

Software Engineering for Economists

Cloud Computing

Agenda

- ▶ Basics
- ▶ Tutorials
 - ▶ Virtual Machine
 - ▶ Storage Accounts

Basics

What is Cloud Computing?

On-demand services, delivered over the network.

Relevant Services:

- ▶ Infrastructure Services
 - ▶ Virtual Machines
- ▶ Data Services
 - ▶ Storage Accounts

Why in Economic Research?

- ▶ Big Compute

- ▶ Estimation

- ▶ Simulation

- ▶ Perturbation

- ▶ Big Data

- ▶ Storage

- ▶ Collection

- ▶ Collaboration

Providers

Google Compute Engine <https://cloud.google.com>

Amazon Web Services <https://aws.amazon.com>

Microsoft Azure <http://azure.microsoft.com>

Microsoft Azure

Resources

Microsoft Azure <http://azure.microsoft.com>

Python Development <http://azure.microsoft.com/python>

Microsoft Research <http://research.microsoft.com/azure>

▶ Training Events

▶ Webinars

▶ Online Tutorials

▶ Award Program

Figure: Microsoft Azure Management Portal

The screenshot displays the Microsoft Azure Management Portal interface. The top navigation bar includes the 'Microsoft Azure' logo and a dropdown menu, along with the user's email 'eisenhauer@policy-lab.org' and a profile icon. The left sidebar contains a list of service categories: ALL ITEMS, WEB APPS, VIRTUAL MACHINES, MOBILE SERVICES, CLOUD SERVICES, SQL DATABASES, STORAGE, HDINSIGHT, MEDIA SERVICES, SERVICE BUS, VISUAL STUDIO ONLINE, CACHE, and BIZTALK SERVICES. The main content area is titled 'all items' and displays a table of resources. The table has columns for NAME, TYPE, STATUS, SUBSCRIPTION, and LOCATION. The resources listed are: heckman007 (Cloud service, Running), portalvhds9c28cb41xx63 (Storage Account, Online), heckman007 (Virtual machine, Running), and Default Directory (Directory, Active). At the bottom of the interface, there is a '+ NEW' button, a 'DELETE' button with a trash icon, and a help icon.

NAME	TYPE	STATUS	SUBSCRIPTION	LOCATION
heckman007	Cloud service	Running	Microsoft Azure Sponsor...	South Central US
portalvhds9c28cb41xx63	Storage Account	Online	Microsoft Azure Sponsor...	South Central US
heckman007	Virtual machine	Running	Microsoft Azure Sponsor...	South Central US
Default Directory	Directory	Active	Shared by all Default Dir...	United States

Tutorials

Virtual Machines

What to expect?

- ▶ Creating
 - ▶ Microsoft Azure Management Portal
- ▶ Accessing and Working
 - ▶ Basics of SSH

Storage Accounts

What to expect?

- ▶ Creating
 - ▶ Microsoft Azure Management Portal
- ▶ Managing
 - ▶ Microsoft Azure SDK for Python

Microsoft Azure SDK for Python

- ▶ Set of Python packages that make it easy to access the Microsoft Azure components such as Service Management, Storage, and Service Bus.

Website: <https://github.com/Azure/azure-sdk-for-python>

Figure: Blob Service Concepts

