



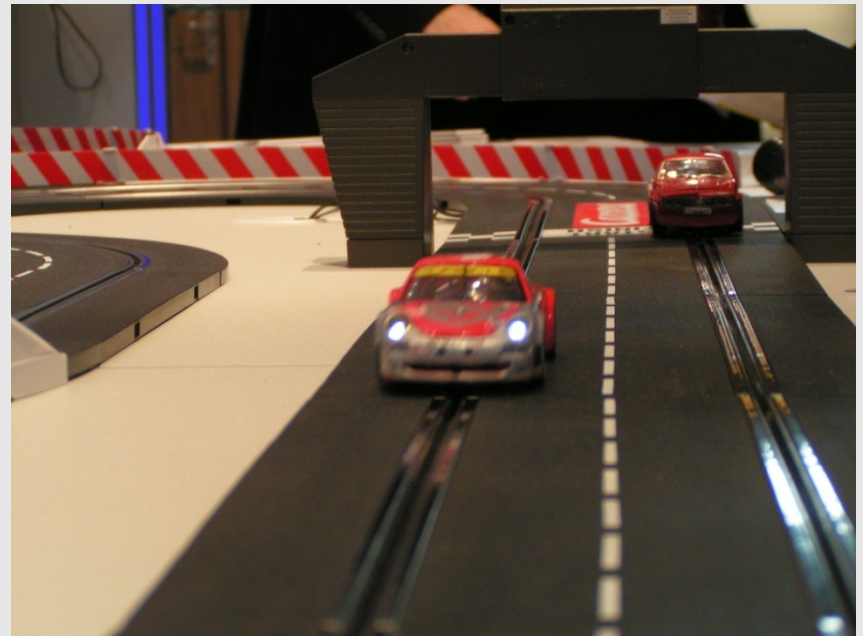
Status of IPv6 in Germany

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Status of IPv6 in Germany

- ⇒ Political Basis
- ⇒ Implementations
- ⇒ Migration
- ⇒ Pilots
- ⇒ Projects
- ⇒ Next Steps
- ⇒ **Information to the IGF
to the ITU statements**





April Fool

All IP Adresses are taken-ICANN disables rootserver

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Suchbegriff

Alle IP-Adressen besetzt

ICANN schaltet Rootserver ab

Seit mehr als zehn Jahren haben die Experten davor gewarnt, jetzt ist die Situation eingetroffen - und das noch schneller als ursprünglich erwartet: Die "Internet-Regierung" ICANN (Internet Corporation for Assigned Names and Numbers) hat bekannt gegeben, dass die letzte freie IP-Adresse vergeben worden ist. Eine solche benötigt jedes Gerät, das an das Internet angeschlossen ist - gleichgültig, ob es sich um einen Server, ein Smartphone oder einen IP-fähigen Fernseher handelt.

Insbesondere der Bedarf aus China habe in den letzten Monaten für einen massiven Anstieg von Registrierungen gesorgt, so ICANN-Präsident Paul Twomey. Dass die Adressen so schnell ausgehen werden, habe aber auch die ICANN-Experten überrascht. Appelle von Institutionen wie der Bundesnetzagentur, nicht benötigte IP-Adressen möglichst zurückzugeben, stießen zudem nur auf geringe Resonanz.

IPv4 und IPv6

Nach dem ursprünglichen Internetprotokoll IPv4 bestehen alle Netzadressen aus vier durch Punkte getrennte Zahlen zwischen 0 und 255. So wären theoretisch $256 \times 256 \times 256 \times 256$ Adressen

Nachrichten-Weltatlas

USA

Landkarte, weitere Nachrichten aus der Region und viele Hintergrundinformationen. [Flash|HTML]

Mehr Ausland

- ▶ Ölteppich im Golf von Mexiko: Auffangen und Abbrennen
- ▶ Audio-Slideshow: Ölpest im Golf von Mexiko [flash]
- ▶ Verletzte bei Protesten in Thailand
- ▶ Rüge des Antifolterkomitees für Italien
- ▶ 50. Jahrestag der Eröffnung des Anne-Frank-Hauses

Multimedia

- ▶ Livestream ARD-Mittagsmagazin 13:00 Uhr
- ▶ tagesschau24
- ▶ Letzte Sendung tagesschau 12:00 Uhr

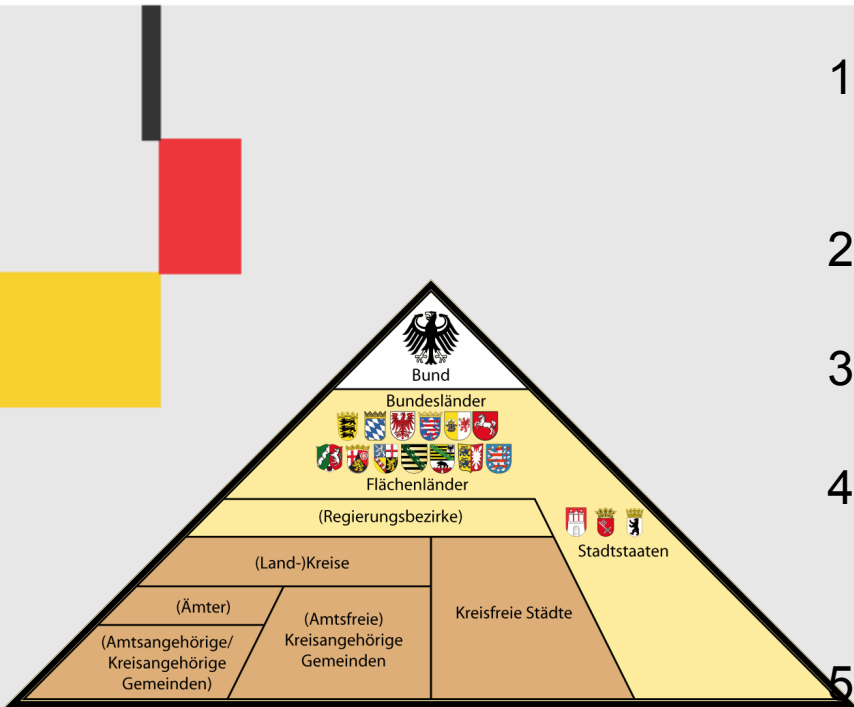
Alle Sendungen

Weltatlas

Info-Services



Political Basis



1. Consensus within decision boards representing all administration levels to apply for a common IPv6 address space
2. RIPE membership / LIR de. government / Assignment of a /26 address space
3. Core topic in the final declaration of the 4th German IT summit
4. Representative Working group
 - Address concept
 - Organization concept
5. Formal approval of the planned approach within Ministry of Interior



Implementations

- Programs were started to modernize the communication infrastructure of the public administration based on IPv6.
 - DOI: Infrastructure serving federal government, states and municipalities
 - Transport: IPv4/IPv6 Dual Stack (10/2009)
 - Network protection devices –firewalls- (6/2010, test version available)
 - Encryption devices-sina- (12/2010, IPv6-only test version available)

NdB: Common network for the federal administration (in planning)





Deployment

- Address Concept (final discussion, 5/2010)
 - Breakdown of the /26 address space in 64 blocks of size /32
 - First assignments to federal states, DOI (including public IT service providers), NdB, Ministry of Defense
- Organization Concept (in process, 6/2010)
 - Independent administration of the /32 blocks by Sub LIRs
 - de.government: coordination / RIPE interface, Policies / sub allocations
- Migration Toolset for the Users (started, 12/2010)
 - Operation guideline
 - Configuration checklists
 - Address templates



Pilots

- VoIP Dataport / Hamburg
 - IP telephony based on IPv6
- Testbed DOI
 - Transport
 - Services (eMail, DNS, network protection, encryption devices)
- Migration CIO website
 - Feasibility study (finished)
 - Cost estimation (finished)
 - Test bed (tbd)





Projects (1)

F&E Project

- IPv6 Profile-NIST analogue gov US
 - Requirement specification
 - IPv6 specifications / purchasing guideline
we would propose to extend it for Europe later
 - Transparent Industries /Users
 - Influence to public IT infrastructure framework
- Test Lab
 - Mobility
 - Multicast Services
 - Conformance / Interoperability tests





Next Steps

- Finalization of address concept and organization concept
- Approval by the german “IT Planning Board”
- Starting IPv6 address distribution
- Starting F&E project
- Supporting and facilitating IPv6 pilots
- Supporting European IPv6 initiatives



**We offer to share our
knowledge and experience!**



Statement of the German Government

Continuation of the IGF

This Forum was established as a unique platform for a non-binding multi-stakeholder dialogue.

It is the only forum that allows a gathering of representatives from all geographical regions across all stakeholder groups to discuss all aspects of Internet Governance on an equal footing. We feel that the lack of pressure to negotiate binding outcomes contributes to frank and open exchanges.

Germany supports a renewal of the IGF mandate



Statement of the German Government ITU IPv6 Working Groups

The ITU's initiative is an attempt aiming at leveraging the existing mechanisms of allocating IP addresses and thus at submitting the management of IP addresses to more control by the state.

As the intervention intended by the ITU poses substantial risks to the workability of the Internet as an information medium and platform to do business.

Germany does not see many benefits of creating a Country Internet Registry (CIR) model as proposed by the ITU.

From our point of view, it will be important that we highlight these problems in the working groups. For any support in this we would be grateful.



Bundesministerium
des Innern

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for
your attention!**

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