بسم الله الرحمن الرحیم

رایانش ابری (بخش اول)

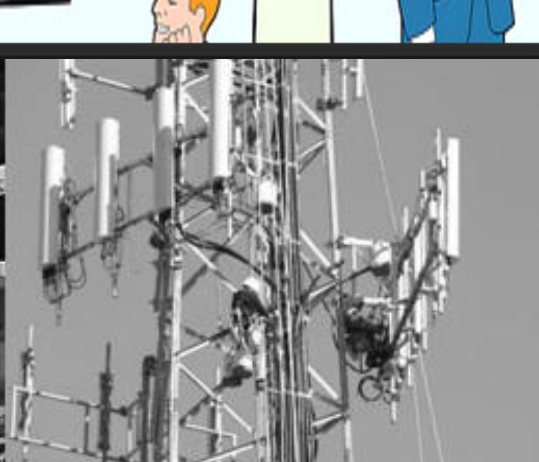آخرین تحقیقات انجام شده در ایران و جهان

http://crc.aut.ac.ir/Javan

برق

آب

تلفن

گاز

Building the Cloud :
- Resource Scheduling
- Resource Provisioning
- Power Management
- Programing Models
- Billing
- Monitoring
- Virtualization
- Migration
- Security
- Network
- Storage
- Scalability
- …
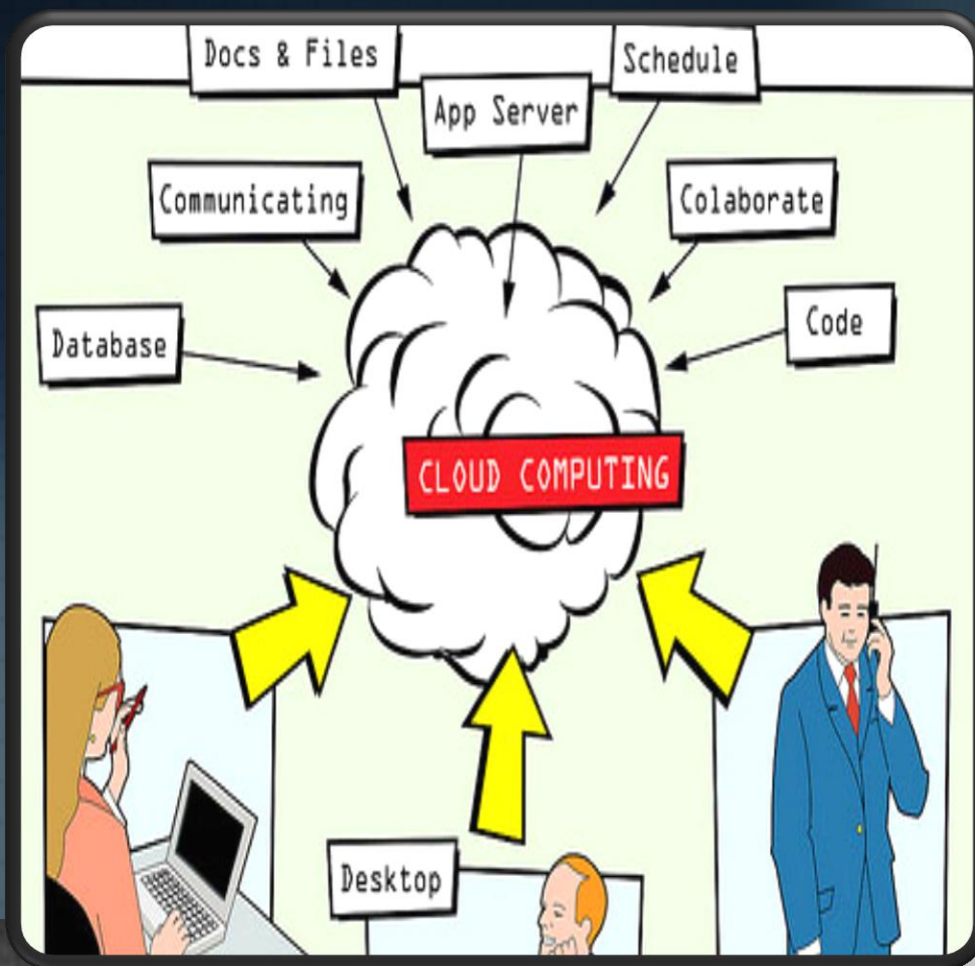
Solving Problems in the Cloud:
- Optimization
- Simulation
- Large scale processing
- Stream Processing
- High Performance Computing
- Business Intelligence
- …

Building Service:
- SaaS (E-Mail, Office, …)
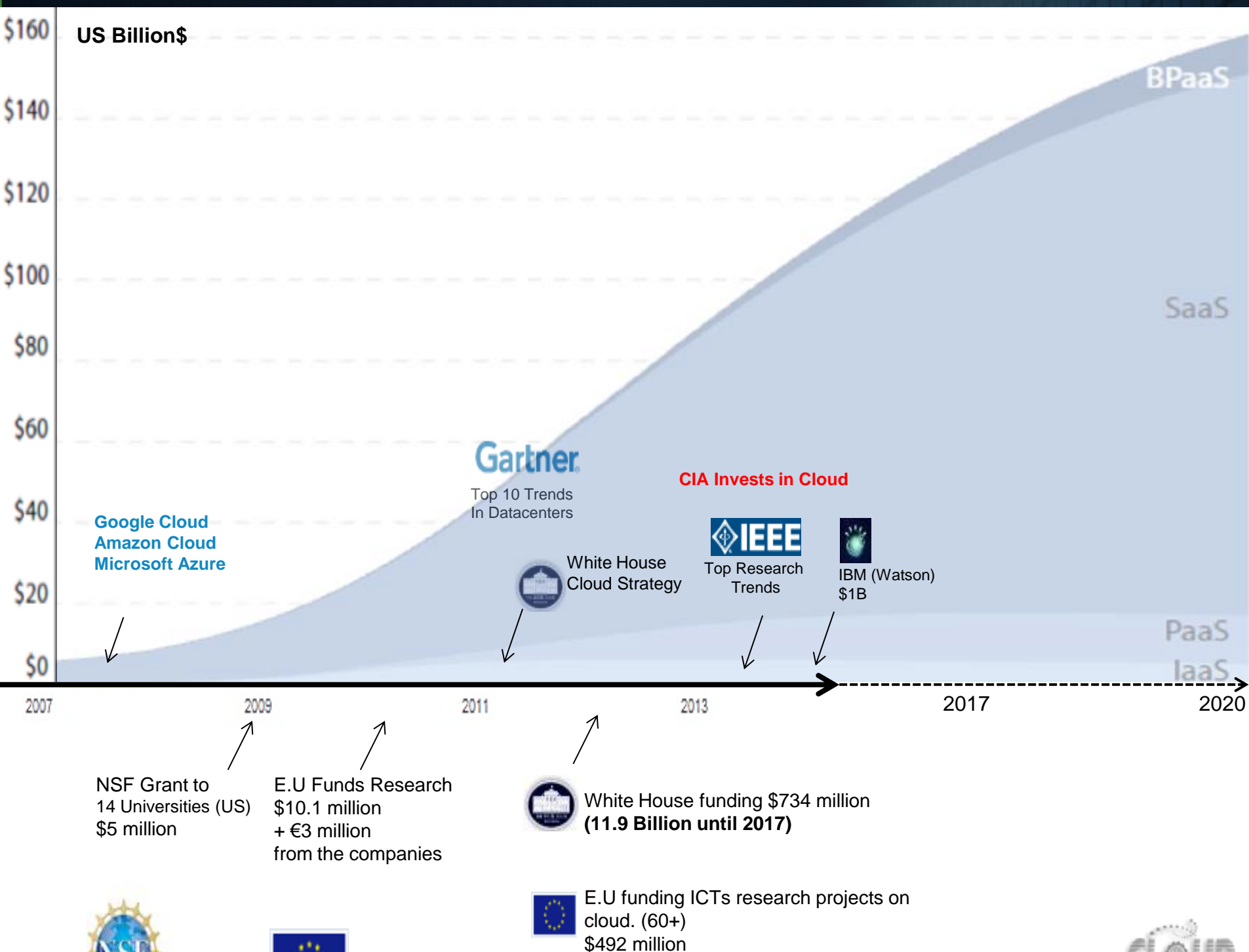- PaaS (Development, …)
- IaaS (Compute, Storage, Network)

CRC & HPCRC @ Amirkabir Univ.

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- **<u>Top 13 IEEE Research Trends 2013:</u>**

- 1) Internet of Things
- 2) Cybersecurity
- 3) Big Data
- **4) Cloud Computing**
- **5) Mobile Cloud (Pervasive)**
- 6) Internet Censorship and Control (Internet Computing)
- 7) Next-Generation Mobile Computing (Software)
- 8) 3D Imaging Techniques and Multimedia Applications
- 9) Reliability
- …

IEEE ⏀ computer society

- **Top 10 IEEE Research Trends 2014:**

- 1) Emergence of the Mobile Cloud
- 2) From Internet of Things to Web of Things
  - *(Need connectivity, internetworking to link physical and digital)*
- 3) From Big Data to Extreme Data
- 4) The Revolution Will Be 3D
- 5. Supporting New Learning Styles
  - *(Online courses demand seamless, ubiquitous approach.)*
- 6. Next-generation mobile networks
  - *(Mobile infrastructure must catch up with user needs.)*
- 7. Balancing Identity and Privacy
- 8. Smart and Connected Healthcare
- 9. E-Government
  - *(Interoperability a big challenge to delivering information.)*

- 10. Scientific Cloud Computing

- IEEE Cloud View:

- The goal is to explore how cloud platforms and abstractions, either by themselves or in combination with other platforms, can be effectively used to support real-world science and engineering applications.

- **IEEE Cloud and Pervasive View:**

- Mobile and embedded devices make it possible for users to access cloud-based services and data anywhere and anytime, extending their reach into everyday life.

- Cloud computing platforms are a natural fit to remedy the lack of local resources in mobile and pervasive devices.

تحلیل محتوا و رسانه های اجتماعی

پردازش انبوه

شبیه سازی اتصال پروتئین ها

پردازش موازی

پردازش فوق سریع

...

- Carnegie-Mellon
- Florida International
- MIT
- California-San Diego Supercomputer Center
- California-Santa Barbara
- Maryland-College Park
- Virginia
- Washington
- …

Award #	Subject	Start Date	Expiration Date	Amount
1048168	Content & Social Media Analyzing	07/01/2011	06/30/2014	$ 214,985.00
1048261	Large Scale Prediction (Genetic)	04/01/2011	03/31/2014	$ 425,000.00
1048296	Continuous Bulk Processing in Cloud	04/01/2011	03/31/2014	$ 360,000.00
1048079	Forecast-as-a-Service (Energy)	04/15/2011	12/31/2013	$ 320,000.00
1048253	Data-Intensive Biocomputing in Cloud	04/15/2011	03/31/2014	$ 370,000.00
1048199	Protein Docking Simulation with Azure	04/01/2011	01/31/2014	$ 421,000.00
1048217	Inferring Pattern and Processes (Genome Evolution)	09/15/2010	08/31/2013	$ 299,657.00
1048298	Mobile Cloud Computing Framework	04/01/2011	03/31/2014	$ 370,000.00
1048311	Parallelizing Large Scale Graph Problems on the Cloud	04/01/2011	03/31/2014	$ 369,889.00
1047540	Cloud-Scale Computing	04/01/2011	03/31/2014	$ 370,000.00
1047815	Relational Data Markets in the Cloud	04/01/2011	03/31/2014	$ 370,000.00
1060213	Scalable Algebraic Visualization in the Cloud	10/01/2010	09/30/2013	$ 117,567.00
1048269	Cloud Storage with Minimal Trust	04/01/2011	03/31/2014	$ 370,000.00
1048200	GIS Vector Data Overlay Processing on Azure Platform	09/01/2010	08/31/2013	$ 199,993.00
1047956	Development Workbench for HPC Applications	10/01/2010	09/30/2014	$ 1,434,000.00
1047962	Virtual Machine for Statistical Computing	09/15/2010	08/31/2013	$ 489,084.00
1147912	Framework for Rapid Adaptation and Reuse	08/01/2012	07/31/2015	$ 1,383,040.00
1047879	Parallel Programming	10/01/2010	09/30/2014	$ 1,740,214.00
0845272	Cooperative Developer Testing	08/01/2009	07/31/2014	$ 440,727.00
1115805	Stork Data Scheduler for Azure	04/15/2011	03/31/2014	$ 97,122.00
1048125	Collaborative Research	04/15/2011	03/31/2014	$ 184,984.00
1048222	Collaborative Research	04/15/2011	03/31/2014	$ 135,000.00
1048082	A String Cartography	10/01/2010	09/30/2014	$ 249,996.00
Total				$ 10,732,258.00