

Parallel Processing

Thoai Nam

Faculty of Computer Science and Engineering

HCMC University of Technology

What we are doing?



Internet of Things (IoT)

(Timothy Chou)

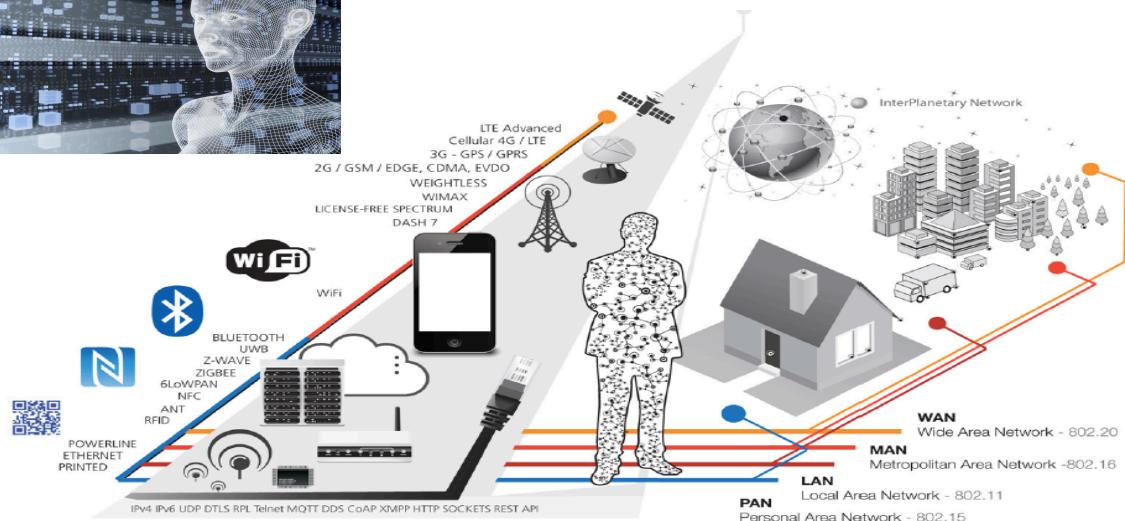
Do



Learn



Collect



Connect

Things

- (1) Smart city problems
- (2) Industry 4.0 problems

Real problems

Traffic jam
Urban flooding
Pollution: waster & air
Security

ITS

GV

CE

IoT

D-STAR

HCMUT-UTS
JRC

HCMUT-
VNPT

Applications

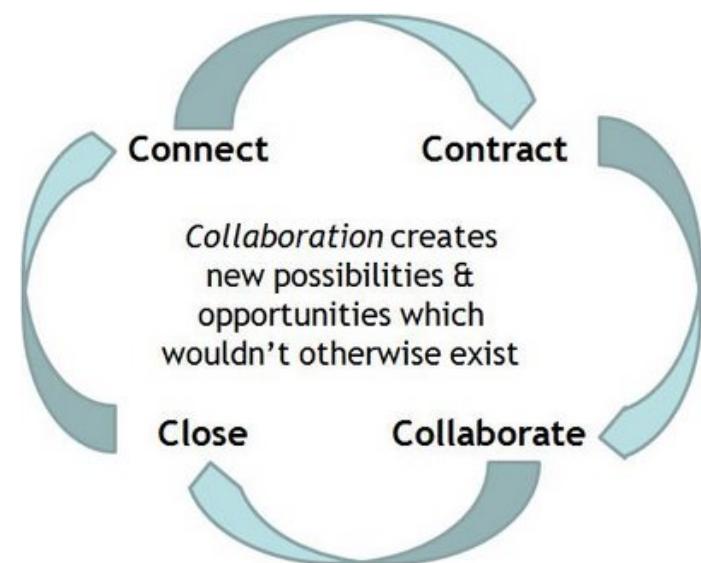
HPC Lab

Computing
Infrastructure



HPC Lab

- **Partners**
 - **VNU-HCM (HCMUT)**
 - **Intel**
 - Ho Chi Minh city
- **Plan: 2012-2022**
 - HPC Lab: set up in 2013
 - Strengthen HPC in Vietnam
 - Solving big problems
 - Leading in technology
 - **Partners: HPE (2015) & Nvidia (2017)**
- **Applications: 2013-2022**
 - **Traffic analysis**
 - **Urban flooding**
 - **Big data analytics**





SuperNode I & II



SuperNode I in 1998-2000



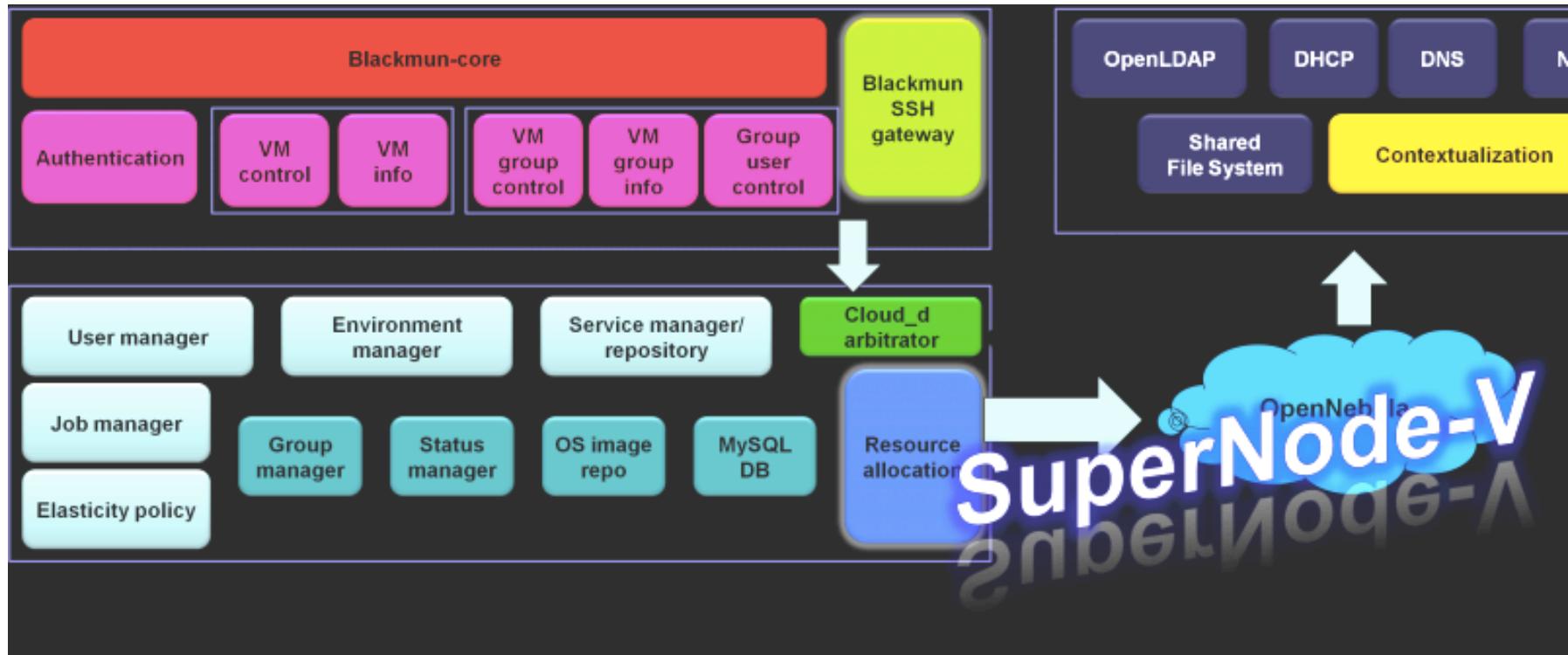
Service View vati - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://172.28.193.3/index.php?r=application&u=YG
Customize Links Free Hotlist Windows Marketplace Windows Media mediCookieContinue... Windows Google Desktop Welcome to Faculty ...
Service View vati
You are logged in as hungnq. Logout
Service View vati
Browse home directory Submit new job Job Status Services
File Edit View History Bookmarks Tools Help
http://www.spn.hcmut.edu.vn/index.php
English - Vietnamese d
Supernode computing system
You are logged in as hungnq. Logout
Browse home directory Submit new job Job Status Services
File Edit View History Bookmarks Tools Help
http://www.spn.hcmut.edu.vn/index.php
English - Vietnamese d
Supernode computing system
You are logged in as hungnq. Logout
Browse ~/
filename Size Permission OwnerID GroupID Function
.bash_logout 24 -rw-r--r-- 539 1000
.bash_profile 191 -rw-r--r-- 539 1000
.bashrc 124 -rw-r--r-- 539 1000
.gSRC 120 -rw-r--r-- 539 1000
.kde 4096 drwxr-xr-x 539 1000
prime.c 7455 -rw-r--r-- 539 1000
prime-seq.c 2295 -rw-r--r-- 539 1000
prime.o 5156 -rw-r--r-- 539 539
Done
Done
Open Notebook



SuperNode II in 2003-2005



SuperNode V



SuperNode-V project: 2010-2012



EDA-Grid & VN-Grid

SuperNode II



Applications
Chip design
Data mining
Airfoil optimization

Security

Monitoring

User Management

Campus/VN-Grid (GT)

Resource Management

Information Service

Data Service

POP-C++



HPC plan at HCMUT

