

What is Bifrost ?

Overview

Bifrost is a minimalistic Linux distribution aimed at networking.

- Stability
- Reliability
- Network performance
- Simplicity

What's not in Bifrost

- systemd
- udev
- upstart
- irqbalance
- dynamic libs
- initrd
- GUI

What's Bifrost specific ?

- live-lock protection
- kernel patches
- read-only rootfs by default
(remount anyone?)
- utilities
- network device configuration
- initramfs

Network device configuration

- eth-affinity

Distributes irq/CPU/rx-queue in a (hopefully) optimal way.

Important for performance!

Live-lock protection

- CPU 0 is protected from bulk network traffic
- Daemons run on CPU 0

Kernel patches

- ixgbe
- e1000
- e1000e
- niu
- pktgen-rx
- (DOM)

Utilities

- devtag
- cpuinfo
- ifinfo
- ifstat2
- schedlat
- remount

Initramfs

Boots Bifrost.

Runs after kernel is loaded.

Mounts partition named bifrost as root filesystem.

Packages

- Installs under /opt
- Follows a very simple formula.
/opt/apache/etc/config.flags/httpd
/opt/apache/rc.d/rc.httpd
- Since everything is statically linked you do not need to worry about dependencies.
- Consider a separate partition for /opt

The End

Questions ?