Fairshare Scheduling

Jobs submitted to the general farm of batch systems at SLAC will be scheduled to run according to a cross-queue user-based fairshare priority system. There is more information here www.slac.stanford.edu/comp/unix/package/lsf/currdoc/lsf_admin/index.htm about this kind of scheduling. The priority of a user's job is dynamically determined based on various factors such as the number of jobs the user has across all the queues in the fairshare, their resource consumption, the number of shares belonging to the user's fairshare group, etc. The general farm fairshare queue structure can be viewed with the command */usr/local/bin/bqueues -l short*.   This is an example of what the relevant part of the output from that command looks like at the time of this writing:

renata@rhel6-64g $ bqueues -l short

QUEUE: short
-- This is the default queue.

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SCHEDULING POLICIES: FAIRSHARE BACKFILL
FAIRSHARE_QUEUES: short medium long atlasq atl-analq

USER_SHARES: [atlasgrp, 37875] [babarAll, 7859] [cdmsALL, 2000] [exoprodgrp, 1500] [exousergrp, 550] [geantgrp, 3874] [glastdata, 854] [glastgrp, 366] [glastusers, 25320] [hpsprodgrp, 1000] [lcd, 600] [lcdprodgrp, 1100] [luxlz, 3500] [rpgrp, 500] [theorygrp, 4257] [AllUsers, 16086]

SHARE_INFO_FOR: short/

USER/GROUP	SHARES	PRIORITY	STARTED	RESERVED	CPU_TIME	RUN_TIME	ADJUST
lcdprodgrp	1100	278.667	0	0	0	0	0.000
exoprodgrp	1500	231.000	0	0	0	0	0.000
geantgrp	3874	220.469	0	0	0	0	0.000
luxlz	3500	212.363	0	0	0	0	0.000
hpsprodgrp	1000	200.000	0	0	0	0	0.000
lcd	600	139.333	0	0	0	0	0.000
rdgrp	342	114.000	0	0	0	0	0.000
glastdata	854	13.352	0	0	481047.4	0	0.000
glastgrp	366	13.086	0	0	143741.5	0	0.000
babarAll	7859	2.497	7	0	54117976.0	3353425	0.000
glastusers	25320	1.540	1822	0	86034584.0	35653321	0.000
atlasgrp	37875	0.532	4414	0	263242448.0	106437853	0.000
rpgrp	500	0.439	62	0	3924898.2	6360861	0.000
cdmsALL	2000	0.418	472	0	5018088.5	19465549	0.000
exousergrp	550	0.414	36	0	4399336.0	287801	0.000
AllUsers	16086	0.414	2104	0	252849040.0	19525638	0.000
theorygrp	4257	0.413	91	0	11024314.0	498370	0.000

USERS: all

HOSTS: genfells+1 hequfarm+1 dolefarm+1 kisofarm+1 bulletfarm/

Jobs submitted by a user that is not a member of any usergoup will get the priority of the AllUsers group. Jobs submitted by a user that is a member of a fairshare group may also get the priority of AllUsers if the priority of AllUsers happens to be higher than that of his own group at the time his job is submitted.