

IntServ Introduction and Experience

Disclaimer

- Intent was to have an IntServ expert do this but due to scheduling conflicts and snafus that didn't happen
- Some overview of the relevant concerns for IntServ deployment seems useful
 - Cribbed from RFC 2208

IntServ and RSVP

- RSVP [RFC 2205] is a unicast and multicast signaling protocol that installs and maintains reservation state information at each router along the path of a stream of data.
- The state is defined by services such as controlled-load and guaranteed QoS ([RFC 2211] and [RFC 2212])

IntServ assumes

- Router packet classification and scheduling, and admission control algorithms
- Message formats in which parameters for desired policies for admission control and resource use can be expressed
- Diversely located mechanisms implementing desired admission control policy functions, including authorization and other security mechanisms.

Issues Affecting Deployment of IntServ

- Scalability
 - Amount of soft-state for micro-flows in Internet backbone routers; call setup delay
- Security Considerations
 - Prevent spoofed reservations
 - Theft of service
 - Handling (classifying) encrypted packets
 - RSVP authorization security - policy
- Policy Control
 - Who can make reservations for which resources?
 - Access control, authorization, and accounting

RFC 2208 Recommendation

- Multimedia applications to be run within an intranet are likely to be the first to benefit from RSVP
- Recommend that people begin to use RSVP in production intranet or limited ISP environments, in which benefits can be realized without having to resolve some of the issues described above.

RSVP use outside of IntServ

- Most RSVP deployment is not for IntServ
- RSVP-TE
 - Policy simpler because end-user and their applications do not issue reservations
- RSVP-TE combined with PCE
 - Policy and admission control (mostly) done centrally
 - Results in more optimal resource usage; potentially less resiliency