Report from Breakouts

Q1: Research Challenges

- Security
  - New model, policies, data privacy, compliance, audit issues
- Abstractions, federation, management, interoperability
- Sensors + Clouds + SDN
  - Systems infrastructure and data management issues
- Cloud Model
  - Application patterns, science vs industry, clouds vs HPC
- Power management, green computing

Q2: Existing Programs/Projects

- US:
  - NSF Cloud: Chameleon, CloudLab
  - CNS is funding cloud research
  - Open Science Data Cloud partnership (NSF funded)
  - MIT: electronic textbooks, kids run simulations in clouds
  - SwitchOn
- Brazil:
  - RNP Cloud Initiative
  - Cloud@USP
  - EU/Brazil Coordinated Call
- Funding Gap: research issues vs. infrastructure building
  - Although infrastructure is needed to research

Q3: Existing/Future Collaborations

- Finding out general US-Brazil collaborations needs more time (googling)
- Existing collaborations in the room
  - Cesar Marcondes / Jason Liu
  - Malathi Veeraraghavan (MV) / Nelson Fonseca
- Build new collaborations upon existing ones: ex. PlanetLab
- Research details are needed to foster future collaborations
  - Events should be organized to identity complementary expertise
- Smart Cities

Q4: Barriers and Enablers

- Barriers
  - Lack of coordinated international funding
- Enablers
  - International complementary expertise
  - Motivating students to work/study abroad
    - Student Exchange Programs (both sides)
    - Expertise is a magnet
  - Collaborative events focused on research
  - Time zone, cultural ties, language
  - Organize around successful projects (e.g., PlanetLab) and then sustain