Step 3: calculate  
  
Main site:

600 workstations

10 servers

12+ network devices

Data usage per day:

Servers: 1000MB (download) + 2000MB (upload)

Workstations: 600 x (500 MB download + 100 MB upload) = 300000MB download + 60000 MB upload = 360000 MB/day

WiFi devices: 500 MB/day (download)

Total for main site:

Download: 1000 + 300000 + 500 = 301500 MB/day

Upload: 2000 + 60000 = 62000 MB/day

In sum: 301500 + 62000 = 363500 MB/day

Auxiliary Sites (each):

260 workstations

2 servers

5+ network devices

Data usage per day:

Servers: 1000 MB download + 2000 MB upload

Workstations: 260 x (500 MB download + 100 MB upload) = 130000MB download + 26000 MB upload

WiFi devices: 500 MB/day

Total for 1 auxiliary site:

Download: 1000 + 130000 + 500 = 131500 MB/day

Upload: 2000 + 26000 = 28000 MB/day

In sum: 131500 + 28000 = 159500 MB/day

Total for 2 auxiliary sites:

Download: 2 x 131500 = 263000 MB/day

Upload: 2 x 28000 = 56000 MB/day

In sum: 2 x 159500 = 319000 MB/day

Total for the network:

Download: 301500 + 263000 = 564500 MB/day

Upload: 62000 + 56000 = 118000 MB/day

In sum: 363500 + 319000 = 682500 MB/day

Peak hours (total 3 hours of peak data usage):

80% of dataflow and workload is from peak hours

Download: 564500 x 0.8 = 451600 MB

Upload: 118000 x 0.8 = 94400 MB

In sum: 546000 MB

Convert throughput (Mbps):

3 hours = 10800 seconds

Total peak traffic:

Download:

451600 MB = 451 600 x 8 Mb = 3612800 Mb

Throughput: 3612800 / 10800 = 334.52 Mbps

Upload:

94400 MB = 94400 x 8Mb = 755200 Mb

Throughput: 755200 / 10800 = 69.93 Mbps

Total:

546000 MB = 546000 x 8Mb = 4368000Mb

Throughput: 4368000 / 10800 = 404.44 Mbps