# Moab
## How does Showq -r "EFFIC" work?

**Issue:** How is EFFIC reported and how often does it update?

**Symptom:** Showq -r can help determin the usage of a system and how efficiant it is being used. The <u>EFFIC</u> field will somtime report numbers that do not match up with what a job is using.

**Solution:** EFFIC is updated every 15 minuits. On busy systems this time can push out to thirty minuits and in rare occasions one hour. To calculate you efficiency look at the inital load from checknode.

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node support-sn1


State: Busy (in current state for 00:00:32)

Configured Resources: PROCS: 8 MEM: 1024M

Utilized Resources: PROCS: 8

Dedicated Resources: PROCS: 8

Attributes: Processors=8,testfeature

  MTBF(longterm): INFINITY MTBF(24h): INFINITY

Opsys: Linux Arch: x86_64

Speed: 1.00  **CPULoad: 2.000**

Partition: slurm Rack/Slot: --- NodeIndex: 1

Features: testfeature

Classes: [extra][normal][intr][medium][share]

RM[slurm]*: TYPE=WIKI:SLURM

EffNodeAccessPolicy: SINGLEJOB


Total Time: 21:00:04:10 Up: 2:13:10 (0.44%) Active: 1:08:59 (0.23%)

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Reservations:

2118x8 Job:Running -00:13:45 -> 00:36:15 (00:50:00)

Jobs: 2118

node support-sn2

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Note that in my case 2.00 was reported. Now in showq -r

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active jobs-----------------------
JOBID S PAR EFFIC XFACTOR Q USERNAME GROUP MHOST PROCS REMAINING STARTTIME

2118 R slu 12.50 1.0 - jbooth jbooth support-sn1 8 00:15:17 Fri May 29 09:37:47

1 active job 8 of 8 processors in use by local jobs (100.00%)
1 of 1 nodes active (100.00%)

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So the formula is ( Used procs) / (Total Number of procs). In my case 2.00 / 16 or .125 or 12.5%. You may notice on your system that at some point load is reported at 4.7 or higher but showq -r still reports the old EFFIC. Over time (15-30 minuits) the EFFIC should change.
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