

# Moab

## How is Moab calculating my jobs priority in checkjob?

**Issue:** How is Moab calculating my jobs priority in checkjob?

**Symptom:** In this example I am using jobs 1111111111 from your support-diag output.

The job received the -54.5 from mdiag -f. There is a 2.0- ceiling. Because they, the user, used 56.52 we subtract 2.0. The user sits at -54.5 over their allocation.

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FairShare Information

Depth: 8 intervals Interval Length: 12:00:00 Decay Rate: 1.00

FS Policy: DEDICATEDPES  
System FS Settings: Target Usage: 0.00

FSInterval	%	Target	0	1	2	3	4	5	6	7
FSWeight	-----	-----	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
TotalUsage	100.00	-----	6815.5	8550.0	8754.3	8831.5	8970.0	9302.0	9628.2	9810.5

USER  
-----  
some\_user\* 56.52 2.00- 49.38 49.94 50.49 46.97 71.38 81.69 74.57 26.06

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=====  
job 1111111111 (RM job '1111111111.emory-sched.pace.gatech.edu')

AName: job\_name1

State: Running

Creds: user:some\_user group:some\_group class:a\_class

WallTime: 8:46:17 of 12:00:00

SubmitTime: Sat Nov 21 08:46:29

# Moab

(Time Queued Total: 1:23:00:19 Eligible: 1:23:00:19)

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Priority Analysis:

Job PRIORITY\* Cred(Class) FS( User) Serv(QTime)

Weights ----- 1( 1) 1( 1000) 1( 1)

1111111111 -15704 38.6(36000) 58.4(-54.5) 3.0(2820.)

PE: 17.00

Reservation '1111111111' (-8:46:43 -> 3:13:17 Duration: 12:00:00)

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## Solution:

The formula for the job priority is "component\_weight \* subcomponent\_weight \* subcomponent\_value" + "component\_weight.....".

So the formula in this case is:

$CREDWEIGHT * CLASSWEIGHT * CLASS\_PRIORITY + FSWEIGHT * FSUSERWEIGHT * FSUSERVALUE + SERVWEIGHT + QTIME$

or

$1 * 1 * 36000 + 1 * 1000 * (-54.5) + 1 * 1 * 2820 = -15680$

The values displayed in mdiag -p are rounded from floating point values. Internally the floating point values are used. This leads to minor differences when I calculate them by hand. In this case -15704 verses -15680.

Unique solution ID: #1078

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