COL334 Evaluation A4

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A) The routing tables for the nodes are as follows:

Node: A, Ti	me: +29.0s									
Destination	Gateway	Genmask	Fla	gs Met	tric Ref	Use	Iface			
10.0.5.0	10.0.1.2	255.255.255	.0	UGS	2	-	-	2		
10.0.6.0	10.0.1.2	255.255.255	.0	UGS	3	-	-	2		
10.0.4.0	10.0.2.2	255.255.255	.0	UGS	2	-	-	3		
10.0.3.0	10.0.2.2	255.255.255	.0	UGS	2	-	-	3		
10.0.0.0	0.0.0.0	255.255.255	.0	U 1	-	-	1			
10.0.1.0	0.0.0.0	255.255.255	.0	U 1		-	2			
10.0.2.0	0.0.0.0	255.255.255	.0	U 1	-	-	3			
Node: B, Ti	ma: ±20 0s									
Destination		Genmask	Fla	ne Mat	tric Paf	معال	Iface			
10.0.6.0	10.0.5.2	255.255.255		UGS	2	-	-	3		
10.0.4.0	10.0.3.2	255.255.255		UGS	2	_	_	2		
10.0.4.0	10.0.3.2	255.255.255		UGS	2	_	_	1		
10.0.2.0	10.0.1.1	255.255.255		UGS		_	_	1		
10.0.0.0	0.0.0.0	255.255.255		U 1	_	_		•		
10.0.1.0	0.0.0.0	255.255.255		U 1	_	_	2			
10.0.5.0	0.0.0.0	255.255.255		U 1	_	_	3			
10.0.0.0	0.0.0.0	200.200.200	. 0	0 1			J			
Node: C, Time: +29.0s										
Destination	Gateway	Genmask	Fla	gs Met	tric Ref	Use	Iface			
10.0.6.0	10.0.3.1	255.255.255	.0	UGS	3	-	-	2		
10.0.5.0	10.0.3.1	255.255.255	.0	UGS	2	-	-	2		
10.0.1.0	10.0.2.1	255.255.255	.0	UGS	2	-	-	1		
10.0.0.0	10.0.2.1	255.255.255	.0	UGS	2	-	-	1		
10.0.2.0	0.0.0.0	255.255.255	.0	U 1	-	-	1			
10.0.3.0	0.0.0.0	255.255.255	.0	U 1	-	-	2			
10.0.4.0	0.0.0.0	255.255.255	.0	U 1	-	-	3			
Nada D. Ti	mar 120 Ga									
Node: D, Ti		Genmask	E1 ^.	ac Mot	trio Dof	Hoo	Iface			
10.0.3.0	10.0.5.1	255.255.255		UGS	2	-	Trace	2		
10.0.3.0	10.0.3.1	200.200.200	. 0	UUS	۷	_	-	_		

10.0.2.0	10.0.5.1	255.255.255	.0	UGS	3	-	-	2
10.0.0.0	10.0.5.1	255.255.255	.0	UGS	3	-	-	2
10.0.1.0	10.0.5.1	255.255.255	.0	UGS	2	-	-	2
10.0.4.0	0.0.0.0	255.255.255	.0	U 1	-	-	1	
10.0.5.0	0.0.0.0	255.255.255	.0	U 1	-	_	2	
10.0.6.0	0.0.0.0	255.255.255	. 0	U 1	-	-	3	
Node: A, Ti	me: +79.0s							
Destination	Gateway	Genmask	Flag	gs Met	ric Ref	Use	Iface	
10.0.4.0	10.0.1.2	255.255.255	.0	UGS	16	-	-	2
10.0.3.0	10.0.2.2	255.255.255	.0	UGS	2	-	-	3
10.0.0.0	0.0.0.0	255.255.255	.0	U 1	-	-	1	
10.0.1.0	0.0.0.0	255.255.255	.0	U 1	-	-	2	
10.0.2.0	0.0.0.0	255.255.255	.0	U 1	-	-	3	
Node: B, Ti	me: +79.0s							
Destination	Gateway	Genmask	Flag	gs Met	ric Ref	Use	Iface	
10.0.6.0	10.0.1.1	255.255.255	.0	UGS	16	-	-	1
10.0.4.0	10.0.1.1	255.255.255	.0	UGS	16	-	-	1
10.0.2.0	10.0.1.1	255.255.255	.0	UGS	2	-	-	1
10.0.0.0	10.0.1.1	255.255.255	.0	UGS	2	-	-	1
10.0.1.0	0.0.0.0	255.255.255	.0	U 1	-	-	1	
10.0.3.0	0.0.0.0	255.255.255	.0	U 1	-	-	2	
10.0.5.0	10.0.1.1	255.255.255	. 0	UGS	16	-	-	1
Node: C, Ti	me: +79.0s							
Destination	Gateway	Genmask	Flag	gs Met	ric Ref	Use	Iface	
10.0.1.0	10.0.2.1	255.255.255	.0	UGS	2	-	-	1
10.0.0.0	10.0.2.1	255.255.255	.0	UGS	2	-	-	1
10.0.2.0	0.0.0.0	255.255.255	.0	U 1	-	-	1	
10.0.3.0	0.0.0.0	255.255.255	.0	U 1	-	-	2	
10.0.4.0	10.0.2.1	255.255.255	.0	UGS	16	-	-	1
Node: D, Ti	me: +79.0s							
Destination	Gateway	Genmask	Flag	gs Met	ric Ref	Use	Iface	
10.0.6.0	0.0.0.0	255.255.255	. 0	U 1	-	-	3	
Node: A, Ti								
	Gateway	Genmask	Flag	-		Use	Iface	
10.0.6.0	10.0.2.2	255.255.255	.0	UGS	12	-	-	3
10.0.4.0	10.0.2.2	255.255.255	.0	UGS	2	-	-	3
10.0.3.0	10.0.2.2	255.255.255	.0	UGS	2	-	-	3

10.0.0.0	0.0.0.0	255.255.255	. 0	U 1	-	-	1			
10.0.1.0	0.0.0.0	255.255.255	. 0	U 1	-	-	2			
10.0.2.0	0.0.0.0	255.255.255	. 0	U 1	-	-	3			
Node: B, Tir	me: +149.0s									
Destination	Gateway	Genmask	Flag	gs Met	ric Ref	Use	Ιſ	ace		
10.0.6.0	10.0.3.2	255.255.255	. 0	UGS	12	-		-	2	
10.0.4.0	10.0.3.2	255.255.255	. 0	UGS	2	-		-	2	
10.0.2.0	10.0.1.1	255.255.255	. 0	UGS	2	-		-	1	
10.0.0.0	10.0.1.1	255.255.255	. 0	UGS	2	-		-	1	
10.0.1.0	0.0.0.0	255.255.255	. 0	U 1	-	-	1			
10.0.3.0	0.0.0.0	255.255.255	. 0	U 1	-	-	2			
10.0.5.0	10.0.1.1	255.255.255	. 0	UGS	16	-		-	1	
Node: C, Time: +149.0s										
Destination	•	Genmask		-		Use	Ιf	ace		
10.0.6.0	10.0.4.2	255.255.255		UGS	11	-		-	3	
10.0.1.0	10.0.2.1	255.255.255		UGS		-		-	1	
10.0.0.0	10.0.2.1	255.255.255		UGS		-		-	1	
10.0.2.0	0.0.0.0	255.255.255	. 0	U 1	-	-	1			
10.0.3.0	0.0.0.0	255.255.255	. 0	U 1	-	-	2			
10.0.4.0	10.0.2.1	255.255.255	. 0	UGS	16	-		-	1	
10.0.4.0	0.0.0.0	255.255.255	. 0	U 1	-	-	3			
	. 1 10 0									
Node: D, Time: +149.0s							_,	_		
Destination	•	Genmask		-		Use	Ιt	ace		
10.0.3.0	10.0.4.1	255.255.255		UGS	11	-		-	1	
10.0.2.0	10.0.4.1	255.255.255				-		-	1	
10.0.0.0	10.0.4.1	255.255.255	. 0	UGS	12	-		-	1	
10.0.1.0	10.0.4.1	255.255.255	. 0	UGS	12	-		-	1	
10.0.5.0	10.0.4.1	255.255.255	. 0	UGS	16	-		-	1	
10.0.6.0	0.0.0.0	255.255.255	. 0	U 1	-	-	3			
10.0.4.0	0.0.0.0	255.255.255	. 0	U 1	-	-	1			
Node: A, Tir	ma: +280 0c									
Destination		Genmask	El a	ac Mot	ric Ref	Hee	T f			
	10.0.1.2		•	•		056	ті	ace	2	
10.0.5.0		255.255.255		UGS	2	_		_	2	
10.0.6.0	10.0.1.2	255.255.255		UGS	3	-		-	2	
10.0.4.0	10.0.2.2	255.255.255		UGS		-		-	3	
10.0.3.0	10.0.2.2	255.255.255		UGS	2	-	_	-	3	
10.0.0.0	0.0.0.0	255.255.255		U 1	-	-	1			
10.0.1.0	0.0.0.0	255.255.255	. ၑ	U 1	-	-	2			

10.0.2.0	0.0.0.0	255.255.255.	0	U 1	-	-	3		
Node: B, Tin	ne: +280.0s								
Destination	Gateway	Genmask	Flag	js Meti	ric Ref	Use	Ιſ	ace	
10.0.6.0	10.0.5.2	255.255.255.	0	UGS	2	-		-	3
10.0.4.0	10.0.3.2	255.255.255.	0	UGS	2	-		-	2
10.0.2.0	10.0.1.1	255.255.255.	0	UGS	2	-		-	1
10.0.0.0	10.0.1.1	255.255.255.	0	UGS	2	-		-	1
10.0.1.0	0.0.0.0	255.255.255.	0	U 1	-	-	1		
10.0.3.0	0.0.0.0	255.255.255.	0	U 1	-	-	2		
10.0.5.0	10.0.1.1	255.255.255.	0	UGS	16	-		-	1
10.0.5.0	0.0.0.0	255.255.255.	0	U 1	-	-	3		
Node: C, Tin	ne: +280.0s								
Destination		Genmask	Flag	ıs Meti	ric Ref	Use	Ιſ	face	
10.0.6.0	10.0.3.1	255.255.255.	_	UGS	3	_		_	2
10.0.5.0	10.0.3.1	255.255.255.	0	UGS	2	-		-	2
10.0.1.0	10.0.2.1	255.255.255.	0	UGS	2	-		-	1
10.0.0.0	10.0.2.1	255.255.255.	0	UGS	2	_		_	1
10.0.2.0	0.0.0.0	255.255.255.	0	U 1	-	_	1		
10.0.3.0	0.0.0.0	255.255.255.	0	U 1	-	_	2		
10.0.4.0	10.0.2.1	255.255.255.	0	UGS	16	-		-	1
10.0.4.0	0.0.0.0	255.255.255.	0	U 1	-	-	3		
Node: D, Tin	ne: +280.0s								
Destination		Genmask	Flag	ıs Meti	ric Ref	Use	Ιſ	face	
10.0.3.0	10.0.5.1	255.255.255.	-	UGS	2	_		_	2
10.0.2.0	10.0.5.1	255.255.255.	0	UGS	3	_		_	2
10.0.0.0	10.0.5.1	255.255.255.	0	UGS	3	_		_	2
10.0.1.0	10.0.5.1	255.255.255.	0	UGS	2	_		_	2
10.0.5.0	10.0.4.1	255.255.255.	0	UGS	12	_		_	1
10.0.6.0	0.0.0.0	255.255.255.	0	U 1	_	-	3		
10.0.4.0	0.0.0.0	255.255.255.	0	U 1	-	-	1		
10.0.5.0	0.0.0.0	255.255.255.	0	U 1	-	-	2		

B) At t=29 s, all the tables have converged and all the links are stable. Once the B-D and B-D links are detatched, the network becomes disconnected, and D is not reachable from A, B or C. This can be seen in the tables at t=79 s, where D's gateway has changed in B and C.

At t=149 s, we see that D is reachable from A, B and C via the B-D link which was reconstructed: C routes it's packets for D through B, as does A. At t=280 s, all the router

tables have converged as they had at t=49 seconds, as all the broken links are back up again.

The command to run the program is $./waf --run 2020CS10869_partb$ (after putting the file in the scratch directory)