

## Networking the Biggest Challenge in Hybrid Cloud Deployment

**Authors :** Aishwarya Shekhar, Devesh Kumar Srivastava

**Abstract :** Cloud computing has emerged as a promising direction for cost efficient and reliable service delivery across data communication networks. The dynamic location of service facilities and the virtualization of hardware and software elements are stressing the communication networks and protocols, especially when data centres are interconnected through the internet. Although the computing aspects of cloud technologies have been largely investigated, lower attention has been devoted to the networking services without involving IT operating overhead. Cloud computing has enabled elastic and transparent access to infrastructure services without involving IT operating overhead. Virtualization has been a key enabler for cloud computing. While resource virtualization and service abstraction have been widely investigated, networking in cloud remains a difficult puzzle. Even though network has significant role in facilitating hybrid cloud scenarios, it hasn't received much attention in research community until recently. We propose Network as a Service (NaaS), which forms the basis of unifying public and private clouds. In this paper, we identify various challenges in adoption of hybrid cloud. We discuss the design and implementation of a cloud platform.

**Keywords :** cloud computing, networking, infrastructure, hybrid cloud, open stack, naas

**Conference Title :** ICNCS 2015 : International Conference on Network and Computer Science

**Conference Location :** Paris, France

**Conference Dates :** June 25-26, 2015