

Telecom's expectation for COTS-based transport solutions

NTT

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Introduction

- NTT (Nippon Telegraph & Telephone)
 - Telecommunication carrier in Japan with 50 million telephone users and 12 million broadband users (as of March 2009).
 - Deploying NGN that combines stability and reliability of telephone network with convenience and economy of the Internet.

- My position:
 - Conducting R&D of future broadband networks beyond NGN.
 - Expecting adaptable COTS solution with stable provision for future networks to be produced.

COTS:commercial off-the-shelf

Background and expectation

- Telecoms must be able to deploy various timely services with stable system provision over long periods.
- Telecoms have already begun transitioning from proprietary to COTS-based solutions.
 - Reduce development term
 - Maintain stability of product supply

Telecoms expect the next stage of COTS-based solutions to be produced: the transport layer.

Telecom's requirements for COTS-based transport solutions

- Higher performance and functionality:
 - 10 – 40 G packet processing per blade.
 - 40 – 100 G packet switching.
 - Basic transport functions on modular firm/software.

- Stable provision for over 10 years usage:
 - Providing guarantee of proper operation of entire system and comprehensive unified support.
 - Strictly complying with standards and ensuring interoperability for multi-vendor systems.

Example of COTS-based router

- Architecture: ITU-T SG13 Q20 (iSCP)
- Protocol between CE and FE: IETF ForCES WG
- Platform hardware: AdvancedTCA (PICMG3.x)
- High availability: redundant CE using SAF-API and CG-Linux by OSDL
- Software: modular approach (commercial or open-source)

