

APPENDIX C

Complete Test Data

This appendix provides the data generated from the CPwE solution testing. For an overview of the test approach used and test summary, see [Chapter 7, "Testing the CPwE Solution."](#) For an analysis of these test results, see [Appendix B, "Test Result Analysis."](#)

Test Suite Summary

Table C-1 Test Suite Overview

Test Suite	Topology	Spanning Tree Protocol	Uplink Physical Layer	IE Switches	Test Iterations	Network Events	MAC Address cases	Test Runs	Screw to Screw	Test Stream	
										Mcast	Ucast
RMC8	Ring	MSTP	Copper	8	20	8	3	480	X		X
RMC16	Ring	MSTP	Copper	16	10	8	3	240	X		X
RPC8	Ring	Rapid-PVST+	Copper	8	20	8	1 (baseline)	160			X
RMF8	Ring	MSTP	Fiber	8	10	4	3	120	X		X
SMC8	Red. Star	MSTP	Copper	8	10	6	3	180	X		X
SMF8	Red. Star	MSTP	Fiber	8	10	6	3	180	X		X
SEC8	Red. Star	EtherChannel	Copper	8	10	6	3	180	X	X	X
SEF8	Red. Star	EtherChannel	Fiber	8	10	6	3	180	X	X	X
SFC8	Red. Star	FlexLinks	Copper	8	10	6	3	180		X	X
SFF8	Red. Star	FlexLinks	Fiber	8	10	6	3	180		X	X

Table C-2 Test Case Naming

Topology	Ring					Redundant Star				
# of IE Switches	8 Switches			16 Switches	8 Switches					
Protocol	MSTP	Rapid PVST+	MSTP				EtherChannel		Flex Links	
Media Uplink	Copper	Copper	Fiber	Copper	Copper	Fiber	Copper	Fiber	Copper	Fiber
Shut link	RMC8-1	RPC8-1	RMF8-1	RMC16-1	SMC8-1	SMF8-1	SEC8-1	SEF8-1	SFC8-1	SFF8-1
No Shut link	RMC8-2	RPC8-2	RMF8-2	RMC16-2	SMC8-2	SMF8-2	SEC8-2	SEF8-2	SFC8-2	SFF8-2
Disconnect	RMC8-3	RPC8-3	RMF8-3	RMC16-3	SMC8-3	SMF8-3	SEC8-3	SEF8-3	SFC8-3	SFF8-3
Reconnect	RMC8-4	RPC8-4	RMF8-4	RMC16-4	SMC8-4	SMF8-4	SEC8-4	SEF8-4	SFC8-4	SFF8-4
Root down	RMC8-5	RPC8-5		RMC16-5						
Root Up	RMC8-6	RPC8-6		RMC16-6						
Stack Master down	RMC8-7	RPC8-7		RMC16-7	SMC8-5	SMF8-5	SEC8-5	SEF8-5	SFC8-5	SFF8-5
Switch Up	RMC8-8	RPC8-8		RMC16-8	SMC8-6	SMF8-6	SEC8-6	SEF8-6	SFC8-6	SFF8-6
Number of test runs	480	160	120	240	180	180	180	180	180	180
Total test runs:	1000				1080					
Grand total:	2080									

RMC8 Test Results

This section provides detailed test results for the test suite with an 8-switch ring topology, MSTP protocol, and copper media uplinks. Figure C-1 depicts the topology and the traffic flows before and after a network disruption.

Figure C-1 RMC8—Break Connection Between IES-7 and IES-8

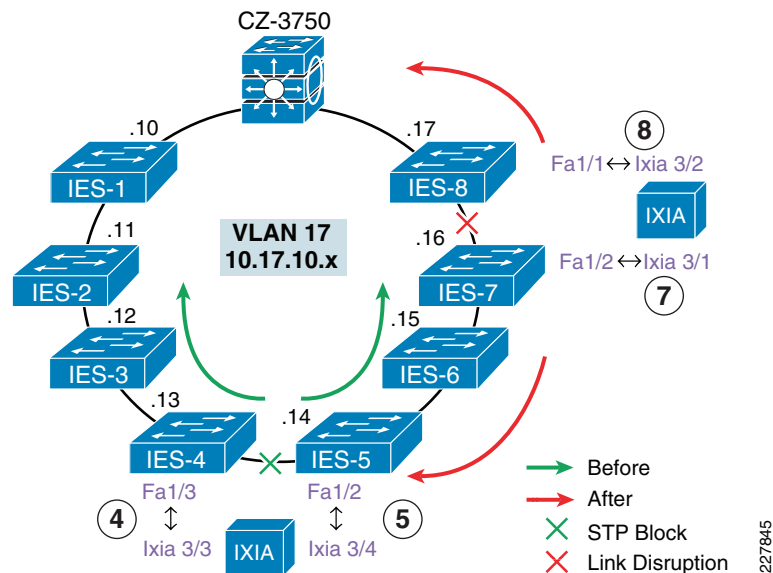


Table C-3 Test Case RMC8-1—Bring Down Link from 7 to 8 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.804	0.804	0.800	0.794	Yes	0.467	0.515	0.434	0.427	Yes	0.454	0.492	0.406	0.401	Yes
2	1.793	1.793	0.423	0.414	Yes	0.424	0.424	0.407	0.401	Yes	0.455	0.455	0.429	0.426	Yes
3	1.307	1.307	0.806	0.801	Yes	0.863	0.863	0.814	0.808	Yes	1.209	1.209	0.829	0.821	Yes
4	1.349	1.349	0.405	0.398	Yes	1.113	1.114	0.791	0.785	Yes	0.483	0.483	0.438	0.430	Yes
5	1.194	1.194	0.398	0.394	Yes	2.350	2.362	0.403	0.397	Yes	2.382	2.382	0.405	0.400	Yes
6	0.848	0.848	0.422	0.419	Yes	0.855	0.854	0.805	0.799	Yes	1.368	1.368	0.832	0.825	Yes
7	1.146	1.146	0.386	0.380	Yes	1.536	1.536	0.410	0.402	Yes	0.452	0.452	0.431	0.423	Yes
8	0.813	0.814	0.809	0.803	Yes	0.935	0.935	0.833	0.825	Yes	0.439	0.439	0.414	0.406	Yes
9	1.012	1.012	0.388	0.385	Yes	0.816	0.816	0.801	0.795	Yes	2.346	2.346	0.399	0.394	Yes
10	1.649	1.650	0.789	0.785	Yes	0.900	0.900	0.423	0.416	Yes	0.426	0.426	0.403	0.396	Yes
11	0.462	0.418	0.386	0.397	Yes	1.332	1.303	0.818	0.830	Yes	0.893	0.893	0.814	0.827	Yes
12	1.154	1.129	0.821	0.829	Yes	0.857	0.857	0.818	0.821	Yes	0.500	0.500	0.421	0.423	Yes
13	0.943	0.936	0.812	0.836	Yes	0.966	0.966	0.808	0.813	Yes	1.784	1.784	0.810	0.820	Yes
14	0.511	0.499	0.410	0.415	Yes	1.505	1.505	0.790	0.795	Yes	0.889	0.889	0.820	0.826	Yes
15	0.797	0.786	0.388	0.413	Yes	1.380	1.380	0.793	0.803	Yes	0.474	0.474	0.406	0.413	Yes
16	0.509	0.490	0.401	0.407	Yes	1.587	1.587	0.801	0.809	Yes	1.293	1.293	0.425	0.431	Yes
17	0.496	0.481	0.391	0.394	Yes	1.396	1.396	0.808	0.809	Yes	0.891	0.891	0.812	0.819	Yes
18	0.512	0.505	0.411	0.418	Yes	0.627	0.627	0.399	0.405	Yes	0.780	0.780	0.436	0.438	Yes
19	1.390	1.365	0.806	0.813	Yes	0.508	0.508	0.415	0.417	Yes	1.754	1.754	0.831	0.834	Yes
20	0.848	0.829	0.788	0.796	Yes	1.595	1.595	0.803	0.806	Yes	0.494	0.494	0.432	0.438	Yes
Average	0.977	0.968	0.562	0.565		1.101	1.102	0.669	0.668			0.990	0.560	0.560	
Std Dev.	0.392	0.397	0.203	0.204		0.481	0.479	0.193	0.195			0.641	0.197	0.200	

Table C-4 Test Case RMC8-2—Bring Link Up from 7 to 8 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.010	0.014	0.025	0.009	No	0.017	0.022	0.043	0.034	No	0.026	0.027	0.052	0.044	No
2	0.013	0.015	0.037	0.013	No	0.018	0.023	0.044	0.033	No	0.025	0.027	0.050	0.046	No
3	0.010	0.015	0.037	0.007	No	0.019	0.020	0.042	0.033	No	0.023	0.027	0.051	0.048	No
4	0.010	0.017	0.035	0.008	No	0.016	0.023	0.041	0.033	No	0.022	0.028	0.048	0.044	No
5	0.012	0.014	0.034	0.011	No	0.019	0.021	0.038	0.031	No	0.026	0.030	0.047	0.042	No
6	0.010	0.015	0.020	0.009	No	0.019	0.023	0.041	0.029	No	0.024	0.030	0.050	0.043	No
7	0.012	0.015	0.026	0.013	No	0.016	0.022	0.042	0.029	No	0.022	0.029	0.047	0.040	No
8	0.012	0.014	0.017	0.011	No	0.019	0.023	0.042	0.034	No	0.023	0.032	0.052	0.045	No
9	0.012	0.015	0.027	0.012	No	0.016	0.026	0.037	0.025	No	0.024	0.030	0.051	0.044	No
10	0.010	0.017	0.021	0.009	No	0.016	0.020	0.037	0.025	No	0.025	0.028	0.048	0.043	No
11	0.019	0.010	0.071	0.030	Yes	0.031	0.021	0.166	0.166	Yes	0.036	0.024	0.127	0.064	Yes
12	0.032	0.011	0.072	0.037	Yes	0.031	0.019	0.170	0.170	Yes	0.035	0.023	0.184	0.184	Yes

Table C-4 Test Case RMC8-2—Bring Link Up from 7 to 8 (Software) (continued)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
13	0.022	0.013	0.041	0.042	Yes	0.053	0.020	0.170	0.170	Yes	0.062	0.024	0.133	0.087	Yes
14	0.031	0.010	0.071	0.038	Yes	0.032	0.019	0.069	0.063	Yes	0.036	0.024	0.177	0.177	Yes
15	0.033	0.010	0.071	0.034	No	0.053	0.017	0.170	0.170	Yes	0.039	0.024	0.187	0.187	Yes
16	0.031	0.013	0.070	0.035	Yes	0.055	0.018	0.167	0.167	Yes	0.036	0.030	0.128	0.076	Yes
17	0.031	0.010	0.072	0.025	Yes	0.055	0.020	0.190	0.190	Yes	0.035	0.025	0.178	0.178	Yes
18	0.036	0.011	0.075	0.038	Yes	0.053	0.017	0.119	0.049	Yes	0.036	0.025	0.189	0.189	Yes
19	0.035	0.010	0.091	0.091	Yes	0.055	0.018	0.177	0.177	Yes	0.064	0.024	0.191	0.191	Yes
20	0.020	0.010	0.123	0.123	Yes	0.030	0.013	0.147	0.077	Yes	0.036	0.023	0.196	0.197	Yes
Average	0.020	0.013	0.052	0.030		0.031	0.020	0.098	0.085		0.033	0.027	0.109	0.098	
Std Dev.	0.010	0.003	0.029	0.030		0.016	0.003	0.063	0.067		0.012	0.003	0.064	0.067	

Table C-5 Test Case RMC8-3—Disconnect Cable from 7 to 8 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	1.392	1.392	0.406	0.400	Yes	0.446	0.460	0.427	0.419	Yes	0.994	1.067	0.435	0.430	Yes
2	1.363	1.363	0.409	0.404	Yes	0.669	0.684	0.405	0.398	Yes	0.581	0.597	0.405	0.399	Yes
3	0.799	0.799	0.792	0.788	Yes	1.025	1.025	0.406	0.400	Yes	1.759	1.759	0.397	0.393	Yes
4	1.178	1.178	0.781	0.775	Yes	0.427	0.439	0.410	0.405	Yes	2.176	2.176	0.815	0.808	Yes
5	0.783	0.783	0.778	0.773	Yes	0.538	0.552	0.424	0.418	Yes	1.700	1.700	0.429	0.422	Yes
6	1.101	1.101	0.385	0.380	Yes	0.807	0.807	0.794	0.786	Yes	2.348	2.348	0.422	0.417	Yes
7	1.750	1.751	0.800	0.791	Yes	0.422	0.430	0.413	0.404	Yes	0.872	0.872	0.831	0.825	Yes
8	1.863	1.863	0.814	0.807	Yes	0.812	0.805	0.788	0.782	Yes	0.843	0.843	0.797	0.790	Yes
9	1.691	1.691	0.406	0.400	Yes	0.807	0.807	0.788	0.786	Yes	0.842	0.842	0.796	0.793	Yes
10	1.722	1.722	0.804	0.798	Yes	0.802	0.802	0.786	0.782	Yes	2.054	2.075	0.813	0.808	Yes
11	1.447	1.413	0.803	0.813	Yes	0.511	0.494	0.408	0.418	Yes	0.492	0.474	0.398	0.412	Yes
12	0.430	0.406	0.385	0.391	Yes	0.967	0.967	0.799	0.809	Yes	0.871	0.871	0.807	0.814	Yes
13	0.483	0.468	0.379	0.384	Yes	1.091	1.091	0.820	0.826	Yes	0.882	0.882	0.813	0.819	Yes
14	0.923	0.911	0.413	0.419	Yes	1.746	1.746	0.821	0.827	Yes	0.864	0.864	0.796	0.806	Yes
15	1.056	1.036	0.382	0.387	Yes	0.852	0.852	0.814	0.820	Yes	1.426	1.426	0.790	0.797	Yes
16	0.964	0.932	0.842	0.844	Yes	0.454	0.446	0.386	0.392	Yes	1.125	1.125	0.798	0.805	Yes
17	0.664	0.409	0.381	0.384	Yes	0.583	0.574	0.396	0.403	Yes	1.314	1.314	0.414	0.421	Yes
18	0.463	0.441	0.414	0.417	Yes	0.566	0.556	0.397	0.404	Yes	0.499	0.487	0.413	0.449	Yes
19	1.001	0.821	0.790	0.797	Yes	0.853	0.853	0.390	0.394	Yes	0.483	0.470	0.400	0.409	Yes
20	1.281	0.414	0.387	0.389	Yes	0.460	0.451	0.390	0.397	Yes	0.896	0.896	0.822	0.829	Yes
Average	1.118	1.045	0.578	0.577		0.742	0.742	0.563	0.564		1.151	1.154	0.629	0.632	
Std Dev.	0.443	0.489	0.208	0.206		0.317	0.317	0.200	0.201		0.576	0.578	0.202	0.200	

Table C-6 Test Case RMC8-4—Reconnect Cable from 7 to 8 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	1.392	1.392	0.406	0.400	Yes	0.446	0.460	0.427	0.419	Yes	0.994	1.067	0.435	0.430	Yes
2	1.363	1.363	0.409	0.404	Yes	0.669	0.684	0.405	0.398	Yes	0.581	0.597	0.405	0.399	Yes
3	0.799	0.799	0.792	0.788	Yes	1.025	1.025	0.406	0.400	Yes	1.759	1.759	0.397	0.393	Yes
4	1.178	1.178	0.781	0.775	Yes	0.427	0.439	0.410	0.405	Yes	2.176	2.176	0.815	0.808	Yes
5	0.783	0.783	0.778	0.773	Yes	0.538	0.552	0.424	0.418	Yes	1.700	1.700	0.429	0.422	Yes
6	1.101	1.101	0.385	0.380	Yes	0.807	0.807	0.794	0.786	Yes	2.348	2.348	0.422	0.417	Yes
7	1.750	1.751	0.800	0.791	Yes	0.422	0.430	0.413	0.404	Yes	0.872	0.872	0.831	0.825	Yes
8	1.863	1.863	0.814	0.807	Yes	0.812	0.805	0.788	0.782	Yes	0.843	0.843	0.797	0.790	Yes
9	1.691	1.691	0.406	0.400	Yes	0.807	0.807	0.788	0.786	Yes	0.842	0.842	0.796	0.793	Yes
10	1.722	1.722	0.804	0.798	Yes	0.802	0.802	0.786	0.782	Yes	2.054	2.075	0.813	0.808	Yes
11	1.447	1.413	0.803	0.813	Yes	0.511	0.494	0.408	0.418	Yes	0.492	0.474	0.398	0.412	Yes
12	0.430	0.406	0.385	0.391	Yes	0.967	0.967	0.799	0.809	Yes	0.871	0.871	0.807	0.814	Yes

Table C-6 Test Case RMC8-4—Reconnect Cable from 7 to 8 (Physical) (continued)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
13	0.483	0.468	0.379	0.384	Yes	1.091	1.091	0.820	0.826	Yes	0.882	0.882	0.813	0.819	Yes
14	0.923	0.911	0.413	0.419	Yes	1.746	1.746	0.821	0.827	Yes	0.864	0.864	0.796	0.806	Yes
15	1.056	1.036	0.382	0.387	Yes	0.852	0.852	0.814	0.820	Yes	1.426	1.426	0.790	0.797	Yes
16	0.964	0.932	0.842	0.844	Yes	0.454	0.446	0.386	0.392	Yes	1.125	1.125	0.798	0.805	Yes
17	0.664	0.409	0.381	0.384	Yes	0.583	0.574	0.396	0.403	Yes	1.314	1.314	0.414	0.421	Yes
18	0.463	0.441	0.414	0.417	Yes	0.566	0.556	0.397	0.404	Yes	0.499	0.487	0.413	0.449	Yes
19	1.001	0.821	0.790	0.797	Yes	0.853	0.853	0.390	0.394	Yes	0.483	0.470	0.400	0.409	Yes
20	1.281	0.414	0.387	0.389	Yes	0.460	0.451	0.390	0.397	Yes	0.896	0.896	0.822	0.829	Yes
Average	1.118	1.045	0.578	0.577		0.742	0.742	0.563	0.564		1.151	1.154	0.629	0.632	
Std Dev.	0.443	0.489	0.208	0.206		0.317	0.317	0.200	0.201		0.576	0.578	0.202	0.200	

Table C-7 Test Case RMC8-5—Root Bridge Down

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.000	0.000	0.400	0.402	Yes	0.220	0.220	0.414	0.409	Yes	0.012	0.012	0.429	0.425	Yes
2	0.258	0.258	0.813	0.806	Yes	0.045	0.045	0.421	0.414	Yes	0.021	0.021	1.379	1.383	Yes
3	0.146	0.146	0.509	0.510	Yes	0.457	0.457	0.430	0.425	Yes	0.458	0.458	0.912	0.912	Yes
4	0.006	0.006	1.728	1.728	Yes	0.804	0.804	0.823	0.815	Yes	0.030	0.029	0.817	0.810	Yes
5	0.000	0.000	0.425	0.426	Yes	0.057	0.057	1.213	1.213	Yes	0.517	0.517	0.811	0.819	Yes
6	0.229	0.229	0.827	0.822	Yes	0.013	0.013	1.129	1.129	Yes	0.204	0.204	0.428	0.420	Yes
7	0.005	0.005	0.540	0.542	Yes	0.849	0.849	0.413	0.406	Yes	0.021	0.021	2.016	2.016	Yes
8	0.006	0.006	1.256	1.257	Yes	0.024	0.023	0.417	0.412	Yes	0.000	0.000	0.421	0.425	Yes
9	0.135	0.135	0.704	0.704	Yes	0.011	0.011	1.765	1.765	Yes	0.022	0.021	0.403	0.404	Yes
10	0.006	0.006	0.414	0.416	Yes	0.094	0.094	0.449	0.443	Yes	0.505	0.504	0.961	0.961	Yes
11	0.684	0.685	0.396	0.407	Yes	0.476	0.476	0.399	0.411	Yes	0.074	0.074	2.565	2.565	Yes
12	0.297	0.297	0.411	0.419	Yes	0.391	0.391	0.402	0.414	Yes	0.091	0.091	0.930	0.930	Yes
13	0.245	0.245	0.777	0.785	Yes	0.846	0.846	1.270	1.274	Yes	0.506	0.506	1.348	1.348	Yes
14	0.037	0.037	1.852	1.852	Yes	0.151	0.151	0.789	0.795	Yes	0.180	0.180	0.797	0.808	Yes
15	0.080	0.080	0.383	0.386	Yes	0.148	0.148	0.394	0.404	Yes	0.159	0.159	1.855	1.855	Yes
16	0.202	0.202	0.774	0.785	Yes	0.095	0.096	1.214	1.214	Yes	0.171	0.171	0.403	0.435	Yes
17	0.208	0.208	0.801	0.809	Yes	0.153	0.153	0.402	0.413	Yes	0.249	0.249	0.679	0.811	Yes
18	0.049	0.049	0.384	0.389	Yes	0.235	0.235	0.383	0.394	Yes	0.278	0.279	1.283	1.283	Yes
19	0.032	0.032	1.006	1.006	Yes	0.566	0.566	0.393	0.399	Yes	0.170	0.170	0.394	0.404	Yes
20	0.051	0.052	0.409	0.435	Yes	0.132	0.132	1.159	1.159	Yes	0.066	0.066	0.153	0.160	Yes
Average	0.134	0.134	0.740	0.744		0.288	0.288	0.714	0.715		0.187	0.187	0.949	0.959	
Std Dev.	0.165	0.165	0.434	0.431		0.285	0.285	0.424	0.423		0.179	0.179	0.629	0.625	

Table C-8 Test Case RMC8-6—Root Bridge Up

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.020	0.020	0.220	0.220	Yes	0.465	0.465	0.468	0.453	Yes	0.595	0.595	0.710	0.697	Yes
2	0.022	0.022	0.900	0.901	Yes	0.038	0.038	0.733	0.720	Yes	0.045	0.045	0.296	0.300	Yes
3	0.022	0.022	0.024	0.024	Yes	0.038	0.038	0.399	0.391	Yes	0.062	0.062	0.072	0.062	Yes
4	0.021	0.021	0.045	0.017	Yes	0.034	0.034	0.540	0.544	Yes	0.049	0.049	0.634	0.643	Yes
5	0.019	0.019	0.045	0.045	Yes	0.042	0.042	0.313	0.304	Yes	0.060	0.060	0.752	0.739	Yes
6	0.020	0.020	0.860	0.853	Yes	0.884	0.884	0.905	0.885	Yes	0.276	0.276	0.284	0.269	Yes
7	0.399	0.399	0.429	0.400	Yes	0.547	0.547	0.563	0.548	Yes	0.133	0.133	0.163	0.148	Yes
8	0.022	0.022	0.024	0.024	No	0.042	0.042	0.702	0.691	Yes	0.067	0.067	0.073	0.058	Yes
9	0.022	0.022	0.308	0.308	Yes	0.040	0.040	0.061	0.053	Yes	0.060	0.060	0.063	0.058	Yes
10	0.023	0.023	0.023	0.023	No	0.039	0.040	0.231	0.221	Yes	0.045	0.045	0.305	0.305	Yes
11	0.028	0.028	0.890	0.867	Yes	0.102	0.102	0.464	0.465	Yes	0.175	0.175	0.139	0.144	Yes
12	0.036	0.036	1.070	1.042	Yes	0.061	0.061	0.118	0.121	Yes	0.878	0.878	0.881	0.881	Yes
13	0.032	0.032	1.060	1.045	Yes	0.051	0.051	0.121	0.120	Yes	0.829	0.829	0.878	0.878	Yes
14	0.105	0.105	0.650	0.650	Yes	0.108	0.108	0.197	0.158	Yes	0.146	0.146	0.890	0.890	Yes
15	0.033	0.033	0.072	0.040	Yes	0.119	0.119	0.226	0.226	Yes	0.069	0.069	0.069	0.069	Yes
16	0.363	0.363	0.513	0.542	Yes	0.098	0.098	0.220	0.220	Yes	0.074	0.074	1.006	1.006	Yes
17	0.053	0.053	0.953	0.984	Yes	0.239	0.239	0.282	0.282	Yes	0.120	0.120	1.078	1.079	Yes
18	0.395	0.395	0.501	0.532	Yes	0.057	0.057	0.238	0.238	Yes	0.084	0.084	0.214	0.182	Yes
19	0.032	0.032	1.006	1.006	Yes	0.058	0.058	0.126	0.129	Yes	0.066	0.066	0.153	0.160	Yes
20	0.032	0.032	0.093	0.068	Yes	0.094	0.094	0.848	0.848	Yes	0.110	0.110	0.538	0.538	Yes
Average	0.085	0.085	0.484	0.479		0.158	0.158	0.388	0.381		0.197	0.197	0.460	0.455	
Std Dev.	0.131	0.131	0.405	0.408		0.222	0.222	0.255	0.253		0.257	0.257	0.358	0.361	

Table C-9 Test Case RMC8-7—Stack Master Down

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.020	0.020	1.362	1.362	Yes	0.037	0.037	0.821	0.816	Yes	0.000	0.000	1.968	1.968	Yes
2	0.010	0.010	0.403	0.396	Yes	0.000	0.000	1.264	1.264	Yes	0.359	0.359	0.422	0.418	Yes
3	0.000	0.000	0.810	0.805	Yes	0.395	0.395	0.820	0.812	Yes	0.000	0.000	1.374	1.374	Yes
4	0.580	0.580	0.410	0.407	Yes	0.000	0.000	0.832	0.832	Yes	0.038	0.038	0.854	0.846	Yes
5	0.000	0.000	0.804	0.799	Yes	0.021	0.021	0.413	0.408	Yes	0.000	0.000	2.401	2.401	Yes
6	0.010	0.010	0.416	0.413	Yes	0.000	0.000	2.734	2.734	Yes	0.507	0.507	0.492	0.482	Yes
7	0.000	0.000	0.814	0.815	Yes	0.763	0.763	0.442	0.438	Yes	0.000	0.000	0.799	0.804	Yes
8	0.013	0.013	0.824	0.818	Yes	0.000	0.000	2.748	2.748	Yes	0.027	0.026	0.843	0.840	Yes
9	0.000	0.000	1.197	1.197	Yes	0.801	0.801	0.425	0.418	Yes	0.000	0.000	0.408	0.409	Yes
10	0.048	0.048	1.183	1.175	Yes	0.000	0.000	0.427	0.430	Yes	1.514	1.514	0.449	0.439	Yes
11	0.081	0.081	0.804	0.812	Yes	0.107	0.107	0.802	0.813	Yes	0.705	0.705	0.418	0.429	Yes
12	0.000	0.000	0.404	0.404	Yes	0.000	0.000	0.411	0.433	Yes	0.000	0.000	0.587	0.587	Yes
13	0.791	0.791	0.370	0.378	Yes	0.883	0.883	0.393	0.404	Yes	0.534	0.534	0.385	0.402	Yes

Table C-9 Test Case RMC8-7—Stack Master Down (continued)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
14	0.000	0.000	0.813	0.817	Yes	0.000	0.000	0.464	0.464	Yes	0.000	0.000	0.459	0.459	Yes
15	0.225	0.225	0.374	0.379	Yes	0.089	0.089	0.399	0.412	Yes	0.119	0.119	0.385	0.399	Yes
16	0.000	0.000	1.257	1.257	Yes	0.000	0.000	0.423	0.448	Yes	0.000	0.000	0.442	0.462	Yes
17	0.043	0.043	0.377	0.385	Yes	0.105	0.105	0.409	0.419	Yes	0.115	0.115	0.406	0.415	Yes
18	0.000	0.000	1.737	1.736	Yes	0.000	0.000	1.147	1.147	Yes	0.000	0.000	0.421	0.439	Yes
19	0.047	0.047	0.381	0.389	Yes	0.093	0.093	0.804	0.836	Yes	0.211	0.211	0.817	0.828	Yes
20	0.000	0.000	0.805	0.812	Yes	0.000	0.000	0.408	0.429	Yes	0.000	0.000	1.222	1.222	Yes
Average	0.093	0.093	0.777	0.778		0.165	0.165	0.829	0.835		0.206	0.206	0.778	0.781	
Std Dev.	0.212	0.212	0.399	0.398		0.295	0.295	0.705	0.703		0.376	0.376	0.563	0.561	

Table C-10 Test Case RMC8-8—Adding Switch Back to Stack

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.000	0.000	0.006	0.042	No	0.027	0.027	0.027	0.011	No	0.000	0.000	0.013	0.013	No
2	0.022	0.022	0.024	0.006	No	0.000	0.000	0.011	0.007	No	0.033	0.033	0.035	0.016	No
3	0.000	0.000	0.006	0.006	No	0.026	0.026	0.021	0.009	No	0.000	0.000	0.010	0.010	No
4	0.019	0.019	0.015	0.008	No	0.000	0.000	0.010	0.006	No	0.033	0.033	0.032	0.016	No
5	0.000	0.000	0.007	0.007	No	0.026	0.026	0.019	0.010	No	0.000	0.000	0.008	0.008	No
6	0.020	0.020	0.024	0.006	No	0.000	0.000	0.009	0.006	No	0.033	0.033	0.034	0.016	No
7	0.000	0.000	0.008	0.008	Yes	0.040	0.040	0.039	0.039	No	0.000	0.000	0.013	0.012	No
8	0.022	0.022	0.024	0.009	Yes	0.000	0.000	0.010	0.006	No	0.034	0.034	0.038	0.017	No
9	0.000	0.000	0.008	0.047	Yes	0.027	0.028	0.019	0.011	No	0.000	0.000	0.013	0.006	No
10	0.022	0.022	0.026	0.008	Yes	0.000	0.000	0.009	0.006	No	0.035	0.035	0.033	0.016	No
11	0.033	0.033	0.049	0.037	Yes	0.049	0.049	0.095	0.076	Yes	0.058	0.058	0.137	0.085	Yes
12	0.000	0.000	0.134	0.100	Yes	0.000	0.000	0.175	0.175	Yes	0.000	0.000	0.177	0.177	Yes
13	0.032	0.032	0.051	0.037	Yes	0.169	0.169	0.183	0.184	Yes	0.057	0.057	0.093	0.087	Yes
14	0.000	0.000	0.109	0.093	Yes	0.000	0.000	0.172	0.172	Yes	0.000	0.000	0.184	0.184	Yes
15	0.033	0.033	0.048	0.040	Yes	0.051	0.051	0.137	0.074	Yes	0.056	0.056	0.158	0.158	Yes
16	0.000	0.000	0.126	0.092	Yes	0.000	0.000	0.079	0.057	Yes	0.000	0.000	0.173	0.173	Yes
17	0.028	0.028	0.048	0.038	Yes	0.050	0.050	0.093	0.072	Yes	0.185	0.185	0.194	0.194	Yes
18	0.000	0.000	0.137	0.102	Yes	0.000	0.000	0.100	0.059	Yes	0.000	0.000	0.168	0.168	Yes
19	0.033	0.033	0.049	0.039	Yes	0.181	0.181	0.181	0.181	Yes	0.057	0.057	0.140	0.080	Yes
20	0.000	0.000	0.121	0.092	Yes	0.000	0.000	0.176	0.176	Yes	0.000	0.000	0.032	0.058	Yes
Average	0.013	0.013	0.051	0.041		0.032	0.032	0.078	0.067		0.029	0.029	0.084	0.075	
Std Dev.	0.014	0.014	0.047	0.036		0.052	0.052	0.069	0.070		0.043	0.043	0.072	0.073	

Table C-11 Test Case RMC16-1—Bring Down Link from 7 to 8 (Software) (continued)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
9	1.164	1.164	0.805	0.804	Yes	2.167	2.167	0.423	0.425	Yes	1.670	1.670	0.804	0.812	Yes
10	2.112	2.112	0.797	0.806	Yes	1.355	1.355	0.401	0.406	Yes	0.483	0.483	0.424	0.429	Yes
Average	1.794	1.791	0.646	0.646		1.656	1.642	0.620	0.619		1.670	1.668	0.655	0.654	
Std Dev.	0.443	0.443	0.205	0.205		0.620	0.636	0.208	0.209		0.648	0.650	0.207	0.208	

Table C-12 Test Case RMC16-2—Bring Link Up from 7 to 8 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.010	0.015	0.024	0.007	No	0.017	0.025	0.033	0.026	No	0.024	0.031	0.051	0.032	No
2	0.010	0.017	0.010	0.006	No	0.017	0.023	0.035	0.026	No	0.024	0.030	0.048	0.035	No
3	0.010	0.017	0.014	0.008	No	0.016	0.025	0.035	0.023	No	0.042	0.043	0.053	0.035	No
4	0.010	0.016	0.014	0.006	No	0.017	0.025	0.029	0.020	No	0.023	0.030	0.054	0.040	No
5	0.010	0.018	0.028	0.005	No	0.017	0.022	0.046	0.036	No	0.024	0.028	0.042	0.029	No
6	0.015	0.010	0.007	0.014	No	0.023	0.017	0.029	0.039	No	0.031	0.024	0.056	0.057	No
7	0.016	0.010	0.007	0.020	No	0.022	0.017	0.038	0.045	No	0.034	0.024	0.055	0.055	No
8	0.015	0.010	0.007	0.035	No	0.035	0.035	0.023	0.033	No	0.029	0.024	0.054	0.055	No
9	0.015	0.010	0.007	0.018	No	0.026	0.017	0.038	0.044	No	0.030	0.023	0.052	0.053	No
10	0.016	0.015	0.007	0.030	No	0.021	0.017	0.027	0.038	No	0.028	0.024	0.063	0.063	No
Average	0.013	0.014	0.012	0.015		0.021	0.022	0.033	0.033		0.029	0.028	0.053	0.045	
Std Dev.	0.003	0.003	0.008	0.011		0.006	0.006	0.007	0.009		0.006	0.006	0.005	0.012	

Table C-13 Test Case RMC16-3—Disconnect Cable from 7 to 8 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	1.386	1.386	0.806	0.803	Yes	1.330	1.330	0.788	0.782	Yes	1.684	1.684	0.812	0.805	Yes
2	1.871	1.871	0.805	0.802	Yes	1.210	1.210	0.811	0.806	Yes	1.291	1.291	0.401	0.394	Yes
3	1.332	1.332	0.417	0.411	Yes	0.746	0.746	0.390	0.384	Yes	1.650	1.650	0.799	0.794	Yes
4	1.710	1.710	0.795	0.790	Yes	0.901	0.901	0.395	0.389	Yes	1.320	1.320	0.434	0.427	Yes
5	1.108	1.108	0.387	0.382	Yes	1.256	1.256	0.815	0.810	Yes	2.369	2.369	0.435	0.429	Yes
6	1.341	1.333	0.791	0.798	Yes	1.180	1.180	0.810	0.817	Yes	1.073	0.950	0.412	0.417	Yes
7	1.291	1.291	0.800	0.802	Yes	1.119	1.119	0.397	0.402	Yes	0.929	0.929	0.414	0.419	Yes
8	1.354	1.354	0.818	0.823	Yes	0.536	0.521	0.421	0.427	Yes	1.238	1.238	0.413	0.421	Yes
9	1.636	1.636	0.789	0.791	Yes	0.988	0.988	0.386	0.391	Yes	1.212	1.212	0.429	0.437	Yes
10	1.133	1.133	0.384	0.389	Yes	1.377	1.377	0.392	0.398	Yes	1.364	1.364	0.430	0.434	Yes
Average	1.416	1.415	0.679	0.679		1.064	1.063	0.561	0.561		1.413	1.401	0.498	0.498	
Std Dev.	0.247	0.248	0.196	0.197		0.270	0.273	0.212	0.210		0.407	0.420	0.163	0.160	

Table C-14 Test Case RMC16-4—Reconnect Cable from 7 to 8

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.010	0.014	0.033	0.006	No	0.016	0.022	0.046	0.034	No	0.023	0.031	0.053	0.040	No
2	0.010	0.017	0.024	0.007	No	0.017	0.022	0.030	0.019	No	0.026	0.027	0.065	0.051	No
3	0.010	0.013	0.035	0.008	No	0.016	0.020	0.025	0.017	No	0.025	0.029	0.061	0.047	No
4	0.012	0.015	0.032	0.009	No	0.018	0.020	0.029	0.017	No	0.024	0.026	0.055	0.042	No
5	0.010	0.017	0.038	0.007	No	0.016	0.020	0.038	0.025	No	0.024	0.032	0.048	0.034	No
6	0.016	0.010	0.008	0.017	No	0.022	0.017	0.031	0.041	No	0.030	0.024	0.064	0.064	No
7	0.014	0.011	0.007	0.037	No	0.023	0.017	0.022	0.033	No	0.030	0.028	0.059	0.059	No
8	0.016	0.010	0.010	0.013	No	0.022	0.017	0.024	0.040	No	0.033	0.024	0.049	0.051	No
9	0.015	0.011	0.009	0.037	No	0.022	0.017	0.020	0.030	No	0.030	0.024	0.058	0.058	No
10	0.015	0.010	0.007	0.024	No	0.023	0.017	0.029	0.037	No	0.027	0.025	0.061	0.061	No
Average	0.013	0.013	0.020	0.017		0.020	0.019	0.029	0.029		0.027	0.027	0.057	0.051	
Std Dev.	0.003	0.003	0.013	0.012		0.003	0.002	0.008	0.009		0.003	0.003	0.006	0.010	

Table C-15 Test Case RMC16-5—Root Bridge Down

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.006	0.006	1.065	1.061	Yes	0.287	0.287	0.655	0.649	Yes	0.000	0.000	0.558	0.560	Yes
2	0.086	0.086	0.441	0.438	Yes	0.000	0.000	0.988	0.988	Yes	0.000	0.000	0.456	0.452	Yes
3	0.000	0.000	0.531	0.533	Yes	0.000	0.000	1.220	1.215	Yes	0.000	0.000	0.635	0.635	Yes
4	0.000	0.000	1.205	1.199	Yes	0.000	0.000	1.650	1.644	Yes	0.017	0.017	0.462	0.458	Yes
5	0.074	0.074	1.637	1.631	Yes	0.000	0.000	0.483	0.476	Yes	0.015	0.015	0.469	0.466	Yes
6	0.015	0.015	0.899	0.899	Yes	0.000	0.000	0.427	0.425	Yes	0.022	0.022	1.296	1.296	Yes
7	0.931	0.931	0.423	0.429	Yes	0.090	0.090	1.294	1.294	Yes	0.432	0.432	0.471	0.469	Yes
8	0.139	0.139	0.458	0.466	Yes	0.104	0.104	1.091	1.091	Yes	0.398	0.398	0.870	0.868	Yes
9	0.195	0.195	1.449	1.449	Yes	0.000	0.000	0.409	0.400	Yes	0.368	0.369	0.520	0.517	Yes
10	0.233	0.233	1.152	1.152	Yes	0.025	0.025	0.484	0.489	Yes	0.812	0.812	0.504	0.511	Yes
Average	0.168	0.168	0.926	0.926		0.051	0.051	0.870	0.867		0.206	0.206	0.624	0.623	
Std Dev.	0.281	0.281	0.446	0.443		0.092	0.092	0.438	0.438		0.282	0.282	0.267	0.268	

Table C-16 Test Case RMC16-6—Root Bridge Up

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.021	0.021	0.044	0.021	No	0.034	0.034	0.045	0.045	No	0.050	0.050	0.883	0.883	Yes
2	0.020	0.020	0.008	0.008	No	0.034	0.034	0.689	0.689	Yes	0.061	0.061	0.093	0.077	No
3	0.022	0.022	0.520	0.520	Yes	0.034	0.034	0.356	0.357	Yes	0.048	0.048	0.422	0.422	Yes
4	0.019	0.019	0.690	0.661	Yes	0.047	0.048	0.054	0.041	Yes	0.048	0.049	0.307	0.307	Yes
5	0.013	0.014	0.432	0.419	Yes	0.031	0.031	0.720	0.726	Yes	0.063	0.063	0.091	0.077	No

Table C-16 Test Case RMC16-6—Root Bridge Up (continued)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
6	0.024	0.024	0.023	0.023	Yes	0.033	0.033	0.628	0.628	Yes	0.491	0.491	0.901	0.901	Yes
7	0.026	0.026	0.733	0.733	Yes	0.034	0.034	0.049	0.048	Yes	0.053	0.053	0.105	0.105	Yes
8	0.421	0.421	0.861	0.889	Yes	0.037	0.038	0.022	0.027	Yes	0.052	0.052	0.065	0.065	Yes
9	0.229	0.229	0.908	0.922	Yes	0.038	0.038	0.942	0.935	Yes	0.080	0.080	0.835	0.851	Yes
10	0.024	0.024	0.689	0.717	Yes	0.044	0.044	0.910	0.912	Yes	0.831	0.831	0.911	0.928	Yes
Average	0.082	0.082	0.491	0.491		0.036	0.037	0.441	0.441		0.178	0.178	0.461	0.462	
Std Dev.	0.136	0.136	0.350	0.359		0.005	0.005	0.378	0.379		0.267	0.267	0.379	0.387	

Table C-17 Test Case RMC16-7—Stack Master Down

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1 - SLOT 1	0.013	0.013	1.749	1.744	Yes	0.025	0.025	1.864	1.861	Yes	0.034	0.034	1.815	1.809	Yes
2 - SLOT 2	0.000	0.000	0.815	0.817	Yes	0.000	0.000	1.143	1.143	Yes	0.000	0.000	0.964	0.964	Yes
3 - SLOT 1	0.103	0.103	0.904	0.898	Yes	0.323	0.323	0.846	0.841	Yes	0.026	0.026	1.608	1.598	Yes
4 - SLOT 2	0.000	0.000	0.812	0.813	Yes	0.000	0.000	0.833	0.836	Yes	0.000	0.000	0.803	0.803	Yes
5 - SLOT 1	0.013	0.012	1.762	1.762	Yes	0.022	0.022	1.732	1.727	Yes	0.032	0.032	1.376	1.368	Yes
6 - SLOT 2	0.000	0.000	0.805	0.806	Yes	0.000	0.000	0.464	0.464	Yes	0.000	0.000	0.421	0.420	Yes
7 - SLOT 1	0.000	0.000	0.824	0.822	Yes	0.000	0.000	0.840	0.839	Yes	0.000	0.000	0.440	0.438	Yes
8 - SLOT 2	0.866	0.866	0.422	0.424	Yes	0.024	0.025	0.429	0.434	Yes	0.857	0.857	0.462	0.472	Yes
9 - SLOT 1	0.000	0.000	0.395	0.393	Yes	0.000	0.000	1.400	1.400	Yes	0.000	0.000	0.598	0.598	Yes
10 - SLOT 2	0.120	0.120	0.435	0.440	Yes	0.028	0.029	0.436	0.439	Yes	0.721	0.721	0.449	0.451	Yes
11 - SLOT 1	0.000	0.000	0.789	0.789	Yes	0.000	0.000	0.822	0.817	Yes	0.000	0.000	0.727	0.727	Yes
12 - SLOT 2	0.903	0.903	0.826	0.832	Yes	0.184	0.184	0.410	0.417	Yes	0.672	0.672	0.843	0.849	Yes
Average	0.168	0.168	0.878	0.878		0.051	0.051	0.935	0.935		0.195	0.195	0.876	0.875	
Std Dev.	0.337	0.337	0.448	0.446		0.100	0.100	0.505	0.502		0.337	0.337	0.480	0.476	

Table C-18 Test Case RMC16-8—Adding Switch Back to Stack

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1 - SLOT 1	0.023	0.023	0.028	0.009	Yes	0.037	0.037	0.037	0.029	No	0.049	0.049	0.072	0.053	No
2 - SLOT 2	0.000	0.000	0.009	0.019	No	0.000	0.000	0.040	0.040	No	0.000	0.000	0.039	0.040	No
3 - SLOT 1	0.023	0.023	0.036	0.005	No	0.035	0.036	0.045	0.032	No	0.049	0.049	0.072	0.054	No
4 - SLOT 2	0.000	0.000	0.010	0.018	No	0.000	0.000	0.032	0.033	No	0.000	0.000	0.049	0.049	No
5 - SLOT 1	0.020	0.020	0.019	0.005	No	0.036	0.036	0.049	0.032	No	0.035	0.035	0.057	0.035	No
6 - SLOT 2	0.000	0.000	0.009	0.013	No	0.000	0.000	0.020	0.025	No	0.000	0.000	0.049	0.049	No
7 - SLOT 1	0.000	0.000	0.004	0.005	No	0.000	0.000	0.009	0.011	No	0.000	0.000	0.008	0.015	No

Table C-18 Test Case RMC16-8—Adding Switch Back to Stack (continued)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
8 - SLOT 2	0.022	0.022	0.008	0.032	No	0.041	0.041	0.029	0.034	No	0.039	0.039	0.022	0.036	No
9 - SLOT 1	0.000	0.000	0.007	0.007	No	0.000	0.000	0.010	0.011	No	0.000	0.000	0.005	0.015	No
10 - SLOT 2	0.025	0.025	0.008	0.020	No	0.031	0.031	0.014	0.026	No	0.036	0.036	0.020	0.030	No
11 - SLOT 1	0.000	0.000	0.005	0.006	No	0.000	0.000	0.009	0.012	No	0.000	0.000	0.010	0.010	No
12 - SLOT 2	0.026	0.025	0.008	0.020	No	0.031	0.031	0.017	0.030	No	0.037	0.037	0.021	0.030	No
Average	0.012	0.012	0.012	0.013		0.018	0.018	0.026	0.026		0.020	0.020	0.035	0.035	
Std Dev.	0.012	0.012	0.010	0.009		0.019	0.019	0.015	0.010		0.022	0.022	0.024	0.015	

RPC8 Test Results

This section provides detailed test results for the test suite with an 8-switch ring topology, rapid PVST+ protocol, and copper media uplinks. Figure C-3 depicts the topology and the traffic flows before and after a network disruption.

Figure C-3 RPC8—Break Connection Between IES-7 and IES-8

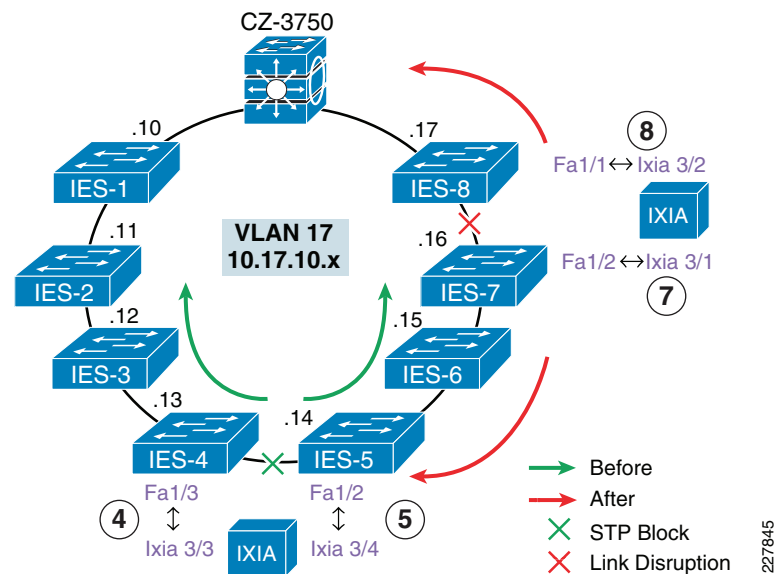


Table C-19 Test Case RPC8-1—Bring Link Down from 7 to 8 (Software)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.851	0.851	0.832	0.822	Yes
2	0.465	0.480	0.451	0.443	Yes
3	0.433	0.450	0.415	0.406	Yes

Table C-19 Test Case RPC8-1—Bring Link Down from 7 to 8 (Software) (continued)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
4	0.472	0.472	0.451	0.443	Yes
5	0.474	0.474	0.455	0.446	Yes
6	0.459	0.459	0.436	0.433	Yes
7	0.858	0.858	0.826	0.826	Yes
8	0.868	0.868	0.849	0.842	Yes
9	0.435	0.435	0.417	0.404	Yes
10	0.834	0.834	0.815	0.807	Yes
11	0.467	0.452	0.427	0.438	Yes
12	0.858	0.858	0.832	0.841	Yes
13	0.435	0.435	0.411	0.420	Yes
14	0.840	0.840	0.817	0.819	Yes
15	0.464	0.464	0.440	0.450	Yes
16	0.826	0.826	0.802	0.811	Yes
17	0.440	0.440	0.416	0.426	Yes
18	0.419	0.418	0.395	0.403	Yes
19	0.431	0.431	0.404	0.417	Yes
20	0.842	0.842	0.815	0.827	Yes
Average	0.609	0.609	0.585	0.586	
Std Dev.	0.201	0.200	0.200	0.200	

Table C-20 Test Case RPC8-2—Bring Link Up from 7 to 8 (Software)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
2	0.021	0.027	0.021	0.012	No
3	0.025	0.028	0.019	0.016	No
4	0.020	0.024	0.020	0.020	No
5	0.023	0.029	0.019	0.011	No
6	0.016	0.020	0.020	0.012	No
7	0.018	0.023	0.036	0.013	No
8	0.021	0.027	0.033	0.011	No
9	0.016	0.020	0.032	0.011	No
10	0.019	0.025	0.030	0.012	No
11	0.027	0.021	0.011	0.037	No
12	0.021	0.018	0.010	0.023	No
13	0.025	0.019	0.013	0.043	No
14	0.018	0.014	0.011	0.018	No
15	0.022	0.018	0.011	0.032	No
16	0.022	0.018	0.010	0.022	No
17	0.021	0.018	0.015	0.026	No
18	0.011	0.007	0.012	0.018	No
19	0.031	0.022	0.015	0.021	No
20	0.019	0.015	0.012	0.027	No

Table C-20 Test Case RPC8-2—Bring Link Up from 7 to 8 (Software) (continued)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
Average	0.021	0.021	0.019	0.020	
Std Dev.	0.004	0.005	0.008	0.009	

Table C-21 Test Case RPC8-3—Disconnect Cable from 7 to 8 (Physical)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.845	0.846	0.819	0.818	Yes
2	0.860	0.860	0.832	0.823	Yes
3	0.854	0.854	0.843	0.835	Yes
4	0.863	0.863	0.840	0.836	Yes
5	0.425	0.446	0.406	0.390	Yes
6	0.453	0.648	0.427	0.419	Yes
7	0.846	0.846	0.825	0.817	Yes
8	0.453	0.471	0.435	0.426	Yes
9	0.473	0.483	0.443	0.435	Yes
10	0.839	0.839	0.812	0.804	Yes
11	0.448	0.436	0.407	0.408	Yes
12	0.845	0.845	0.819	0.829	Yes
13	0.817	0.817	0.792	0.800	Yes
14	0.827	0.812	0.788	0.798	Yes
15	0.436	0.428	0.402	0.411	Yes
16	0.445	0.431	0.405	0.414	Yes
17	0.821	0.821	0.795	0.803	Yes
18	0.822	0.822	0.799	0.808	Yes
19	0.442	0.425	0.401	0.406	Yes
20	0.441	0.438	0.411	0.422	Yes
Average	0.663	0.672	0.635	0.635	
Std Dev.	0.202	0.195	0.205	0.205	

Table C-22 Test Case RPC8-4—Reconnect Cable from 7 to 8

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.021	0.027	0.025	0.016	No
2	0.021	0.026	0.039	0.011	No
3	0.014	0.018	0.032	0.014	No
4	0.024	0.028	0.030	0.014	No
5	0.024	0.037	0.015	0.013	No
6	0.009	0.014	0.018	0.012	No
7	0.027	0.031	0.016	0.015	No
8	0.027	0.031	0.021	0.017	No
9	0.009	0.042	0.022	0.011	No

Table C-22 Test Case RPC8-4—Reconnect Cable from 7 to 8 (continued)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-PeerTimeout
10	0.024	0.028	0.033	0.012	No
11	0.017	0.013	0.015	0.021	No
12	0.030	0.023	0.012	0.025	No
13	0.021	0.017	0.014	0.020	No
14	0.021	0.018	0.011	0.019	No
15	0.019	0.016	0.015	0.017	No
16	0.019	0.015	0.015	0.033	No
17	0.021	0.017	0.014	0.042	No
18	0.021	0.017	0.011	0.038	No
19	0.020	0.016	0.010	0.031	No
20	0.023	0.017	0.011	0.028	No
Average	0.021	0.023	0.019	0.020	
Std Dev.	0.005	0.008	0.009	0.009	

Table C-23 Test Case RPC8-5—Root Bridge Down

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-PeerTimeout
1	0.020	0.020	0.508	0.499	Yes
2	0.014	0.014	0.486	0.483	Yes
3	0.013	0.013	0.449	0.490	Yes
4	0.000	0.000	0.556	0.561	Yes
5	0.011	0.011	0.876	0.869	Yes
6	0.016	0.016	0.480	0.473	Yes
7	0.015	0.015	0.494	0.485	Yes
8	0.013	0.013	0.894	0.888	Yes
9	0.000	0.000	0.583	0.585	Yes
10	0.015	0.015	0.498	0.491	Yes
11	0.000	0.000	0.826	0.823	Yes
12	0.000	0.000	0.811	0.807	Yes
13	0.032	0.032	0.882	0.869	Yes
14	0.034	0.034	0.471	0.466	Yes
15	0.000	0.000	0.425	0.421	Yes
16	0.024	0.024	0.437	0.450	Yes
17	0.022	0.022	0.465	0.473	Yes
18	0.024	0.024	0.445	0.447	Yes
19	0.022	0.022	0.460	0.457	Yes
20	0.000	0.000	0.428	0.424	Yes
Average	0.014	0.014	0.574	0.573	
Std Dev.	0.011	0.011	0.173	0.170	

Table C-24 Test Case RPC8-6—Root Bridge Up

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.031	0.031	0.024	0.024	No
2	0.061	0.057	0.039	0.035	No
3	0.032	0.032	0.032	0.032	No
4	0.028	0.028	0.040	0.044	Yes
5	0.328	0.033	0.049	0.053	Yes
6	0.054	0.050	0.042	0.038	Yes
7	0.030	0.030	0.044	0.047	Yes
8	0.035	0.035	0.042	0.046	Yes
9	0.029	0.029	0.047	0.051	Yes
10	0.043	0.043	0.040	0.034	No
11	0.024	0.024	0.013	0.013	No
12	0.040	0.040	0.028	0.058	No
13	0.044	0.044	0.028	0.040	No
14	0.024	0.024	0.015	0.015	No
15	0.034	0.034	0.020	0.020	No
16	0.041	0.042	0.033	0.038	No
17	0.025	0.025	0.040	0.039	No
18	0.032	0.032	0.033	0.034	No
19	0.029	0.029	0.034	0.034	No
20	0.024	0.024	0.039	0.032	No
Average	0.049	0.034	0.034	0.036	
Std Dev.	0.066	0.009	0.010	0.012	

Table C-25 Test Case RPC8-7—Stack Master Down

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.031	0.031	0.477	0.468	Yes
2	0.000	0.000	0.427	0.431	Yes
3	0.032	0.032	0.475	0.464	Yes
4	0.000	0.000	0.871	0.875	Yes
5	0.029	0.028	0.472	0.462	Yes
6	0.000	0.000	0.862	0.866	Yes
7	0.026	0.026	0.458	0.449	Yes
8	0.000	0.000	0.834	0.838	Yes
9	0.027	0.027	0.458	0.450	Yes
10	0.000	0.000	0.859	0.862	Yes
11	0.000	0.000	0.844	0.834	Yes
12	0.035	0.035	0.427	0.437	Yes
13	0.000	0.000	0.426	0.423	Yes
14	0.036	0.036	0.417	0.435	Yes
15	0.000	0.000	0.440	0.436	Yes
16	0.000	0.000	0.864	0.859	Yes

Table C-25 Test Case RPC8-7—Stack Master Down (continued)

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
17	0.000	0.000	0.819	0.816	Yes
18	0.035	0.036	0.460	0.470	Yes
19	0.000	0.000	0.425	0.422	Yes
20	0.037	0.038	0.858	0.867	Yes
Average	0.014	0.014	0.609	0.608	
Std Dev.	0.017	0.017	0.204	0.205	

Table C-26 Test Case RPC8-8—Adding Switch Back to Stack

	Baseline				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.031	0.031	0.012	0.012	No
2	0.000	0.000	0.016	0.016	No
3	0.036	0.036	0.044	0.011	No
4	0.000	0.000	0.010	0.010	No
5	0.036	0.033	0.010	0.010	No
6	0.000	0.000	0.009	0.010	No
7	0.038	0.038	0.011	0.011	No
8	0.000	0.000	0.012	0.019	No
9	0.033	0.032	0.012	0.012	No
10	0.000	0.000	0.013	0.016	No
11	0.000	0.000	0.015	0.010	No
12	0.045	0.046	0.015	0.017	No
13	0.000	0.000	0.016	0.009	No
14	0.026	0.026	0.015	0.015	No
15	0.000	0.000	0.016	0.009	No
16	0.000	0.000	0.014	0.014	No
17	0.000	0.000	0.016	0.009	No
18	0.026	0.028	0.010	0.010	No
19	0.000	0.000	0.024	0.010	No
20	0.032	0.032	0.011	0.011	No
Average	0.015	0.015	0.015	0.012	
Std Dev.	0.018	0.018	0.008	0.003	

RMF8 Test Results

This section provides detailed test results for the test suite with a 8-switch ring topology, MSTP protocol, and fiber media uplinks. [Figure C-4](#) depicts the topology and the traffic flows before and after a network disruption.

Figure C-4 RMF8—Break Connection between IES-7 and IES-8

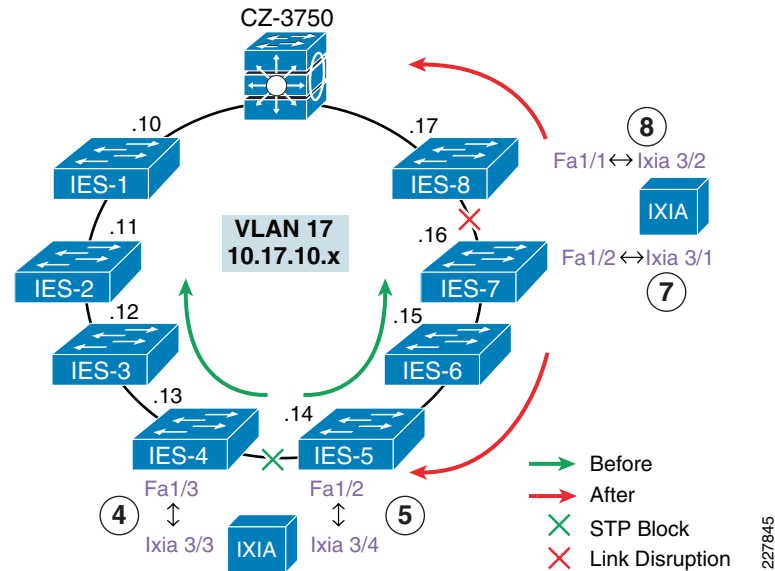


Table C-27 Test Case RMF8-1—Bring Down Link from 7 to 8 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	1.246	1.246	0.055	0.051	Yes	0.111	0.127	0.093	0.086	Yes	0.160	0.161	0.104	0.101	Yes
2	1.497	1.497	0.072	0.067	Yes	1.939	1.939	0.088	0.081	Yes	0.127	0.127	0.102	0.096	Yes
3	0.092	0.092	0.091	0.084	No	1.150	1.150	0.096	0.088	Yes	0.119	0.119	0.070	0.063	No
4	0.175	0.175	0.087	0.081	Yes	0.100	0.100	0.082	0.075	Yes	0.095	0.095	0.075	0.068	Yes
5	0.085	0.085	0.079	0.073	No	0.085	0.085	0.071	0.063	No	1.622	1.622	0.072	0.069	Yes
6	0.975	0.969	0.051	0.057	Yes	0.129	0.129	0.096	0.096	Yes	0.598	0.481	0.074	0.087	Yes
7	0.090	0.090	0.077	0.083	Yes	0.458	0.458	0.070	0.077	Yes	0.114	0.114	0.067	0.074	Yes
8	0.079	0.079	0.069	0.074	No	0.142	0.124	0.094	0.101	Yes	0.116	0.116	0.092	0.097	Yes
9	0.073	0.073	0.063	0.069	Yes	0.089	0.089	0.065	0.072	Yes	0.102	0.102	0.069	0.070	Yes
10	0.360	0.360	0.069	0.074	Yes	0.425	0.425	0.086	0.092	Yes	0.121	0.121	0.084	0.092	Yes
Average	0.467	0.467	0.071	0.071		0.463	0.462	0.084	0.083		0.317	0.306	0.081	0.082	
Std Dev.	0.554	0.553	0.013	0.011		0.615	0.615	0.012	0.012		0.483	0.477	0.014	0.014	

Table C-28 Test Case RMF8-2—Bring Up Link from 7 to 8 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.010	0.016	0.025	0.009	Yes	0.016	0.024	0.044	0.028	No	0.024	0.035	0.072	0.056	No
2	0.010	0.018	0.039	0.009	Yes	0.016	0.027	0.034	0.026	No	0.021	0.035	0.058	0.045	No
3	0.010	0.020	0.029	0.008	No	0.019	0.020	0.045	0.032	No	0.024	0.032	0.083	0.065	No
4	0.010	0.015	0.027	0.008	No	0.018	0.021	0.047	0.032	No	0.023	0.030	0.061	0.047	No
5	0.010	0.016	0.013	0.008	Yes	0.016	0.021	0.053	0.035	No	0.026	0.029	0.065	0.047	No
6	0.015	0.018	0.017	0.035	No	0.022	0.016	0.032	0.040	No	0.031	0.028	0.055	0.056	No

Table C-28 Test Case RMF8-2—Bring Up Link from 7 to 8 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
7	0.015	0.015	0.017	0.035	No	0.022	0.024	0.031	0.034	No	0.032	0.028	0.064	0.064	No
8	0.018	0.010	0.011	0.020	No	0.022	0.017	0.022	0.035	No	0.029	0.024	0.042	0.049	No
9	0.016	0.010	0.007	0.023	No	0.021	0.021	0.056	0.056	No	0.029	0.024	0.048	0.051	No
10	0.016	0.010	0.009	0.034	No	0.023	0.017	0.032	0.042	No	0.032	0.023	0.045	0.048	No
Average	0.013	0.015	0.019	0.019		0.019	0.021	0.040	0.036		0.027	0.029	0.059	0.053	
Std Dev.	0.003	0.004	0.010	0.012		0.003	0.004	0.011	0.009		0.004	0.004	0.013	0.007	

Table C-29 Test Case RMF8-3—Disconnect Cable from 7 to 8 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.060	0.127	0.125	0.050	No	0.073	0.094	0.080	0.051	No	0.110	0.136	0.110	0.078	Yes
2	1.967	1.987	0.082	0.057	Yes	1.398	1.417	0.062	0.036	Yes	1.133	1.149	0.070	0.048	Yes
3	0.041	0.079	0.064	0.029	No	1.375	1.395	0.087	0.061	Yes	1.156	1.173	0.087	0.064	Yes
4	1.309	1.329	0.084	0.059	Yes	0.093	0.111	0.092	0.068	Yes	1.112	1.130	0.084	0.060	Yes
5	1.073	1.103	0.077	0.040	Yes	0.060	0.079	0.058	0.034	No	0.104	0.133	0.108	0.073	Yes
6	0.150	0.075	0.061	0.128	Yes	0.136	0.086	0.055	0.092	No	0.513	0.485	0.074	0.098	Yes
7	0.078	0.061	0.051	0.073	Yes	1.006	0.990	0.036	0.057	Yes	0.128	0.115	0.063	0.084	Yes
8	0.016	0.010	0.007	0.035	Yes	0.429	0.413	0.074	0.099	Yes	0.126	0.111	0.076	0.093	Yes
9	0.786	0.770	0.030	0.051	Yes	0.702	0.686	0.043	0.064	Yes	0.281	0.266	0.056	0.079	Yes
10	0.078	0.058	0.049	0.070	Yes	0.083	0.066	0.036	0.059	Yes	0.980	0.958	0.084	0.109	Yes
Average	0.556	0.560	0.063	0.059		0.535	0.534	0.062	0.062		0.564	0.566	0.081	0.079	
Std Dev.	0.691	0.701	0.032	0.028		0.549	0.554	0.020	0.021		0.475	0.478	0.018	0.018	

Table C-30 Test Case RMF8-4—Reconnect Cable from 7 to 8

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.012	0.013	0.016	0.011	No	0.016	0.024	0.039	0.025	No	0.022	0.030	0.061	0.048	No
2	0.010	0.013	0.023	0.010	No	0.019	0.020	0.049	0.034	No	0.023	0.029	0.055	0.040	No
3	0.012	0.013	0.026	0.012	No	0.017	0.025	0.039	0.031	No	0.023	0.031	0.063	0.044	No
4	0.012	0.014	0.040	0.010	No	0.015	0.021	0.041	0.027	No	0.024	0.027	0.067	0.051	No
5	0.010	0.017	0.014	0.008	No	0.016	0.028	0.035	0.027	No	0.022	0.029	0.073	0.060	No
6	0.016	0.010	0.010	0.037	No	0.021	0.022	0.041	0.047	No	0.023	0.028	0.050	0.051	No
7	0.016	0.010	0.007	0.035	No	0.024	0.018	0.027	0.041	No	0.028	0.025	0.038	0.049	No
8	0.015	0.011	0.014	0.037	No	0.023	0.017	0.031	0.043	No	0.029	0.023	0.042	0.049	No
9	0.015	0.013	0.015	0.040	No	0.026	0.016	0.038	0.045	No	0.028	0.025	0.059	0.059	No
10	0.016	0.014	0.014	0.032	No	0.027	0.016	0.035	0.047	No	0.030	0.023	0.045	0.049	No
Average	0.013	0.013	0.018	0.023		0.020	0.021	0.037	0.037		0.025	0.027	0.055	0.050	
Std Dev.	0.002	0.002	0.010	0.014		0.004	0.004	0.006	0.009		0.003	0.003	0.011	0.006	

SMC8 Test Results

This section provides detailed test results for the test suite with an 8-switch redundant star topology, MSTP protocol, and copper media uplinks. Figure C-5 depicts the topology and the traffic flows before and after a network disruption.

Figure C-5 SMC8

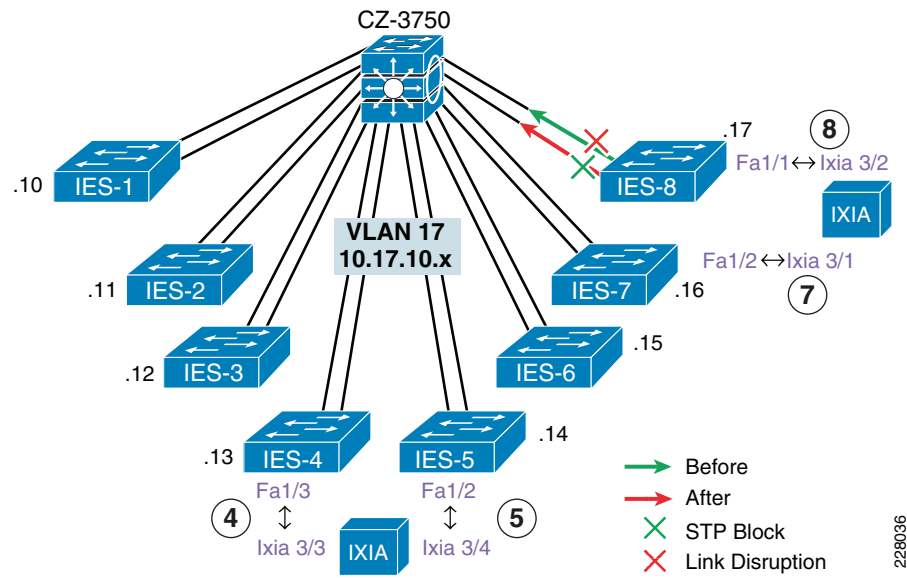


Table C-31 Test Case SMC8-1—Bring Down Active Link Between IES-8 and 3750 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.049	0.010	0.000	0.000	No	0.113	0.031	0.000	0.000	No	0.159	0.052	0.000	0.000	No
2	0.045	0.012	0.000	0.000	No	0.109	0.031	0.000	0.000	No	0.172	0.053	0.000	0.000	No
3	0.015	0.010	0.000	0.000	No	0.093	0.033	0.000	0.000	No	0.170	0.054	0.000	0.000	No
4	0.016	0.012	0.000	0.000	No	0.091	0.031	0.000	0.000	No	0.160	0.054	0.000	0.000	No
5	0.013	0.011	0.000	0.000	No	0.099	0.032	0.000	0.000	No	0.165	0.051	0.000	0.000	No
6	0.016	0.058	0.000	0.000	No	0.033	0.146	0.000	0.000	No	0.034	0.068	0.000	0.000	No
7	0.015	0.045	0.000	0.000	No	0.022	0.102	0.000	0.000	No	0.034	0.096	0.000	0.000	No
8	0.014	0.047	0.000	0.000	No	0.034	0.106	0.000	0.000	No	0.034	0.093	0.000	0.000	No
9	0.014	0.015	0.000	0.000	No	0.033	0.101	0.000	0.000	No	0.034	0.098	0.000	0.000	No
10	0.014	0.016	0.000	0.000	No	0.035	0.099	0.000	0.000	No	0.034	0.098	0.000	0.000	No
Average	0.021	0.024	0.000	0.000		0.066	0.071	0.000	0.000		0.100	0.072	0.000	0.000	
Std Dev.	0.014	0.019	0.000	0.000		0.037	0.044	0.000	0.000		0.069	0.022	0.000	0.000	

Table C-32 Test Case SMC8-2—Bring Up Active Link Between IES-8 and 3750 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.027	0.010	0.000	0.000	No	0.056	0.019	0.000	0.000	No	0.122	0.031	0.000	0.000	4.642
2	0.029	0.010	0.000	0.000	No	0.058	0.026	0.000	0.000	No	0.158	0.030	0.000	0.000	4.614
3	0.031	0.010	0.000	0.000	No	0.053	0.019	0.000	0.000	No	0.151	0.030	0.000	0.000	4.611
4	0.037	0.012	0.000	0.000	No	0.056	0.019	0.000	0.000	No	0.128	0.030	0.000	0.000	4.630
5	0.029	0.010	0.000	0.000	No	0.053	0.022	0.000	0.000	No	0.123	0.031	0.000	0.000	4.657
6	0.014	0.022	0.000	0.000	No	0.020	0.072	0.000	0.000	Yes	0.023	0.097	0.000	0.000	4.588
7	0.010	0.034	0.000	0.000	No	0.020	0.074	0.000	0.000	Yes	0.020	0.067	0.000	0.000	4.591
8	0.010	0.036	0.000	0.000	No	0.020	0.104	0.000	0.000	Yes	0.023	0.089	0.000	0.000	4.593
9	0.010	0.031	0.000	0.000	No	0.021	0.094	0.000	0.000	Yes	0.020	0.100	0.000	0.000	4.603
10	0.010	0.022	0.000	0.000	No	0.020	0.099	0.000	0.000	Yes	0.020	0.072	0.000	0.000	4.592
Average	0.021	0.020	0.000	0.000		0.038	0.055	0.000	0.000		0.079	0.058	0.000	0.000	4.612
Std Dev.	0.011	0.011	0.000	0.000		0.019	0.037	0.000	0.000		0.062	0.030	0.000	0.000	0.024

Table C-33 Test Case SMC8-3—Disconnect Active Link Between IES-8 and 3750 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.779	0.780	0.000	0.000	Yes	0.795	0.795	0.000	0.000	Yes	0.846	0.847	0.000	0.000	Yes
2	0.779	0.779	0.000	0.000	Yes	0.788	0.788	0.000	0.000	Yes	0.543	0.422	0.000	0.000	Yes
3	0.801	0.801	0.000	0.000	Yes	0.853	0.827	0.000	0.000	Yes	0.568	0.443	0.000	0.000	Yes
4	0.784	0.784	0.000	0.000	Yes	0.464	0.401	0.000	0.000	Yes	0.541	0.421	0.000	0.000	Yes
5	0.793	0.793	0.000	0.000	Yes	0.490	0.411	0.000	0.000	Yes	0.830	0.830	0.000	0.000	Yes
6	0.388	0.428	0.000	0.000	Yes	0.798	0.798	0.000	0.000	Yes	0.818	0.818	0.000	0.000	Yes
7	0.778	0.778	0.000	0.000	Yes	0.824	0.823	0.000	0.000	Yes	0.838	0.838	0.000	0.000	Yes
8	0.811	0.811	0.000	0.000	Yes	0.408	0.475	0.000	0.000	Yes	0.856	0.856	0.000	0.000	Yes
9	0.387	0.417	0.000	0.000	Yes	0.425	0.490	0.000	0.000	Yes	0.829	0.829	0.000	0.000	Yes
10	0.393	0.398	0.000	0.000	Yes	0.428	0.487	0.000	0.000	Yes	0.415	0.536	0.000	0.000	Yes
Average	0.669	0.677	0.000	0.000		0.627	0.630	0.000	0.000		0.708	0.684	0.000	0.000	
Std Dev.	0.194	0.181	0.000	0.000		0.196	0.189	0.000	0.000		0.170	0.199	0.000	0.000	

Table C-34 Test Case SMC8-4—Reconnect Active Link Between IES-8 and 3750 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.041	0.010	0.000	0.000	No	0.047	0.020	0.000	0.000	No	0.119	0.030	0.000	0.000	Yes
2	0.027	0.010	0.000	0.000	No	0.057	0.019	0.000	0.000	No	0.162	0.030	0.000	0.000	Yes
3	0.038	0.010	0.000	0.000	No	0.048	0.020	0.000	0.000	No	0.095	0.030	0.000	0.000	Yes
4	0.027	0.010	0.000	0.000	No	0.057	0.020	0.000	0.000	No	0.140	0.030	0.000	0.000	Yes
5	0.027	0.010	0.000	0.000	No	0.036	0.019	0.000	0.000	No	0.111	0.030	0.000	0.000	Yes
6	0.013	0.036	0.000	0.000	No	0.020	0.096	0.000	0.000	Yes	0.031	0.167	0.000	0.000	Yes
7	0.010	0.021	0.000	0.000	No	0.020	0.105	0.000	0.000	Yes	0.030	0.205	0.000	0.000	Yes
8	0.010	0.032	0.000	0.000	No	0.020	0.069	0.000	0.000	Yes	0.034	0.171	0.000	0.000	Yes
9	0.013	0.021	0.000	0.000	No	0.020	0.096	0.000	0.000	Yes	0.031	0.186	0.000	0.000	Yes
10	0.010	0.021	0.000	0.000	No	0.023	0.091	0.000	0.000	Yes	0.033	0.206	0.000	0.000	Yes
Average	0.022	0.018	0.000	0.000		0.035	0.055	0.000	0.000		0.079	0.108	0.000	0.000	
Std Dev.	0.012	0.010	0.000	0.000		0.016	0.039	0.000	0.000		0.052	0.084	0.000	0.000	

Table C-35 Test Case SMC8-5—Stack Master Down (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.824	0.854	0.819	0.801	Yes	0.863	0.855	0.487	0.480	Yes	0.954	0.954	0.548	0.550	Yes
2	0.436	0.436	0.800	0.788	Yes	0.510	0.473	0.883	0.875	Yes	0.936	0.939	0.513	0.528	Yes
3	0.806	0.832	0.830	0.831	Yes	0.938	0.873	0.867	0.846	Yes	0.888	0.872	0.499	0.534	Yes
4	0.824	0.797	0.434	0.459	Yes	0.493	0.523	0.853	0.845	Yes	0.903	0.917	0.880	0.901	Yes
5	0.838	0.807	0.433	0.435	Yes	0.466	0.489	0.866	0.858	Yes	0.583	0.552	0.589	0.559	Yes
6	0.813	0.780	0.406	0.407	Yes	0.845	0.826	0.823	0.834	Yes	0.855	0.896	0.823	0.866	Yes
7	0.811	0.795	0.808	0.794	Yes	0.815	0.802	0.831	0.849	Yes	0.833	0.854	0.503	0.517	Yes
8	0.422	0.423	0.421	0.424	Yes	0.804	0.845	0.439	0.473	Yes	0.838	0.866	0.877	0.846	Yes
9	0.826	0.807	0.796	0.793	Yes	0.481	0.491	0.425	0.477	Yes	0.864	0.820	0.882	0.874	Yes
10	0.835	0.834	0.435	0.436	Yes	0.530	0.439	0.430	0.530	Yes	0.530	0.505	0.832	0.854	Yes
Average	0.744	0.736	0.618	0.617		0.674	0.662	0.690	0.707		0.818	0.818	0.695	0.703	
Std Dev.	0.166	0.163	0.203	0.195		0.192	0.190	0.212	0.187		0.144	0.158	0.176	0.175	

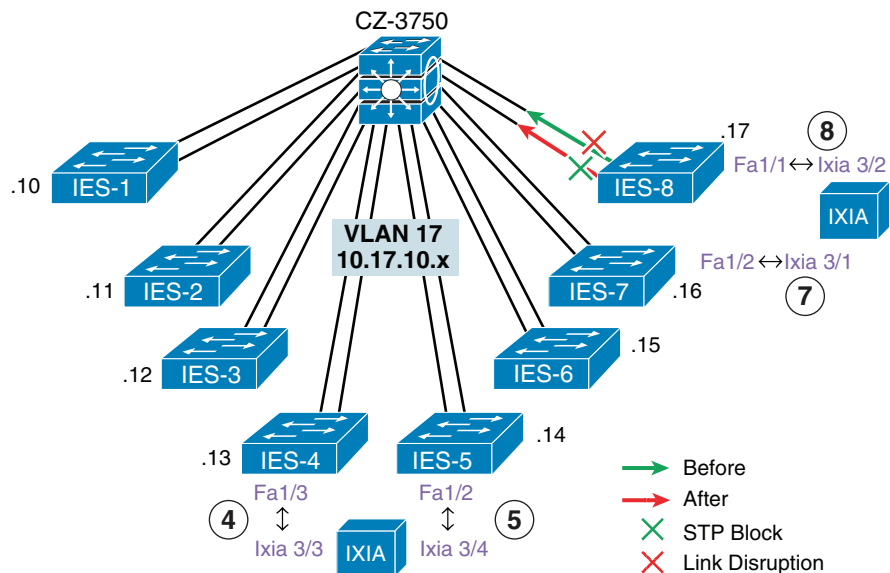
Table C-36 Test Case SMC8-6—Adding the Switch Back to Stack

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.041	0.046	0.027	0.048	No	0.052	0.064	0.052	0.062	No	0.078	0.097	0.073	0.094	Yes
2	0.486	0.475	0.840	0.826	No	0.065	0.091	0.054	0.069	Yes	0.084	0.163	0.109	0.108	Yes
3	0.023	0.025	0.036	0.047	No	0.091	0.107	0.052	0.072	Yes	0.072	0.134	0.072	0.088	Yes
4	0.042	0.057	0.025	0.023	No	0.056	0.098	0.055	0.062	No	0.111	0.154	0.083	0.087	Yes
5	0.023	0.038	0.056	0.041	Yes	0.080	0.066	0.060	0.063	No	0.177	0.154	0.101	0.098	Yes
6	0.043	0.027	0.040	0.047	No	0.065	0.133	0.066	0.073	Yes	0.252	0.215	0.114	0.159	Yes
7	0.043	0.046	0.056	0.036	No	0.073	0.138	0.129	0.110	Yes	0.104	0.082	0.086	0.083	Yes
8	0.046	0.049	0.039	0.053	No	0.133	0.163	0.091	0.053	Yes	0.115	0.292	0.109	0.246	Yes
9	0.044	0.023	0.047	0.050	No	0.156	0.063	0.072	0.077	Yes	0.141	0.147	0.084	0.153	Yes
10	0.042	0.066	0.059	0.065	No	0.138	0.055	0.066	0.071	Yes	0.141	0.224	0.080	0.121	Yes
Average	0.083	0.085	0.123	0.124		0.091	0.098	0.070	0.071		0.127	0.166	0.091	0.124	
Std Dev.	0.142	0.138	0.252	0.247		0.038	0.037	0.024	0.015		0.054	0.063	0.016	0.051	

SMF8 Test Results

This section provides detailed test results for the test suite with an 8-switch redundant star topology, MSTP protocol, and fiber media uplinks. Figure C-6 depicts the topology and the traffic flows before and after a network disruption.

Figure C-6 SMF8—Bring Down Active Link Between IES-8 and 3750



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Table C-37 Test Case SMF8-1—Shutdown Active Link from IES-8 to 3750 (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.064	0.014	0.000	0.000	No	0.069	0.032	0.000	0.000	No	0.174	0.058	0.000	0.000	Yes
2	0.044	0.013	0.000	0.000	No	0.104	0.031	0.000	0.000	No	0.098	0.054	0.000	0.000	No
3	0.020	0.013	0.000	0.000	No	0.061	0.032	0.000	0.000	No	0.078	0.051	0.000	0.000	No
4	0.046	0.013	0.000	0.000	No	0.100	0.032	0.000	0.000	No	0.079	0.052	0.000	0.000	No
5	0.014	0.011	0.000	0.000	No	0.068	0.032	0.000	0.000	No	0.079	0.053	0.000	0.000	No
6	0.016	0.044	0.000	0.000	No	0.035	0.084	0.000	0.000	No	0.049	0.142	0.000	0.000	No
7	0.016	0.051	0.000	0.000	No	0.035	0.058	0.000	0.000	No	0.053	0.075	0.000	0.000	No
8	0.016	0.050	0.000	0.000	No	0.033	0.066	0.000	0.000	No	0.046	0.061	0.000	0.000	No
9	0.016	0.046	0.000	0.000	No	0.033	0.080	0.000	0.000	No	0.057	0.149	0.000	0.000	No
10	0.013	0.048	0.000	0.000	No	0.034	0.080	0.000	0.000	No	0.058	0.097	0.000	0.000	No
Average	0.026	0.030	0.000	0.000		0.057	0.053	0.000	0.000		0.077	0.079	0.000	0.000	
Std Dev.	0.018	0.018	0.000	0.000		0.028	0.023	0.000	0.000		0.038	0.038	0.000	0.000	

Table C-38 Test Case SMF8-2—Bring Up Link from IES-8 to 3750 (software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.027	0.012	0.000	0.000	No	0.082	0.020	0.000	0.000	Yes	0.136	0.031	0.000	0.000	Yes
2	0.040	0.010	0.000	0.000	No	0.062	0.019	0.000	0.000	Yes	0.094	0.030	0.000	0.000	No
3	0.040	0.012	0.000	0.000	No	0.063	0.020	0.000	0.000	Yes	0.121	0.032	0.000	0.000	Yes
4	0.027	0.010	0.000	0.000	No	0.048	0.020	0.000	0.000	No	0.127	0.030	0.000	0.000	Yes
5	0.027	0.010	0.000	0.000	No	0.056	0.020	0.000	0.000	No	0.095	0.030	0.000	0.000	No
6	0.010	0.018	0.000	0.000	No	0.020	0.063	0.000	0.000	No	0.032	0.123	0.000	0.000	No
7	0.010	0.023	0.000	0.000	No	0.021	0.073	0.000	0.000	No	0.031	0.119	0.000	0.000	Yes
8	0.012	0.021	0.000	0.000	No	0.020	0.060	0.000	0.000	No	0.031	0.126	0.000	0.000	No
9	0.013	0.035	0.000	0.000	No	0.020	0.052	0.000	0.000	No	0.033	0.120	0.000	0.000	No
10	0.010	0.033	0.000	0.000	No	0.020	0.059	0.000	0.000	No	0.031	0.127	0.000	0.000	Yes
Average	0.022	0.018	0.000	0.000		0.041	0.041	0.000	0.000		0.073	0.077	0.000	0.000	
Std Dev.	0.012	0.010	0.000	0.000		0.024	0.023	0.000	0.000		0.046	0.049	0.000	0.000	

Table C-39 Test Case SMF8-3—Disconnect Active Link from IES-8 to 3750 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.067	0.087	0.000	0.000	No	0.080	0.085	0.000	0.000	No	0.111	0.118	0.000	0.000	No
2	0.075	0.078	0.000	0.000	No	0.087	0.122	0.000	0.000	No	0.096	0.109	0.000	0.000	No
3	0.074	0.058	0.000	0.000	No	0.081	0.092	0.000	0.000	No	0.084	0.104	0.000	0.000	No
4	0.067	0.075	0.000	0.000	No	0.093	0.092	0.000	0.000	No	0.080	0.094	0.000	0.000	No
5	0.070	0.064	0.000	0.000	No	0.089	0.116	0.000	0.000	No	0.118	0.144	0.000	0.000	Yes
6	0.024	0.068	0.000	0.000	No	0.102	0.074	0.000	0.000	No	0.175	0.100	0.000	0.000	Yes
7	0.157	0.095	0.000	0.000	Yes	0.144	0.086	0.000	0.000	Yes	0.141	0.101	0.000	0.000	Yes
8	0.096	0.048	0.000	0.000	No	0.109	0.086	0.000	0.000	No	0.175	0.104	0.000	0.000	Yes
9	0.078	0.043	0.000	0.000	No	0.111	0.072	0.000	0.000	No	0.131	0.092	0.000	0.000	Yes
10	0.130	0.095	0.000	0.000	Yes	0.137	0.094	0.000	0.000	Yes	0.166	0.122	0.000	0.000	Yes
Average	0.084	0.071	0.000	0.000		0.103	0.092	0.000	0.000		0.128	0.109	0.000	0.000	
Std Dev.	0.037	0.018	0.000	0.000		0.022	0.016	0.000	0.000		0.036	0.016	0.000	0.000	

Table C-40 Test Case SMF8-4—Reconnect Cable IES-8 to 3750 (Physical)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.029	0.010	0.000	0.000	No	0.050	0.020	0.000	0.000	No	0.141	0.030	0.000	0.000	Yes
2	0.027	0.010	0.000	0.000	No	0.045	0.020	0.000	0.000	No	0.149	0.030	0.000	0.000	Yes
3	0.036	0.012	0.000	0.000	No	0.047	0.020	0.000	0.000	No	0.145	0.030	0.000	0.000	Yes
4	0.040	0.010	0.000	0.000	No	0.088	0.022	0.000	0.000	Yes	0.108	0.033	0.000	0.000	Yes
5	0.045	0.010	0.000	0.000	No	0.083	0.022	0.000	0.000	Yes	0.129	0.033	0.000	0.000	Yes
6	0.010	0.028	0.000	0.000	No	0.023	0.068	0.000	0.000	No	0.030	0.116	0.000	0.000	Yes
7	0.010	0.024	0.000	0.000	No	0.020	0.070	0.000	0.000	No	0.031	0.129	0.000	0.000	Yes
8	0.013	0.024	0.000	0.000	No	0.020	0.065	0.000	0.000	No	0.030	0.118	0.000	0.000	Yes
9	0.010	0.016	0.000	0.000	No	0.020	0.057	0.000	0.000	No	0.031	0.127	0.000	0.000	No
10	0.010	0.017	0.000	0.000	No	0.024	0.068	0.000	0.000	No	0.031	0.131	0.000	0.000	Yes
Average	0.023	0.016	0.000	0.000		0.042	0.043	0.000	0.000		0.083	0.078	0.000	0.000	
Std Dev.	0.014	0.007	0.000	0.000		0.026	0.024	0.000	0.000		0.056	0.049	0.000	0.000	

Table C-41 Test Case SMF8-5—Stack Master Down (Software)

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.090	0.089	0.115	0.088	No	0.137	0.193	0.159	0.173	Yes	0.191	0.213	0.180	0.195	Yes
2	0.096	0.127	0.092	0.093	Yes	0.183	0.202	0.146	0.182	Yes	0.229	0.227	0.196	0.201	Yes
3	0.114	0.094	0.111	0.113	No	0.162	0.187	0.124	0.158	Yes	0.213	0.224	0.250	0.199	Yes
4	0.082	0.080	0.080	0.081	No	0.153	0.185	0.151	0.121	Yes	0.230	0.233	0.210	0.203	Yes
5	0.097	0.126	0.093	0.095	No	0.153	0.184	0.161	0.192	Yes	0.228	0.269	0.233	0.240	Yes
6	0.092	0.091	0.095	0.093	Yes	0.156	0.143	0.149	0.164	Yes	0.204	0.174	0.186	0.173	Yes
7	0.103	0.104	0.071	0.070	No	0.144	0.178	0.146	0.165	Yes	0.246	0.247	0.199	0.210	Yes
8	0.113	0.097	0.078	0.103	No	0.141	0.167	0.125	0.160	Yes	0.189	0.234	0.204	0.225	Yes
9	0.076	0.077	0.094	0.106	No	0.170	0.159	0.151	0.128	Yes	0.188	0.238	0.196	0.235	Yes
10	0.100	0.099	0.105	0.104	Yes	0.163	0.140	0.144	0.130	Yes	0.244	0.218	0.188	0.241	Yes
Average	0.096	0.098	0.093	0.095		0.156	0.174	0.146	0.157		0.216	0.228	0.204	0.212	
Std Dev.	0.012	0.017	0.014	0.013		0.014	0.021	0.012	0.024		0.022	0.025	0.022	0.022	

Table C-42 Test Case SMF8-6—Adding Switch Back to Stack

	Baseline					200 MAC					400 MAC				
Run	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout	7 to 8	8 to 7	4 to 5	5 to 4	Peer-to-Peer Timeout
1	0.051	0.050	0.049	0.085	No	0.071	0.105	0.134	0.087	Yes	0.088	0.146	0.169	0.111	Yes
2	0.034	0.033	0.061	0.056	No	0.056	0.052	0.083	0.080	Yes	0.105	0.180	0.159	0.127	Yes
3	0.037	0.036	0.068	0.064	No	0.066	0.091	0.176	0.110	Yes	0.115	0.176	0.132	0.135	Yes
4	0.040	0.039	0.060	0.054	No	0.070	0.095	0.128	0.086	Yes	0.115	0.141	0.169	0.152	Yes
5	0.048	0.046	0.063	0.067	No	0.081	0.104	0.144	0.110	Yes	0.084	0.100	0.164	0.113	Yes
6	0.042	0.038	0.044	0.049	No	0.038	0.040	0.062	0.060	No	0.080	0.080	0.088	0.095	Yes
7	0.032	0.029	0.035	0.023	No	0.083	0.090	0.061	0.056	No	0.102	0.104	0.096	0.102	Yes
8	0.030	0.030	0.043	0.063	No	0.062	0.067	0.051	0.062	No	0.078	0.084	0.074	0.099	Yes
9	0.021	0.022	0.042	0.032	No	0.041	0.041	0.054	0.058	No	0.079	0.080	0.089	0.124	Yes
10	0.041	0.043	0.041	0.053	No	0.025	0.044	0.044	0.070	No	0.089	0.089	0.093	0.104	Yes
Average	0.038	0.036	0.051	0.054		0.059	0.073	0.094	0.078		0.093	0.118	0.123	0.116	
Std Dev.	0.009	0.008	0.011	0.018		0.019	0.027	0.047	0.020		0.015	0.039	0.039	0.018	

SEC8 Test Results

This section provides detailed test results for the test suite with an 8-switch redundant star topology, EtherChannel protocol and copper media uplinks. [Figure C-7](#) depicts the topology and the traffic flows before and after a network disruption.

Figure C-7 SEC8—Bring Down Active Link Between IES-8 and 3750

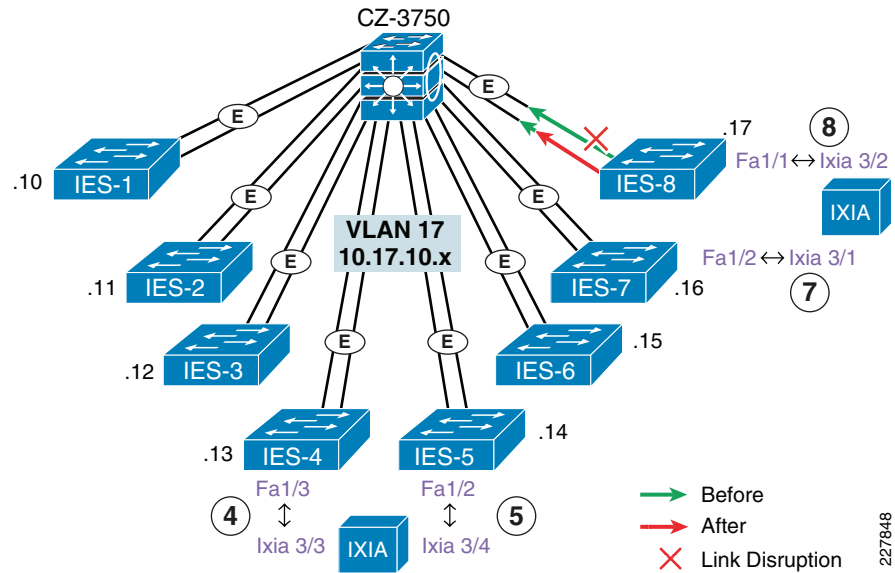


Table C-43 Test Case SEC8-1—Shutdown Link IES-8 to 3750

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.393	0.001	0.393	0.001	Yes	0.425	0.001	0.818	0.001	Yes	0.407	0.001	0.799	0.001	Yes
2	0.798	0.001	0.798	0.001	Yes	0.216	0.001	0.416	0.001	Yes	0.417	0.001	0.817	0.001	Yes
3	0.780	0.001	0.780	0.001	Yes	0.207	0.001	0.398	0.001	Yes	0.203	0.001	0.397	0.001	Yes
4	0.815	0.001	0.815	0.001	Yes	0.421	0.001	0.810	0.001	Yes	0.210	0.001	0.450	0.039	Yes
5	0.413	0.001	0.413	0.001	Yes	0.417	0.001	0.802	0.001	Yes	0.398	0.001	0.780	0.001	Yes
6	0.001	0.374	0.001	0.374	Yes	0.001	0.402	0.001	0.803	Yes	0.001	0.202	0.002	0.403	Yes
7	0.001	0.788	0.001	0.788	Yes	0.001	0.394	0.001	0.789	Yes	0.001	0.188	0.001	0.376	Yes
8	0.001	0.781	0.001	0.781	Yes	0.001	0.389	0.001	0.779	Yes	0.001	0.194	0.001	0.388	Yes
9	0.001	0.782	0.001	0.783	Yes	0.001	0.192	0.002	0.385	Yes	0.001	0.192	0.001	0.383	Yes
10	0.001	0.396	0.002	0.396	Yes	0.001	0.389	0.001	0.778	Yes	0.001	0.203	0.002	0.406	Yes
Average	0.321	0.313	0.321	0.313		0.169	0.177	0.325	0.354		0.164	0.098	0.325	0.200	
Std Dev.	0.366	0.359	0.366	0.359		0.193	0.195	0.372	0.391		0.187	0.103	0.368	0.202	

Table C-44 Test Case SEC8-2—Bring Up Link IES-8 to 3750

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.000	0.011	0.007	0.011	No	0.000	0.011	0.009	0.005	No	0.000	0.012	0.014	0.006	No
2	0.000	0.012	0.006	0.012	No	0.000	0.010	0.005	0.005	No	0.000	0.011	0.012	0.006	No
3	0.000	0.011	0.006	0.011	No	0.000	0.011	0.009	0.005	No	0.000	0.010	0.012	0.005	No
4	0.000	0.010	0.007	0.010	No	0.000	0.012	0.008	0.006	No	0.000	0.012	0.011	0.006	No
5	0.000	0.011	0.007	0.011	No	0.000	0.011	0.223	0.219	No	0.000	0.010	0.011	0.005	No
6	0.031	0.023	0.031	0.028	No	0.016	0.014	0.033	0.036	No	0.017	0.015	0.034	0.040	No
7	0.024	0.021	0.024	0.026	No	0.015	0.012	0.030	0.032	No	0.015	0.013	0.030	0.036	No
8	0.028	0.023	0.028	0.029	No	0.013	0.010	0.025	0.029	No	0.017	0.014	0.034	0.039	No
9	0.032	0.025	0.032	0.031	No	0.013	0.010	0.027	0.028	No	0.016	0.015	0.033	0.040	No
10	0.024	0.018	0.024	0.024	No	0.013	0.011	0.027	0.029	Yes	0.015	0.012	0.029	0.035	No
Average	0.014	0.016	0.017	0.019		0.007	0.011	0.039	0.039		0.008	0.012	0.022	0.022	
Std Dev.	0.015	0.006	0.011	0.009		0.007	0.001	0.065	0.064		0.008	0.002	0.011	0.017	

Table C-45 Test Case SEC8-3—Disconnect IES-8 from 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.397	0.772	0.397	0.772	Yes	0.198	0.767	0.381	0.384	Yes	0.197	0.791	0.387	0.411	Yes
2	0.773	0.382	0.773	0.382	Yes	0.194	0.770	0.373	0.385	Yes	0.205	0.790	0.401	0.411	Yes
3	0.788	0.389	0.788	0.389	Yes	0.208	0.787	0.399	0.394	Yes	0.203	0.753	0.399	0.391	Yes
4	0.393	0.775	0.393	0.775	Yes	0.404	0.361	0.777	0.181	Yes	0.196	0.774	0.385	0.403	Yes
5	0.376	0.767	0.376	0.767	Yes	0.405	0.387	0.778	0.193	Yes	0.200	0.774	0.392	0.403	Yes
6	0.378	0.789	0.378	0.789	Yes	0.397	0.196	0.794	0.393	Yes	0.180	0.398	0.361	0.796	Yes
7	0.795	0.397	0.795	0.397	Yes	0.382	0.197	0.764	0.394	Yes	0.190	0.398	0.379	0.795	Yes
8	0.370	0.766	0.370	0.766	Yes	0.189	0.398	0.377	0.795	Yes	0.396	0.196	0.791	0.392	Yes
9	0.377	0.778	0.377	0.778	Yes	0.379	0.184	0.758	0.369	Yes	0.186	0.385	0.373	0.771	Yes
10	0.374	0.781	0.374	0.781	Yes	0.180	0.387	0.359	0.773	Yes	0.182	0.395	0.364	0.789	Yes
Average	0.502	0.659	0.502	0.659		0.294	0.443	0.576	0.426		0.213	0.565	0.423	0.556	
Std Dev.	0.196	0.187	0.196	0.187		0.106	0.244	0.209	0.206		0.065	0.230	0.130	0.199	

Table C-46 Test Case SEC8-4—Reconnect Cable IES-8 to 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.000	0.011	0.021	0.025	No	0.000	0.010	0.010	0.005	No	0.000	0.010	0.012	0.005	No
2	0.000	0.010	0.021	0.011	No	0.000	0.011	0.009	0.006	No	0.000	0.011	0.012	0.006	No
3	0.000	0.012	0.006	0.012	No	0.000	0.010	0.009	0.005	No	0.000	0.010	0.012	0.005	No
4	0.000	0.011	0.007	0.011	No	0.000	0.012	0.008	0.006	No	0.000	0.010	0.031	0.026	No
5	0.000	0.011	0.006	0.011	No	0.000	0.011	0.008	0.005	No	0.000	0.011	0.012	0.006	No
6	0.022	0.019	0.022	0.029	No	0.014	0.011	0.028	0.030	No	0.017	0.015	0.034	0.040	No
7	0.023	0.018	0.023	0.025	No	0.014	0.011	0.029	0.030	No	0.015	0.013	0.031	0.040	No
8	0.028	0.024	0.028	0.030	No	0.015	0.011	0.030	0.030	No	0.018	0.015	0.036	0.043	Yes
9	0.027	0.022	0.027	0.028	No	0.014	0.011	0.028	0.030	No	0.016	0.013	0.031	0.036	No
10	0.026	0.022	0.026	0.028	No	0.012	0.011	0.024	0.030	No	0.015	0.011	0.029	0.036	No
Average	0.013	0.016	0.019	0.021		0.007	0.011	0.018	0.018		0.008	0.012	0.024	0.024	
Std Dev.	0.013	0.005	0.009	0.008		0.007	0.001	0.010	0.013		0.009	0.002	0.010	0.017	

Table C-47 Test Case SEC8-5—Stack Master Down (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.371	1.209	0.371	1.209	Yes	0.628	0.579	1.208	0.192	Yes	0.664	0.637	1.303	0.176	Yes
2	1.189	0.000	1.189	0.000	Yes	0.778	0.996	0.186	1.214	Yes	0.826	0.802	0.201	1.218	Yes
3	0.774	1.190	0.774	1.190	Yes	0.631	0.581	1.212	0.385	Yes	0.605	0.580	1.187	0.177	Yes
4	1.211	0.000	1.211	0.000	Yes	0.985	0.799	0.392	1.202	Yes	0.774	0.801	0.192	1.193	Yes
5	0.398	1.235	0.398	1.235	Yes	0.623	0.574	1.197	0.394	Yes	0.616	0.590	1.207	0.369	Yes
6	0.000	0.000	0.000	0.000	Yes	0.609	0.610	0.000	0.000	Yes	0.610	0.611	0.000	0.000	Yes
7	1.217	1.220	1.217	1.220	Yes	1.123	1.125	2.247	2.249	Yes	0.609	0.611	1.219	1.221	Yes
8	0.000	0.000	0.000	0.000	Yes	0.605	0.606	0.000	0.000	Yes	0.598	0.599	0.000	0.000	Yes
9	1.213	1.216	1.213	1.216	Yes	1.007	1.009	2.014	2.017	Yes	0.609	0.610	1.218	1.220	Yes
10	0.000	0.000	0.000	0.000	Yes	0.606	0.608	0.000	0.000	Yes	0.598	0.599	0.000	0.000	Yes
Average	0.637	0.607	0.637	0.607		0.760	0.749	0.846	0.765		0.651	0.644	0.653	0.557	
Std Dev.	0.544	0.640	0.544	0.640		0.202	0.216	0.850	0.852		0.082	0.084	0.610	0.575	

Table C-48 Test Case SEC8-6—Bring Switch Back to Stack

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.032	0.023	92.389	0.023	Yes	0.025	0.031	94.292	0.012	Yes	0.048	0.035	16.123	0.012	Yes
2	0.000	0.015	0.000	9.593	Yes	0.010	0.010	24.101	26.257	Yes	0.012	0.009	22.976	26.995	Yes
3	0.034	0.026	1.879	0.026	Yes	0.027	0.036	26.390	0.014	Yes	0.045	0.049	0.151	0.018	Yes
4	0.000	0.022	0.000	22.760	Yes	0.006	0.008	7.149	25.003	Yes	0.007	0.007	10.503	50.456	Yes
5	0.037	0.024	27.488	0.024	Yes	0.030	0.030	35.356	0.011	Yes	0.025	0.028	13.683	0.011	Yes
6	0.000	0.000	0.000	0.000	Yes	0.023	0.023	0.442	0.443	Yes	0.031	0.032	0.000	0.000	Yes
7	0.074	0.059	0.077	0.063	Yes	0.057	0.018	4.479	4.383	Yes	0.027	0.027	3.506	3.505	Yes
8	0.000	0.000	0.000	0.000	Yes	0.052	0.048	0.000	0.000	Yes	0.021	0.019	0.000	0.000	Yes
9	1.094	1.086	21.923	21.913	Yes	0.396	0.317	0.791	0.642	Yes	0.343	0.046	29.111	28.536	Yes
10	0.000	0.000	0.000	0.000	Yes	0.045	0.043	0.000	0.000	Yes	0.048	0.036	0.000	0.000	Yes
Average	0.127	0.125	14.376	5.440		0.067	0.056	19.300	5.677		0.061	0.029	9.605	10.953	
Std Dev.	0.341	0.338	29.267	9.394		0.117	0.093	29.374	10.605		0.100	0.014	10.659	17.955	

SEF8 Test Results

This section provides detailed test results for the test suite with an 8-switch redundant star topology, EtherChannel protocol and fiber media uplinks. Figure C-8 depicts the topology and the traffic flows before and after a network disruption.

Figure C-8 SEF8—Bring Down Active Link Between IES-8 and 3750

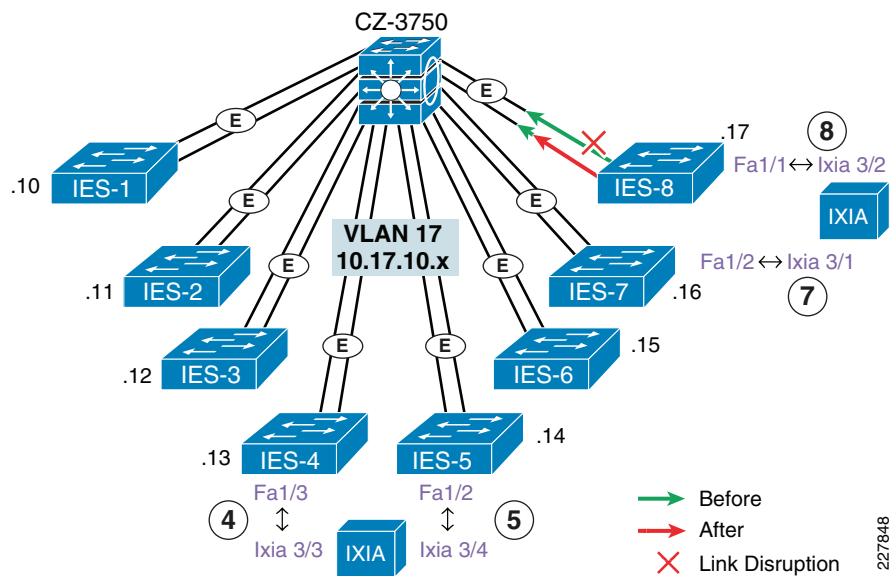


Table C-49 Test Case SEF8-1—Bring Down Link IES-8 to 3750 (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.097	0.000	0.097	0.000	No	0.047	0.000	0.090	0.001	No	0.032	0.000	0.063	0.001	No
2	0.078	0.030	0.078	0.030	No	0.051	0.000	0.098	0.001	No	0.030	0.000	0.060	0.001	No
3	0.080	0.000	0.080	0.000	No	0.032	0.000	0.062	0.001	No	0.048	0.000	0.094	0.001	No
4	0.078	0.000	0.078	0.000	No	0.036	0.000	0.069	0.001	No	0.049	0.000	0.096	0.001	No
5	0.077	0.000	0.077	0.000	No	0.039	0.000	0.076	0.001	No	0.047	0.000	0.093	0.001	No
6	0.001	0.071	0.001	0.071	No	0.001	0.045	0.001	0.089	No	0.001	0.039	0.001	0.079	No
7	0.001	0.076	0.001	0.076	No	0.001	0.042	0.002	0.084	No	0.001	0.039	0.001	0.077	No
8	0.001	0.073	0.001	0.073	No	0.001	0.028	0.001	0.056	No	0.001	0.027	0.001	0.054	No
9	0.001	0.059	0.002	0.059	No	0.001	0.030	0.001	0.059	No	0.001	0.029	0.001	0.058	No
10	0.001	0.066	0.001	0.066	No	0.001	0.040	0.001	0.080	No	0.001	0.037	0.001	0.075	No
Average	0.042	0.037	0.042	0.037		0.021	0.018	0.040	0.037		0.021	0.017	0.041	0.035	
Std Dev.	0.043	0.035	0.043	0.035		0.022	0.020	0.042	0.040		0.022	0.018	0.044	0.036	

Table C-50 Test Case SEF8-2—Bring Up Link IES-8 to 3750 (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Time out	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.007	0.000	0.000	0.000	No	0.000	0.000	0.009	0.005	No	0.000	0.000	0.012	0.005	No
2	0.000	0.000	0.000	0.000	No	0.000	0.000	0.011	0.005	No	0.000	0.000	0.010	0.005	No
3	0.000	0.000	0.009	0.000	No	0.000	0.000	0.009	0.005	No	0.000	0.000	0.012	0.005	No
4	0.000	0.000	0.008	0.000	No	0.000	0.000	0.011	0.005	No	0.000	0.000	0.014	0.005	No
5	0.000	0.000	0.008	0.000	No	0.000	0.000	0.009	0.005	No	0.000	0.000	0.012	0.005	No
6	0.021	0.016	0.021	0.021	No	0.011	0.009	0.023	0.025	No	0.013	0.012	0.026	0.033	No
7	0.024	0.018	0.024	0.024	No	0.011	0.009	0.022	0.025	No	0.013	0.011	0.025	0.031	No
8	0.025	0.018	0.025	0.023	No	0.012	0.010	0.024	0.026	No	0.013	0.012	0.026	0.034	No
9	0.020	0.018	0.020	0.023	No	0.011	0.010	0.022	0.027	No	0.015	0.012	0.030	0.035	No
10	0.020	0.016	0.020	0.021	No	0.011	0.010	0.022	0.027	No	0.013	0.011	0.027	0.032	No
Average	0.012	0.009	0.014	0.011		0.006	0.005	0.016	0.015		0.007	0.006	0.019	0.019	
Std Dev.	0.011	0.009	0.010	0.012		0.006	0.005	0.007	0.011		0.007	0.006	0.008	0.015	

Table C-51 Test Case SEF8-3—Disconnect IES-8 from 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.062	0.000	0.062	0.000	0.000	0.037	0.000	0.070	0.033	0.000	0.047	0.000	0.092	0.037	0.000
2	0.089	0.000	0.089	0.000	0.000	0.038	0.000	0.072	0.031	0.000	0.040	0.000	0.078	0.022	0.000
3	0.057	0.000	0.057	0.000	0.000	0.044	0.000	0.084	0.025	0.000	0.047	0.000	0.093	0.023	0.000
4	0.068	0.000	0.068	0.000	0.000	0.037	0.000	0.071	0.039	0.000	0.026	0.000	0.050	0.028	0.000
5	0.066	0.000	0.066	0.000	0.000	0.047	0.000	0.090	0.039	0.000	0.038	0.000	0.075	0.029	0.000
6	0.074	0.038	0.074	0.038	No	0.045	0.024	0.090	0.048	No	0.042	0.007	0.083	0.014	No

Table C-51 Test Case SEF8-3—Disconnect IES-8 from 3750 (Physical) (continued)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
7	0.132	0.042	0.132	0.041	No	0.041	0.020	0.081	0.039	No	0.050	0.008	0.100	0.016	No
8	0.078	0.057	0.077	0.057	No	0.063	0.005	0.126	0.009	No	0.043	0.025	0.086	0.050	No
9	0.102	0.032	0.102	0.032	No	0.060	0.006	0.119	0.011	No	0.062	0.011	0.125	0.023	No
10	0.074	0.040	0.073	0.040	No	0.033	0.020	0.065	0.040	No	0.047	0.028	0.092	0.055	No
Average	0.080	0.021	0.080	0.021		0.044	0.007	0.087	0.031		0.044	0.008	0.087	0.030	
Std Dev.	0.022	0.023	0.023	0.023		0.010	0.010	0.021	0.013		0.009	0.010	0.019	0.014	

Table C-52 Test Case SEF8-4—Reconnect Cable IES-8 to 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.000	0.000	0.008	0.000	No	0.000	0.000	0.008	0.006	No	0.000	0.000	0.013	0.005	No
2	0.000	0.000	0.006	0.000	No	0.000	0.000	0.008	0.005	No	0.000	0.000	0.009	0.005	No
3	0.000	0.000	0.008	0.000	No	0.000	0.000	0.011	0.005	No	0.000	0.000	0.011	0.005	No
4	0.000	0.000	0.009	0.000	No	0.000	0.000	0.009	0.005	No	0.000	0.000	0.012	0.005	No
5	0.000	0.000	0.008	0.000	No	0.000	0.000	0.011	0.005	No	0.000	0.000	0.012	0.005	No
6	0.018	0.016	0.018	0.021	No	0.013	0.010	0.025	0.026	No	0.013	0.011	0.027	0.034	No
7	0.020	0.017	0.020	0.023	No	0.011	0.009	0.021	0.025	No	0.014	0.012	0.029	0.034	No
8	0.023	0.018	0.023	0.023	No	0.011	0.009	0.022	0.025	No	0.013	0.011	0.027	0.032	No
9	0.023	0.016	0.022	0.021	No	0.011	0.009	0.022	0.026	No	0.013	0.011	0.025	0.031	No
10	0.022	0.017	0.022	0.022	No	0.012	0.010	0.024	0.028	No	0.014	0.011	0.028	0.032	No
Average	0.011	0.008	0.014	0.011		0.006	0.005	0.016	0.016		0.007	0.006	0.019	0.019	
Std Dev.	0.011	0.009	0.007	0.012		0.006	0.005	0.007	0.011		0.007	0.006	0.008	0.015	

Table C-53 Test Case SEF8-5—Stack Master Down (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	1.232	0.000	1.232	0.000	Yes	0.599	0.645	0.017	1.210	Yes	0.632	0.640	0.028	1.232	Yes
2	0.037	1.226	0.037	1.226	Yes	0.618	0.569	1.188	0.021	Yes	0.637	0.611	2.115	0.881	Yes
3	1.201	0.000	1.201	0.000	Yes	0.627	0.668	0.030	1.240	Yes	0.617	0.638	0.027	1.204	Yes
4	0.024	1.204	0.024	1.204	Yes	0.631	0.581	1.212	0.021	Yes	0.629	0.603	1.232	0.027	Yes
5	1.218	0.000	1.218	0.000	Yes	0.590	0.637	0.019	1.187	Yes	0.626	0.632	0.028	1.218	Yes
6	0.000	0.000	0.000	0.000	Yes	0.614	0.615	0.000	0.000	Yes	0.588	0.589	0.000	0.000	Yes
7	1.193	1.196	1.193	1.196	Yes	0.610	0.611	1.219	1.222	Yes	0.599	0.600	1.197	1.200	Yes
8	0.000	0.000	0.000	0.000	Yes	0.612	0.613	0.000	0.000	Yes	0.610	0.667	0.000	0.000	Yes
9	1.178	1.181	1.179	1.181		0.609	0.610	1.217	1.220		0.614	0.615	1.227	1.229	
10	0.000	0.000	0.000	0.000		0.592	0.593	0.000	0.000		0.592	0.593	0.000	0.000	
Average	0.608	0.481	0.608	0.481	8.152	0.610	0.614	0.490	0.612	20.172	0.614	0.619	0.585	0.699	8.632
Std Dev.	0.629	0.621	0.629	0.621	0.259	0.014	0.030	0.619	0.636	37.881	0.017	0.025	0.782	0.605	0.629

Table C-54 Test Case SEF8-6—Stack Master Up (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.015	0.000	21.183	0.000	Yes	0.030	0.033	0.011	27.770	Yes	0.033	0.048	0.013	34.239	Yes
2	0.017	0.037	0.017	28.428	Yes	0.007	0.006	41.247	0.011	Yes	0.008	0.008	66.788	0.011	Yes
3	0.021	0.000	39.579	0.000	Yes	0.025	0.034	0.009	28.175	Yes	0.041	0.036	0.018	34.044	Yes
4	0.025	0.042	0.025	36.150	Yes	0.011	0.009	0.177	0.015	Yes	0.007	0.007	6.681	0.011	Yes
5	0.013	0.000	32.008	0.000	Yes	0.034	0.565	0.014	16.992	Yes	0.048	0.042	0.022	33.940	Yes
6	0.000	0.000	0.000	0.000	Yes	0.032	0.024	0.000	0.000	Yes	0.029	0.040	0.000	0.000	Yes
7	0.043	0.043	0.049	0.048	Yes	0.019	0.020	2.454	2.048	Yes	0.025	0.025	3.782	3.147	Yes
8	0.000	0.000	0.000	0.000	Yes	0.060	0.021	0.000	0.000	Yes	0.019	0.019	0.000	0.000	Yes
9	0.043	0.043	0.046	0.046	Yes	0.021	0.021	1.624	1.512	Yes	0.023	0.024	3.548	3.064	Yes
10	0.000	0.000	0.000	0.000	Yes	0.044	0.024	0.000	0.000	Yes	0.506	0.041	0.000	0.000	Yes
Average	0.018	0.016	9.291	6.467		0.028	0.076	4.554	7.652		0.074	0.029	8.085	10.846	
Std Dev.	0.016	0.021	15.551	13.730		0.016	0.172	12.921	11.901		0.152	0.015	20.759	16.077	

SFF8 Test Results

This section provides detailed test results for the test suite with an 8-switch redundant star topology, FlexLinks protocol, and fiber media uplinks. Figure C-9 depicts the topology and the traffic flows before and after a network disruption.

Figure C-9 SFF8—Bring Down Active Link Between IES-8 and 3750

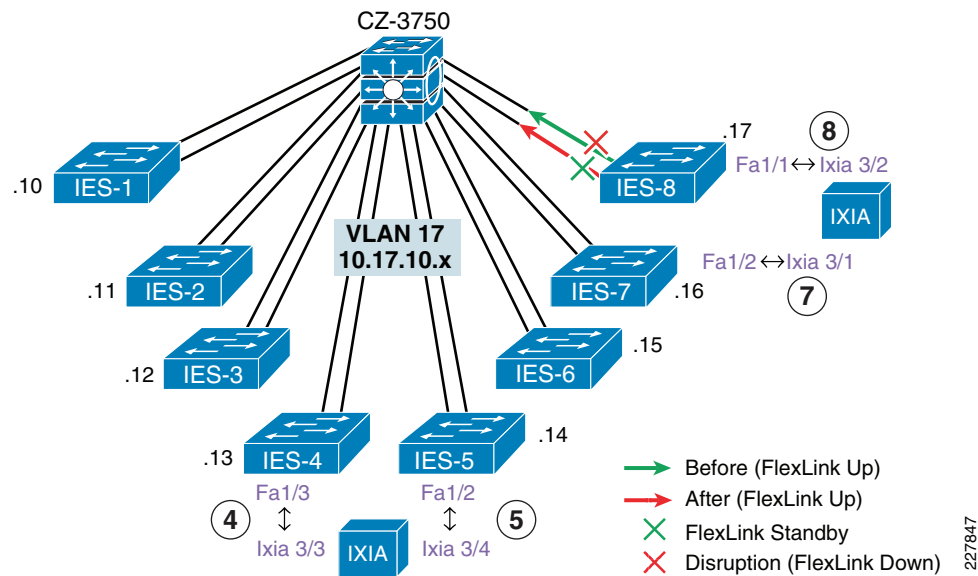


Table C-55 Test Case SFF8-1—Shutdown Link Between IES-8 and 3750 (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout
1	0.030	0.021	0.021	0.021	No	0.033	0.014	0.014	0.014	No	0.049	0.012	0.012	0.012	No
2	0.059	0.027	0.027	0.027	No	0.026	0.016	0.016	0.016	No	0.033	0.016	0.016	0.016	No
3	0.017	0.005	0.005	0.005	No	0.037	0.021	0.020	0.020	No	0.038	0.010	0.010	0.010	No
4	0.068	0.045	0.045	0.045	No	0.026	0.016	0.016	0.016	No	0.042	0.017	0.017	0.017	No
5	0.057	0.029	0.029	0.029	No	0.054	0.032	0.032	0.032	No	0.065	0.027	0.027	0.027	No
6	0.021	0.017	0.017	0.017	No	0.029	0.012	0.012	0.012	No	0.023	0.005	0.005	0.005	No
7	0.021	0.035	0.021	0.021	No	0.021	0.038	0.021	0.021	No	0.019	0.053	0.019	0.019	No
8	0.011	0.043	0.011	0.011	No	0.027	0.038	0.027	0.027	No	0.016	0.033	0.016	0.016	No
9	0.009	0.026	0.009	0.009	No	0.040	0.057	0.040	0.041	No	0.016	0.045	0.016	0.016	No
10	0.016	0.051	0.016	0.016	No	0.031	0.041	0.031	0.031	No	0.033	0.057	0.033	0.033	No
11	0.006	0.034	0.006	0.006	No	0.027	0.044	0.027	0.027	No	0.010	0.044	0.010	0.010	No
12	0.027	0.041	0.027	0.027	No	0.013	0.023	0.013	0.013	No	0.014	0.033	0.014	0.014	No
Average	0.028	0.031	0.019	0.019	0.000	0.030	0.029	0.022	0.023		0.030	0.029	0.016	0.016	
Std Dev.	0.021	0.013	0.012	0.012	0.000	0.010	0.014	0.009	0.009		0.017	0.018	0.008	0.008	

Table C-56 Test Case SFF8-2—Bring Up Link IES-8 to 3750 (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	Peer-to-Peer Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout
1	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
2	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
3	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
4	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
5	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
6	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
7	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
8	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
9	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
10	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
11	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
12	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
Average	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	
Std Dev.	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	

Table C-57 Test Case SFF8-3—Disconnect the Up Cable from IES-8 to 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	Peer-to-Peer Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout
1	0.069	0.053	0.069	0.024	No	0.034	0.031	0.033	0.022	No	0.053	0.052	0.053	0.036	No
2	0.045	0.037	0.044	0.014	No	0.036	0.048	0.035	0.013	No	0.027	0.043	0.027	0.009	No
3	0.028	0.044	0.027	0.017	No	0.042	0.030	0.042	0.021	No	0.042	0.071	0.041	0.034	No
4	0.069	0.060	0.069	0.023	No	0.040	0.044	0.040	0.018	No	0.097	0.059	0.097	0.021	No
5	0.064	0.056	0.064	0.034	No	0.037	0.025	0.036	0.015	No	0.034	0.038	0.034	0.011	No
6	0.061	0.051	0.062	0.018	No	0.051	0.037	0.051	0.020	No	0.054	0.037	0.053	0.020	No
7	0.061	0.029	0.061	0.021	No	0.058	0.024	0.058	0.008	No	0.063	0.054	0.063	0.027	No
8	0.066	0.060	0.065	0.035	No	0.056	0.005	0.056	0.016	No	0.071	0.051	0.071	0.032	No
9	0.064	0.040	0.064	0.032	No	0.058	0.036	0.058	0.014	No	0.048	0.028	0.048	0.000	No
10	0.068	0.036	0.067	0.031	No	0.045	0.029	0.046	0.019	No	0.047	0.033	0.047	0.017	No
11	0.075	0.035	0.077	0.029	No	0.054	0.046	0.054	0.021	No	0.065	0.049	0.065	0.020	No
12	0.051	0.023	0.052	0.021	No	0.044	0.026	0.044	0.016	No	0.040	0.033	0.040	0.015	No
Average	0.060	0.044	0.060	0.025		0.046	0.032	0.046	0.017		0.053	0.046	0.053	0.020	
Std Dev.	0.013	0.012	0.013	0.007		0.009	0.012	0.009	0.004		0.019	0.013	0.019	0.011	

Table C-58 Test Case SFF8-4—Reconnect Cable from IES-8 to 3750

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	Peer-to-Peer Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout
1	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
2	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
3	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.008	0.008	No
4	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
5	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
6	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
7	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
8	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
9	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
10	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
11	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
12	0.000	0.000	0.000	0.000	No	0.000	No	0.000	0.000	No	0.000	0.000	0.000	0.000	No
Average	0.000	0.000	0.000	0.000		0.000		0.000	0.000		0.000	0.000	0.001	0.001	
Std Dev.	0.000	0.000	0.000	0.000		0.000		0.000	0.000		0.000	0.000	0.002	0.002	

Table C-59 Test Case SFF8-5—Stack Master Down (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	Peer-to-Peer Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout
1	0.056	0.058	0.031	0.031	No	0.072	0.061	0.061	0.061	No	0.060	0.052	0.019	0.019	No
2	0.030	0.057	0.030	0.030	No	0.061	0.067	0.034	0.034	No	0.090	0.072	0.027	0.027	Yes ¹
3	0.049	0.051	0.023	0.023	No	0.025	0.039	0.021	0.021	No	0.087	0.103	0.040	0.040	Yes
4	0.055	0.059	0.037	0.037	No	0.064	0.054	0.034	0.034	No	0.082	0.065	0.025	0.025	Yes ¹
5	0.065	0.064	0.037	0.037	No	0.033	0.053	0.033	Yes	0.000	0.061	0.079	0.034	0.034	No
6	0.053	0.054	0.036	0.036	No	0.038	0.065	0.038	Yes	0.000	0.075	0.088	0.028	0.028	No
7	0.051	0.055	0.040	0.040	Yes	0.055	0.070	0.040	Yes	0.000	0.084	0.078	0.030	0.030	No
8	0.063	0.031	0.031	0.031	No	0.073	0.039	0.039	Yes	0.000	0.084	0.085	0.027	0.027	No
9	0.055	0.086	0.055	0.055	No	0.072	0.060	0.039	Yes	0.000	0.087	0.055	0.026	0.026	No
10	0.027	0.060	0.027	0.027	No	0.058	0.070	0.049	Yes	0.000	0.088	0.060	0.033	0.033	No
11	0.049	0.047	0.036	0.036	No	0.040	0.058	0.040	Yes	0.000	0.050	0.075	0.024	0.024	Yes
12	0.044	0.047	0.040	0.040	No	0.029	0.049	0.020	Yes	0.000	0.072	0.067	0.024	0.024	No
Average	0.050	0.056	0.035	0.035		0.052	0.057	0.037		0.000	0.077	0.073	0.028	0.028	
Std Dev.	0.011	0.013	0.008	0.008		0.018	0.011	0.011		0.000	0.013	0.015	0.006	0.006	

1. Stack Master Down (100MAC). Test unveiled problems with safety controller (O) dropping out.

Table C-60 Test Case SFF8-6—Return Switch to Stack (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	Peer-to-Peer Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout	Ucast 8 to 7	Ucast 7 to 8	Mcast 8 to 7	Mcast 7 to 8	I/O Timeout
1	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
2	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
3	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
4	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	3.609	3.608	No
5	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
6	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	8.618	8.619	No
7	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
8	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
9	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
10	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
11	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
12	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
Average	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	1.019	1.019	
Std Dev.	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	2.608	2.608	

SFC8 Test Results

This section provides detailed test results for the test suite with an 8-switch redundant star topology, FlexLinks protocol, and copper media uplinks. [Figure C-10](#) depicts the topology and the traffic flows before and after a network disruption.

The diagram illustrates a network topology with a central switch **CZ-3750** connected to eight edge switches (**IES-1** through **IES-8**) and two **IXIA** devices. A central box indicates **VLAN 17** with IP range **10.17.10.x**.

The switches are numbered 1 through 8 in circles. The IXIA devices are labeled **IXIA** and **IXIA** with associated interface labels.

Legend:

- Green arrow: Before (FlexLink Up)
- Red arrow: After (FlexLink Up)
- Green X: FlexLink Standby
- Red X: Disruption (FlexLink Down)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.045	0.027	0.027	0.027	No	0.067	0.042	0.042	0.042	No	0.140	0.018	0.018	0.018	No
2	0.056	0.025	0.025	0.025	No	0.028	0.018	0.018	0.018	No	0.030	0.015	0.015	0.015	No
3	0.017	0.010	0.010	0.010	No	0.045	0.028	0.028	0.028	No	0.054	0.017	0.017	0.017	No
4	0.040	0.011	0.011	0.011	No	0.016	0.005	0.005	0.005	No	0.047	0.029	0.029	0.029	No
5	0.024	0.005	0.005	0.005	No	0.109	0.012	0.012	0.012	No	0.048	0.007	0.007	0.007	No
6	0.011	0.008	0.008	0.008	No	0.030	0.021	0.021	0.021	No	0.036	0.017	0.018	0.018	No
7	0.015	0.030	0.015	0.015	No	0.006	0.018	0.006	0.006	No	0.008	0.033	0.008	0.008	No
8	0.044	0.073	0.044	0.044	No	0.012	0.043	0.012	0.012	No	0.017	0.075	0.017	0.017	No
9	0.011	0.033	0.011	0.011	No	0.023	0.037	0.023	0.023	No	0.029	0.052	0.029	0.029	No
10	0.019	0.046	0.019	0.019	No	0.024	0.048	0.024	0.024	No	0.017	0.061	0.017	0.017	No
11	0.021	0.025	0.021	0.021	No	0.032	0.044	0.032	0.032	No	0.028	0.052	0.028	0.028	No
12	0.029	0.048	0.029	0.029	No	0.028	0.179	0.028	0.028	No	0.013	0.074	0.013	0.013	No
Average	0.028	0.028	0.019	0.019		0.035	0.041	0.021	0.021		0.039	0.038	0.018	0.018	
Std Dev.	0.015	0.020	0.011	0.011		0.028	0.046	0.011	0.011		0.035	0.024	0.007	0.007	

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.196	0.196	No
2	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
3	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
4	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
5	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.083	0.071	No

Table C-62 Test Case SFC8-2—Bring Up Link IES-8 to 3750 (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
6	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	3.042	3.042	No
7	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
8	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
9	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
10	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
11	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
12	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
Average	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.277	0.276	
Std Dev.	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.873	0.873	

Table C-63 Test Case SFC8-3—Disconnect IES-8 from 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.392	0.360	0.360	0.360	Yes	0.375	0.357	0.357	0.357	Yes	0.387	0.349	0.349	0.349	Yes
2	0.767	0.767	0.767	0.767	Yes	0.757	0.757	0.757	0.757	Yes	0.387	0.369	0.369	0.369	Yes
3	0.762	0.762	0.762	0.762	Yes	0.425	0.362	0.362	0.362	Yes	0.757	0.757	0.757	0.757	Yes
4	0.756	0.756	0.756	0.756	Yes	0.369	0.360	0.360	0.360	Yes	0.373	0.349	0.349	0.349	Yes
5	0.755	0.756	0.755	0.755	Yes	0.749	0.749	0.749	0.749	Yes	0.402	0.362	0.362	0.362	Yes
6	0.749	0.749	0.749	0.749	Yes	0.759	0.759	0.759	0.759	Yes	0.372	0.352	0.352	0.352	Yes
7	0.357	0.386	0.357	0.357	Yes	0.358	0.371	0.358	0.358	Yes	0.751	0.751	0.751	0.751	Yes
8	0.350	0.357	0.350	0.350	Yes	0.762	0.762	0.762	0.762	Yes	0.355	0.404	0.355	0.355	Yes
9	0.355	0.378	0.355	0.356	Yes	0.367	0.377	0.367	0.367	Yes	0.767	0.767	0.767	0.767	Yes
10	0.351	0.369	0.351	0.351	Yes	0.758	0.758	0.758	0.758	Yes	0.749	0.749	0.749	0.749	Yes
11	0.366	0.366	0.366	0.366	Yes	0.751	0.751	0.751	0.751	Yes	0.753	0.753	0.753	0.753	Yes
12	0.770	0.770	0.770	0.770	Yes	0.367	0.395	0.368	0.368	Yes	0.748	0.748	0.748	0.748	Yes
Average	0.561	0.565	0.558	0.558		0.566	0.563	0.559	0.559		0.567	0.559	0.555	0.555	
Std Dev.	0.208	0.204	0.211	0.211		0.199	0.202	0.206	0.206		0.196	0.204	0.208	0.208	

Table C-64 Test Case SFC8-4—Reconnect Cable from IES-8 to 3750 (Physical)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
2	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
3	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
4	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
5	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
6	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
7	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
8	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No

Table C-64 Test Case SFC8-4—Reconnect Cable from IES-8 to 3750 (Physical) (continued)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
9	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
10	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
11	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
12	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
Average	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	
Std Dev.	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	

Table C-65 Test Case SFC8-5—Stack Master Down (Software)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.375	0.377	0.366	0.366	Yes	0.617	0.494	0.372	0.372	Yes	0.984	0.781	0.762	0.762	Yes
2	0.797	0.773	0.773	0.773	Yes	0.372	0.394	0.372	0.372	Yes	0.811	0.764	0.764	0.764	Yes
3	0.772	0.770	0.762	0.762	Yes	0.773	0.792	0.773	0.773	Yes	0.885	0.928	0.769	0.769	Yes
4	0.362	0.391	0.365	0.369	Yes	0.807	0.778	0.777	0.777	Yes	0.790	0.766	0.766	0.766	Yes
5	0.790	0.765	0.765	0.765	Yes	0.797	0.791	0.768	0.768	Yes	1.088	1.243	0.763	0.763	Yes
6	0.766	0.784	0.768	0.770	Yes	0.766	0.776	0.766	0.766	Yes	0.424	0.417	0.371	0.371	Yes
7	0.374	0.374	0.368	0.368	Yes	0.776	0.790	0.772	0.772	Yes	0.761	0.783	0.761	0.761	Yes
8	0.756	0.790	0.756	0.756	Yes	0.393	0.413	0.834	0.836	Yes	0.799	0.771	0.771	0.771	Yes
9	0.773	0.801	0.773	0.773	Yes	0.770	0.758	0.758	0.758	Yes	0.772	0.825	0.772	0.772	Yes
10	0.788	0.790	0.771	0.771	Yes	0.397	0.408	0.397	0.397	Yes	0.849	0.847	0.769	0.769	Yes
11	0.384	0.383	0.354	0.354	Yes	0.398	0.370	0.360	0.360	Yes	0.783	0.803	0.768	0.768	Yes
12	0.370	0.369	0.362	0.362	Yes	0.790	0.801	0.790	0.790	Yes	0.783	0.801	0.769	0.769	Yes
Average	0.609	0.614	0.599	0.599		0.638	0.630	0.645	0.645		0.811	0.811	0.734	0.734	
Std Dev.	0.209	0.208	0.208	0.208		0.189	0.192	0.200	0.200		0.157	0.182	0.114	0.114	

Table C-66 Test Case SFC8-6—Return Switch to Stack

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
1	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
2	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
3	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
4	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
5	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
6	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
7	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
8	0.001	0.001	0.000	0.000	No	0.000	0.000	0.000	0.001	No	0.000	0.000	0.000	0.000	No
9	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.001	0.001	0.000	0.000	No
10	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No

Table C-66 Test Case SFC8-6—Return Switch to Stack (continued)

	Baseline					200 MAC, 80 Mcast Groups					400 MAC, 200 Mcast Groups				
Run	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout	7 to 8 Ucast	8 to 7 Ucast	7 to 8 Mcast	8 to 7 Mcast	I/O Timeout
11	0.001	0.001	0.000	0.000	No	0.000	0.000	0.000	0.000	No	0.000	0.000	0.000	0.000	No
12	0.001	0.001	0.001	0.001	No	0.001	0.001	0.000	0.000	No	0.000	0.001	0.000	0.000	No
Average	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	
Std Dev.	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	

Application Latency (Screw-to-Screw) Test Results

As described in [Chapter 7, “Testing the CPwE Solution,”](#) screw-to-screw tests were conducted to measure the application latency and jitter and identify the impact a path change has on the application latency and jitter. In [Appendix B, “Test Result Analysis,”](#) this data is summarized and used to estimate the latency added by additional switch hops. [Figure C-11](#) to [Figure C-23](#) show the test results from each screw-to-screw test iteration.

Figure C-11 Application Latency and Jitter in RMC 8, Short Path

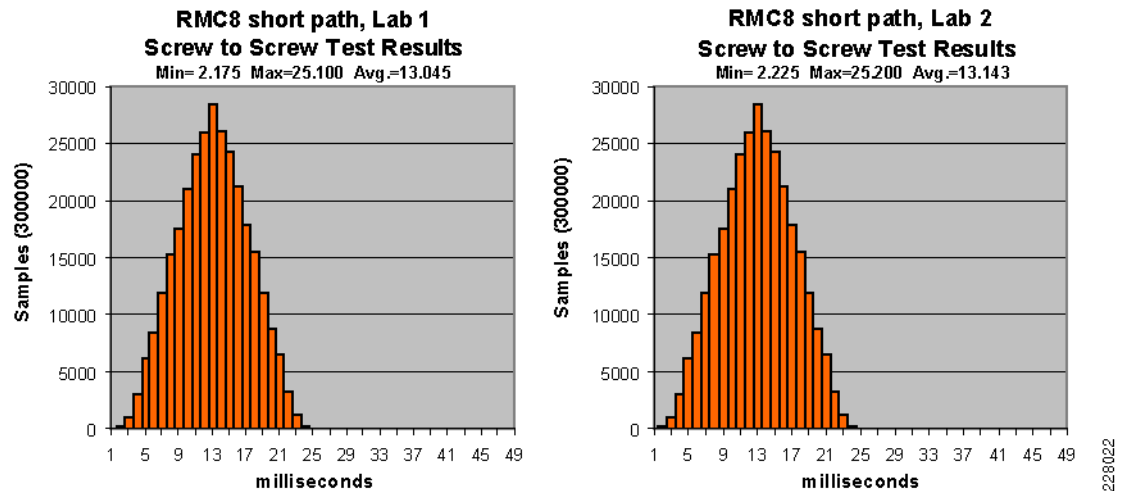


Figure C-12 Application Latency and Jitter in RMC 8, Long Path

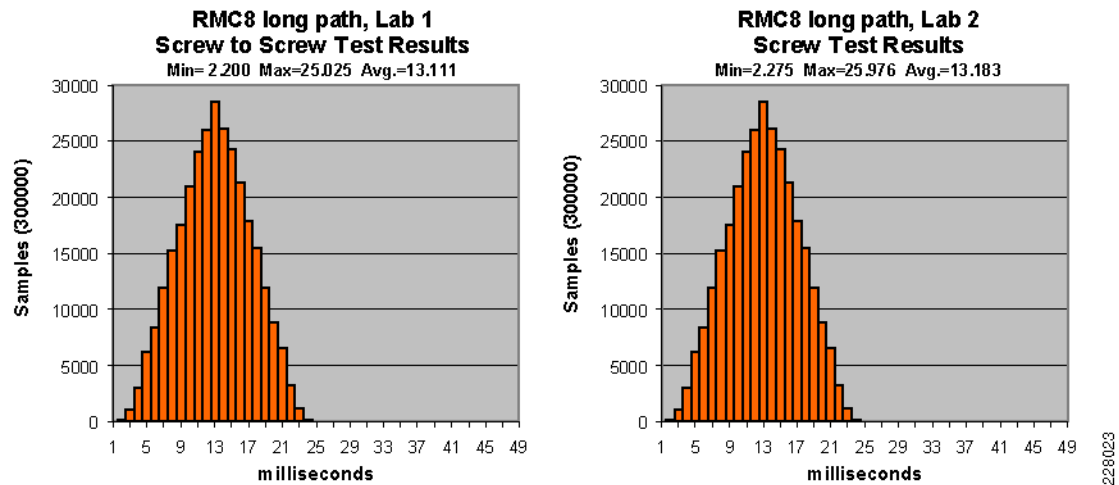


Figure C-13 Application Latency and Jitter in RMC16, Short Path

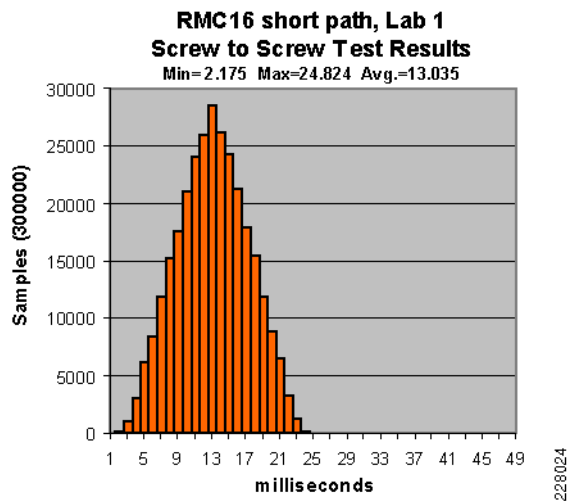


Figure C-14 Application Latency and Jitter in RMC16, Long Path

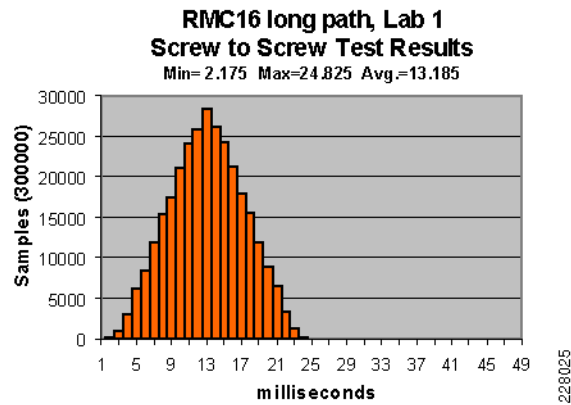


Figure C-15 Application Latency and Jitter in RMF8, Short Path

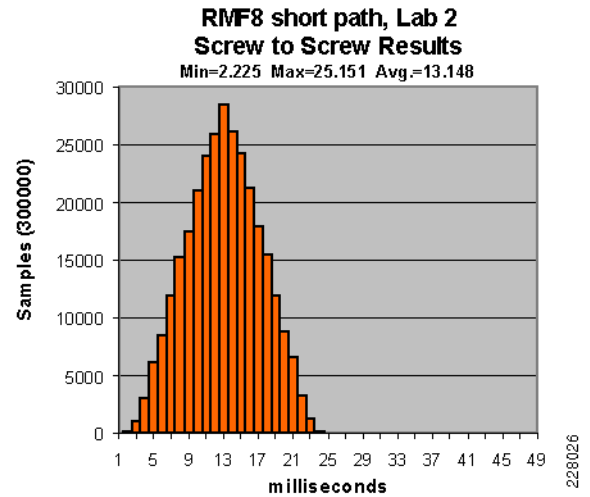
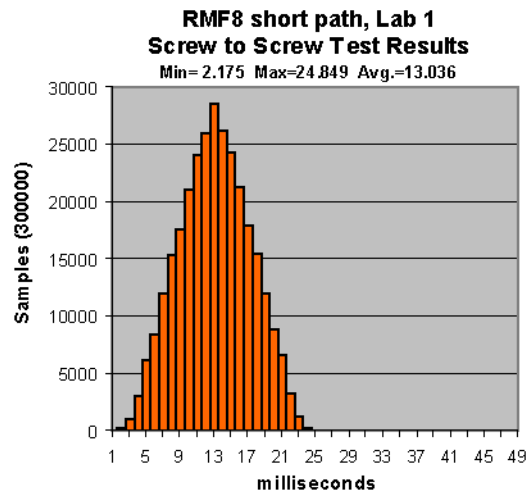


Figure C-16 Application Latency and Jitter in RMF8, Long Path

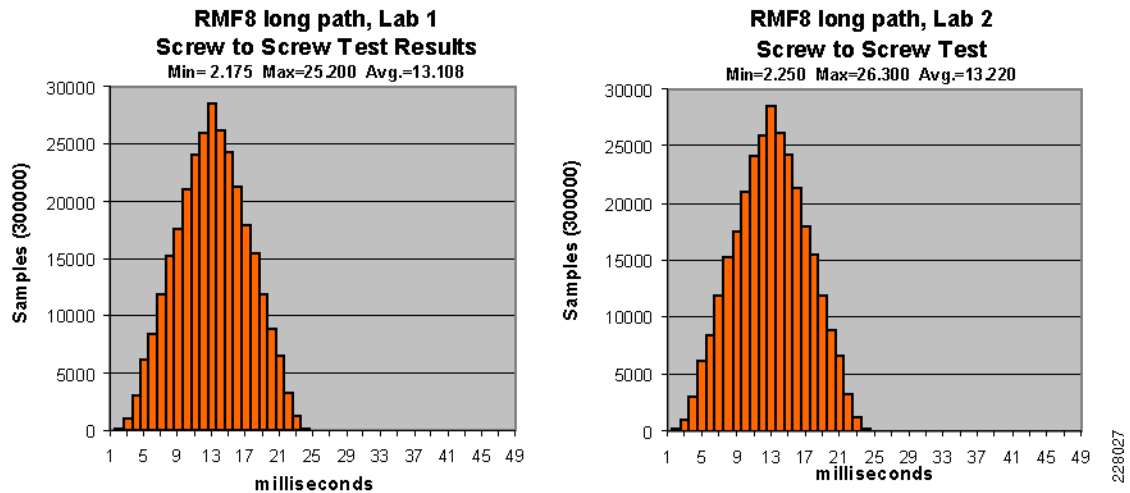


Figure C-17 Application Latency and Jitter in SMC8, No Break

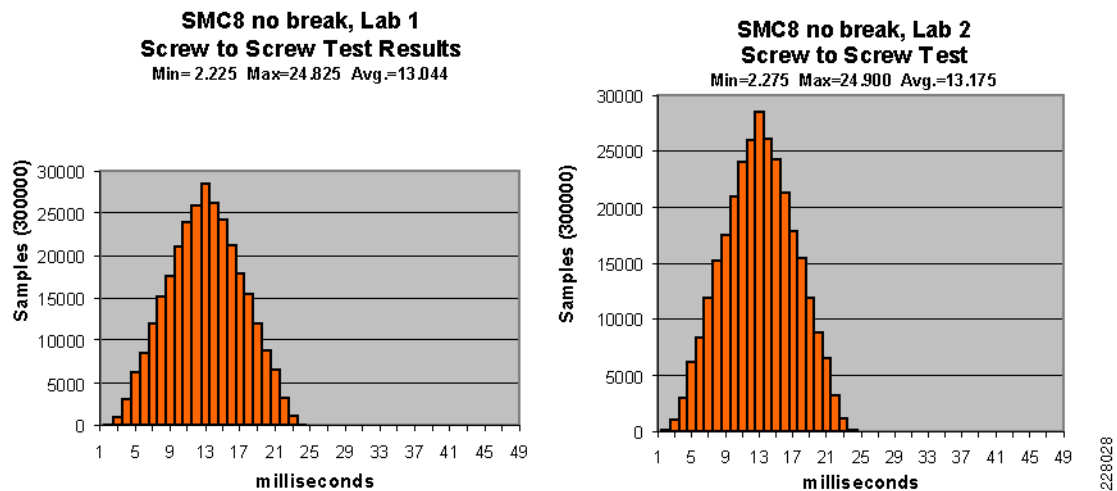


Figure C-18 Application Latency and Jitter in SMC8, with Break

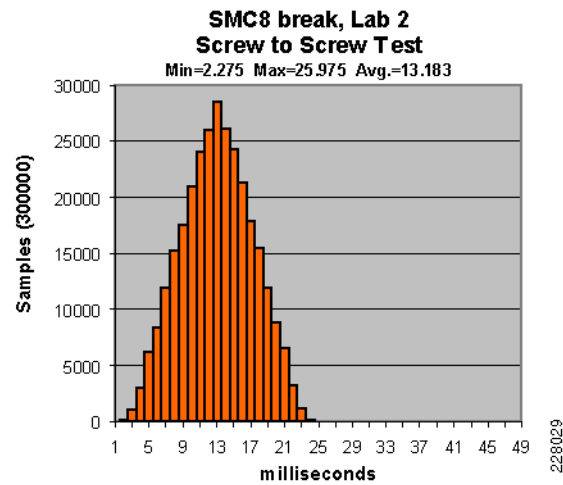


Figure C-19 Application Latency and Jitter in SMF8, with No Break

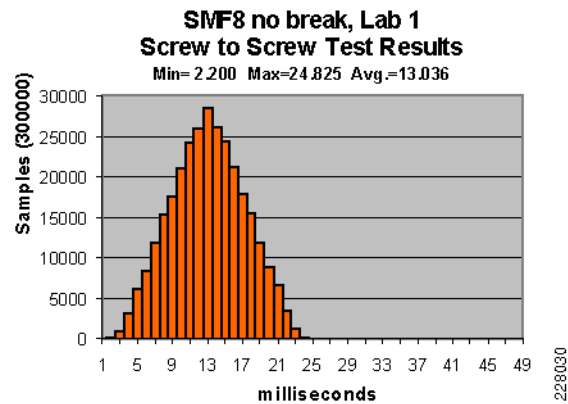


Figure C-20 Application Latency and Jitter in SEC8, with No Break

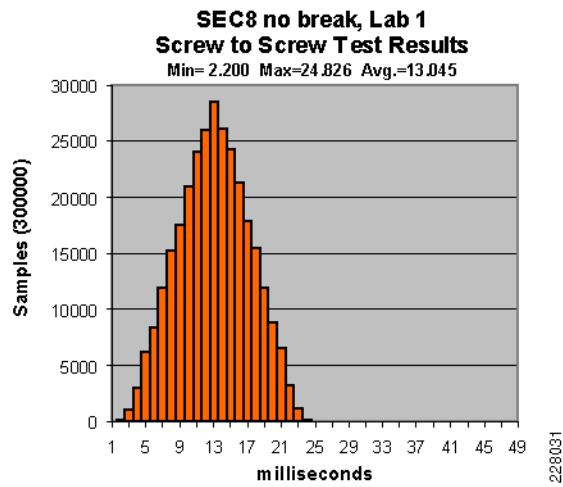


Figure C-21 Application Latency and Jitter in SEC8, with Break

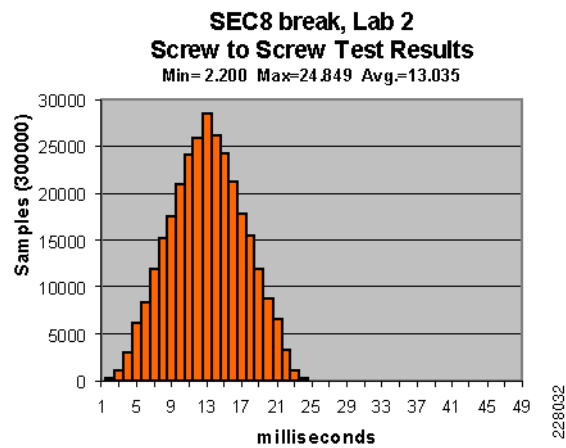


Figure C-22 Application Latency and Jitter in SEF8, with No Break

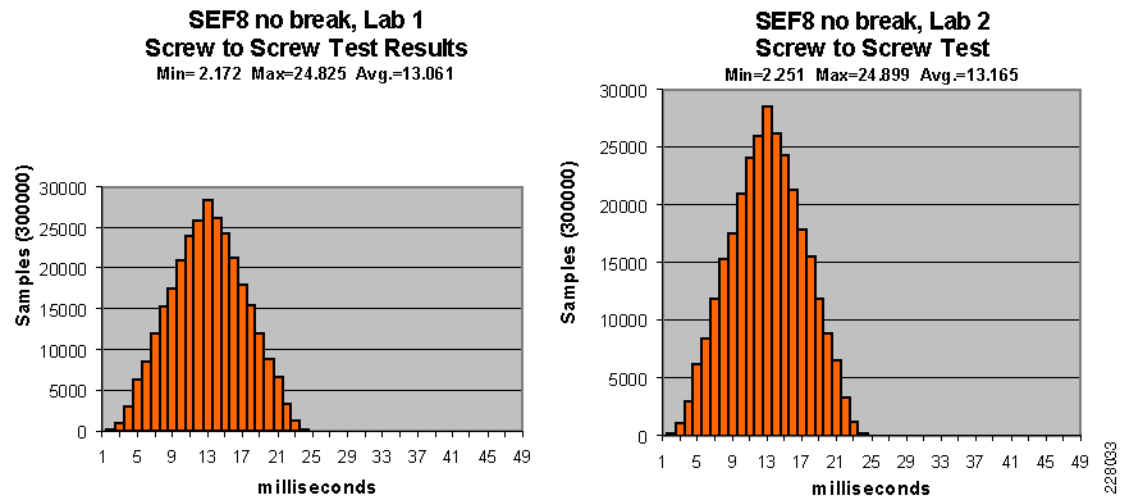


Figure C-23 Application Latency and Jitter in SEF8, with Break

