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?