HPCC MANAGED SERVICE

HMS

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LEXISNEXIS RISK SOLUTIONS

Contents

Introduction

The HPCC Managed Service (HMS) app looks similar to Instant Cloud, but it has many more feature/functions. Here are the feature/functions it currently has:

1. Launch clusters with the same options used by cloudformation templates
2. Launch multiple clusters (same as Instant Cloud).
3. Increase and/or decrease thor slave and/or roxie nodes.
4. Increase and/or decrease slaves per instance and/or channels per slave.
5. Mount or dismount s3 buckets (one or many) on landing zone and spray and despray from/to the s3 bucket.
6. Add/remove admin cidrs (this is for port 22) to/from security group.
7. Change cluster's instance type.
8. Change master, slave, and/or roxie ebs volume size.
9. Stop or start the cluster and/or schedule dates and times when the cluster will start and stop.
10. Estimate cluster cost. You can estimate cost of different cluster configurations before and after launching or changing cluster.
11. Get the total current cost of a cluster since its inception.
12. Terminate a cluster

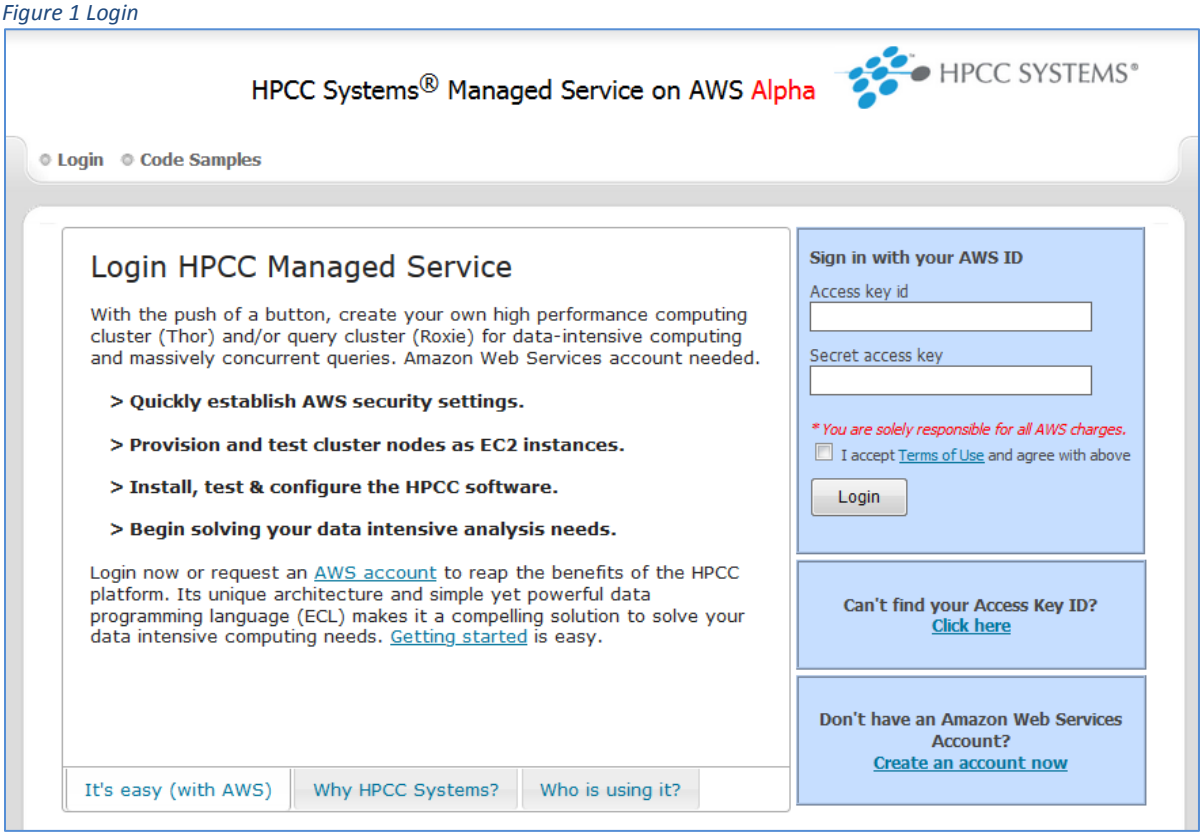
Feature/functions 3 through 8 are accomplished from the “Modify Cluster” screen, Figure 6. To launch a cluster, click on “Launch Cluster”. Feature/functions 9 through 12 are functions applied to a specific cluster. All of these can be accomplished by clicking on the appropriate link on the “View Cluster” screen.
The main purpose of this document is to explain what can be done from the various application screens shown below and to tell you when you will be redirected to each screen.

Login Screen

The 1st screen you will see is Figure 1, Login, 1) on the first time you access the HMS app or 2) when you click on ‘Login’ from the Logout screen, Figure 9. Here you enter you aws access and secret keys to login.

Once you login, you will be redirected to the View Cluster screen which will look like either Figure 2, View Clusters Without Clusters, or Figure 3, View Clusters With One or More Clusters depending on whether you already have clusters launched or not.

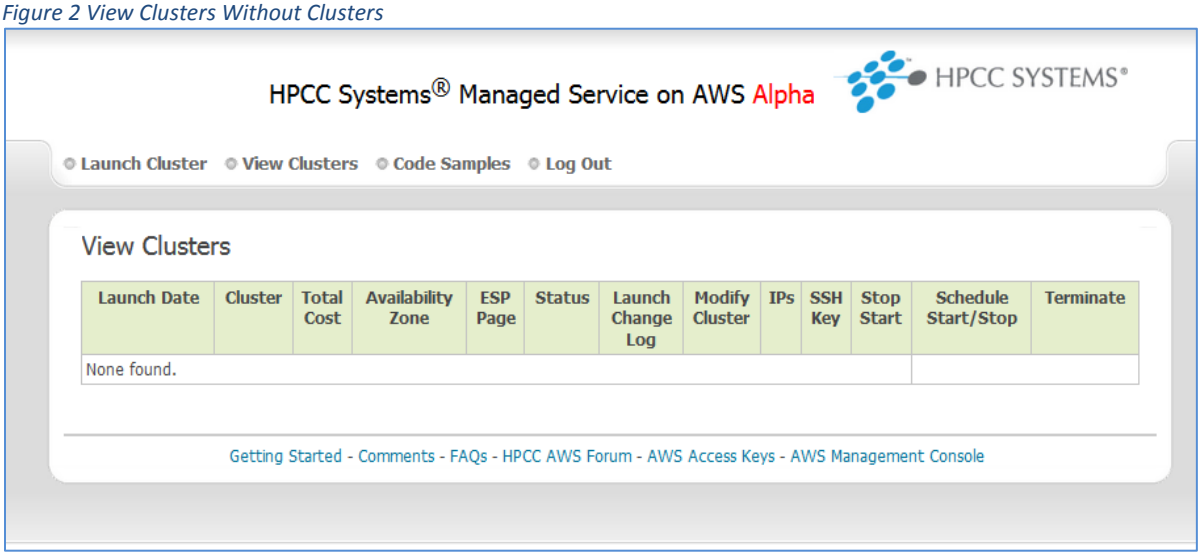
Figure 1 Login



View Cluster Screen

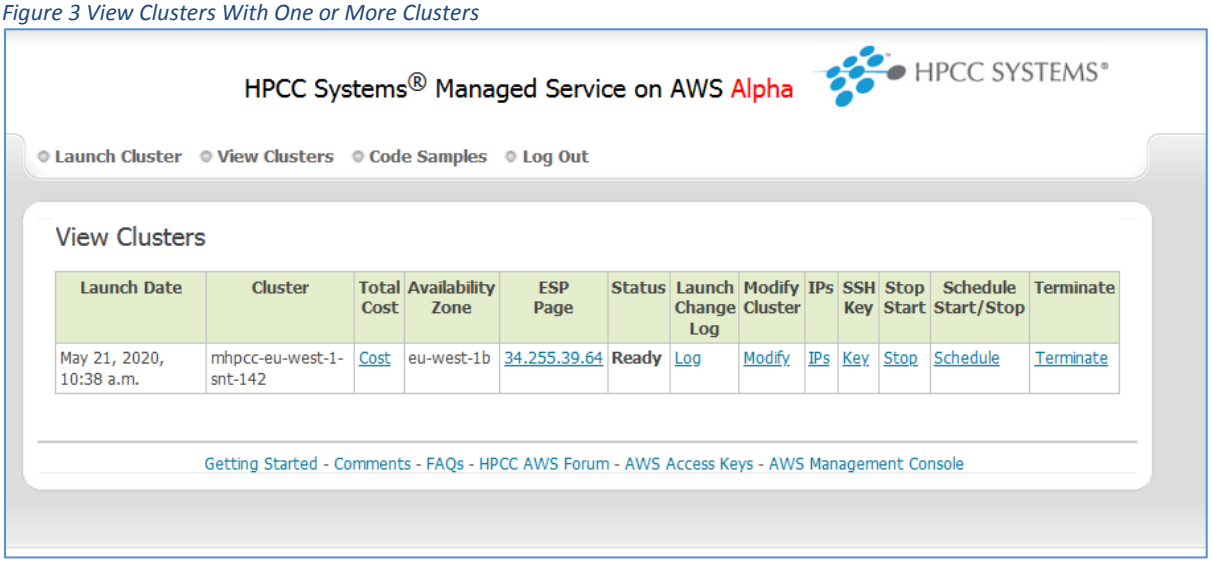
You will see Figure 2, View Clusters Without Clusters, just after login when you don't have any clusters. Or, you will see it if you click on "View Clusters" and all you clusters have been terminated.

Figure 2 View Clusters Without Clusters



You will see Figure 3, View Clusters With One or More Clusters, just after login and you have one or more clusters. Or, you will see it if you click on "View Clusters" and you have one or more clusters. The above Figure 3 shows just one cluster which is ready to use. You can tell that it is "ready to use" because "Ready" is in the Status column. And also, you can tell because all columns contain information about the cluster or a link that gets you to another web page. If the cluster wasn't ready there would be some columns empty, like in Figure 4, View Cluster With Clusters Not Ready.

Figure 3 View Clusters With One or More Clusters



Some of the columns are clickable. Table 1, shows what happens if you click on any of the clickable columns of a cluster.

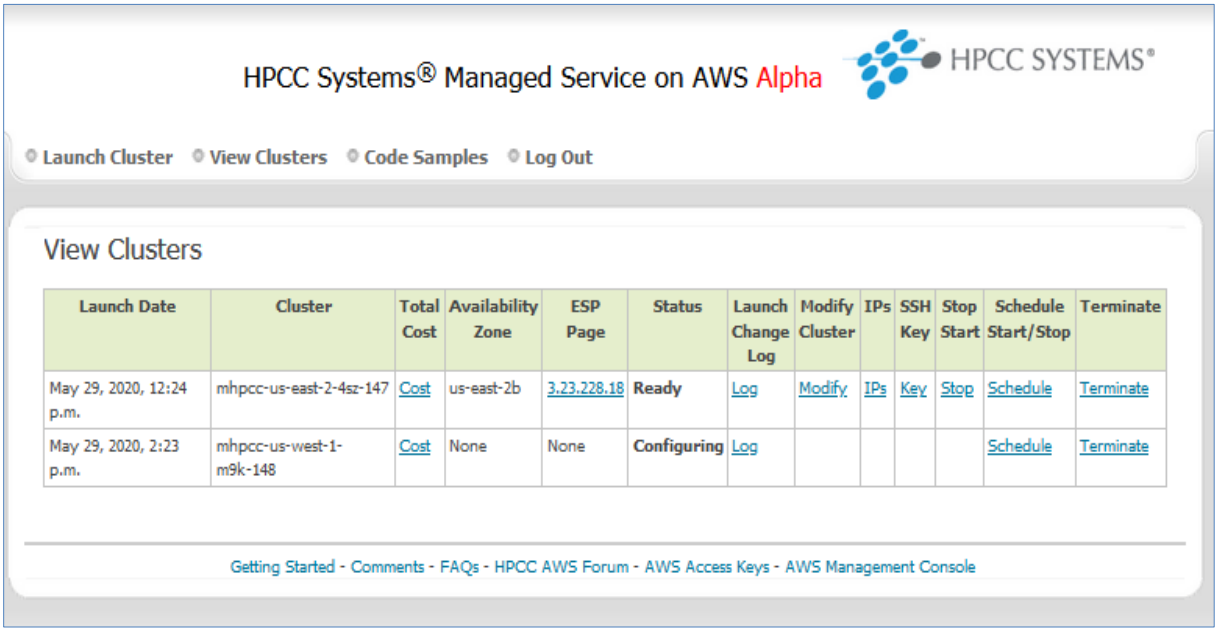
Table 1 View Cluster Clickable Columns

Clickable Column Name	Purpose	Page Redirected To
Total Cost	Get the total cost of cluster to date.	Cost of Cluster screen, Figure 7
ESP Page	Open new tab containing the cluster's ECL Watch page.	Not redirected but new tab will contain ECL Watch page of the cluster
Launch Change Log	Display the log page of the launched cluster or of a changing cluster.	Cluster Event Log, Figure 10
Modify Cluster	Change the cluster: add or remove nodes, increase the size of thor, roxie, or master disk, mount s3 bucket on landing zone, etc.	Modify Cluster, Figure 6
IPs	Show public and private IPs of cluster nodes.	IP Screen
SSH Keys	Show private ssh key	SSH Key Screen
Stop Start	Immediately Stop or Start the cluster	Stop or Start Confirmation

Clickable Column Name	Purpose	Page Redirected To
Schedule Stop/Start	Schedule when the cluster should stop or start, including days.	Schedule Start/Stop Times and Dates, Figure 8
Terminate	Terminate cluster.	Cluster Event Log, Figure 10

You will see Figure 4, View Clusters with Clusters Not Ready, if you click on "View Clusters" and you have one or more clusters that aren't ready to use. For example, in Figure 4, the 2nd cluster isn't ready. Its status is 'Configuring'. But, also notice that some columns for this cluster are empty, e.g. "Modify Cluster", "IPs", "SSH Key", and "Stop Start" columns.

Figure 4 View Clusters With Clusters Not Ready

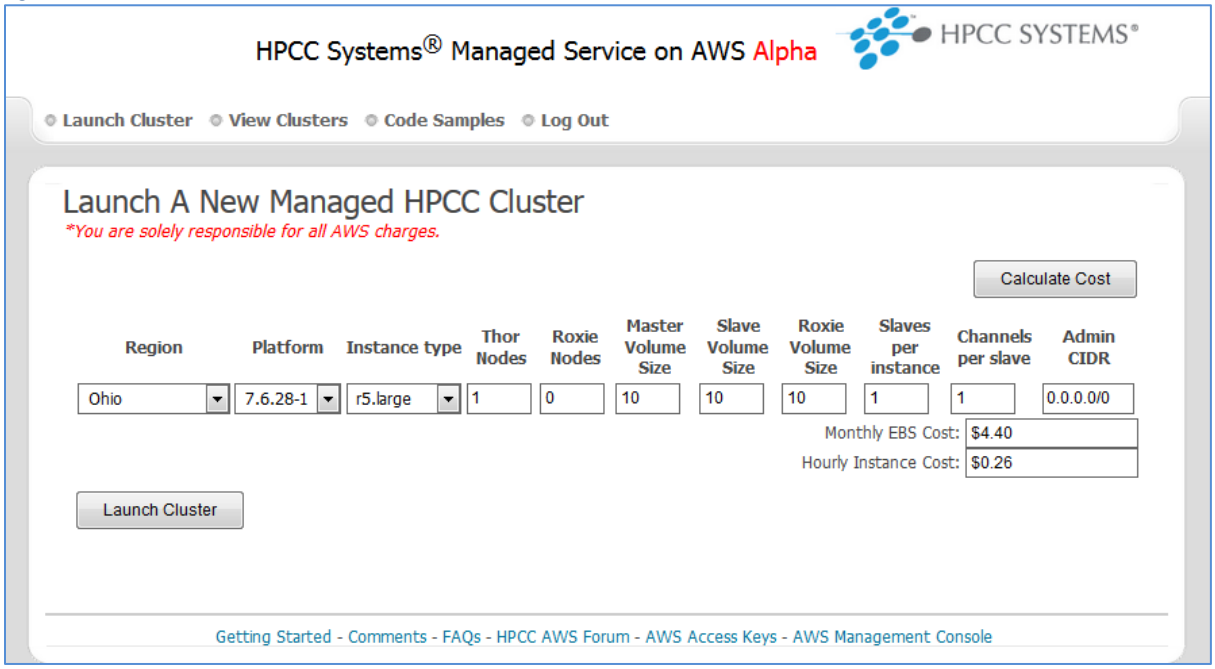


Launch Cluster Screen

If you click on "Launch Cluster", you will be redirected to the "Launch Cluster" screen, Figure 5. From this screen you can do 3 tasks:

- Configure a cluster by placing values in the different columns: Region, Platform, Instance Type, Thor Nodes, Roxie Nodes, Master Volume Size, Slave Volume Size, Roxie Volume Size, Slaves Per Instance, Channels Per Slave, and/or Admin CIDR.
- Launch a cluster you have configured on this screen by clicking on the "Launch Cluster" button. After clicking on "Launch Cluster", you will be redirected to the "Cluster Event Log", Figure 10, so you can watch the progress of the launch.
- Calculate the "Monthly EBS Cost" and "Hourly Instance Cost" of the cluster currently configured on this screen by clicking on the "Calculate Cost" button. You can reconfigure the cluster and click on "Calculate Cost" button as many times as you want.

Figure 5 Launch Cluster



Modify Cluster Screen

Once your cluster is ready to use, i.e. its Status is "Ready", from the View Clusters screen, you can click on "Modify Cluster" to be redirected to the "Modify Cluster" screen, figure 6. When you first arrive on this screen the values in the columns are the values of the configuration of the cluster. You can modify any of these values to change the cluster's configuration. There are 3 tasks that you can do from this screen:

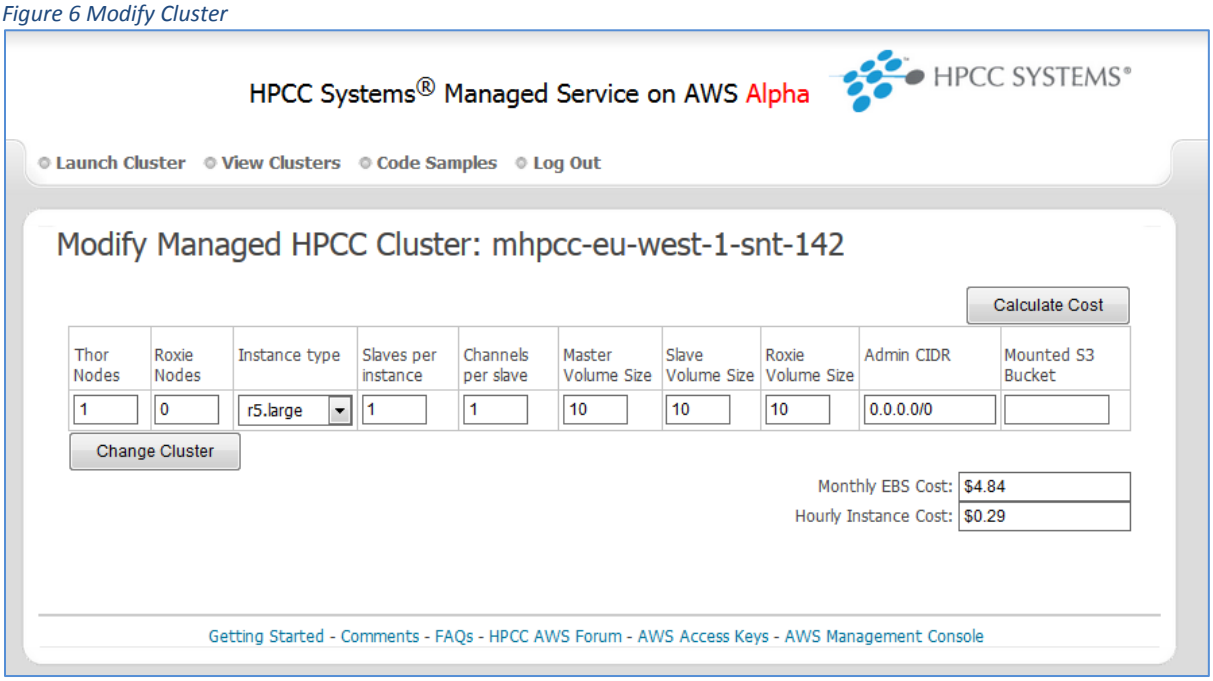
- Configure a cluster by changing the values in the different columns: Thor Nodes, Roxie Nodes, Instance Type, Slaves Per Instance, Channels Per Slave, Master Volume Size, Slave Volume Size, Roxie Volume Size, Admin CIDR and/or Mount an S3 Bucket of the Landing Zone.
  Initiate the changes to the cluster you have specified on this screen by clicking on the "Change Cluster" button. After clicking on "Change Cluster", you will be redirected to the "Cluster Event Log", Figure 10.
- Determine the "Monthly EBS Cost" and "Hourly Instance Cost" of the cluster you have configured on this screen by clicking on the "Calculate Cost" button. You can reconfigure the cluster and click on "Calculate Cost" button as many times as you want.

It is worth noting that to dismount an s3 bucket from the landing zone, you put a minus sign just to the left of the s3 bucket's name. This same technique is used to remove Admin CIDRs from the cluster's security group, i.e. put a minus sign to the left of the CIDR to be removed.

It is also worth noting that if you change the number of thor slaves and/or roxie instances and you have logical files on your cluster, these logical files are moved to the HMS s3 bucket before changing the number of instances and then moved back to the cluster after the change it done. Furthermore, if your logical files are large, this might take a long time.

By the way, giving you the ability to add admin cidrs to your cluster's security group port 22, makes your cluster more secure because you can control who can ssh into a cluster's instances by controlling the IPs that can ssh into port 22.

Figure 6 Modify Cluster

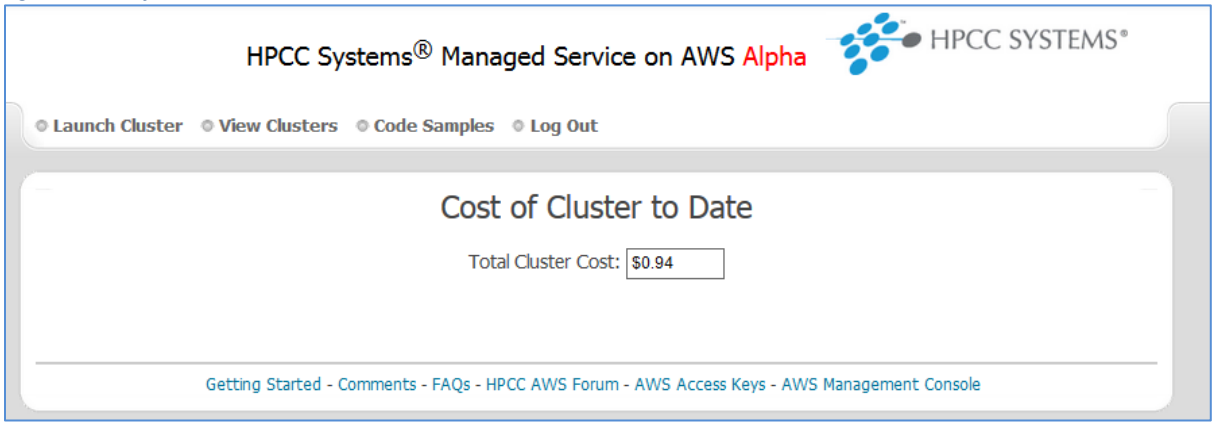


Cost of Cluster Screen

Figure 7, Cost of Cluster, tells you the total cost of the cluster since its inception. The cost calculation does not include instance cost during the time the cluster is stopped because you aren't charged for instances when they are stopped.

If you hover over the screen title, "Cost of Cluster to Date", a popup will show you the formulas used to determine the cost.

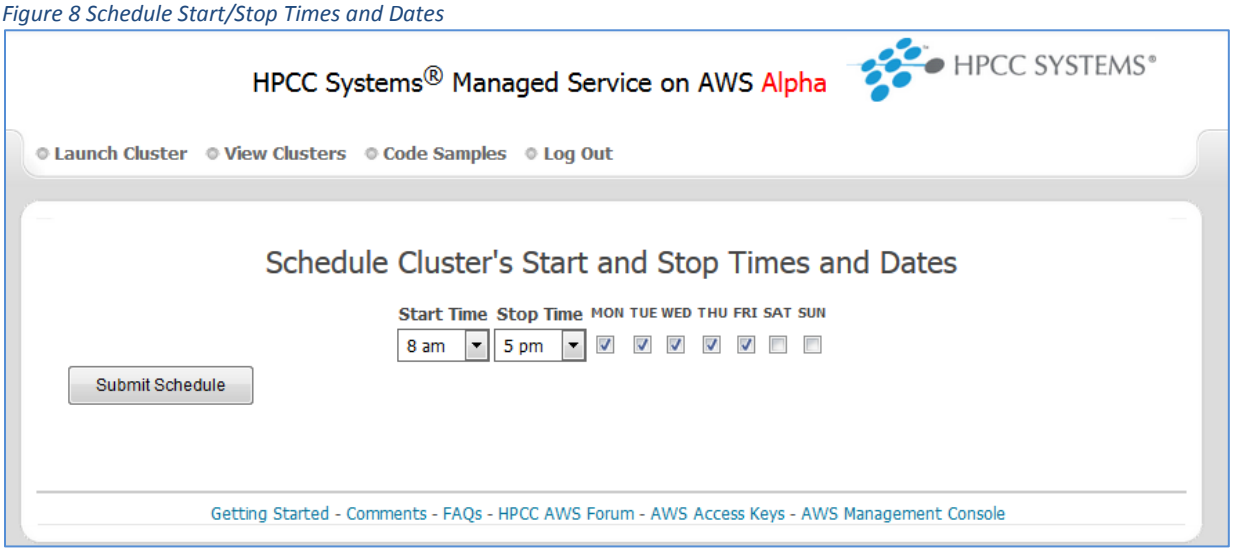
Figure 7 Cost of Cluster



Schedule Start/Stop Times and Dates Screen

Schedule Start/Stop Times and Dates, Figure 8, lets you setup a schedule when you want the cluster to be running and when you want it to be stopped (Note. Cluster instances don't cost when they are stopped). The Start Time and Stop Time dropdowns let you specify the hour you want the cluster to start and the hour you want the cluster to stop, respectively. To specify the days you want the cluster to be running, you place a check mark in one or more of the checkboxes: MON through SUN. In Figure 8, you will notice that MON, TUE, WED, THU, and FRI are checked. So, these are the days the cluster will be running, i.e. they won't run on SAT and SUN.

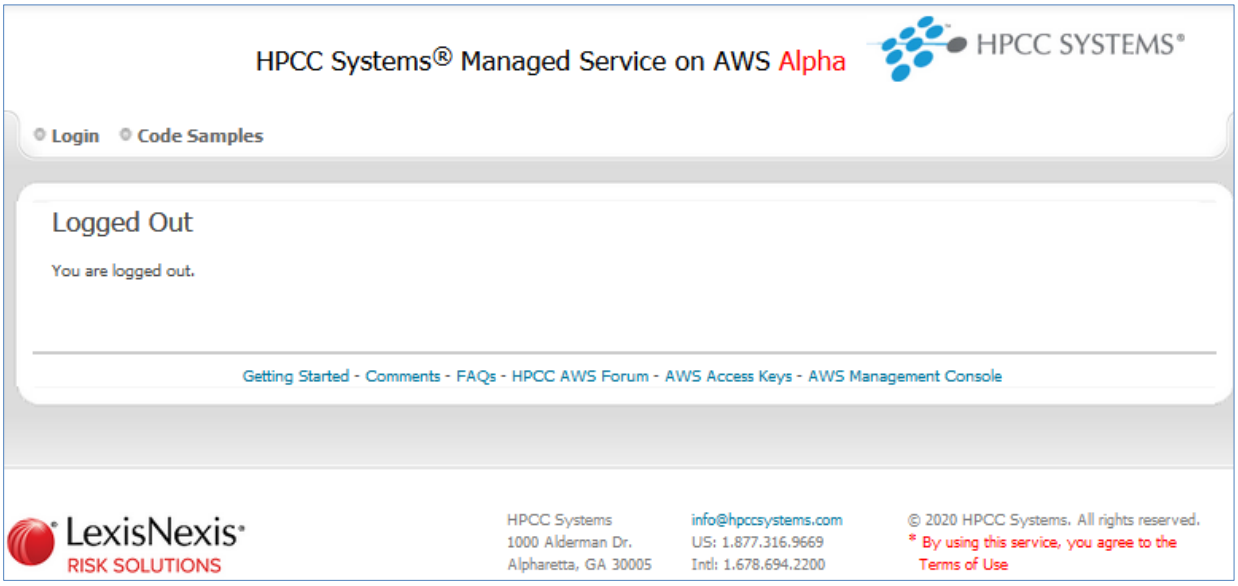
Figure 8 Schedule Start/Stop Times and Dates



Logout Screen

When you click on "Log Out", you are redirected to this screen, Logged Out, Figure 9. From this screen you can click on "Login" and you will be redirected to the "Login" screen, Figure 1.

Figure 9 Logout



Cluster Event Log Screen

When you launch a cluster, by clicking on “Launch Cluster” of Figure 5, or if you click on “Change Cluster” on the “Modify Cluster” screen, Figure 6, you will be redirected to this screen, “Cluster Event Log”, Figure 10. On this screen you can monitor the progress of the launch or change of the cluster.

Also, if you are on this screen, you can click on “View Cluster” and be redirected to the “View Cluster” screen, Figure 3 or 4. And then, you can click on “Log” to return to the “Cluster Event Log”.

Figure 10 Cluster Event Log