University of Toronto
Engineering

UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING

DEEP 2014 – Cloud Computing & Security

Module 1 – What is Cloud Computing?

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Module 1 - What Is Cloud Computing?

- Ideas?

- Cloud computing is not a well-defined field! It could include:

  - *A simple client-server communication*

  - *An ad-hoc peer-to-peer*

  - *Distributed computing*

  - *"Virtual" Infrastructure*

- The definition we'll use in this class:

  - ***"Sharing computational resources"***

Module 1 - What Is Cloud Computing?

SaaS

- "Software as a Service"

  - *SaaS provider offers simple services or applications*

  - *Customer uses services or applications running on the cloud*

  - *Applications accessed through thin client interface*

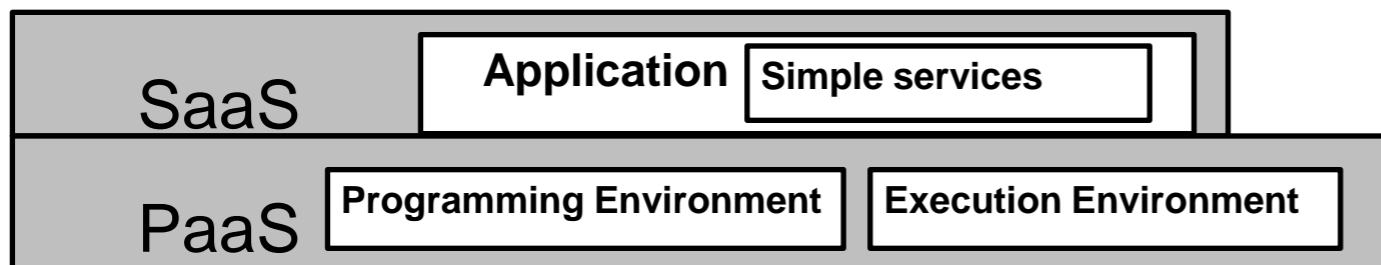 - *Examples: Gmail, Quicken Online, Google Docs*

SaaS	Application	Simple services

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PaaS

- Platform as a Service

  - *PaaS provider offers platform services*

  - *Programmer uses environment to develop, test, and deploy applications*

  - *PaaS supports many applications*
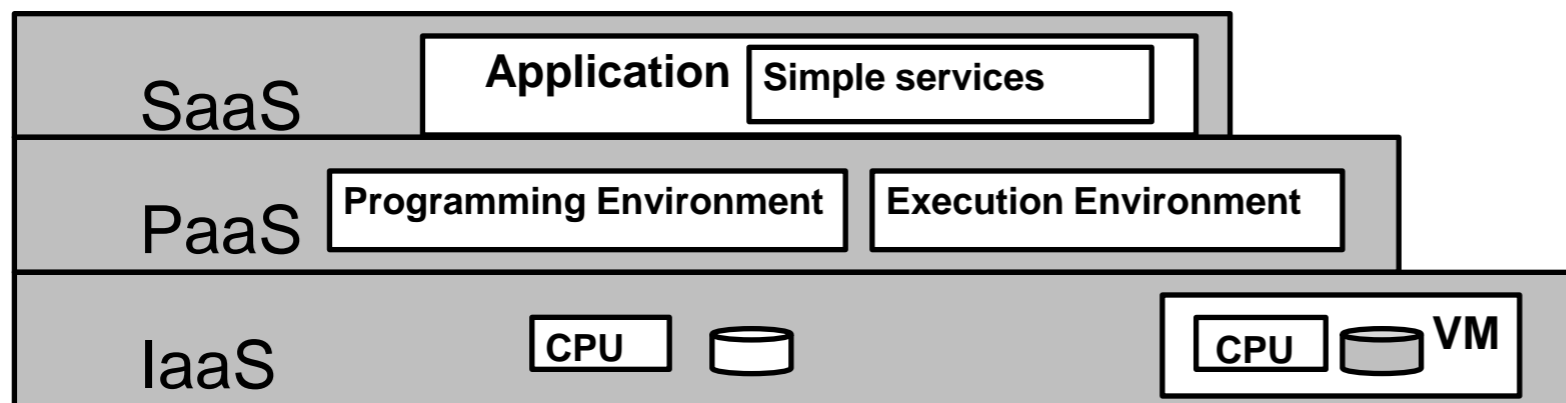
  - *Examples: Google App Engine*

SaaS	Application	Simple services

PaaS	Programming Environment	Execution Environment

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IaaS

- Infrastructure as a Service

  - *IaaS provider offers virtual computing resources*

  - *Customer can deploy and run arbitrary software*

  - *Customer does not manage/control infrastructure*

  - *Examples: Amazon Elastic Cloud*

SaaS	Application	Simple services		
PaaS	Programming Environment		Execution Environment	
IaaS	CPU		CPU	VM

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Client-Server Model

- A client is the end user (you)

  - *All a client needs is a network connexion and a way to interact with the user*

  - *It could be a browser on your computer, your smart phone, or even your refrigerator!*

- A server is the computer or network to which you connect:

  - *At its most basic, a server is also just a computer with a network connexion!*

- Head over to your favourite site...

  - *You've just contacted a server, using your browser as a client!*

  - *In module 3, we'll learn how this all works...*

Module 1 - What Is Cloud Computing?

Let's use some cloud services!

- Go to
  https://docs.google.com/document/d/17Qq3YlFvI0d6Fr7c_A7uu2aFigqcYyp8H2T_nH0O2Qc/edit?usp=sharing

  - *Add your name & something funny!*

  - *You've just used Software as a Service!*

- We'll be using IaaS to make our own SaaS throughout the week!

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Thanks!

Questions?
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