

Bigdata Cluster Overview V.1.0

Cubedoop Cluster™

CubePi Cluster™

For more detail
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Cubedoop Cluster™

Our company made a Bigdata Machine Learning Platform (vertical software stack). That means our company already had essential technical know-how to store large volume of data and do MapReduce for analysis. Using by enough experience of Bigdata cluster, our company built a our own Bigdata cluster named Cubedoop Cluster™ onto Apache Hadoop

Cluster Appliance

Cubedoop Cluster™ is a cluster appliance that could be scaled out (appliance mean generally a separate and discrete hardware device with integrated software) Right after Bigdata specialist choose right size of cluster for solving customer's problem, Our company offer a perfectly parameterized and customized Cubedoop Cluster™



Standard 3 of Rack

Cluster S/W Features

We are setting up our own cluster guided by Cubedoop customizing parameter, Our cluster specialist report periodically a evaluation for current parameters for performance of cluster and That will give my customer good chance to save their resources. Our solution offers monitoring tool for efficient management of cluster as other hadoop distribution company, We has concentrated to offer convenience to customer. especillay customer can debug in just one node.

Cluster H/W Features

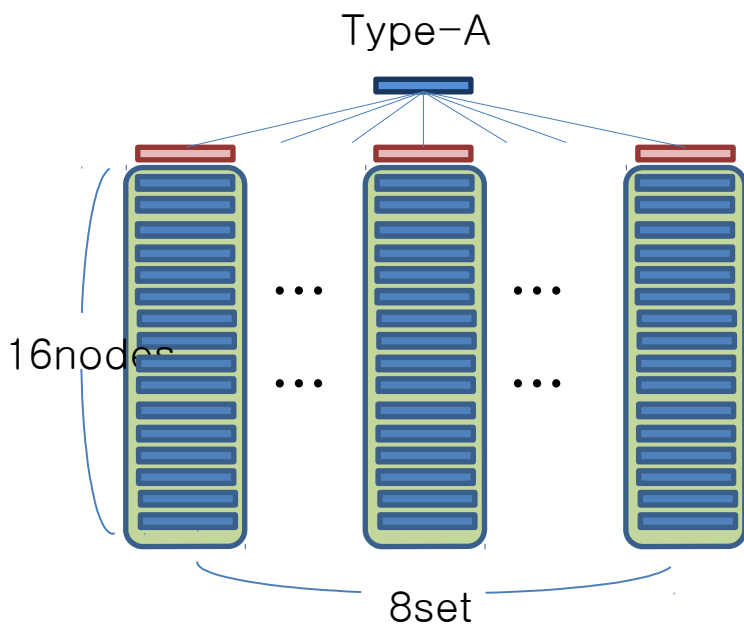
We designed special own H/W structure for management convenience of Cluster. We grouped each main-board and hard-disk and power-supply. The Bigdata cluster has a dedicated server for monitoring electricity state. as a result that minimize cost for replaceng disordered node and that also made maintenance easy and simple.



Semi Standard size e rack

Cluster type

Type – A : $16 * 8 = 128$ nodes
Type – B : $16 * 16 = 256$ nodes
Type – C : $16 * 24 = 384$ nodes
Type – D : $24 * 24 = 576$ nodes



Appliance + support

Bigdata specialist know-how is necessary for management of big size of cluster.

Because it take long time to get know-how for bigdata cluster, Almost company does not have Bigdata specialists hasitate to adop bigdata cluster.

We have a plan to support customer to maintenace Bigdata perfectly, especially we have a technical education program to trasfer our big data skill And we have enough experiece to support out customer.

Service Layer

Stable bigdata processing

Failure response

Audit report

Cluster monitoring

Periodic Check up

Maintenance support

For more detail

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Cluster type(WorkLoad)

Standard : balanced job, diverse kind job. that mean almost job is not biased for CPU calculation and not biased for I/O workload.

CPU biased : data mining or handleing derived data(example : Natural language proccesing. HPPC)

I/O biased : heavy file I/O (example:typical MapReduce job, Sorting)

CubePi Cluster™

We tried to do bench-marking for distributed cluster using by many number of Raspberry PI2.

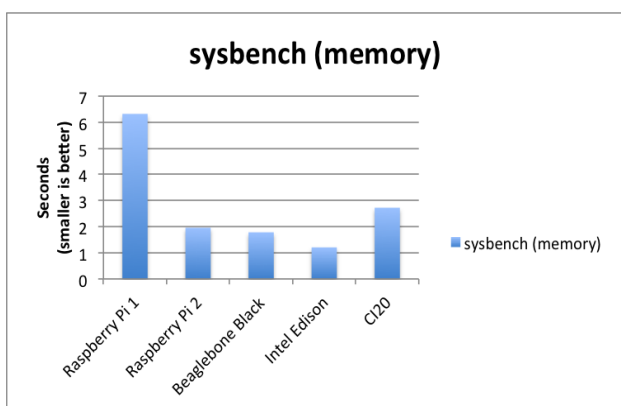
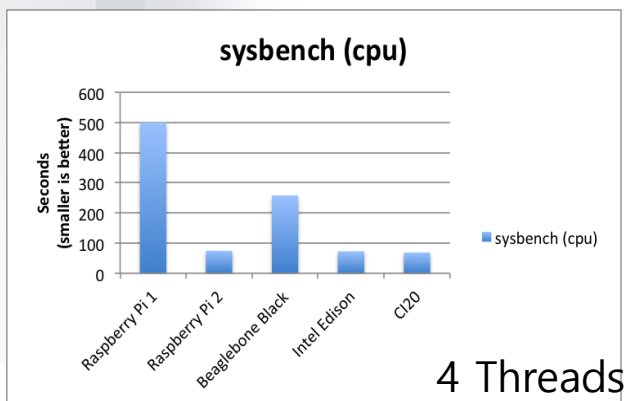
That was origin of CubePi. We has lined up CubePi cluster for production.

The performance of Paspberry PI 2 is trivial than laptop computer. But the cluster of many number of Raspberry PI 2 has nice power to analysis. it is enough to use that cluster for enterprise. We are forecasting the use of that cluster will be spread (HPCC (High-Performance Computing Cle uster), or DAS (Data Analytics Supercomputer)

Raspberry Pi 2 Spec

	Pi1 B+	Pi 2B
CPU	Arm11	CortexA7
Cores	1	4
Clock	700MHz	900MHz
GPU	Videocor e IV	Videocore IV
Memory	512MB	1G
USB Ports	4	4
Storage	microSD	microSD
Network	10/100	10/100
GPIO	40-pin	40-pin

Pi 2 performance



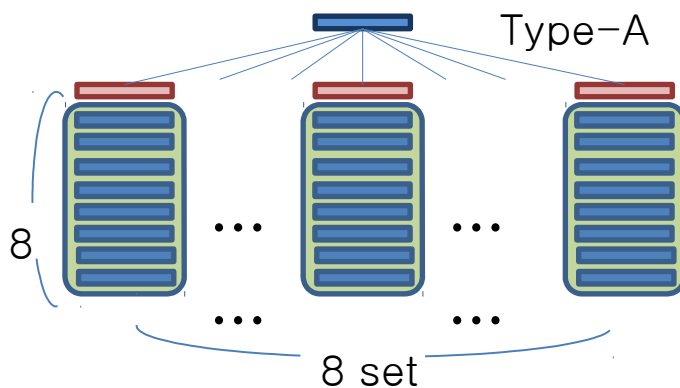
** Referred from <http://www.davidhunt.ie>

Cluster type

Type – A : $8 * 8 = 64$ nodes

Type – B : $8 * 16 = 128$ nodes

Type – C : $8 * 24 = 192$ nodes



CubePi Cluster™ use

A-type of CubePi Cluster™ is suitable for education.

CubePi cluster give ICT engineer good chance to study large cluster over 64 nodes.It is very hard to get a chance to experience a large cluster.

C-Type of CubePi cluster is fitted for HPCC.