

ECSE-489 : TELECOMMUNICATION NETWORK LAB
WINTER 2003
(2 CREDITS)

Experiment 6

Introduction

This experiment is designed to explore the Resource Reservation Protocol (RSVP). The experiment is to be concluded in the three-hour lab session. You will be expected to provide a 2-3 page report (which may be handwritten provided it is legible) outlining your methodology and results. During the three-hour session, you will perform a brief demonstration.

Experiments

Open the RSVP project and go to scenario 1.

Add a new client / receiver pair transmitting an “interactive media” low resolution video-conferencing application. The video should be sent at 10 frames/second, with each frame having a size of 500 bytes. This flow should have RSVP enabled, initially using the default profile.

Now run the simulation for each of the following three cases. In each case, deduce whether the RSVP request was successful, and record the throughput and delay of the video stream.

- 1) Enable RSVP for the video-conferencing flow, using the Default flow specification.
- 2) Use a new RSVP profile for the video-conferencing flow, which reserves a bandwidth of 2500 bytes/second, and a buffer size of 10000 bytes.
- 3) Same as part 2), and also fail the link to the client_no_RSVP.
- 4) Same as part 2), and also fail the link to the client_RSVP

Compare the delay and throughput of the four cases.

Hint

- For each interface on the router through which an RSVP flow is being transmitted, make sure the queuing scheme is set to WFQ and the queuing profile is set to ToS-based. (IP Routing –Interface-QoS). Also check host interfaces.