

## Results of the Simulation Completed at: 27/01/2022 12:28:48

### Overall Response Time Summary

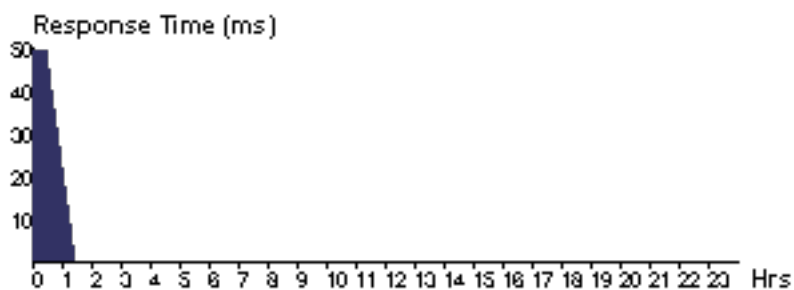
	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
Overall response time:	50.09	37.86	63.86
Data Center processing time:	0.48	0.01	0.88

### Response Time by Region

<b>Userbase</b>	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
UB10	50.02	38.39	59.91
UB11	50.34	39.88	60.88
UB12	50.04	39.11	60.86
UB1	50.17	38.58	60.77
UB2	50.19	40.36	63.11
UB4	50.29	39.55	57.31
UB5	49.96	40.86	61.60
UB6	50.18	38.61	63.86
UB7	49.82	37.86	58.86
UB8	49.98	38.60	60.32
UB9	50.10	39.89	61.88

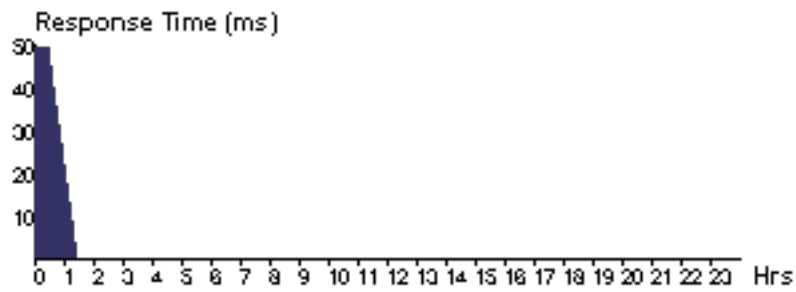
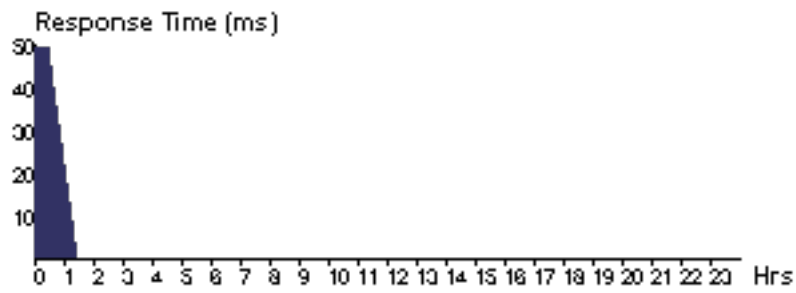
### User Base Hourly Response Times

UB1

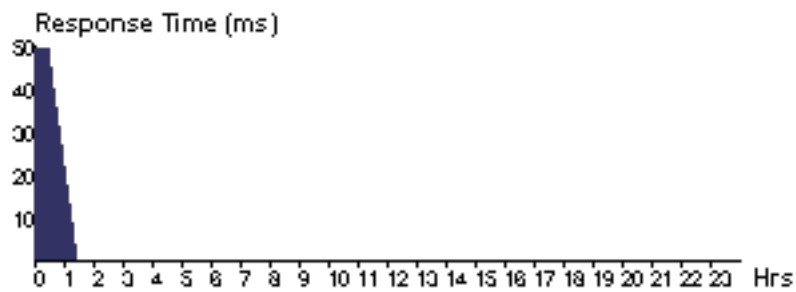


UB10

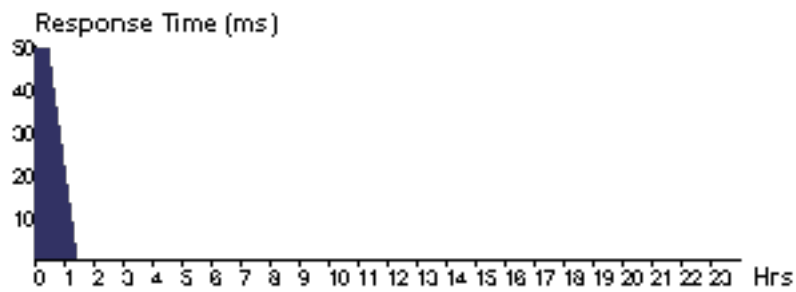
UB11



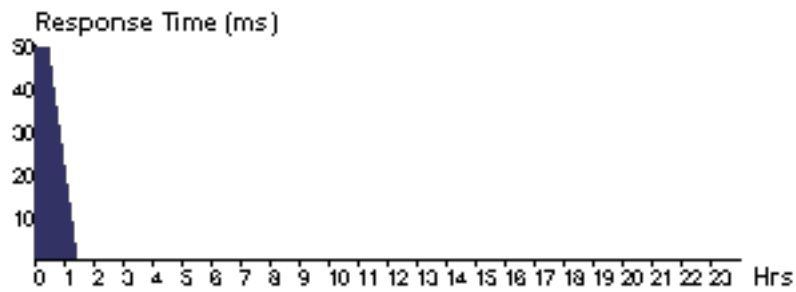
UB12



UB2

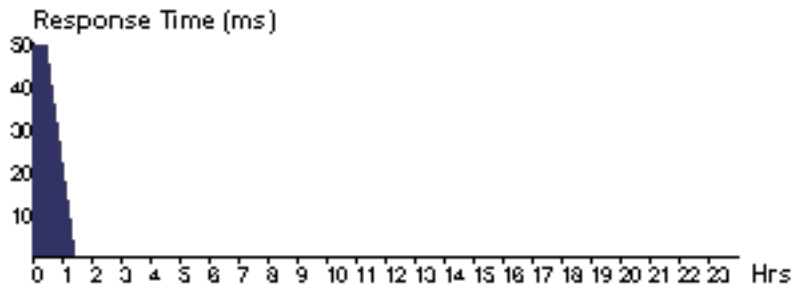
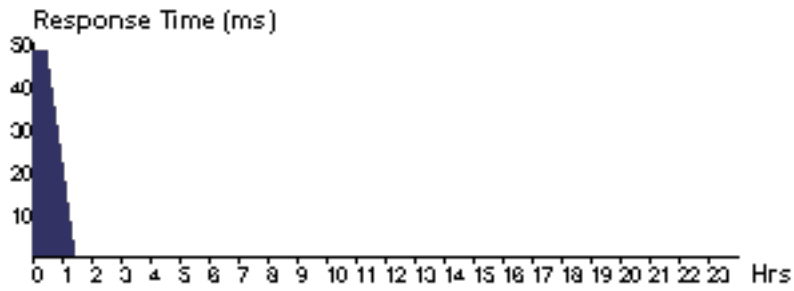


UB4

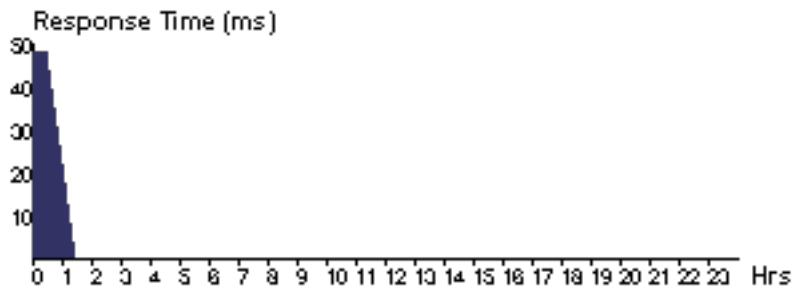


UB5

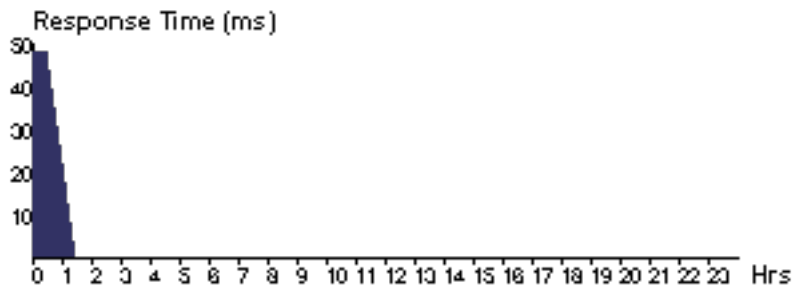
UB6



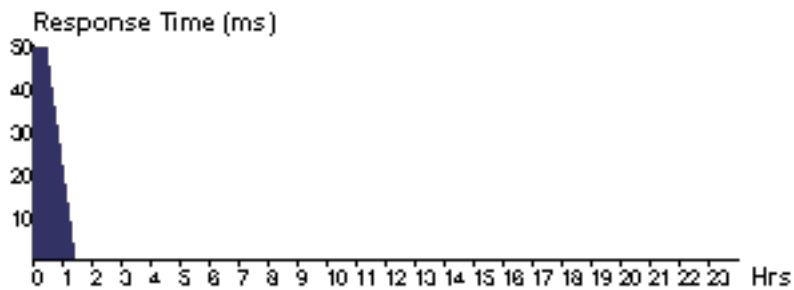
UB7



UB8



UB9



Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.46	0.01	0.86
DC2	0.46	0.04	0.81

DC3	0.48	0.01	0.86
DC4	0.47	0.01	0.88
DC5	0.49	0.02	0.88
DC6	0.47	0.01	0.86

Data Center Hourly Average Processing Times

DC1

DC2

DC3

DC4

DC5

DC6

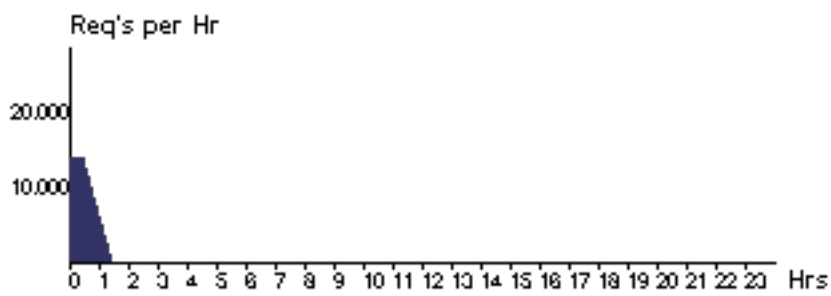
## Data Center Hourly Loading

DC1



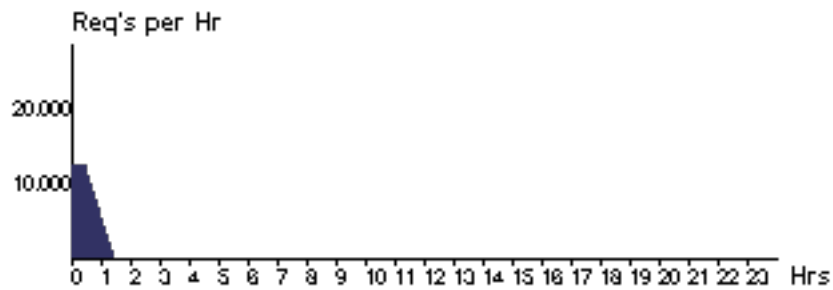
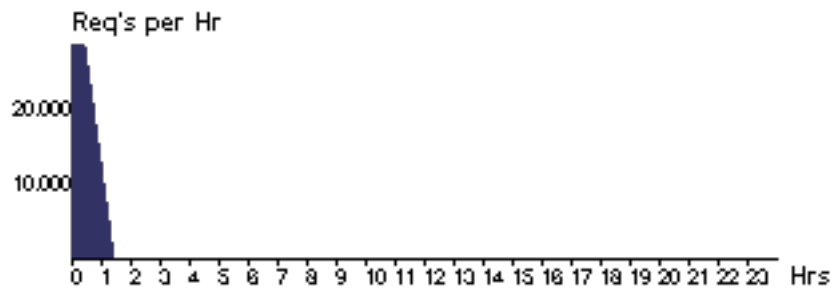
DC2

DC3



DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	3.00
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	3.77

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	0.50	0.00	0.50
DC1	0.50	0.13	0.63
DC4	0.50	0.30	0.80
DC3	0.50	0.15	0.65
DC6	0.50	0.06	0.56
DC5	0.50	0.13	0.63

## Results of the Simulation Completed at: 27/01/2022 12:33:29

### Overall Response Time Summary

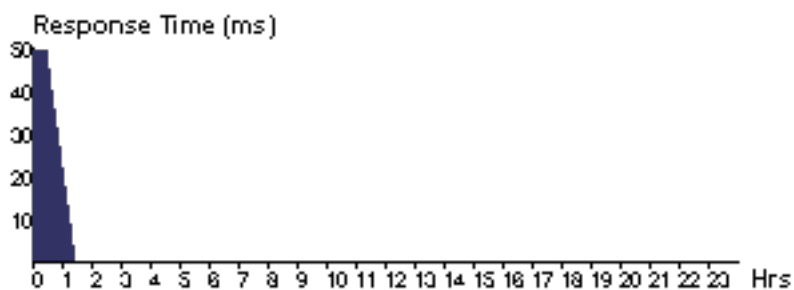
	Avg (ms)	Min (ms)	Max (ms)
Overall response time:	50.10	37.86	63.86
Data Center processing time:	0.48	0.01	0.89

### Response Time by Region

Userbase	Avg (ms)	Min (ms)	Max (ms)
UB10	50.01	38.39	59.91
UB11	50.34	39.88	60.88
UB12	50.08	39.11	60.86
UB1	50.17	38.58	60.77
UB2	50.19	40.36	63.11
UB4	50.14	39.55	57.31
UB5	49.99	40.35	60.61
UB6	50.14	38.61	63.86
UB7	49.83	37.86	58.61
UB8	49.94	38.60	60.32
UB9	50.11	39.89	61.88

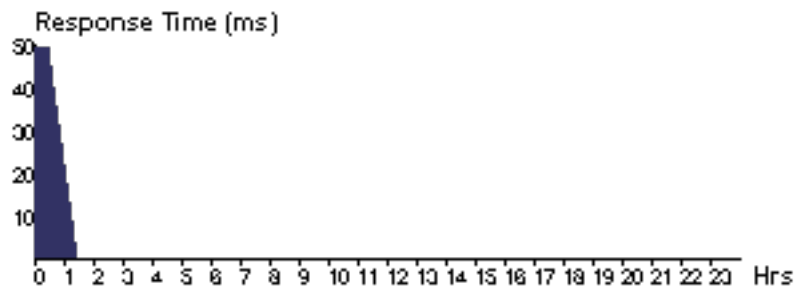
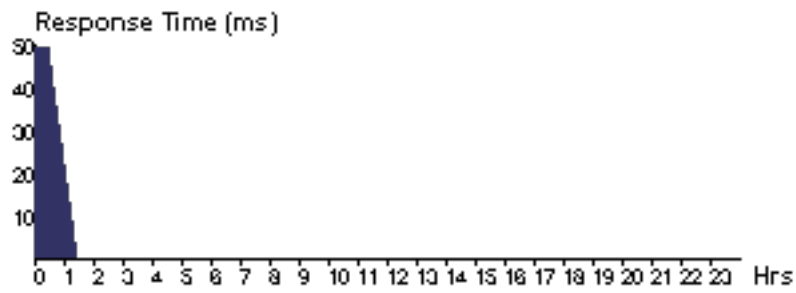
### User Base Hourly Response Times

UB1

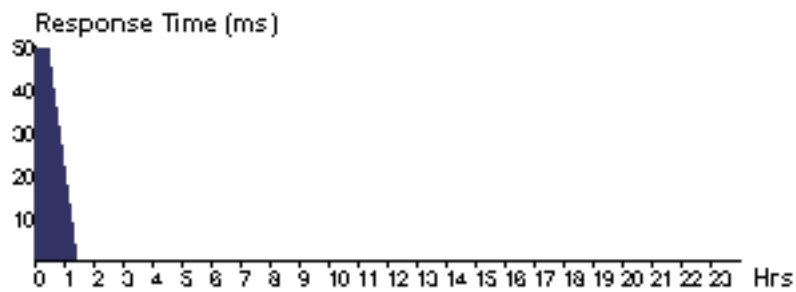


UB10

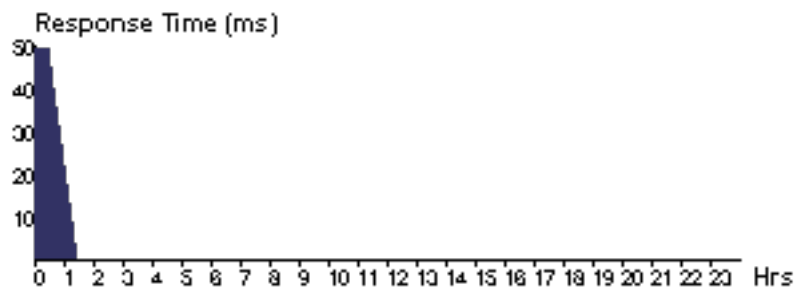
UB11



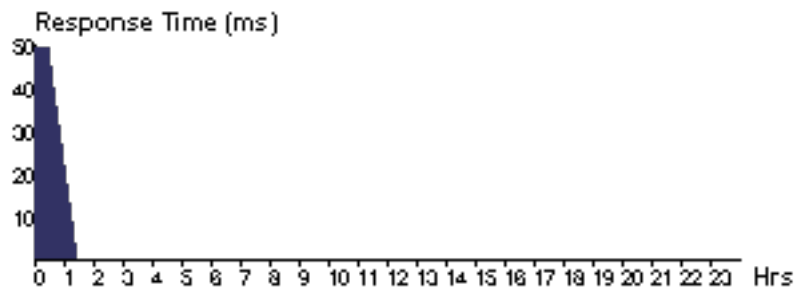
UB12



UB2



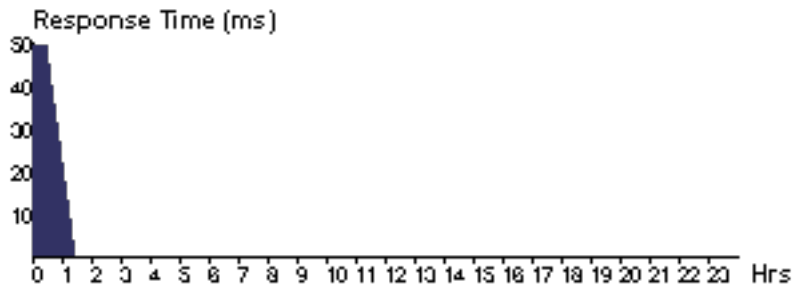
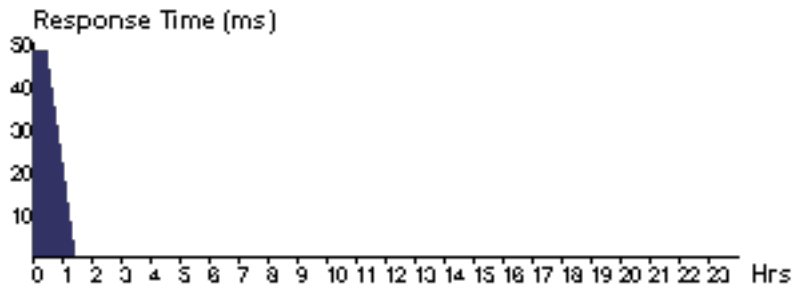
UB4



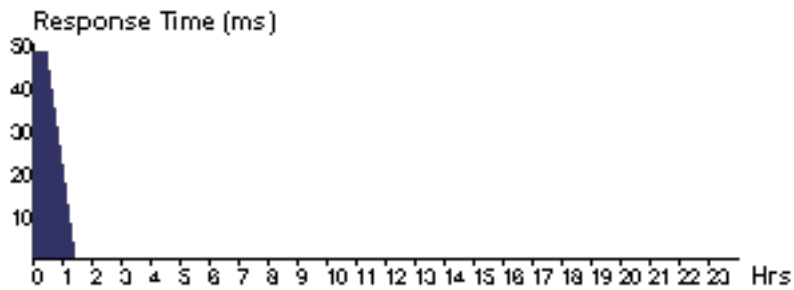
UB5

UB6

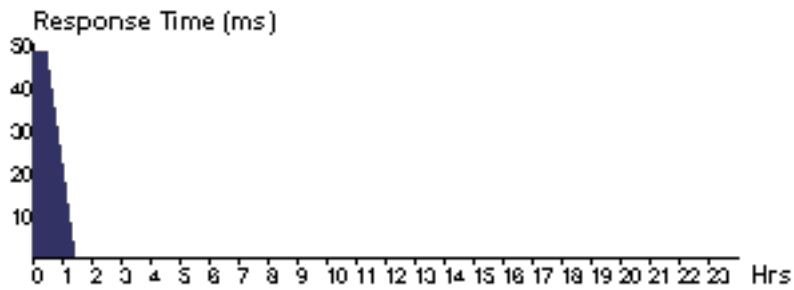




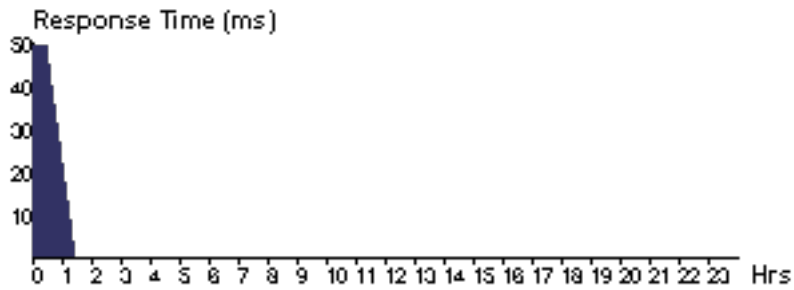
UB7



UB8



UB9



Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.46	0.01	0.86
DC2	0.46	0.04	0.81

DC3	0.48	0.01	0.86
DC4	0.47	0.01	0.88
DC5	0.49	0.02	0.89
DC6	0.47	0.01	0.86

Data Center Hourly Average Processing Times

DC1

DC2

DC3

DC4

DC5

DC6

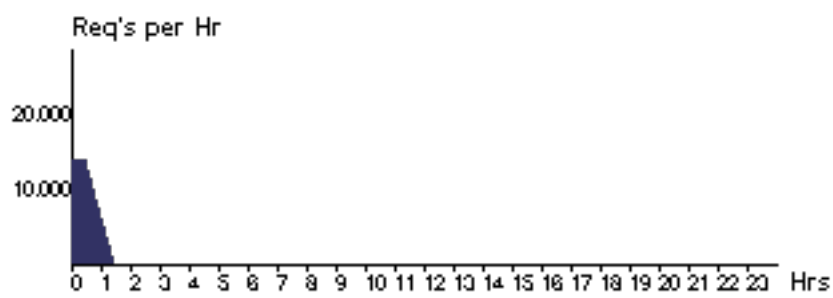
## Data Center Hourly Loading

DC1



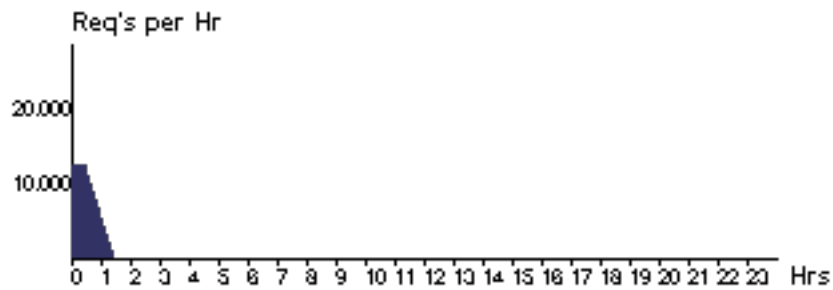
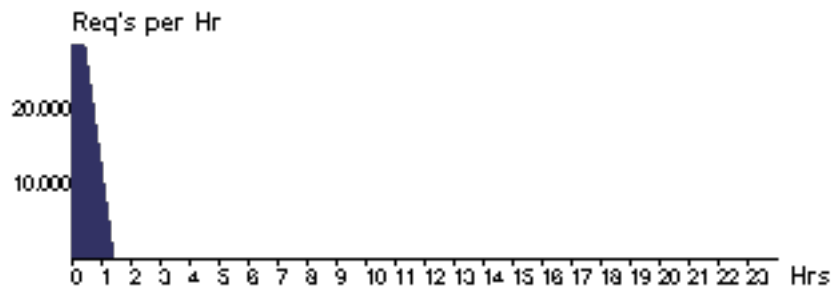
DC2

DC3

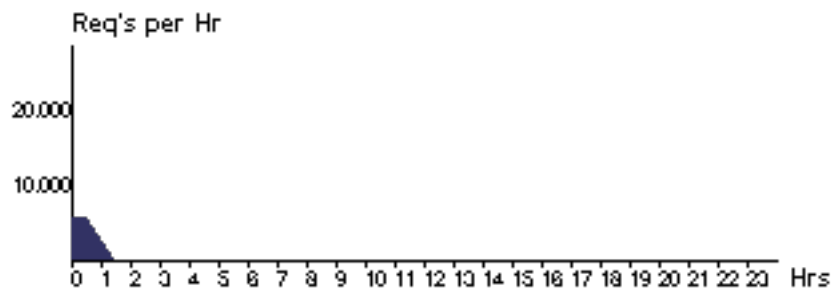


DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	3.00
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	3.77

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	0.50	0.00	0.50
DC1	0.50	0.13	0.63
DC4	0.50	0.30	0.80
DC3	0.50	0.15	0.65
DC6	0.50	0.06	0.56
DC5	0.50	0.13	0.63

## Results of the Simulation Completed at: 27/01/2022 12:34:19

### Overall Response Time Summary

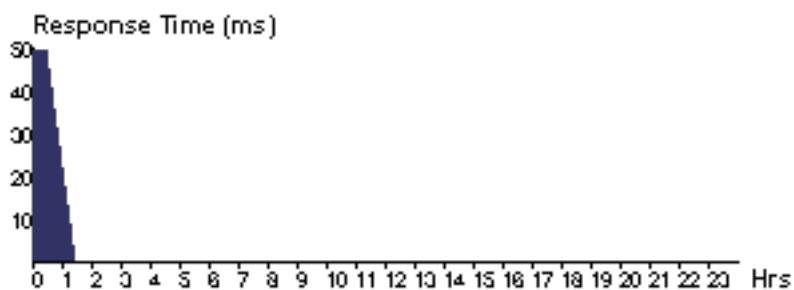
	Avg (ms)	Min (ms)	Max (ms)
Overall response time:	50.09	37.86	63.86
Data Center processing time:	0.48	0.01	0.88

### Response Time by Region

Userbase	Avg (ms)	Min (ms)	Max (ms)
UB10	49.98	38.39	59.89
UB11	50.29	39.88	60.88
UB12	50.09	39.11	60.86
UB1	50.08	38.58	60.77
UB2	50.24	40.36	63.11
UB4	50.21	39.55	57.31
UB5	50.07	40.86	61.60
UB6	50.14	38.61	63.86
UB7	49.79	37.86	58.61
UB8	50.01	38.60	60.32
UB9	50.12	39.89	61.88

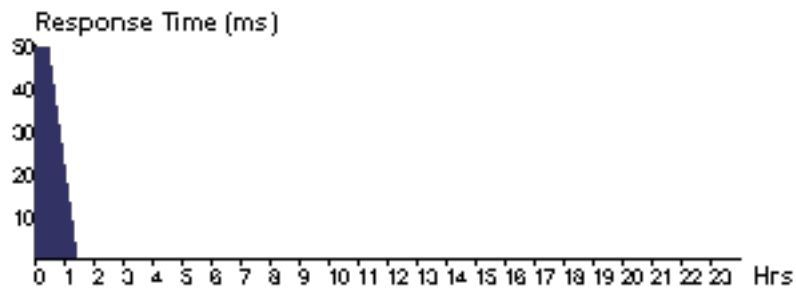
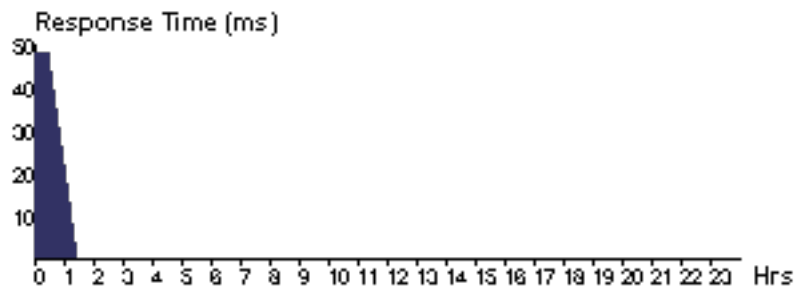
### User Base Hourly Response Times

UB1

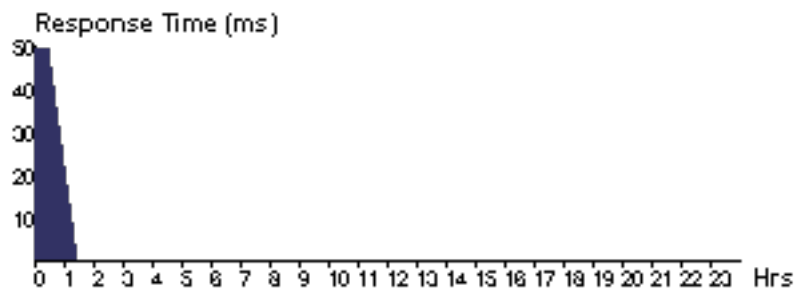


UB10

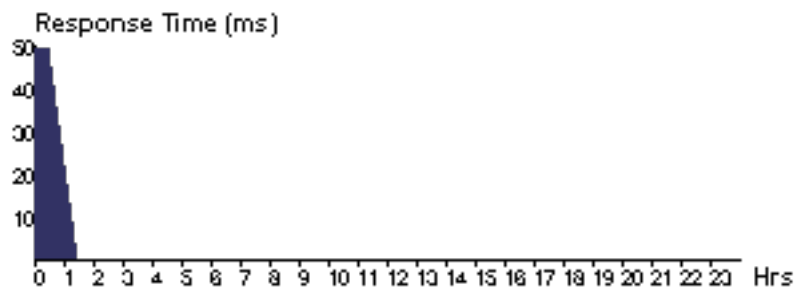
UB11



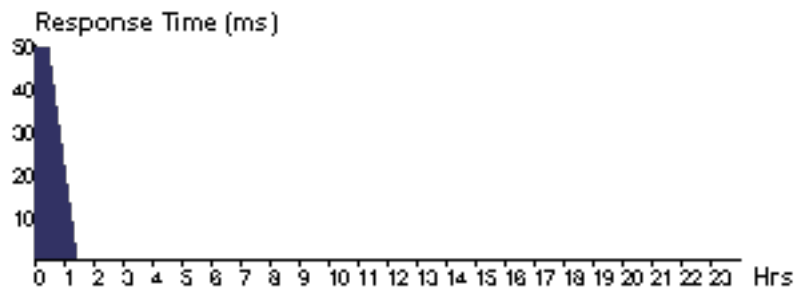
UB12



UB2

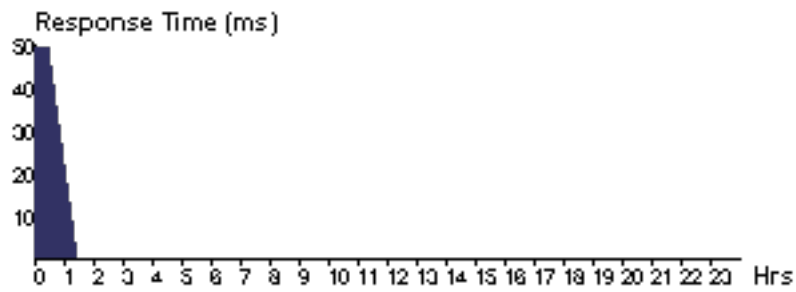
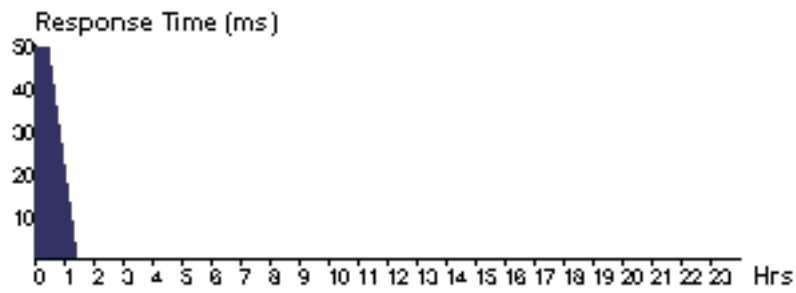


UB4

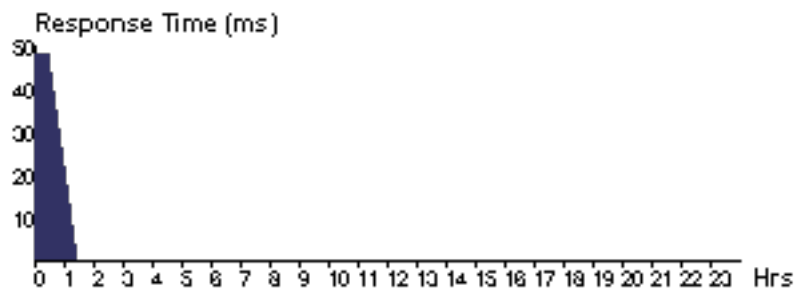


UB5

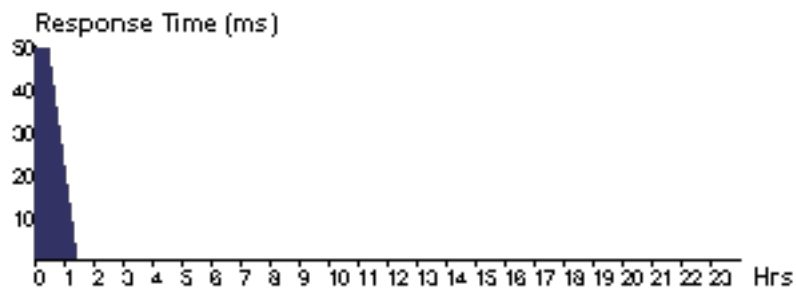
UB6



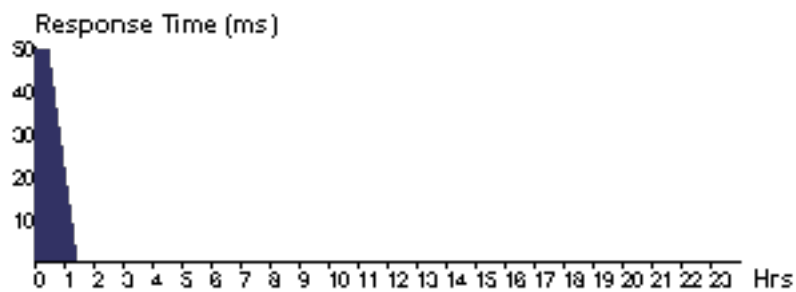
UB7



UB8



UB9



Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.46	0.01	0.86
DC2	0.47	0.04	0.81

DC3	0.48	0.01	0.86
DC4	0.47	0.01	0.88
DC5	0.49	0.02	0.88
DC6	0.47	0.01	0.86

Data Center Hourly Average Processing Times

DC1

DC2

DC3

DC4

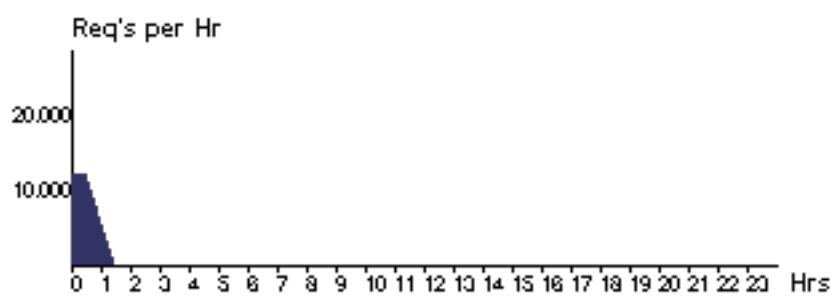
DC5

DC6



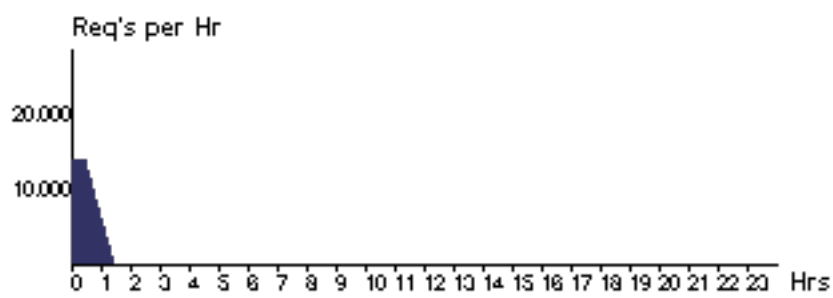
## Data Center Hourly Loading

DC1



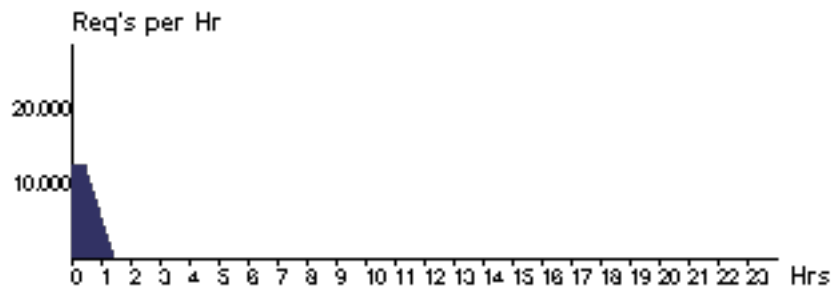
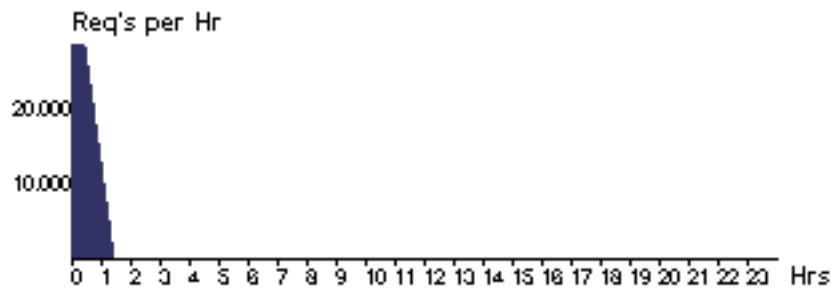
DC2

DC3

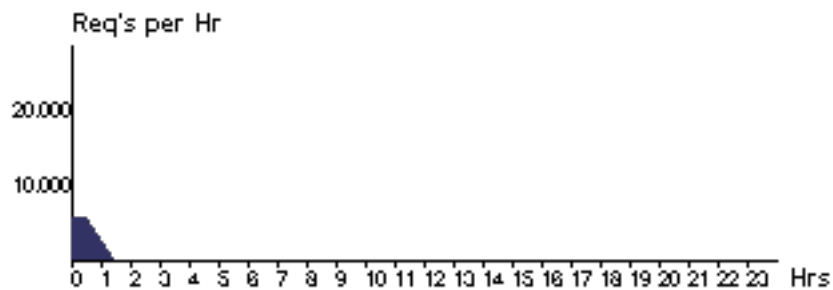


DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	3.00
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	3.77

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	0.50	0.00	0.50
DC1	0.50	0.13	0.63
DC4	0.50	0.30	0.80
DC3	0.50	0.15	0.65
DC6	0.50	0.06	0.56
DC5	0.50	0.13	0.63

## Results of the Simulation Completed at: 27/01/2022 12:35:15

### Overall Response Time Summary

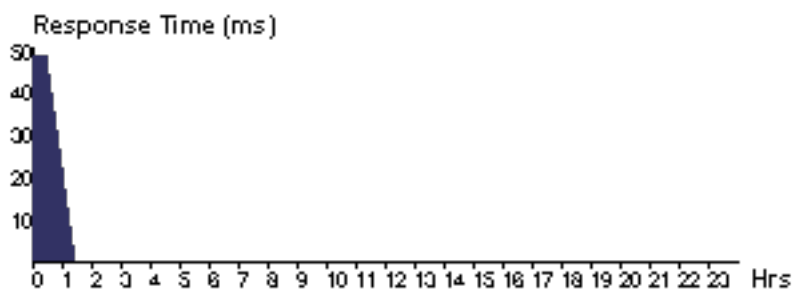
	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
Overall response time:	50.09	36.88	66.86
Data Center processing time:	0.48	0.01	0.89

### Response Time by Region

<b>Userbase</b>	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
UB10	50.33	40.38	60.89
UB11	49.86	40.13	60.63
UB12	50.14	38.11	62.33
UB1	49.90	39.10	60.61
UB2	49.98	38.11	62.11
UB4	49.93	41.81	59.31
UB5	50.10	40.36	59.86
UB6	50.03	40.11	61.11
UB7	50.17	39.36	66.86
UB8	50.65	43.29	61.01
UB9	50.12	36.88	65.62

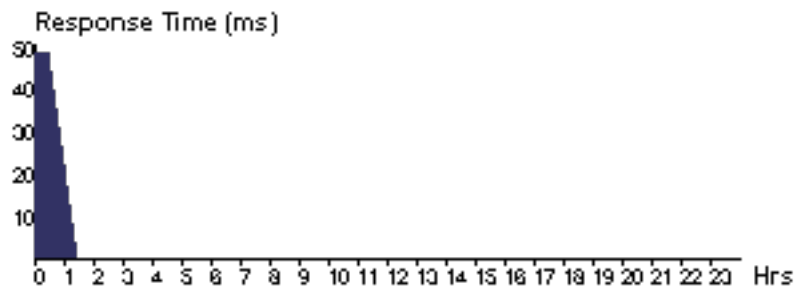
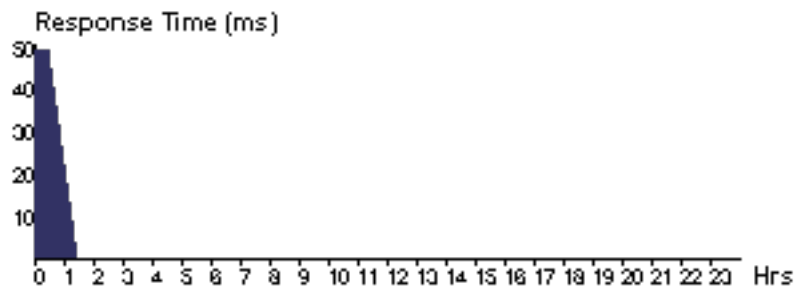
### User Base Hourly Response Times

UB1

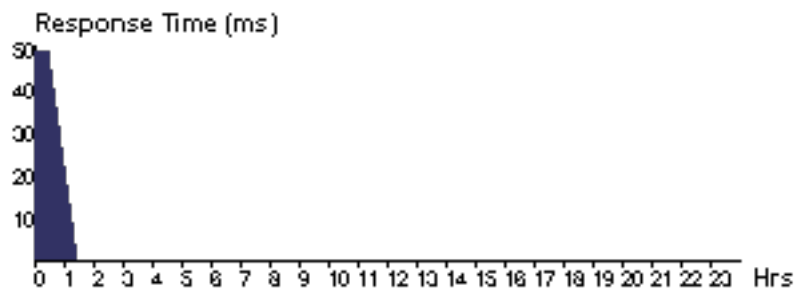


UB10

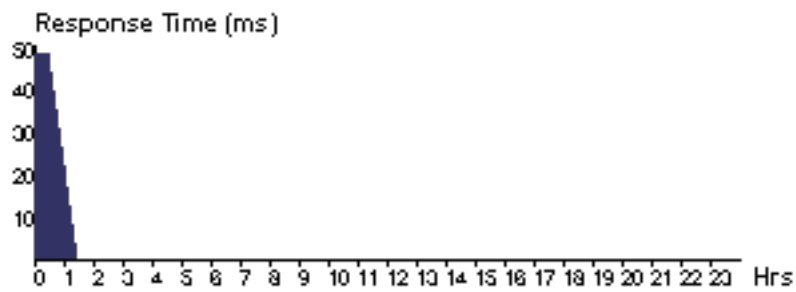
UB11



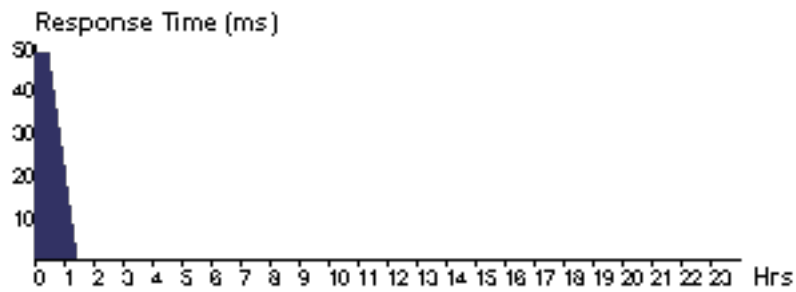
UB12



UB2

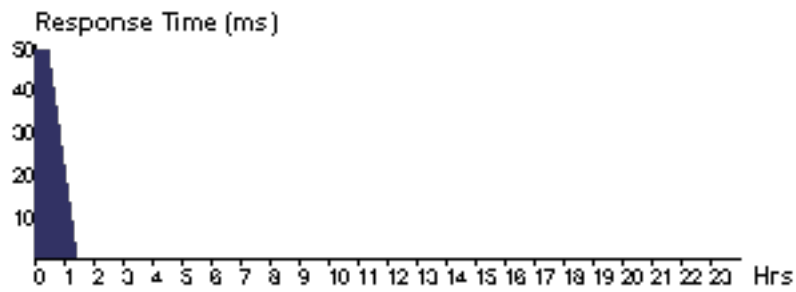
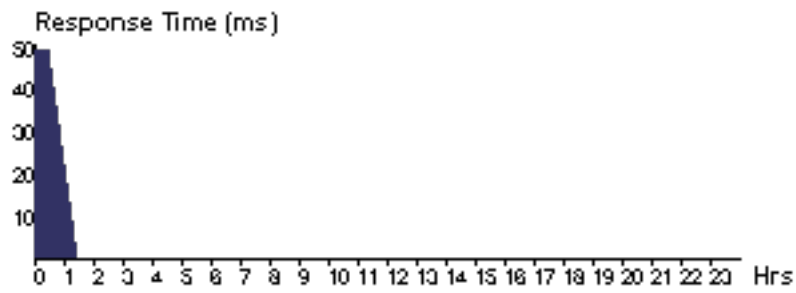


UB4

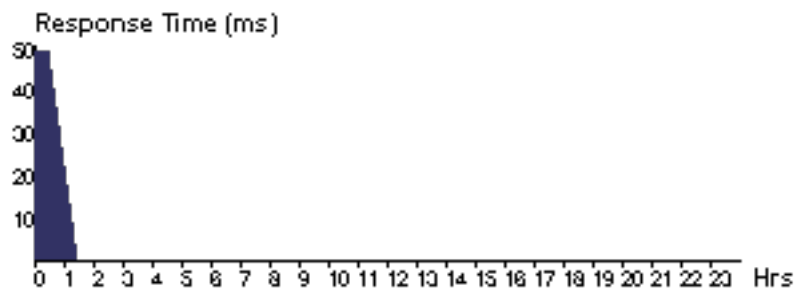


UB5

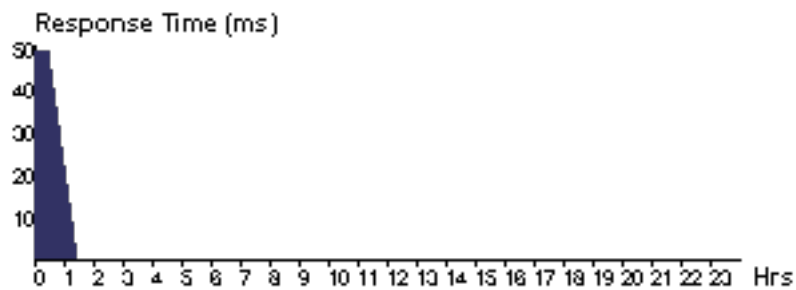
UB6



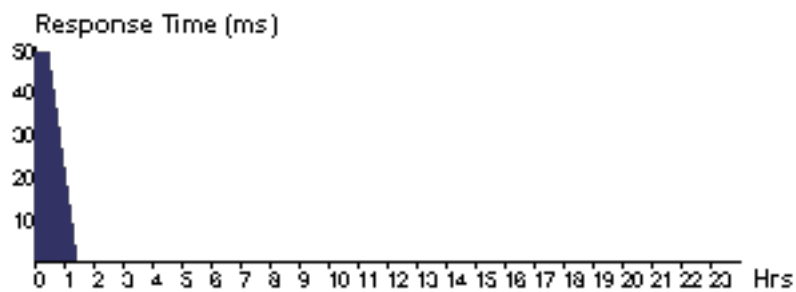
UB7



UB8



UB9



Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.47	0.01	0.86
DC2	0.46	0.04	0.81

DC3	0.48	0.01	0.86
DC4	0.48	0.01	0.88
DC5	0.48	0.03	0.89
DC6	0.47	0.01	0.86

Data Center Hourly Average Processing Times

DC1

DC2

DC3

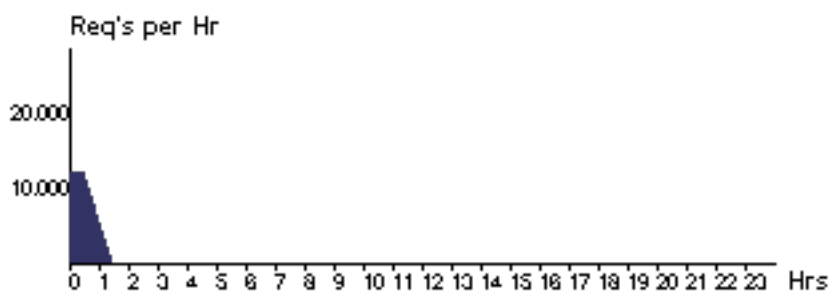
DC4

DC5

DC6

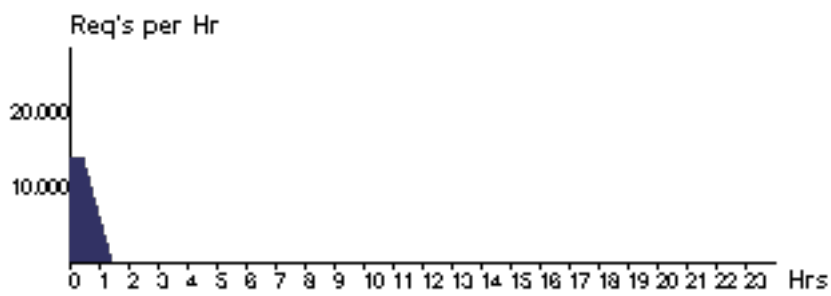
## Data Center Hourly Loading

DC1



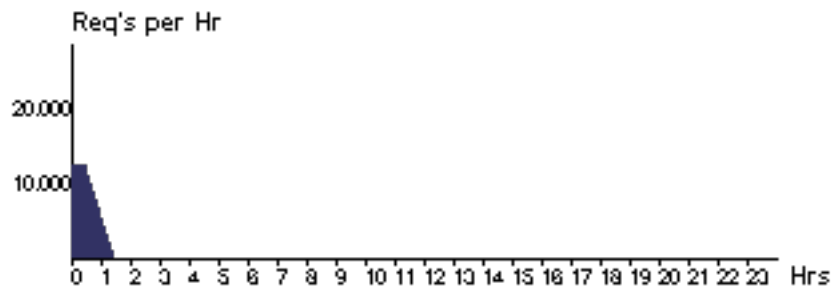
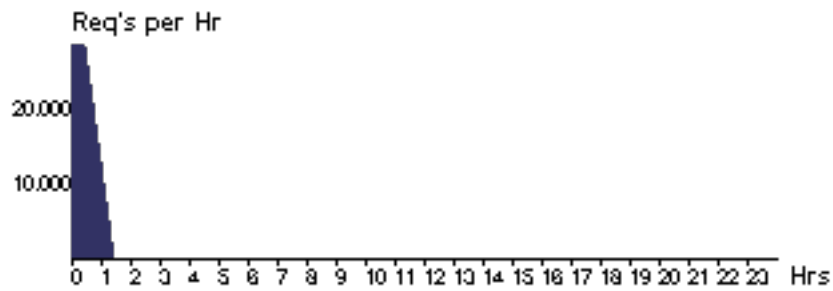
DC2

DC3

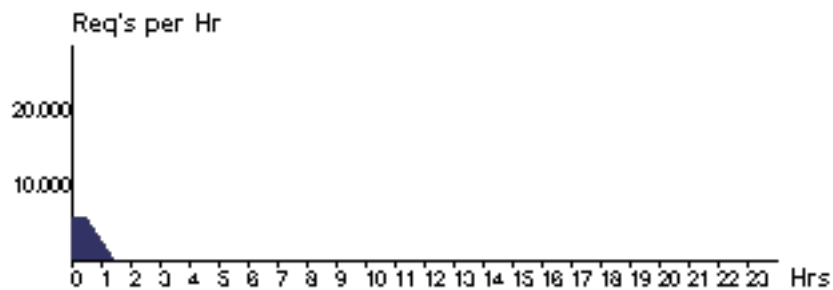


DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	3.00
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	3.77

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	0.50	0.00	0.50
DC1	0.50	0.13	0.63
DC4	0.50	0.30	0.80
DC3	0.50	0.15	0.65
DC6	0.50	0.06	0.56
DC5	0.50	0.13	0.63



## Results of the Simulation Completed at: 27/01/2022 12:36:08

### Overall Response Time Summary

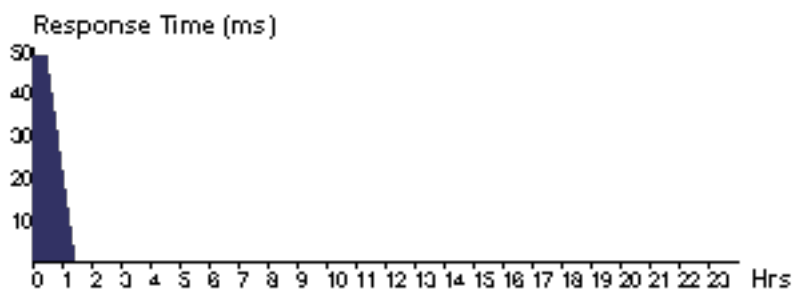
	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
Overall response time:	50.09	36.88	66.86
Data Center processing time:	0.48	0.01	0.88

### Response Time by Region

<b>Userbase</b>	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
UB10	50.30	40.38	60.89
UB11	49.82	39.38	60.38
UB12	50.16	38.11	62.33
UB1	49.97	39.10	60.61
UB2	49.96	38.11	62.11
UB4	49.72	41.81	59.31
UB5	50.06	40.36	60.61
UB6	50.12	40.11	61.11
UB7	50.13	39.36	66.86
UB8	50.72	43.29	61.01
UB9	50.11	36.88	65.62

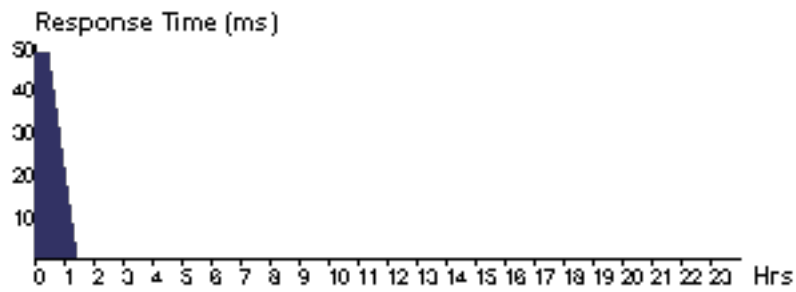
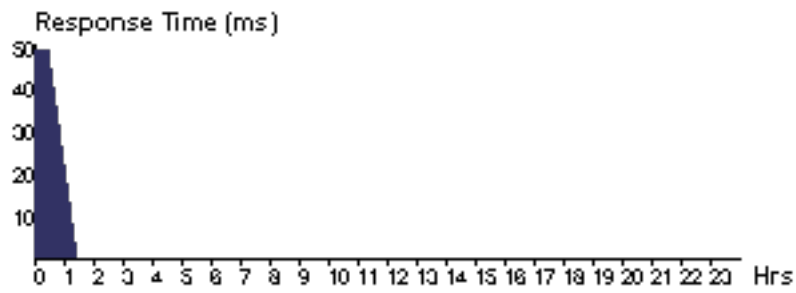
### User Base Hourly Response Times

UB1

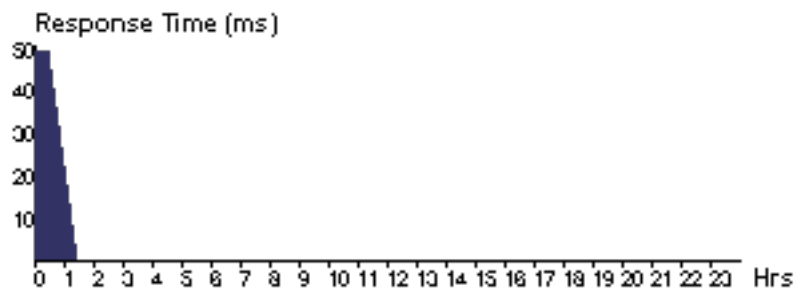


UB10

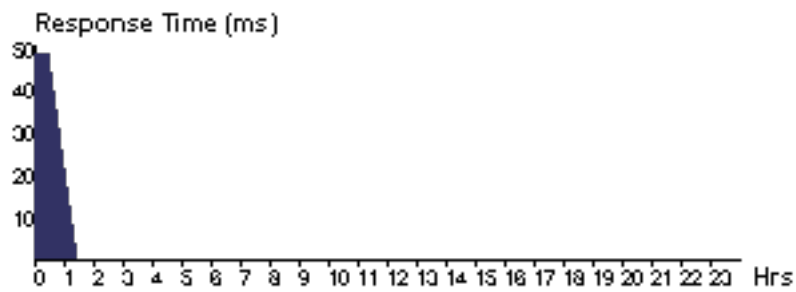
UB11



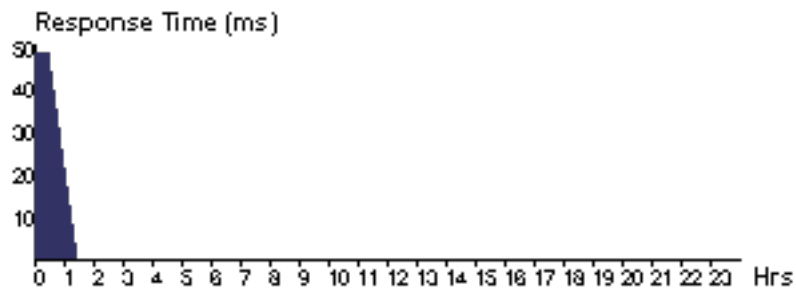
UB12



UB2

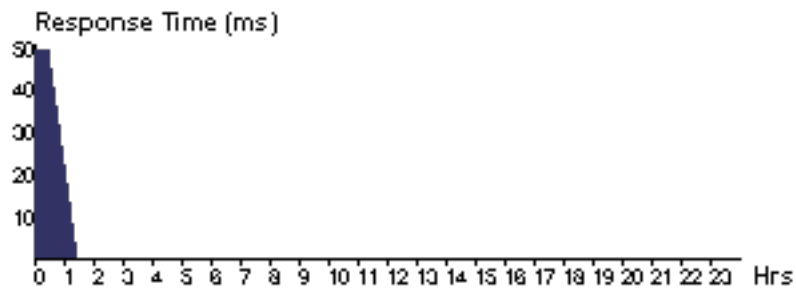
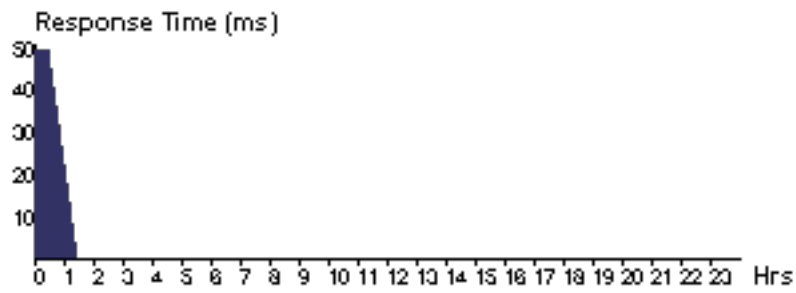


UB4

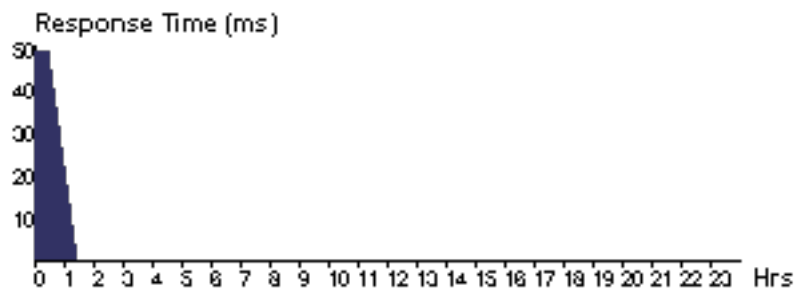


UB5

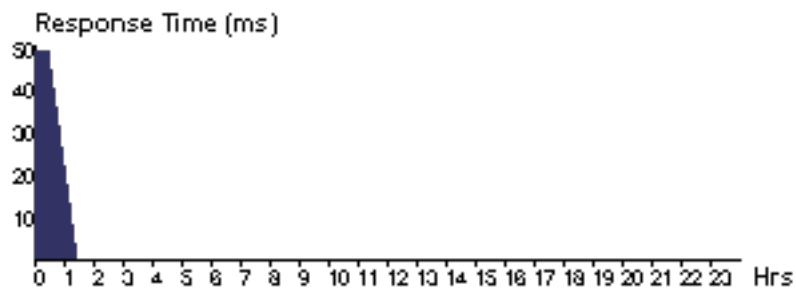
UB6



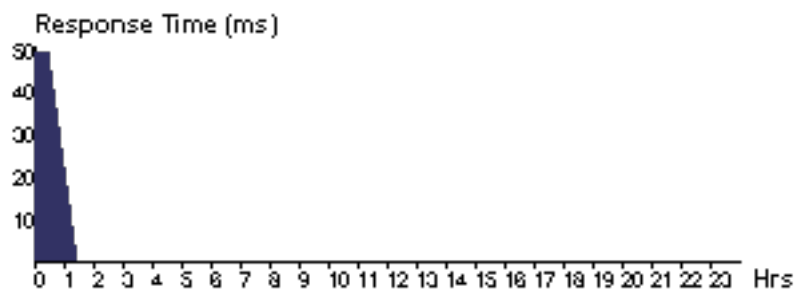
UB7



UB8



UB9



## Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.47	0.01	0.86
DC2	0.46	0.04	0.81

DC3	0.47	0.01	0.86
DC4	0.48	0.01	0.88
DC5	0.48	0.03	0.88
DC6	0.47	0.01	0.86

Data Center Hourly Average Processing Times

DC1

DC2

DC3

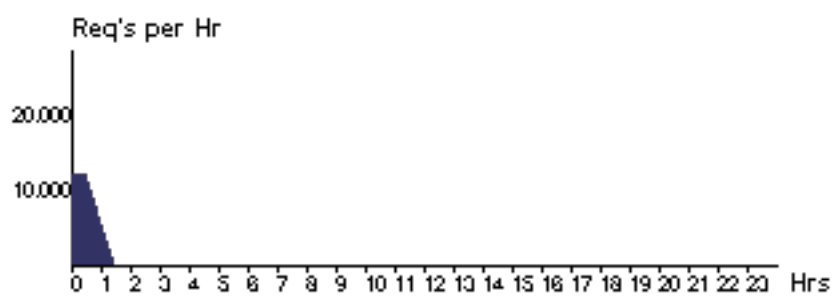
DC4

DC5

DC6

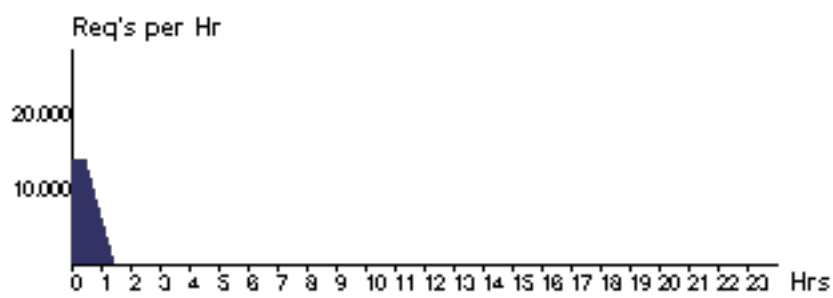
## Data Center Hourly Loading

DC1



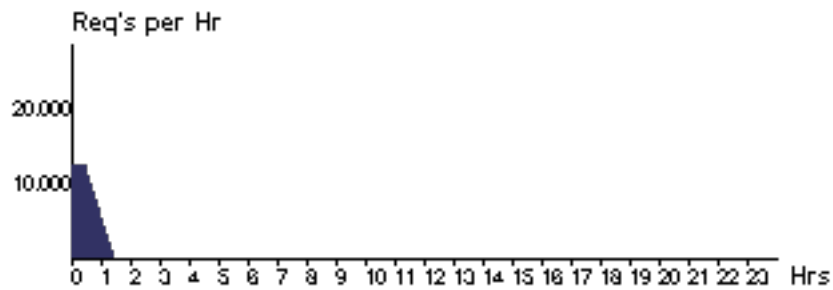
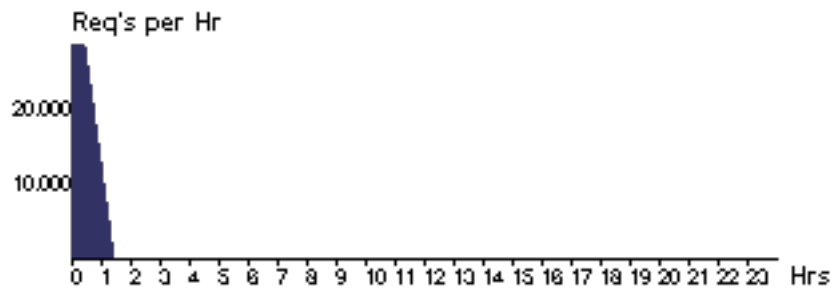
DC2

DC3



DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	3.00
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	3.77

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	0.50	0.00	0.50
DC1	0.50	0.13	0.63
DC4	0.50	0.30	0.80
DC3	0.50	0.15	0.65
DC6	0.50	0.06	0.56
DC5	0.50	0.13	0.63

## Results of the Simulation Completed at: 27/01/2022 12:37:21

### Overall Response Time Summary

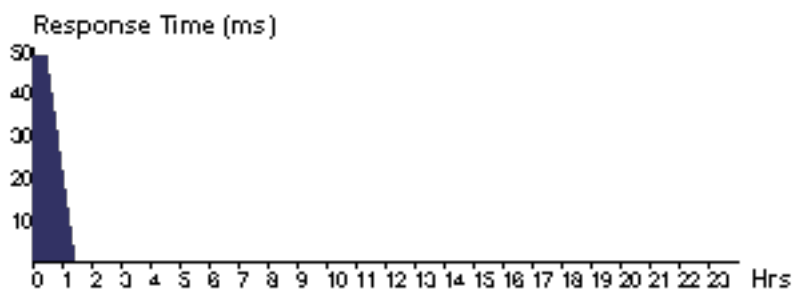
	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
Overall response time:	50.09	36.88	66.86
Data Center processing time:	0.48	0.01	0.89

### Response Time by Region

<b>Userbase</b>	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
UB10	50.29	40.38	60.89
UB11	49.86	39.38	60.38
UB12	50.14	38.11	62.33
UB1	49.95	39.10	60.61
UB2	49.86	38.11	62.11
UB4	49.63	41.81	59.31
UB5	50.06	40.36	60.54
UB6	50.13	40.11	61.11
UB7	50.21	39.36	66.86
UB8	50.73	43.29	61.01
UB9	50.12	36.88	65.62

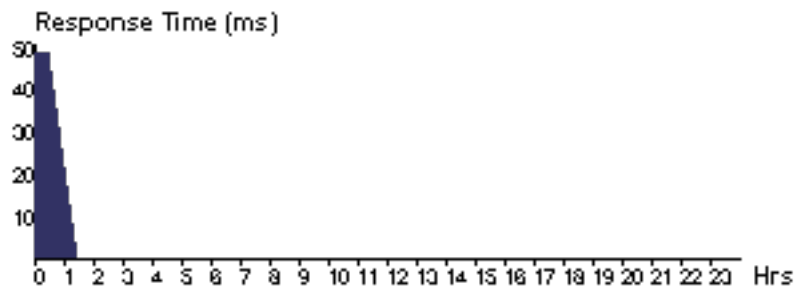
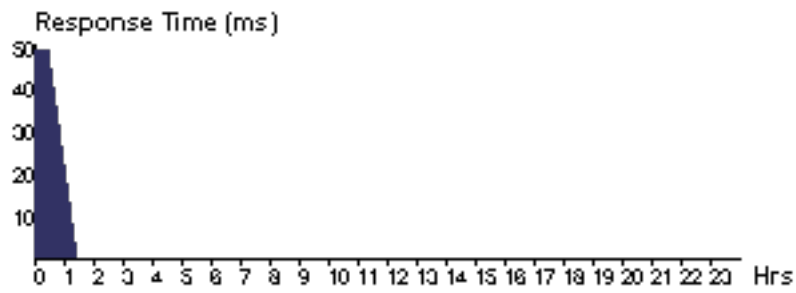
### User Base Hourly Response Times

UB1

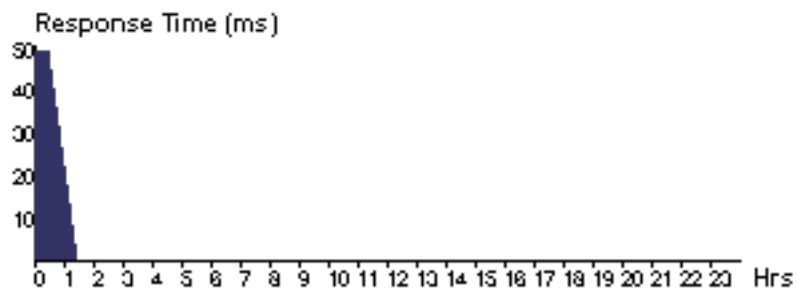


UB10

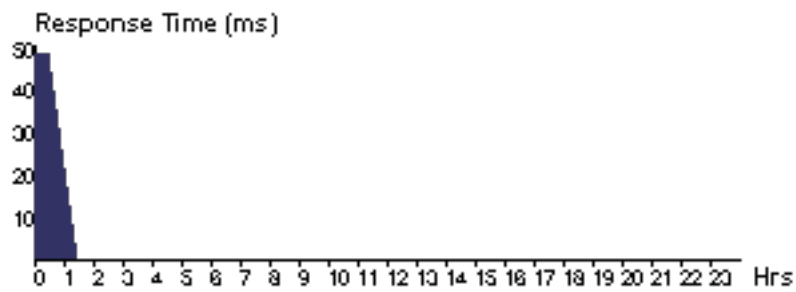
UB11



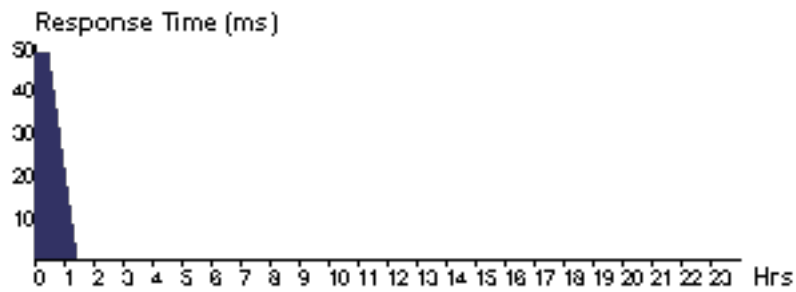
UB12



UB2



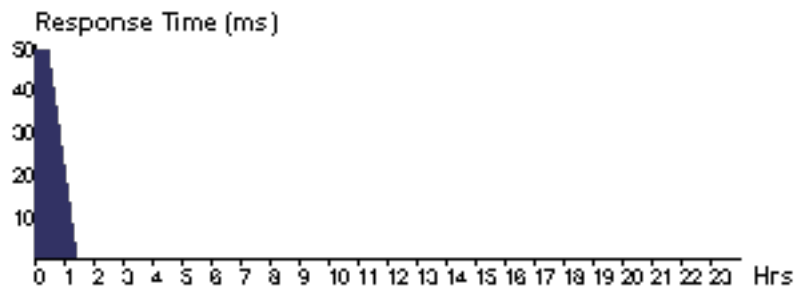
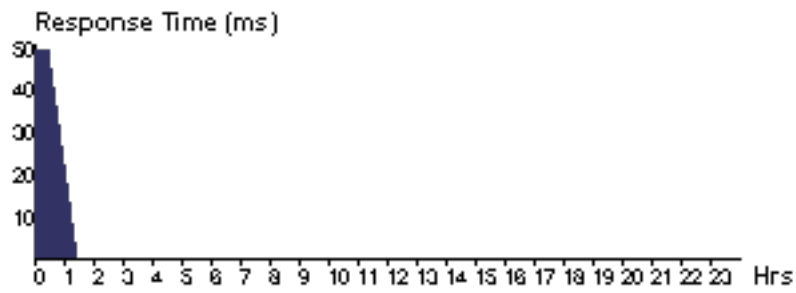
UB4



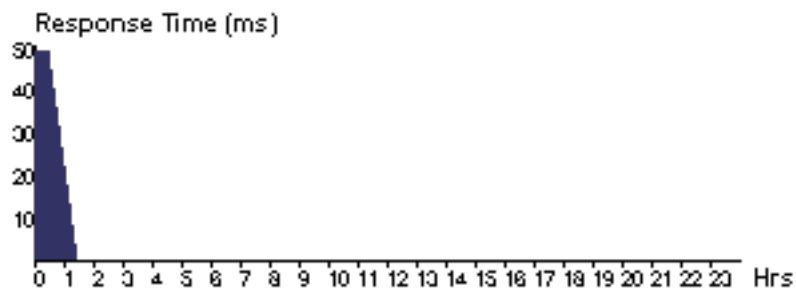
UB5

UB6

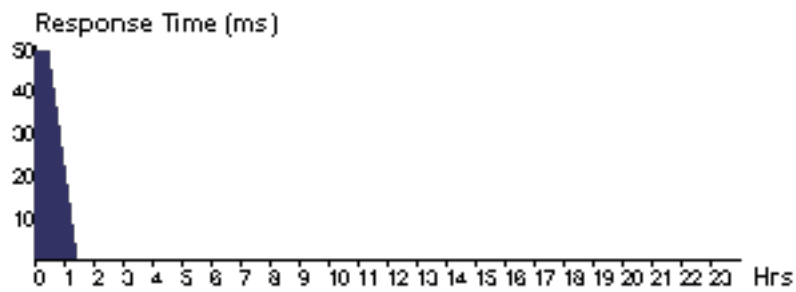




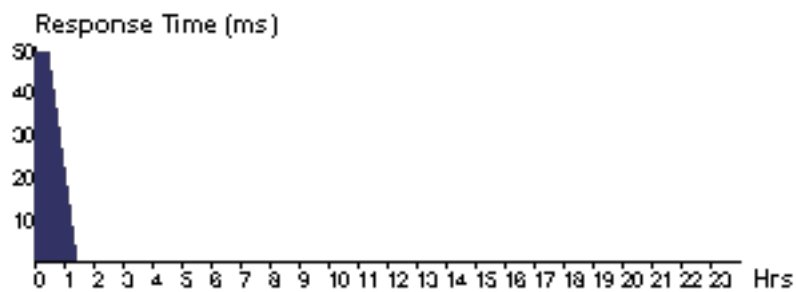
UB7



UB8



UB9



Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.47	0.01	0.86
DC2	0.44	0.04	0.81

DC3	0.47	0.01	0.86
DC4	0.48	0.01	0.88
DC5	0.47	0.03	0.89
DC6	0.47	0.01	0.86

Data Center Hourly Average Processing Times

DC1

DC2

DC3

DC4

DC5

DC6

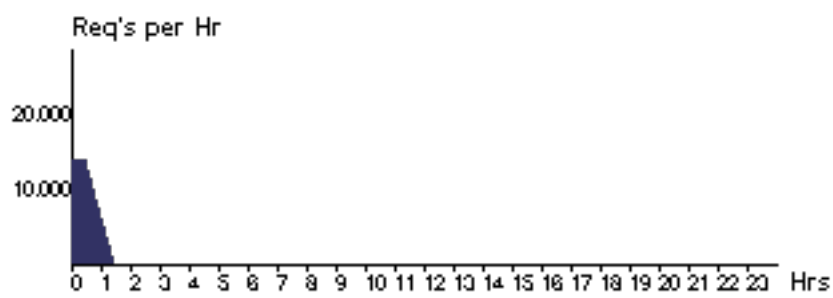
## Data Center Hourly Loading

DC1



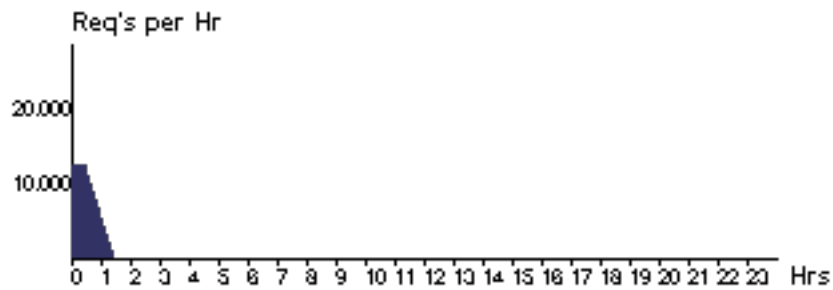
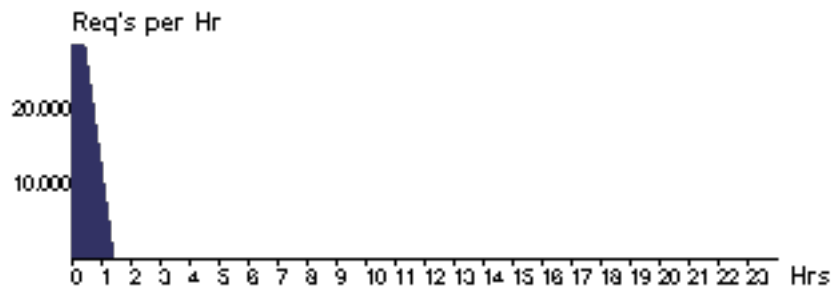
DC2

DC3

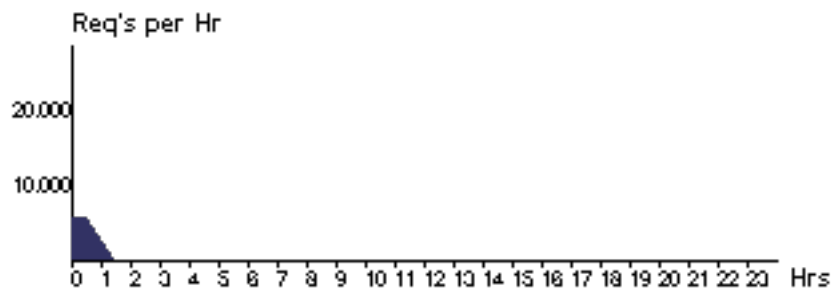


DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	3.00
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	3.77

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	0.50	0.00	0.50
DC1	0.50	0.13	0.63
DC4	0.50	0.30	0.80
DC3	0.50	0.15	0.65
DC6	0.50	0.06	0.56
DC5	0.50	0.13	0.63

## Results of the Simulation Completed at: 27/01/2022 12:43:09

### Overall Response Time Summary

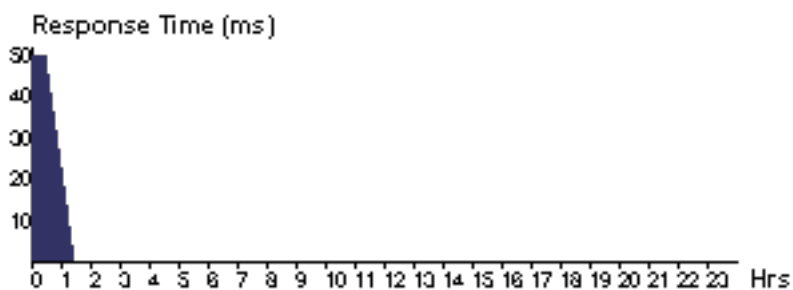
	Avg (ms)	Min (ms)	Max (ms)
Overall response time:	50.85	38.03	67.48
Data Center processing time:	1.23	0.01	10.13

### Response Time by Region

Userbase	Avg (ms)	Min (ms)	Max (ms)
UB10	50.76	38.43	60.21
UB11	51.01	41.23	61.45
UB12	50.38	39.26	60.86
UB1	50.90	38.72	60.80
UB2	50.96	38.61	64.13
UB4	50.68	39.86	57.85
UB5	50.14	40.35	61.16
UB6	50.35	39.16	63.98
UB7	50.02	38.03	58.68
UB8	49.89	38.85	60.44
UB9	51.61	39.91	67.48

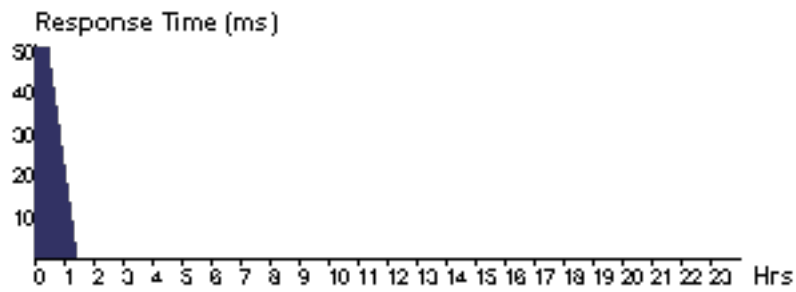
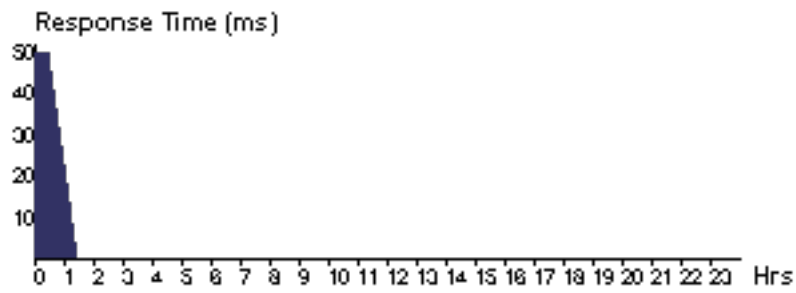
### User Base Hourly Response Times

UB1

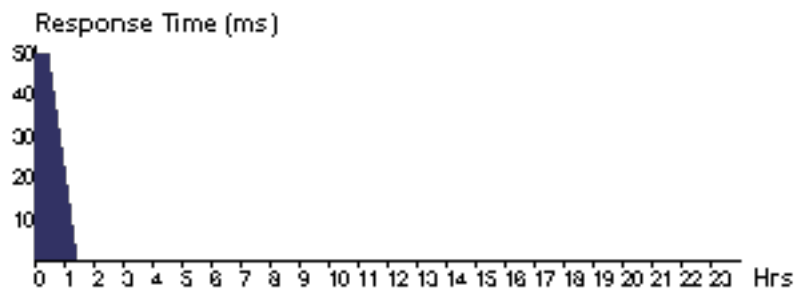


UB10

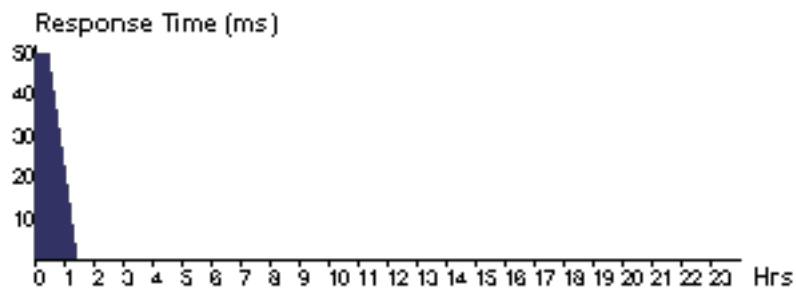
UB11



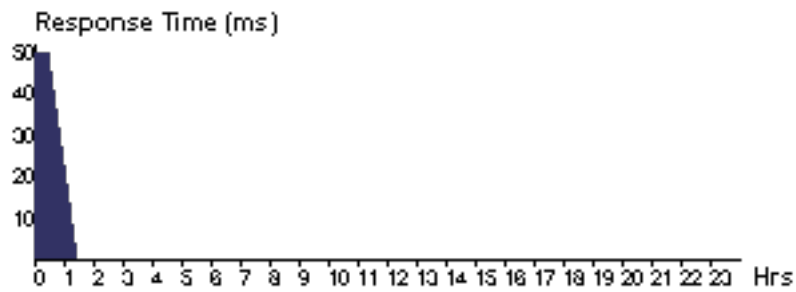
UB12



UB2

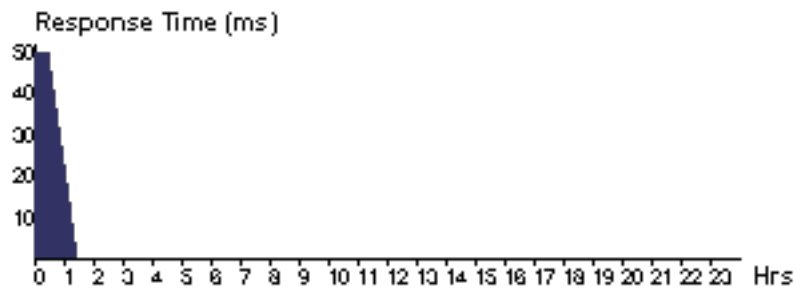
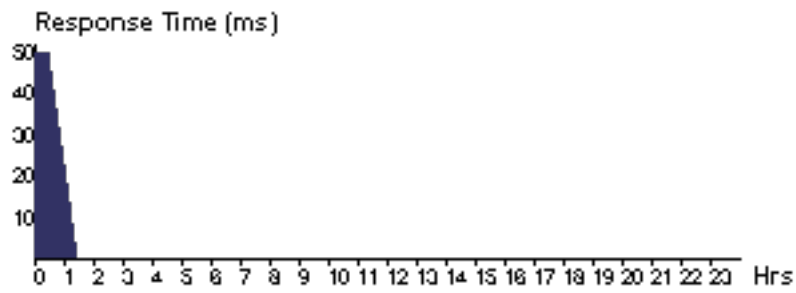


UB4

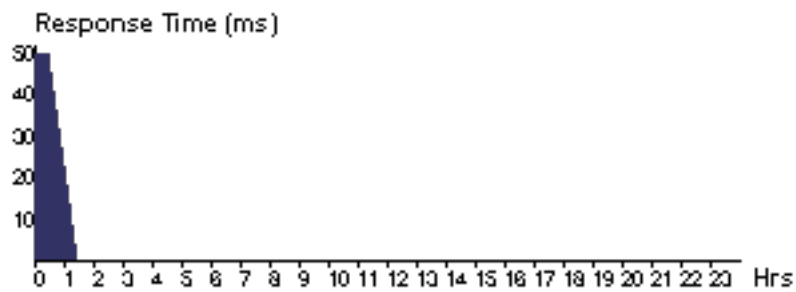


UB5

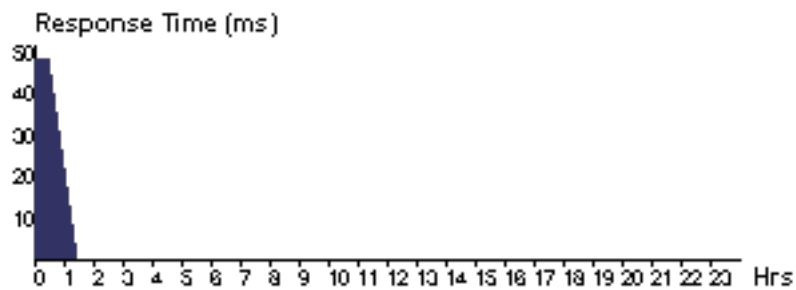
UB6



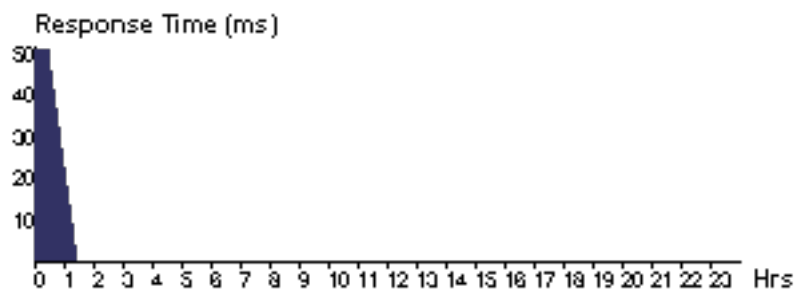
UB7



UB8



UB9



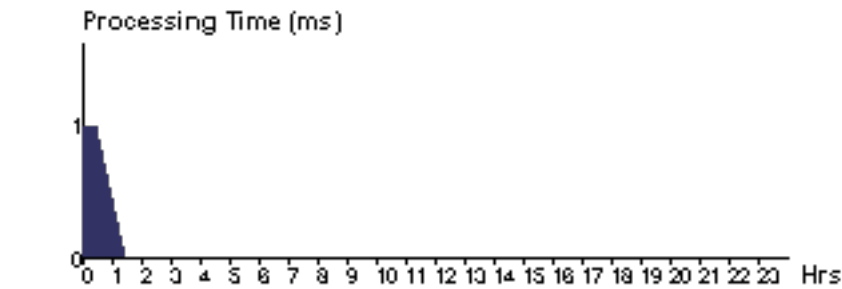
Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	1.22	0.01	5.54
DC2	0.76	0.25	1.35

DC3	0.66	0.01	2.42
DC4	1.63	0.02	10.13
DC5	1.20	0.04	5.71
DC6	0.75	0.02	2.80

Data Center Hourly Average Processing Times

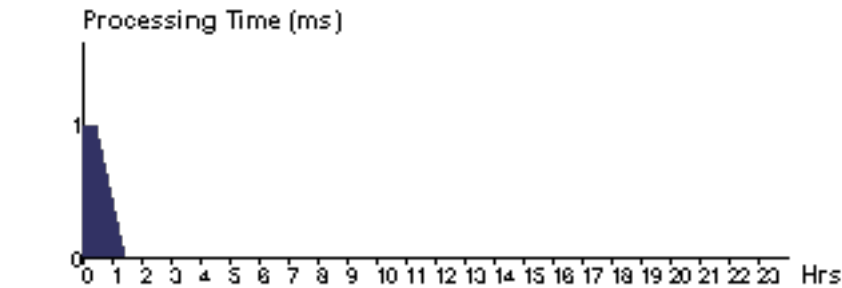
DC1



DC2

DC3

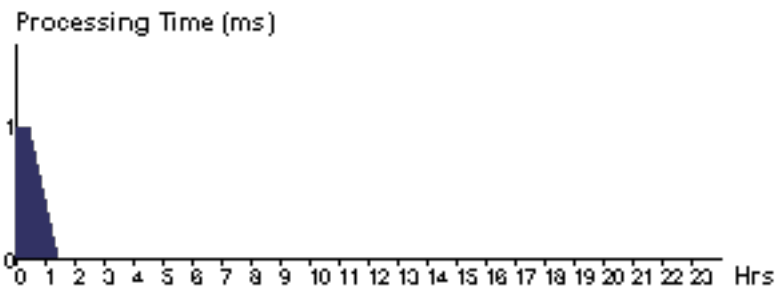
DC4



DC5

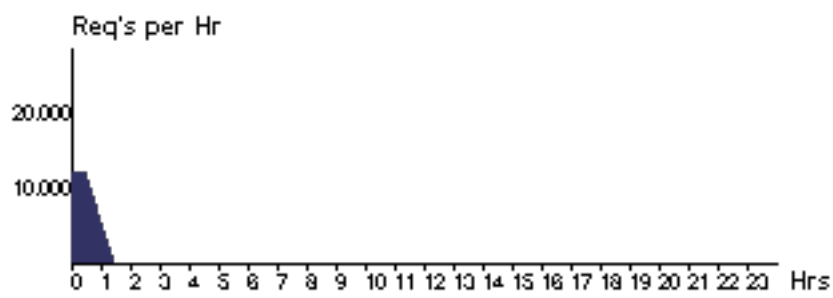
DC6





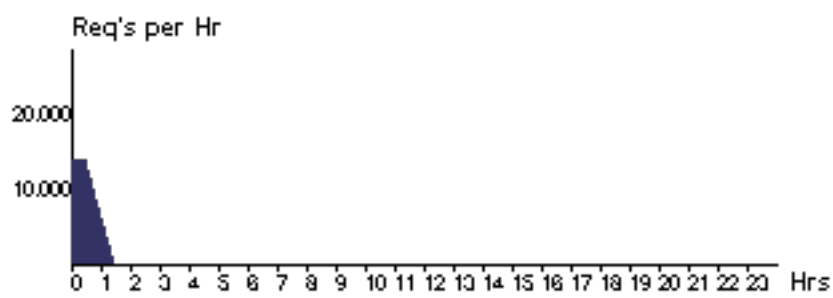
## Data Center Hourly Loading

DC1



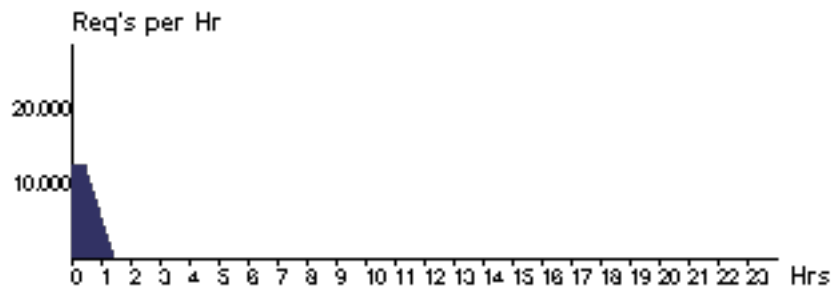
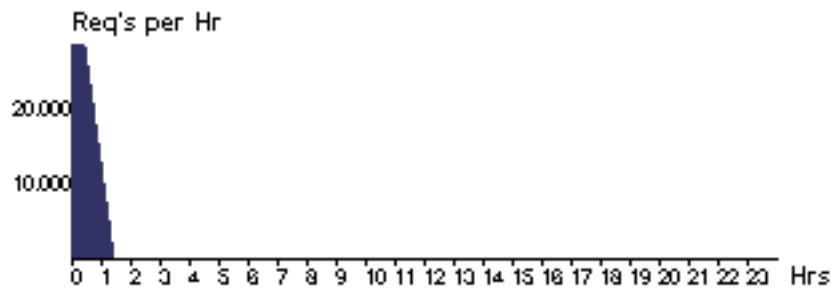
DC2

DC3

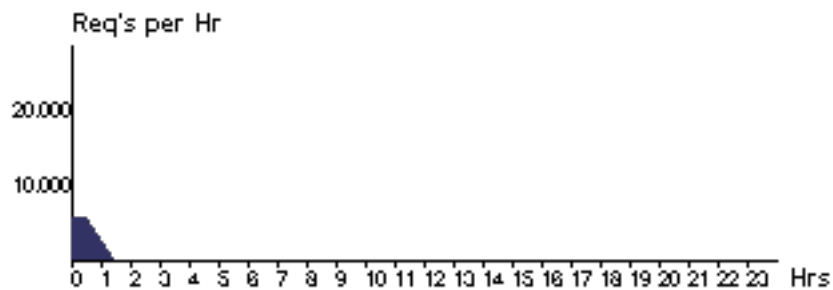


DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	18.76
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	19.53

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	3.05	0.00	3.05
DC1	3.31	0.13	3.44
DC4	3.25	0.30	3.55
DC3	2.89	0.15	3.04
DC6	2.97	0.06	3.04
DC5	3.28	0.13	3.41

## Results of the Simulation Completed at: 27/01/2022 12:43:57

### Overall Response Time Summary

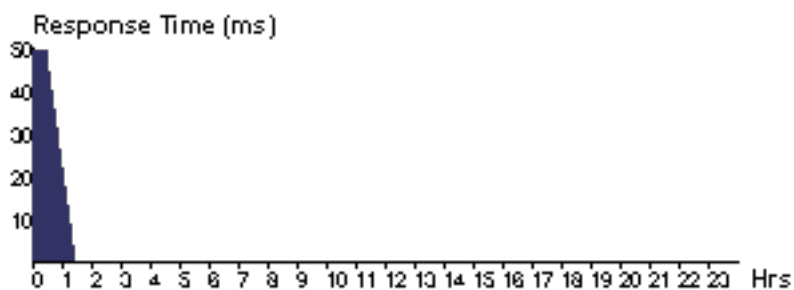
	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
Overall response time:	50.27	38.03	63.98
Data Center processing time:	0.65	0.01	1.99

### Response Time by Region

<b>Userbase</b>	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
UB10	50.28	38.43	60.21
UB11	50.60	40.13	61.45
UB12	50.28	39.26	60.86
UB1	50.48	38.70	60.80
UB2	50.54	40.68	63.31
UB4	50.57	39.89	57.89
UB5	50.05	40.95	60.86
UB6	50.20	38.61	63.98
UB7	49.98	38.03	59.08
UB8	50.02	38.85	60.44
UB9	50.21	39.93	62.00

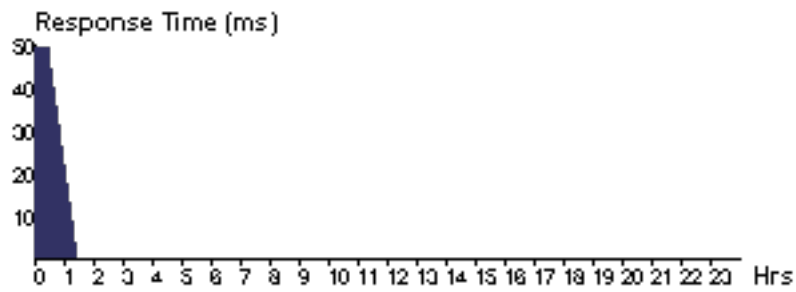
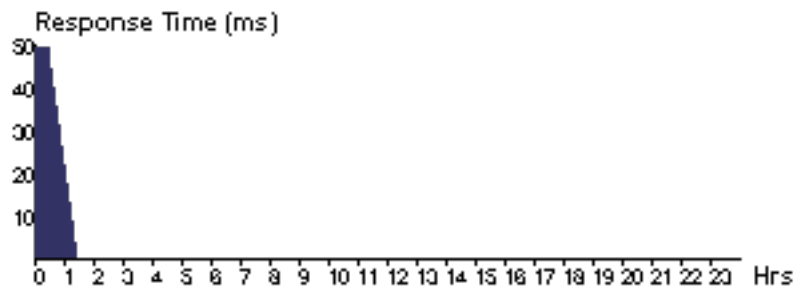
### User Base Hourly Response Times

UB1

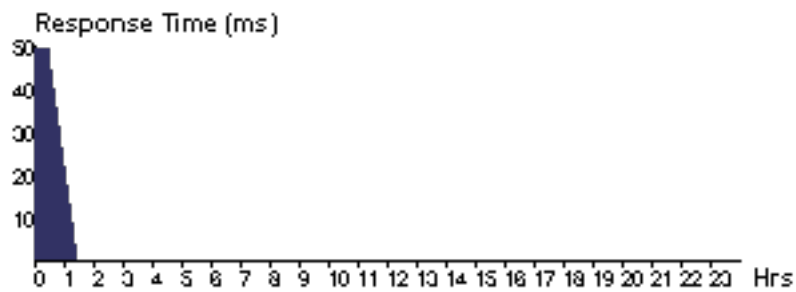


UB10

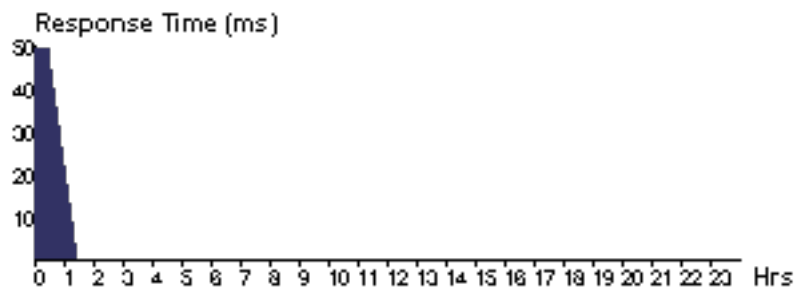
UB11



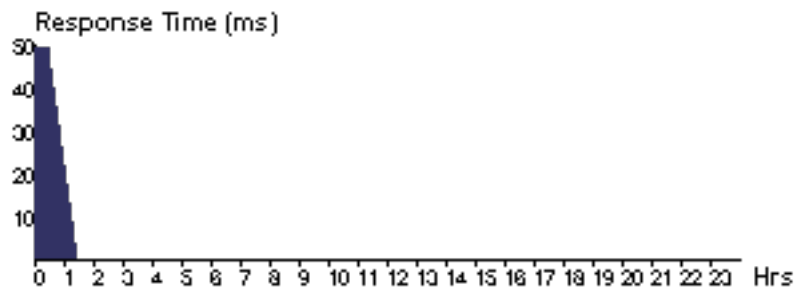
UB12



UB2

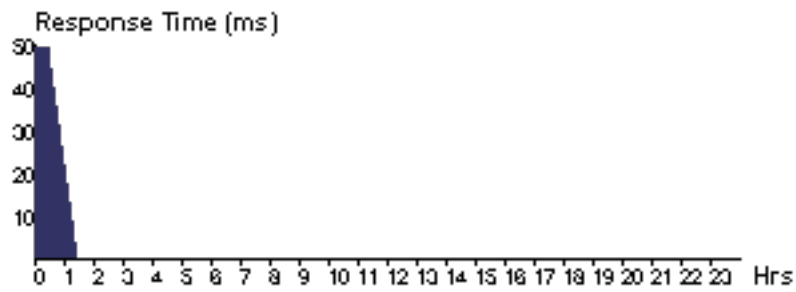
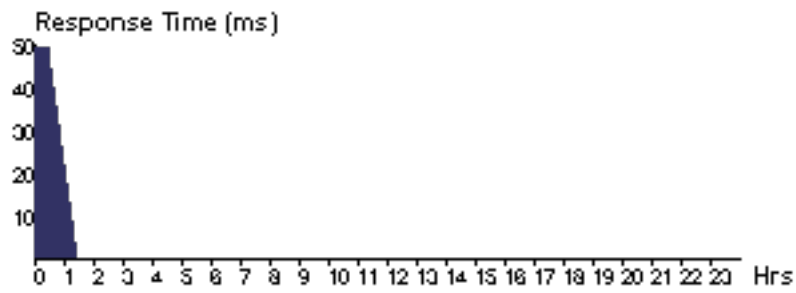


UB4

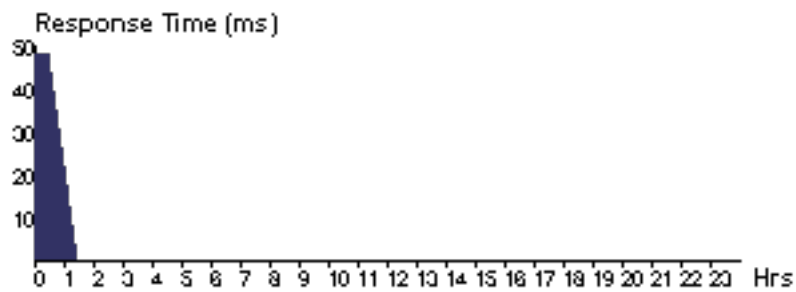


UB5

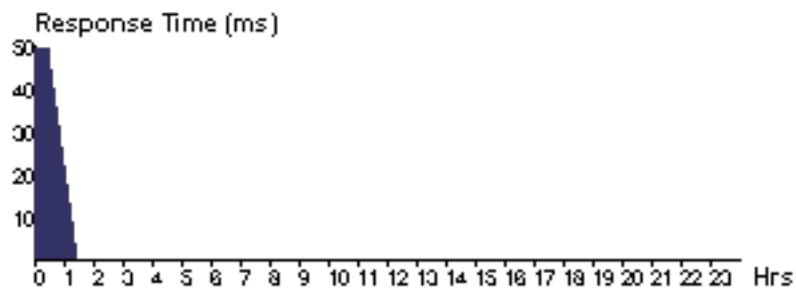
UB6



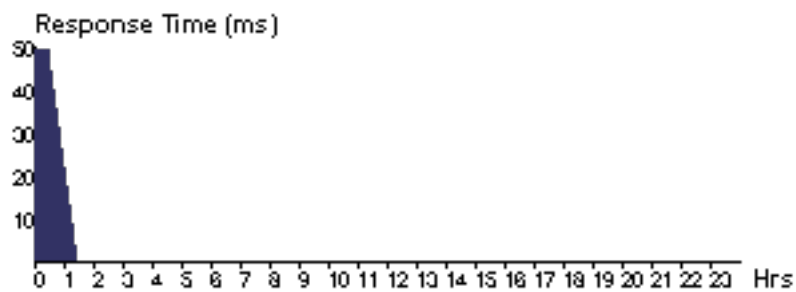
UB7



UB8



UB9



Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.75	0.01	1.84
DC2	0.77	0.11	1.39

DC3	0.58	0.01	1.20
DC4	0.59	0.01	1.81
DC5	0.79	0.04	1.99
DC6	0.63	0.02	1.44

Data Center Hourly Average Processing Times

DC1

DC2

DC3

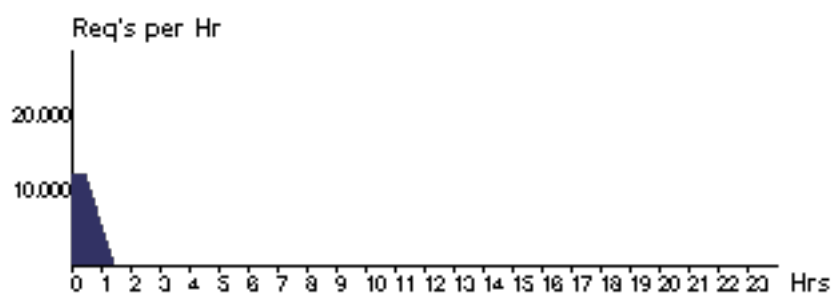
DC4

DC5

DC6

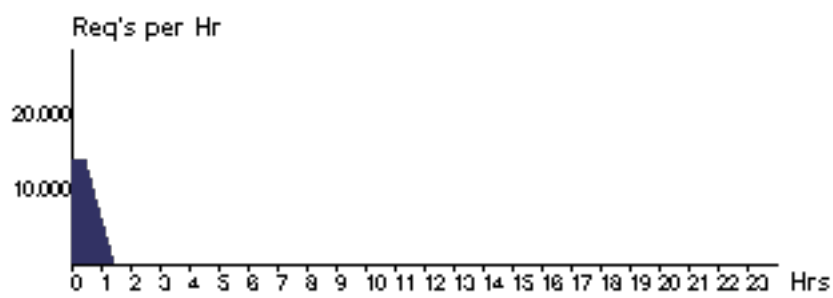
## Data Center Hourly Loading

DC1



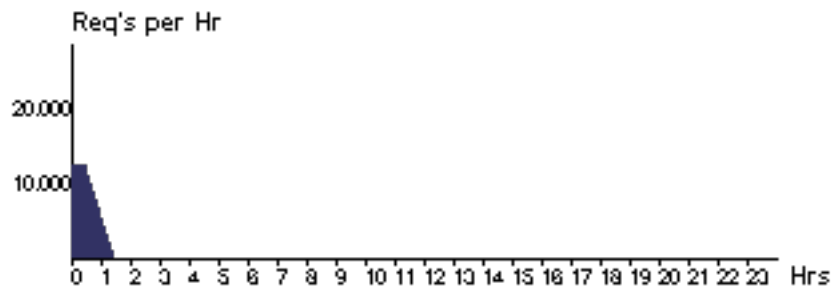
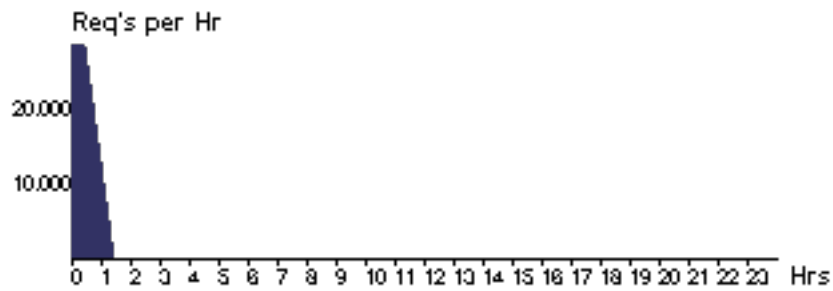
DC2

DC3

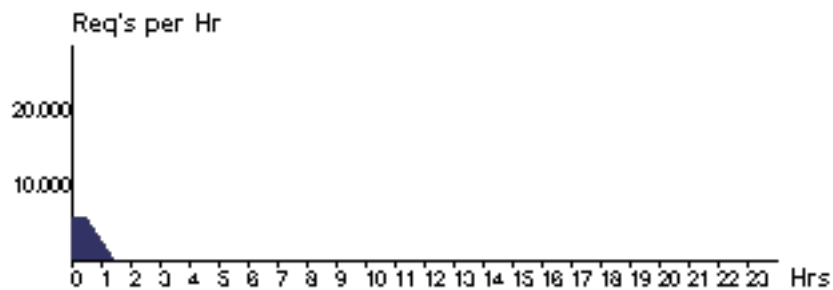


DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	18.80
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	19.57

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	3.26	0.00	3.26
DC1	3.13	0.13	3.26
DC4	3.25	0.30	3.55
DC3	2.89	0.15	3.04
DC6	2.97	0.06	3.04
DC5	3.28	0.13	3.41



## Results of the Simulation Completed at: 27/01/2022 12:45:37

### Overall Response Time Summary

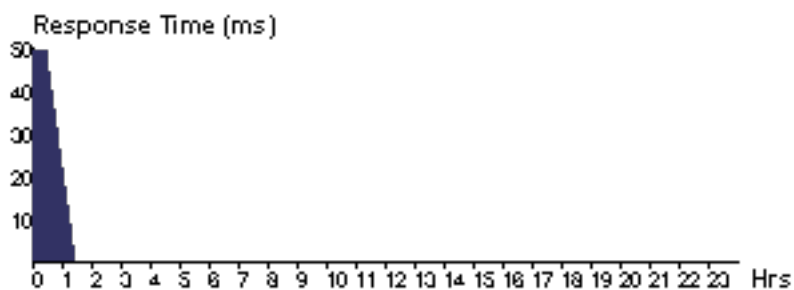
	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
Overall response time:	50.27	38.03	63.98
Data Center processing time:	0.65	0.01	2.74

### Response Time by Region

<b>Userbase</b>	<b>Avg (ms)</b>	<b>Min (ms)</b>	<b>Max (ms)</b>
UB10	50.33	38.43	60.21
UB11	50.62	40.13	61.45
UB12	50.20	39.26	60.86
UB1	50.44	38.70	60.80
UB2	50.43	38.61	63.31
UB4	50.56	39.89	57.89
UB5	49.99	40.96	61.71
UB6	50.33	39.18	63.98
UB7	50.01	38.03	59.08
UB8	49.94	38.85	60.44
UB9	50.22	39.93	62.00

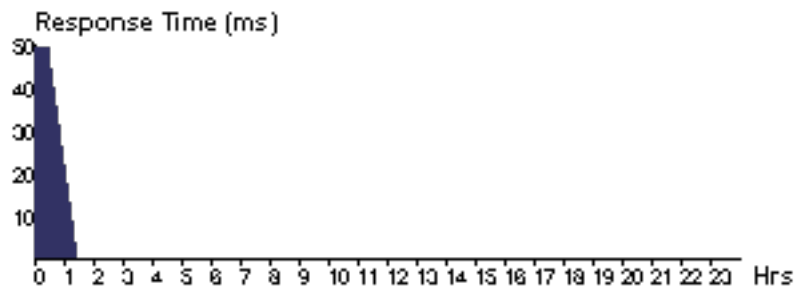
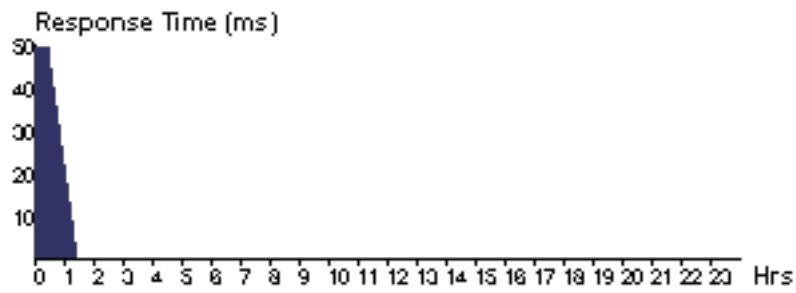
### User Base Hourly Response Times

UB1

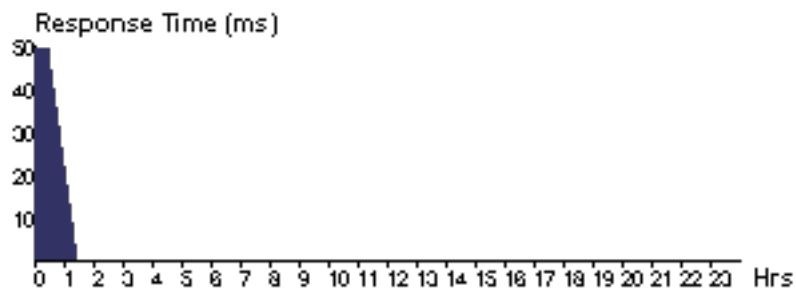


UB10

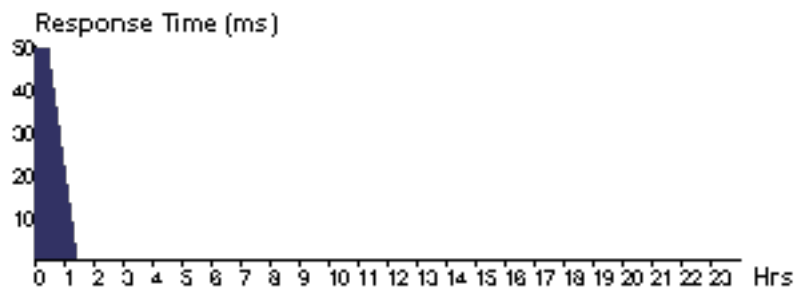
UB11



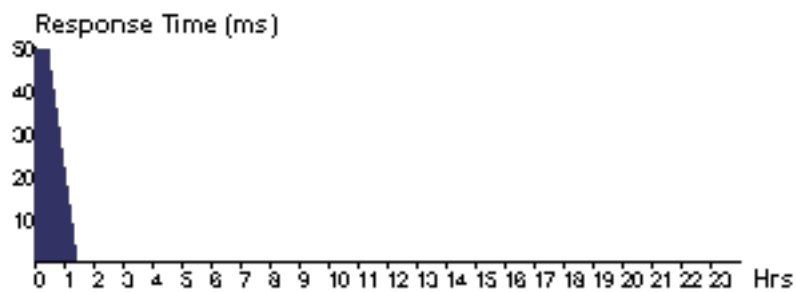
UB12



UB2

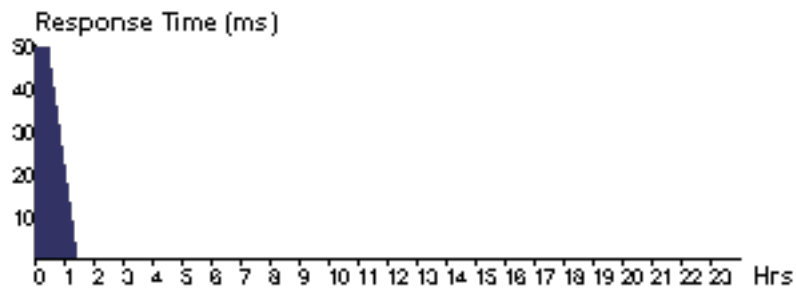
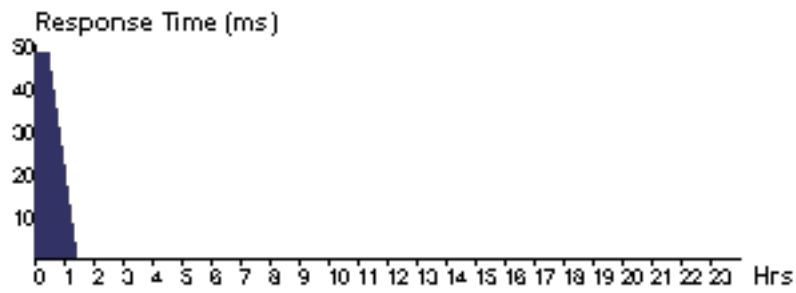


UB4

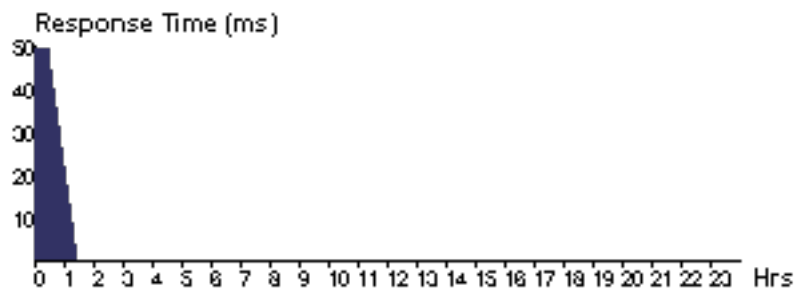


UB5

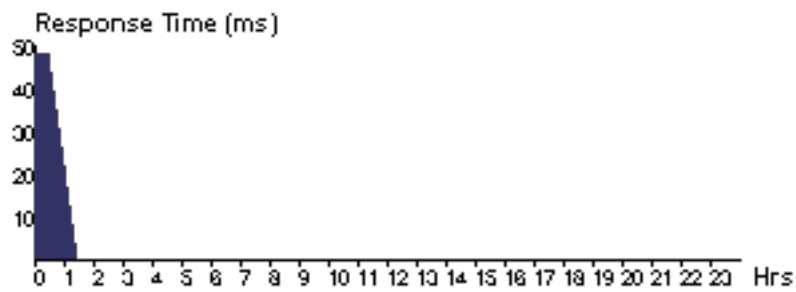
UB6



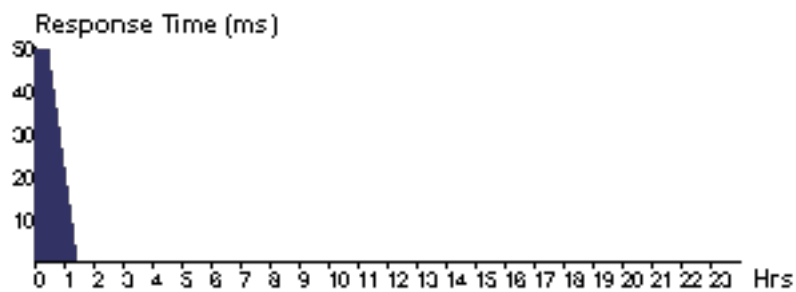
UB7



UB8



UB9



## Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.74	0.01	1.51
DC2	0.78	0.11	1.39

DC3	0.59	0.01	1.15
DC4	0.59	0.01	2.74
DC5	0.79	0.04	1.54
DC6	0.61	0.02	1.25

Data Center Hourly Average Processing Times

DC1

DC2

DC3

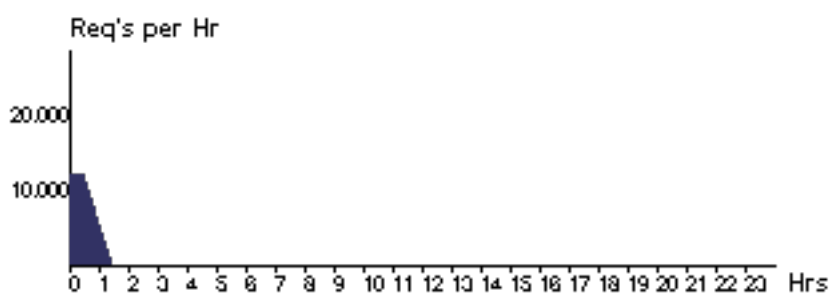
DC4

DC5

DC6

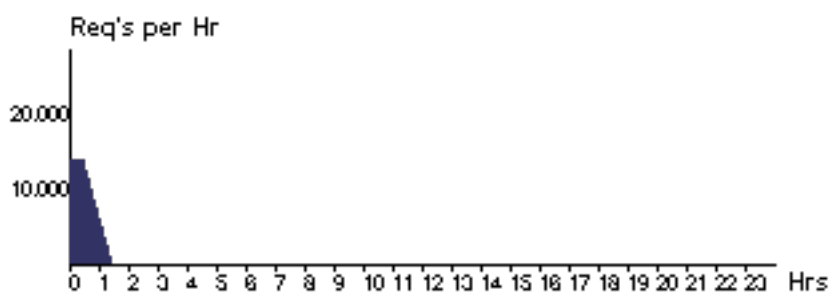
## Data Center Hourly Loading

DC1



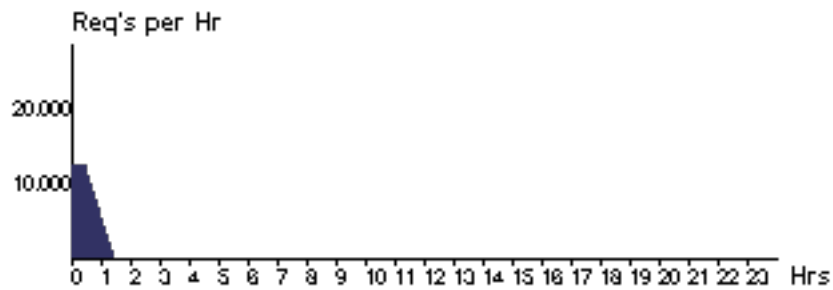
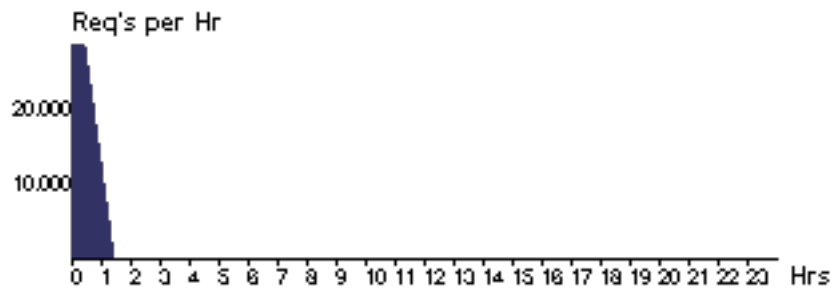
DC2

DC3



DC4

DC5



## DC6



## Cost

Total Virtual Machine Cost (\$):	18.98
Total Data Transfer Cost (\$):	0.77
Grand Total: (\$)	19.75

Data Center	VM Cost \$	Data Transfer Cost \$	Total \$
DC2	3.26	0.00	3.26
DC1	3.13	0.13	3.26
DC4	3.25	0.30	3.55
DC3	3.17	0.15	3.31
DC6	2.89	0.06	2.95
DC5	3.28	0.13	3.41

NAME: VATSAL MANVAR

ROLL NO: 19BCE120

PRACTICAL NO: 1

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**Summary:**

→ Using closest data center as service broker policy the use of various load balancing policy yields almost same overall response time analysis. Although, the response time among different regions varies. While the overall cost remains same.

→ Using optimal response time as service broker policy the use of various load balancing policy yields almost same overall response time analysis. Although, the response time among different regions varies. While the overall cost remains same.

→ Using reconfigure dynamically with load as service broker policy the use of equally spread current execution load as load balancing policy yields the most efficiently among all the various load balance policy

→ Considering all the service broker policy , the optimized response time policy performs overall efficient the other policies;