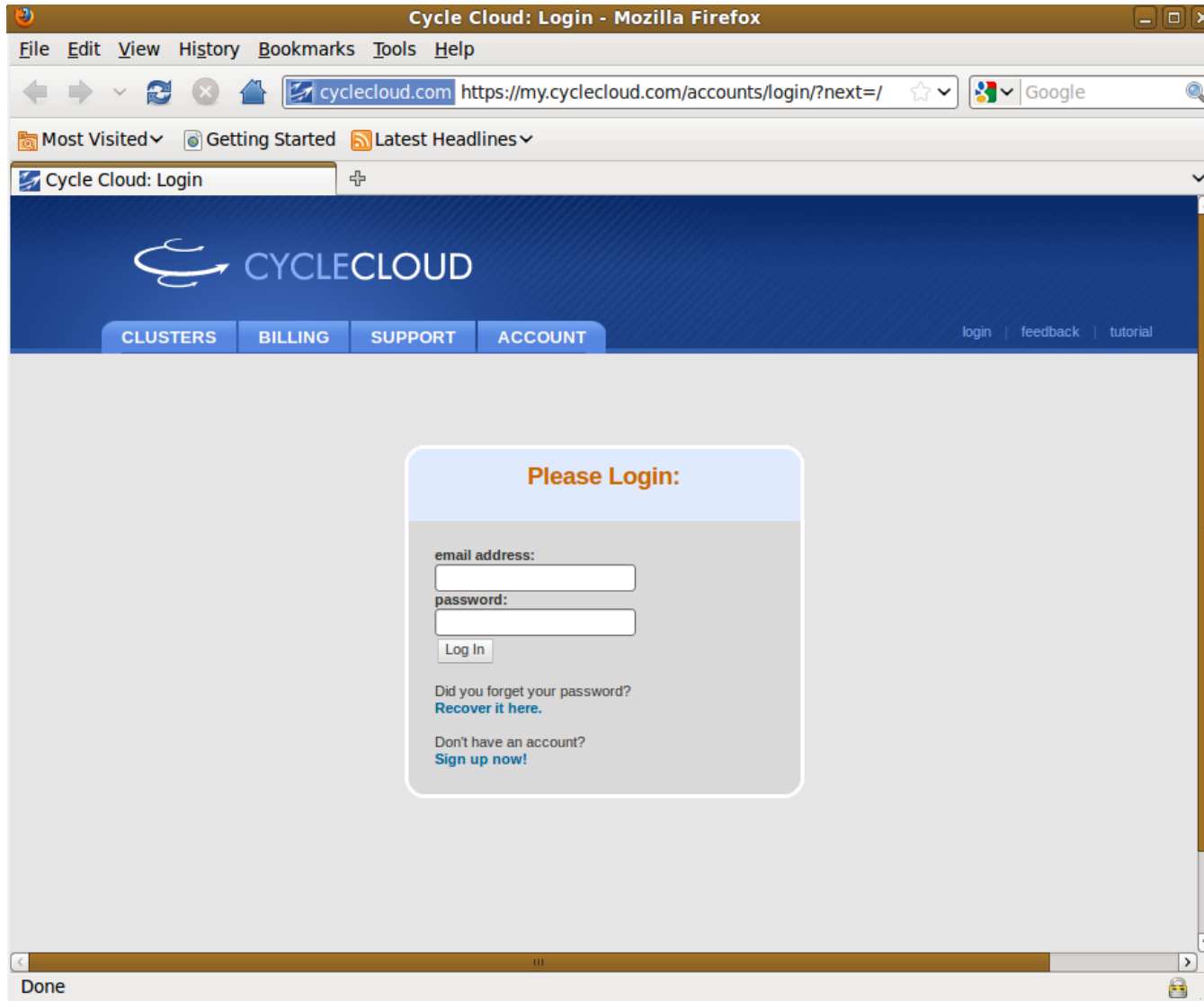


2011 OSG Summer School

Summary of the **Cloud session live demo**

by Igor Sfiligoi
University of California San Diego

CycleCloud Login



The screenshot shows a Mozilla Firefox browser window titled "Cycle Cloud: Login - Mozilla Firefox". The address bar displays "https://my.cyclecloud.com/accounts/login/?next=/". The browser's menu bar includes File, Edit, View, History, Bookmarks, Tools, and Help. Below the address bar, there are tabs for "Most Visited", "Getting Started", and "Latest Headlines". A single tab titled "Cycle Cloud: Login" is active. The main content area features the "CYCLECLOUD" logo at the top, followed by navigation links: CLUSTERS, BILLING, SUPPORT, and ACCOUNT. On the right side of the header, there are links for login, feedback, and tutorial. The central part of the page contains a "Please Login:" section with input fields for "email address:" and "password:", a "Log In" button, and links for "Recover it here." and "Sign up now!". The browser's status bar at the bottom shows "Done".


Cycle Cloud: Login - Mozilla Firefox

File Edit View History Bookmarks Tools Help

cyclecloud.com https://my.cyclecloud.com/accounts/login/?next=/

Most Visited Getting Started Latest Headlines

Cycle Cloud: Login

 CYCLECLOUD

CLUSTERS BILLING SUPPORT ACCOUNT login feedback tutorial

Please Login:

email address:

password:

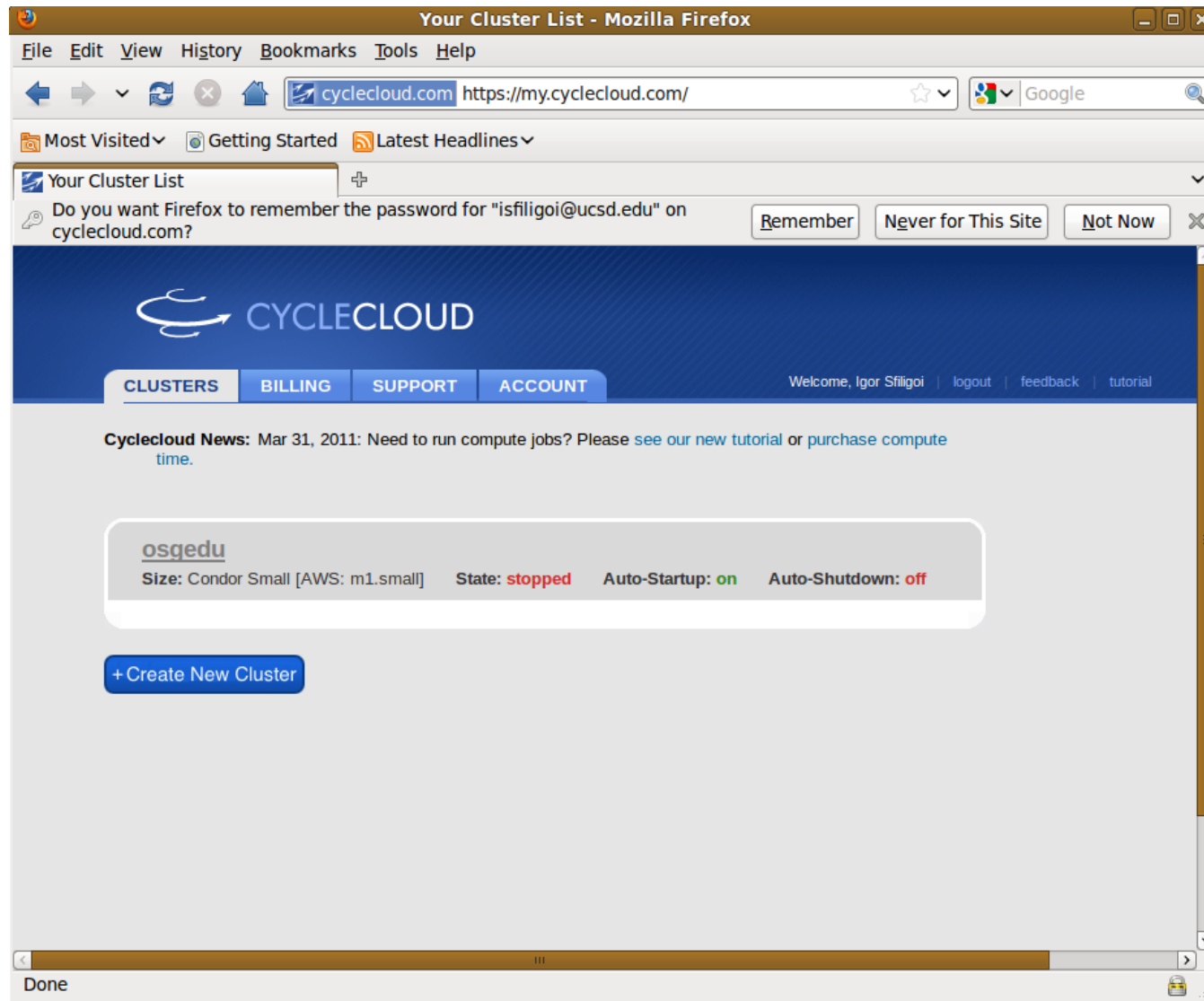
Log In

Did you forget your password?
[Recover it here.](#)

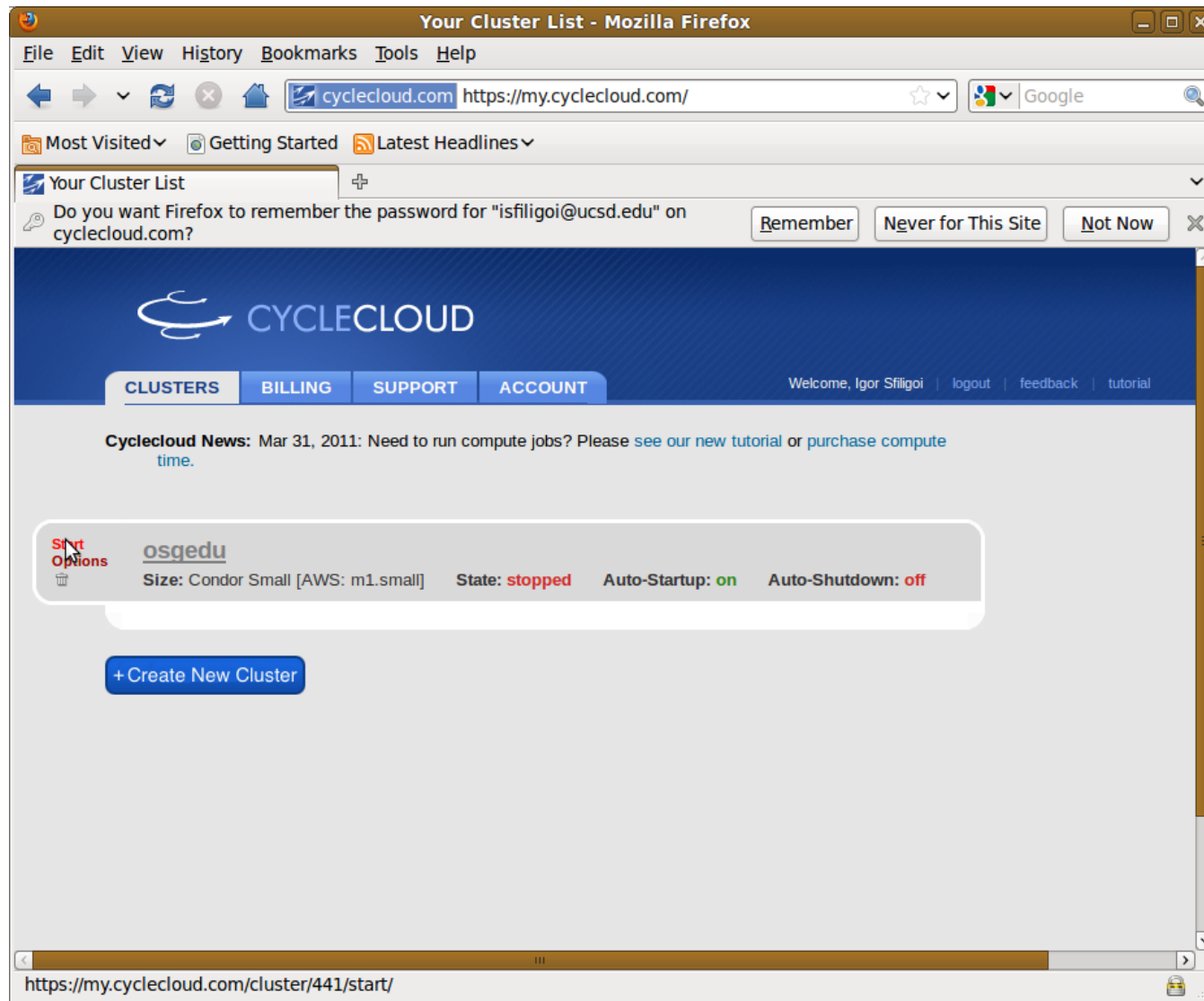
Don't have an account?
[Sign up now!](#)

Done

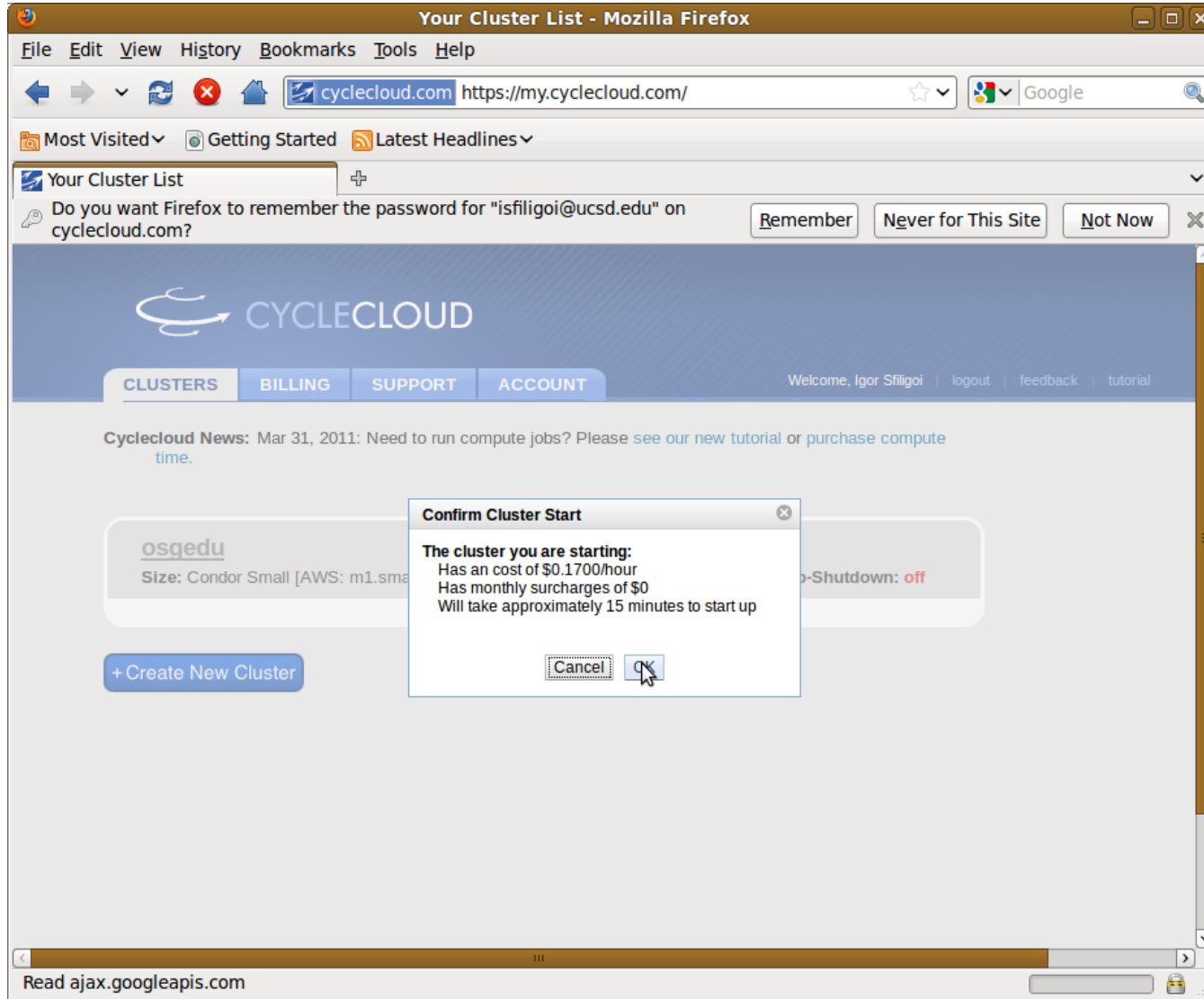
Cloud Cluster Control Center



Starting the cluster



Cost information



Your Cluster List - Mozilla Firefox

File Edit View History Bookmarks Tools Help

cyclecloud.com https://my.cyclecloud.com/

Most Visited Getting Started Latest Headlines

Your Cluster List

Do you want Firefox to remember the password for "isfiligoi@ucsd.edu" on cyclecloud.com? Remember Never for This Site Not Now

CYCLECLOUD

CLUSTERS BILLING SUPPORT ACCOUNT

Welcome, Igor Sfiligoi | logout | feedback | tutorial

Cyclecloud News: Mar 31, 2011: Need to run compute jobs? Please [see our new tutorial](#) or [purchase compute time](#).

osgedu
Size: Condor Small [AWS: m1.small] | Shutdown: off

+ Create New Cluster

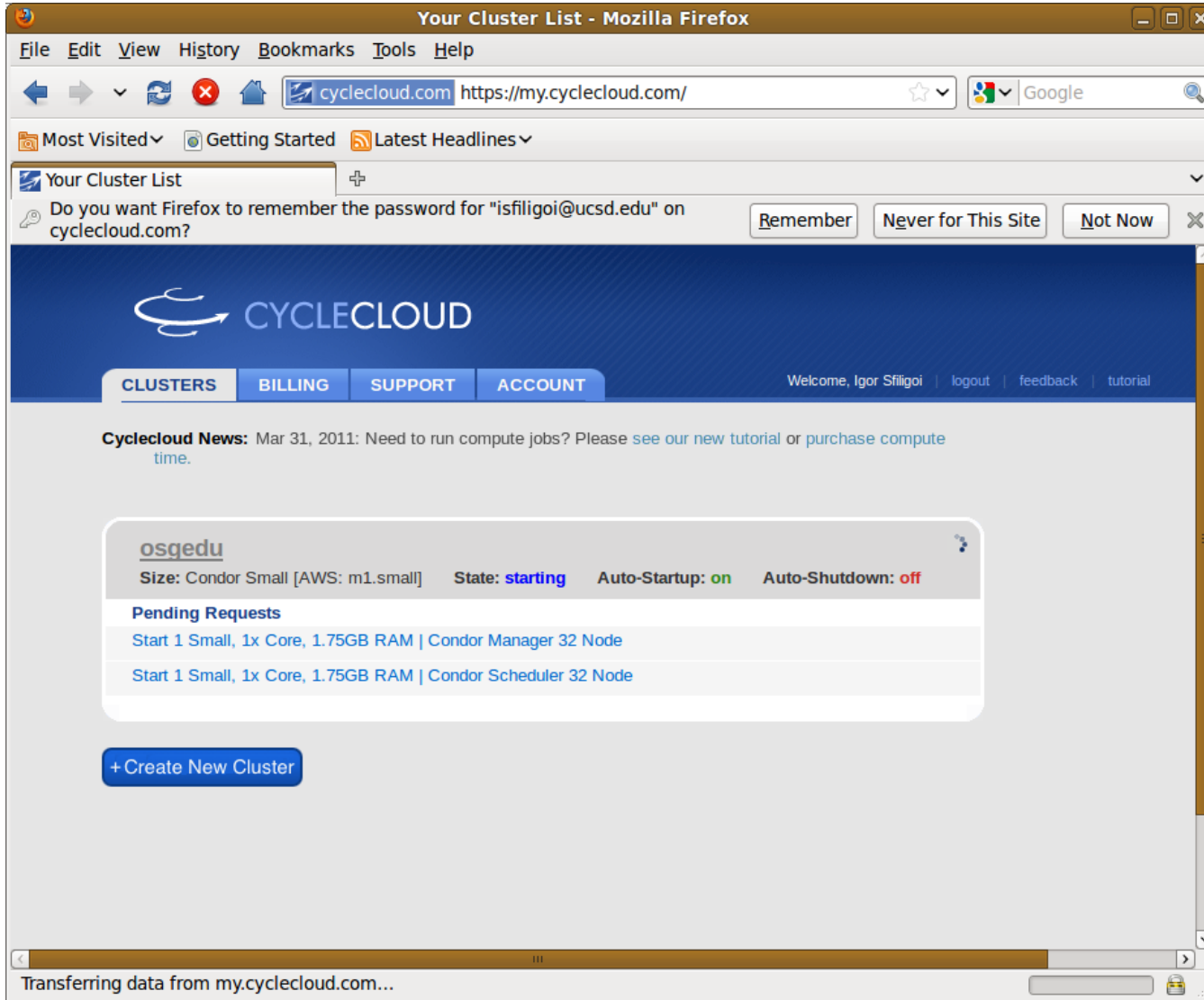
Confirm Cluster Start

The cluster you are starting:
Has an cost of \$0.1700/hour
Has monthly surcharges of \$0
Will take approximately 15 minutes to start up

Cancel OK

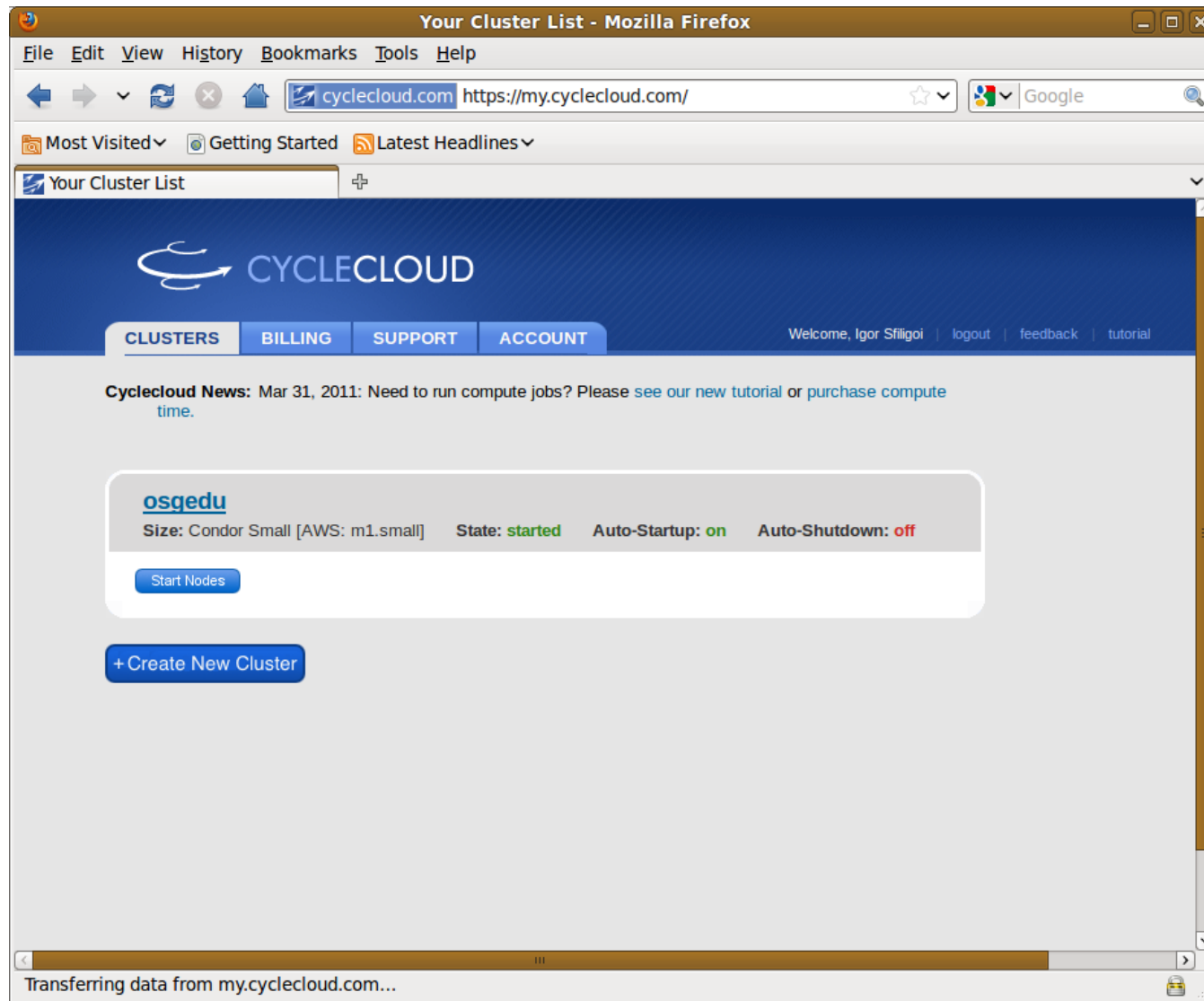
Read ajax.googleapis.com

Waiting for login node to start

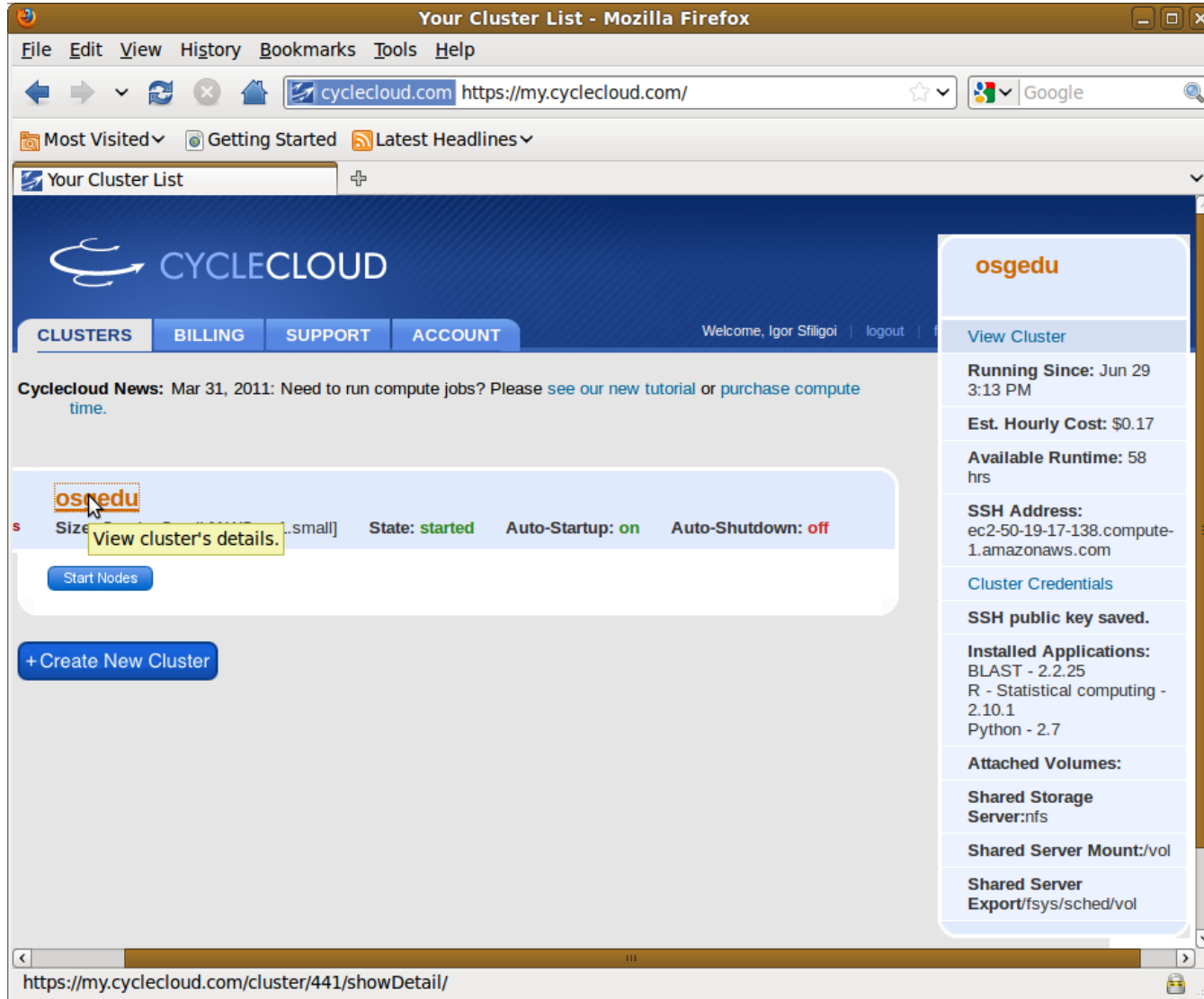


Transferring data from my.cyclecloud.com...

The submit node is ready



Obtaining the SSH address



The screenshot shows a Mozilla Firefox browser window titled "Your Cluster List - Mozilla Firefox" at the URL <https://my.cyclecloud.com/>. The page displays the Cyclecloud interface with a navigation bar (CLUSTERS, BILLING, SUPPORT, ACCOUNT) and a sidebar for the cluster "osgedu".

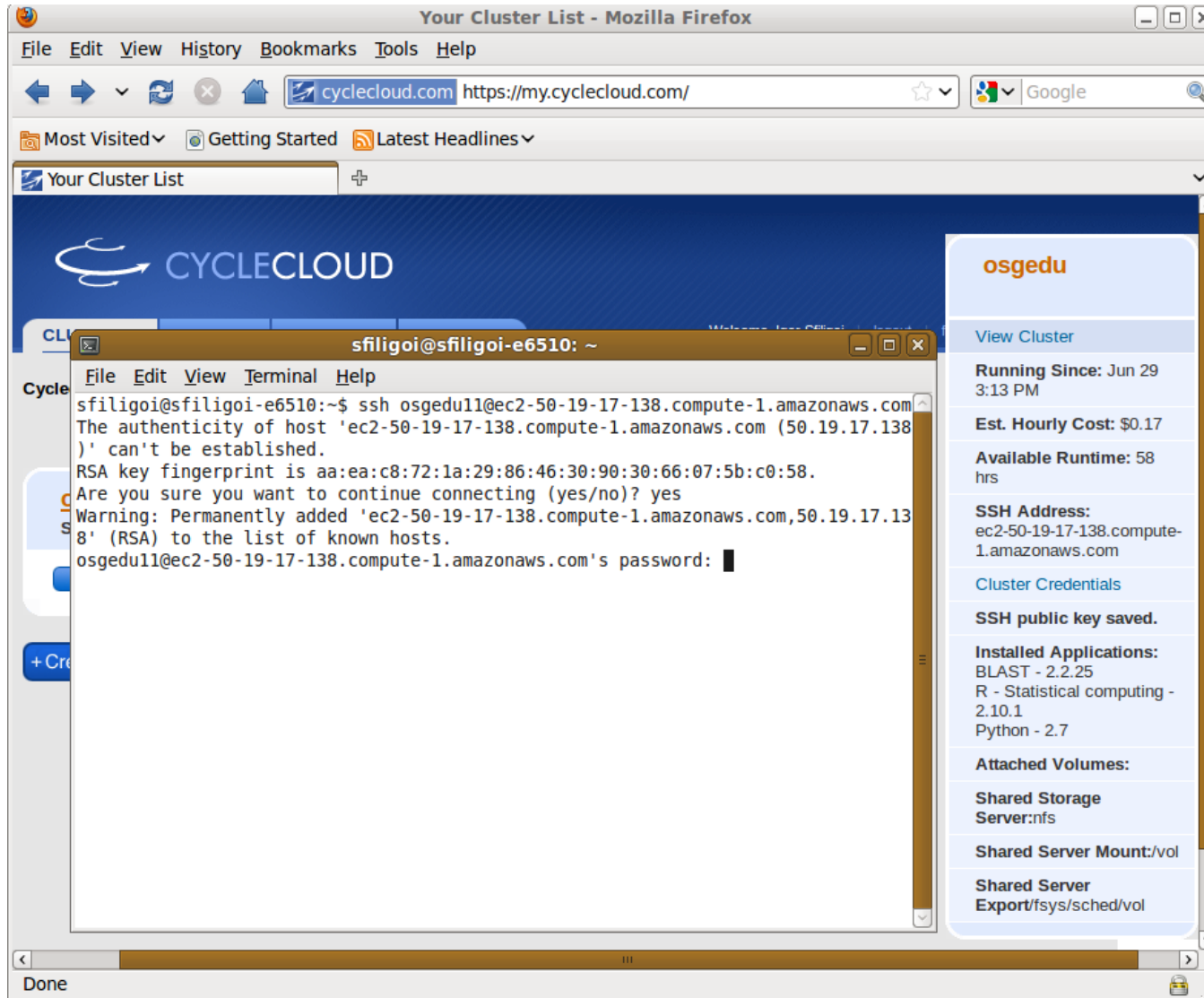
Cluster Details for "osgedu":

- View Cluster**
- Running Since:** Jun 29 3:13 PM
- Est. Hourly Cost:** \$0.17
- Available Runtime:** 58 hrs
- SSH Address:** `ec2-50-19-17-138.compute-1.amazonaws.com`
- Cluster Credentials**
- SSH public key saved.**
- Installed Applications:**
 - BLAST - 2.2.25
 - R - Statistical computing - 2.10.1
 - Python - 2.7
- Attached Volumes:**
 - Shared Storage Server:** nfs
 - Shared Server Mount:** /vol
 - Shared Server Export:** /fsys/sched/vol

In the main cluster list, the "osgedu" cluster is shown with a "View cluster's details." tooltip and a "Start Nodes" button. The status is "State: started", "Auto-Startup: on", and "Auto-Shutdown: off". A "+ Create New Cluster" button is also visible.

The browser address bar shows the URL: <https://my.cyclecloud.com/cluster/441/showDetail/>

Using ssh to log in



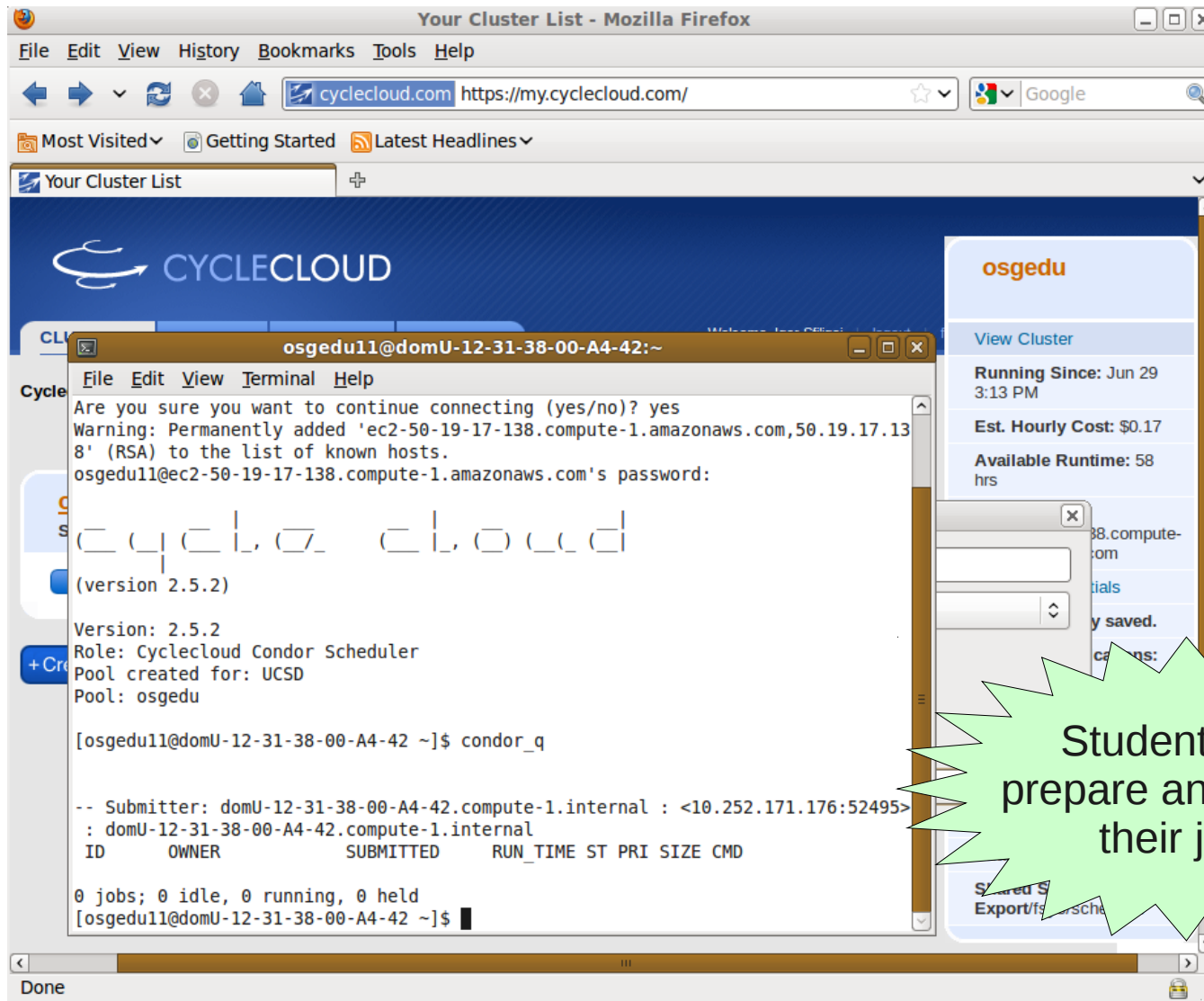
The screenshot shows a Mozilla Firefox browser window titled "Your Cluster List - Mozilla Firefox" with the address bar displaying "https://my.cyclecloud.com/". The CycleCloud website is visible in the background. In the foreground, a terminal window titled "sfiligoi@sfiligoi-e6510: ~" is open, showing the execution of an SSH command to connect to an Amazon EC2 instance. The terminal output includes a warning about the host's authenticity and a confirmation to add the host to the known hosts list. The password prompt is visible at the end of the command line.

```
sfiligoi@sfiligoi-e6510: ~
File Edit View Terminal Help
sfiligoi@sfiligoi-e6510:~$ ssh osgedull@ec2-50-19-17-138.compute-1.amazonaws.com
The authenticity of host 'ec2-50-19-17-138.compute-1.amazonaws.com (50.19.17.138)' can't be established.
RSA key fingerprint is aa:ea:c8:72:1a:29:86:46:30:90:30:66:07:5b:c0:58.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-50-19-17-138.compute-1.amazonaws.com,50.19.17.138' (RSA) to the list of known hosts.
osgedull@ec2-50-19-17-138.compute-1.amazonaws.com's password: 
```

The background website shows the "osgedu" cluster details, including:

- View Cluster**
- Running Since:** Jun 29 3:13 PM
- Est. Hourly Cost:** \$0.17
- Available Runtime:** 58 hrs
- SSH Address:** ec2-50-19-17-138.compute-1.amazonaws.com
- Cluster Credentials**
- SSH public key saved.**
- Installed Applications:** BLAST - 2.2.25, R - Statistical computing - 2.10.1, Python - 2.7
- Attached Volumes:**
- Shared Storage Server:** nfs
- Shared Server Mount:** /vol
- Shared Server Export:** /fsys/sched/vol

A peek at the Condor system



The screenshot shows a Mozilla Firefox browser window titled "Your Cluster List - Mozilla Firefox" at the URL `https://my.cyclecloud.com/`. The browser displays the Cyclecloud web interface with a sidebar on the left and a main content area. A terminal window is open in the foreground, showing the user `osgedu11` at the host `domU-12-31-38-00-A4-42`. The terminal output shows the user connecting to an Amazon EC2 instance, adding its public key to the host list, and running the `condor_q` command. The output of `condor_q` shows no jobs are currently running.

Terminal Output:

```
osgedu11@domU-12-31-38-00-A4-42:~
File Edit View Terminal Help
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-50-19-17-138.compute-1.amazonaws.com,50.19.17.138' (RSA) to the list of known hosts.
osgedu11@ec2-50-19-17-138.compute-1.amazonaws.com's password:
c y c l e c l o u d
(version 2.5.2)
Version: 2.5.2
Role: Cyclecloud Condor Scheduler
Pool created for: UCSD
Pool: osgedu

[osgedu11@domU-12-31-38-00-A4-42 ~]$ condor_q

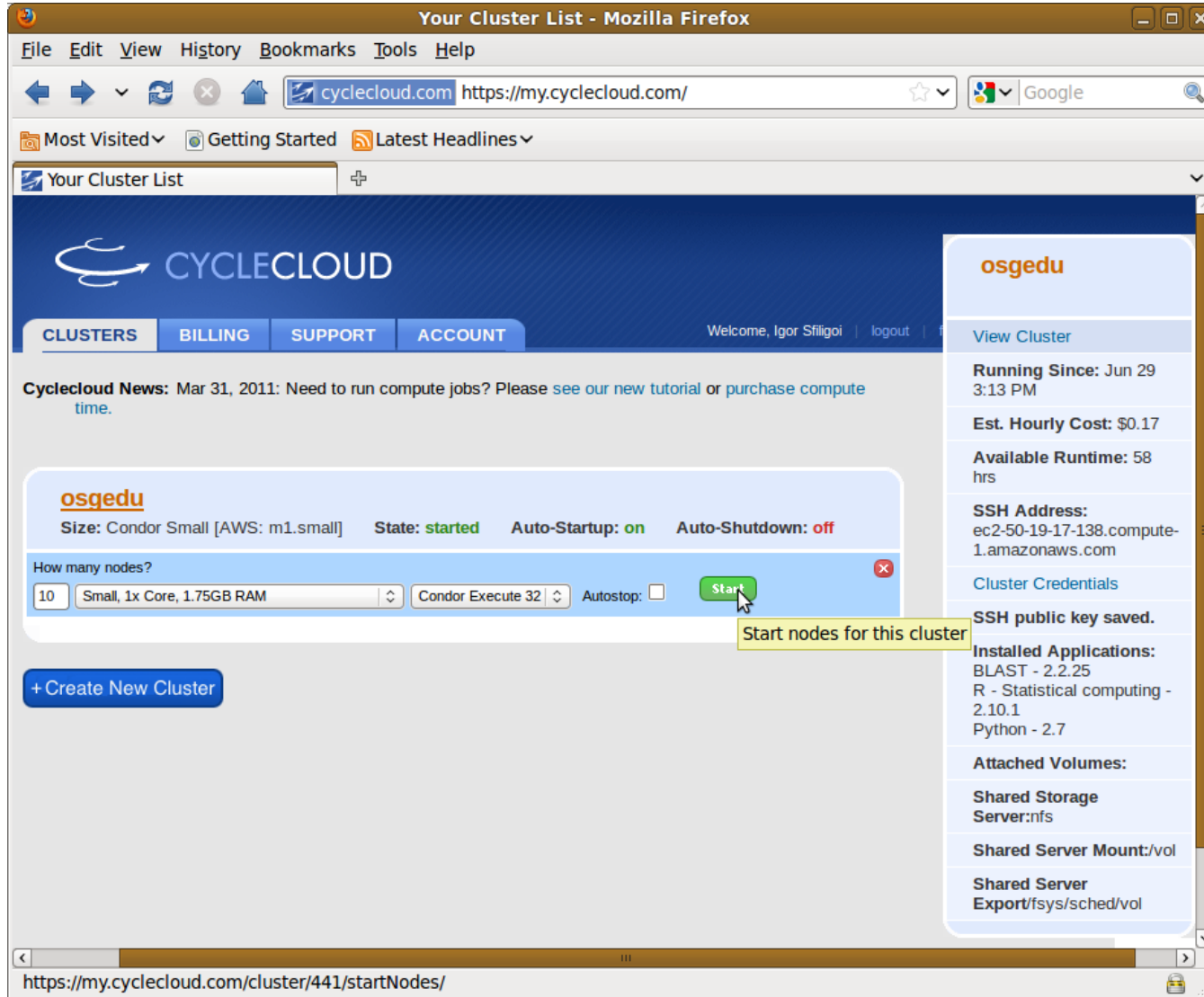
-- Submitter: domU-12-31-38-00-A4-42.compute-1.internal : <10.252.171.176:52495>
: domU-12-31-38-00-A4-42.compute-1.internal
ID      OWNER      SUBMITTED  RUN_TIME ST PRI SIZE CMD
0 jobs; 0 idle, 0 running, 0 held
[osgedu11@domU-12-31-38-00-A4-42 ~]$
```

Web Interface Details:

- Cluster Name:** osgedu
- View Cluster** (link)
- Running Since:** Jun 29 3:13 PM
- Est. Hourly Cost:** \$0.17
- Available Runtime:** 58 hrs

Students can prepare and submit their jobs

Request worker nodes



Your Cluster List - Mozilla Firefox

File Edit View History Bookmarks Tools Help

cyclecloud.com https://my.cyclecloud.com/

Most Visited Getting Started Latest Headlines

Your Cluster List

CYCLECLOUD

CLUSTERS BILLING SUPPORT ACCOUNT

Welcome, Igor Sfiligoi | logout

Cyclecloud News: Mar 31, 2011: Need to run compute jobs? Please [see our new tutorial](#) or [purchase compute time](#).

osgedu

Size: Condor Small [AWS: m1.small] State: **started** Auto-Startup: **on** Auto-Shutdown: **off**

How many nodes?

10 Small, 1x Core, 1.75GB RAM Condor Execute 32 Autostop: ☐ **Start**

+ Create New Cluster

osgedu

View Cluster

Running Since: Jun 29 3:13 PM

Est. Hourly Cost: \$0.17

Available Runtime: 58 hrs

SSH Address: ec2-50-19-17-138.compute-1.amazonaws.com

Cluster Credentials

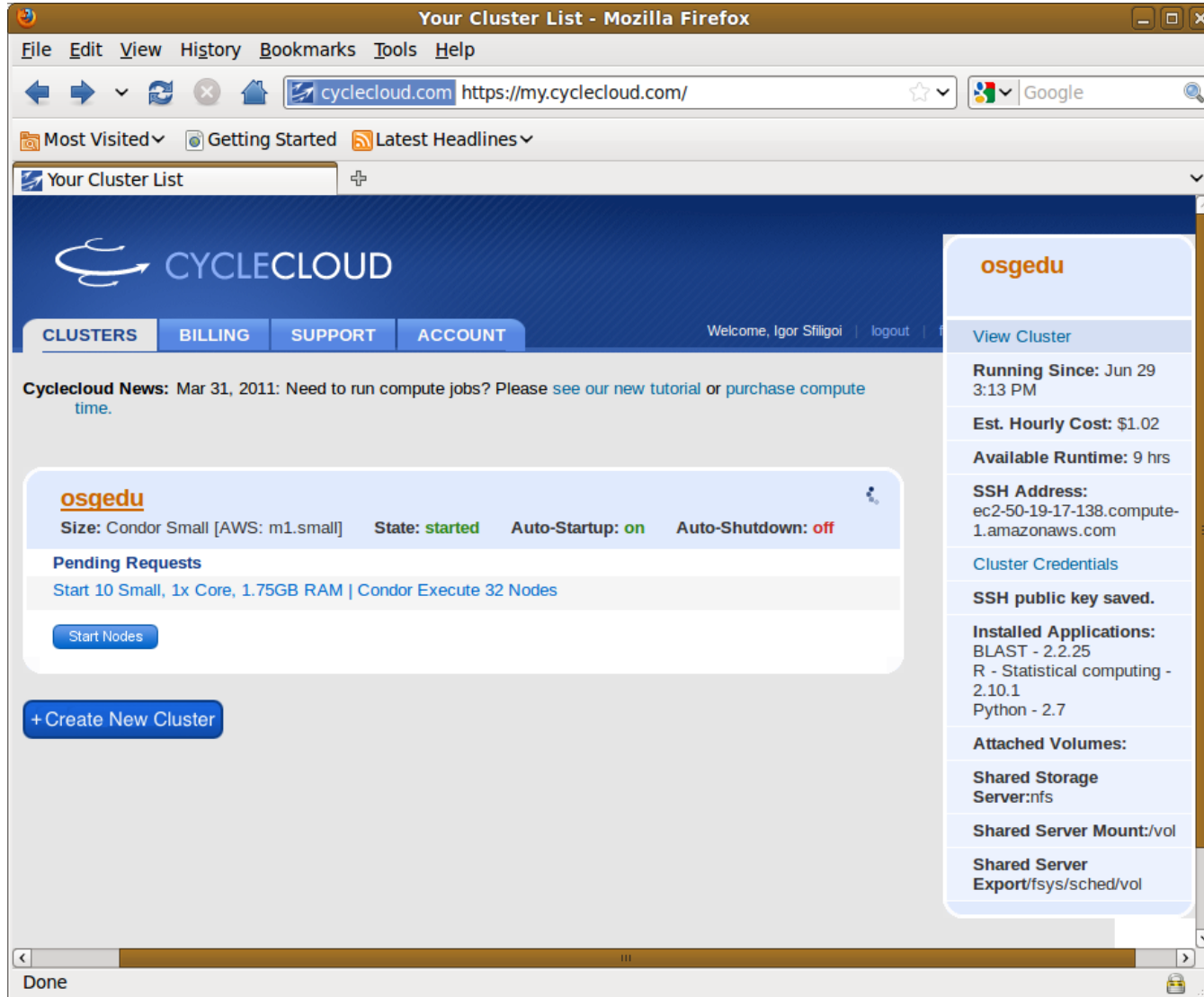
SSH public key saved.

Installed Applications: BLAST - 2.2.25, R - Statistical computing - 2.10.1, Python - 2.7

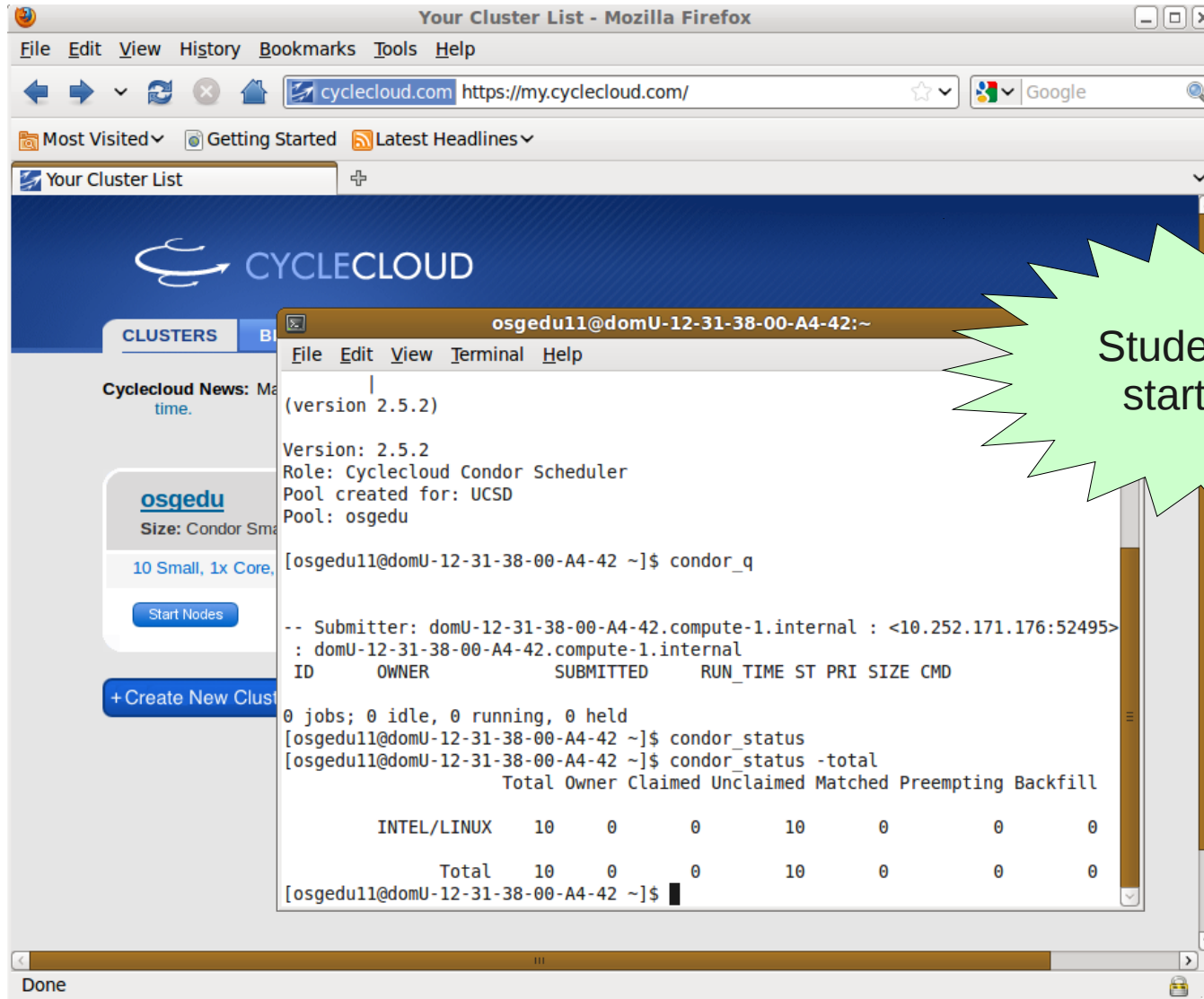
Attached Volumes: Shared Storage Server:nfs, Shared Server Mount:/vol, Shared Server Export:/sys/sched/vol

https://my.cyclecloud.com/cluster/441/startNodes/

Waiting for worker nodes



We have our Condor pool



The screenshot shows a web browser window titled "Your Cluster List - Mozilla Firefox" displaying the Cyclecloud interface. The browser address bar shows "https://my.cyclecloud.com/". The Cyclecloud logo is visible in the header. On the left sidebar, there is a "CLUSTERS" tab and a "Start Nodes" button. A terminal window is open in the foreground, showing the output of the "condor_q" and "condor_status" commands. The terminal output indicates that the Condor scheduler is running and shows a table of resources.

```
osgedu11@domU-12-31-38-00-A4-42:~
File Edit View Terminal Help
(version 2.5.2)
Version: 2.5.2
Role: Cyclecloud Condor Scheduler
Pool created for: UCSD
Pool: osgedu
[osgedu11@domU-12-31-38-00-A4-42 ~]$ condor_q
-- Submitter: domU-12-31-38-00-A4-42.compute-1.internal : <10.252.171.176:52495>
: domU-12-31-38-00-A4-42.compute-1.internal
ID OWNER SUBMITTED RUN_TIME ST PRI SIZE CMD
0 jobs; 0 idle, 0 running, 0 held
[osgedu11@domU-12-31-38-00-A4-42 ~]$ condor_status
[osgedu11@domU-12-31-38-00-A4-42 ~]$ condor_status -total
Total Owner Claimed Unclaimed Matched Preempting Backfill
INTEL/LINUX 10 0 0 10 0 0 0
Total 10 0 0 10 0 0 0
[osgedu11@domU-12-31-38-00-A4-42 ~]$
```

Students' jobs start to run.

Monitoring the cost

UCSD's Billing Info - Mozilla Firefox

File Edit View History Bookmarks Tools Help

cyclecloud.com https://my.cyclecloud.com/statement/2011/06/

Most Visited Getting Started Latest Headlines

UCSD's Billing Info

CYCLECLOUD

CLUSTERS BILLING SUPPORT ACCOUNT

Welcome, Igor Sfiligoi | logout | feedback | tutorial

Summary of Jun 2011 Activity

Billing Cycle for this Report: Jun 01, 2011 - Jun 29, 2011 | << Last Statement |

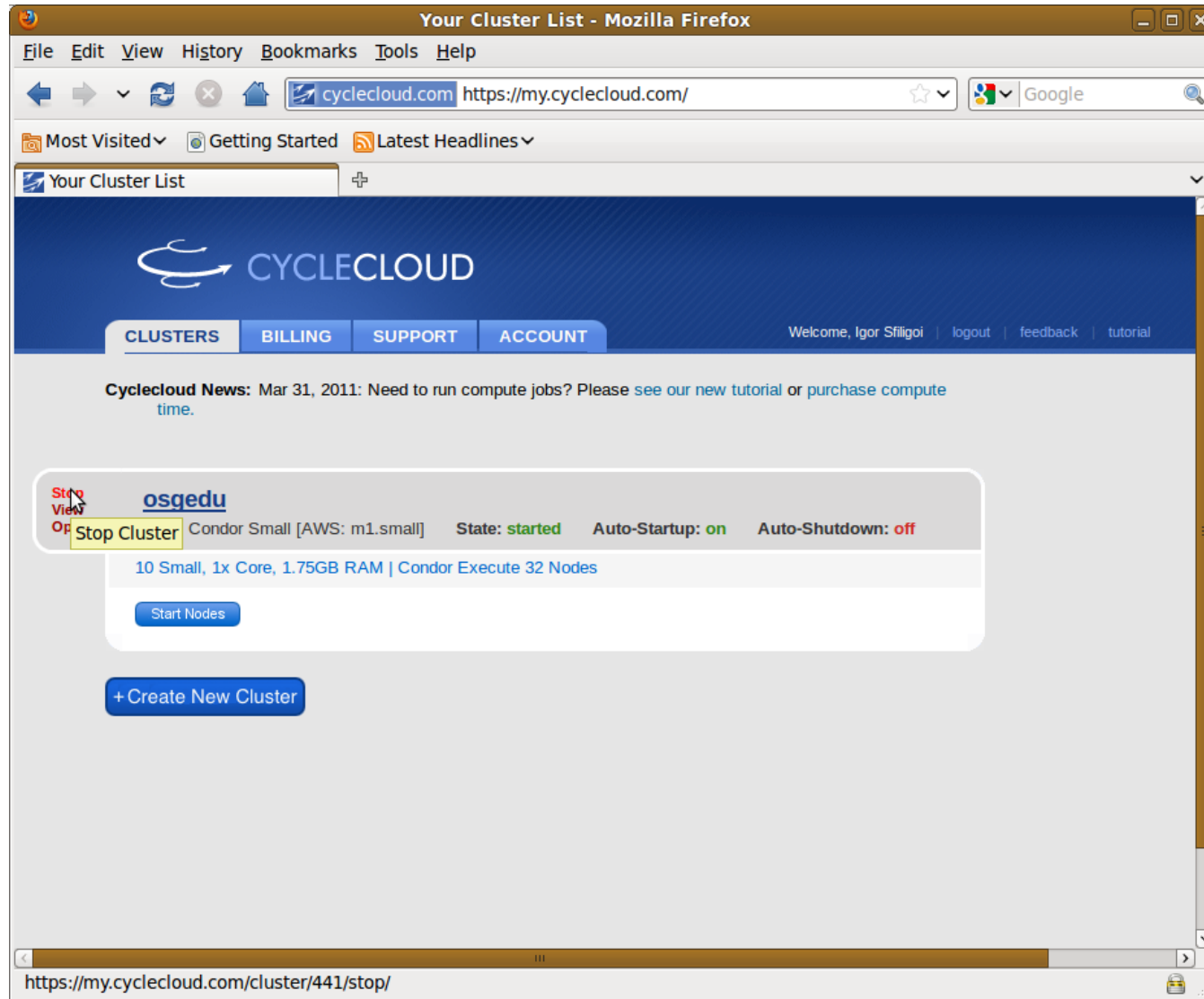
Your statement is determined based upon pricing. Please contact us with any questions.

Previous Balance:					\$0.00
Cluster Name:	Item:	Rate:	Core Usage:	Instance Usage:	Totals:
osgedu	Condor Small	\$0.17/cluster-hour	---	4 Hrs	\$0.68
	Small, 1x Core, 1.75GB RAM	\$0.085/instance-hour	42 Hrs	42 Hrs	\$3.57
	Large, 2x Core, 7.5GB RAM	\$0.34/instance-hour	10 Hrs	5 Hrs	\$1.70
Cluster Total >>			52 Hrs	47 Hrs	\$5.95
Subtotal:					5.95
Deposits:					\$30.00
Account Balance:					\$24.05

[View Transactions](#) [Add Credit](#)

Done

Preparing to stop the cluster



The end

