

Exercise Multimedia Technology WS 2004/2005

Sheet 8 (December 17th 2004)

8.1 Integrated Services (IntServ)

In conjunction with QoS, there exist different architectures, e.g., the Integrated Services. Explain the concept of IntServ and describe how it works using [1], [2], and [3].

8.2 RSVP

The Resource Reservation Protocol (RSVP) was proposed as a signalling protocol that can be used with IntServ. Work out the fundamentals of RSVP using [4] and [5].

1. How does RSVP work?
2. Explain the terms “soft state” and “receiver-initiated reservation”.
3. Describe the PATH and RESV message in detail.

8.3 Differentiated Services (DiffServ)

Explain the fundamentals of the DiffServ architecture.

8.4 Comparison IntServ/DiffServ

Compare the different architectures IntServ and DiffServ with respect to the following issues:

1. Stream Identification: How does IntServ/RSVP identify single data streams?

2. Scalability: Which of the architectures is more efficient with respect to scalability?
3. How does the admission control work with IntServ, i.e., what happens if a requested QoS cannot be guaranteed?

References

- [1] <http://www.informatik.uni-mannheim.de/pi4/lectures/ws0405/mmtechnik/ueb/data/braden94integrated.pdf>
- [2] <http://www.informatik.uni-mannheim.de/pi4/lectures/ws0405/mmtechnik/ueb/data/shenker95fundamental.pdf>
- [3] <http://www.informatik.uni-mannheim.de/pi4/lectures/ws0405/mmtechnik/ueb/data/xiao99internet.pdf>
- [4] <http://www.informatik.uni-mannheim.de/pi4/lectures/ws0405/mmtechnik/ueb/data/white1997.pdf>
- [5] <http://www.informatik.uni-mannheim.de/pi4/lectures/ws0405/mmtechnik/ueb/data/zhang1993.pdf>