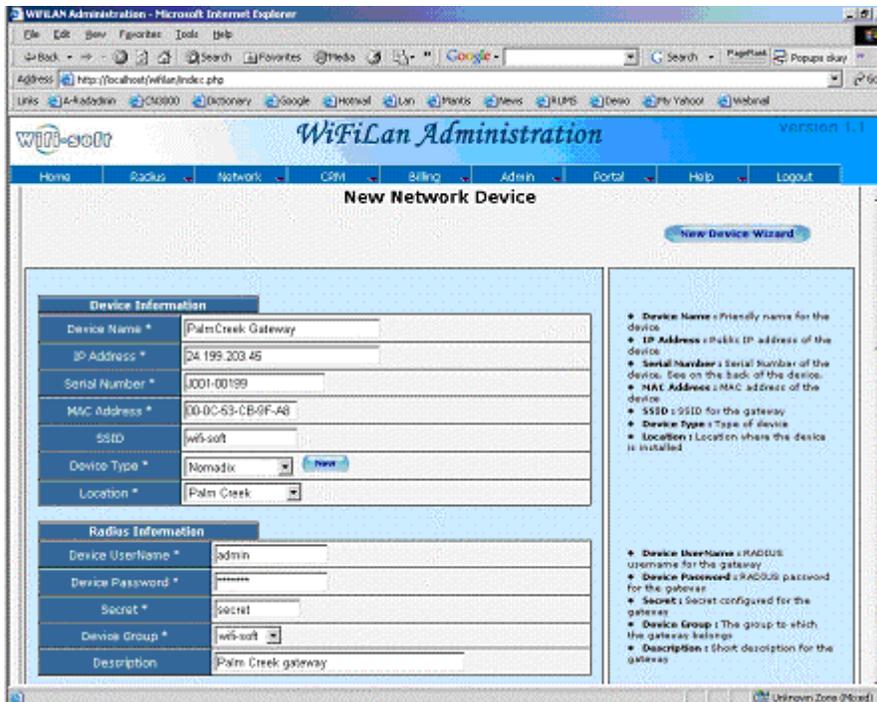
Location Information	
Location Name *	Palm Creek
Address	1450 Palm Creek Blvd
City-State *	Dallas - TEXAS
Zipcode	75722
Latitude	
Longitude	
Type	Condominium

Below the form is a "Submit" button. To the right of the form is a list of instructions:

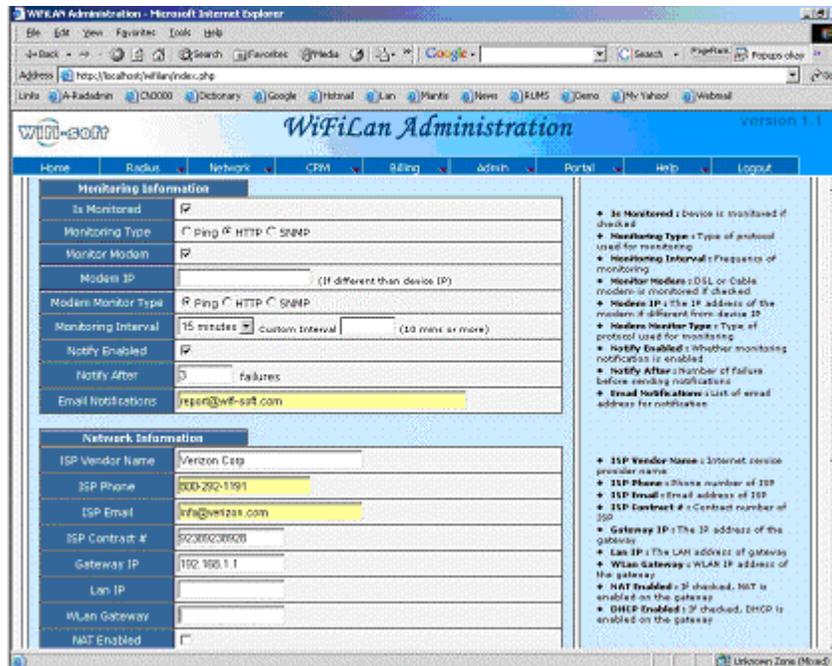
- Location Name : Name of the location.
- Address : The address for the location
- City-State : Select predefined & city-state combination for the location.
- Zipcode : Enter the zipcode for the location if known
- Latitude : Enter the latitude of the location if known
- Longitude : Enter the longitude of the location if known
- Type : Select the type of location

Adding New Device

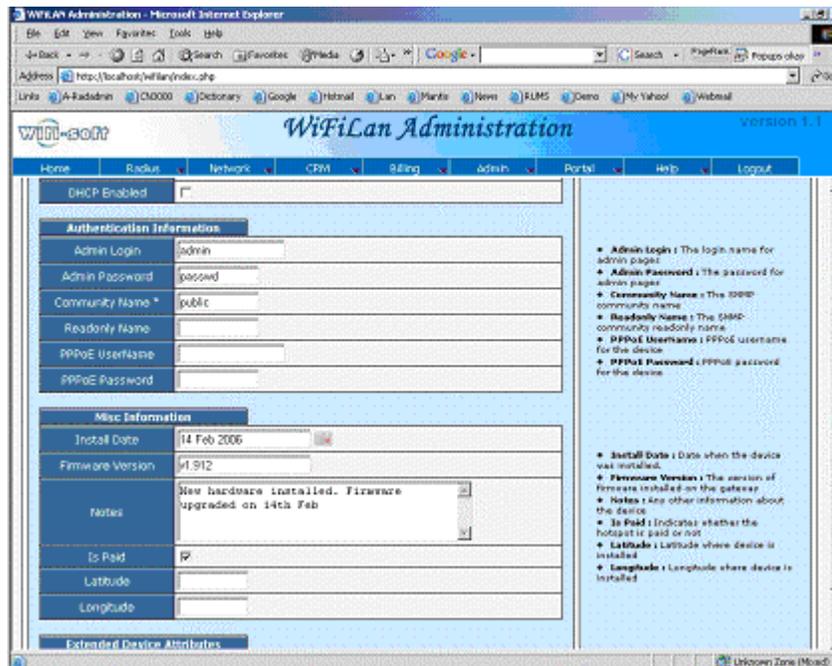
Click on Network->Devices->New Device to add a new device. The device entry in WiFiLan stores all the information about a gateway like Zyxel VSG -1200 or Colubris CN 3200. Usually, there is one gateway for each location. The device information captures the general information about the device. Make sure that you enter correct IP address, serial number (if available) and mac address of the device. Select the location from the list.



The Monitoring section defines the parameters needed for configuring monitoring for this device. Is Monitored flag indicates whether the device is monitored and the Monitor Type decides the protocol to use for monitoring. Generally you can use ICMP (ping) for monitoring, but if it is not available then use HTTP or SNMP. Please note that the device has to be configured with correct SNMP information for SNMP-based monitoring. If the gateway is connected via DSL modem, then you can monitor the modem and gateway separately. The monitoring interval decides the time between two monitors. To get notified when the gateway goes down (or comes back up), check the Notify Enabled field. Notify After number will decides the number of failures before sending notifications. This is mainly used to avoid false positives. Finally, the Email notification field contains comma-separate email addresses who will receive a notification then the status of the device changes. This list is appended to the master notify list described below.



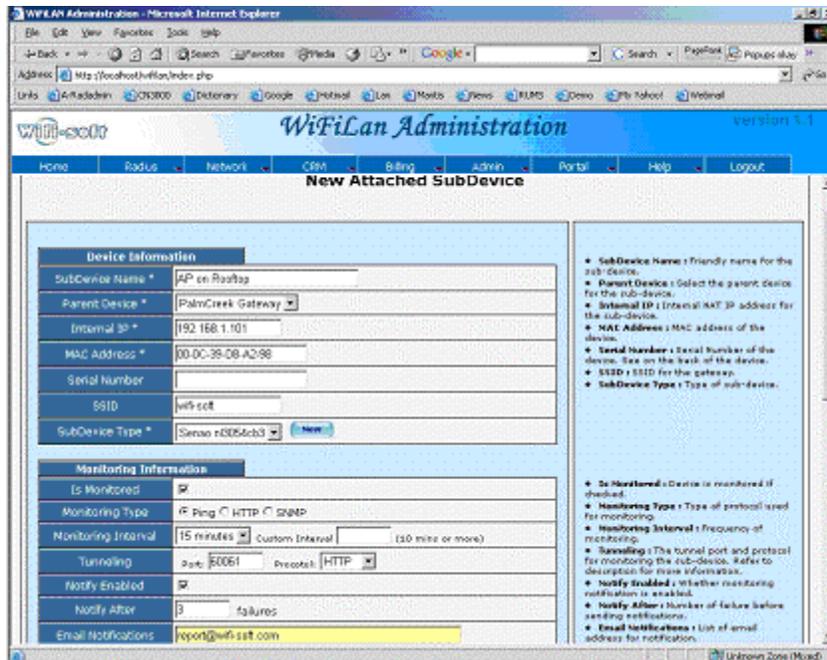
Enter the data in these fields if required.



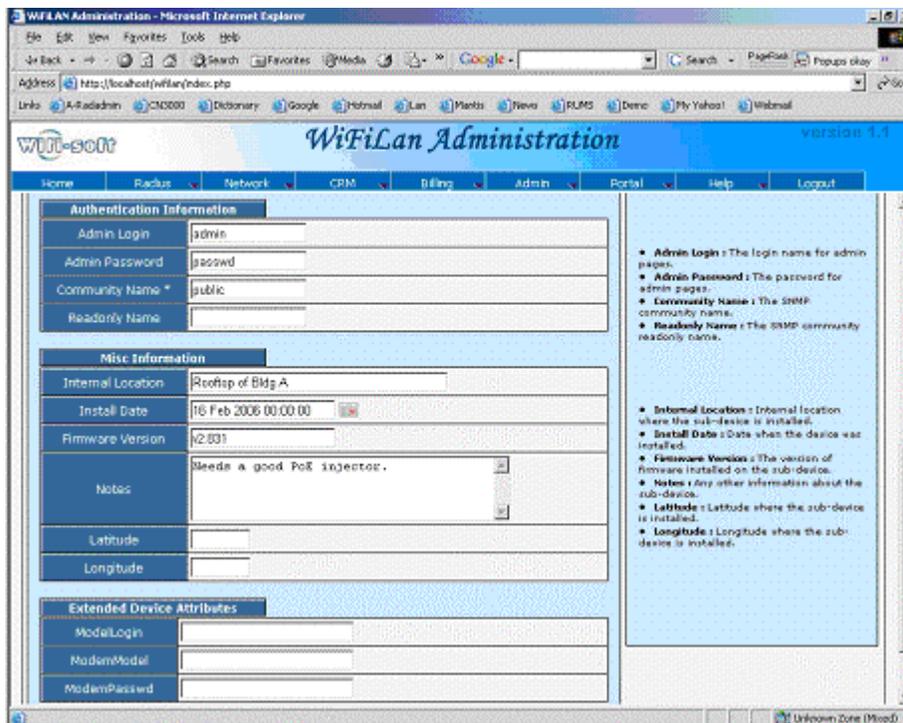
Enter any notes and other miscellaneous information as needed.

Adding SubDevices

SubDevices in WiFiLAN capture the information for attached APs installed in the field. These APs operate on internal network and are not directly accessible from outside. Administrators need to setup the gateway with port forwarding so that outside people can access them over a HTTP connection.



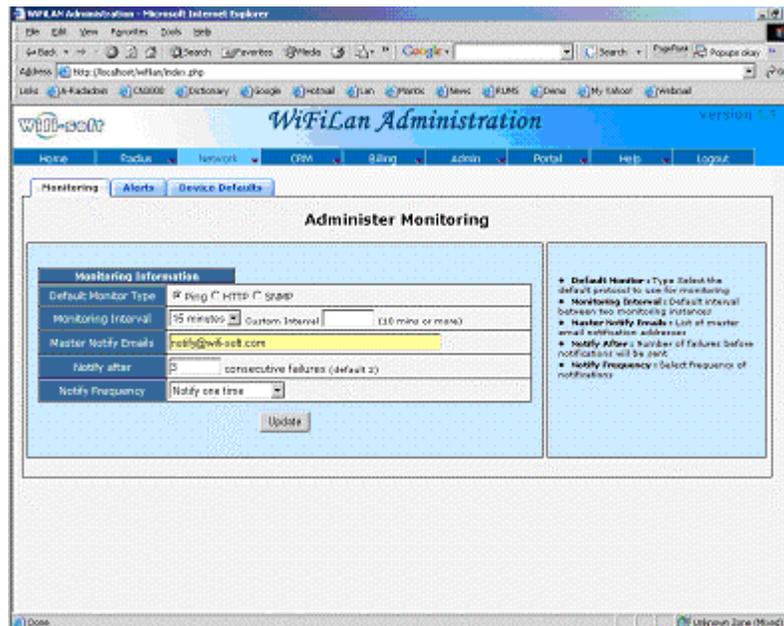
The information for sub-device is almost similar to that of the device. You need to select the appropriate parent device for the subdevice along with the type of device in the general device information. In monitoring section, you need to specify the tunneling port and method. The port number should match the port on which forwarding is setup for the given device, while the protocol will be based on the URL. Make sure that you use HTTP as the monitoring type for a subdevice.



Enter additional information about the subdevice as needed.

Monitoring Administration

The Network->Admin->Monitoring tab defines the default values used by the monitoring server. If the corresponding value is not defined for a device, then the server will use the default value instead. To configure an email account that will receive notification for all devices defined in WiFiLAN, enter the email address in the master notify email field.

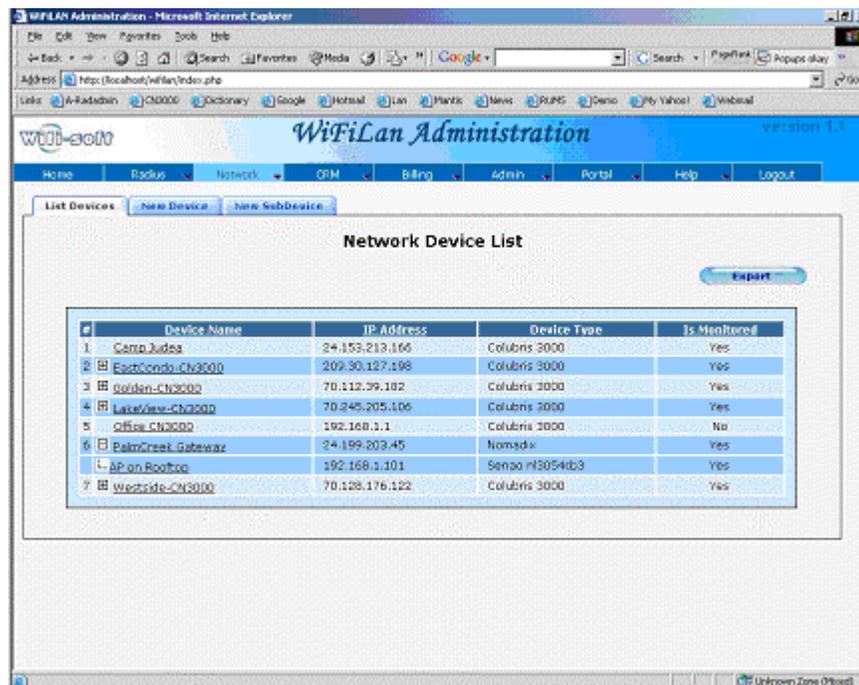


Parameter	Description
Default Monitor Type	Select the default protocol to be used for monitoring. The monitoring server can use Ping (ICMP), HTTP or SNMP to determine the status of a device.
Monitoring Interval	The default interval between two consecutive monitors. To set custom interval, enter a number greater than 10 in the Custom Interval field
Master Notify Emails	List of email addresses (comma separated) to which a notification email will be sent if a device is down or comes back up.
Notify After *	Number of successive failures before sending DOWN notifications.
Notify Frequency	Number of times the notifications should be sent. Values are: <ol style="list-style-type: none"> 1. Notify one time 2. Notify multiple times (each time when device is down) 3. Do not notify

The monitoring section for a subdevice is almost similar to that of a device. It contains additional information about the tunneling parameters. Specify the port number on which port forwarding is setup for the attached device in the tunneling port field and select the appropriate protocol used to access the admin page for the attached device.

Device List

The device list shows all the gateways (devices) along with attached devices (subdevices) defined in the WiFiLAN. All subdevices are listed as children of the device. Clicking on + icon will expand the subdevice list and clicking on – icon will collapse the list.

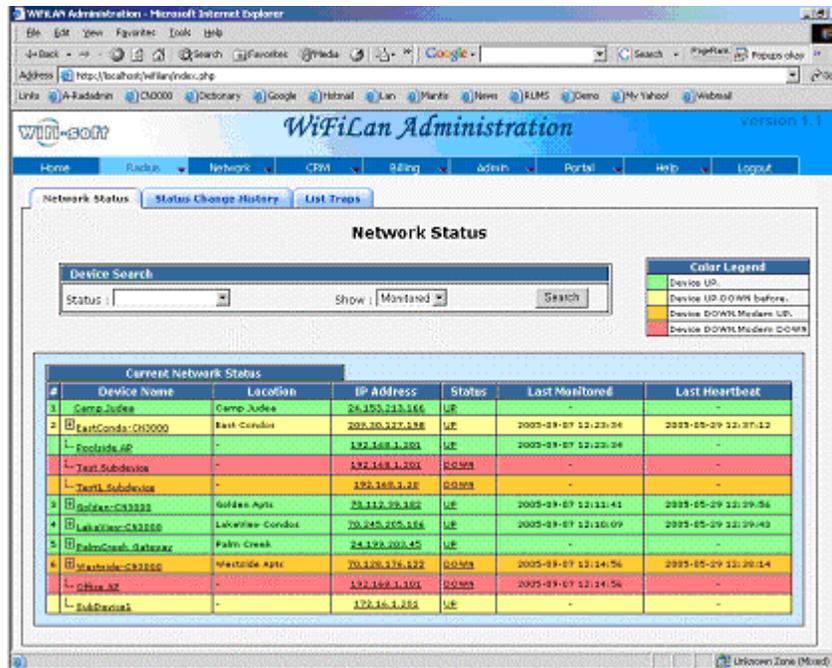


Viewing Network status

To view status of each monitored device and subdevice, click on Network->Status menu. All monitored devices are displayed in tabular format as shown below. Use the following legend to identify the status of the device:

Color	Description
Red	The device is down since it is unreachable from the monitoring server
Orange	The modem is working correctly i.e. Internet connection is okay, but the device appears to be down.
Yellow	The device was temporarily down in the last 24 hours, but is UP and reachable from the monitoring server
Green	The device is UP and reachable
White	The device is not monitored

You can view the detailed monitoring history for the device, you can click on the Status entry for the device or subdevice. If the device sends SNMP heartbeats, then the time when the last heartbeat is received is displayed under the Heartbeat column.



Congratulations! You have finished configuring WiFiLAN for network monitoring.