



Practical Solutions for Interconnecting Sites, Data Centres and Cloud Services

Andy Duncan

IT Interface Manager, Spitfire



Introduction

As Application complexity increases how do we provide cohesive, easy to manage, effective connectivity to support the application and business requirements.

Business and Technological Trends

- Adoption of Hosted & Cloud Services
- Colocation
- Hybrid Cloud
- Virtualisation & Hyper-convergence
- Increased Compliance and Legislation
- Home working
- Mobilisation



Demands on Infrastructure

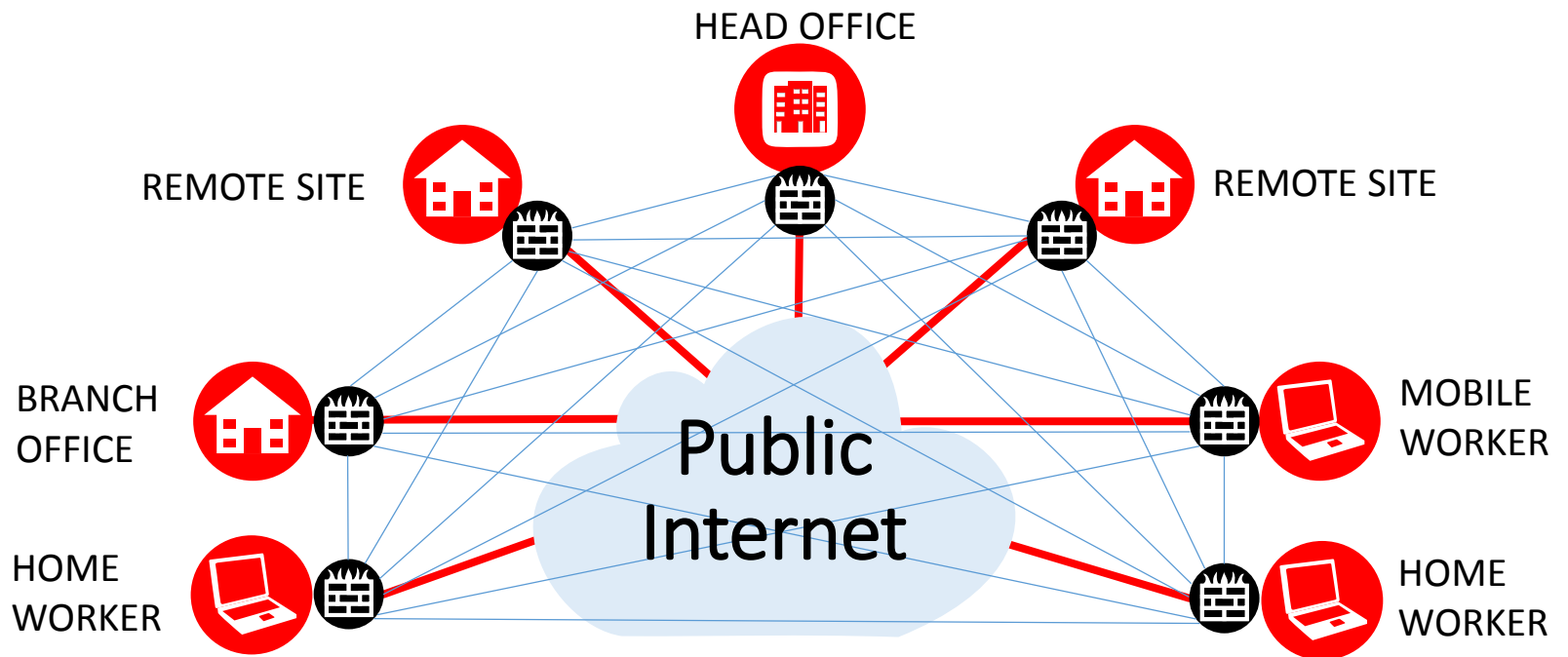
- Dependency on Internet connectivity
- LAN and WAN security
- High speed, high performance WAN
- Low cost



IT Partner Challenges

- Delivering applications with high performance requirements over internet circuits
- Interconnecting sites reliably and securely
- Managing security across multiple sites
- Avoiding high cost specialist hardware and licenses
- Connecting to Cloud Service Providers with consistent performance and effective security

Option 1: IPsec VPN



Option 2: Point to Point circuits

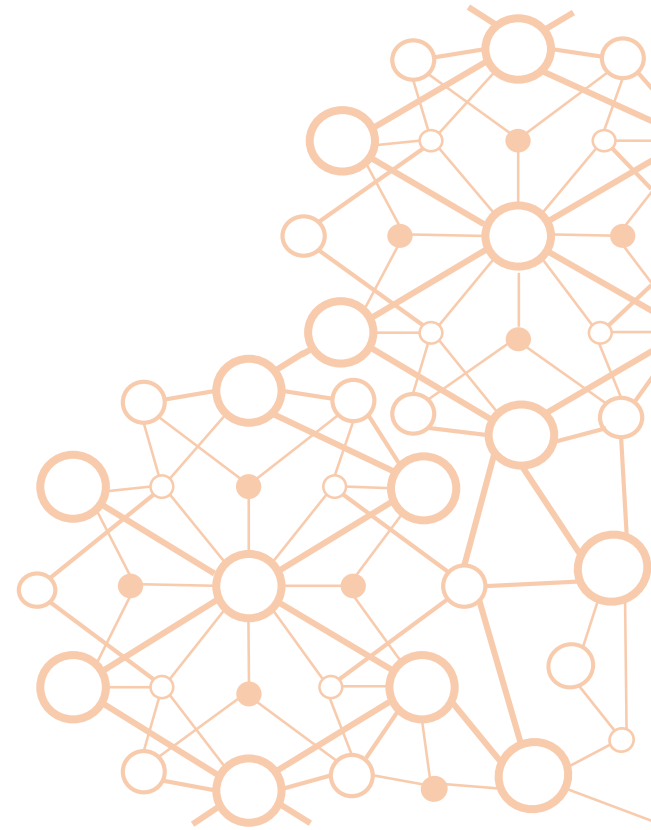
- Provide a layer 2 connection between 2 sites
- Dedicated Ethernet P2P circuit provides:
 - Consistent high performance
 - Secure private circuit
 - No VPN performance overhead
 - No specialist hardware requirement
- However:
 - Expensive in comparison to internet circuits (especially where distance exceeds 35km)
 - In-flexible (what if you close/move an office?)
 - Offers no scalability if you add sites
 - Additional circuit required for Internet access

Option 3: SD-WAN

- Provides a centrally managed, application focussed connected WAN
- SD-WAN provides:
 - Simplified management of complex WAN
 - Ability to utilise all connectivity methods
 - Scalability
- **However:**
 - Any performance is only as good as the underlying network infrastructure
 - Adds a costly overhead in terms of hardware/license
 - New technology, very high M&As in the industry

Option 4: MPLS Virtual Private Network

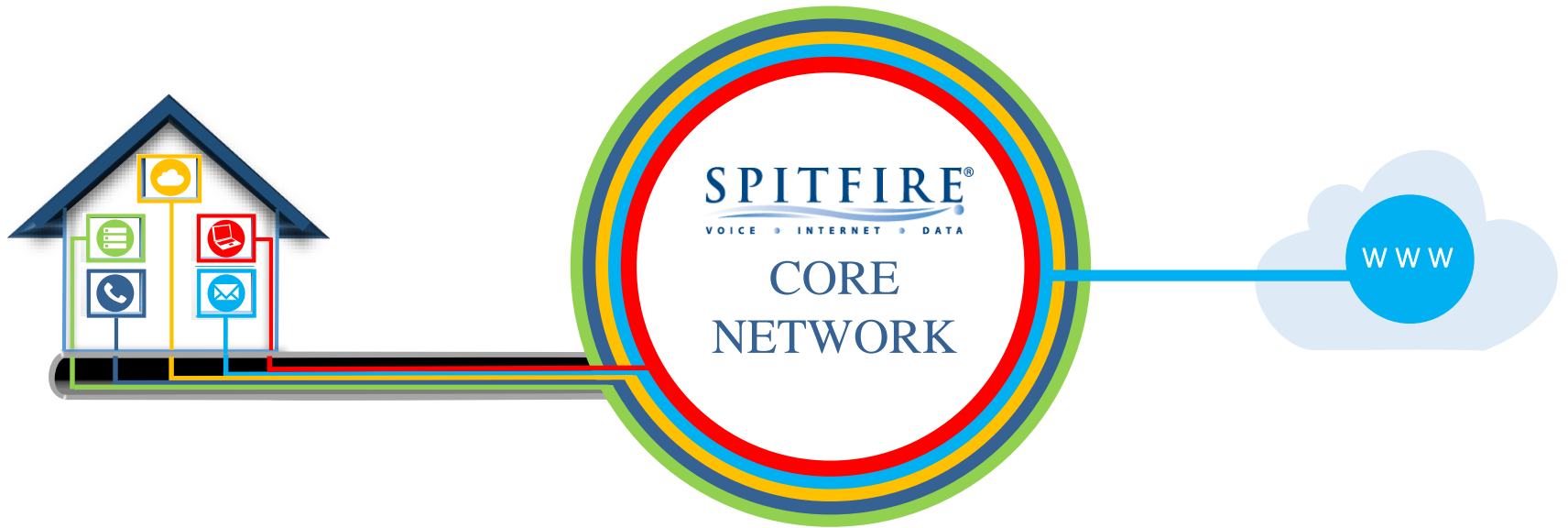
- It's just for large corporates
- It's expensive
- It's complex



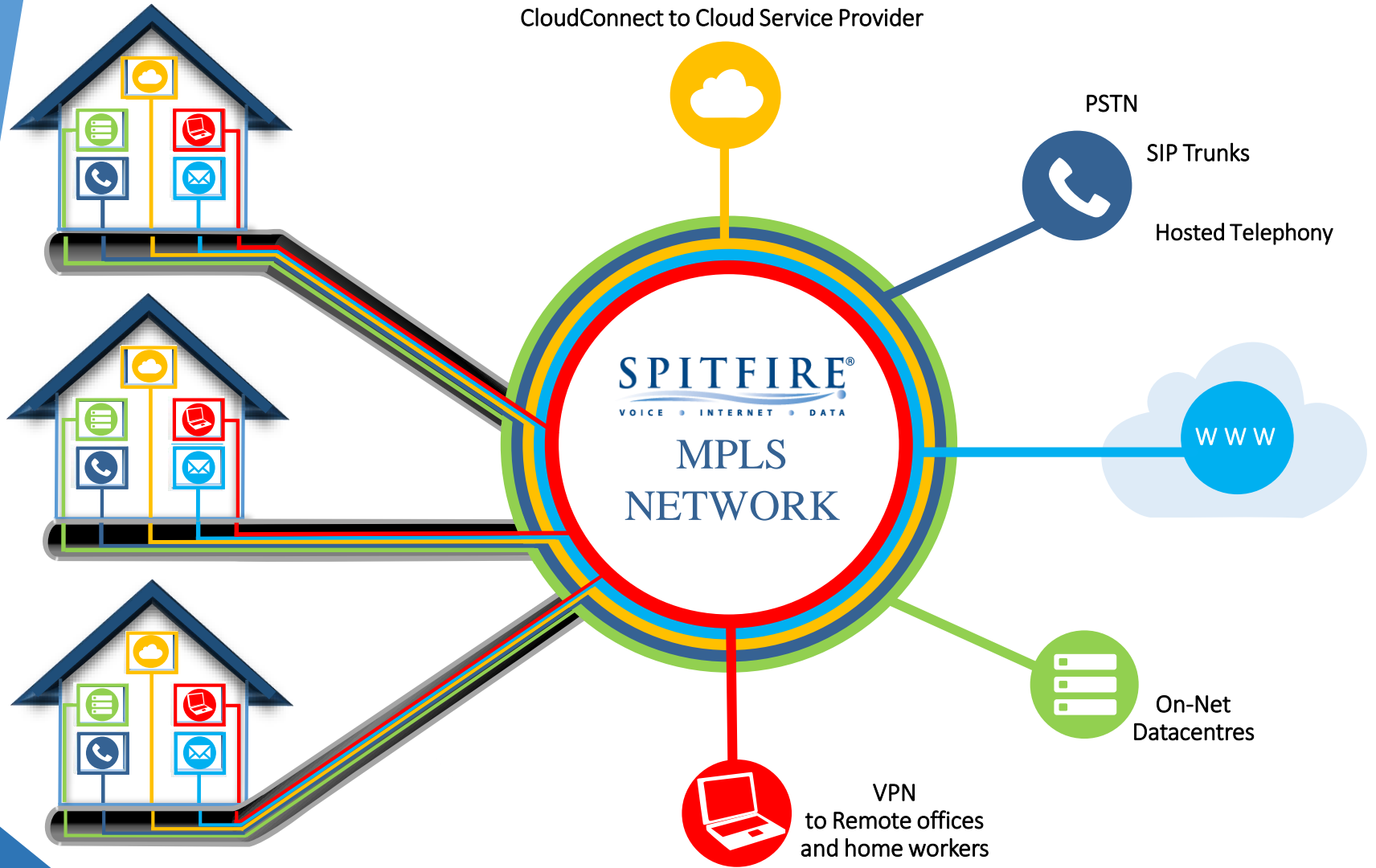
MPLS – your thoughts

- A customer replaces standalone internet circuits with an MPLS Virtual Private Network. Their monthly service charges will typically...
 - A: Be reduced or up to 10% higher,
 - B: Be between 10% and 25% higher, or
 - C: Be more than 25% higher?

MPLS



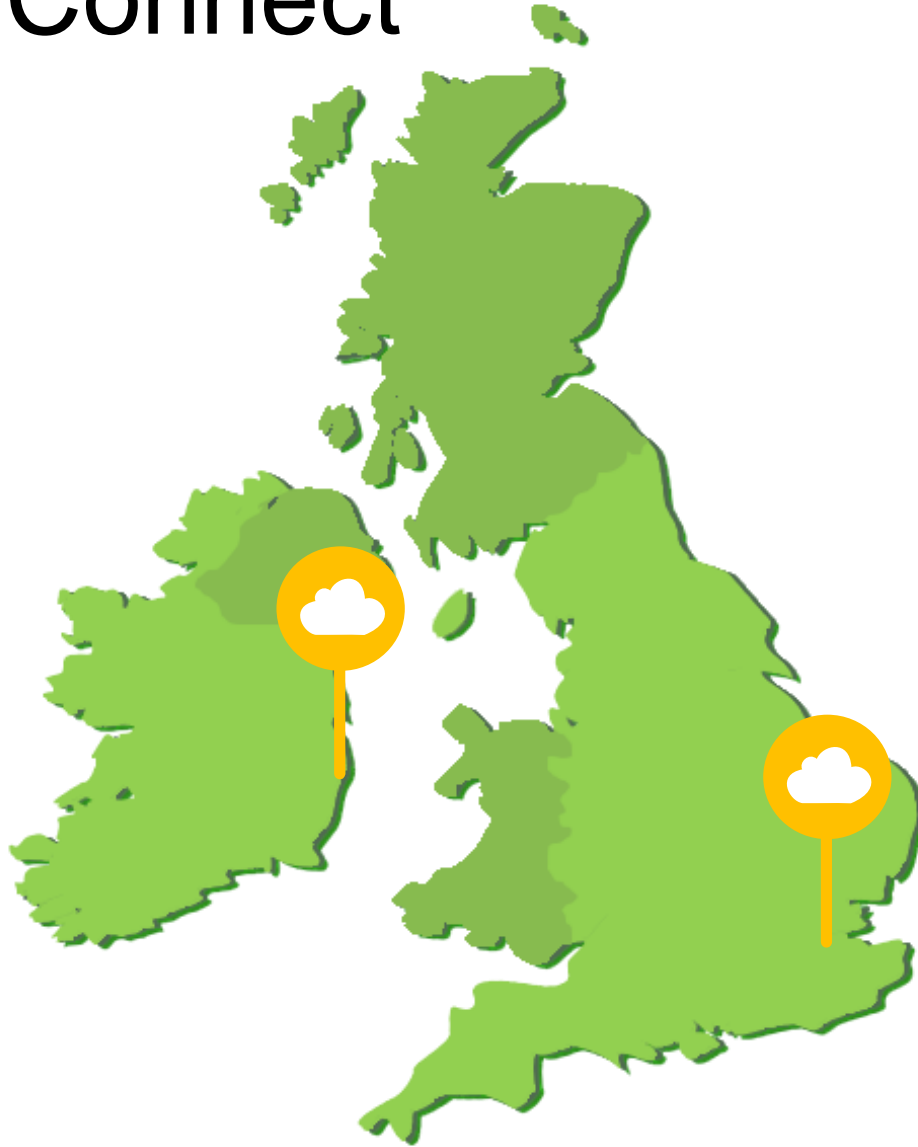
MPLS



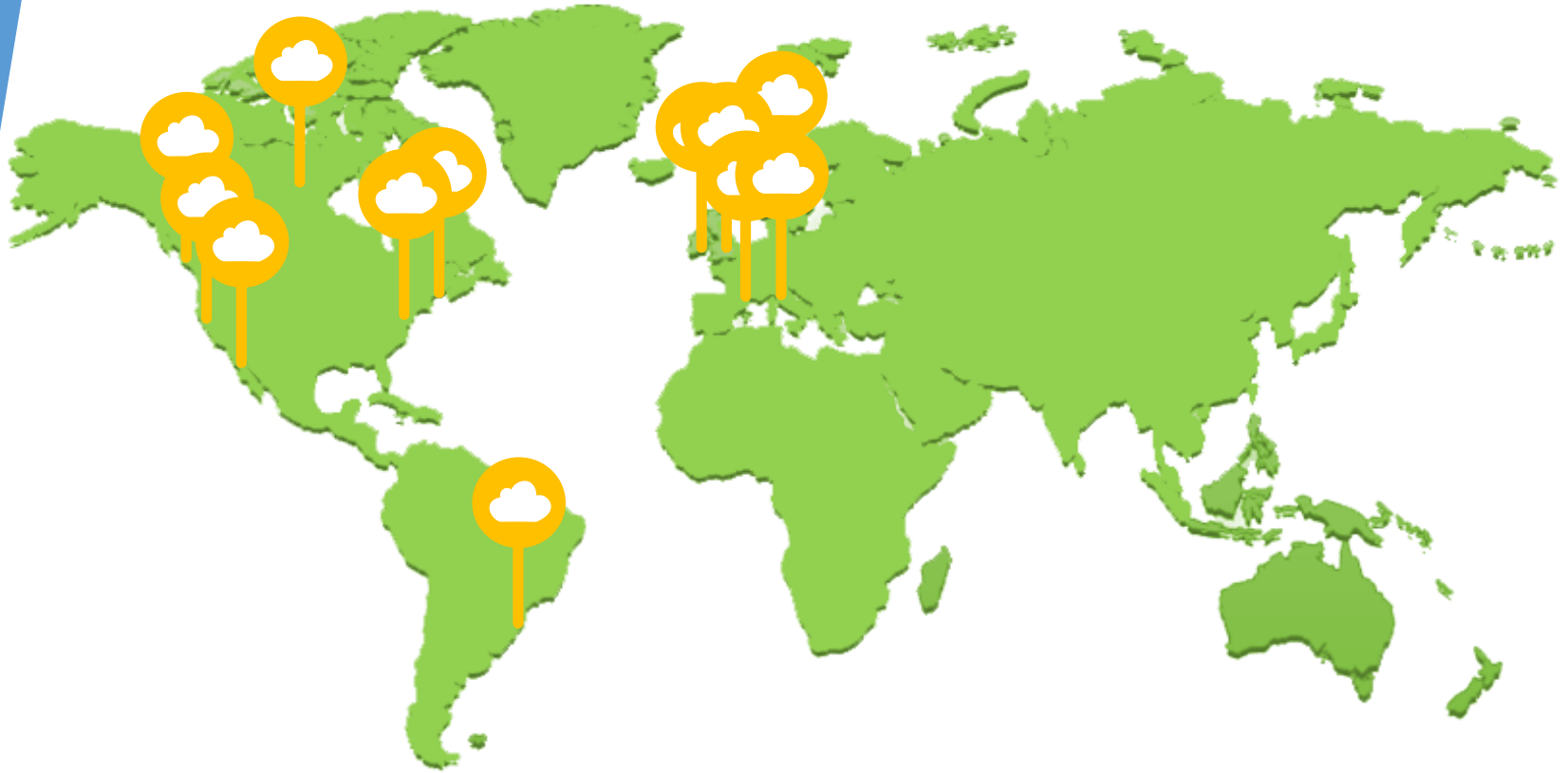
Cloud Connect



Cloud Connect



Cloud Connect



MPLS Benefits

- All voice, data centre and Cloud services are now privately connected to your customer's LAN
- Consistent bandwidth, low latency, packet loss and jitter between sites
- Centralised internet breakout – only one egress point to secure
- No IPsec VPNs to license and manage
- Minimal support requirement
- SLA driven service
- Inherent network resilience
- Can connect broadband or Ethernet circuits from multiple access providers

MPLS Myths

- **It's just for large corporates**
 - MPLS can be a cost effective solution, even for SMEs with one or two sites
- **It's expensive**
 - By taking advantage of UK national wholesale access, most MPLS services are comparable monthly rental charges to the equivalent standalone internet circuits
- **It's complex**
 - It's as simple as defining LAN subnets. Spitfire does all the configuration for you and manages any future changes



So what?

- MPLS provides practical, cost effective connectivity between sites, data centres and cloud services to meet the growing demands of your organisation

