LIMULUS™ APACHE™ HADOOP® APPLIANCE

PERSONAL CLUSTER BIG DATA WORKSTATION

An Apache Hadoop Cluster When You Need One, an Efficient Workstation When You Don't

The Limulus Personal Hadoop workstation from Basement Supercomputing™ provides industry leading price-to-performance with a personal low power/noise appliance. The four node Limulus Apache Hadoop workstation comes with the Hortonworks™ Data Platform 2.x (HDP) fully installed. In addition, the quiet and cool desk-side workstation includes the Apache Ambari GUI for Hadoop administration. Each Limulus packs four standard Micro-ATX motherboards into a standard PC case supported by a single high efficient power supply (one wall plug).

Power to the three worker nodes is controlled by the master using a simple software interface. Each of the additional nodes can be powered-on when needed by the user. At idle, with nodes off, a Limulus consumes a mere 60 watts of power.

Expansion options include 10 Gigabit Ethernet and connecting an additional unit for a total of 8 nodes (32 cores total) and up to 16 TB of raw HDFS storage in SSD.

"DAY ONE, READY TO RUN" TURN-KEY POWERHOUSE WITH SUPPORT

Each Limulus comes with a fully installed Linux OS and the Hortonworks HDP 2.x Apache Hadoop software. The system is ready for use on first "power-up." No other configuration is needed other than user/site customization. All Linux software is fully open source (SRPMS available), integrated, and upgradable (via YUM/RPM). Each system comes with on-board basic documentation, which is supplemented by an on-line manual. The fully configured system includes:

- Node management with pdsh and whatsup
- Full Ganglia and Nagios integration
- Simple node power control commands
- Node log management and replication using rsyslog
- Automatic ssh key generation and propagation of user accounts
- NAT configured on nodes for full LAN/Internet access
- Complete Apache Hadoop installation (Version 2)
- Integrated Ambari Apache Hadoop management GUI

SUPPORT OFFERINGS

Hortonworks support packages are available on all Limulus Apache Hadoop appliances. The basic support package includes 90 days of private access to the Basement Supercomputing Question and Answer page (http://basement-supercomputing.com/qa). In addition, one live phone call/incident is included as part of the 90-day support package. Hardware issues and deeper problems are handled via phone and email support. Additional 9-month and 12-month support packages are also available. The basic support package covers cluster software and operating system issues but does not include Hortonworks HDP support. Contact Basement Supercomputing for more information these comprehensive support options.

BASEMENT SUPERCOMPUTING™ IS A HORTONWORKS™ TECHNOLOGY PARTNER.
More information: http://basement-supercomputing.com

BASEMENT SUPERCOMPUTING

Hortonworks

HORTONWORKS PARTNERWORKS CONSULTANT

HORTONWORKS PARTNERWORKS HDP CERTIFIED READY

hadoop

BASEMENT SUPERCOMPUTING LIMULUS HADOOP MODELS		
HPC Models	**MODEL 300**	**MODEL 400**
Total Nodes	4	4
Total Cores	16	16
Total Memory	80 GB DDR4 (upgradable to 208 GB)	128 GB DDR4 (upgradable to 256 GB)
Node CPU	(1) Intel Skylake i7-6700; 3.4 Ghz; 8 MB cache; 65 watts (3) Intel Skylake i5-6600; 3.3 GHz; 6 MB cache; 65 watts	Intel Skylake i7-6700; 3.4 Ghz; 8 MB cache; 65 watts
Node Memory	(1) 32 GB RAM (upgradable to 64 GB) (3) 16 GB RAM (upgradable to 48 GB)	32 GB RAM (upgradable to 64 GB)
Raw Storage Capacity	10 TB Total; SATA 6.0 4x512 GB SSD, 2x4 TB HDD (on login node)	16 TB Total; SATA 6.0 4x1024 GB SSD 2x6 TB HDD (on login node)
Network Connectivity	1x GbE external, internal 8-port GbE switch (10 GbE available)	1x GbE external, internal 8-port GbE switch (10 GbE available)
HDFS Raw Size	2 TB (SSD)	4 TB (SSD)
Terasort Performance (100 GBytes)	866 seconds; 113 MB/sec	866 seconds; 113 MB/sec
Hadoop Daemon Configuration	Headnode(1): namenode, datanode, resourcemanager, nodemanager, historyserver, proxyserver Worker Nodes (3): datanode, nodemanager	Headnode (1): namenode, datanode, resourcemanager, nodemanager, historyserver, proxyserver Worker Nodes (3): datanode, nodemanager

COMMON SYSTEM SPECIFICATIONS:

- Number of Motherboards: 4 Micro ATX, one has full access, three are embedded with front panel access
- Video: Intel HD Graphics 530
- SATA 6.0 Storage
- Interconnect: Gigabit Ethernet (10 Gigabit option)
- External Ports: GbE, DVI-D, RGB, HDMI, 1xUSB-C, 4xUSB-3/2, 2xUSB-2/1.1, eSATA, 7.1 Audio, PS2 Kbd Mse
- Power Supply: 850 Watts
- Power cord: Single
- Idle Power Main: 60 Watts
- Idle Power with All Nodes : 102 Watts
- Full Load Power with All Nodes: 320 Watts (running HPL benchmark)
- Operating System: Centos 6x
- Dimensions: 9x23.25x24.25 (inches); 22.9x59x61.6 (cm)
- Weight: 50 pounds; 22.7 kg

INSTALLED HADOOP SOFTWARE

Basic Hadoop RPMs included in the Hortonworks Apache Hadoop distribution are listed below. Other Hadoop applications available from the HDP repository. All software is open source. The base distribution is built on CentOS 6.x.

Hortonworks Data Platform (HDP) 2.x Including the following packages:

(For details, please see: http://hortonworks.com/products/hdp-2)

- Apache Hadoop (YARN, HDFS, MapReduce)
- Apache Ambari
- Apache Falcon
- Apache HBase
- Apache HCatalog
- Apache Hive
- Apache Oozie
- Apache Pig
- Apache Storm
- Apache Sqoop
- Apache Tez
- Apache ZooKeeper
- Apache Spark

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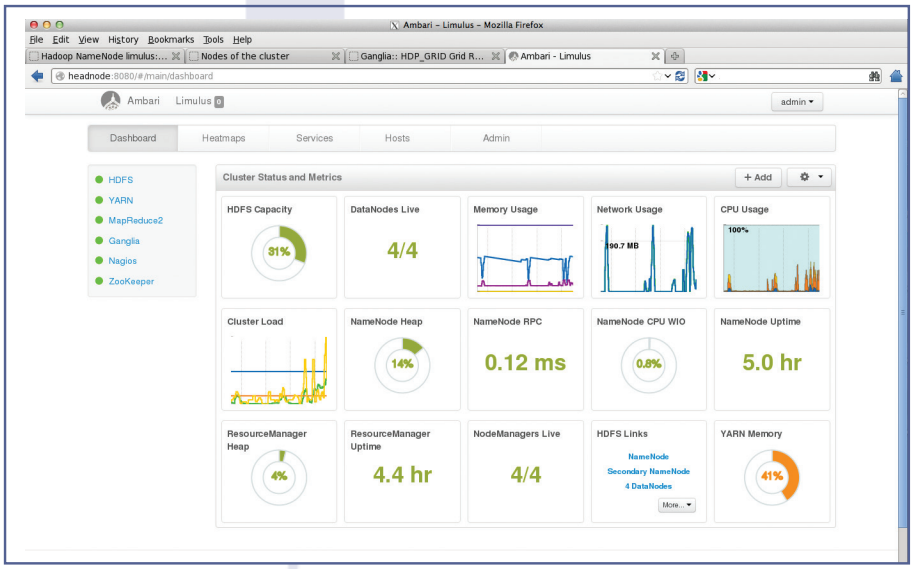

Apache Ambari Administration GUI