Let's start the experiments from the sinthetic workload: we need to find the correct workload to avoid underutilization of the data center (as it happens now).

Let's define the parameters to use and compute the correct values of $\overline{L}_{tot}$ and $\overline{L}_{tot} + a$.

Let's take the Processing rates computed with the Riccardo's file:

- CPU: [0.15, 1.867, 2.133,2.533,2.668] (GHz)
- F:[0.65217, 8.12, 9.27, 11.01, 11.60] (Mbit/s) - Processing Rate

$F_{max} = 11.6$ is the maximum processing rate. To have the VMs working at their maximum frequency, we want a maximum workload (in the maximum peak) of $M * F_{max} * T$. Hence we have $\overline{L}_{tot} + a = M * F_{max} * T$, and consequently $\overline{L}_{tot} = \frac{\overline{L}_{tot} + a}{PMR} = \frac{M * F_{max} * T}{PMR}$

So, let' fix $M = 50$, $T = 3s$, and $PMR = 4$ and compute $\overline{L}_{tot} = 435$ Mbit and $\overline{L}_{tot} + a = 1740$ Mbit.

For the other parameters, use these values: $T_t = 5s$, $R_t = 10$ Gbit/s, $k_e = 0.005$, and the default values for $C_e ff = 1$, $P_i^{idle} = 5$ mW, $\Omega_i = 5$ mW

We all these values, you should run an experiment with 100 slots and provide us these results: the percentage of time spent in the different frequencies for the data center. Basically, we are talking of the results shown in Fig. 5. In this way, we can see if the data center is working correctly.