

1 Detailed view

1.1 Central node 0

1.1.1 Computed parameters

Analytical Model			
λ_t	λ_e	λ_c	λ_b
0.0123	0.234	0	0.00683

D_t	D_e	D_c	D_b
1.5	1	0	0.5

U_t	U_e	U_c	U_b
0.0185	0.234	0	0.00341

Total Utilization Factor = 0.25591

R_t	R_e	R_c	R_b
2.02	1.34	0	0.672

Simulated Model			
λ_t	λ_e	λ_c	λ_b
0.0124	0.233	0.0	0.0069

D_t	D_e	D_c	D_b
1.52	1.0	0.0	0.486

U_t	U_e	U_c	U_b
0.0188	0.234	0.0	0.00335

Total Utilization Factor =
0.25615000000000004

R_t	R_e	R_c	R_b
1.83	1.39	0.0	0.871

1.2 Central storage of Node 0

1.2.1 Computed parameters

Analytical Model				Simulated Model			
λ_t	λ_e	λ_c	λ_b	λ_t	λ_e	λ_c	λ_b
0.00617	0.234	0	0.00756	0.00621	0.233	0.0	0.0076
D_t	D_e	D_c	D_b	D_t	D_e	D_c	D_b
0.4	0.73	0	0.23	0.413	0.729	0.0	0.226
U_t	U_e	U_c	U_b	U_t	U_e	U_c	U_b
0.00247	0.171	0	0.00174	0.00256	0.17	0.0	0.00172
Total Utilization Factor = 0.17521				Total Utilization Factor = 0.17428000000000002			
R_t	R_e	R_c	R_b	R_t	R_e	R_c	R_b
0.485	0.885	0	0.279	0.509	0.885	0.0	0.384

1.3 Regional node 1

1.3.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.0123	0.117	0.0117	0.00195

D_t	D_e	D_c	D_b
1.5	2	1	0.5

U_t	U_e	U_c	U_b
0.0185	0.234	0.0117	0.000975

Total Utilization Factor = 0.265175

R_t	R_e	R_c	R_b
2.04	2.72	1.36	0.68

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.0123	0.116	0.0117	0.00193

D_t	D_e	D_c	D_b
1.49	2.0	1.01	0.493

U_t	U_e	U_c	U_b
0.0184	0.232	0.0117	0.000951

Total Utilization Factor = 0.263051

R_t	R_e	R_c	R_b
1.84	2.74	1.85	0.91

1.4 Regional node 2

1.4.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.0123	0.117	0.0117	0.00195

D_t	D_e	D_c	D_b
1.5	2	1	0.5

U_t	U_e	U_c	U_b
0.0185	0.234	0.0117	0.000975

Total Utilization Factor = 0.265175

R_t	R_e	R_c	R_b
2.04	2.72	1.36	0.68

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.0125	0.116	0.0119	0.00192

D_t	D_e	D_c	D_b
1.52	2.01	0.988	0.481

U_t	U_e	U_c	U_b
0.0191	0.233	0.0117	0.000923

Total Utilization Factor = 0.264723

R_t	R_e	R_c	R_b
1.86	2.76	1.86	0.894

1.5 Local node 3

1.5.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.02	0.07	0.0117	0

D_t	D_e	D_c	D_b
1.5	2	1	0

U_t	U_e	U_c	U_b
0.03	0.14	0.0117	0

Total Utilization Factor = 0.1817

R_t	R_e	R_c	R_b
1.83	2.44	1.22	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.0201	0.0701	0.0119	0.0

D_t	D_e	D_c	D_b
1.53	1.99	0.99	0.0

U_t	U_e	U_c	U_b
0.0308	0.14	0.0118	0.0

Total Utilization Factor = 0.1826

R_t	R_e	R_c	R_b
1.78	2.47	1.54	0.0

1.6 Local node 4

1.6.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.017	0.047	0.0117	0

D_t	D_e	D_c	D_b
1.5	2	1	0

U_t	U_e	U_c	U_b
0.0255	0.094	0.0117	0

Total Utilization Factor =
0.13119999999999998

R_t	R_e	R_c	R_b
1.73	2.3	1.15	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.0168	0.0461	0.0119	0.0

D_t	D_e	D_c	D_b
1.49	1.99	0.997	0.0

U_t	U_e	U_c	U_b
0.025	0.0917	0.0118	0.0

Total Utilization Factor = 0.1285

R_t	R_e	R_c	R_b
1.66	2.32	1.37	0.0

1.7 Local node 5

1.7.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.02	0.07	0.0117	0

D_t	D_e	D_c	D_b
1.5	2	1	0

U_t	U_e	U_c	U_b
0.03	0.14	0.0117	0

Total Utilization Factor = 0.1817

R_t	R_e	R_c	R_b
1.83	2.44	1.22	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.0203	0.0693	0.0119	0.0

D_t	D_e	D_c	D_b
1.48	2.01	0.992	0.0

U_t	U_e	U_c	U_b
0.0301	0.139	0.0118	0.0

Total Utilization Factor = 0.1809

R_t	R_e	R_c	R_b
1.72	2.49	1.54	0.0

1.8 Local node 6

1.8.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.017	0.047	0.0117	0

D_t	D_e	D_c	D_b
1.5	2	1	0

U_t	U_e	U_c	U_b
0.0255	0.094	0.0117	0

Total Utilization Factor =
0.13119999999999998

R_t	R_e	R_c	R_b
1.73	2.3	1.15	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.0173	0.047	0.0117	0.0

D_t	D_e	D_c	D_b
1.49	2.01	0.998	0.0

U_t	U_e	U_c	U_b
0.0258	0.0945	0.0116	0.0

Total Utilization Factor =
0.131900000000000002

R_t	R_e	R_c	R_b
1.66	2.36	1.38	0.0

1.9 Actuator 8

1.9.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	4	0

U_t	U_e	U_c	U_b
0	0	0.0748	0

Total Utilization Factor = 0.0748

R_t	R_e	R_c	R_b
0	0	4.32	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	4	0

U_t	U_e	U_c	U_b
0	0	0.0748	0

Total Utilization Factor = 0.0748

R_t	R_e	R_c	R_b
0	0	4.32	0

1.10 Actuator 10

1.10.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	3	0

U_t	U_e	U_c	U_b
0	0	0.0492	0

Total Utilization Factor = 0.0492

R_t	R_e	R_c	R_b
0	0	3.16	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	3	0

U_t	U_e	U_c	U_b
0	0	0.0492	0

Total Utilization Factor = 0.0492

R_t	R_e	R_c	R_b
0	0	3.16	0

1.11 Actuator 12

1.11.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	4	0

U_t	U_e	U_c	U_b
0	0	0.0748	0

Total Utilization Factor = 0.0748

R_t	R_e	R_c	R_b
0	0	4.32	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	4	0

U_t	U_e	U_c	U_b
0	0	0.0748	0

Total Utilization Factor = 0.0748

R_t	R_e	R_c	R_b
0	0	4.32	0

1.12 Actuator 14

1.12.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	3	0

U_t	U_e	U_c	U_b
0	0	0.0492	0

Total Utilization Factor = 0.0492

R_t	R_e	R_c	R_b
0	0	3.16	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	3	0

U_t	U_e	U_c	U_b
0	0	0.0492	0

Total Utilization Factor = 0.0492

R_t	R_e	R_c	R_b
0	0	3.16	0

1.13 LAN IN 18

1.13.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00187	0

Total Utilization Factor = 0.00187

R_t	R_e	R_c	R_b
0	0	0.1	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00187	0

Total Utilization Factor = 0.00187

R_t	R_e	R_c	R_b
0	0	0.1	0

1.14 LAN OUT 18

1.14.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.02	0.07	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.004	0.014	0	0

Total Utilization Factor =
0.018000000000000002

R_t	R_e	R_c	R_b
0.204	0.204	0	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.02	0.07	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.004	0.014	0	0

Total Utilization Factor =
0.018000000000000002

R_t	R_e	R_c	R_b
0.204	0.204	0	0

1.15 LAN IN 19

1.15.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00164	0

Total Utilization Factor = 0.00164

R_t	R_e	R_c	R_b
0	0	0.1	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00164	0

Total Utilization Factor = 0.00164

R_t	R_e	R_c	R_b
0	0	0.1	0

1.16 LAN OUT 19

1.16.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.017	0.047	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.0034	0.0094	0	0

Total Utilization Factor = 0.0128

R_t	R_e	R_c	R_b
0.203	0.203	0	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.017	0.047	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.0034	0.0094	0	0

Total Utilization Factor = 0.0128

R_t	R_e	R_c	R_b
0.203	0.203	0	0

1.17 LAN IN 20

1.17.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00187	0

Total Utilization Factor = 0.00187

R_t	R_e	R_c	R_b
0	0	0.1	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0187	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00187	0

Total Utilization Factor = 0.00187

R_t	R_e	R_c	R_b
0	0	0.1	0

1.18 LAN OUT 20

1.18.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.02	0.07	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.004	0.014	0	0

Total Utilization Factor =
0.0180000000000000002

R_t	R_e	R_c	R_b
0.204	0.204	0	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.02	0.07	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.004	0.014	0	0

Total Utilization Factor =
0.0180000000000000002

R_t	R_e	R_c	R_b
0.204	0.204	0	0

1.19 LAN IN 21

1.19.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00164	0

Total Utilization Factor = 0.00164

R_t	R_e	R_c	R_b
0	0	0.1	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0	0	0.0164	0

D_t	D_e	D_c	D_b
0	0	0.1	0

U_t	U_e	U_c	U_b
0	0	0.00164	0

Total Utilization Factor = 0.00164

R_t	R_e	R_c	R_b
0	0	0.1	0

1.20 LAN OUT 21

1.20.1 Computed parameters

Analytical Model

λ_t	λ_e	λ_c	λ_b
0.017	0.047	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.0034	0.0094	0	0

Total Utilization Factor = 0.0128

R_t	R_e	R_c	R_b
0.203	0.203	0	0

Simulated Model

λ_t	λ_e	λ_c	λ_b
0.017	0.047	0	0

D_t	D_e	D_c	D_b
0.2	0.2	0	0

U_t	U_e	U_c	U_b
0.0034	0.0094	0	0

Total Utilization Factor = 0.0128

R_t	R_e	R_c	R_b
0.203	0.203	0	0