

**GUIDELINES FOR SIZING THE SWIFT RELATED  
REQUIREMENTS FOR PARTICIPATION ON MEPS+**

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**Objective of the document:**

This document serves as a guide to the bandwidth requirements for the MEPS+ participants. It comprises of a throughput table and an associated bandwidth computation table. These tables are followed by an example that illustrates how bandwidth requirements can be evaluated.

The table below is based on the assumptions indicated and should be taken as an example and guide for participants, and should not be generalized.

Neither MAS nor IBM nor BCSIS (collectively referred to as "the Providers") warrant the accuracy, adequacy, timeliness, correctness, suitability or applicability of the information provided in this document, including all calculations that are set out as illustrations to provide guidance to MEPS+ participants, and the Providers expressly disclaim any liability for any wrong description, error or omission. As such, MEPS+ participants should seek their own professional advice, perform specific analysis of their requirements and consult their SWIFT Service Partner before deciding on their bandwidth needs<sup>1</sup>.

**Throughput Table**

No	MEPS+ Transactions per day <sup>2</sup>	Throughput calculation in TPS				Total Throughput <sup>7</sup>
		FIN <sup>3</sup>	Browse <sup>4</sup> Per Browser	Interact <sup>5</sup> per Browser	FileAct <sup>6</sup>	
1.	501 – 1800	0.28 – 1	0.5	0.03 - 0.1	0.096	0.906 – 1.696
2.	251 – 500	0.14 – 0.28	0.5	0.014 – 0.03	0.032	0.686 – 0.842
3.	51 – 250	0.03 – 0.14	0.5	0.01 – 0.014	0.016	0.556 – 0.67
4.	5 – 50	0.003 – 0.03	0.5	0.01	0.016	0.529 – 0.556
5.	<5	<0.003	0.1 <sup>8</sup>	-	-	0.103

<sup>1</sup> Participants need to factor in their existing SWIFT bandwidth requirements while computing their total requirements.

<sup>2</sup> MEPS+ transactions comprise transactions sent by participants as well as received by them. Each MEPS+ transaction (incoming or outgoing) would be equivalent to an average of two FIN messages.

<sup>3</sup> Based on 500-byte message and transactions happening during the peak traffic per hour. 1 TPS is approximately equal to sending or receiving a 500-byte SWIFTNet message. The assumption is made that ALL the FIN transactions happen during the peak traffic per hour. This column can be linearly interpolated to arrive at specific TPS requirements.

<sup>4</sup> This corresponds to receiving a 20KB page in less than 8 seconds. If customer runs several SAB concurrently on the same line, the bandwidth requirement should be increased proportionally.

<sup>5</sup> 1 TPS equates approximately the issue of a signed request and the reception of a signed response of 2,200 bytes. The assumption is that InterAct messages are 20% of participants' MEPS+ transaction volume and all InterAct messages occur during the peak hour. SAB used for security management only, and the InterAct traffic generated to the LAR service in the background is negligible.

<sup>6</sup> 1 TPS is the equivalent of sending or receiving 10MB per hour. An hourly throughput is used since a user is not interested in instantaneous throughput for this service. Assumption made that the average volume transferred per FileAct operation is 160kb.

<sup>7</sup> Assumption is made that all peaks happen at the same time. Please see the example calculation for other scenarios.

<sup>8</sup> Assumption is made that customer uses the SAB purely for monitoring only.

The TPS are related to the bandwidth through the following table:

**Bandwidth Computation Table<sup>9</sup>**

TPS	IP Line
<1.000	PSTN Dial-up
0.3000 – 1.999	64 Kbps economy
2.000 – 3.999	64 Kbps standard
4.000 – 7.999	128 Kbps
8.000 – 15.999	256 Kbps
16.000 – 47.999	512 Kbps
48.000 – 63.999	T1 (1.5 Mbps)
Above 64	E1 (2Mbps) Please consult your SWIFT service partner

### Throughput Computation Example

Consider a participant having a current SWIFT traffic of 3.5 TPS. Based on the assumptions below, this participant will require additional bandwidth as follows:

1. Assuming a peak per hour traffic of 250 outgoing and incoming MEPS+ transactions at an average size of 500 bytes, peak throughput is 0.14 TPS (Row 3 of the Throughput Table).
2. Assuming two concurrent Browse users, peak throughput is  $2 \times 0.5 = 1$  TPS (Row 3 of the Throughput Table).
3. Assuming subscription to other SWIFTNet Messaging Services,
  - a. Peak throughput for InterAct = 0.014 TPS (Row 3 of the Throughput Table)
  - b. Peak throughput for FileAct = 0.016 TPS (Row 3 of the Throughput Table)

The total throughput for this participant is calculated for three scenarios.

#### Scenario 1: All peaks occur at the same time

If the peaks for all types of SWIFT services occur simultaneously, then add the individual peak throughput requirements.

Thus, total throughput requirement =  $3.5 + 0.14 + 1 + 0.014 + 0.016 = 4.67$  TPS.

This is equivalent to a bandwidth of 128 Kbps standard

#### Scenario 2: Each peak occurs when the other is negligible

The highest of all the services should be considered as the throughput requirement.

Thus, the total throughput requirement = 3.5 TPS.

This is equivalent to a bandwidth of 64 Kbps standard.

#### Scenario 3: Unable to predict peak overlap.

Since the peak throughput times may differ for several flows, assumptions that the other flows are all at maximum 25% of their peak when the largest flow is at its peak.

Total throughput = largest individual peak + sum other peaks/4

Total throughput =  $3.5 + (0.14 + 1 + 0.014 + 0.016)/4 = 3.793$  TPS.

This is equivalent to a bandwidth requirement of 64 Kbps standard.

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<sup>9</sup> These throughput calculations are based on an expected Committed Data Rate (CDR) that is 70% of the nominal quoted bandwidth. Bursting (use of additional bandwidth) up to at least 100% of nominal quoted bandwidth is assumed to be possible. Please consult with your network partners for more detailed throughput information if the CDR is below or above than the expected 70%.