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CS 118 – HW #4

1. 1. The shortest path between R1 and P is as follows: R1->R2->R4->R3->P. This gives a path with cost 4. The smallest pack size guaranteed to get through without fragmentation is 512.



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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Router | T = 0 | T = 1 | T = 2 | T = 3 | T = 4 | T = 5 | T = 6 | T = 7 | T = 8 |
| R1 | 1 | 1 | 21 | 21 | 21 | 21 | 511 | 511 | 511 |
| R2 | 20 | 20 | 20 | 21 | 21 | 510 | 510 | 511 | 511 |
| R3 | 510 | 510 | 510 | 510 | 510 | 510 | 510 | 510 | 511 |
| R4 | 10 | 10 | 10 | 21 | 21 | 510 | 510 | 511 | 511 |

At time 0: R1 sends LSP sequence 1 to R2 and R4

At time 1: R2 sends LSP sequence 20 to R1 and R4 sends LSP sequence 10 to R1

At time 2: R1 updates its LSP sequence to 21 and sends that to R2 and R4

At time 3: R2 and R4 update their LSP sequences to 21 and they both send that to R3

At time 4: R3 sends LSP sequence 510 to R2 and R4

At time 5: R2 and R4 both send 510 to R1

At time 6: R1 updates to 511 and sends to R2 and R4

At time 7: R2 and R4 send to R3

At time 8: R3 updates and the system stabilizes

It takes 8 time units for the system to stabilize.