

Clouds

Overlay Virtual Networks

Software Defined Networking

**What Really Matters
Is Your Business**

The Do's and Don'ts Cloud Building

Who is Ivan Pepelnjak (@ioshints)

- Networking engineer since 1985
- Chief Technology Advisor
@ NIL Data Communications
- Consultant, blogger, book and webinar author
- Currently teaching “Scalable Web Application Design” at University of Ljubljana



Focus:

- Large-scale data centers,
- Network virtualization
- Scalable designs and architectures

Why Is Ivan Talking About Clouds?

NIL Data Communications

- System integrator since 1989
- Building Internet and training ISPs since 1993
- Offering cloud services since 2001
- Cisco Cloud Partner (Cloud Builder)
- Cisco's Innovation Award for our learning services

Flip-IT (IT-as-a-Service)

- In production since July 2009
- Deployments in dozens of countries worldwide

Building a Cloud in Three Easy Steps



**Step 1:
Reach the Executive
Decision**



Step 2: Delegate to Engineering

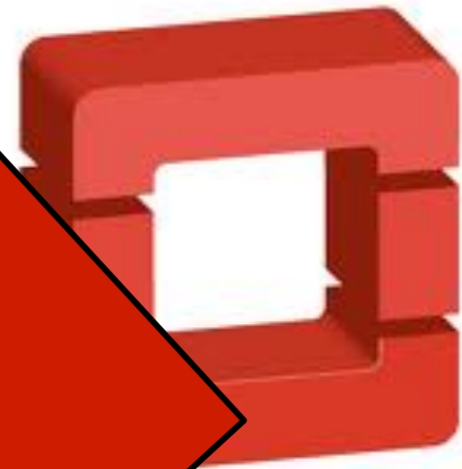


Step 3: Select a Product





vmware®



Openstack™



Service product



Windows Server
Hyper-V™



WRONG

What Can You Sell?

There's More to Clouds Than Virtual Machines

Infrastructure-as-a-Service

There's More to Clouds Than Virtual Machines

Software-as-a-Service

Platform-as-a-Service

Infrastructure-as-a-Service

There's More to Clouds Than Virtual Machines

Software-as-a-Service

Platform-as-a-Service

Infrastructure-as-a-Service

Storage-aaS

Backup-aaS

There's More to Clouds Than Virtual Machines

IT-as-a-Service

Software-as-a-Service

Platform-as-a-Service

Infrastructure-as-a-Service

Storage-aaS

Backup-aaS

DR-as-a-Service

Monitoring-as-a-Service

What Will Your Customers Buy?

How Are You Different?



Focus!



Build or Buy?

Clouds

are all about

On-Demand Services

and

Orchestration

The Path So Far

- Internal resourcing
- Market research
- Service definition (focus on added value)
- Build or Buy?
- Find the orchestration system

**And Now We Can
Discuss Technologies**

Be Vendor Agnostic

Use Dedicated Infrastructure

Standardize



Keep It Simple



Be Conservative



**When In Doubt,
Focus on
Business Needs**

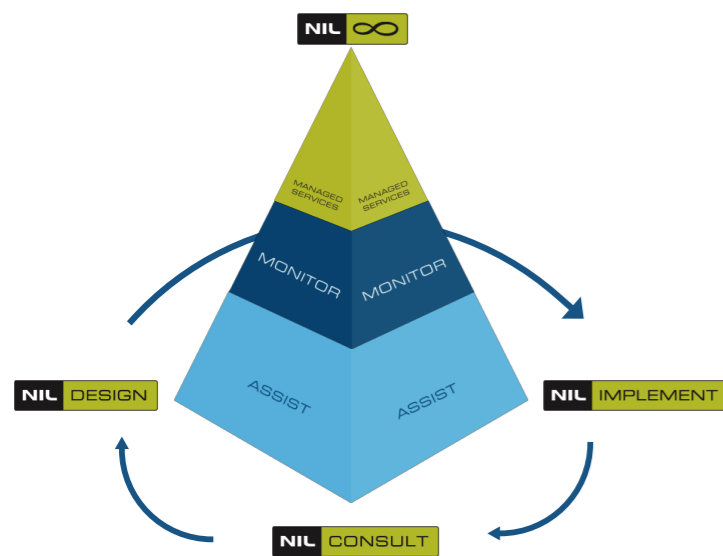
Available Now

usually beats

Perfect



Partner!



The Path Will Be Long

START NOW



A young child stands on a floor with a large map of Europe. The map is drawn in grey on a light-colored tiled floor. Several cities are labeled: 'Paris' (partially visible), 'London', and 'Brussel'. A network switch or router is placed on the floor near the 'Brussel' label, with several colorful cables (red, blue, yellow, green) plugged into it. Another network device is visible in the upper right corner. The child is wearing a white t-shirt with red sleeves and dark pants. The overall scene suggests a network experiment or a lesson about geography and technology.

Questions?

Send them to ip@nil.com or [@ioshints](https://twitter.com/ioshints)