



Active Networks

2001-10-16

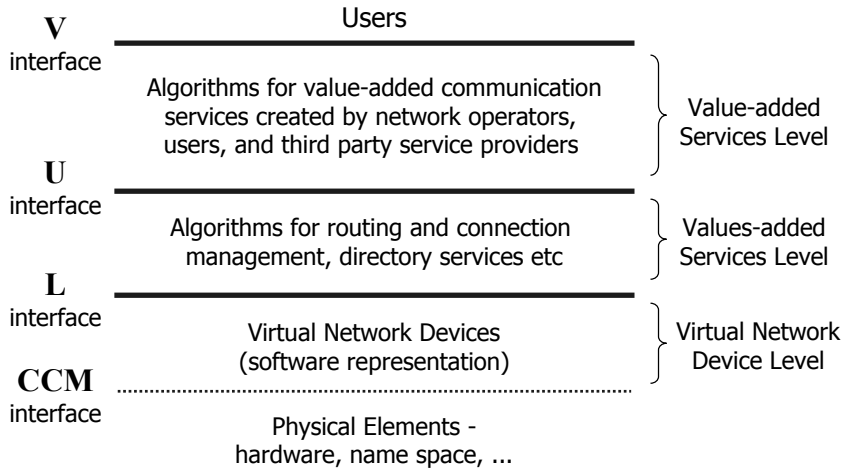


Project Status

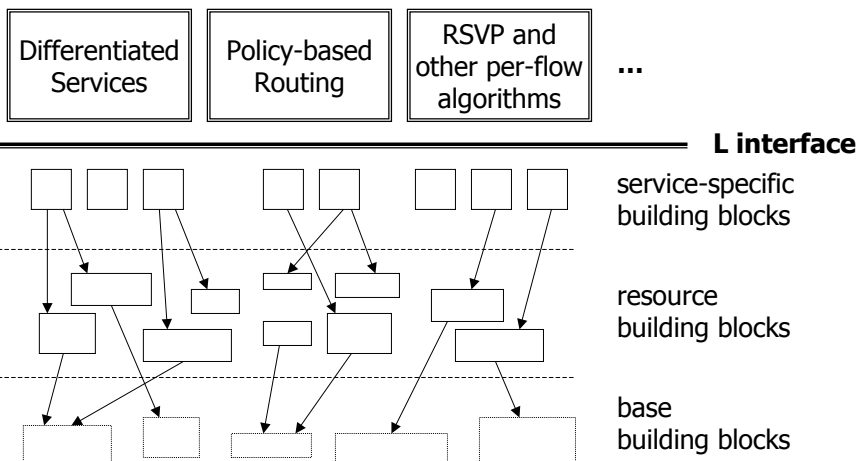
- Active Linux Router architecture was specified
- Active Router interfaces was specified –
Base and Resource Building Blocks specification
according to P1520 recommendations
- Active Router functions was specified –
mapping between P1520 Resource BB and
Linux IP router native functions
- Planning of tests –
testing architecture draft was specified



The IEEE P1520 Reference Model



IEEE P1520 Building Blocks Model



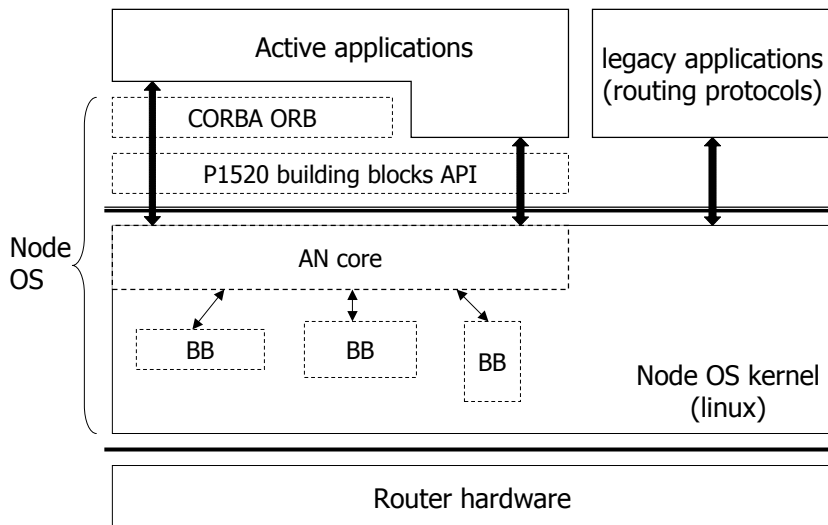


P1520 Building Blocks for IP Router

- Base BB
 - Action
 - Component
 - Condition
 - Target
 - Processing Unit (PU)
- Resource specific BB
 - Classifier
 - Packet scheduler
 - Queue
 - Meter
 - Shaper
 - Dropper
 - Flow table
 - Routing table
 - Routing table manipulator
 - Network address translation
 - Packet header manipulator

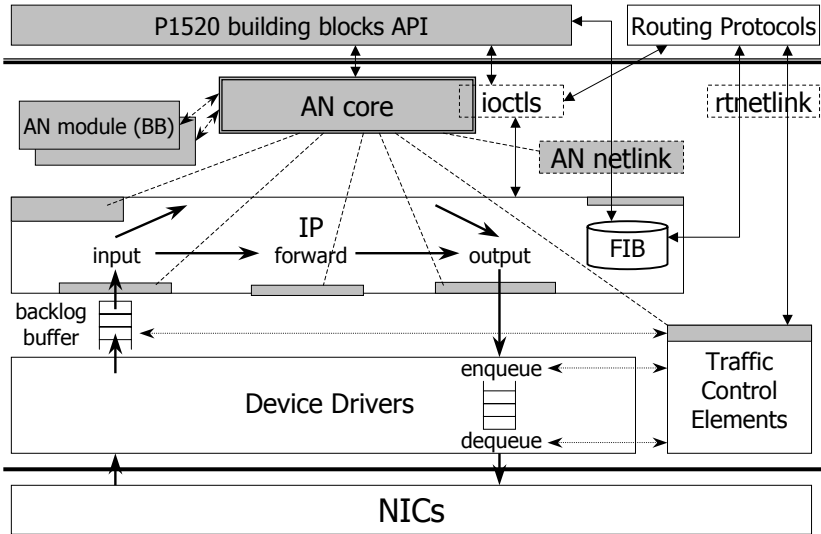


Active Linux Router Arch

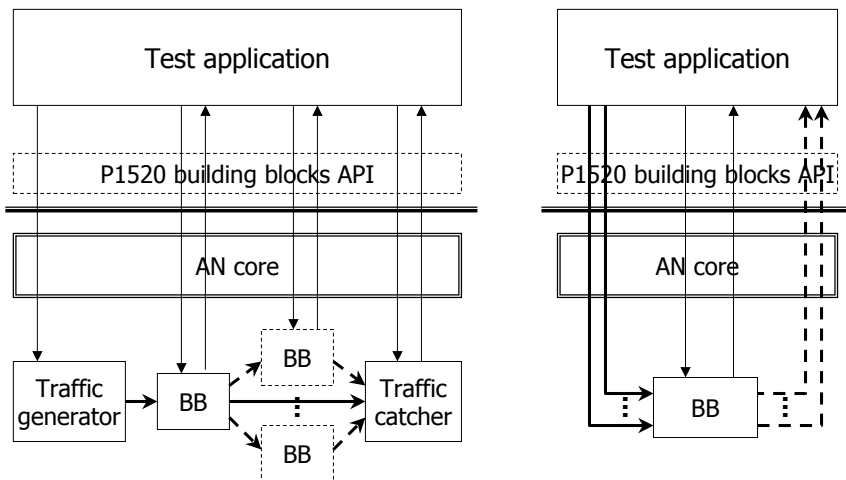




Active Linux Router Kernel



Testing Architecture



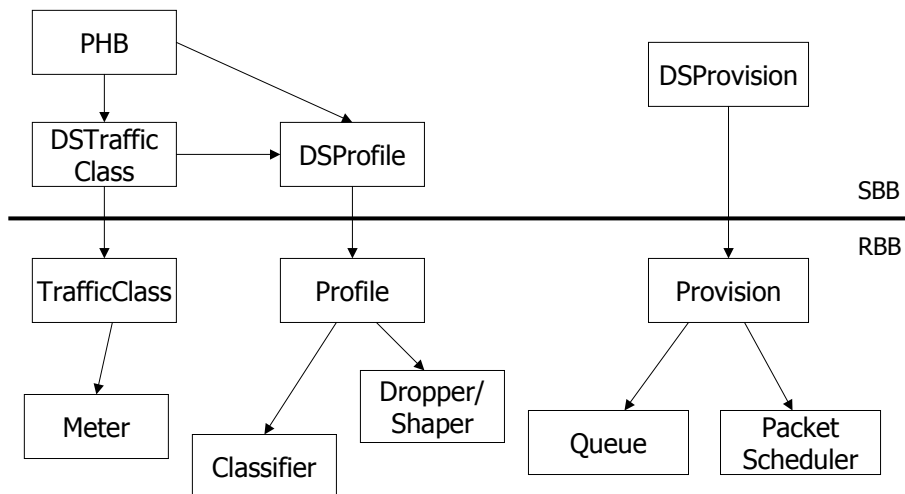


Why Diffserv ?

- Well-defined by IETF standards
- Diffserv architecture has a direct mappings to IEEE P1520 building blocks framework
- Already implemented in commercial routers – it will be possible to test and pilot the Active Router in an existing network infrastructure

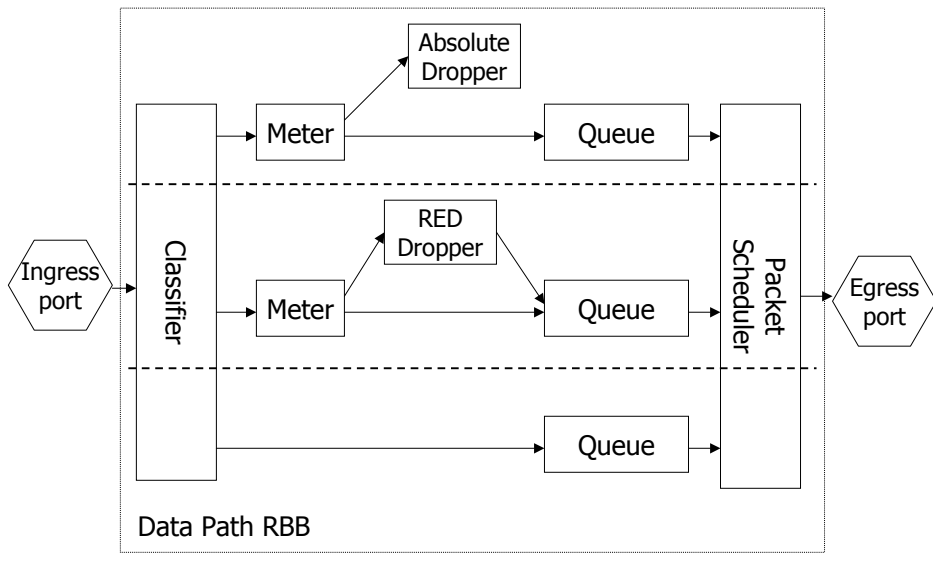


Differentiated Services BB





Diffserv Data Path Example



Project Plan

- Implementation of functions (25mm)
1.01.2002 – 31.10.2002
 - Active Networks Core implementation
 - Resource building blocks implementation
 - Specification and implementation of additional building blocks
- Implementation of interfaces (4mm)
1.03.2002 – 1.08.2002
- Testing (2mm)
1.11.2002 – 31.12.2002
- Planning of piloting (2mm)
1.01.2002 – 28.02.2002