

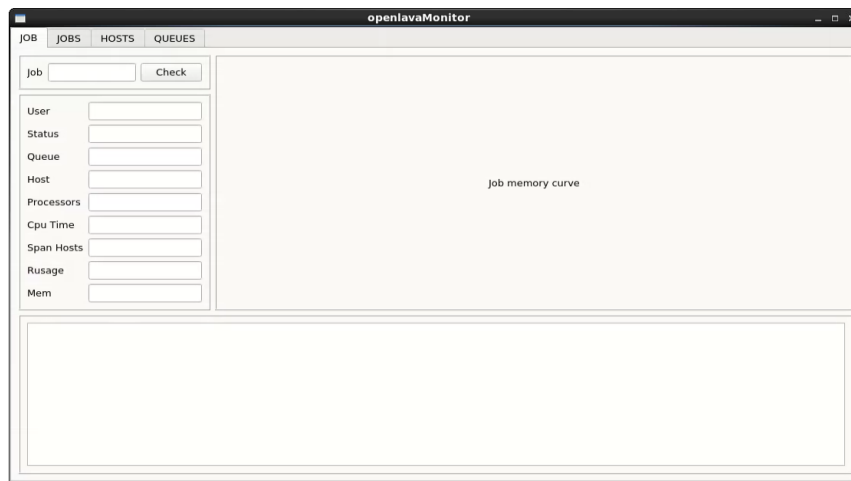
# bmonitor Manual

**openlavaMonitor** is an open-source software for openlava data collection, data analysis and information display. bmonitor is the main process, which is used to review basic information of job/jobs/hosts/queues, job memory curve and queue RUN/PEND number curve.

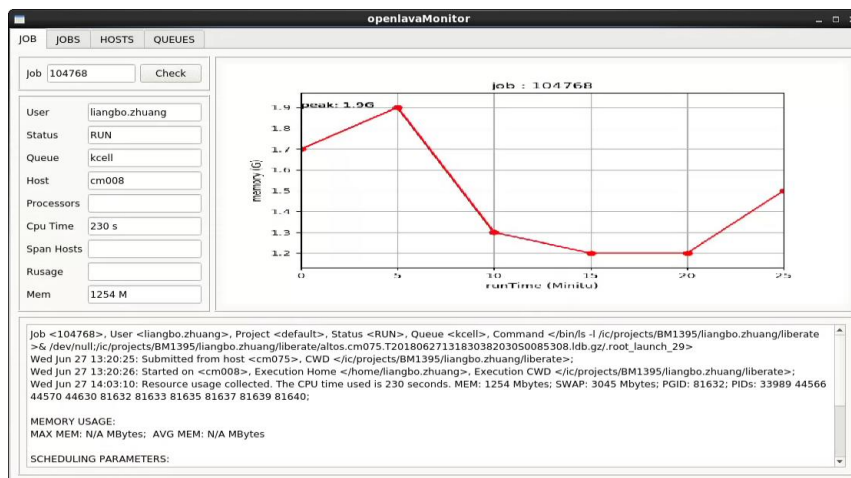
There are four Tabs on bmonitor, they are JOB/JOB'S/HOSTS/QUEUES, below are some introductions.

## JOB Tab:

Below is the initial interface of JOB Tab.

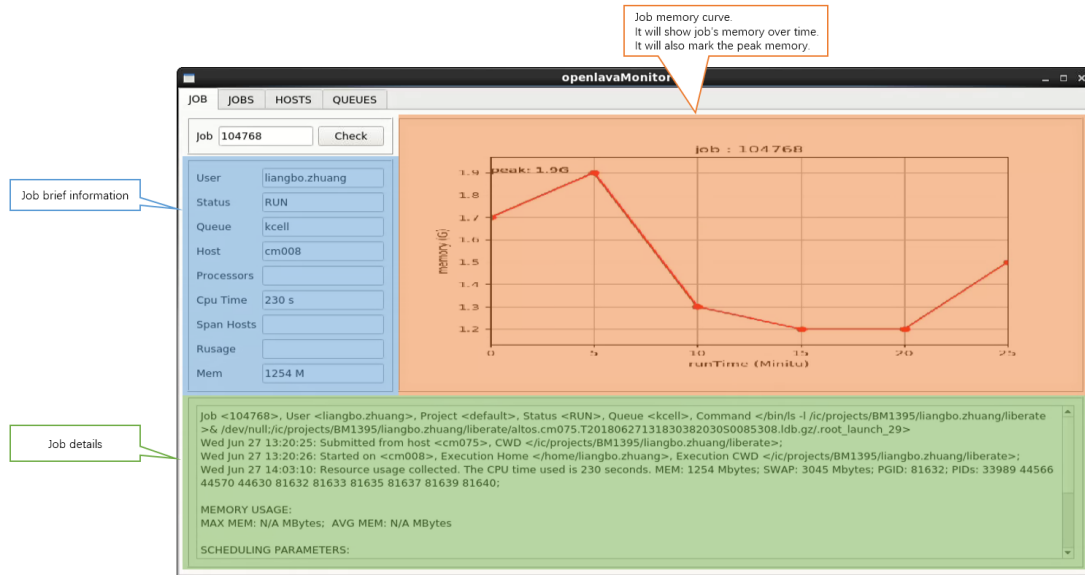


Enter **jobid** into the “**Job**” input box, then click the “**Check**” button, it will show the job information.



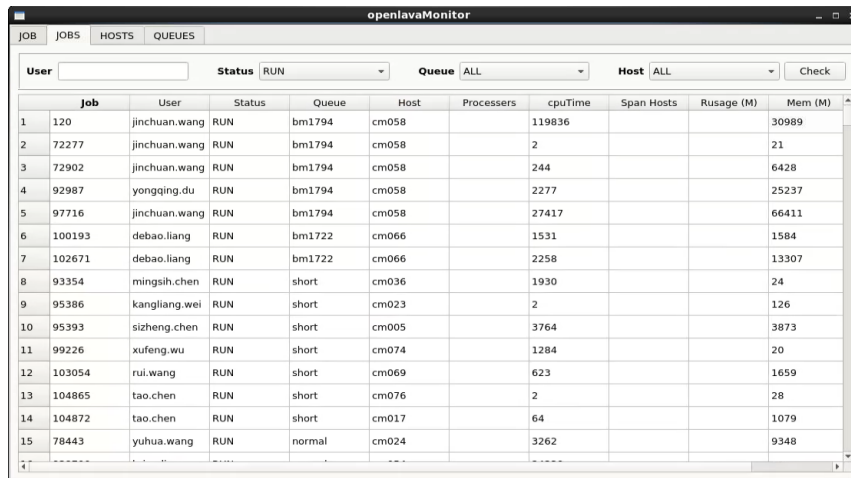
It contains three parts:

- Job brief information on the left side.
- Job details on the bottom.
- Job memory curve on the right side.



## JOBS Tab:

Below is the initial interface of JOBS Tab.



Job	User	Status	Queue	Host	Processors	cpuTime	Span Hosts	Rusage (M)	Mem (M)
1 120	jinchuan.wang	RUN	bm1794	cm058		119836			30989
2 72277	jinchuan.wang	RUN	bm1794	cm058		2			21
3 72902	jinchuan.wang	RUN	bm1794	cm058		244			6428
4 92987	yongqing.du	RUN	bm1794	cm058		2277			25237
5 97716	jinchuan.wang	RUN	bm1794	cm058		27417			66411
6 100193	debao.liang	RUN	bm1722	cm066		1531			1584
7 102671	debao.liang	RUN	bm1722	cm066		2258			13307
8 93354	mingsih.chen	RUN	short	cm036		1930			24
9 95386	kangliang.wei	RUN	short	cm023		2			126
10 95393	sizheng.chen	RUN	short	cm005		3764			3873
11 99226	xufeng.wu	RUN	short	cm074		1284			20
12 103054	rui.wang	RUN	short	cm069		623			1659
13 104865	tao.chen	RUN	short	cm076		2			28
14 104872	tao.chen	RUN	short	cm017		64			1079
15 78443	yuhua.wang	RUN	normal	cm024		3262			9348

You can choose the jobs by filling the following options:

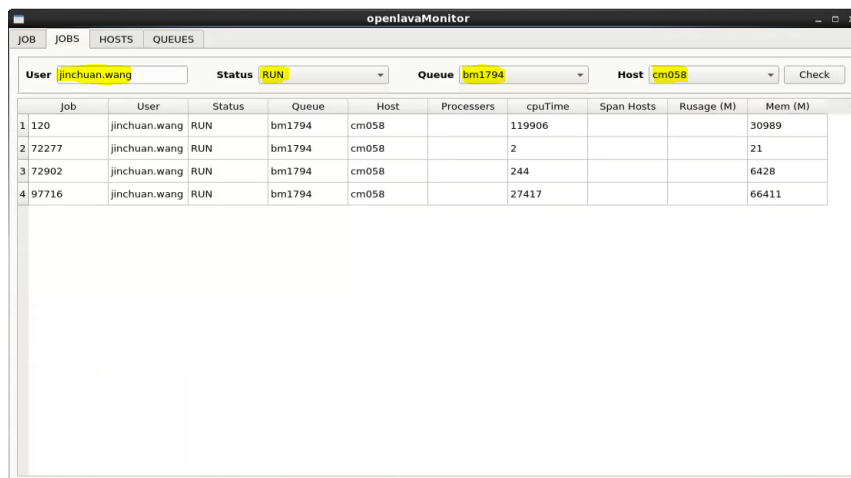
**User:** user name. Default is empty.

**Status:** job status, **RUN/PEND/ALL** are optional. Default is “**RUN**”.

**Queue:** queue name, **ALL/queue\_names** are optional. Default is “**ALL**”.

**Host:** host name, **ALL/host\_names** are optional. Default is “**ALL**”.

Then click the “**Check**” button to get the selected jobs.



Job	User	Status	Queue	Host	Processors	cpuTime	Span Hosts	Rusage (M)	Mem (M)
1 120	jinchuan.wang	RUN	bm1794	cm058		119906			30989
2 72277	jinchuan.wang	RUN	bm1794	cm058		2			21
3 72902	jinchuan.wang	RUN	bm1794	cm058		244			6428
4 97716	jinchuan.wang	RUN	bm1794	cm058		27417			66411

In the JOBS table, all columns are sortable. Click the column headings to sort them in ascending or descending order.

For example, sort **Mem** in descending order.

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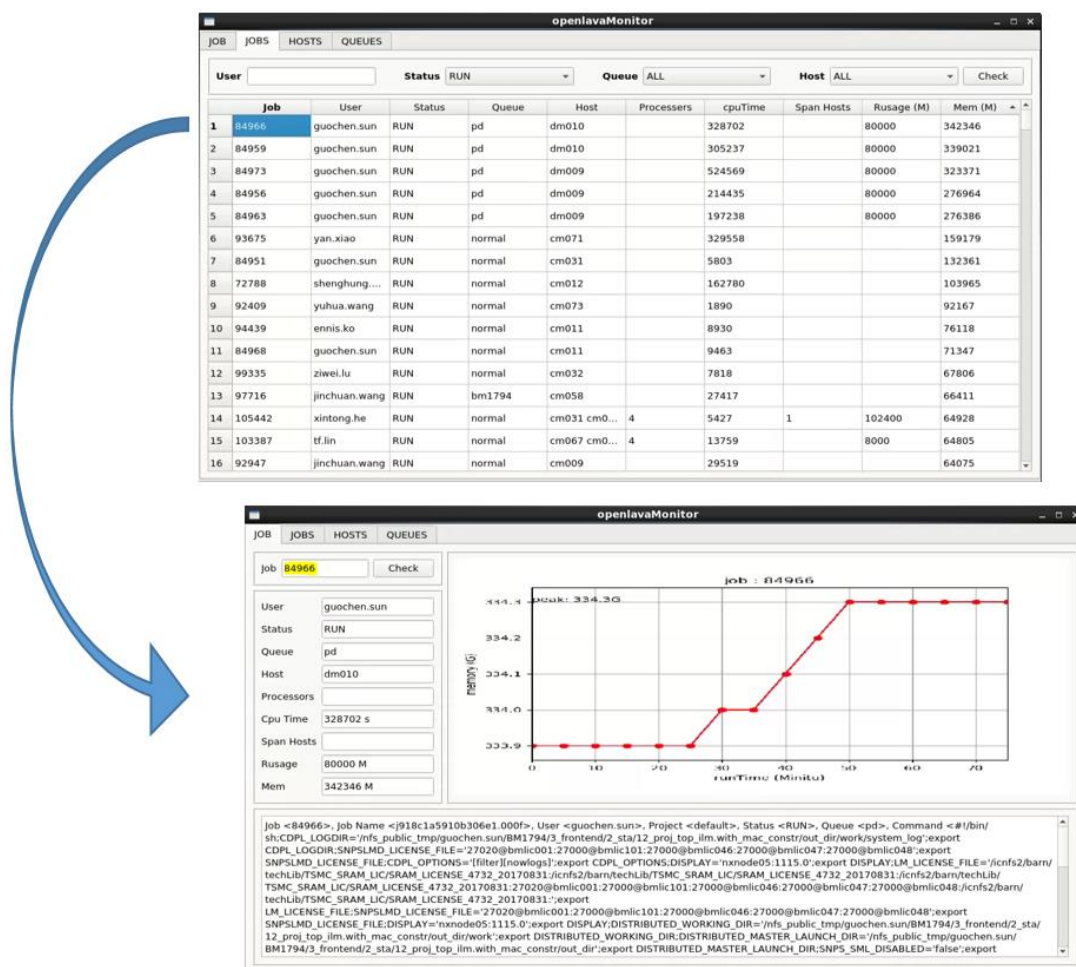
Click the header of the table, get the triangle symbol.

Job is sorted in descending order of Mem

Job	User	Status	Queue	Host	Processors	CpuTime	Span Hosts	Rusage (M)	Mem (M)
1 84966	guochen.sun	RUN	pd	dm010		328702		80000	342346
2 84959	guochen.sun	RUN	pd	dm010		305237		80000	339021
3 84973	guochen.sun	RUN	pd	dm009		524569		80000	323371
4 84956	guochen.sun	RUN	pd	dm009		214435		80000	276964
5 84963	guochen.sun	RUN	pd	dm009		197238		80000	276386
6 93675	yan.xiao	RUN	normal	cm071		329558			159179
7 84951	guochen.sun	RUN	normal	cm031		5803			132361
8 72788	shenghung....	RUN	normal	cm012		162780			103965
9 92409	yuhua.wang	RUN	normal	cm073		1890			92167
10 94439	ennis.ko	RUN	normal	cm011		8930			76118
11 84968	guochen.sun	RUN	normal	cm011		9463			71347
12 99335	ziwei.lu	RUN	normal	cm032		7818			67806
13 97716	jinchuan.wang	RUN	bm1794	cm058		27417			66411
14 105442	xintong.he	RUN	normal	cm031 cm0...	4	5427	1	102400	64928
15 103387	tf.lin	RUN	normal	cm067 cm0...	4	13759		8000	64805
16 92947	jinchuan.wang	RUN	normal	cm009		29519			64075

Click the **jobid** to jump to the JOB tab, get the job information on JOB tab.

For example, click "84966", it will jump to JOB tab and show the job information for "84966".



HOSTS Tab:

Below is the initial interface of HOSTS Tab.

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JOB	JOBS	HOSTS	QUEUES							
	Host	Status	Queue	Njobs	Ncpus	Ut (%)	Mem (G)	Maxmem (G)	swp (G)	maxswp (G)
1	cm001	closed_Adm	short normal...	0	56	0	427008	516922	4094	4095
2	cm005	ok	short normal...	19	48	39	349184	516794	3946	4095
3	cm006	ok	short normal...	31	48	95	269312	516633	0	4095
4	cm007	ok	short normal...	20	48	32	441344	516794	4002	4095
5	cm008	ok	short normal...	28	48	66	308224	516794	0	4095
6	cm009	ok	short normal...	13	48	41	323584	516794	4044	4095
7	cm010	ok	short normal...	15	48	86	214016	516794	0	4095
8	cm011	ok	short normal...	41	48	64	139264	516794	5	4095
9	cm012	ok	short normal...	16	48	18	177152	516794	0	4095
10	cm013	ok	short normal...	18	48	23	321536	452154	4034	4095
11	cm015	ok	short normal...	18	48	14	286720	516794	3880	4095
12	cm016	ok	short normal...	20	48	2	484352	516794	3626	4095
13	cm017	ok	short normal...	12	48	23	387072	516794	364	4095
14	cm019	ok	short normal...	23	48	26	240640	516633	0	4095
15	cm020	ok	short normal...	36	48	64	399360	516794	782	4095
16	cm021	ok	short normal...	31	48	62	359424	516794	2	4095
17	cm022	ok	short normal...	17	48	21	403456	516794	135168	135167
18	cm023	ok	short normal...	36	48	23	191488	516792	3362	4095

In the HOSTS table, all columns are sortable. Click the column headings to sort them in ascending or descending order.

For example, sort **Ncpus** in descending order.


Click the header of the table, get the triangle symbol.

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JOB	JOBS	HOSTS	QUEUES							
	Host	Status	Queue	Njobs	Ncpus	Ut (%)	Mem (G)	Maxmem (G)	swp (G)	maxswp (G)
1	pl01	ok	test	0	192	1	829440	1033840	516096	528383
2	em001	ok	bm1794 gls ...	1	144	3	2834432	3102511	3922	4095
3	pl02	ok	test	0	144	2	1314816	2068272	204800	204799
4	dm001	ok	test circuit k...	18	112	46	993280	1033412	8188	8191
5	dm002	ok	pd test	4	112	25	137216	1033412	8084	8191
6	dm003	ok	bm1794 pd t...	42	112	53	920576	1033219	8188	8191
7	dm005	ok	pd test	42	112	5	282624	1033412	8188	8191
8	dm006	ok	bm1722 pd t...	5	112	97	207872	1033412	8188	8191
9	dm007	ok	pd test	7	112	18	842752	1017252	8188	8191
10	zb04	ok	test zb	0	72	0	768000	775484	0	0
11	cm001	closed_Adm	short normal...	0	56	0	427008	516922	4094	4095
12	cm005	ok	short normal...	19	48	39	349184	516794	3946	4095
13	cm006	ok	short normal...	31	48	95	269312	516633	0	4095
14	cm007	ok	short normal...	20	48	32	441344	516794	4002	4095
15	cm008	ok	short normal...	28	48	66	308224	516794	0	4095
16	cm009	ok	short normal...	13	48	41	323584	516794	4044	4095
17	cm010	ok	short normal...	15	48	86	214016	516794	0	4095
18	cm011	ok	short normal...	41	48	64	139264	516794	5	4095

Host is sorted in descending order of Ncpus

Click the **Host** or **Njobs** item to jump to the JOBS tab, get all of the running jobs (started on specified host) on JOBS tab.

For example, click "cm005", it will jump to JOBS tab, and show all of the running jobs (started on cm005) on JOBS tab.



The image shows two screenshots of the 'openlavaMonitor' application interface, demonstrating how to filter jobs by host.

**Top Screenshot (HOSTS tab):** The 'HOSTS' tab is active, displaying a table of hosts. The 'Host' column lists hosts from cm001 to cm023. The 'Njobs' column shows the number of jobs for each host. The row for 'cm005' is highlighted in blue.

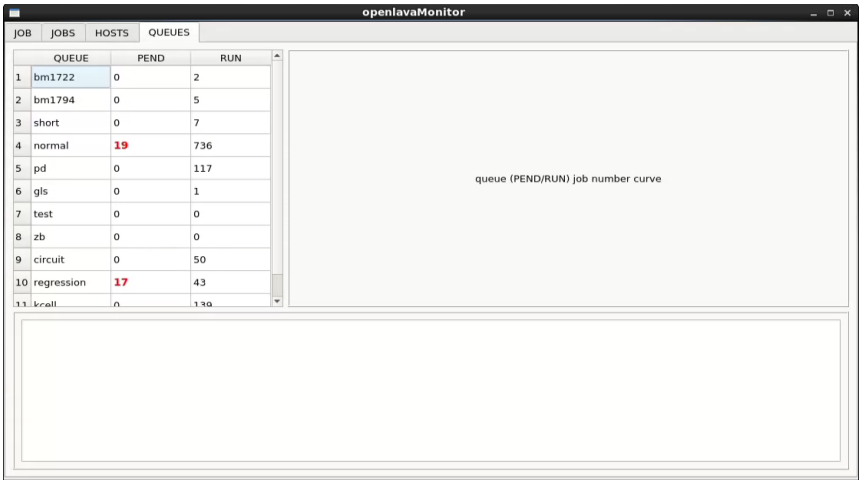
	Host	Status	Queue	Njobs	Ncpus	Ut (%)	Mem (G)	Maxmem (G)	swp (G)	maxswp (G)
1	cm001	closed_Admi	short normal...	0	56	1	423936	516922	4094	4095
2	cm005	ok	short normal...	15	48	23	339968	516794	3946	4095
3	cm006	ok	short normal...	19	48	34	282624	516633	1	4095
4	cm007	ok	short normal...	20	48	36	450560	516794	4002	4095
5	cm008	ok	short normal...	17	48	44	363520	516794	0	4095
6	cm009	ok	short normal...	31	48	25	270336	516794	4062	4095
7	cm010	ok	short normal...	17	48	21	172032	516794	0	4095
8	cm011	ok	short normal...	31	48	26	105472	516794	137	4095
9	cm012	ok	short normal...	14	48	19	161792	516794	0	4095
10	cm013	ok	short normal...	27	48	63	347136	452154	4032	4095
11	cm015	ok	short normal...	25	48	35	235520	516794	3734	4095
12	cm016	ok	short normal...	9	48	4	484352	516794	3626	4095
13	cm017	ok	short normal...	21	48	64	401408	516794	362	4095
14	cm019	ok	short normal...	21	48	23	278528	516633	0	4095
15	cm020	ok	short normal...	17	48	19	394240	516794	762	4095
16	cm021	ok	short normal...	34	48	85	389120	516794	1	4095
17	cm022	ok	short normal...	14	48	27	388096	516794	135168	135167
18	cm023	ok	short normal...	23	48	32	221184	516792	3646	4095

**Bottom Screenshot (JOBS tab):** The 'JOBS' tab is active. The 'Host' dropdown menu is set to 'cm005'. The table displays all running jobs for host 'cm005'.

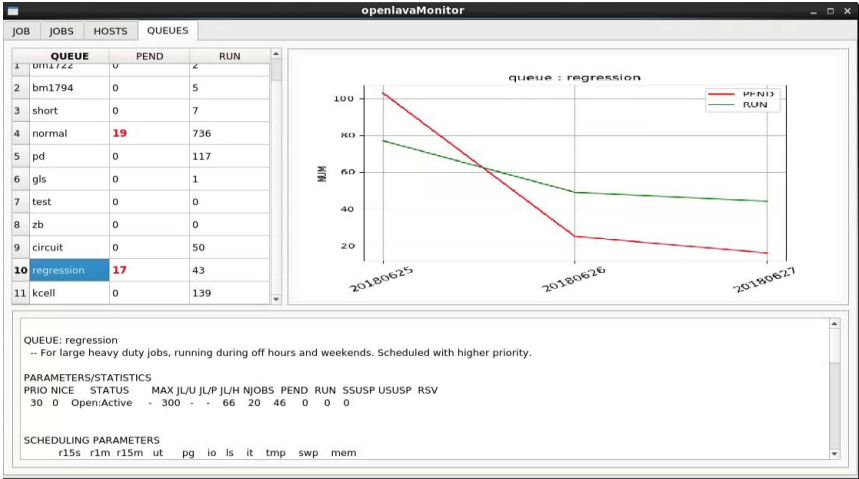
	Job	User	Status	Queue	Host	Processors	cpuTime	Span Hosts	Rusage (M)	Mem (M)
1	95393	sizheng.chen	RUN	short	cm005		4398			3891
2	48009	chen.geng	RUN	normal	cm005		123038		5000	18492
3	72838	yujia.li	RUN	normal	cm005		26547			35002
4	90991	ying.yang	RUN	normal	cm005		14520			1181
5	92410	lingling.zhou	RUN	normal	cm005		617			1616
6	92427	fuzhen.men	RUN	normal	cm005		114635			37180
7	92433	tony.liu	RUN	normal	cm005		3480		100000	4853
8	94596	feynman.chai	RUN	normal	cm005		9187			16032
9	95655	yanda.liu	RUN	normal	cm005		5519			6516
10	106930	gary.di	RUN	normal	cm005		7			13
11	106985	gary.di	RUN	normal	cm005		1284			172
12	107219	shenqian.qiu	RUN	normal	cm005		3897			10549
13	107284	tao.liu01	RUN	normal	cm005		35			930
14	107285	tao.liu01	RUN	normal	cm005		36			932
15	107288	guyou.zhang	RUN	normal	cm005		558		10000	6768

QUEUES Tab:

Below is the initial interface of QUEUES Tab.

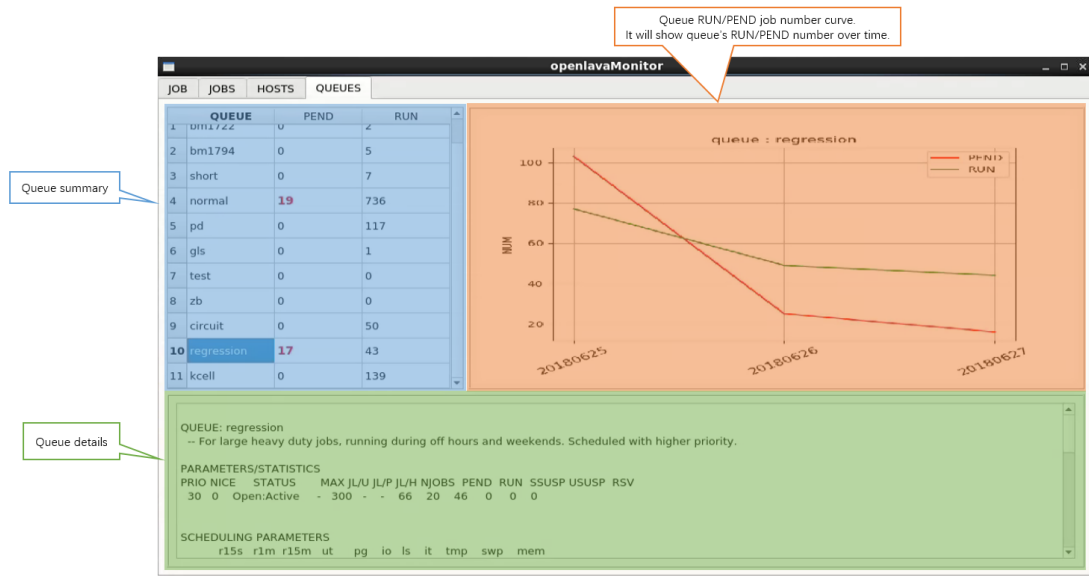


Click the Queue item, it will show the queue information.



It contains three parts:

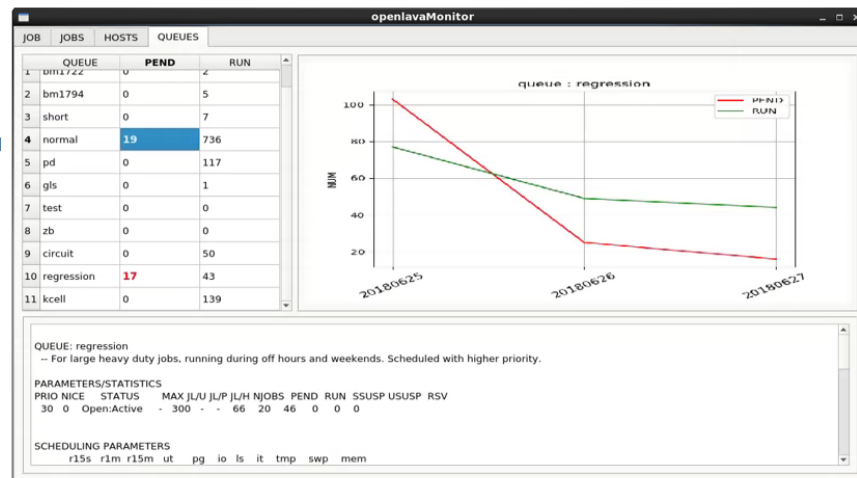
- Queue summary (RUN/PEND job number) on the left side.
- Queue details on the bottom.
- Queue RUN/PEND job number curve on the right side.





Click the **PEND** item to jump to the JOBS tab, get all of the pending jobs (started on specified queue) on JOBS tab.

For example, click “19” (PEND number) of “**normal**” queue, it will jump to JOBS tab and show all of the pending jobs (started on queue “normal”).



The screenshot shows the 'openlavaMonitor' application with the 'JOBS' tab selected. The 'Status' is set to 'PEND' and the 'Queue' is set to 'normal'. A table lists all pending jobs, including their job ID, user, status, queue, host, processors, CPU time, span, usage, and memory.

Job	User	Status	Queue	Host	Processors	cpuTime	Span	Hosts	Rusage (M)	Mem (M)
1 52296	ennis.ko	PEND	normal			93405				14
2 65898	ennis.ko	PEND	normal			18006			5000	20985
3 70664	shenghung....	PEND	normal			965				851
4 98715	ennis.ko	PEND	normal			5852				350
5 98718	ennis.ko	PEND	normal			19128			100000	14
6 98723	ennis.ko	PEND	normal			17260				13666
7 98726	ennis.ko	PEND	normal			12135			100000	2910
8 103351	ennis.ko	PEND	normal			2443			100000	4459
9 103364	ennis.ko	PEND	normal		4	176977	1		102400	27230
10 103647	shenghung....	PEND	normal			5903				4452
11 103649	shenghung....	PEND	normal			8640				7638
12 108064	mingjing.yu	PEND	normal			6891				596
13 108417	tony.lin	PEND	normal			2646				44634
14 108419	tony.lin	PEND	normal			1			5000	18
15 108436	tony.lin	PEND	normal			124				1054
16 108437	tony.lin	PEND	normal			17954				27912

Click the **RUN** item to jump to the JOBS tab, get all of the running jobs (started on specified queue) on JOBS tab.

For example, click “736” (RUN number) of “normal” queue, it will jump to JOBS tab and show all of the running jobs (started on queue “normal”).

