**Prerequisite:**

* Having Azure PASS pre-distributed
* Windows Azure Sign-up Instructions
* List of requisite software including get two browsers, Azure Explorer, Cygwin (optional).
* course content Pre-downloaded including Scripts, Data, and Code
* Instructions for installing CLI, Azure SDK on computer with pointers to technical papers.

**Agenda:**

1. 09:00 Welcome 30 minutes, accounts logistics.
2. 09:15 Introduction to Windows Azure:  [60 min] No more than 30 slides and a portal tour. Outline of Use Scenarios and Design Patterns for Day 1

10:15 break

1. 10:30 Windows Azure Website intro + Lab => short, perhaps 2 examples:  create a blog, deploy a simple Python web App.  [Lab 45 min]
2. 11:30 Windows Azure Virtual Machine => pre-canned class VM with all pre-installed tools, IPython notebook pre-configured, auto starts.   [Lab]  [0.5 hours to start copying VM from VM depot]
3. 12:00 Lunch and discussions
4. 01:00 VM lab continued, run through data clustering, pandas, and other scientific examples [1 hour]

02:00 break

1. 02:15 Windows Azure Storage [Python] mostly. [1 hour] reuse their existing IPython notebook to try out the storage Commands and CLI.  Attach a disk to a VM for Windows and Linux.
2. Notes:  <http://haishibai.blogspot.com/search?q=file+share>  VPN file share discussion optional per Dan’s request.

03:15 break

1. 03:30 Understanding and Scaling Cloud Services:  Weather demo, Blast demo.  <http://blaster.cloudapp.net/>

Then a lab on plugging in your own EXE to run in a simple worker role scale out using Service Bus.  Python **Service Bus** client with Blast worker. (Is this appropriate).  The lab will ask students to join the class blast cluster by adding a service bus key, create a new topic and run python.exe worker.py.  Then, submit jobs through the blaster.cloudapp.net portal.

1. 04:45 Conclusion and discussions.

Day 2: Big compute ½ day

1. 09:00 Recap
2. 09:15 Use Scenarios and Design Patterns for Day 2
3. 09:45 **Windows** HPC Server 2012 Cluster in the Cloud and On-premise.
4. 10:15 break
5. 10:30 HPC demos: R and Matlab.
6. 11:15 Demo of auto Deploying **Linux** IPython Cluster.

12:00 Lunch and discussions

1. 01:00 Data Analytics using Excel (demo from data market, azure, power tools) and Layerscape.

02:15 Break

1. 02:30 Big Data analytics using HDInsight and SPARK/SHARK

03:30 break

1. 03:45 Kafka and STORM interactive demo:  Have students look through Kafka code and run client from their VM to send messages to the big screen.
2. 04:45 Conclusion and discussions.