

Futures of Clouds

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Chi Siamo

- ▶ **IT Center** : Centro Interdipartimentale dell'Università di Pisa (Fisica + Informatica)
- ▶ Si occupa di Ricerca e Sviluppo IT ed è totalmente finanziato con fondi privati
- ▶ Raccoglie le competenze sviluppate separatamente dai 2 Dipartimenti nelle collaborazioni con i produttori di IT
- ▶ Ha due DataCenter e una infrastruttura di rete privata dedicata ai test
- ▶ Ospita al suo interno studenti e dottorandi che hanno la possibilità' di "farsi le ossa" su soluzioni IT di ultima generazione

CLOUD

“Cloud is not a destination or singular path, but a transformation that places IT squarely at the center of the enterprise as both a leader and enabler of value-creation.”

*Michael Dell,
Chairman & CEO, Dell Inc.*

Cloud Technologies

- ▶ Virtualization
- ▶ Management
- ▶ Monitoring & Reporting
- ▶ Orchestration
- ▶ Self Service

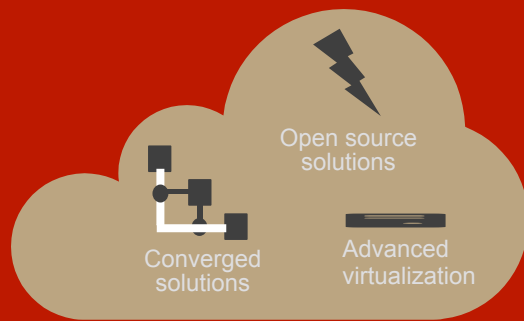
The Paradigm of Cloud

Enabling private cloud

Delivering single & multi-cloud management

Supplying Cloud as a Service

Cloud Management & Broker Engine



On premises

- Governance & access controls
- Performance monitoring
- Application integration
- Provisioning & management
- Cloud Broker

Public Cloud ecosystem

Software as a service

Community cloud
(vertical compliance)

Managed private cloud

Off premises

Mobility and Cloud

Mobility depends on Cloud

Enthusiasts say.....Future Mobility 100% on cloud

The Reality is that:

Getting and putting data on the cloud is getting harder.....

Bandwidth

BUT.....

- ▶ Mobile apps processing power and some data are local to the smartphone
- ▶ We are moving to smart devices : from jet engines to home....
- ▶ Internet of Things
- ▶ Mobile and wireless networks are not enough.....

From Cloud Computing to Fog Computing

Stop thinking to cloud and start thinking how to retain data on the smart objects or somewhere near....

Rethink networks...connect device to device...

Deal with «Big Data»....

Example : new Boeing 747 are fully connected. GE collects the data from engines (half a terabyte/engine/flight).

From up in the sky
(CLOUD) to close
to the ground (FOG)