



## Public Internet Provisioning Software: System Overview

*Fire4 Internet Management Appliances offer a rich suite of features for any business that wants to provide Internet access to the public. The user login environment (walled garden) is completely configurable from a single (splash) page to a multi-page web site. Five billing interfaces include credit card processing and scratch cards. Free Internet access can generate revenue through the splash page banner advertising feature.*

### Software Features:

Fire4 provides software as a service (SaaS) that eliminates initial investment costs and permits clients to proceed with the project deployment and obtain near-carrier grade performance. Each product includes a 1-year server account subscription.

The Internet service provider can customize every aspect of the user interface to brand the user experience. Billing products like pre-pay scratch cards can also be customized.

The Fire4 plug and play software solution is ideal for any business that wants to provision public Internet access as part of a suite of customer services, while avoiding technical headaches.

Businesses that take advantage of Fire4 solutions include resorts, marinas and hotels. They all rate customer satisfaction, profitability and quick return on investment as goals that our software has helped them achieve.

### Customer billing:

Five concurrent billing modes provide WISPs with the flexibility to deploy public Internet in diverse applications, including last mile, hot spots and wholesale.

### Customer Support:

Important features are verification of authentication codes and verification of equipment availability.

### Banner advertising:

Install banners on custom splash pages with optional click thru and manage banners remotely via the Avansu management system.

### Reporting:

Generate traffic and billing reports for nodes and groups of nodes. Download reports in CSV format and import into other software for accounting or statistical analysis.

### Bandwidth and Fair Usage:

Access points and routers can be set to limit traffic and throttle bandwidth linked to authentication for high volume users.

### Equipment Failure Monitoring:

All equipments connected to the WISP network can be set to alarm on device failure.

### Trouble Ticket Automation:

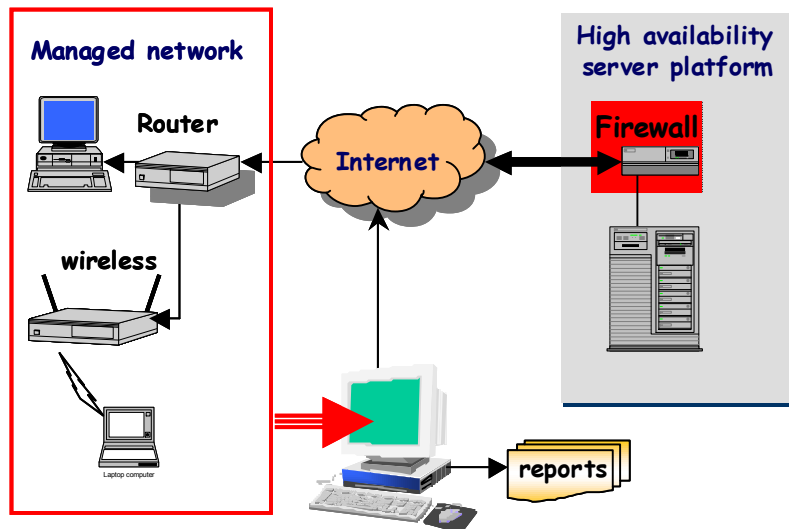
A cell phone alert and email trouble ticket are delivered to field technicians on device failure.

### Remote Equipment Management:

Access any equipment remotely to modify the configuration of non-critical parameters.

### Virtual Network Operations Center (NOC):

The network administrator has access to a web based NOC that provides a network inventory and access to node configuration.



## Firmware Interface

All appliances can be configured by connecting to the device locally through the Ethernet interface (NX1, NX2) or the wireless interface (AP1). The interface is password protected. All port configuration parameters are accessible and can be modified using the browser GUI.

Manu of the configuration parameters (with the exception of port IP parameters) can be configured via the server interface.

The firmware interface also supports backup and restore of the configuration file to facilitate quick substitution of equipment in the field.

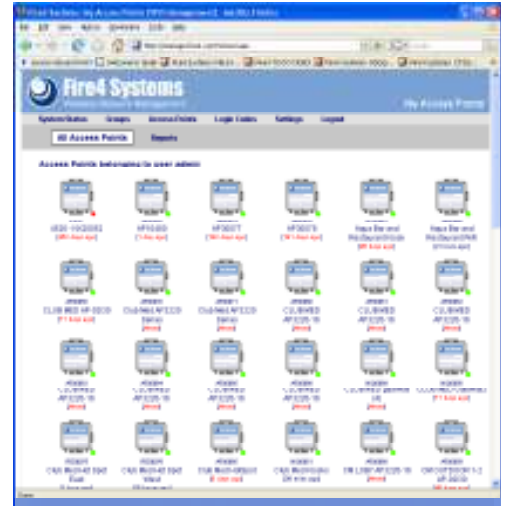


## Server Interface

Management services are provided via a web interface to our servers. The interface is menu driven and simple to use.

No specialized technical knowledge is required to Set up and manage a network. Any IT person will be immediately familiar with the management interface.

Clients can access all billing, monitoring and management features through a low cost account subscription: one year is included with the product.



## Appliance Firmware Features

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| Select wireless mode (AP, CPE or Repeater)         |
| Select network function (Router or Bridge)         |
| Single and dual radio repeater (half/full duplex)  |
| Configure Ethernet port(s) for custom IP ranges    |
| DHCP server, relay or client on all Ethernet ports |
| Secure web based management interface (SSL)        |
| Captive portal for access via credit card or code  |
| Captive portal for access after agreement to T&C   |
| Define expiry time for disclaimer mode logins      |
| Select captive portal login page from a library    |
| Upload own design for captive portal login page    |
| Custom hostname and SSL cert for login page        |
| Personalization of instructions and error message  |
| View details about authenticated clients           |
| Manage (logout) authenticated clients              |
| Auto logout of client if no data transferred       |
| Display advert banners on login page               |
| IP/domain white list (walled garden)               |
| MAC address white list (no login required)         |
| S/N ratio graph for CPE antenna alignment          |
| Backup node settings to server or download file    |
| Restore node settings from server or upload file   |
| Bandwidth management (throttling) via QoS          |
| Local and remote firmware upgrade                  |

## Server Interface Features

|   |
|---|
| Each appliance is registered with the server account            |
| Access code validation (login)                                  |
| Download access codes (CSV)                                     |
| View usage of access codes                                      |
| Billing via scratch cards                                       |
| Monthly billing subscription                                    |
| Credit card billing via Authorize.NET                           |
| Billing via PayPal® account                                     |
| User download/upload speed controlled by authentication         |
| Advert banner management  |
| Manage appliances within groups to facilitate reporting         |
| View billing and usage reports                                  |
| Download usage and billing reports for devices and groups (CSV) |
| Enable/disable node remotely                                    |
| Remote view of node status                                      |
| Historical view of outages                                      |
| Email alert of node outage                                      |
| Optional cell phone alert of outage via text message            |
| Remote reboot of node   |
| Remote access to nodes logs                                     |
| View node settings remotely                                     |
| Update appliance settings remotely                              |
| Archive of appliance settings file                              |
| Manage redundant nodes via hot standby feature                  |

