# O2 Cluster Status

This page shows all service outages for the O2 cluster, including planned maintenance and unplanned events.

We also post updates on the [HMS RC Twitter page](https://twitter.com/HMSRC)

## Two Factor Authentication:

As of Monday Dec 3 2018, all O2 cluster logins from outside of the HMS network require two-factor authentication. Please see:

- Two Factor Authentication on O2
- Two Factor Authentication FAQ

## Scheduled Maintenance and Current Outages:

<table>
<thead>
<tr>
<th>Date</th>
<th>Service</th>
<th>Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>no maintenance scheduled</td>
<td></td>
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</tr>
</tbody>
</table>

## Previous Service Outages:

<table>
<thead>
<tr>
<th>Date</th>
<th>Service</th>
<th>Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-12-05</td>
<td>/n/scratch2 filesystem</td>
<td>The automated process that deletes old files under /n/scratch2 (specifically, files that were last accessed more than 29 days ago), was intentionally disabled by Research Computing for approximately the past month due to an issue on the scratch2 fileserver. So, there are currently files older than 30 days on /n/scratch2 which have not yet been purged as they normally would have been. We fixed that fileserver issue and resumed the purging of these old files starting Wed, Dec 5.</td>
</tr>
</tbody>
</table>
| 2018-12-03 | O2 logins | All O2 cluster logins from outside of the HMS network will start requiring two-factor authentication.  
For more details, please see: Two Factor Authentication (2FA) on O2 and Two Factor Authentication FAQ  
Currently, O2 only requires a password login using your eCommons ID. Due to increased hacking attempts on O2, it is necessary to increase the security of our systems and going to two factor authentication is a big step.  
HMS users already must use two factor authentication for Harvard Key and HMS VPN logins. O2 logins will work similarly.  
Two-factor authentication will be required when logging in from:  
- the HMS Public wireless network  
- Other Harvard networks (FAS, etc)  
- Networks at HMS affiliates (hospitals, etc)  
- Any other external network (home, etc), NOT using the HMS VPN  
- an HMS system (even on campus) which has a public-facing IP address (this is mostly for web and other application servers, not your desktop) |
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| **2018-11-28** | MySQL and PostgreSQL Databases and TWiki server  
A planned maintenance window at:  
**Wednesday, 2018-11-28, 6pm - 7pm**  
for the following services:  
- PostgreSQL (production and staging database servers)  
- MySQL (production and staging database servers)  
- TWiki (the website: [wiki.med.harvard.edu](https://wiki.med.harvard.edu))  
Only websites and cluster jobs using these database services were affected. |
| **2018-11-20** | /n/scratch2  
Intermittent storage issues affected the availability of the /n/scratch2 directories across O2 systems.  
*Duration: 6.00 AM - 6.00 PM* |
| **2018-10-24** | /n/groups  
Intermittent storage issues affected the availability of the /n/groups and /n/data2 directories across O2 systems. |
| **2018-10-10** | authentication service  
Instability in O2's authentication service was causing some user accounts to lose group memberships across O2 systems.  
Services were restored to normal at approximately 10:18am |
| **2018-10-01** | /n/scratch2 directory  
When attempting to write to files under /n/scratch2, you may see errant behavior such as:  
- Files are successfully written, but warning/error messages are generated  
- Files can not be written, with error messages such as "Bad Address"  
Issue was resolved with a bug fix on the scratch2 storage server. |
| **2018-09-08** | O2 Login servers  
Unplanned Outage: a core HMS network outage caused o2 login nodes unreachable. The issue is resolved by HMS Networking team  
*Duration: 02.30 PM - 5.30 PM* |
| **2018-08-17** | PostgreSQL (production, staging)  
MySQL (staging) Request Tracker (RT)  
These will be offline for approximately 1 hour starting at 9pm EDT for urgent maintenance. |
| **2018-08-14** | O2 Cluster and web services  
Unplanned outage: a failure in the HMS virtual machine hosting infrastructure caused service outages in Research Computing's web services and, to a lesser extent, on the O2 cluster. The outage did not affect running cluster jobs, though.  
*Duration: 02:20 pm - 06:20 pm* |
| **2018-08-06** | O2 Cluster  
Unplanned outage: Cisco networking hardware failed and caused many jobs to fail. The defect hardware has been replaced and everything is stable.  
*Duration: 05:00 am - 08:00 pm* |
| **2018-04-25** | O2 login servers  
2 login servers, login03 and login05, required reboots due to resource-intensive end user processes locking up those systems. |
| **2018-04-26** | O2 Cluster  
Unplanned outage: networking issues disrupted communication to/from the login nodes. Running/pending jobs were not impacted. |
| **2018-04-11** | O2 /home cluster  
A severe network latency to the /home storage cluster impacted logins and processes trying to access this cluster. Duration: 11.00am - 05:00pm |
| **2018-04-10** | O2 Cluster  
Unplanned outage: networking issues disrupted communication to/from the login nodes. Running/pending jobs were not impacted. |
| **2018-04-03** | /home filesystem  
The filesystem for /home was getting close to maximum capacity and running on older hardware.  
This planned maintenance involved migrating all /home to data to a new filesystem with more capacity. This required a full shutdown of O2's Slurm job scheduler and unmounting /home from all cluster and infrastructure systems. |
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<tbody>
<tr>
<td>2018-03-13</td>
<td>/n/scratch2</td>
<td>A hardware failure on the /n/scratch2 fileserver resulted in /n/scratch2 being non-writable.</td>
</tr>
<tr>
<td>2018-03-14</td>
<td>filesystem</td>
<td>On 3/14, hardware was replaced and the filesystem repaired, after which service returned to normal.</td>
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</tbody>
</table>