Brooklyn Research Cluster (OpenStack)

Quick Links

HPC Home
Getting an account
Getting started on Prince
Prince How-to Articles

Logging in
Windows
Mac / Linux

Clusters and Storage
Prince (HPC)
Dumbo (Hadoop)
Brooklyn (OpenStack)
Dalmatia (NYU Abu Dhabi)
Transferri ng data to/from the clusters
Transferri ng data to/from Prince cluster using Globus
Submittin g jobs with sbatch
Available software
Licensed Software Available on the HPC Cluster
Building Software
Slurm Tutorial
Tutorials
FAQs
Scratch Area Cleanup
Programming for Biologists
Acknowle dge Statemen t
Research Gallery
HPC People
Brooklyn Research Cluster

Features

Brooklyn Research Cluster provides Infrastructure as a Service.

- Users request the resources they need for their project
- The system configures requested resources and gives low-level control to the user.

Users are free to utilize the system in whatever manner their research requires

- They can install packages, customize the system, run/modify system services.
- This allows experienced researchers to work independently of support staff, improving productivity and freeing support staff to work on larger issues.

Brooklyn Research Cluster allows operations that are not normally available on traditional clusters

- Users can create snapshots of their systems allowing them to go back to past states if an experiment goes awry or to reproduce an experiment at a latter date.
- Users can create virtual networks allowing control of communication between different nodes. This is particularly useful for developing networking applications.

Rich library of supported environments

- These environments can be provisioned with a push of a button making the setup seamless.
- These environments do not necessarily need to provide root access, ensuring that the system would work as expected.
- This could allow administrators to provide the same level of support to users who don’t need full control of the system or don’t have the technical skills necessary.

Hardware Specifications

<table>
<thead>
<tr>
<th>System Name</th>
<th>Brooklyn Research Cluster</th>
</tr>
</thead>
</table>
| Network     | 100GBit Ethernet network will allow for fast communication between compute servers and between the compute and storage servers.  
              10Gbit network will provide uplinks to the NYU network  
              1Gbit networks will provide management of the cluster |
| Servers     | The cluster consists of 25 new servers  
              Each server will have two 14 core Intel E5-2690v4 with a total of 28 cores running at 2.6 GHz  
              The servers will each have 256Gb of DDR4 RAM.  
              20 of the servers will have 4 Nvidia P100 GPUs with 12Gb RAM each.  
              The remaining 5 servers will have 4 Nvidia P40 GPUs with 24Gb RAM each  
              New compute servers can be added, regardless of specs or vendor. |
| Storage | The compute nodes will be backed by a Ceph storage system.  
|---------|--------------------------------------------------|  
|         | • The storage will have 300TBs of storage (100TBs usable).  
|         | • Ceph will provide storage for images, volumes and data.  
|         | • The system will provide researchers with high bandwidth consistent storage.  
|         | • The storage will be scalable, new storage servers can be added as needed, without vendor lock in.  

Request an account on Brooklyn Research Cluster

Logging in to Brooklyn Research Cluster

Launch an Instance

Upload an Image

Flavors in Brooklyn Research Cluster