



第十三回PCクラスタシンポジウム

Cray クラスタ製品のご紹介



平成25年12月12,13日
クレイ・ジャパン・インク

CRAY

The Supercomputer company



Since
Nov
2012



HPC Systems

Leadership supercomputing performance and scalability



Storage & Data Management

Scale-out, manageable high performance storage systems

CRAY
SONEXION



YarcData A CRAY COMPANY

Solutions for Big Data analytics



Cluster Solutions

Configurable Industry standard scale out computing

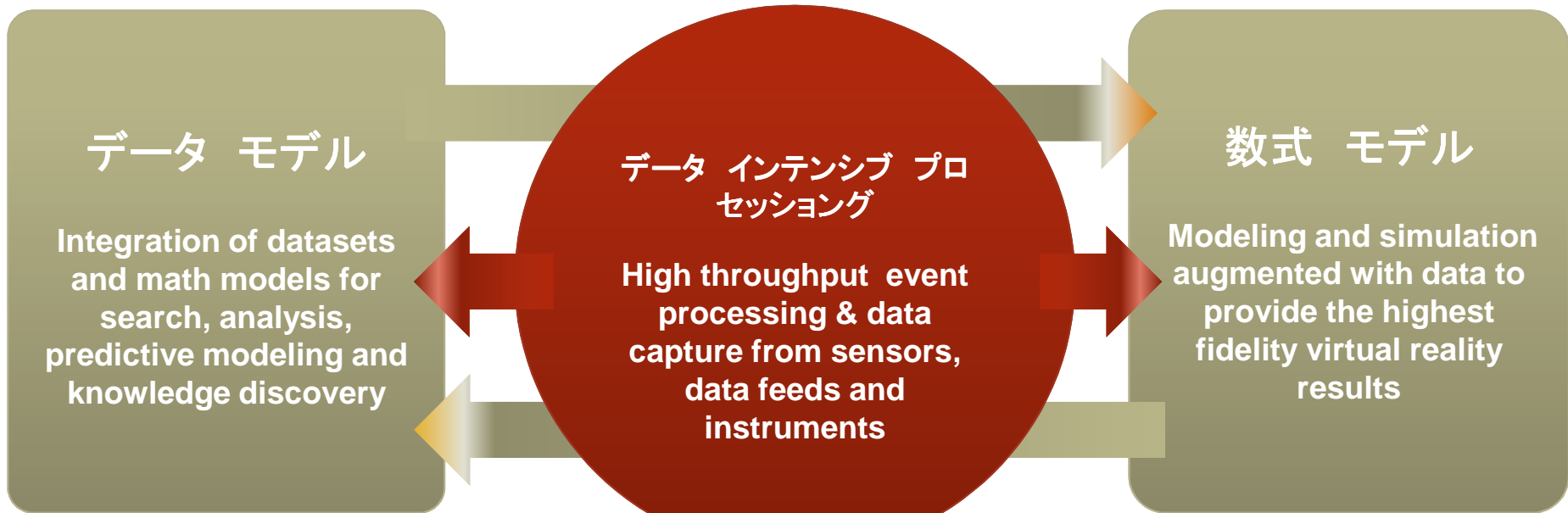
Adaptive Supercomputing



Cray's Vision:

The Fusion of Supercomputing and Big & Fast Data

Modeling The World
Cray Supercomputers solving “grand challenges” in science, engineering and analytics

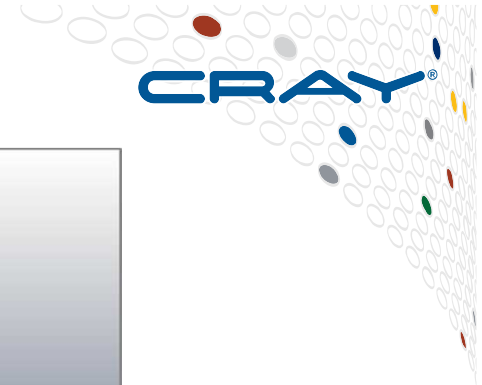


Advanced Analytic Appliances

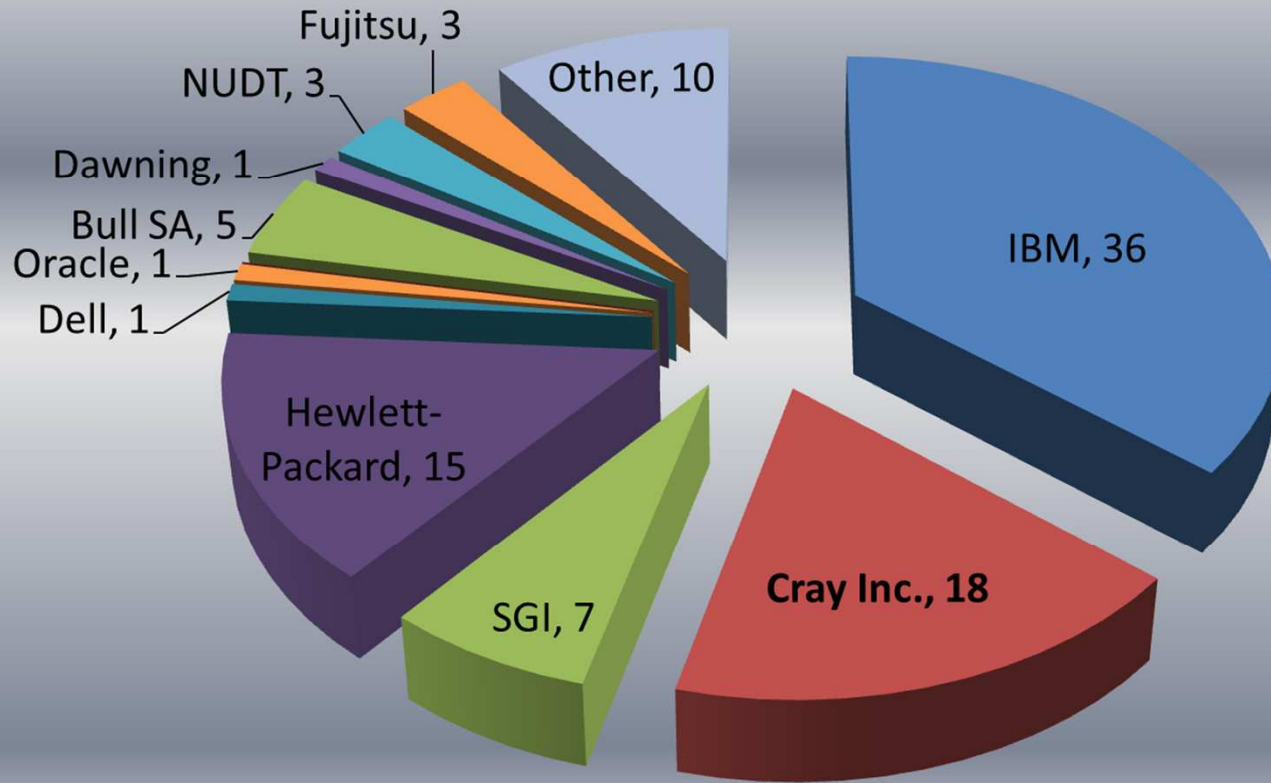
Storage & Data Management

Supercomputers

Top100 by Vendor Systems

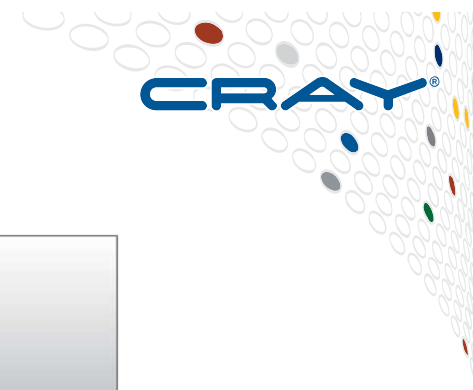


Top 100 by Number of Systems

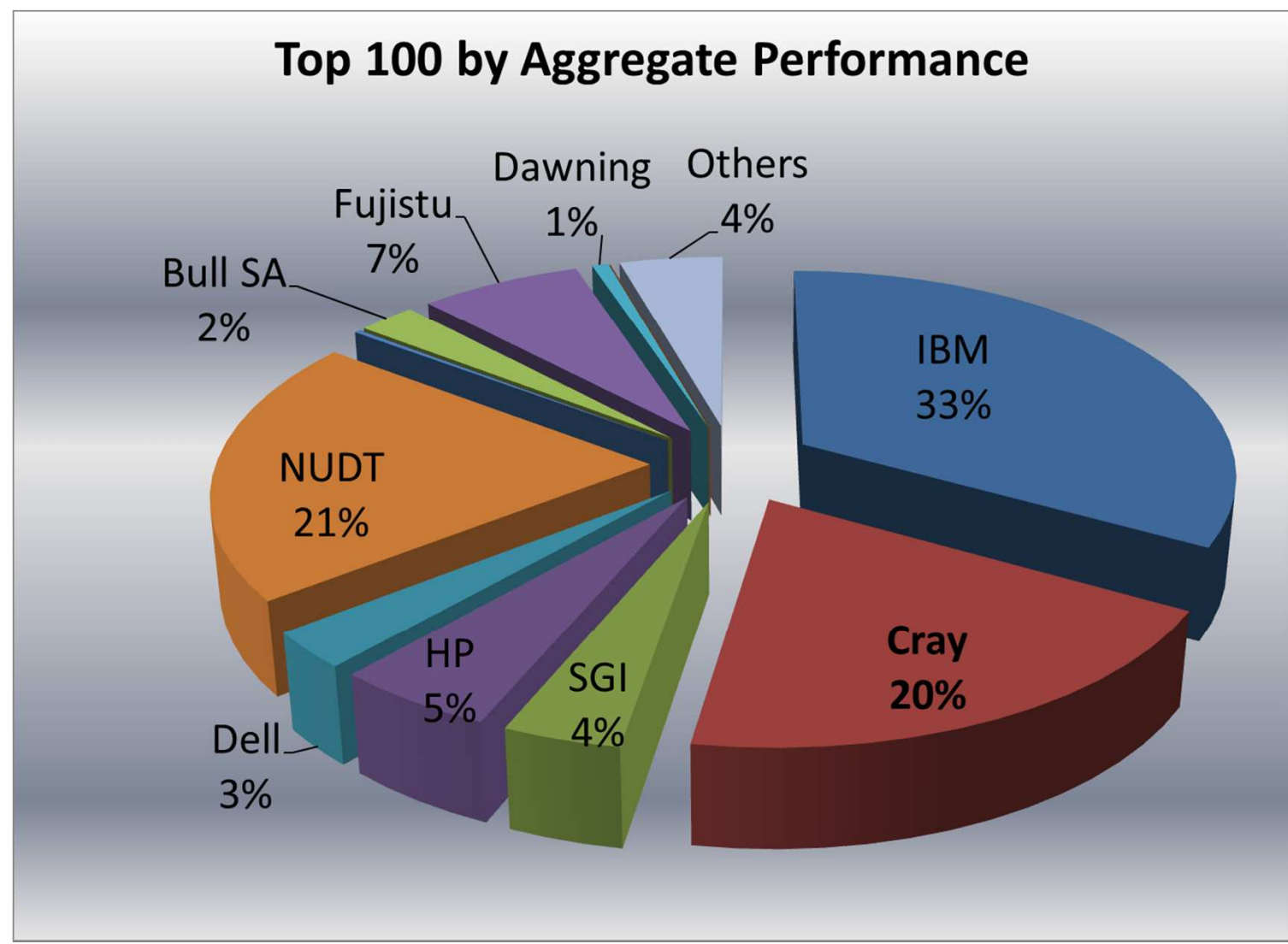


Eight Top100 Cray Systems are not included because they are either not yet accepted or the customer doesn't want them listed.

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Top100 – Vendor Aggregate Performance



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Green500



Green500 Rank	MFLOPS/W	Site*	Computer*	Total Power (kW)
<u>1</u>	4,503.17	GSIC Center, Tokyo Institute of Technology	TSUBAME-KFC - LX 1U-4GPU/104Re-1G Cluster, Intel Xeon E5-2620v2 6C 2.100GHz, Infiniband FDR, NVIDIA K20x	27.78
<u>2</u>	3,631.86	Cambridge University	Wilkes - Dell T620 Cluster, Intel Xeon E5-2630v2 6C 2.600GHz, Infiniband FDR, NVIDIA K20	52.62
 <u>3</u>	3,517.84	Center for Computational Sciences, University of Tsukuba	HA-PACS TCA - Cray 3623G4-SM Cluster, Intel Xeon E5-2680v2 10C 2.800GHz, Infiniband QDR, NVIDIA K20x	78.77
 <u>4</u>	3,185.91	Swiss National Supercomputing Centre (CSCS)	<u>Piz Daint – Cray XC30, Xeon E5-2670 8C 2.600GHz, Aries interconnect , NVIDIA K20x</u> Level 3 measurement data available	1,753.66
<u>5</u>	3,130.95	ROMEO HPC Center - Champagne-Ardenne	romeo - Bull R421-E3 Cluster, Intel Xeon E5-2650v2 8C 2.600GHz, Infiniband FDR, NVIDIA K20x	81.41
<u>6</u>	3,068.71	GSIC Center, Tokyo Institute of Technology	TSUBAME 2.5 - Cluster Platform SL390s G7, Xeon X5670 6C 2.930GHz, Infiniband QDR, NVIDIA K20x	922.54
<u>7</u>	2,702.16	University of Arizona	iDataPlex DX360M4, Intel Xeon E5-2650v2 8C 2.600GHz, Infiniband FDR14, NVIDIA K20x	53.62
<u>8</u>	2,629.10	Max-Planck-Gesellschaft MPI/IPP	iDataPlex DX360M4, Intel Xeon E5-2680v2 10C 2.800GHz, Infiniband, NVIDIA K20x	269.94
<u>9</u>	2,629.10	Financial Institution	iDataPlex DX360M4, Intel Xeon E5-2680v2 10C 2.800GHz, Infiniband, NVIDIA K20x	55.62
<u>10</u>	2,358.69	CSIRO	CSIRO GPU Cluster - Nitro G16 3GPU, Xeon E5-2650 8C 2.000GHz, Infiniband FDR, Nvidia K20m	71.01

HPCWire Awards

- A record 10 awards this year!
- Best HPC Cluster Solution or Technology



<p>Top 5 Vendors to Watch</p> <p>HPC <small>wire</small></p> <p>Readers' Choice Awards 2013</p>	<p>Best HPC Cluster Solution or Technology</p> <p>HPC <small>wire</small></p> <p>Readers' Choice Awards 2013</p>	<p>Best HPC Collaboration Between Government and Industry</p> <p>HPC <small>wire</small></p> <p>Readers' Choice Awards 2013</p>	<p>Best Use of HPC Application in Manufacturing</p> <p>HPC <small>wire</small></p> <p>Editors' Choice Awards 2013</p>	<p>Best Use of HPC Application in Life Sciences</p> <p>HPC <small>wire</small></p> <p>Editors' Choice Awards 2013</p>
<p>Top 5 Vendors to Watch</p> <p>HPC <small>wire</small></p> <p>Editors' Choice Awards 2013</p>	<p>Best HPC Cluster Solution or Technology</p> <p>HPC <small>wire</small></p> <p>Editors' Choice Awards 2013</p>	<p>Best Application of HPC in Big Data</p> <p>HPC <small>wire</small></p> <p>Readers' Choice Awards 2013</p>	<p>Best Use of HPC Application in Automotive</p> <p>HPC <small>wire</small></p> <p>Editors' Choice Awards 2013</p>	<p>Best Application of HPC in Financial Services</p> <p>HPC <small>wire</small></p> <p>Editors' Choice Awards 2013</p>

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Cray CS300™ Cluster Supercomputer

CRAY®



CRAY
CS300-LC™



CRAY
CS300-AC™

Cray CS300-AC
Air-Cooled System

CS300-LC
Liquid-Cooled System

Cray CS300 SMP: Shared Memory Parallel
Cray CS300 LMS: Large Memory System

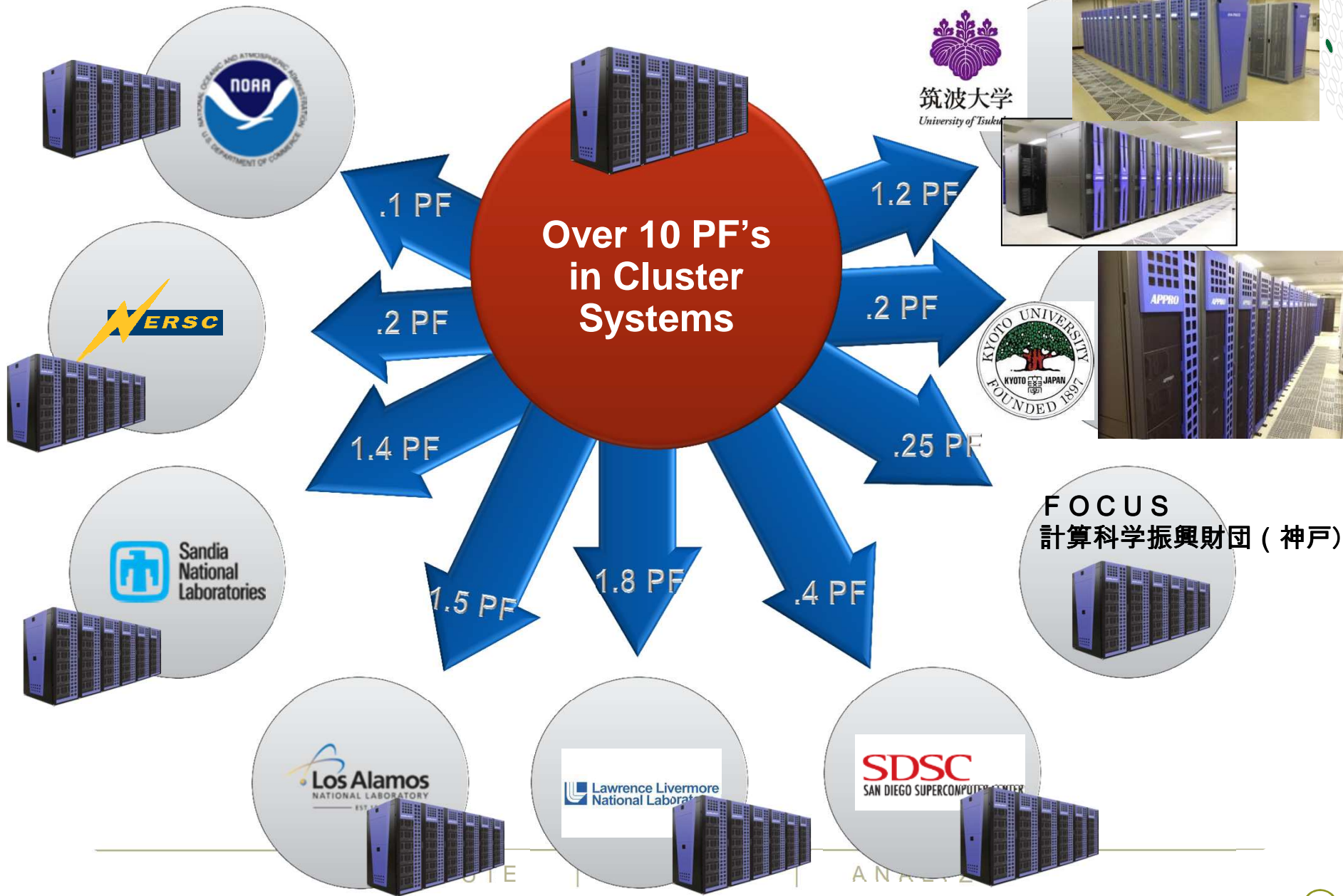
Cray CS300 System for



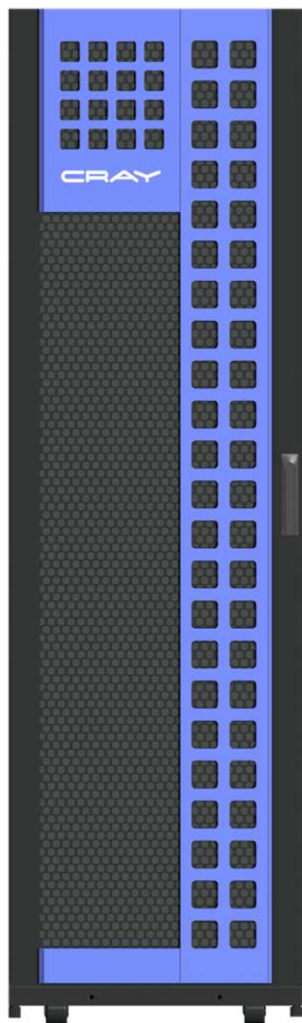
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Cray Cluster Solutions

CCS is Specialized in *Mid-Range* Systems



Cray Clusterの特徴



CS300 Super Computing

1. ベストプライスパフォーマンス
2. 構成の柔軟性
3. 省エネ、高効率、電力制御
4. Crayプログラミング環境
5. ハイレベルRAS機能
6. オープンスタンダード
7. スケーラブル
8. 優れた管理運用ツール ACE



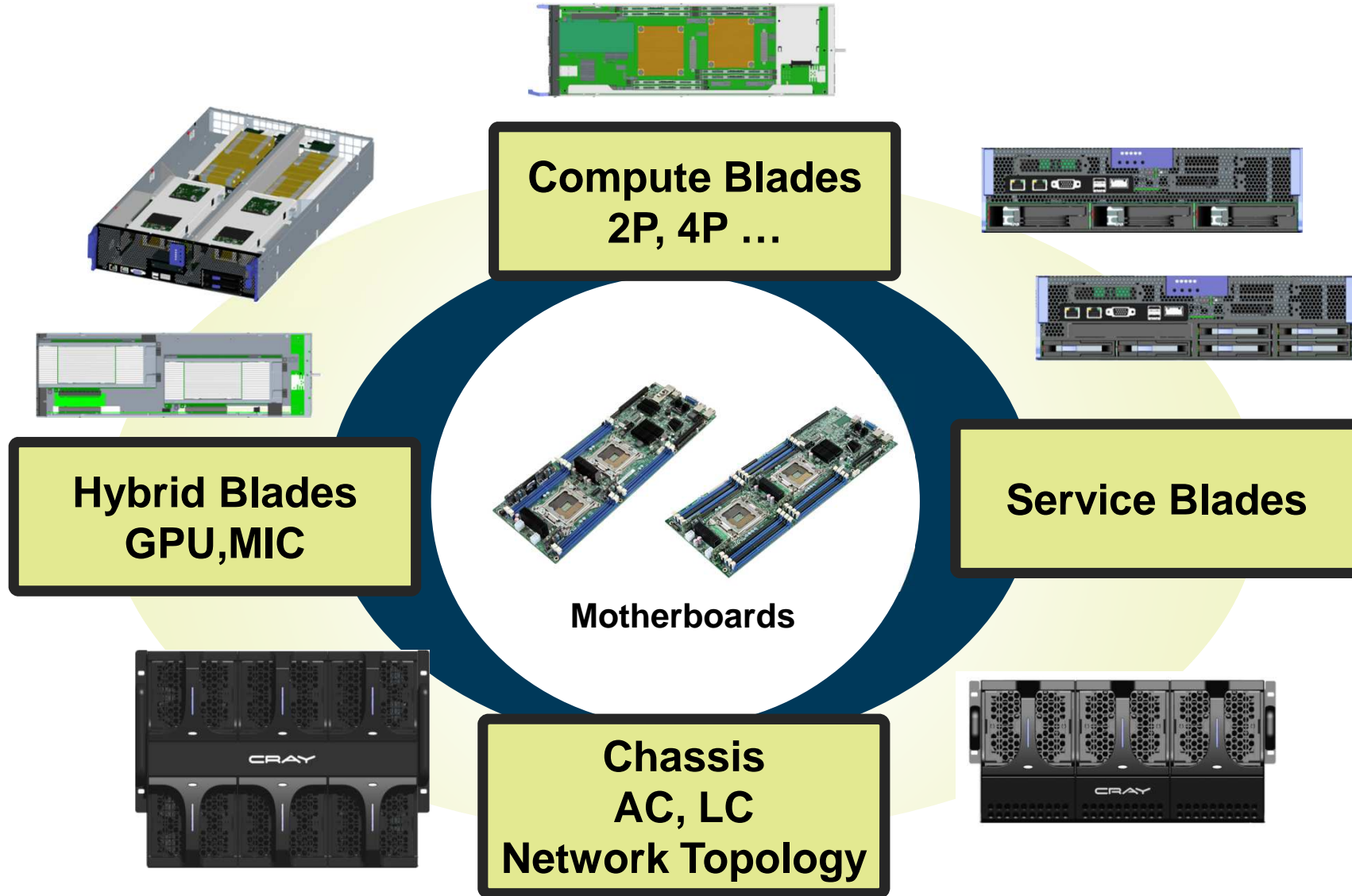
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Cray Cluster Solutions

Cray CS300™ Cluster Supercomputer

構成の柔軟性、先進性

CRAY



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Cray Cluster Solutions

Cray CS300 SMP

Shared Memory Parallel System

Oct 2013

CRAY®

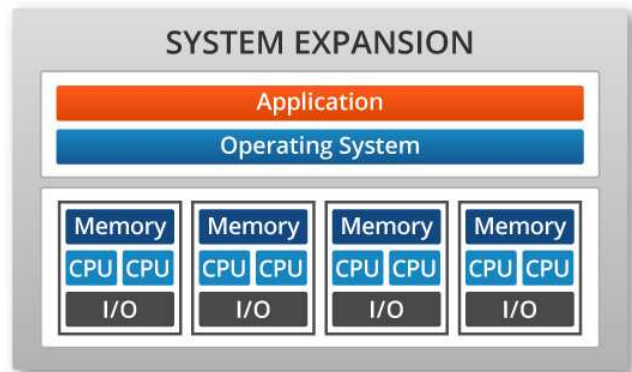
Preconfigured and Ready-To-Go Solutions

- 最適化されたvSMP Foundation™
- 大規模SMP構成を可能に
- シングルまたはデュアル FDR Infiniband インターコネク
- 標準ラックに搭載、豊富なノード選択肢



簡単に構築、管理、運用

- システム管理機能、システム運用ツール
- SMPならではの使いやすさ、プログラミングのし易さ
- クラスタ管理ツール不要、SMPとして管理可能

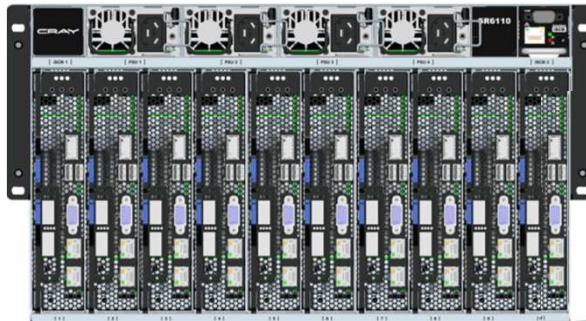


Built-to-order configuration flexibility is also available

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Cray Cluster Solutions

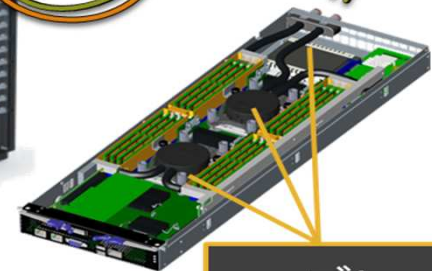
高効率水冷システム Direct LC + Warm Water cooling



屋外
ドライクーラー



ラックCDU
モジュール



ブレード
冷却ユニット



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Cray Cluster Solutions