



EQUINIX

WHERE OPPORTUNITY CONNECTS

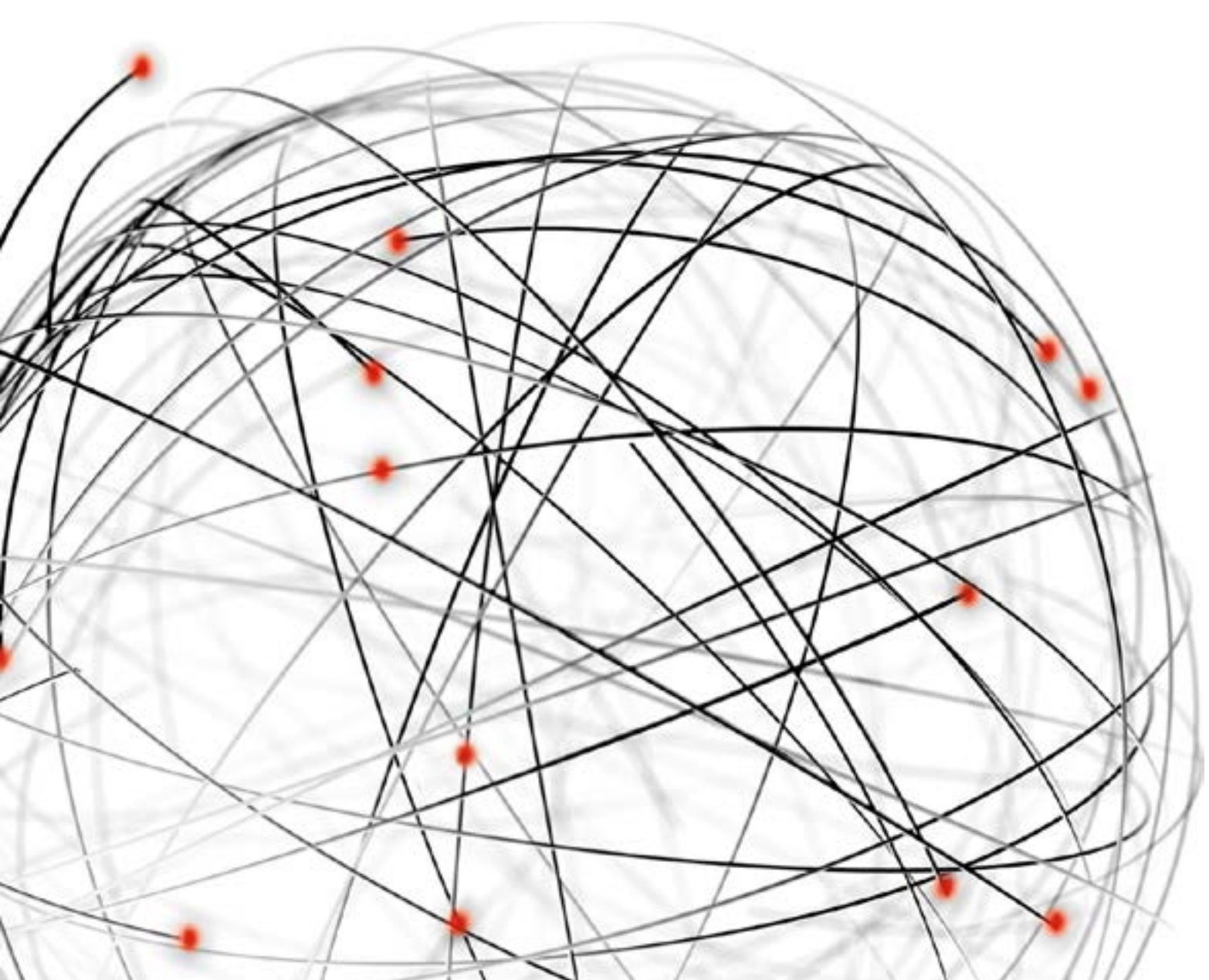


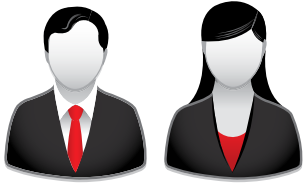



TABLE OF CONTENTS

Interconnection Oriented Architecture™ (IOA™) Cheat Sheet

IOA™ What To Target.....	1
IOA™ How To Target.....	2

INTERCONNECTION ORIENTED ARCHITECTURE™ (IOA™) CHEAT SHEET





What to Target

USE CASE	PROBLEM SCENARIO	PAIN	ROOT CAUSE	SYMPTOMS TO VALIDATE
 <p>People</p>	Interconnecting Employees, Customers and Partners	<p>User Experience – Poor or inconsistent user experience creates frustration and lost revenue opportunities.</p> <p>Economies of Scope and Scale – Current end-user connectivity architecture does not scale cost-effectively. Fragmented delivery, lack of capabilities and increased security exposure, diminish user satisfaction.</p>	<p>Not Designed for Ubiquitous Nature of the Mobile, Virtual Worker or Digital Engagement of Customers – Demand for rich interconnection is exponentially growing and the current architecture is not sustainable.</p> <p>Network Architecture – MPLS is being used for MAN/WAN, point-to-point, carrier lock-in. This is legacy technology for a hardwired world.</p>	<ol style="list-style-type: none"> 1. Is your business looking to transform and differentiate customer engagement and experience? 2. How is your current ranking in quality of user experience surveys? 3. Do you find the need to keep adding unforecasted bandwidth and compute to improve key business applications' performance? 4. Do you find it hard to relocate teams? Are you able to keep the workplace up-to-date? 5. Do you see limitations in your current end-user architecture?
 <p>Locations</p>	Interconnecting Geographic Markets, Ecosystems and Business Locations	<p>Security and Complexity – Spaghetti topology to connect users and applications, and multiple hops and points of failure, present too much exposure for man-in-the-middle attacks.</p> <p>Speed to Capacity – Long lead times to add/remove/increase connectivity to multiple offices, channels, regions and data centers slows application and data access.</p>	<p>Lack of Flexibility – Location, application and infrastructure requirements are changing more frequently.</p> <p>Never Enough Notice – New networking is a long-term fix and can be limiting, whereas business requirements are the opposite.</p>	<ol style="list-style-type: none"> 1. How long does it take get connections to business locations? 2. If the location strategy has experienced an accelerated change, what then? 3. How much are you backhauling to your own data centers? 4. If you could rewire the enterprise (wave a wand), what would you do? 5. What if you could globally change anything, including the providers, as needed? With less multi-year tail?
 <p>Clouds</p>	Interconnecting Internal and External Cloud Services	<p>Integration and Security – There can be complexity and security issues with multi-tiered external connections across multiple clouds. Cloud sprawl is exponentially difficult to manage without proper architecture and controls.</p> <p>Lack of Variability – If the network is fixed and provisioned, then it cannot behave in a dynamic, tiered variable manner as cloud services do.</p>	<p>Siloed Networks – Siloed networks are not designed for dynamic, secure connections to networked services, a dependency for hybrid clouds.</p> <p>Fragmented Interconnection – Fixed network bindings to a subset of providers defeats the benefits of cloud ubiquity.</p>	<ol style="list-style-type: none"> 1. Are there active cloud adoption projects? (Are they growing?) 2. How will data move between private and cloud services? 3. Is multicloud management already a problem? 4. Where will the hub of cloud and partner interconnectivity reside? 5. Do you see limitations in your current cloud connectivity architecture?
 <p>Data</p>	Interconnecting Data for Accessibility and Real-Time Analytics	<p>Network Physics – Massive amounts of new datasets are increasingly being generated across dispersed locations and regions. It is impossible to consolidate the data in real time, conduct analytics and generate on-demand insight.</p> <p>Regulations and Compliance – Data security, privacy and residency requirements are being regulated. Legal liability is becoming a top-of-mind business risk.</p>	<p>Data Afterthought – Still thinking “storage for my application” rather than data-as-a-service? Then you need the interconnections required to make your storage more accessible to your applications.</p> <p>Data Sensitivity – With security, privacy laws and protection, error on the side of caution (i.e., do nothing). Your security architecture needs to evolve.</p>	<ol style="list-style-type: none"> 1. What is the business strategy around data? 2. How much data are you having to move around the network? What is preventing you from putting your data closer to where you need it? 3. How will your data be exchanged with partners? 4. How much bandwidth will data consume? 5. Do you see limitations in the IT and networking architectures?

INTERCONNECTION ORIENTED ARCHITECTURE™ (IOA™) CHEAT SHEET

How to Target



USE CASE	STAKEHOLDERS	WHAT TO TARGET	WHY IT IS BROKEN	HOW TO FIX LEVERAGING EQUINIX
 <p>People</p>	<p>Head of End-User Computing</p> <p>Head of Customer Experience</p> <p>Head of Application Development</p> <p>CIO/CTO/Chief Architect</p>	<p>Dispersion of Users and Apps and Regions</p> <p>Desktop-as-a-Service</p> <p>Virtual Workplace/Workspace in the Cloud</p> <p>Application Optimization including:</p> <ul style="list-style-type: none"> Unified Communications and Collaboration Apps Rich Internet Applications (RIA), Digital Content Mgmt (DCM), Electronic Design Automation (EDA) 	<p>Application and Network Topology</p> <p>Location, not user oriented</p> <p>Too many connection points</p> <p>Siloed solutions and integration (voice, video, desktop)</p> <p>Not designed for today's interactive app workload</p> <p>Spaghetti Topology – User-to-app-to-data across LAN/WAN</p> <p>New application designs need their copy of data within close proximity to perform optimally</p>	<p>User Experience Driven IOA</p> <p>Implement a Performance Hub Node as an extension of the network</p> <p>Bring the application to the user</p> <p>Unify endpoint security at the edge</p> <p>Improve quality of user experience</p> <p>Optimize distributed application performance</p> <p>Remove single carrier risk or vendor lock-in</p> <p>Single platform with choice</p>
 <p>Locations</p>	<p>Head of Enterprise Networking</p> <p>COO</p> <p>CIO/CTO/Chief Architect</p>	<p>Multiple Business Locations</p> <p>New Business Points of Presence</p> <p>Digital Ecosystems</p> <p>MPLS Replacement/WAN Transformation</p> <p>Distributed IT Edge Security</p> <p>Server and Communication Closet Consolidation</p> <p>Out of Region Data Center/Reduce Proximity Risk</p>	<p>Business Location and Network Topology</p> <p>Connecting sites is an afterthought</p> <p>Workload behavior is not considered</p> <p>Outsourced network contracts mask the problem</p> <p>MPLS creates a poor topology, based on carrier location not business, user or app topology</p>	<p>Ecosystem Driven IOA</p> <p>Implement a Interconnection Ecosystem Platform</p> <p>Enable private access to markets and services (avoid Internet exposure)</p> <p>Rewire the WAN and Enterprise Connectivity (self-service)</p> <p>Create and join partner and customer ecosystems</p> <p>Optimize business globalization (location-aware traffic management)</p> <p>Rapidly grow and shrink corporate network presence (locations)</p>
 <p>Clouds</p>	<p>Head of Cloud</p> <p>Chief Digital Officer</p> <p>CIO/CTO/Chief Architect</p>	<p>Sourcing Multiple Clouds across Multiple Regions</p> <p>Cloud Ecosystem Direct Connect</p> <p>Secure Cloud Initiatives</p> <p>Multicloud Connectivity</p> <p>Anything-as-a-Service (XaaS)/Private/Hybrid Cloud</p> <p>Disaster Recovery/Business Continuity in the Cloud</p>	<p>One-Size-Fits-All Network Architecture</p> <p>Internet is not a suitable backbone</p> <p>Carrier model not built for multicloud integration</p> <p>Carrier model does not enable dynamic and variable virtual circuit provisioning that matches actual user consumption or entitlement</p>	<p>Multicloud Interconnected Architecture</p> <p>Implement Equinix Cloud Exchange™ and Performance Hub(s)</p> <p>One platform to directly connect to multiple clouds</p> <p>Add a Equinix Performance Hub™ node and bridge private/public clouds seamlessly</p> <p>Improve security, keep business traffic off the Internet</p> <p>Enable dynamic virtual circuit provisioning (assemble/tear down) to match variable user consumption</p>
 <p>Data</p>	<p>Head of Data</p> <p>Chief Data Officer</p> <p>CIO/CTO/Chief Architect</p>	<p>Data Creation and Analysis across Multi-Regions</p> <p>Customer Experience/Supply Chain Mgmt Apps</p> <p>Private Cloud Data with Public Cloud Apps</p> <p>The Internet of Things, Data Aggregation and Analysis</p> <p>Mobile Commerce (stores, payments, advertising)</p>	<p>Data Distribution Model</p> <p>Storage and network architectures were not designed for interactive data transmissions over long distances</p> <p>Speed of light physics – impossible to process data and analytics in real time in a centralized model</p> <p>Lack of distributed data housing predetermines location and performance</p>	<p>Integrated Data and Communication Hub Architecture</p> <p>Implement an integrated data and communications hub</p> <p>Bring the data and apps to the user</p> <p>Enable critical data and analytic housing at the point of data creation</p> <p>Provide secure data housing and transit</p> <p>Implement off-premise private data cloud for multi-petabyte scale</p>