

Scalable and Elastic – Real-world Implementation Case Study

Project: TaxSmile – Tax Submission Portal

➤ Initial Deployment:

- On-Premise Setup (Feb): 2 Servers
- Load & Stress Testing (Apr): Added 3 More Servers

➤ Pre-Deployment Planning:

1. Approvals from Stakeholders – Directors, COO, CTO
2. Order Placement – Vendor from Germany
3. Server Retrofitting – 3 Network Engineering Teams, 24/7 Ops
4. Infrastructure – Room Rental, Power Supply Setup

➤ Observations:

- Traffic Expected to Drop in Aug

➤ Cloud Transition:

The screenshot shows a Zoom meeting window. The main content is a presentation slide titled "Scalable and Elastic". The slide text is as follows:

TaxSmile — Tax submission portal — On Prem — 2 Servers — Feb Arch — Apr — Load Testing and Stress Testing — 3 More Servers

- 1.Approvals from the stake holders — Directors, COO, CTO
- 2.Place the Order — Vendor — Germany
- 3.Retro the servers — Network Engs — 24/7 — 3 Teams + 1 Team
- 4.Rent for the room
- 5.Power Supply

Apr — Aug — Traffic will go down

TaxSmile — Tax submission portal — Cloud Solution — 2 Servers — Feb Azure Portal — text box — 2 — Save button — 1 min

The slide is displayed in a Zoom window with a sidebar on the left showing a file explorer and a participant list on the right. The meeting title is "Data Engineering Batch 5 - Jul 2025".

The screenshot shows a Zoom meeting window. The main content is a presentation slide titled "On-site, IaaS, PaaS, SaaS". The slide displays a comparison of cloud service models across various layers of the technology stack.

On-site	IaaS	PaaS	SaaS
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

Legend:

- You manage (Blue)
- Service provider manages (Red)

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Migrated to Azure Cloud

Setup: 2 Servers (Feb)

Simple Portal Example: 2 text boxes + 1 Save button → Executes in 1 min

Cloud Service Models – Responsibility Matrix

► On-Premise:

You manage everything from Networking to Applications.

► Infrastructure as a Service (IaaS):

You manage: Applications, Data, Runtime, Middleware, OS

Provider manages: Virtualization, Servers, Storage, Networking

► Platform as a Service (PaaS):

You manage: Applications, Data

Provider manages: Runtime, Middleware, OS, Virtualization, Servers, Storage, Networking

► Software as a Service (SaaS):

Provider manages everything – You only manage Application usage.



Key Takeaway:

As we move from On-Prem to SaaS, the responsibility shifts from the user to the provider, reducing management overhead and increasing scalability.

