

$$th_x(t) = \frac{\sum_{j=0}^{u_x} s_x(t-j)h_x(t-j)}{t_0}, \quad (2)$$

where $s_x(t)$ is the time period from time slot $t-1$ to time slot t of VM x , and $h_x(t) = 1$ if VM x is scheduled from time slot $t-1$ to time slot t and $h_x(t) = 0$ otherwise. If VM x is scheduled at time t , $th_x(t)$ increases. Otherwise, $th_x(t)$ decreases by $\frac{th_x(t-1)}{t_0}$. Intuitively, if $th_x(t)$ increases, the utility value decreases and VM x will have fewer chances to be scheduled in subsequent time slots.

As you can see from two figures, they are quite different in writing equations in the document. This is the reason I recommend latex all the time. I even took one course required latex as the default editing tool. Otherwise, a part of my scores was deducted because of not using it. Once you make a format fitting to you, you do not need to worry about making a format again. Cool!

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Intuitively, if $th_x(t)$ increases, the utility value decreases and VM x will have fewer chances to be scheduled in subsequent time slots.