BIND 9
The Past, The Present and The Future

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BIND 9.0: The Past

• First released in 2000
• Other things from 2000:
  • gcc 2.95.2
  • Linux kernel 2.4.0
  • GNOME 1.2
  • Qt 2.0
  • Window 2000
  • First camera phone
  • Playstation 2 launched
  • New century started (only in pop-culture and US)
BIND 9
Past Releases
BIND 9.12: The Present

- NSEC Aggressive Use
- Serve Stale (TTL Stretching)
- Response Policy Interface
- Major Refactoring [1]
- Speedup factor: 1.25-6
- CDS/CDNSKEY tools
- EDDSA Support (when available in OpenSSL)

BIND 9: The Future

- Open Development
- Faster Release Cycle
- Reduce Supported Platforms
- New Features
- More Refactoring
Open Development

- Open (By Default) Issue Tracker
- Public Merge Requests
- Public Wiki
- Public Continuous Integration
- (Future) Public Web Forum to discuss BIND and DNS

Photo by Roman Kraft on Unsplash
ISC GitLab

- https://gitlab.isc.org/isc-projects/bind9

- In production (but still work-in-progress):
  - 130 issues (92 open, 38 closed)
  - 107 merge requests (67 merged, 20 closed, 20 open)
  - Continuous Integration (GitLab CI) by default
    - GitLab CI exposed many intermittent test failures
  - Self-hosted Instance
Faster Release Cycle

• Odd Numbers — Development Release
  • 9.13.x, 9.15.x, 9.17.x
  • Releases as we go
  • Best Effort Support

• Even Numbers — Stable Release
  • When Development Release stabilise
  • 9.13.<last> → 9.14.0
  • Supported until next Stable Release = ~ 1 year

• Every Second Stable Release — Extended Support Version
  • Supported until next ESV Release with overlap = 4 years
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**BIND 9**

Future Releases
Supported platforms

• At every release cycle we evaluate the life-cycle:
  • Major Linux distributions
  • FreeBSD, OpenBSD, NetBSD
  • Selected proprietary operating systems (Mac OS X, Windows, Solaris)

• Create a list of operating systems and distributions still supported by vendors

• Support the list for the life-cycle of each major release (9.14, 9.16, 9.18)

• There will be several Tiers:
  • Supported Tier (We will patch it)
  • Best Effort Tier (Send us the patch)
  • Non-supported Tier (Don’t even bother sending a patch)
Modernise

• The new list of supported platforms will allow us:
  • Fully utilise modern C language standards
    • Depend on standard libraries (POSIX, etc…)
    • Use C11 language constructs (probably stick with the VC11++ subset)
  • Use external libraries when appropriate
  • Reduce the code we have to maintain in BIND9
Planned Features

• Local Root Zone Copy (RFC7706-like implementation)

• Modules & Hooks
  
  • Ability to load dynamic module and hook into query-response processing

• Refactor non-core functionality into modules
Introducing BINDCoin!

- Every DNS Server as a Mining Node
- DNS Smart Contracts
- DNS Caches as permanent storage[1]
- ICO Resource Record
- Stocks will skyrocket!!!

1. https://blog.apnic.net/2016/04/04/dns-zombies/
Refactoring

“In anything at all, perfection is finally attained not when there is no longer anything to add, but when there is no longer anything to take away, when a body has been stripped down to its nakedness.”

–Antoine de Saint Exupéry
BIND’s not yet dead, baby,
BIND’s not yet dead!
Thank you!