

Kathmandu University

Internet [Dhulikhel Premises & SoL]

Bandwidth Usage Report

Internet Bandwidth Usage report for the time period of last 10 Months

(November 2020 to August 2021)

[30.08.2021]

Prepared by: ISMS

INTERNET DETAILS

| S. No. | Particulars | Details |
|--------|-------------------|---------------------------------------------------------------------------------|
| 1 | Service Provider | Worldlink Communications Limited |
| 2 | Service Since | October 2017 (Upgraded to 150Mbps in March 2020) |
| 3 | Bandwidth | 150 Mbps Overseas Symmetric (Intl) 600 Mbps National Symmetric (Local) |
| 4 | Utilization Time | 24 Hours |
| 5 | Service Locations | Central Campus Dhulikhel Premises, School of Law |
| 6 | Internet Users | Office Building, Staff/Faculty Residence, Student Hostels, Guests & Visitors |

This report comprises two sets of graphs via two different sources. These graphs represent the internet bandwidth usage for the last 10 months in KU central campus premises including School of Law. The term International/Overseas Bandwidth indicates the internet services/usage with source/destination outside of Nepal and Local/National Bandwidth indicates the internet services/usage with source/destination within Nepal. The term Total Bandwidth indicates the internet services/usage with source/destination both inside and outside of Nepal.

The graph in the negative axis (below zeroth axis) represents Upload bandwidth consumption which is significantly lower compared to Download bandwidth consumption (positive axis) and is thus not discussed in this report.

BANDWIDTH CONSUMPTION RATES [INTERNATIONAL AND LOCAL]

Source: Worldlink MRTG, Enterprise Support

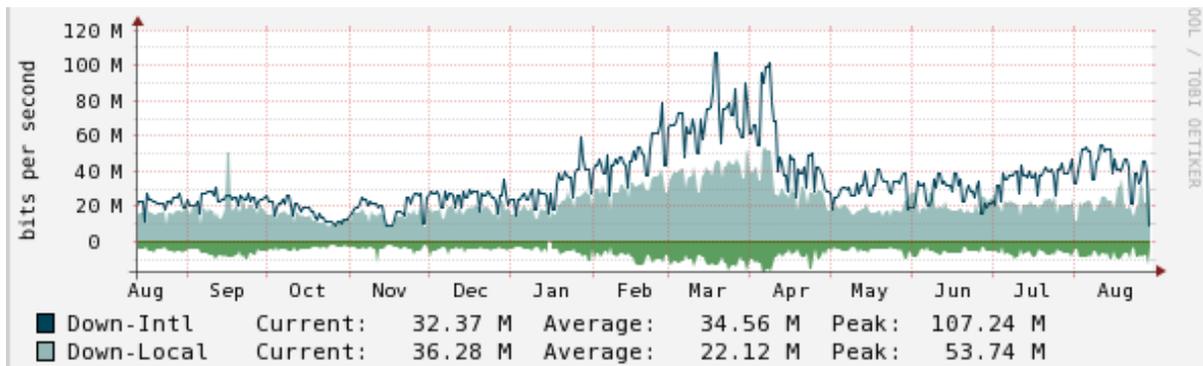


Fig: Annual Average Internet Bandwidth Consumption (1 day Avg) from 31.08.2020 to 30.08.2021

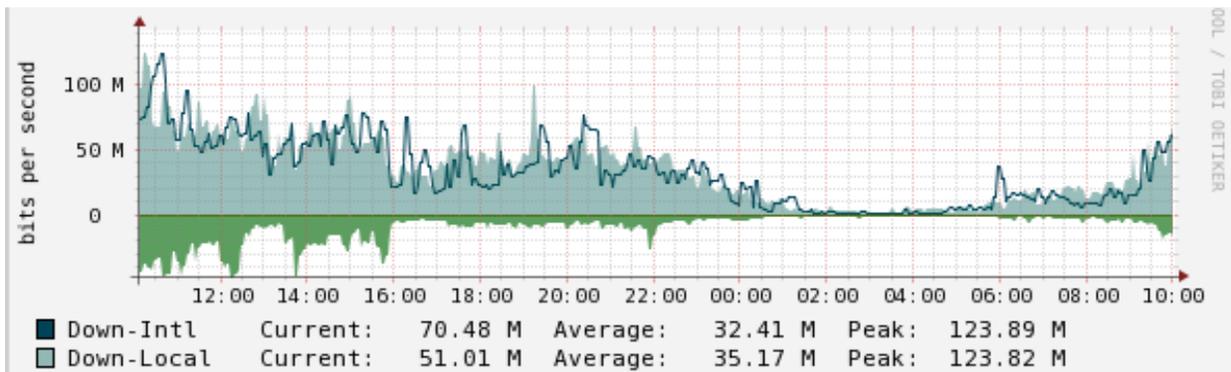


Fig: Daily/Current Average Internet Bandwidth Consumption (5 Min Avg) from 29.08.2021 10:00 to 30.08.2021 10:00

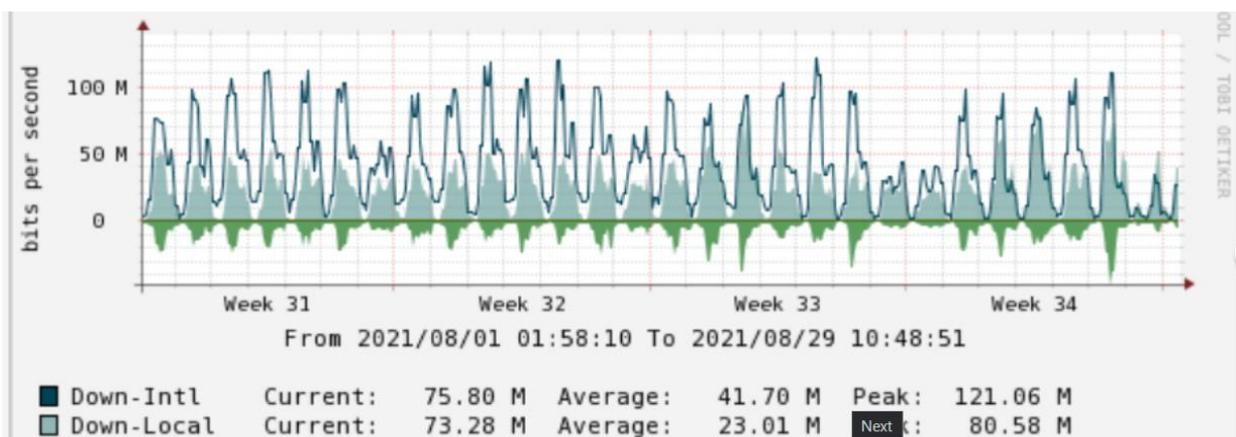


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of August 2021

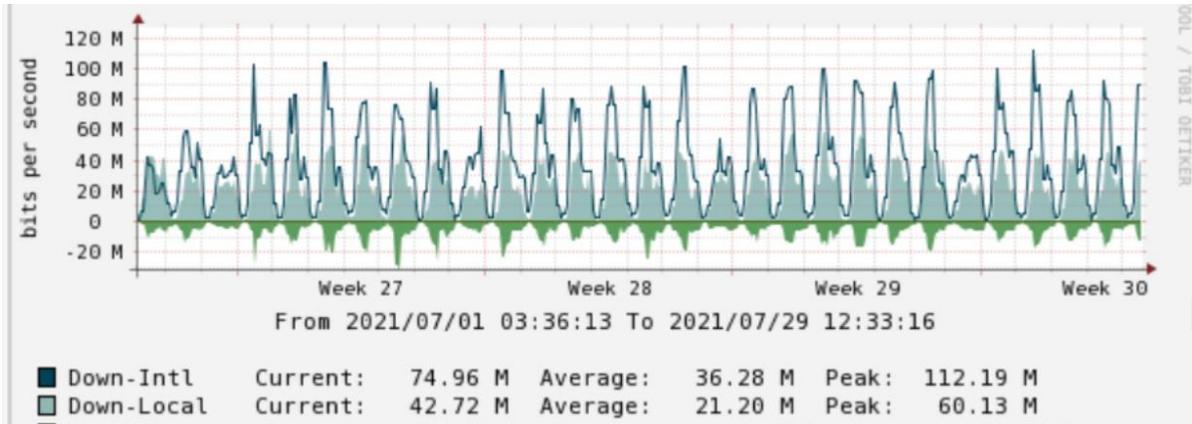


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of July 2021

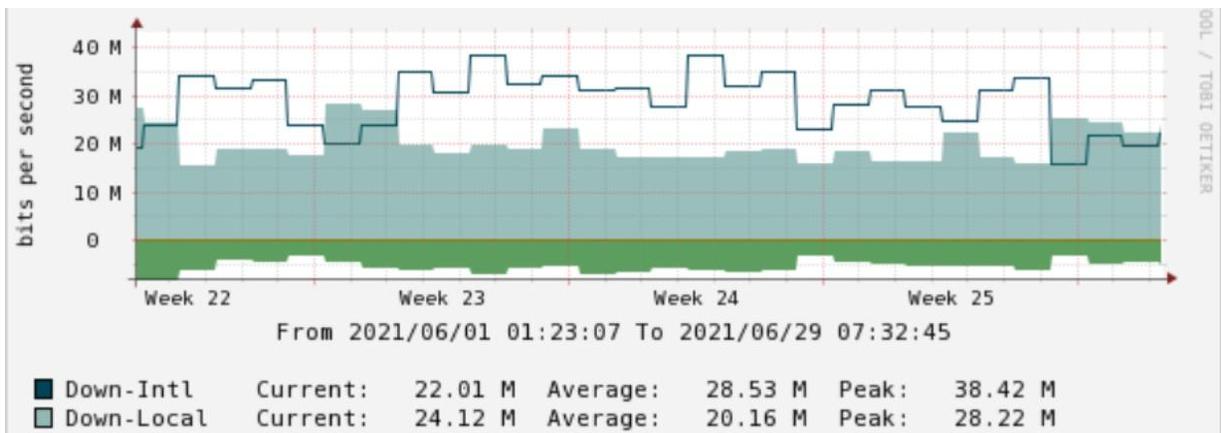


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of June 2021

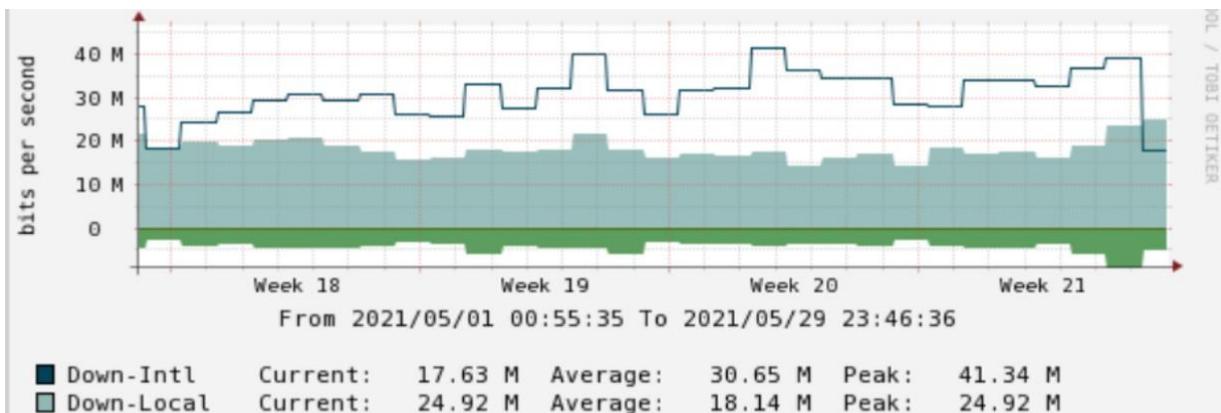


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of May 2021

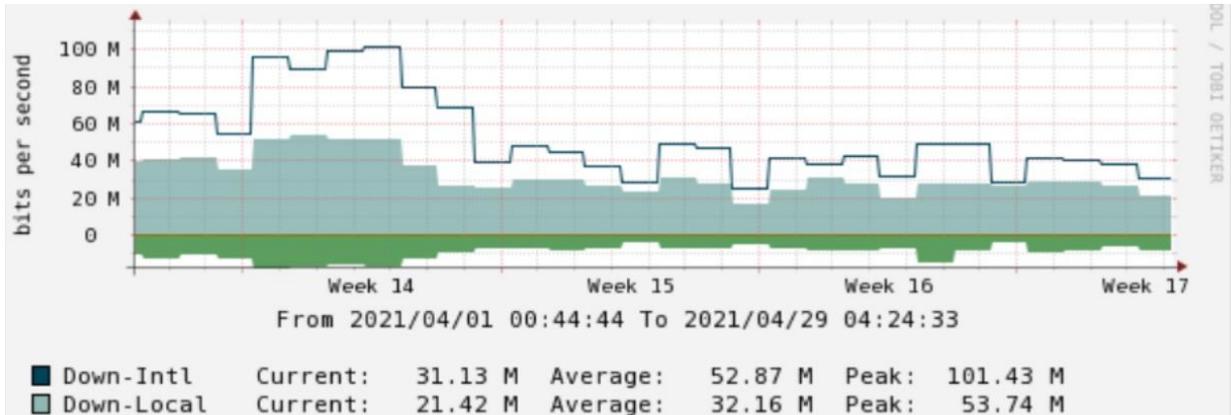


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of April 2021

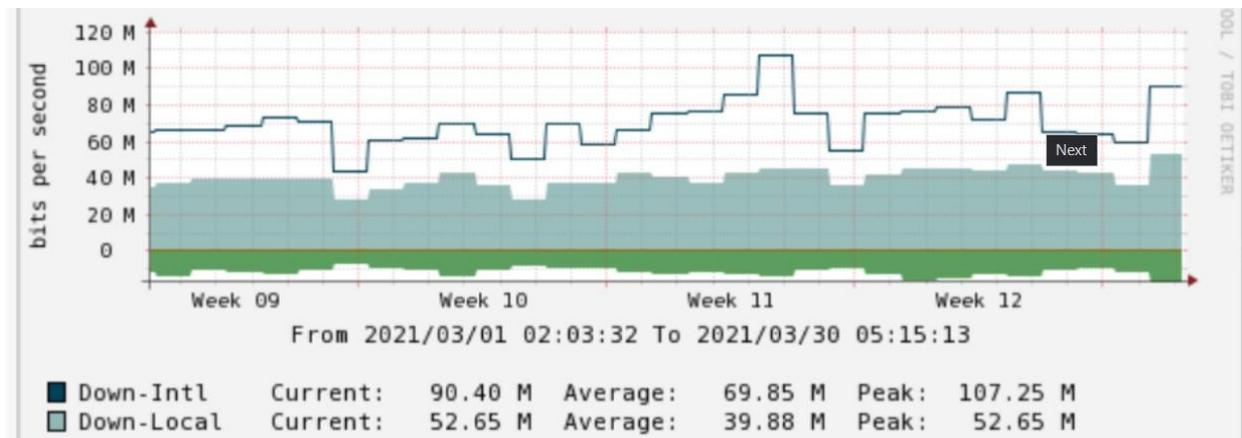


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of March 2021

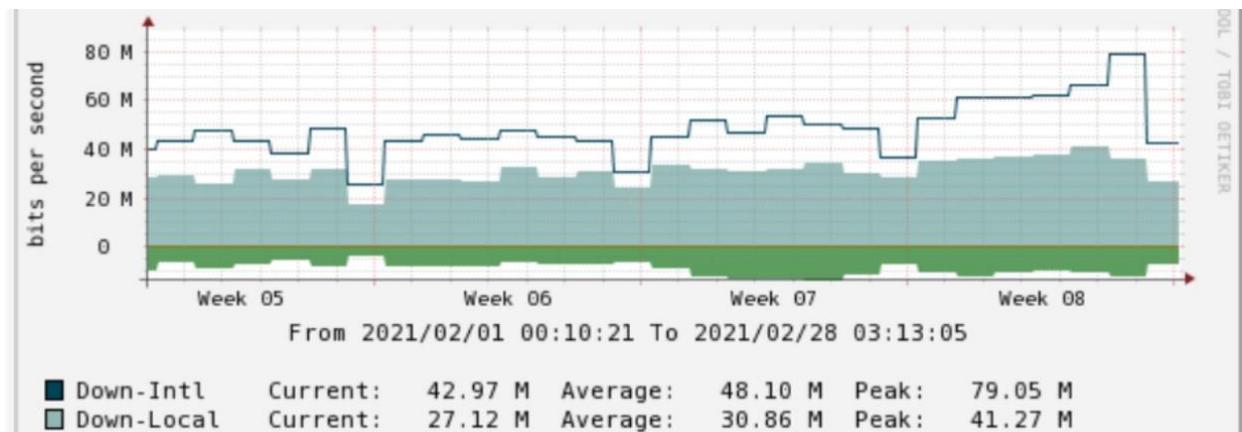


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of February 2021

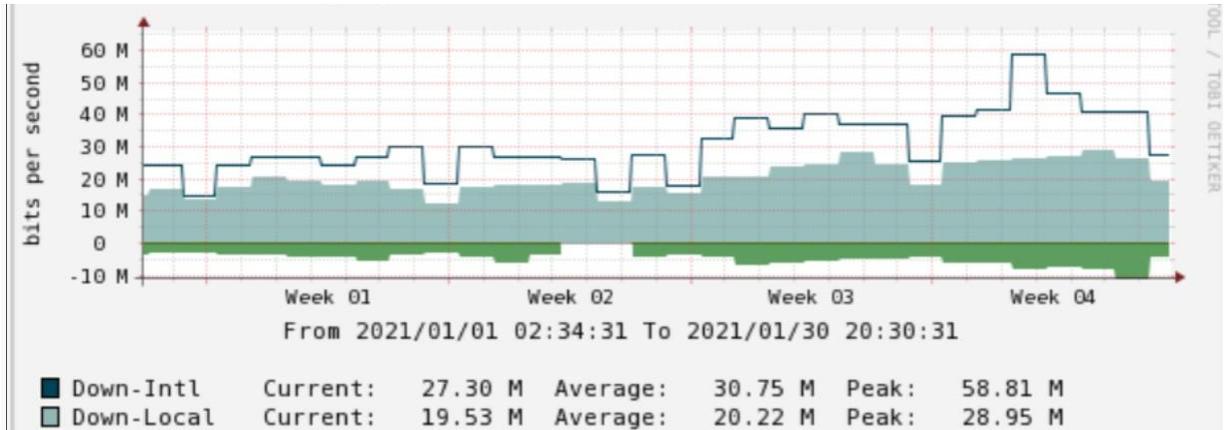


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of **January 2021**

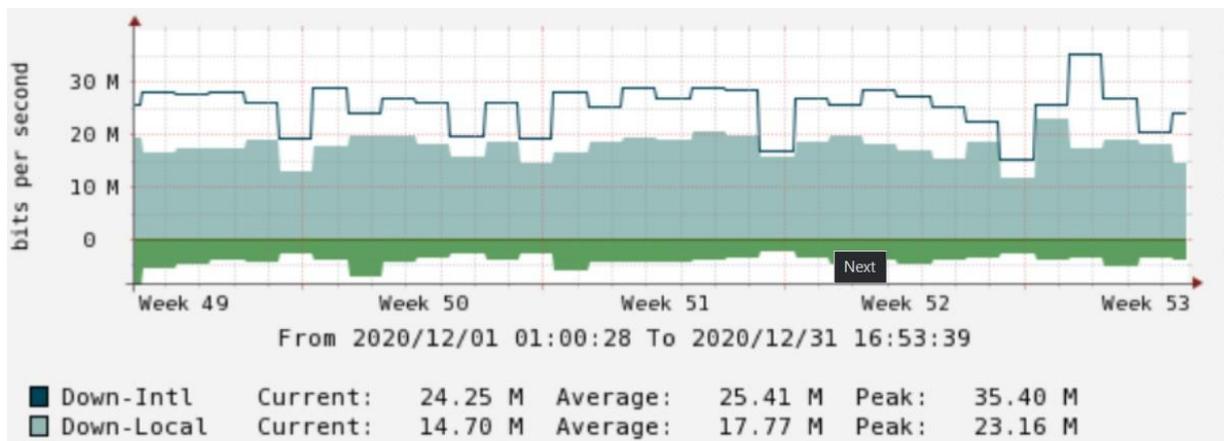


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of **December 2020**

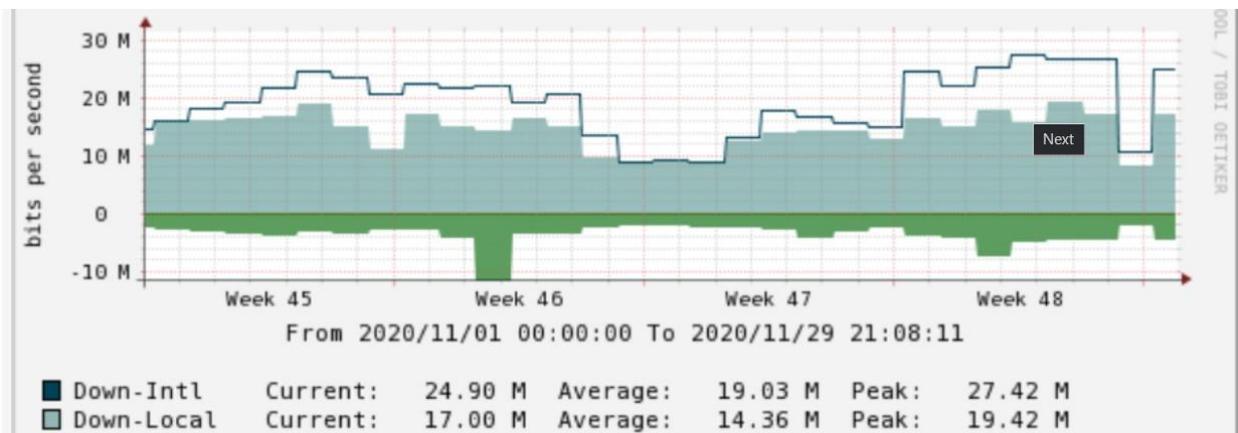


Fig: Monthly Average Internet Bandwidth Consumption (1 Day Avg) of **November 2020**

BANDWIDTH CONSUMPTION RATES [TOTAL]

Source: ISMS MRTG, Cacti Server

In the following graphs, the upper curves (single lines) represent the spikes in the data rates and could be ignored. Refer to the solid green and blue plots only.

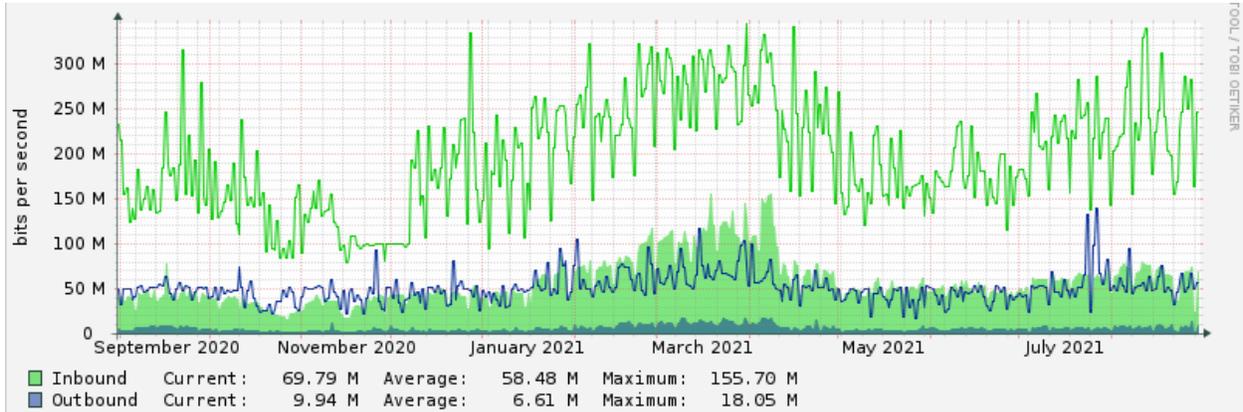


Fig: Annual Average Internet Bandwidth Consumption (1 day Avg) from 31.08.2020 to 30.08.2021

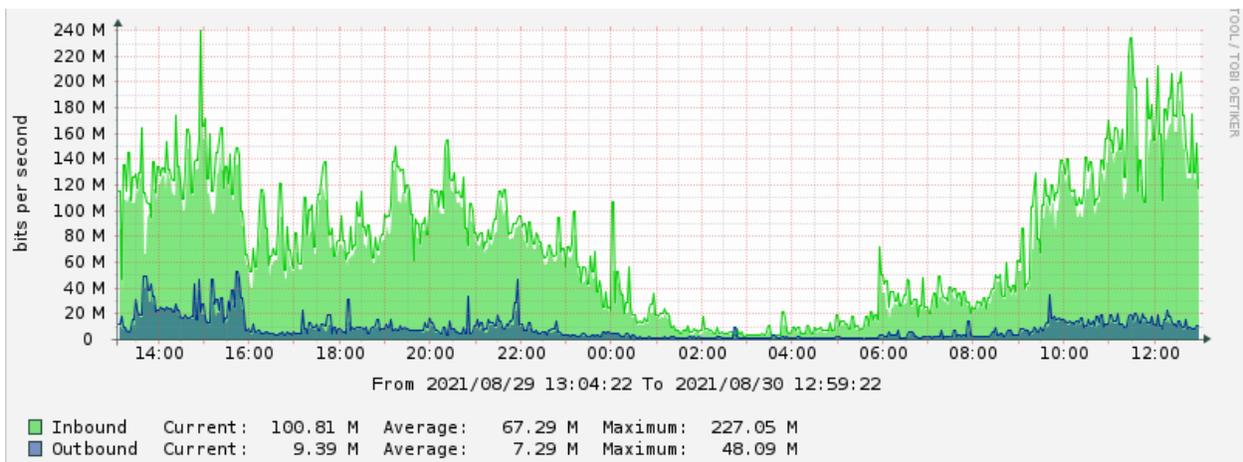


Fig: Daily/Current Average Internet Bandwidth Consumption (5 Min Avg) from 29.08.2021 13:00 to 30.08.2021 13:00

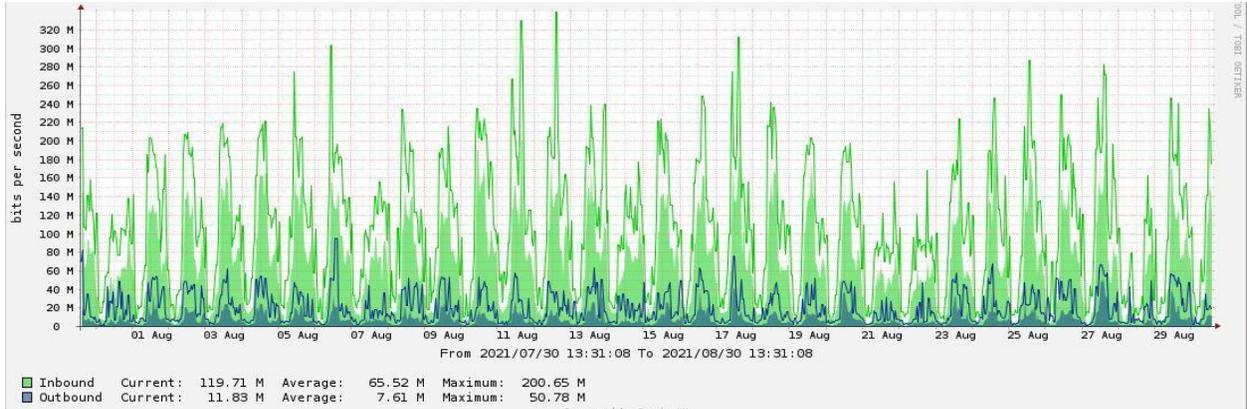


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of August 2021

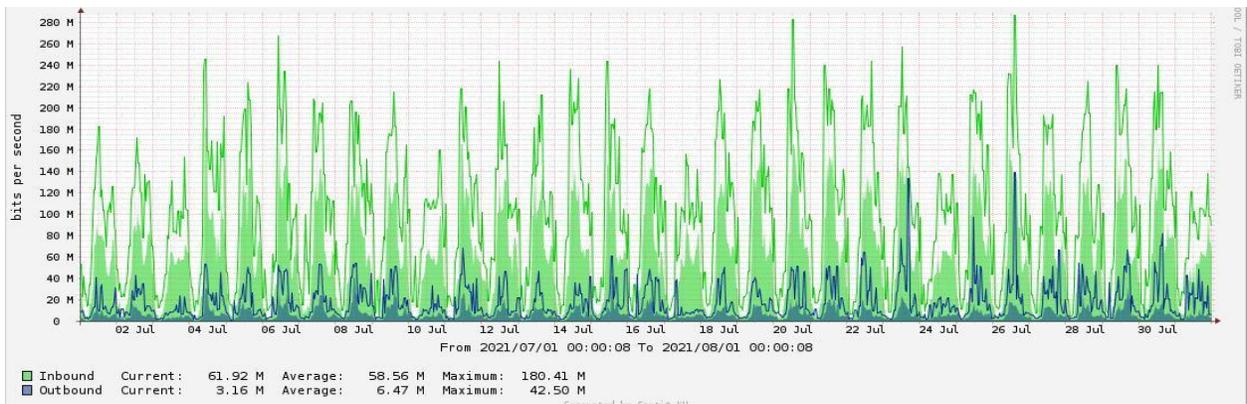


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of July 2021

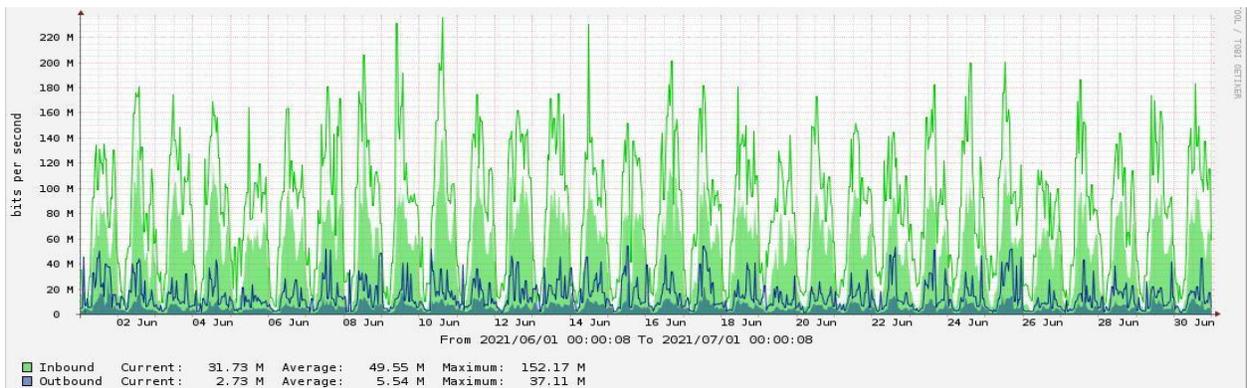


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of June 2021

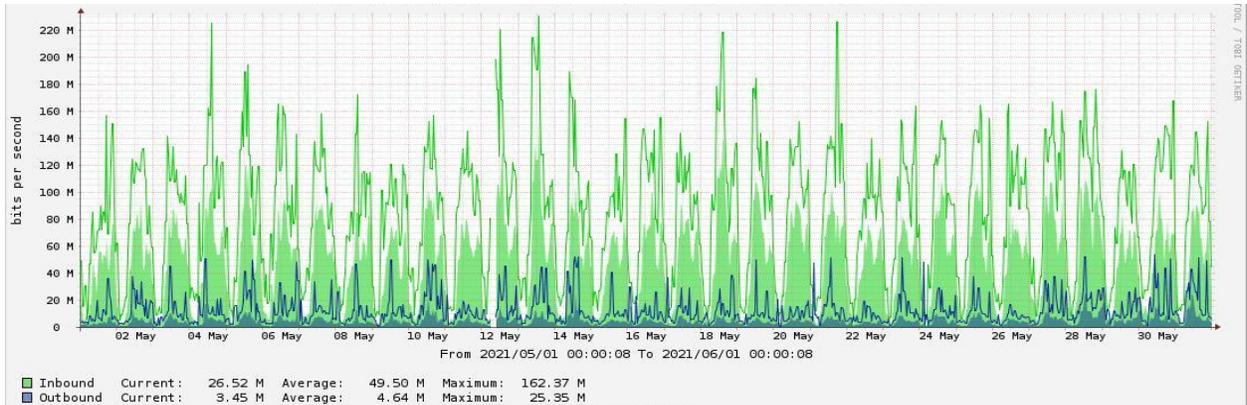


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of May 2021

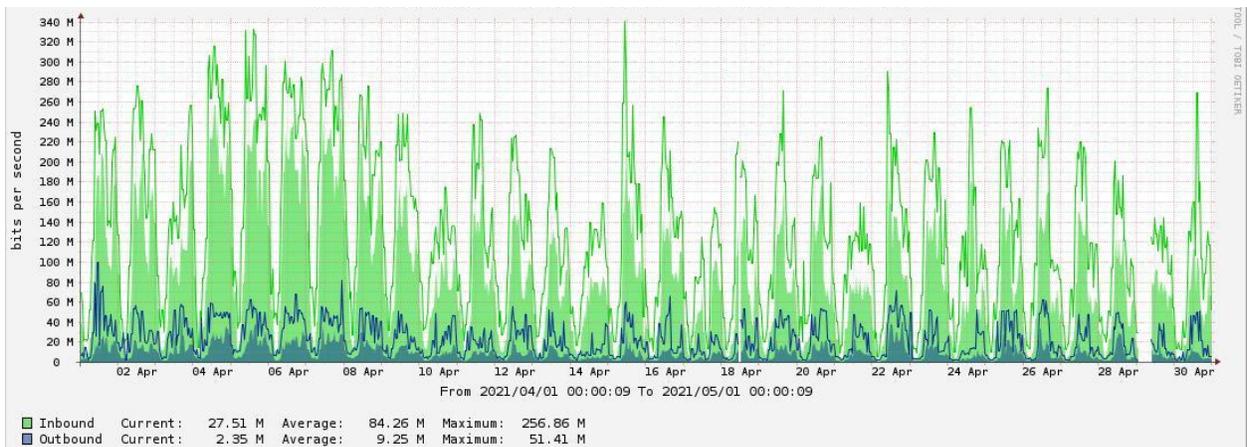


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of April 2021

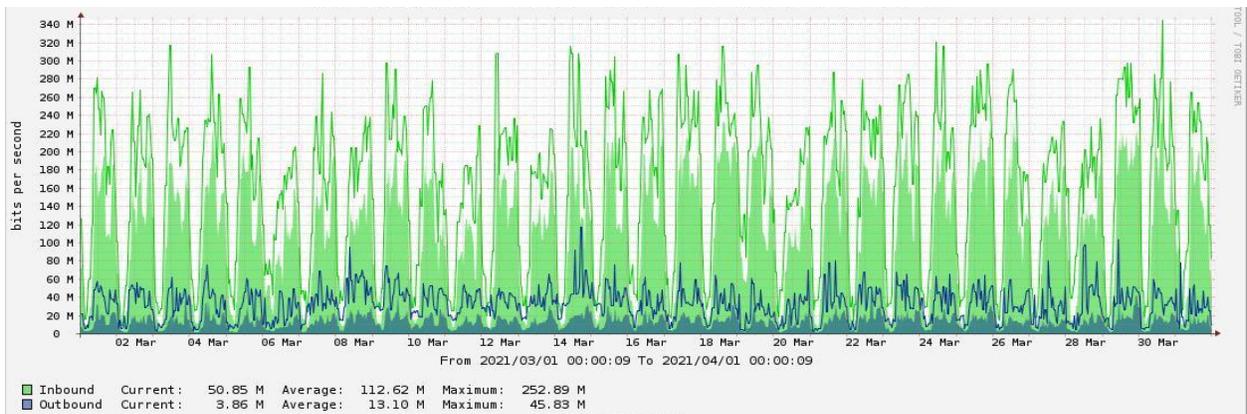


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of March 2021

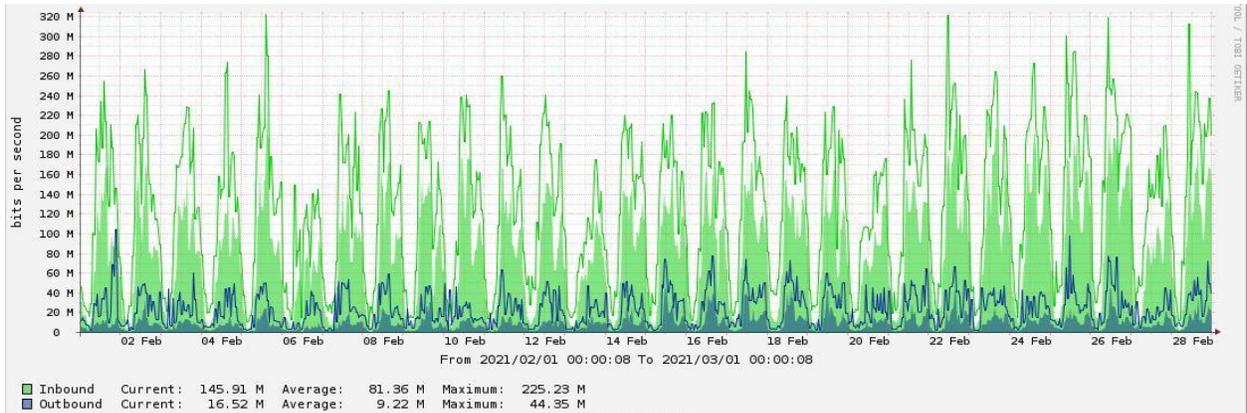


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of February 2021

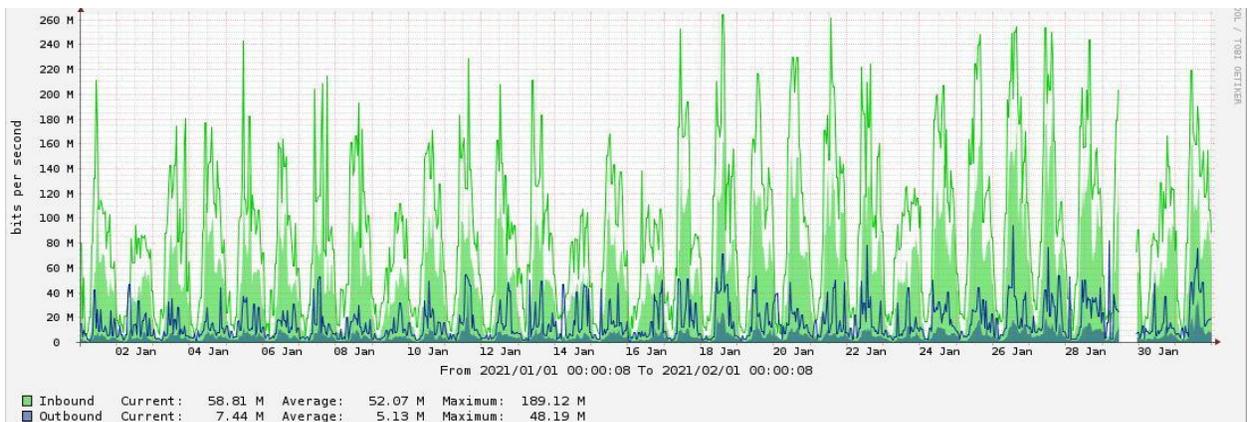


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of January 2021

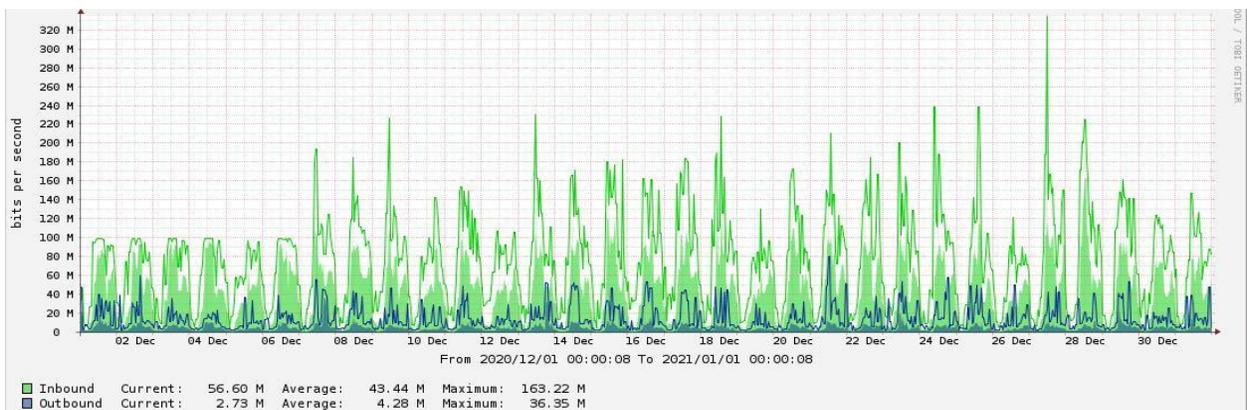


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of December 2020

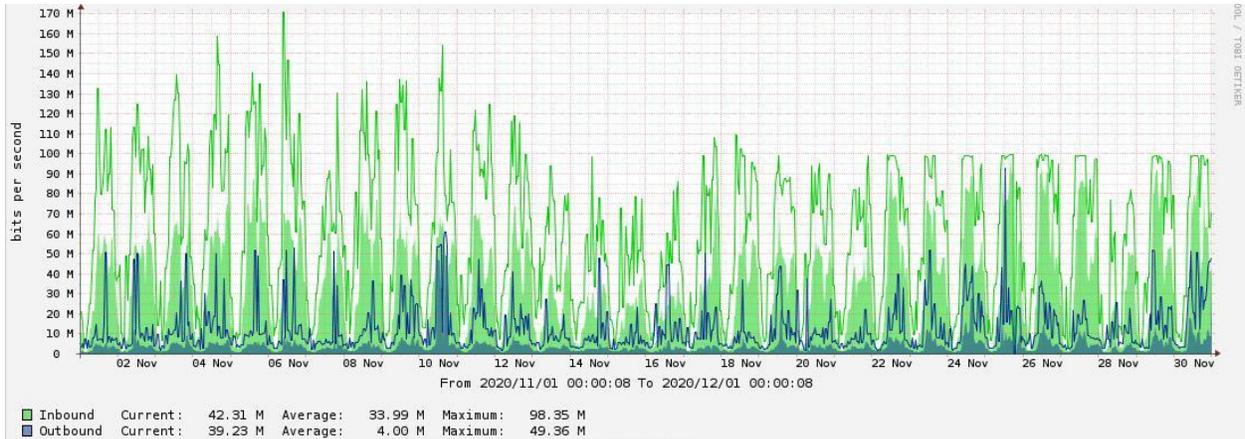


Fig: Monthly Average Internet Bandwidth Consumption (1 Hour Avg) of November 2020

CONCLUSION

The current international internet bandwidth usage peaks above 120Mbps and averages around 40Mbps. The total internet (international+local) usage peaks at about 200Mbps and averages around 70Mbps. In the month of March, when certain groups of students were physically present in the university, the international internet bandwidth usage averaged around 70Mbps (peak 100Mbps+) and total BW averaged around 120Mbps (peak 250Mbps+).

The nature of these rates/graphs provides a general idea about how much consumption or need is seen and does not exactly show the instantaneous usage or requirement because as the graph range increases, the samples are averaged between wide durations. A 5 minutes average graph is tremendously close to the real consumption rates as opposed to 1 Day average plot.

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