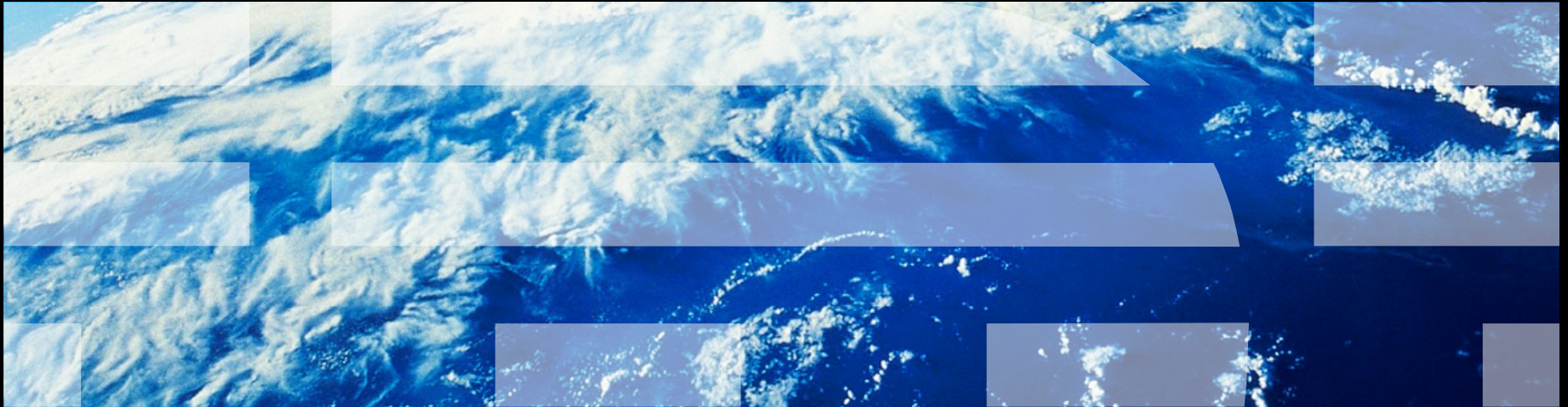


# World Community Grid

## An Update



## World Community Grid's Mission

World Community Grid's mission is to create the world's largest public computing grid to tackle projects that benefit humanity.

- Engage volunteers who want to contribute their computers to humanitarian research projects
- Provide free computing power to research projects whose findings may provide a humanitarian benefit
- Achieve results that are openly shared
- Use the depth and breadth of IBM to build the power and capability of the grid



**world community grid™**

## Active Research@World Community Grid

- 📍 Computing for Clean Water, Tsinghua University
- 📍 The Clean Energy Project, Harvard University
- 📍 Discovering Dengue Drugs – Together, University of Texas Medical Branch
- 📍 Help Cure Muscular Dystrophy, Université Pierre et Marie Curie
- 📍 Help Fight Childhood Cancer, Chiba Cancer Center Research Institute
- 📍 Help Conquer Cancer, Ontario Cancer Institute
- 📍 Human Proteome Folding, New York University
- 📍 FightAIDS@Home, The Scripps Research Institute



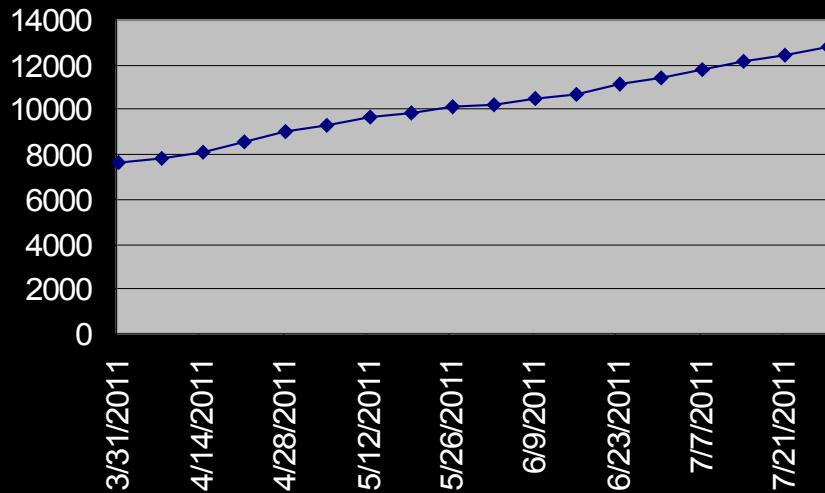
## Upcoming Research News

- Two new projects to be launched in 2011
  - One is currently in beta (volunteer) testing and final preparations for launch
  - The other is about to start alpha (internal) testing
  
- One of our projects has been ported to OpenCL
  - We are currently alpha (internal) testing it
  - Plan to start beta soon
  - Plans for more after we get this one released

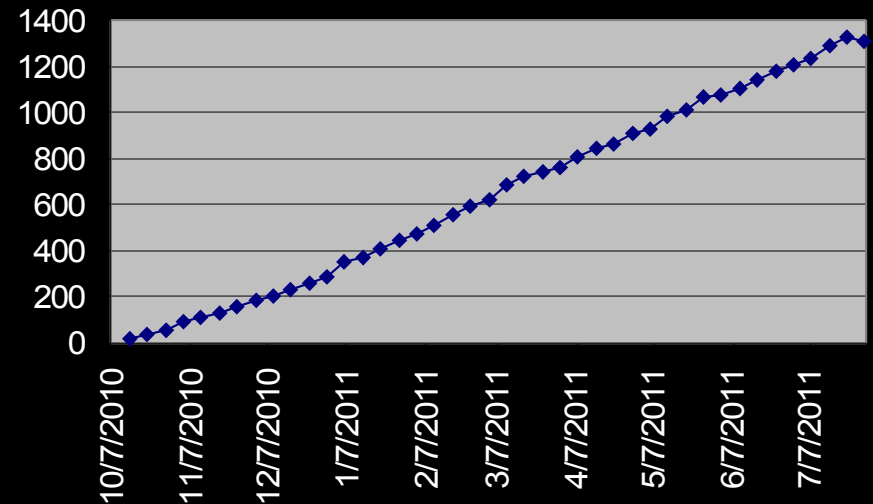
# Partnership with Sony

- Sony VAIO's sold in the US contain an option to contribute to World Community Grid during the OOBIE process
- Uses conservative settings (doesn't run until 8 minutes after user stops using computer)
- Impressive Results:

Continuing Devices



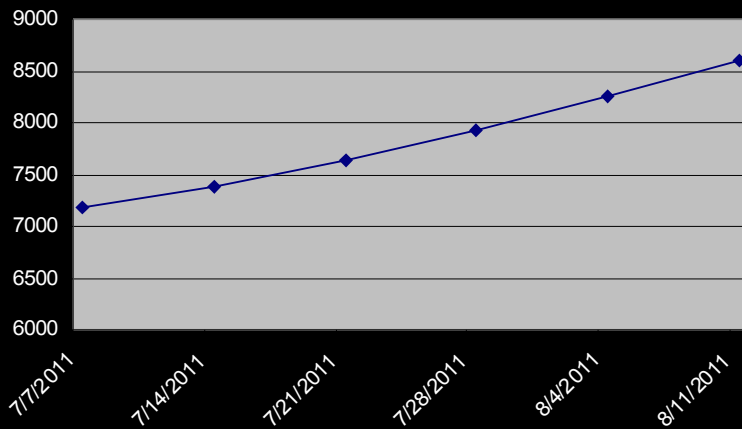
Daily Cpu Days Returned



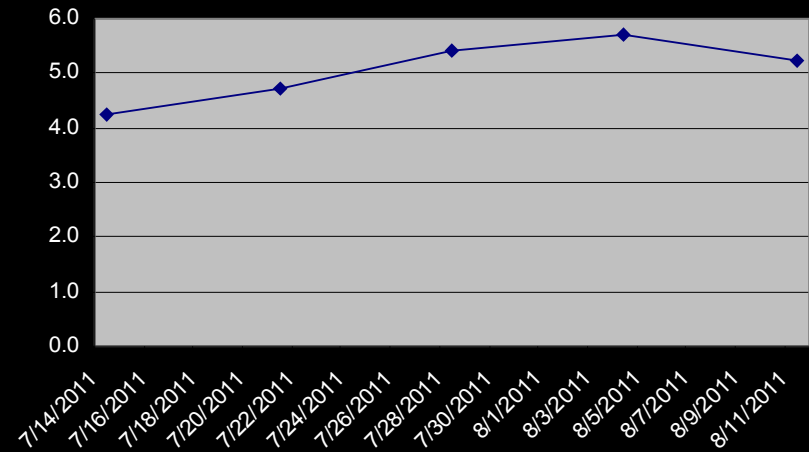
# Internal IBM Deployment

- Previously IBM participation has been voluntary with ongoing promotional communications from management team
- As of early July, World Community Grid will be deployed in the standard image build for all employee workstations
- This deployment strategy has resulted in a very good upward trend in participation:

### Continuing Devices

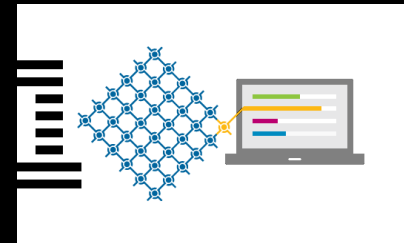


### Daily Cpu Years Returned

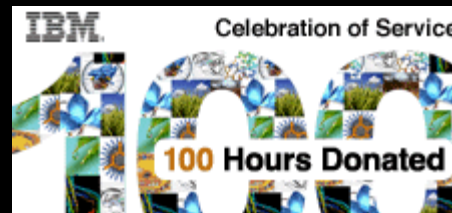


# IBM@100

- The IBM Corporation had its 100 year anniversary as a corporation this year
- As part of the celebrations, a website called IBM@100 was created. Part of this website includes 100 Icons of Progress that are described as World Community Grid was selected as one of these Icons of Progress
  - “These 100 iconic moments—these Icons of Progress—demonstrate our faith in science, our pursuit of knowledge and our belief that together we can make the world work better.”
  - <http://www.ibm.com/ibm100/us/en/icons/worldgrid/>



- We had an challenge to IBM Employees to donate 100 hours of computer time between May 16<sup>th</sup> to June 16<sup>th</sup>
  - Communicated via email for existing register IBM email address and via departmental emails
  - Over 12,300 employees met the goal





# IBM Plays Jeopardy



- Jeopardy is a quiz game show in the US
- IBM developed a system called Watson to compete against the two most successful players in Jeopardy's history
- Watson defeated the humans and collected a \$1,000,000 prize
- 50% of the prize money was allocated for World Community Grid
- That money was granted to our research partners to advance their post-processing of results previously computed on World Community Grid (BOINC was granted some as well)

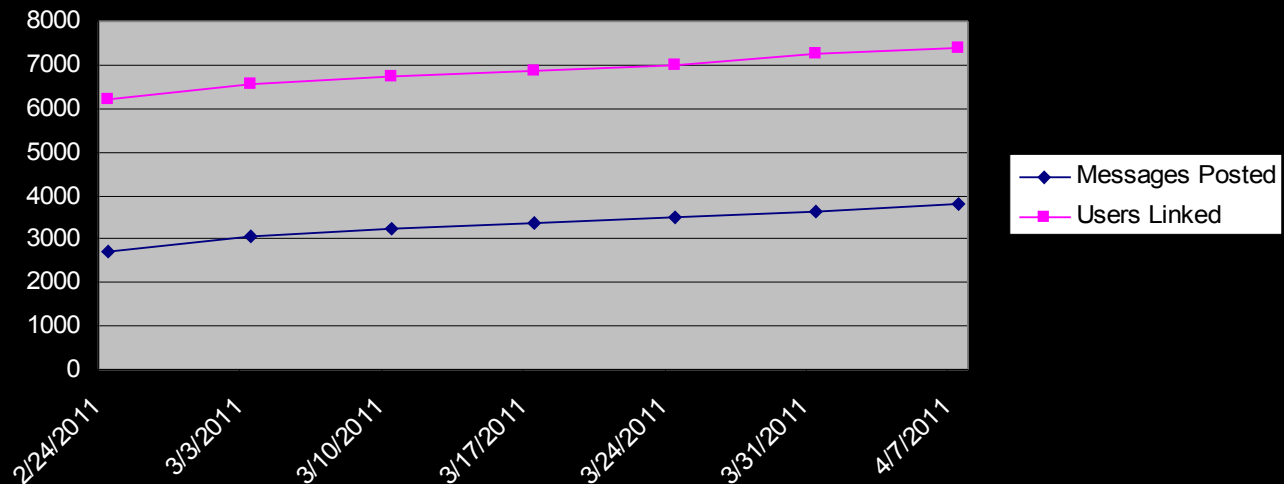




## Social Media

- In December 2010, World Community Grid launched a new feature that enabled automated posting of messages for badges earned, weekly contribution and other items to the Facebook walls and Twitter feeds for volunteers who chose to participate.
- Great uptake:

Facebook and Twitter Usage



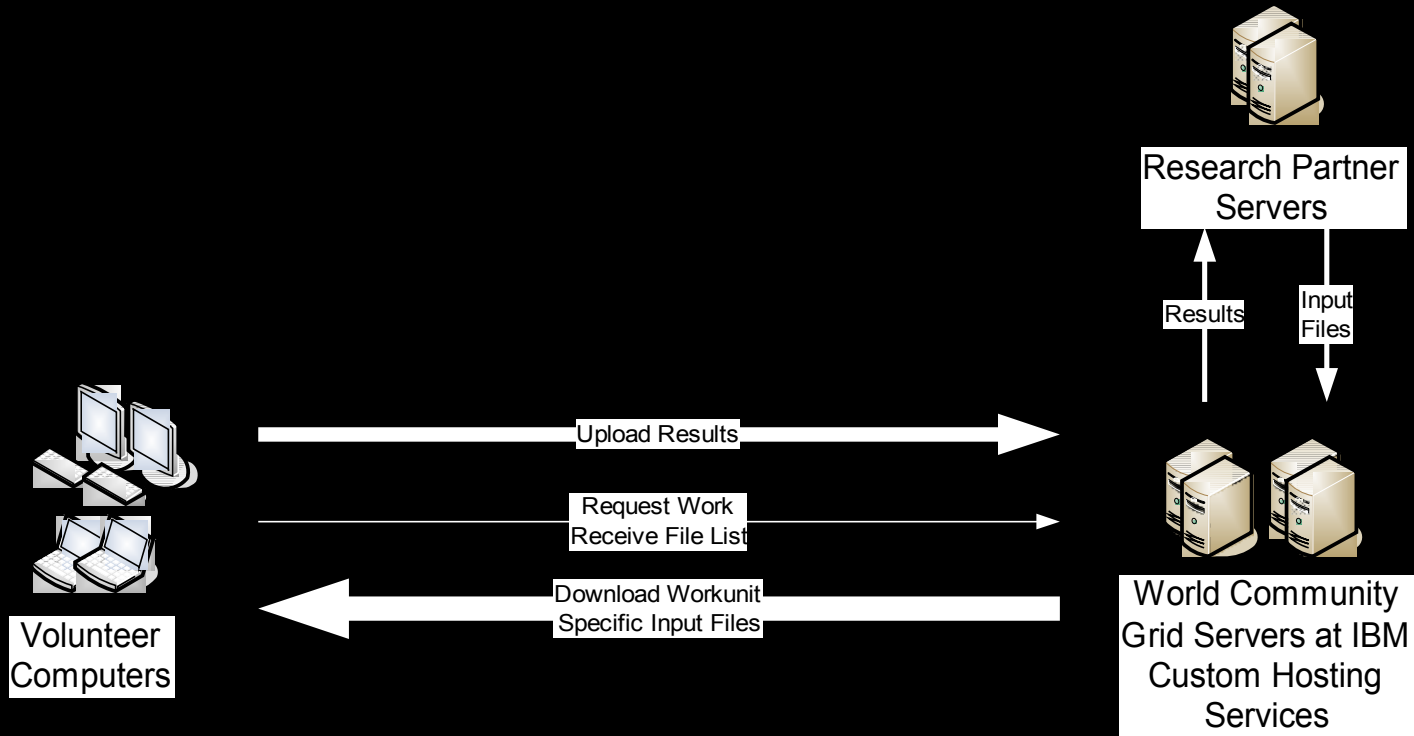
- Until Facebook deleted our app for violating terms of service in April. Facebook requires that users must explicitly interact with the message prior to it being posted – automated posting of standardized messages is not allowed.

## Lecture Series

- Every 3-4 Months we have a webcast where one of our affiliated research organization presents their research to the volunteer community
  - December 1: 2010, Dr. Alex Perryman, The Scripps Research Institute, San Jose, CA, USA presented FightAIDS@Home
  - April 22, 2011: Dr. Alan Aspuru-Guzik, Harvard University, Boston, MA, USA presented The Clean Energy Project
  - August 12, 2011 – Dr. Robert Malmstrom: The University of Texas Medical Branch, Galveston, Texas, USA presented The Discovering Dengue Drugs - Together
  
- About 125 volunteers join the live webcast
  
- The webcasts are then uploaded to YouTube. The replays of each have been viewed over 3,500 times.
  - <http://www.youtube.com/user/WCGrid>

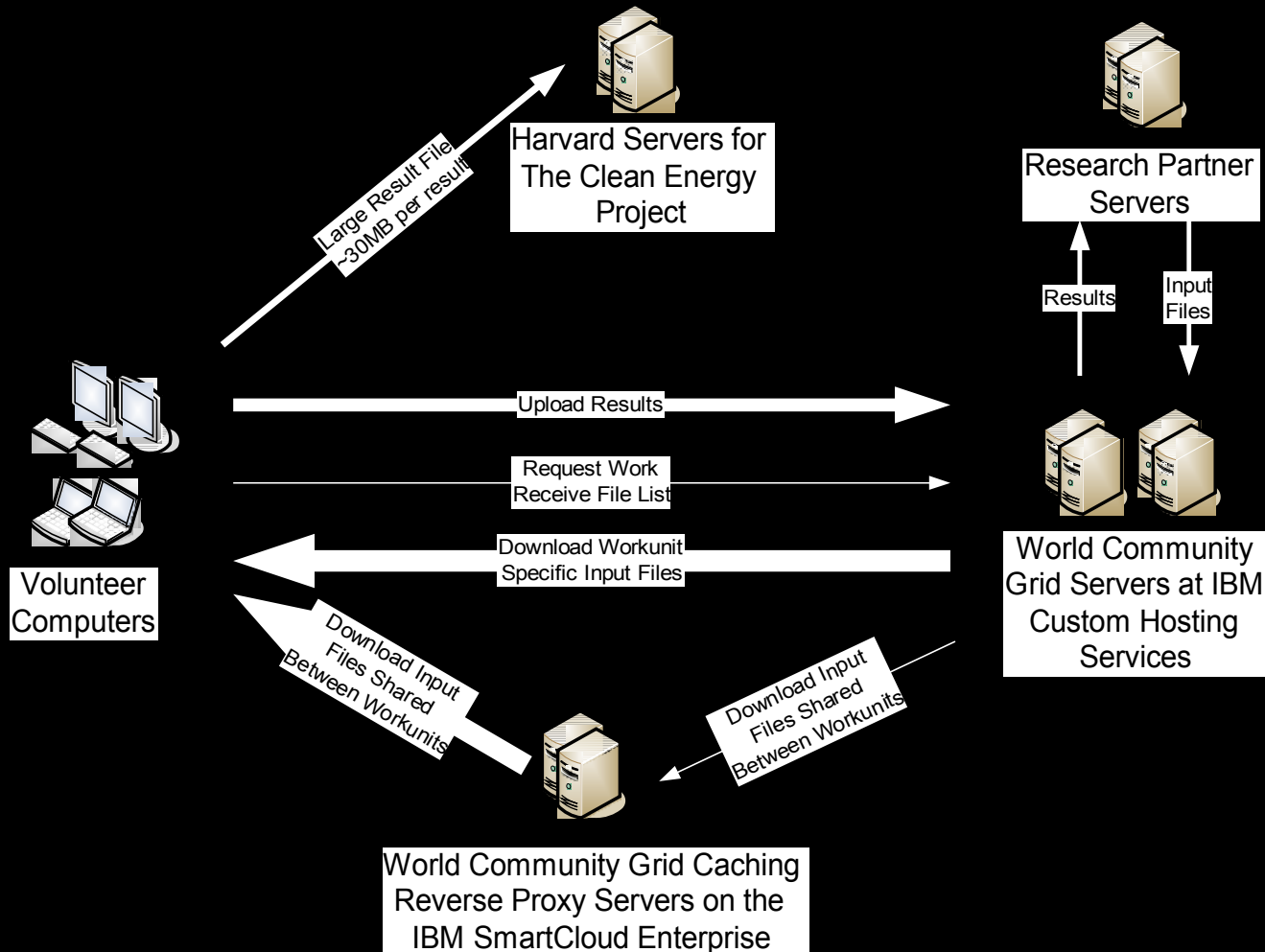
# Changing How Data is Distributed and Uploaded

- Our bandwidth use has grown as the available compute power has increased and as we have taken on projects that require larger input and result data sizes
- Originally:



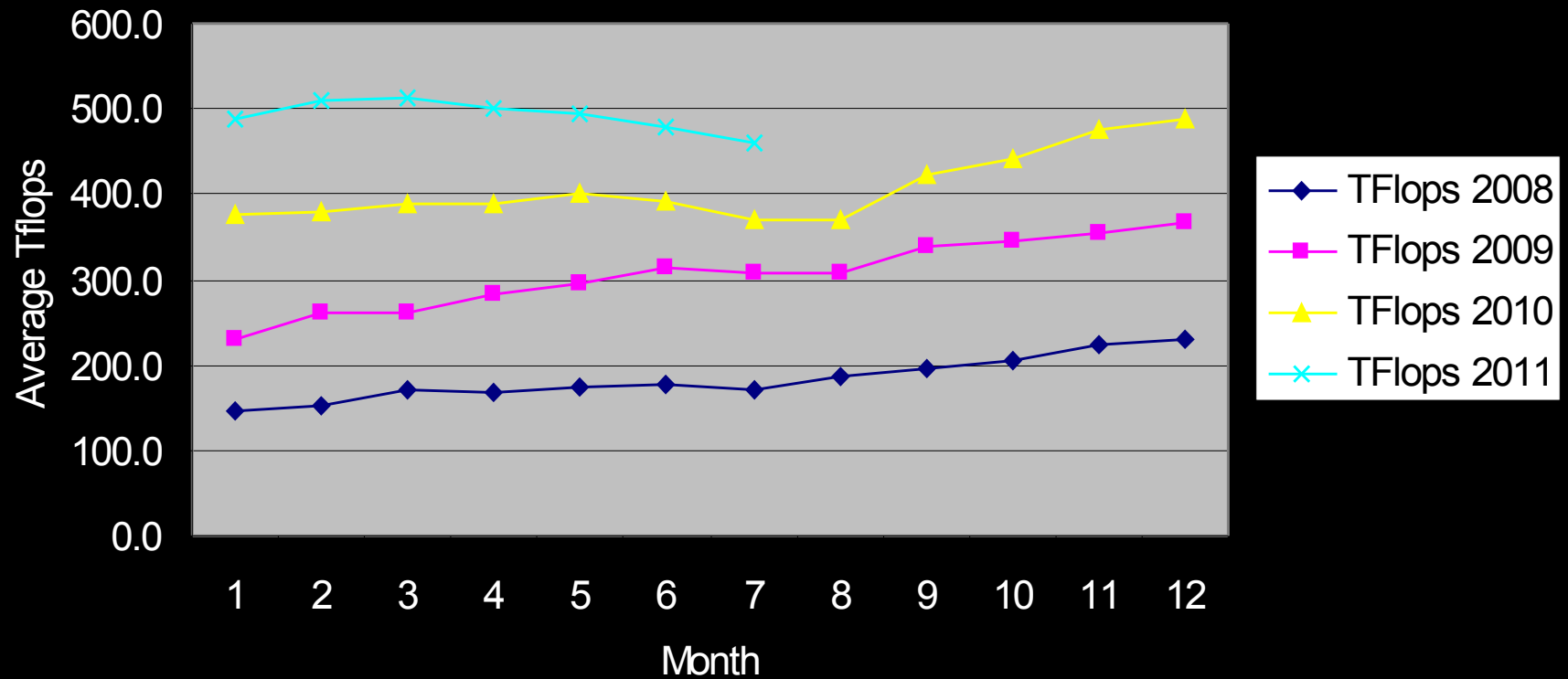
# Changing How Data is Distributed and Uploaded

- Now:



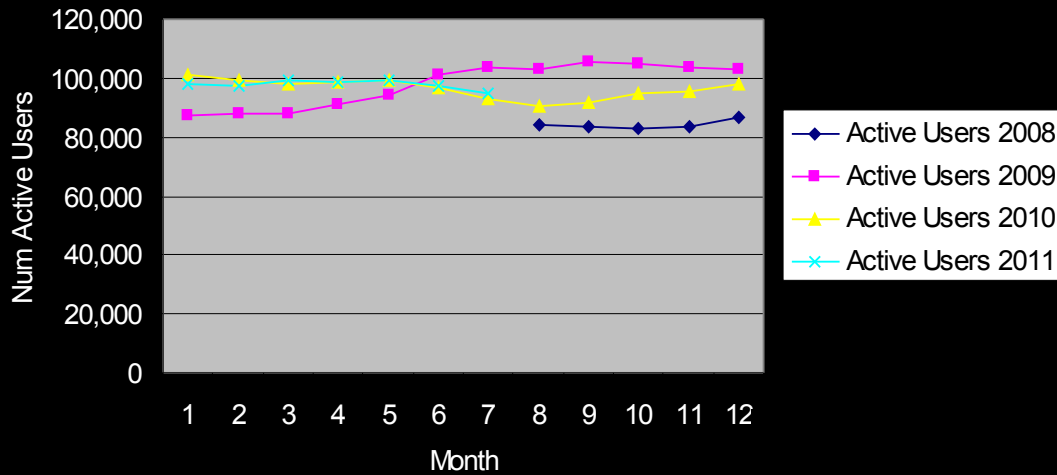
## Growth - Flops

TFlops by Year/Month

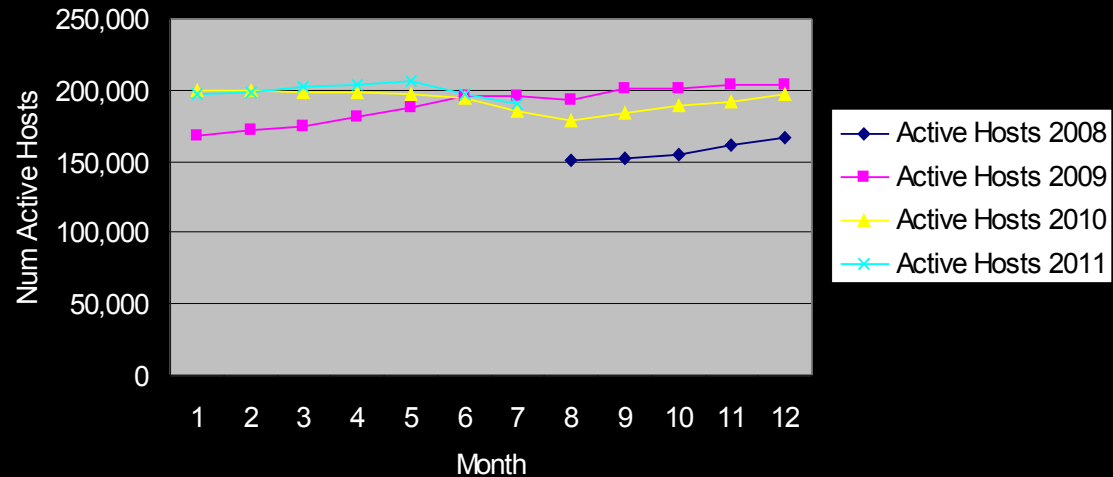


# Growth – Active Users and Devices

Active Users by Year/Month



Active Hosts by Year/Month



# Questions?