HTCondor Command Line Monitoring Tool

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Oxford is a Tier-2 Site

- Supports both HEP and non-HEP jobs

Batch Systems:

- Torque/Maui SL6 - ~600 cores (Local Cluster)
- Slurm on CentOS7
- HTCondor
  - SL6 – ~2900 cores (Grid)
  - CentOS 7 - ~140 cores (Grid)
  - CentOS 7 - ~160 cores (Local "Test" Cluster)

Monitoring

- Telegraf for collecting metrics using HTCondor Python bindings
- InfluxDB time series database
- Grafana for visualization

condor_wn is a command line tool written in python that displays a snapshot information about jobs running on the cluster.

Uses python modules:

- htcondor and classad
- prettytable - to get the pretty output
- yaml - to read values from a configuration file

condor_wn

--list <all:offline:online:multicore> --column n --descending
--summary
--workernode <workernode>
--user <username>
--online <workernode>
--offline <workernode>
--html
--help

condor_wn --summary

displays the following summary tables:

- CPU Summary
- Number of Jobs
- Jobs per User
- Idle Jobs (displayed if the jobs in the idle queue are more than 2 day old)*
- Held Jobs (displayed if the jobs in the held queue are more than 2 day old)*
- Long Running Jobs (displayed if the jobs in the running queue are more than 5 days old)*
- Jobs Exceeding CPU Threshold (displayed if the jobs exceeds CPU threshold of 120%)*

* The default value can be changed in the condor_wn.yaml config file

condor_wn – summary tables

```
[root@t2arc01 ~]# condor_wn -s
Condor Jobs Overview on t2arc01.physics.ox.ac.uk Monday, 20 August 2018 13:16:36
CPU Summary
+---------------+--------+------------+------------+------------+----------+
| #WorkerNodes  | #CPUs  | #CPUsUsed  | #CPUsFree  | %CPUsUsed  | LoadEff  |
+---------------+--------+------------+------------+------------+----------+
|      138      |  2938  |    2824    |    114     |     96     |    98    |
+---------------+--------+------------+------------+------------+----------+
Jobs Summary
+------+-----------+------+------+---------+---------+
| jobs | completed | idle | held | running | removed |
+------+-----------+------+------+---------+---------+
| 2875 |     0     | 538  |  0   |  2337   |    0    |
+------+-----------+------+------+---------+---------+
Jobs per VO
+--------------------------+---------+------+-------+--------+----------+
| VO                       | Status  | CPUs | #Jobs | #Cores | CPU Eff  |
+--------------------------+---------+------+-------+--------+----------+
| group_ALICE_admin        | idle    |    1 |   113 |    113 |          |
+--------------------------+---------+------+-------+--------+----------+
| group_ALICE_admin        | running |    1 |   600 |    600 |   93.67  |
+--------------------------+---------+------+-------+--------+----------+
| group_ATLAS_multicore    | idle    |    8 |    22 |    176 |          |
+--------------------------+---------+------+-------+--------+----------+
| group_ATLAS_multicore    | running |    8 |    70 |    560 |   84.65  |
+--------------------------+---------+------+-------+--------+----------+
| group_ATLAS_pilot        | running |    1 |   607 |    607 |   97.51  |
+--------------------------+---------+------+-------+--------+----------+
| group_ATLAS_production   | running |    1 |     2 |      2 |   21.79  |
+--------------------------+---------+------+-------+--------+----------+
| group_CMS_admin          | running |    1 |     1 |      1 |    0.70  |
+--------------------------+---------+------+-------+--------+----------+
| group_CMS_pilot          | idle    |    1 |   103 |    103 |          |
+--------------------------+---------+------+-------+--------+----------+
| group_CMS_pilot          | running |    1 |   199 |    199 |  106.87  |
+--------------------------+---------+------+-------+--------+----------+
| group_LHCB_pilot         | idle    |    1 |    38 |     38 |          |
+--------------------------+---------+------+-------+--------+----------+
| group_LHCB_pilot         | running |    1 |   400 |    400 |   95.31  |
+--------------------------+---------+------+-------+--------+----------+
| group_NA62_pilot         | idle    |    1 |   262 |    262 |          |
+--------------------------+---------+------+-------+--------+----------+
| group_NA62_pilot         | running |    1 |   400 |    400 |   92.27  |
+--------------------------+---------+------+-------+--------+----------+
| group_PHENO_pilot        | running |    1 |    58 |     58 |   97.37  |
+--------------------------+---------+------+-------+--------+----------+
Jobs Exceeding CPU Threshold Of 120%
+------------+--------------+-----------+------+----------+-------------------+
| WorkerNode |    JobID     | Job Owner | CPUs | CPU Eff  |       Time        |
+------------+--------------+-----------+------+----------+-------------------+
|   t2wn69   | 12506117.0   | CMS_pilot |  1   | 121.01%  | 2 days 23:16:49   |
+------------+--------------+-----------+------+----------+-------------------+
|  t2wn149   | 12506284.0   | CMS_pilot |  1   | 127.06%  | 2 days 23:04:06   |
+------------+--------------+-----------+------+----------+-------------------+
|  t2wn141   | 12506286.0   | CMS_pilot |  1   | 126.33%  | 2 days 23:04:06   |
+------------+--------------+-----------+------+----------+-------------------+
```

condor_wn – list jobs on worker nodes

`condor_wn --workernode t2wn1,t2wn97` – displays jobs on worker node(s)

```
[root@t2arc01 ~]# condor_wn -w t2wn1,t2wn97
Condor Jobs Overview on t2arc01.physics.ox.ac.uk Monday, 20 August 2018 13:31:32
Jobs per Workernode
```

WorkerNode	Status	#CPUs	%CPU	%Memory	AverageLoad	LoadEfficiency	#Jobs	Jobs
t2wn1	online	54	88.9	49.9	47.6	88.2	20	ALICE_admin: 12523029.0: 1: 1 day 08:19:11: 96.43%
								ALICE_admin: 12528768.0: 1: 0 day 20:25:29: 94.56%
								ALICE_admin: 12528769.0: 1: 0 day 20:25:06: 95.25%
								ALICE_admin: 12529011.0: 1: 0 day 17:01:54: 97.93%
								ALICE_admin: 12529019.0: 1: 0 day 17:01:24: 97.73%
								ALICE_admin: 12530695.0: 1: 0 day 14:54:01: 97.74%
								ALICE_admin: 12530699.0: 1: 0 day 14:53:40: 97.79%
								ALICE_admin: 12530700.0: 1: 0 day 14:53:08: 97.92%
								ALICE_admin: 12530729.0: 1: 0 day 12:44:04: 96.59%
								ALICE_admin: 12530731.0: 1: 0 day 12:43:44: 96.75%
								ATLAS_multicore: 12537529.0: 8: 0 day 05:08:46: 86.43%
								ATLAS_multicore: 12537531.0: 8: 0 day 05:08:24: 86.73%
								ATLAS_multicore: 12538436.0: 8: 0 day 01:28:05: 64.87%
								ATLAS_multicore: 12538437.0: 8: 0 day 01:27:20: 65.66%
								ATLAS_pilot: 12531317.0: 1: 0 day 17:09:17: 98.71%
								ATLAS_pilot: 12531320.0: 1: 0 day 17:08:18: 98.76%
								LHCB_pilot: 12530603.0: 1: 0 day 12:44:36: 96.73%
								LHCB_pilot: 12531262.0: 1: 0 day 12:12:15: 96.88%
								LHCB_pilot: 12534703.0: 1: 0 day 11:06:47: 97.34%
								NA62_pilot: 12538562.0: 1: 0 day 01:26:57: 79.02%
t2wn97	online	12	100.0	64.3	12.0	100.2	5	ALICE_admin: 12530685.0: 1: 0 day 15:41:00: 93.63%
								ATLAS_multicore: 12539060.0: 8: 0 day 00:23:07: 4.53%
								ATLAS_pilot: 12536195.0: 1: 0 day 08:40:07: 96.82%
								ATLAS_pilot: 12536879.0: 1: 0 day 06:42:23: 95.46%
								ATLAS_pilot: 12537043.0: 1: 0 day 06:16:57: 97.89%

`condor_wn --workernode t2wn2,t2wn97 --column 5 --descending`

- displays jobs on worker nodes, sorted by column 5 (AverageLoad) and in descending order.

```
[root@t2arc01 ~]# condor_wn -w t2wn1,t2wn97 -c 5 -d
Condor Jobs Overview on t2arc01.physics.ox.ac.uk Monday, 20 August 2018 13:42:04
Jobs per Workernode
```

WorkerNode	Status	#CPUs	%CPU	%Memory	AverageLoad	LoadEfficiency	#Jobs	Jobs
t2wn97	online	12	100.0	64.3	12.1	101.0	5	ALICE_admin: 12530685.0: 1: 0 day 15:51:31: 94.16%
								ATLAS_multicore: 12539060.0: 8: 0 day 00:33:38: 46.18%
								ATLAS_pilot: 12536195.0: 1: 0 day 08:50:38: 97.71%
								ATLAS_pilot: 12536879.0: 1: 0 day 06:52:54: 96.66%
								ATLAS_pilot: 12537043.0: 1: 0 day 06:27:28: 95.23%
t2wn1	online	54	88.9	49.9	47.2	87.3	20	ALICE_admin: 12523029.0: 1: 1 day 08:29:42: 95.91%
								ALICE_admin: 12528768.0: 1: 0 day 20:36:01: 94.97%
								ALICE_admin: 12528769.0: 1: 0 day 20:35:38: 95.65%
								ALICE_admin: 12529011.0: 1: 0 day 17:12:25: 96.93%
								ALICE_admin: 12529019.0: 1: 0 day 17:11:55: 96.73%
								ALICE_admin: 12530695.0: 1: 0 day 15:04:32: 98.25%
								ALICE_admin: 12530699.0: 1: 0 day 15:04:11: 98.30%
								ALICE_admin: 12530700.0: 1: 0 day 15:03:39: 98.43%
								ALICE_admin: 12530729.0: 1: 0 day 12:54:35: 97.21%
								ALICE_admin: 12530731.0: 1: 0 day 12:54:15: 97.36%
								ATLAS_multicore: 12537529.0: 8: 0 day 05:19:17: 88.04%
								ATLAS_multicore: 12537531.0: 8: 0 day 05:18:56: 88.33%
								ATLAS_multicore: 12538436.0: 8: 0 day 01:38:37: 72.88%
								ATLAS_multicore: 12538437.0: 8: 0 day 01:37:52: 73.66%
								ATLAS_pilot: 12531317.0: 1: 0 day 17:19:48: 99.15%
								ATLAS_pilot: 12531320.0: 1: 0 day 17:18:50: 99.20%
								LHCB_pilot: 12530603.0: 1: 0 day 12:55:07: 97.32%
								LHCB_pilot: 12531262.0: 1: 0 day 12:22:47: 97.53%
								LHCB_pilot: 12534703.0: 1: 0 day 11:17:18: 98.03%
								NA62_pilot: 12538562.0: 1: 0 day 01:37:28: 85.69%

condor_wn --user CMS_pilot

- displays user CMS_pilot jobs on worker nodes

```
[root@t2arc01 ~]# condor_wn -u CMS_pilot
Condor Jobs Overview on t2arc01.physics.ox.ac.uk Monday, 20 August 2018 15:45:13
Jobs per Workernode
```

WorkerNode	Status	#CPUs	%CPU	%Memory	AverageLoad	LoadEfficiency	#Jobs	Jobs
t2wn100	online	32	100.0	68.5	31.6	98.8	2	CMS_pilot: 12505737.0: 1: 3 days 02:49:13: 104.72% CMS_pilot: 12506742.0: 1: 3 days 00:13:42: 90.09%
t2wn101	online	32	100.0	70.3	33.4	104.4	4	CMS_pilot: 12506282.0: 1: 3 days 01:32:42: 113.53% CMS_pilot: 12535954.0: 1: 0 day 10:50:58: 86.67% CMS_pilot: 12538066.0: 1: 0 day 05:05:01: 76.85% CMS_pilot: 12540281.0: 1: 0 day 00:28:37: 12.63%
t2wn102	online	32	100.0	70.8	29.6	92.5	7	CMS_pilot: 12506319.0: 1: 3 days 01:26:03: 91.39% CMS_pilot: 12514439.0: 1: 2 days 08:08:16: 104.75% CMS_pilot: 12536898.0: 1: 0 day 08:05:01: 86.46% CMS_pilot: 12538676.0: 1: 0 day 04:07:08: 78.86% CMS_pilot: 12539732.0: 1: 0 day 01:57:35: 71.99% CMS_pilot: 12539929.0: 1: 0 day 01:38:20: 42.42% CMS_pilot: 12539933.0: 1: 0 day 01:37:35: 40.44%
t2wn103	online	32	81.2	55.5	25.4	79.5	1	CMS_pilot: 12516305.0: 1: 2 days 04:08:19: 107.65%
t2wn104	online	32	100.0	70.6	30.9	96.6	5	CMS_pilot: 12535795.0: 1: 0 day 11:20:19: 86.97% CMS_pilot: 12535953.0: 1: 0 day 10:51:58: 87.79% CMS_pilot: 12535966.0: 1: 0 day 10:46:43: 79.30% CMS_pilot: 12536387.0: 1: 0 day 10:25:09: 88.77% CMS_pilot: 12536399.0: 1: 0 day 10:19:23: 90.25%
t2wn105	online	32	100.0	69.0	31.4	98.3	1	CMS_pilot: 12506285.0: 1: 3 days 01:32:43: 117.24%
t2wn106	online	32	100.0	70.7	33.1	103.3	5	CMS_pilot: 12516304.0: 1: 2 days 04:08:51: 106.47% CMS_pilot: 12534507.0: 1: 0 day 13:24:00: 84.31% CMS_pilot: 12536718.0: 1: 0 day 09:09:18: 87.80% CMS_pilot: 12536751.0: 1: 0 day 08:58:53: 85.28% CMS_pilot: 12539513.0: 1: 0 day 02:22:58: 75.71%
t2wn107	online	32	100.0	70.8	31.5	98.5	5	CMS_pilot: 12505604.0: 1: 3 days 03:14:59: 99.95% CMS_pilot: 12506281.0: 1: 3 days 01:32:42: 108.71% CMS_pilot: 12506650.0: 1: 3 days 00:40:47: 106.69% CMS_pilot: 12534505.0: 1: 0 day 13:24:01: 85.05%

```
condor_wn --list offline
- list all offline worker nodes

condor_wn --list online
- list all online worker nodes

condor_wn --list multicore
- list all multicore jobs

condor_wn --list all
- list all worker nodes
```

condor_wn – list

```
[root@t2arc01 ~]# condor_wn -l multicore
Condor Jobs Overview on t2arc01.physics.ox.ac.uk Tuesday, 21 August 2018 09:01:29
Jobs per Workernode
```

WorkerNode	Status	#CPUs	%CPU	%Memory	AverageLoad	LoadEfficiency	#Jobs	Jobs
t2wn1	online	54	94.4	52.9	50.3	93.2	5	ATLAS_multicore: 12546184.0: 8: 0 day 05:37:00: 88.33%
								ATLAS_multicore: 12546539.0: 8: 0 day 04:16:20: 90.19%
								ATLAS_multicore: 12547582.0: 8: 0 day 03:16:10: 89.54%
								ATLAS_multicore: 12547589.0: 8: 0 day 03:16:33: 88.73%
								ATLAS_multicore: 12548503.0: 8: 0 day 01:36:30: 74.59%
t2wn10	online	16	93.8	61.2	15.0	93.6	1	ATLAS_multicore: 12546538.0: 8: 0 day 04:16:58: 90.91%
t2wn100	online	32	90.6	62.1	28.9	90.3	1	ATLAS_multicore: 12548561.0: 8: 0 day 01:30:08: 66.02%
t2wn102	online	32	100.0	70.7	28.9	90.3	1	ATLAS_multicore: 12546434.0: 8: 0 day 04:55:56: 84.74%
t2wn105	online	32	100.0	68.2	32.9	102.8	1	ATLAS_multicore: 12546433.0: 8: 0 day 04:55:56: 83.57%
t2wn108	online	32	100.0	69.3	33.9	105.8	1	ATLAS_multicore: 12546425.0: 8: 0 day 05:02:51: 85.95%
t2wn109	online	32	81.2	55.9	19.2	60.0	1	ATLAS_multicore: 12546421.0: 8: 0 day 05:15:45: 87.19%
t2wn11	online	16	93.8	61.2	15.0	93.5	1	ATLAS_multicore: 12548380.0: 8: 0 day 01:56:57: 72.09%
t2wn112	online	32	100.0	68.1	30.9	96.6	1	ATLAS_multicore: 12546462.0: 8: 0 day 04:36:15: 87.92%
t2wn115	online	32	100.0	70.5	29.5	92.1	1	ATLAS_multicore: 12548599.0: 8: 0 day 01:12:20: 58.71%
t2wn116	online	32	100.0	68.0	31.0	96.8	1	ATLAS_multicore: 12549022.0: 8: 0 day 00:23:59: 3.27%
t2wn117	online	32	100.0	67.9	30.0	93.6	1	ATLAS_multicore: 12549054.0: 8: 0 day 00:16:13: 1.84%
t2wn119	online	32	93.8	64.5	29.9	93.3	1	ATLAS_multicore: 12549038.0: 8: 0 day 00:21:18: 3.82%
t2wn12	online	16	87.5	57.0	14.0	87.6	1	ATLAS_multicore: 12548657.0: 8: 0 day 00:36:04: 33.71%
t2wn120	online	32	100.0	68.0	31.0	96.8	1	ATLAS_multicore: 12548620.0: 8: 0 day 00:56:44: 45.22%

condor_wn --offline t2wn16

- offline worker node t2wn16

condor_wn --online t2wn16

- online worker node t2wn16

Putting All worker nodes online/offline

condor_wn --offline ALL

```
Are you sure that you want to put ALL workernodes offline
[y/N] y
Are you REALLY sure that you want to put ALL workernodes
offline [y/N] N
```

condor_wn – online/offline worker nodes

```
[root@t2arc00 ~]# condor_wn -f t2wn16
offlining worker node.... t2wn16.physics.ox.ac.uk
[root@t2arc00 ~]# condor_wn -l offline
Condor Jobs Overview on t2arc00.physics.ox.ac.uk Tuesday, 21 August 2018 08:41:58
Jobs per Workernode
+------------+---------+-------+------+---------+-------------+----------------+-------+------+
| WorkerNode |  Status | #CPUs | %CPU | %Memory | AverageLoad | LoadEfficiency | #Jobs | Jobs |
+------------+---------+-------+------+---------+-------------+----------------+-------+------+
|   t2wn16   | offline |   16  | 0.0  |   0.0   |     0.0     |      0.0       |   0   |      |
+------------+---------+-------+------+---------+-------------+----------------+-------+------+
[root@t2arc00 ~]# condor_wn -o t2wn16
onlining worker node.... t2wn16.physics.ox.ac.uk
[root@t2arc00 ~]# condor_wn -l all
Condor Jobs Overview on t2arc00.physics.ox.ac.uk Tuesday, 21 August 2018 08:42:28
Jobs per Workernode
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
| WorkerNode | Status | #CPUs | %CPU | %Memory | AverageLoad | LoadEfficiency | #Jobs | Jobs                                                      |
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
|  t2wn150   | online |   40  | 5.0  |   1.5   |     1.9     |      4.8       |   2   | LHCB_pilot: 131410.0: 1: 0 day 04:43:04: 73.90%           |
|            |        |       |      |         |             |                |       | LHCB_pilot: 131530.0: 1: 0 day 00:08:29: 0.20%            |
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
|  t2wn151   | online |   40  | 15.0 |   4.3   |     5.6     |      13.9      |   6   | ATLAS_production: 131521.0: 1: 0 day 00:23:00: 42.46%     |
|            |        |       |      |         |             |                |       | ATLAS_production: 131525.0: 1: 0 day 00:12:17: 0.14%      |
|            |        |       |      |         |             |                |       | LHCB_pilot: 131409.0: 1: 0 day 04:43:04: 93.39%           |
|            |        |       |      |         |             |                |       | LHCB_pilot: 131484.0: 1: 0 day 02:06:08: 90.62%           |
|            |        |       |      |         |             |                |       | LHCB_pilot: 131485.0: 1: 0 day 02:05:49: 90.94%           |
|            |        |       |      |         |             |                |       | LHCB_pilot: 131529.0: 1: 0 day 00:08:29: 0.20%            |
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
|  t2wn152   | online |   40  | 0.0  |   0.0   |     0.0     |      0.0       |   0   |                                                           |
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
|   t2wn16   | online |   16  | 0.0  |   0.0   |     0.0     |      0.0       |   0   |                                                           |
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
|   t2wn41   | online |   8   | 0.0  |   0.0   |     0.0     |      0.0       |   0   |                                                           |
+------------+--------+-------+------+---------+-------------+----------------+-------+-----------------------------------------------------------+
```

condor_wn --list all -summary --html
- creates an html output file with summary tables and list all worker nodes

- **The template style for the html is defined in condor_wn.yaml and can be changed if you don't like the layout of the tables**

To avoid copying the html file to a webserver

- Install HTCondor RPMs on a webserver
- Copy configuration files:
  - pool_password
  - condor_config
  - condor_config.local

Make sure:

- SCHEDD_HOST is defined in the config

  SCHEDD_HOST = <scheduler server>

Condor Jobs Overview on t2arc01.physics.ox.ac.uk

Wednesday, 29 August 2018 08:40:12

Jobs per VO

VO	Status	CPUs	#Jobs	#Cores	CPU Eff
group_ALICE_admin	idle	1	74	74	
group_ALICE_admin	running	1	500	500	95.43
group_ATLAS_multicore	idle	8	112	896	
group_ATLAS_multicore	running	8	43	344	80.96
group_ATLAS_pilot	running	1	31	31	88.67
group_ATLAS_production	running	1	5	5	43.67
group_CMS_pilot	held	1	1	1	
group_CMS_pilot	idle	1	96	96	
group_CMS_pilot	running	1	200	200	108.65
group_DUNE_pilot	running	1	26	26	1.24
group_ILC_standard	running	1	51	51	41.73
group_LHCB_pilot	running	1	490	490	95.99
group_LSST_multicore	idle	8	1004	8032	
group_LSST_multicore	running	8	24	192	30.58
group_NA62_pilot	idle	1	308	308	
group_NA62_pilot	running	1	350	350	97.11
group_PHENO_pilot	running	1	494	494	96.64

CPU Summary

#WorkerNodes	#CPUs	#CPUsUsed	#CPUsFree	%CPUsUsed	LoadEff
137	2906	2683	223	92	97

Jobs Summary

jobs	completed	idle	held	running	removed
3809	0	1594	1	2214	0

Held Jobs For More Than 2 Days

JobID	Job Owner	CPUs	CPU Eff	Time
12600551.0	CMS_pilot	1	0.00%	3 days 11:26:27

Jobs Exceeding CPU Threshold Of 120%

WorkerNode	JobID	Job Owner	CPUs	CPU Eff	Time
t2wn136	12594581.0	CMS_pilot	1	137.06%	3 days 23:03:23
t2wn122	12605037.0	CMS_pilot	1	128.59%	3 days 02:56:45
t2wn122	12605809.0	CMS_pilot	1	151.50%	3 days 00:48:06
t2wn115	12610398.0	CMS_pilot	1	121.78%	2 days 13:55:50
t2wn100	12611957.0	CMS_pilot	1	207.90%	2 days 10:08:21
t2wn132	12612247.0	CMS_pilot	1	214.84%	2 days 09:17:00
t2wn109	12614698.0	CMS_pilot	1	167.66%	2 days 03:44:37
t2wn125	12617265.0	CMS_pilot	1	163.19%	1 day 23:34:05
t2wn133	12617272.0	CMS_pilot	1	217.40%	1 day 23:32:51

condor_wn.yaml

```
idlejobs_ndays: 2
heldjobs_ndays: 2
runningjobs_ndays: 5
inefficient_cpu_threshold: 120
inefficient_cpu_time_threshold: 3600
```

If a jobs exceeds CPU threshold of 120%, a table listing the jobs will be displayed.

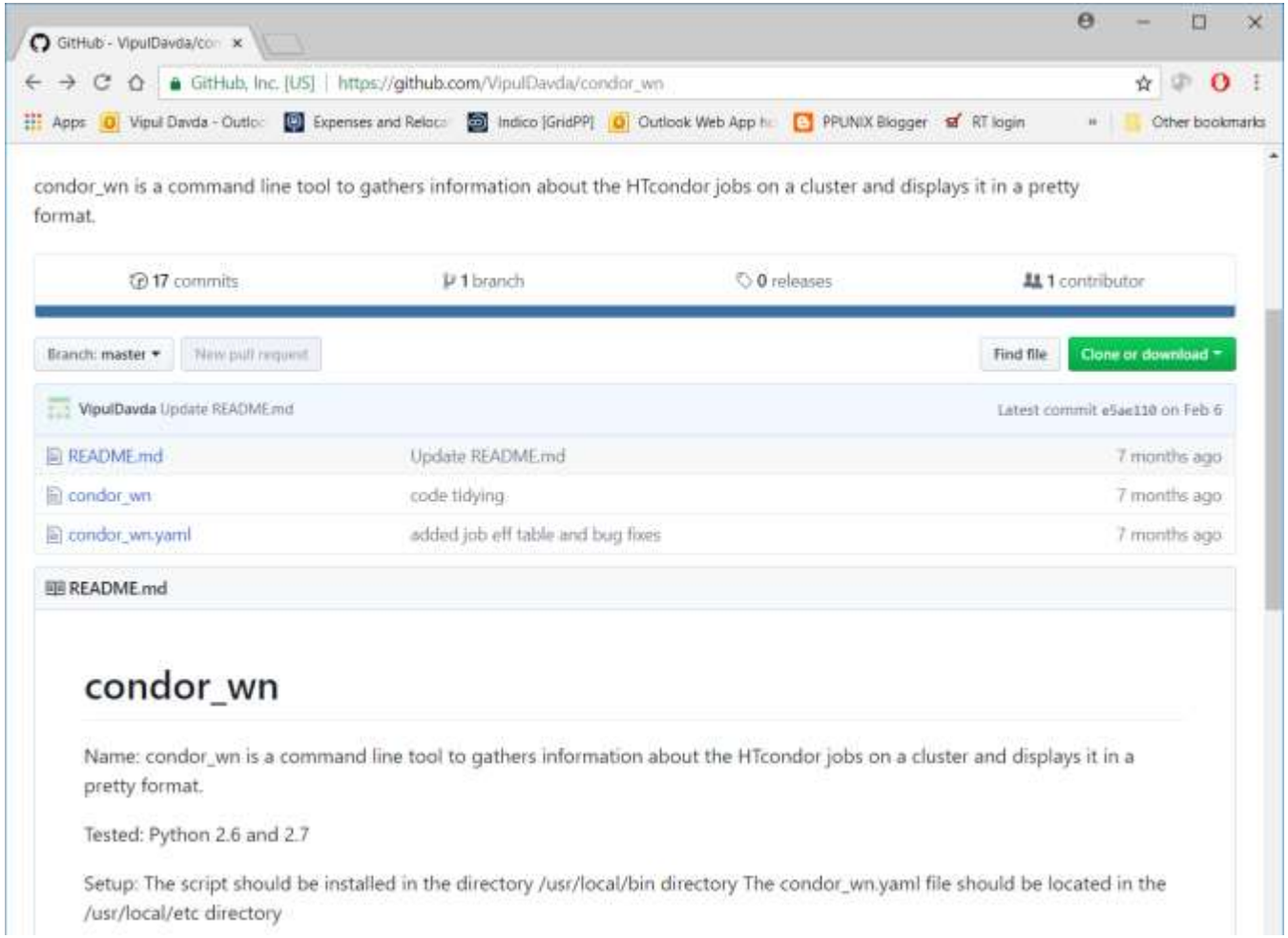
```
html_file: "/var/www/html/condorjobs_overview.html"

headerline:  "Condor Jobs Overview on "
cputitle: "CPU Summary"
vojobstitle: "Jobs per VO"
jobtitle: "Jobs Summary"
hostjobstitle: "Jobs per Workernode"
heldjobstitle: "Held Jobs"
idlejobstitle: "Idle Jobs"
longjobstitle: "Long Running Jobs"
ineffjobstitle: "Jobs Exceeding CPU Threshold"

pageTemplate: |
   <!DOCTYPE html>
   <html>
   <head>
     <title>{headerline}</title>
     <style>
```

condor_wn.yaml

Jobs Exceeding CPU Threshold Of 120%

WorkerNode	JobID	Job Owner	CPUs	CPU Eff	Time
t2wn154	12503272.0	CMS_pilot	1	121.33%	4 days 03:17:01
t2wn149	12506284.0	CMS_pilot	1	127.63%	3 days 19:25:16
t2wn141	12506286.0	CMS_pilot	1	125.37%	3 days 19:25:16
t2wn31	12506290.0	CMS_pilot	1	121.21%	3 days 19:25:17
t2wn72	12506556.0	CMS_pilot	1	145.71%	3 days 18:53:06
t2wn126	12506683.0	CMS_pilot	1	128.31%	3 days 18:26:43
t2wn147	12509374.0	CMS_pilot	1	133.76%	3 days 12:33:52
t2wn111	12510856.0	CMS_pilot	1	126.66%	3 days 10:23:12
t2wn7	12512643.0	CMS_pilot	1	128.46%	3 days 06:32:38
t2wn23	12512965.0	CMS_pilot	1	120.58%	3 days 05:25:55
t2wn8	12514939.0	CMS_pilot	1	123.08%	3 days 00:52:28

https://github.com/VipulDavda/condor_wn



QUESTIONS?