Digital Identity Management and RNP

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RNP

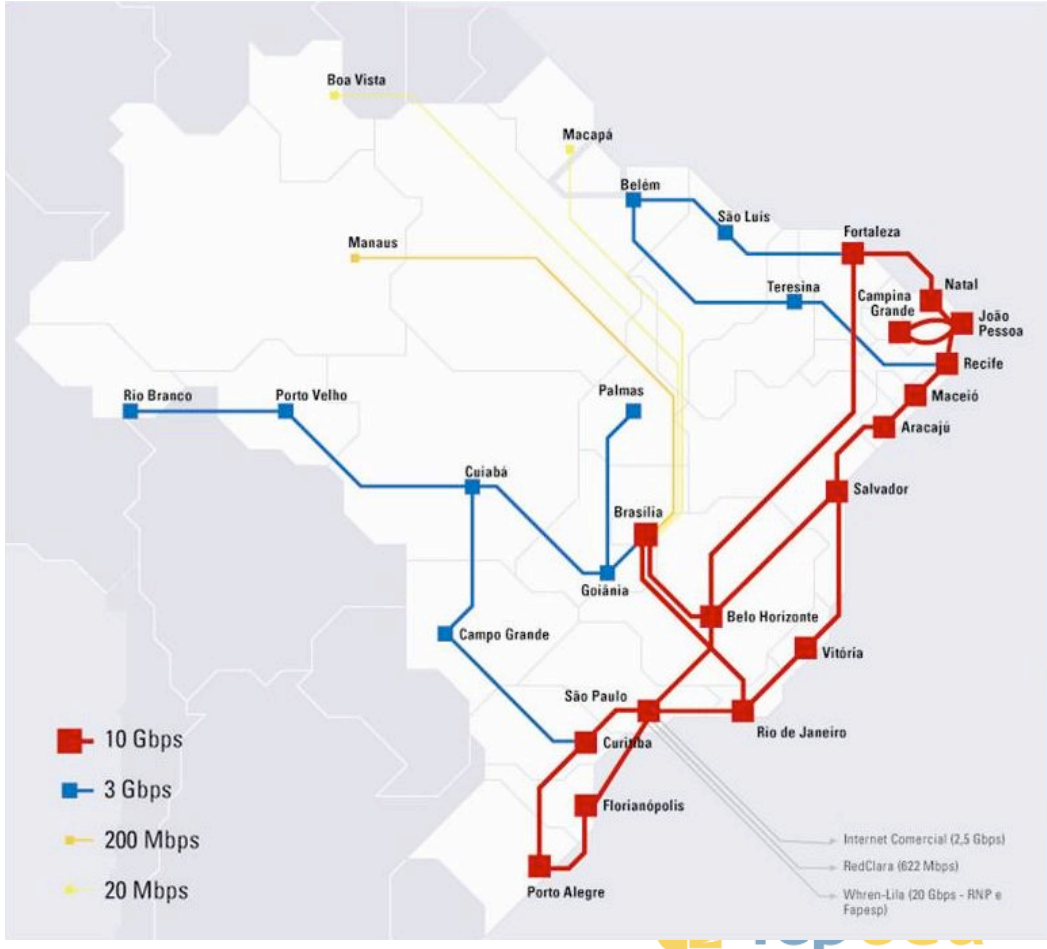
- RNP (Rede Nacional de Ensino e Pesquisa): non-profit private organization
  - under contract by Brazilian government to manage national academic network
- more than 300 connected organizations
  - around 130 universities
  - 30 private and public research centers

RNP Activities

- network infrastructure
- services
- research and development:
  - fostering the use of new technologies
- training

Network infrastructure: the Ipe backbone

- hybrid architecture, supporting routed IP and e2e circuit traffic
- last mile: optical metropolitan networks



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RNP Services

- voice over IP
- webconf
- video streaming
- video distribution
- federated authentication
- public key infrastructure
- ...

New Technologies

- advanced networking
  - tools for hybrid architectures
  - testbeds for protocols and network technologies
- middleware
  - basic services: authentication and authorization, circuit reservation, ...
  - building blocks for other applications
- applications
  - education and research-related network-based applications

Working Groups

- RNP has lifelong informal collaboration with academic community
- formal WG program started in 2002
- open call once a year
- surveyed or developed technologies may lead to services offered by RNP
  - fone@rnp
  - video services
  - distance learning tools
  - authentication and authorzation

Efforts in Digital Identity

- working groups on identity-related issues started in 2002
- currently two RNP services for research and higher ed organizations:
  - ICPEDU – PKI
  - CAFe – federated authentication and authorization
  - role of RNP (www.rnp.br/servicos/):
    - dissemination
    - management of centralized parts of service/procedures
    - support for institutions wishing to adhere

ICPEDU

- software and hardware developed in WG program
  - hardware is currently used also in ICP-Brasil
- root authority maintained in UFSC
- CAs are universities and research centers (20)
- certificate emission at no cost
- main applications:
  - email
  - electronic signature
  - SSL
  - electronic forms
  - grids: brgridca.ic.uff.br

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CAFe – Comunidade Acadêmica FEderada

- applications
  - integrated learning programs (multi-institutional)
  - access to digital libraries
- exchange of SAML assertions
  - authentication at home instituion
  - predefined attributes released to service for authorization
- ideas from Incommon and european federations (refeds)
- recommended configuration for internal data organization
  - large number of institutions with little technical expertise

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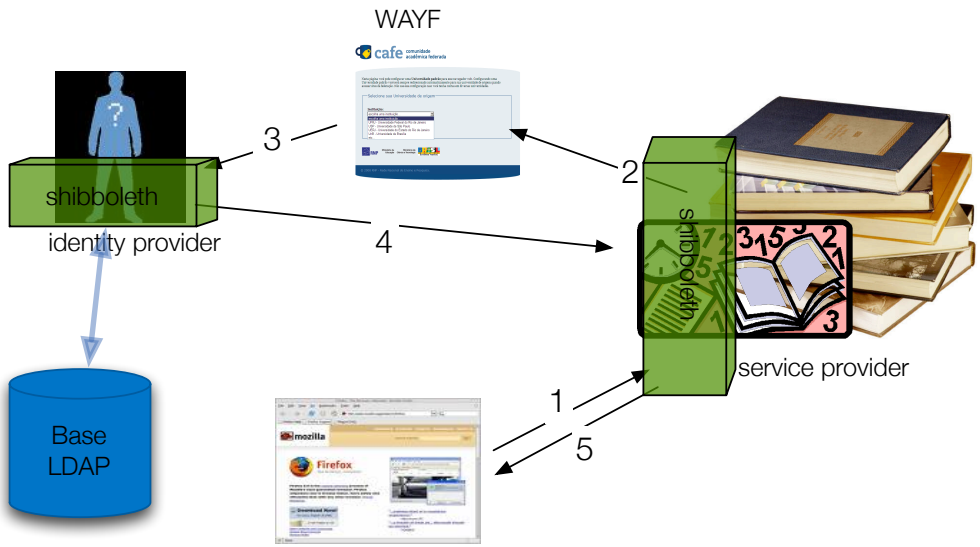
CAFe recommended configurations

- use of shibboleth software
- authentication and attribute data from LDAP repositories
  - brEduPerson schema for LDAP
  - tools for populating LDAP with institutional data



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brEduPerson schema

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Current Status

- ICPEDU and CAFe in operation as services from 2010
- around 15 organizations using each service
  - challenge: dissemination
- evolution
  - technical committee: discussion of directions in identity management

Some current issues

- integration of trust infrastructures
  - federations: edugain
- virtual organizations: multiple sources of attributes
  - attribute certificates?
  - attribute aggregation
- working group: integration of different authentication frameworks
  - specific case: bridges such as CILogon
- pilot: eduroam

- Thanks!

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