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# Cascade: Beyond alpha

Ximon Eighteen - OARC 46

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# Open Source DNS

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**NSD**



**unbound**



**OpenDNSSEC**

# Goodbye OpenDNSSEC...

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3 October 2025

October 2027



Formal announcement  
of OpenDNSSEC  
End-of-Life

- Ongoing support for OpenDNSSEC.
- Critical bug fixes and security updates.
- No new features will be developed.

No further updates or  
support will be provided.

# ...Hello Cascade

## Introducing Cascade

Purpose-built DNSSEC signer, written in Rust

Built from scratch with the same expertise

Tailored for today's DNS operators – you!

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OARC ~~45~~ 46

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~~Alpha~~

Beta

# Thankyou!

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Nominet DNS Fund

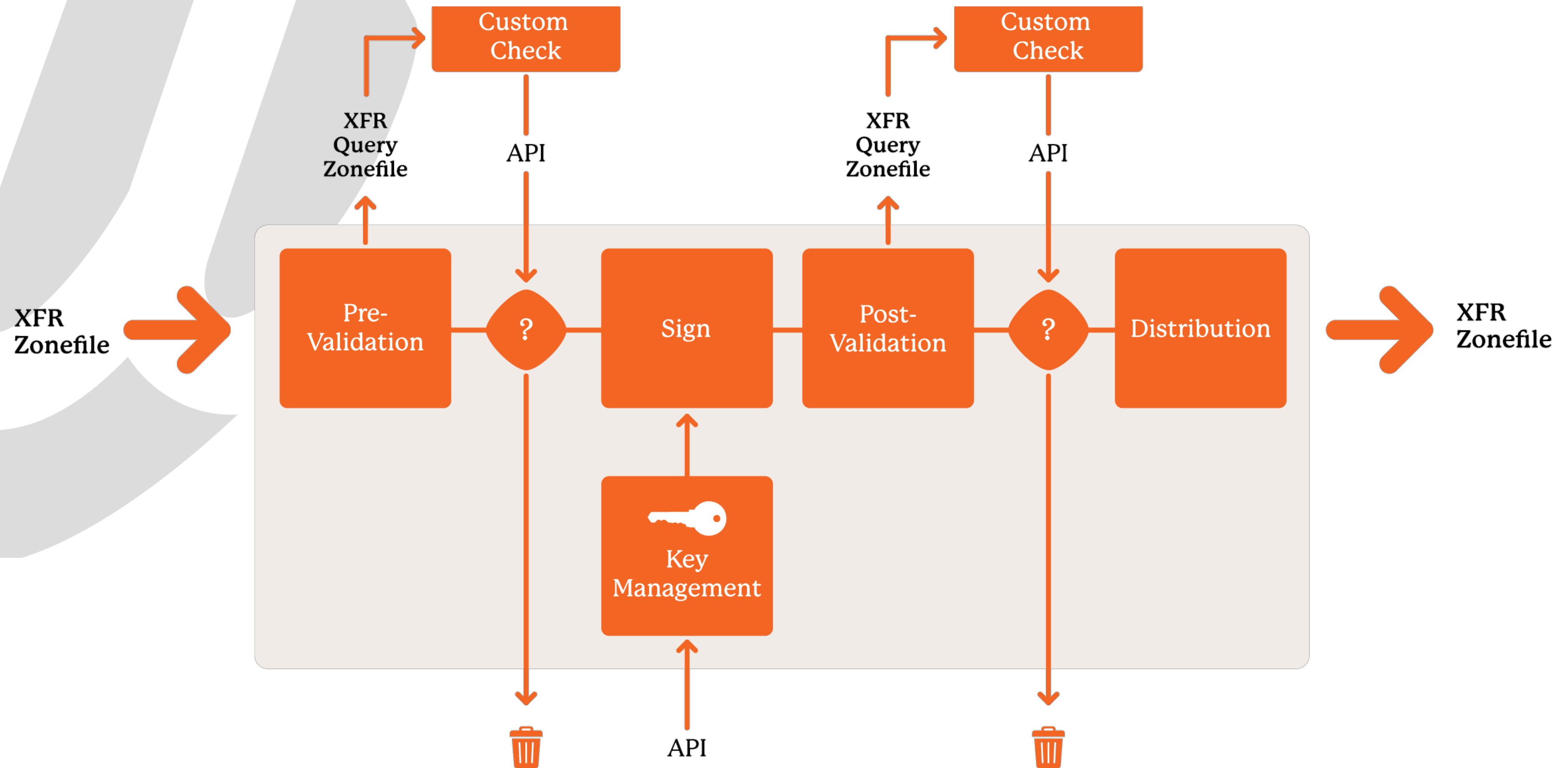
## Sovereign Tech Agency

& alpha testers!

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# Recap: Cascade Architecture



# Beyond Alpha

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- Re-designed to be more robust.
- Deterministic incremental signing.
- Persistence and restoration of signed zones.
- Zone transfer improvements.
- Monitoring via Prometheus metrics.
- Support for more DNS record types.
- Maintenance mode.

**NEW**

**NEW**

**NEW**

**NEW**

**NEW**

**NEW**

# Deterministic Incremental Signing

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- Signs only changes to the zone, regenerating the NSEC(3) chain if needed.
- Why? Speed, predictable resource usage, IXFR size.
- Predictable resigning, chunk by chunk at specific intervals.
- Integrated with automated key roll support.



# Zone Transfer Improvements

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Added support for:

- RFC 1995 Incremental Zone Transfer in DNS
- RFC 1996 A Mechanism for Prompt Notification of Zone Changes (DNS NOTIFY)
- RFC 8945 Secret Key Transaction Authentication for DNS (TSIG)

# For OpenDNSSEC Users

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- ods2cascade
- Generates Cascade configuration and setup commands tailored to your OpenDNSSEC deployment.
- Requires *read-only* access to your OpenDNSSEC configuration and state (files and database).
- Does NOT make changes to your setup.

# Production Ready June 2026

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- Beta release available now-ish.
- For TLD operators with a few large zones.
- Not (yet) intended for operators with many small zones.
- Available as DEB and RPM packages or to build from sources.
- Contact us for support with migration.



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# Cascade: Beyond alpha

Demo time!

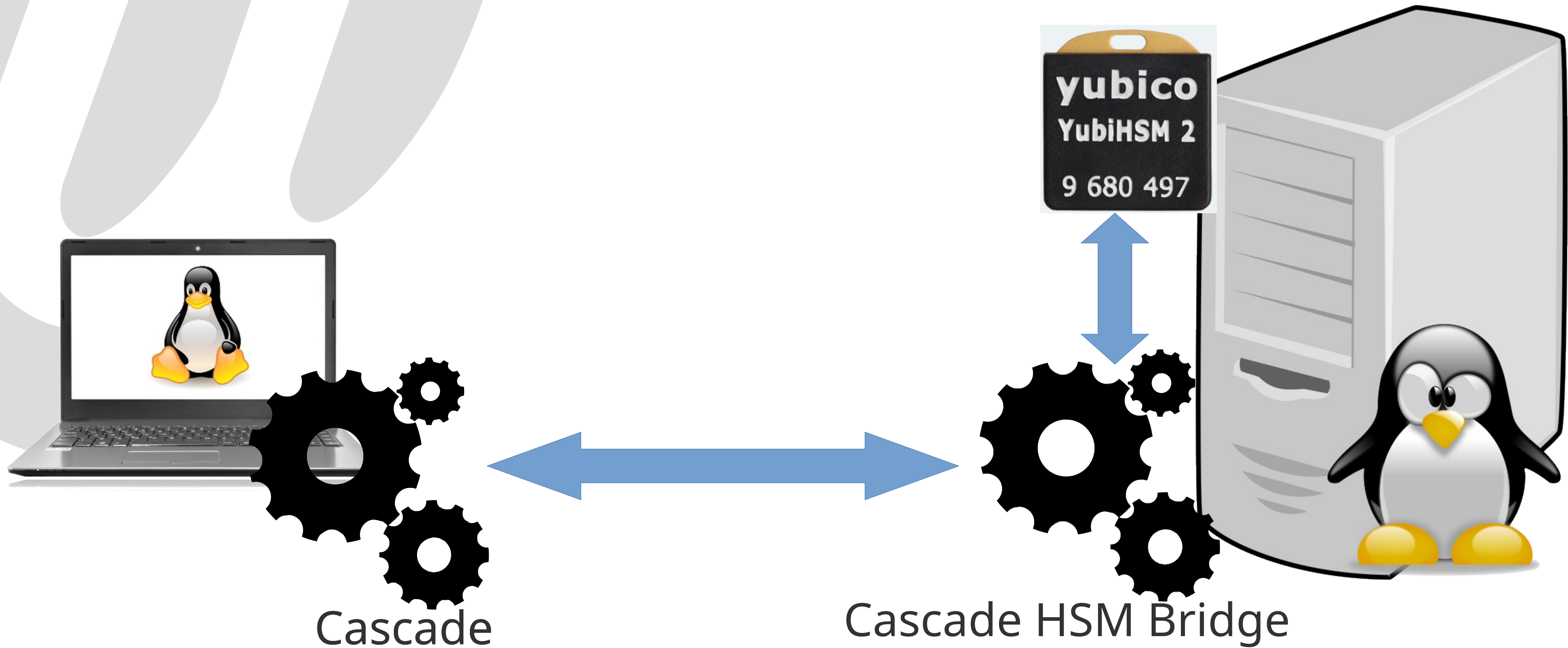
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# Demo Setup

Edinburgh

Amsterdam





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# Cascade: Beyond alpha

Coming June 2026

Check it out at [\[docs.\]cascade.nl.netlabs.nl](https://docs.cascade.nl.netlabs.nl)

Join us at [community.nl.netlabs.nl](https://community.nl.netlabs.nl)

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