

**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
- i40e (untested)

# 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

# Opt-get

- Simplistic package-manager
- `opt-get list|fetch|install|update [name]`
- `/etc/opt/sources.list`

# The End

Questions ?