



Rock-solid **Internet infrastructure.** (Yeah, we keep our stuff in bunkers.)

WHO DO YOU TRUST TO GET THE JOB DONE?

# Innovation at the core of the Internet

When it comes to Internet services, you need a partner you can trust. Netnod brings you all the benefits that come from choosing one of the most respected organisations working in the Internet today.

Netnod operates the largest IXPs in the Nordics and provides a secondary DNS service to TLDs, partners and enterprises throughout the world. If these terms are new to you, take a look at the fact box to see how these crucial parts of the Internet work.

## 20 years of stability and security

We are innovators at the core of the Internet with a worldwide reputation for our services and the expertise of our staff. For more than 20 years, we have been ensuring the stability and security of critical Internet infrastructure by:

- running the largest IXPs in the Nordics with the highest traffic per peer in Europe
- providing secondary DNS services to some of the largest TLDs in the world
- operating i.root-servers.net, one of the world's 13 root name servers
- distributing Swedish national time through NTP

## Rock-solid Internet services

Netnod delivers rock-solid Internet services to TLDs, partners and enterprises. We empower our customers with world-class IX and DNS services, and support their online presence 24/7. By making critical Internet services robust, accessible and affordable, we ensure a stable and secure Internet for the Nordics and beyond.

### IXP: Internet Exchange Point

An IXP is a physical interconnection point where networks such as Internet Service Providers (ISPs) and Content Delivery Networks (CDNs) come together to exchange traffic (peer). IXPs are one of the building blocks of the Internet.

### TLD: Top Level Domain

TLDs such as .com and .net and country code TLDs such as .se and .ru are the highest level of domains in the DNS hierarchy.

### DNS: Domain Name System

The DNS is the distributed database which every Internet application uses to transform human-readable names such as [www.netnod.se](http://www.netnod.se) into the numeric string (or IP address like 212.237.144.84) for that domain.

### Secondary DNS Service

A secondary DNS service improves a network's resilience and protects it against DNS outage while increasing performance for the network's end users.

### NTP: Network Time Protocol

NTP is the most commonly used protocol for synchronising the time on computer systems. An accurate, NTP-based system is essential not only for individual users but also for local and national economies.

### Root Server

There are 13 root name servers in the world. They provide the entry points to the Domain Name System (DNS).

# Netnod's Internet Exchange Points

GROW YOUR NETWORK, SAVE MONEY AND CONTROL YOUR TRAFFIC

Netnod is one of the most well-established IXP operators in the world. We are the largest IXP operator in the Nordics and offer connection to IXPs across Sweden, Denmark and Norway.

Some of the largest ISPs, telcos and Content Delivery Networks (CDNs) in the world peer at Netnod IXPs. Netnod's open and neutral IXPs offer:

- the highest amount of traffic per peer in Europe
- peering opportunities with the largest transit providers and CDNs in the region
- improved speed, stability, redundancy and routing control
- the best possible access to the Nordics, the Baltics and the Russian market
- quick set up for your interconnects and high volume discounts for additional ports
- the most flexible connection options available

## Flexible interconnection

Netnod helps grow your network and save money. We provide flexible interconnection services that scale with your business and evolve with your needs. With just one contract and one point of contact, you can grow your network in the Nordics and beyond using:

- public peering
- private peering
- remote peering
- single or dual ports
- data centre interconnect through our Optical IX service

# 100% uptime since 2002\*



For maximum resilience, Netnod's IXP infrastructure is secured in military-grade bunkers.

## Netnod's Optical IX service

Netnod's Optical IX platform is the most cost-effective way for networks to grow. Our Optical IX service optimises point-to-point interconnections between data centres and other locations.

- Next generation 100 Gbit/s optical network built using state-of-the-art DCI equipment from ADVA Optical Networking
- Programmable optical layer with Netnod On-Net Locations connected in days
- Optical routes, automatic restoration, and built-in redundancy
- Connections across optical, physical or data link

## Why should you peer?

When you peer, you exchange traffic with other networks connected to the IXP. By peering at a well-established IXP, you save money and gain more control over your traffic, your routes and the performance of your network.

GUARANTEE YOUR CUSTOMERS 100% UPTIME

# Rock-solid DNS services

As the operator of a root server, and the provider of choice for some of the largest TLDs, Netnod has been ensuring the stability and security of critical DNS infrastructure for more than 20 years.

Netnod is one of the most trusted DNS providers in the world with a track record of ensuring 100% uptime across a global network.

With DNSNODE, Netnod provides a complete suite of authoritative DNS services. DNSNODE ensures rock-solid DNS for TLDs and enterprises by providing:

- 100% uptime across one of the most robust and advanced anycast networks in the world
- intelligent connections that optimise routing, reduce latency and improve end user experience
- industry-leading security and resilience against DDoS attack
- 24/7 support

## DNSNODE for TLDs

A cost-effective way to complement your existing solution, our DNS service offers you:

- TLD support that enables you to scale your business
- 70+ locations around the world and growing
- the latest security and standards compliance
- expertise in DNS monitoring, statistics and research

## DNSNODE for enterprises

Netnod has scaled its TLD-grade anycast service for the enterprise market to offer:

- a quick setup process, no contract lock in and a simple pricing structure
- best-in-class APIs enabling smooth integration with leading provisioning platforms
- strategic support and intelligent connections that optimise routing and bring customers closer to their end users

### Secure your DNS services

If you use just one DNS provider or solution, you expose your customers to unnecessary risk.

Adding Netnod's DNSNODE service is a simple, cost-effective way to improve resilience, reduce

latency and protect your business against DNS outage.

### The benefits of anycast

Anycast DNS enables many independent servers to share the same IP address. With anycast, you seamlessly maintain identical data

sets at all locations. This brings your DNS services closer to end users reducing latency while improving redundancy and resilience.

The benefits of the DNSNODE service also include simplified DNS management, improved load sharing and DDoS mitigation.

Amsterdam  
Beijing  
Chicago  
Dubai  
Frankfurt  
Helsinki  
Geneva  
Hong Kong  
Kathmandu  
London  
Paris  
Palo Alto  
São Paulo  
St. Petersburg  
Stockholm  
Tokyo  
Washington DC



THE WORLD TRUSTS NETNOD

# Supporting **critical infrastructure** at the core of the Internet

As a neutral and independent organisation, Netnod provides critical services for the good of the Internet in the Nordics and beyond.

## **I-root**

Since 2000, Netnod has operated i.root-servers.net, one of the Internet's 13 root name servers. The I-root service is provided by a set of distributed nodes using IPv4 and IPv6 anycast. Distributed across the world, I-root deals with several hundred million DNS queries a day.

## **Netnod's NTP service: keeping Sweden in sync**

Network Time Protocol (NTP) is the most commonly used protocol for synchronising the time on computer systems. An accurate, NTP-based system is essential not only for individual users but also for local and national economies. Netnod works with the Swedish Post and Telecom Authority (PTS) and the SP National Laboratory to develop the infrastructure for a robust, nationwide time distribution service.

## **About Netnod**

Established in 1996 as a neutral and independent Internet infrastructure organisation, Netnod is fully owned by the non-profit foundation TU-stiftelsen (Stiftelsen för Telematikens utveckling).



### **Contact**

Email: [info@netnod.se](mailto:info@netnod.se)  
Phone: +46 (0)8 562 860 00  
Web: [www.netnod.se](http://www.netnod.se)  
Twitter: [@netnod](https://twitter.com/netnod)

A black and white photograph of two people, a man and a woman, working on server hardware. The man is in the foreground, wearing glasses and a watch, and is pointing at a component on a server rack. The woman is behind him, also looking at the hardware. The background shows more server racks in a data center.

“There are only 13 root name servers in the world. **The world trusts Netnod**”



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operator in the  
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