INSPUR HPC Development

-Industrial Perspective of China

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Introduction Of INSPUR Group

A leading IT company since 1945

Turnover of INSPUR group

- 2010: 4.828 Billion US$
- 2011: 5.6 Billion US$
- 2012: 6.5 Billion US$

Unit: Billion US$

- Turnover (2010-2012)
- ~20% growth

Employees >11K

- R&D: 34%
- Engineer: 23%
- Market: 21%
- Manage: 12%
- Other: 10%
- Total: 100%

Three Stocks

- INSPUR Soft (600756)
  Shanghai shares
- INSPUR Info (000977)
  Shenzhen shares
- INSPUR International (596.HK)
  Hong Kong shares
Introduction Of INSPUR Group

**IT experiences > 60 years**

### 1945-1980 Mainframe
- 1945, Taichang instrument plant (Shanghai)
- 1960, educational instrument plant (Jinan)
- 1970, transistors served at Dongfanghong No.1 satellite
- 1983, 1st Chinese PC at P.R.C

### 1980-1995 Personal computer
- 1990, 1st Beep-Pager with 1st standard at P.R.C
- 1993, 1st station with 10 CPU at P.R.C

### 1995-2010 Internet
- 2007, large-scale industrialized production of LED lighting
- 2007, SKL of high-end server & storage technology founded
- 2008, high-end fault-tolerant servers have been developed
- 2009, massive storage technology has been explored

### 2010--Cloud
- 2010, Cloud computing was selected as next step
- 2011, we released the "sea of clouds" container data center
Introduction Of INSPUR Group

International business > 20 countries
Introduction Of INSPUR Group

Computers
server, storage, PC, special PC

Softwares
ERP, profession software, software outsourcing

LED Light
epitaxial wafer, tube core

Smart terminal
adding machine, ATM, set-top box

Mobile
CDMA/GSM

IT Solutions
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Introduction Of INSPUR HPC

State Key Laboratory of High-end Server & Storage Technology

Easy HPC
Application examples of HPC

Cloud computing

GPU cluster

Video rendering

Gene information

Chip design

Industrial design

Enterprises informatization

Aerospace

Defense & military

Data mining

Numerical calculation

Commercial manufacture

Weather forecast

Petroleum exploration

Life science

Emerging application fields
Application of INSPUR HPC

Analyze 300+ professional software and set up the example database for 40+ typical applications.
Software-Cluster Management (Cluster Engine)

- Easy to Use
- Remote Visit
- Live trend monitor
- Live data analysis
- Results exhibition
- Automatic Job Scheduling

Scientific workflow promotes the science research

User

Administrator

Supercomputer system management Easy to manage

Unified Port: Job Scheduling, Resource monitor

Statistic analysis of resource using and bottleneck detection

Comprehensive monitor, quick point lock

Smart job schedule

Customized interface

Integrated profession tool
NUDT and INSPUR: Tianhe-1A, which became the world's fastest supercomputer, with a peak computing rate of **2.507** PetaFLOPS. (Top 500 June 2010)
NUDT and INSPUR: Tianhe-2, which has become the world's fastest supercomputer, with a peak computing rate of 33 PFLOPS. (Top500 June 2013)
CN-Grid II: INSPUR supported 17 Univ,
Tsinghua University

Peak: 172T
Target: IPCC AR5
Application: earth simulation

No. 97 @ top500 Jun. 2011
The first & highest performance cluster in Chinese Universities
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The fundamental approach to promote HPC is enlarging the community

http://www.asc-events.org
The First Asia Challenge – ASC13

43 teams participated into the ASC13
40 experts served as the judgers and consultants

http://www.asc-events.org
ASC13 Background

1. SC&ISC
   Two most influential events on supercomputer.
   SC leans to US; ISC leans to EU.
   Asia has not totally engaged yet.

2. Chinese Ministry

3. Asian Scientist
   40 well-known scientist and experts are included in the committee

http://www.asc-events.org
# Student Cluster Challenge

## Opportunities for University
- **✓** public exposure
- **✓** showing university culture
- **✓** training ability demonstration
- **✓** attracting international talents

## Opportunities for Student
- **✓** intense hands-on training
- **✓** true cases study
- **✓** acquainting with international peers
- **✓** exposure to higher education organization
- **✓** exposure to job providers

[http://www.asc-events.org](http://www.asc-events.org)
Thank You

INSPUR For HPC Innovation

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