

pfSense 2.0

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pfSense - Introduction

- FreeBSD-based open-source distribution for firewalls and routers
- Started in 2004 based on m0n0wall
- Powerful and flexible firewalling and routing platform
- Versions
 - Legacy 1.2.3
 - Latest stable – 2.0
 - released 17th September, 2011

pfSense - Applications

- Firewall (incl. redundant setups)
- SOHO Router
- WAN Router
- Wireless Access Point/Captive Portal
- VPN Appliance (OpenVPN, IPSec, L2TP, PPTP)
- VoIP Appliance (FreeSWITCH)
- Sniffer appliance
- ...

System Requirements

- 100Mhz Pentium CPU, 128MB RAM, 1GB Hard driver/512MB CF card (embedded)
- Throughput
 - 10-20Mbps – 266Mhz CPU
 - 21-50Mbps – 500Mhz CPU
 - 51-200Mbps – 1GHz CPU
 - 201-500Mbps – 2.0Ghz CPU, PCI-e network adapters
 - 501Mbps+ - server-class hardware, 3.0Ghz CPU, PCI-X/PCI-e network adapters
- Features/Installed Packages
 - VPN – CPU resource and/or HW encryption, 500Mhz CPU for 10Mbps IPsec
 - Captive Portal - CPU resource
 - Large state tables – 1Kb RAM per connection
 - Packages – additional RAM - snort, ntop, etc – at least 512Mb RAM

pfSense - Features

- pf firewall from OpenBSD
 - Stateful filtering of IP, UDP and TCP streams based on various parameters
 - Max connections limit per rule, selective logging per rule
 - Filtering based on OS
 - Policy routing
 - Transparent L2 filtering, Traffic normalization
 - NAT and Load balancing
 - Redundancy – carp and pfsync
- WebUI
- Package management
- Update & configuration management

New Features in 2.0

- New installation options
- New interface types
 - GRE and GIF tunnels
 - Dial-up modem and Multi-link PPP
 - 3G, VAP and more wireless cards supported
 - LAGG
- Bridging enhancements
- Multiple gateways (dynamic) & Multi-WAN
- WebGUI improvements – HTTPS, context help menus

New Features (cont.)

- Firewall
 - Layer 7 filtering
 - Traffic shaper rewritten
 - EasyRule
 - Extended advanced rule options
 - Extended NAT options
 - Rule scheduling handled by pf
 - State summary view & real-time stats in WebUI

New Features - VPN

- L2TP VPN added
- IPSec
 - Ipsec-tools 0.8
 - Mobile IPSec works with Android/iPhone
- OpenVPN
 - Remote access configuration wizzard
 - Client export package
 - OpenVPN Status page

New in 2.0

- User management
 - Local database
 - LDAP
 - Radius
 - Authentication diagnostics
- Cert manager
- Config history
 - diff, download, descriptions

Available packages

- Advanced routing
 - OpenBGPD, OpenOSPF
- Telephony
 - FreeSWITCH, SIP Proxy
- Network Management
 - Zabbix, nagios
- Network diagnostics
 - Bandwithd, rated, iperf, nmap, pfflowd
- Web proxy
 - Squid, squidGuard, LightSquid, HAVP Antivirus
- Network intrusion detection - snort

Planned releases - 2.0.1

- <http://redmine.pfsense.org>
- Maintenance release
- Expected - ???
- Status - ~ 20% issues fixed

Planned releases - 2.1

- The big step - IPv6
 - pf, carp, traffic shaper, load balancer, captive portal, DHCPv6, PPPoE, PPTP
- Packages' updates
- New Varnish package
- cryptodev support
- Improved policy routing & route metrics
- Super vlan (RFC 3069)

PfSense 2.0 webUI menus

DEMO

Thank you!

Questions?