New Features in FreeBSD 9.0

- TCP pluggable CC
- TCP scalability
- Infiniband
- New NFS
- bsdinstall
- VM page locking
- ccNUMA
- Large SMP

- SUJ
- ATA_CAM / ahci(4)
- ZFSv28
- TRIM
- Event Timers
- clang/llvm
- Capsicum
- NX Stack

Schedule

- Code Slush   June 19, 2011

- Code Freeze   July 17, 2011

- BETA1   July 20, 2011

- Branch stable/9   August 3, 2011

- RC1   August 24, 2011

- RELEASE   September 7, 2011

Network Stack

- **Further VIMAGE work** (bz@)
- TCP connection groups (rwatson@)
- NOINET kernel (bz@)
- **ARP Queues** (gnn@)
- **SIFTR and TCP pluggable CC** (lstewart@)

Device Drivers

- **ATA_CAM and ahci(4)** (mav@)
  - geom_raid(4) replaces ataraid(4)
  - Enabled by default in GENERIC
  - Compat shim to ease transition
- **Infiband** (jeff@)

Device Resource Management

- **resource_list_reserve() for ACPI and PCI** (jhb@)

- **PCI-PCI bridge driver manages windows** (jhb@)

- Host-PCI bridge resource windows (jhb@)

- PCI bus numbering (jhb@)

Other Kernel I

- Embedded (MIPS/ARM/PPC)
    - **MIPS SMP, MIPS n64?**
    - **PPC64 + SMP**
- ccNUMA (alc@ / jhb@)
- **VM page queue lock pushdown** (jeff@ / kmacy@ / alc@ / kib@)
- **SUJ** (jeff@)
- **Eventtimers framework** (mav@)

Other Kernel II

- Remove Giant (jhb@)
    - **if_watchdog / if_timer removed**
- Replace cpumask_t with cpuset_t (attilio@)
- **ZFSv28**
- **New NFS client/server** (rmacklem@)
- Netdumps (attilio@ from SandVine)
- Capsicum (partially merged)

Userland and Ports

- **clang/llvm in base with GCC** (rdivacky@ / ed@)

- **binutils update (2.17.50)** (dim@)

- **Last GPLv2 GCC**

- **Userland Dtrace** (rpaulo@)

- **New installer** (nathanw@)

- **Non-executable stack** (kib@)

Open Questions

- SU+J on by default?

- Clang default for world + kernel?