PRIVATE CLOUD > PUBLIC CLOUD > BIOS MULTI-CLOUD

Managed Services
across leading Clouds

" If there is one phenomenon that is shaking the foundation of IT services today, it is undoubtedly the adoption and growth of the cloud industry. "
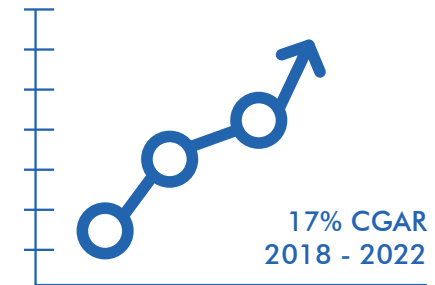
Gartner, 4 September 2018

The Future is in the Clouds

Global growth of cloud is accelerating

$175 Billion
in Global Cloud spending in 2018

growing to

$300 Billion
in Global Cloud spending by 2022

17% CGAR
2018 - 2022
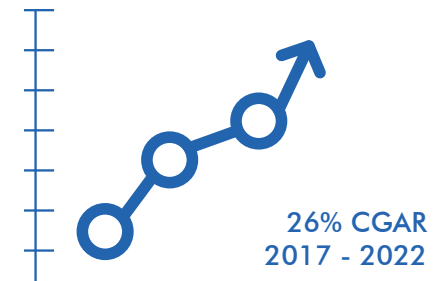
And it's not just around the world — it's happened right here in the Middle East at an even faster rate
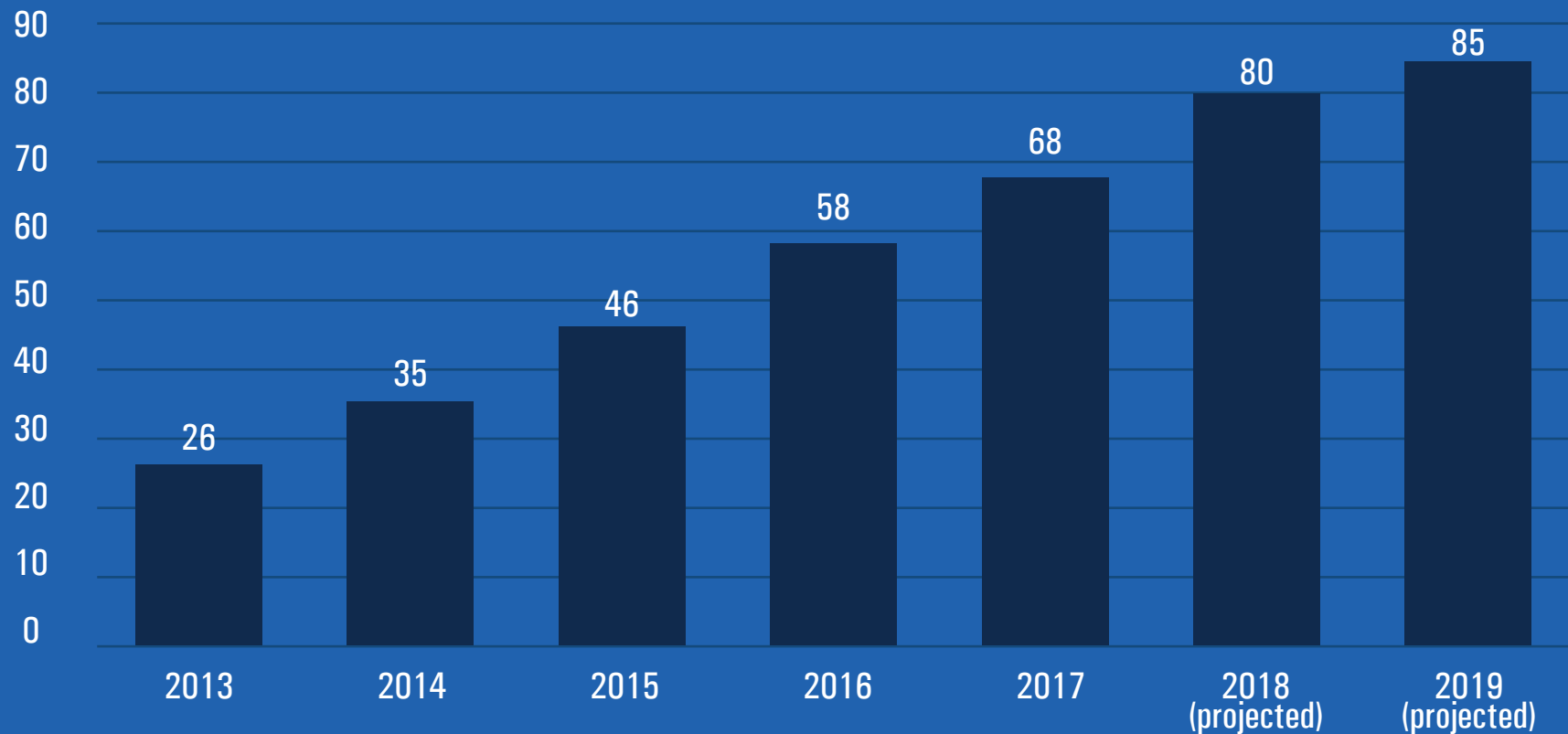
$860 Million
in Cloud spending in MENA in 2017

growing to

$2.8 Billion
in Cloud spending in MENA by 2022

26% CGAR
2017 - 2022

Companies using cloud... On its way to 90%

Organizations' Cloud Adoption Rates
Percentage of Respondents

Year	Value
2013	26
2014	35
2015	46
2016	58
2017	68
2018 (projected)	80
2019 (projected)	85

What is driving this explosive growth in MENA?

- Cost Reduction
- Business Agility
- Scalability
- CAPEX to OPEX
- Mobility
- Innovation
- Advantage
- Cloud API's
- Customer Demand
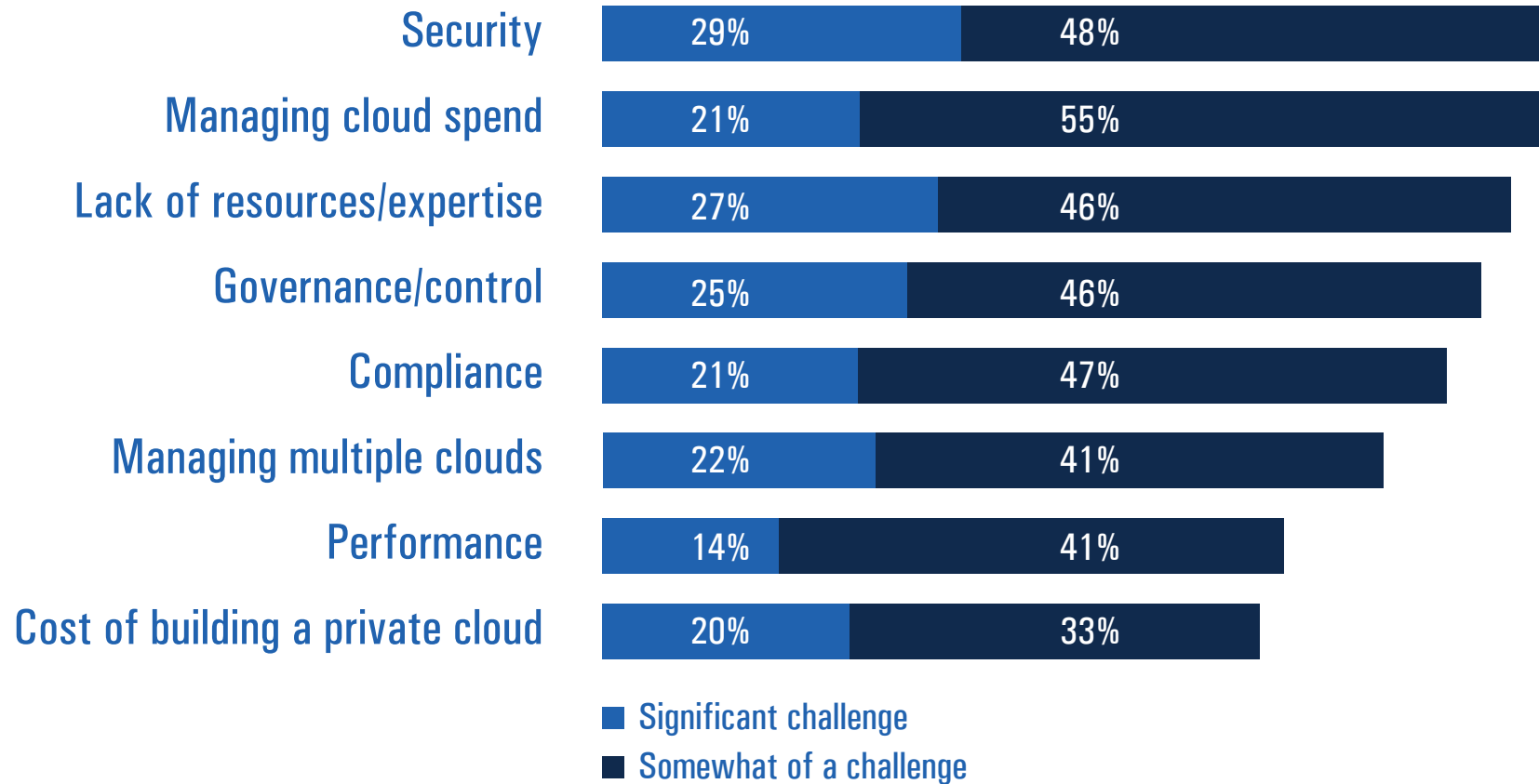- Open Source Projects
- Internal Mandate to move to Cloud
- Others

"Cloud combined with the correct managed and cyber security services allows customers to remove the need for equipment and the operational cost associated with it. It reduces cost by 60% in some cases, while delivering an always on technology platform to the business that's infinitely scalable and more agile than any traditional way of delivering IT."

Dominic Docherty
Managing Director, BIOSME

What are the cloud challenges?

Challenge	Significant challenge	Somewhat of a challenge
Security	29%	48%
Managing cloud spend	21%	55%
Lack of resources/expertise	27%	46%
Governance/control	25%	46%
Compliance	21%	47%
Managing multiple clouds	22%	41%
Performance	14%	41%
Cost of building a private cloud	20%	33%

- Significant challenge
- Somewhat of a challenge

Source: RightScale 2018 State of the Cloud Report

BIOS addresses these challenges by bundling their key products

Product	Challenges they address
CLOUD HPT HIGH PERFORMANCE TECHNOLOGY	A High Performance Technology cloud located in-country, that provides performance and the flexibility to create hybrid and private clouds
Assured	Provides managed service and support of cloud environments via 24x7 Network Operation Centers and real-time monitoring and alerting
Secured	Provides Security, Compliance, Governance and Controls via 24x7 Security Operation Center and SIEM as a Service
BIOS MULTI-CLOUD	Provides a single common experience and portal for managing multiple clouds, enabling ease of governance and control

What is CloudHPT?

Your Production
Your DR

CLOUD HPT
HIGH PERFORMANCE TECHNOLOGY

TX   **DUBAI**

Your Production
Your DR

CLOUD HPT
HIGH PERFORMANCE TECHNOLOGY

T4   **ABU DHABI**

YOUR OFFICE
(Anywhere)

Launched in 2013, CloudHPT is a Cisco Validated and Certified Cloud with multiple footprints in Dubai and Abu Dhabi. CloudHPT stands for Cloud High Performance Technology. CloudHPT is fully owned and operated by BIOSME and provides hybrid Infrastructure and Disaster Recovery as a service for hundreds of companies in the UAE
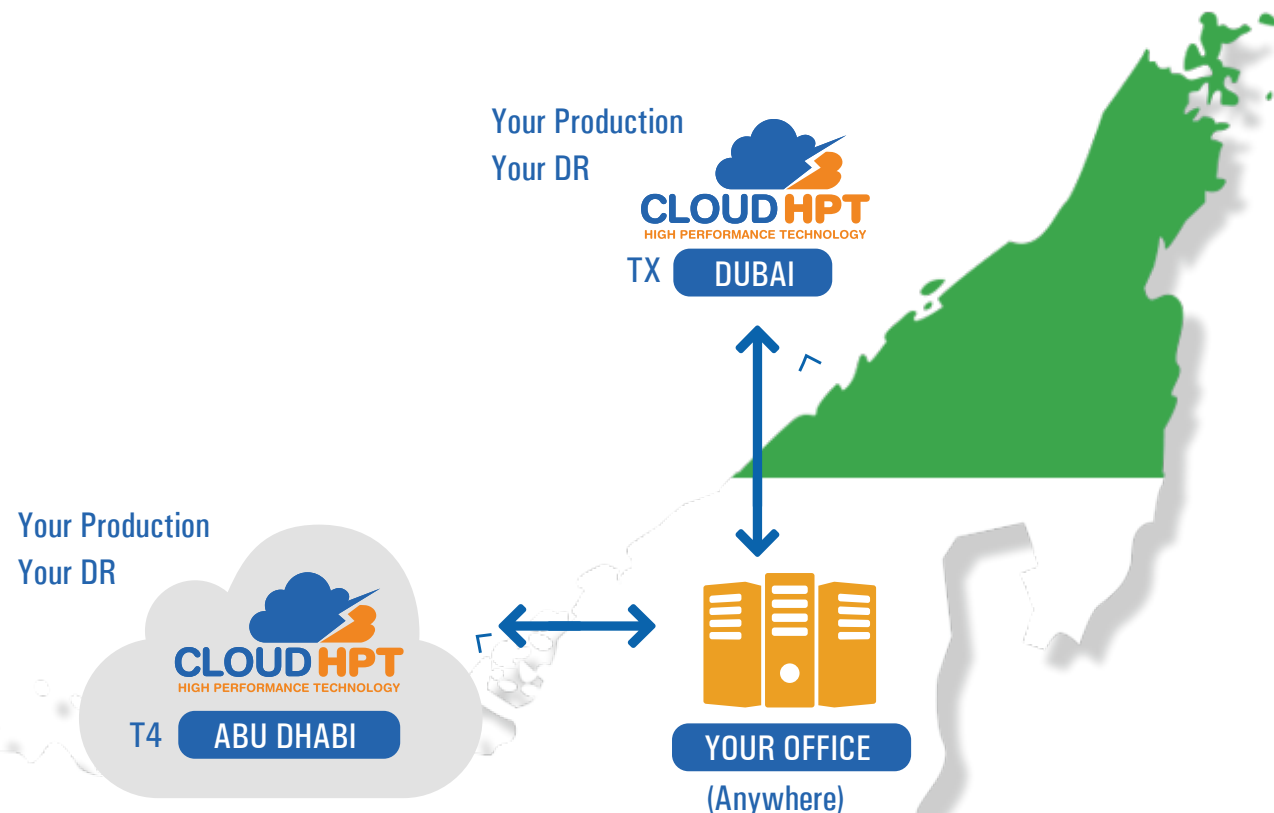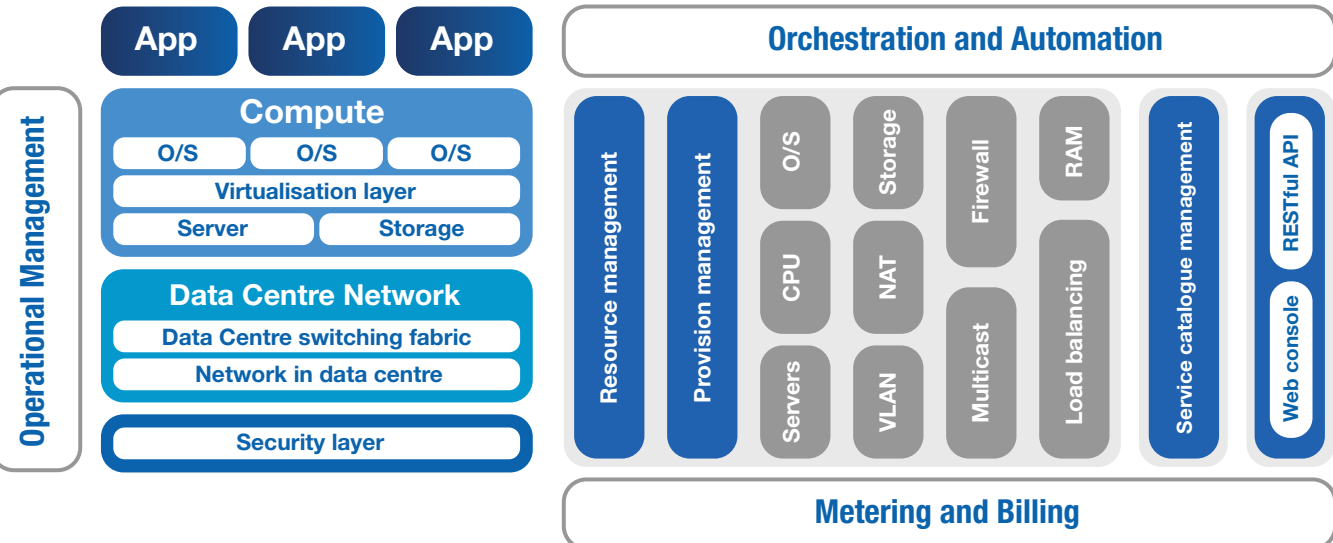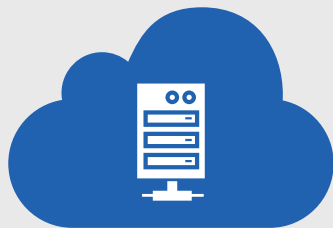
- TX DC in Dubai
- T4 DC in Abu Dhabi
- ISO & all compliance standards
- DR and IaaS in sync
- Multiple Telco's

What is CloudHPT Infrastructure as a Service (IaaS)?

Infrastructure as a service (IaaS) is one of the most widely adopted cloud computing services, providing computing on demand through shared storage, hardware, servers and networking components. Cisco Powered™ Infrastructure as a Service (IaaS) delivers best-in-class, flexible and scalable cloud solutions with the highest level of security for your confidence.

MANAGED CLOUD

CLOUD HPT
HIGH PERFORMANCE TECHNOLOGY

App | App | App

Orchestration and Automation

Operational Management

Compute
O/S | O/S | O/S
Virtualisation layer
Server | Storage

Data Centre Network
Data Centre switching fabric
Network in data centre

Security layer

Resource management | Provision management | O/S | Storage | Firewall | RAM | Service catalogue management | RESTful API

CPU | NAT | | | Web console

Servers | VLAN | Multicast | Load balancing

Metering and Billing

ORCHESTRATION | ADMINISTRATION | BILLING | PROVISIONING | MANAGEMENT | SUPPORT | FEDERATION

Why Should I use CloudHPT Infrastructure as a Service (IaaS)?

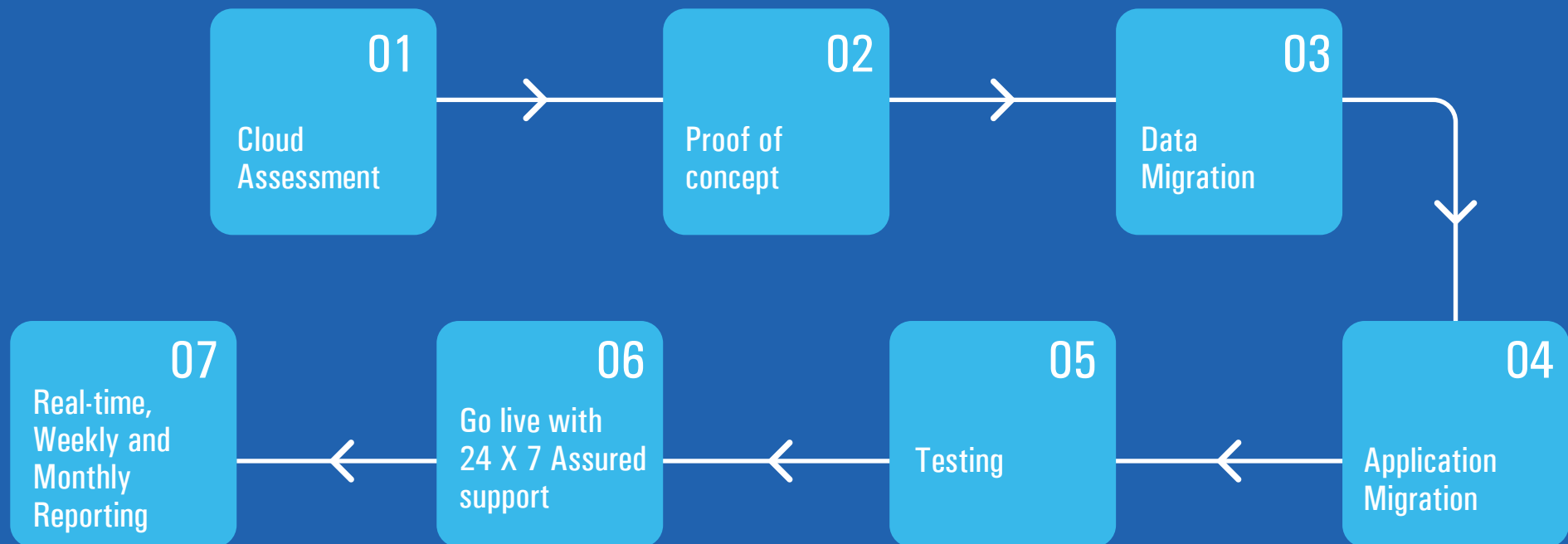## Cisco Powered Infrastructure as a Service

We work with companies to create a roadmap to the cloud which will reduce their overall IT costs by more than 50% and eliminate future CAPEX.

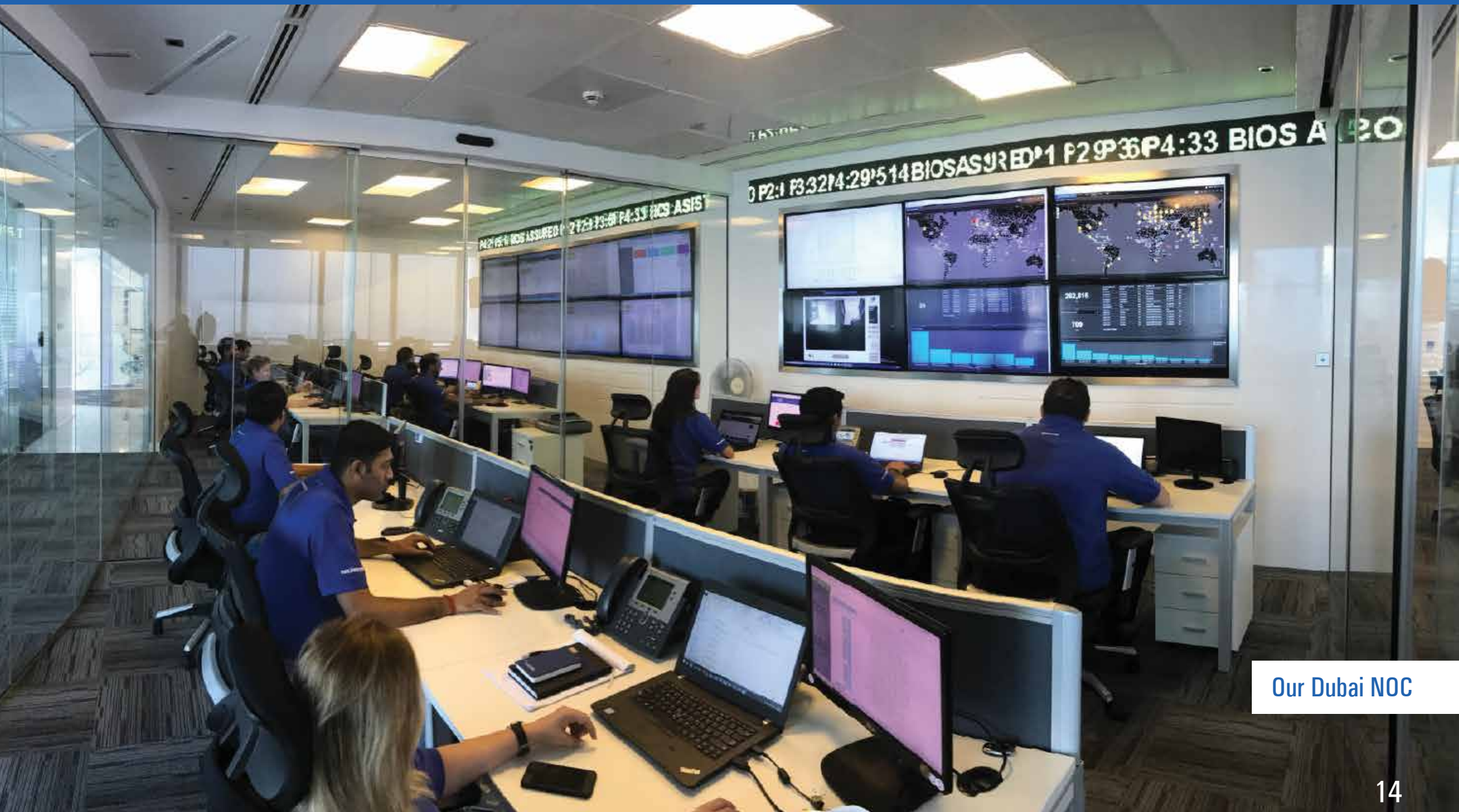### What does a Cisco Powered cloud IaaS mean for our customers?

ELIMINATED

- CAPEX
- 50% of IT cost per annum
- Budget requirement
- 3 months decision making process
- 2 months lead time

- 3 months install time
- Risk of miss-purchase
- Technology obsolescence
- Ongoing management costs

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How can BIOS help me move to the cloud with confidence?

01 Cloud Assessment

02 Proof of concept

03 Data Migration

04 Application Migration

05 Testing

06 Go live with 24 X 7 Assured support

07 Real-time, Weekly and Monthly Reporting
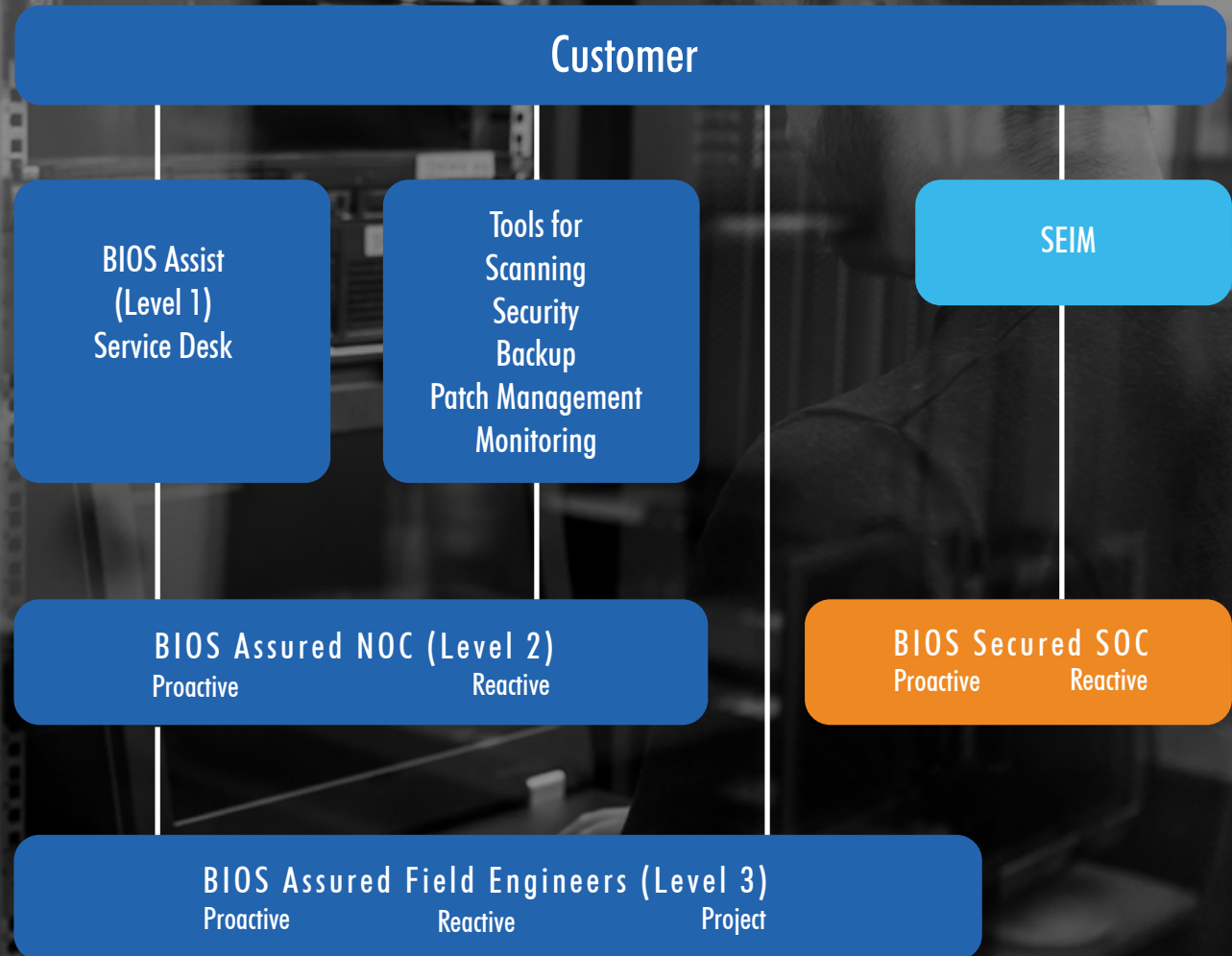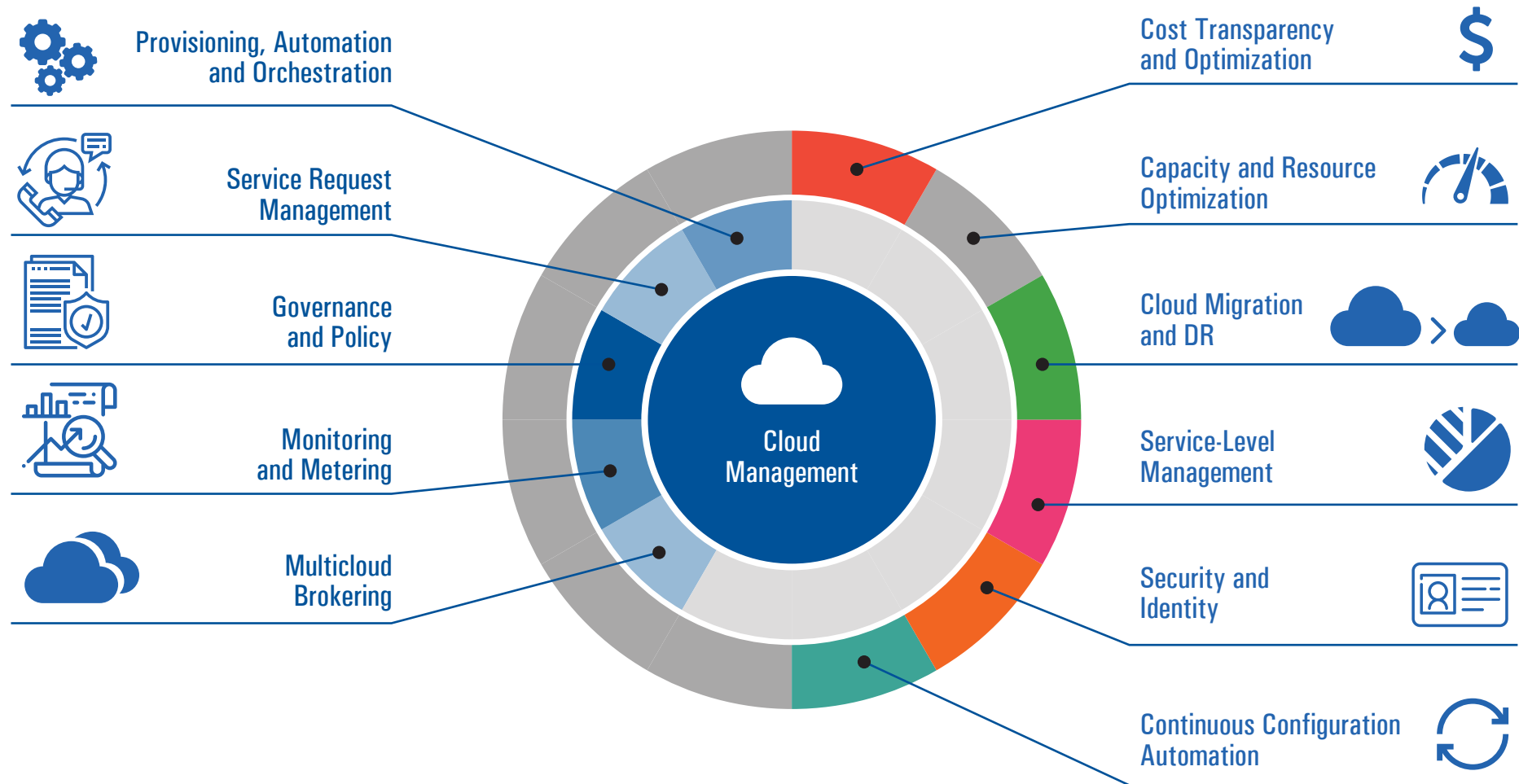
What is BIOS Assured?

Our Dubai NOC

14

Cloud, like any other IT platform, requires management and support. Customers of CloudHPT have BIOS Assured cloud managed services included in their solution.

Agents and Analyzers monitor cloud environments in real-time and when any thresholds are broken, alerts are sent to our Network Operations Center. Tickets are created and assigned to cloud experts. This operates 24x7. The service also includes a continual program of improvements to ensure environments operate at 100% efficiency.

BIOS Assured follows an ISO 20000-1 certified process

Customer

BIOS Assist (Level 1) Service Desk

Tools for Scanning Security Backup Patch Management Monitoring

SEIM

BIOS Assured NOC (Level 2)
Proactive   Reactive

BIOS Secured SOC
Proactive   Reactive

BIOS Assured Field Engineers (Level 3)
Proactive   Reactive   Project

What does BIOS Assured deliver?

Provisioning, Automation and Orchestration

Service Request Management

Governance and Policy

Monitoring and Metering

Multicloud Brokering

Cloud Management

Cost Transparency and Optimization

Capacity and Resource Optimization

Cloud Migration and DR

Service-Level Management

Security and Identity

Continuous Configuration Automation

BIOS Assured also
provides customers
with access to real
time monitoring and
ticketing tools.

In addition, clients
are provided with
monthly
performance and
usage reports
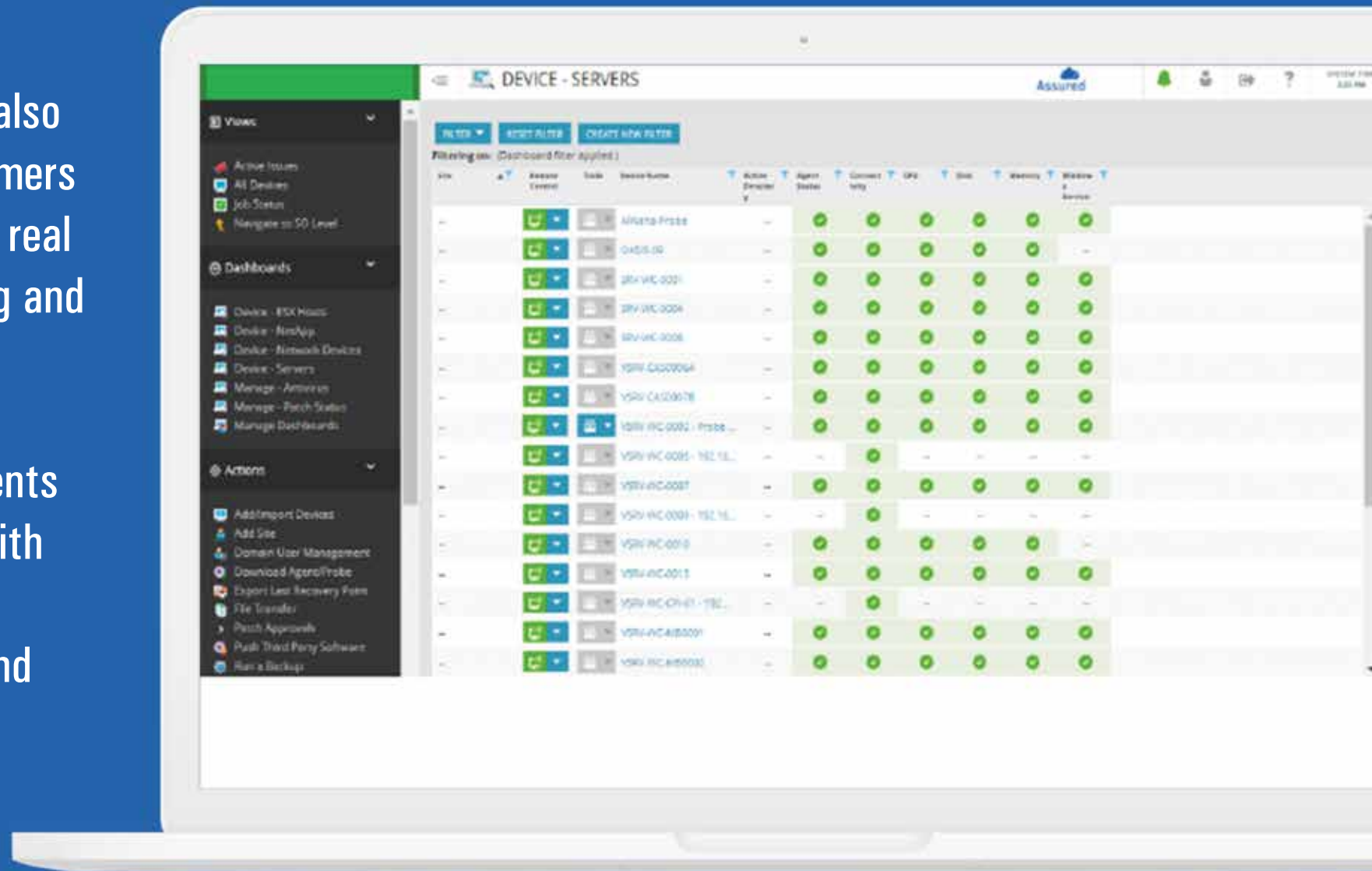
What is BIOS Secured and how does it protect my cloud?

BIOS Secured is our Security-as-a-Service solution, consisting of several elements that combine to provide a robust and comprehensive battle-hardened approach to IT Security. Chiefly these elements consist of:

- 24x7 Security Operation Center
- Security Information and Event management tool (SIEM)
- Cyber Threat Intelligence Platform (CTIP)
- Security analytics and dashboards
- Vulnerability assessments
- An ISO 27001 certified response and incident management framework
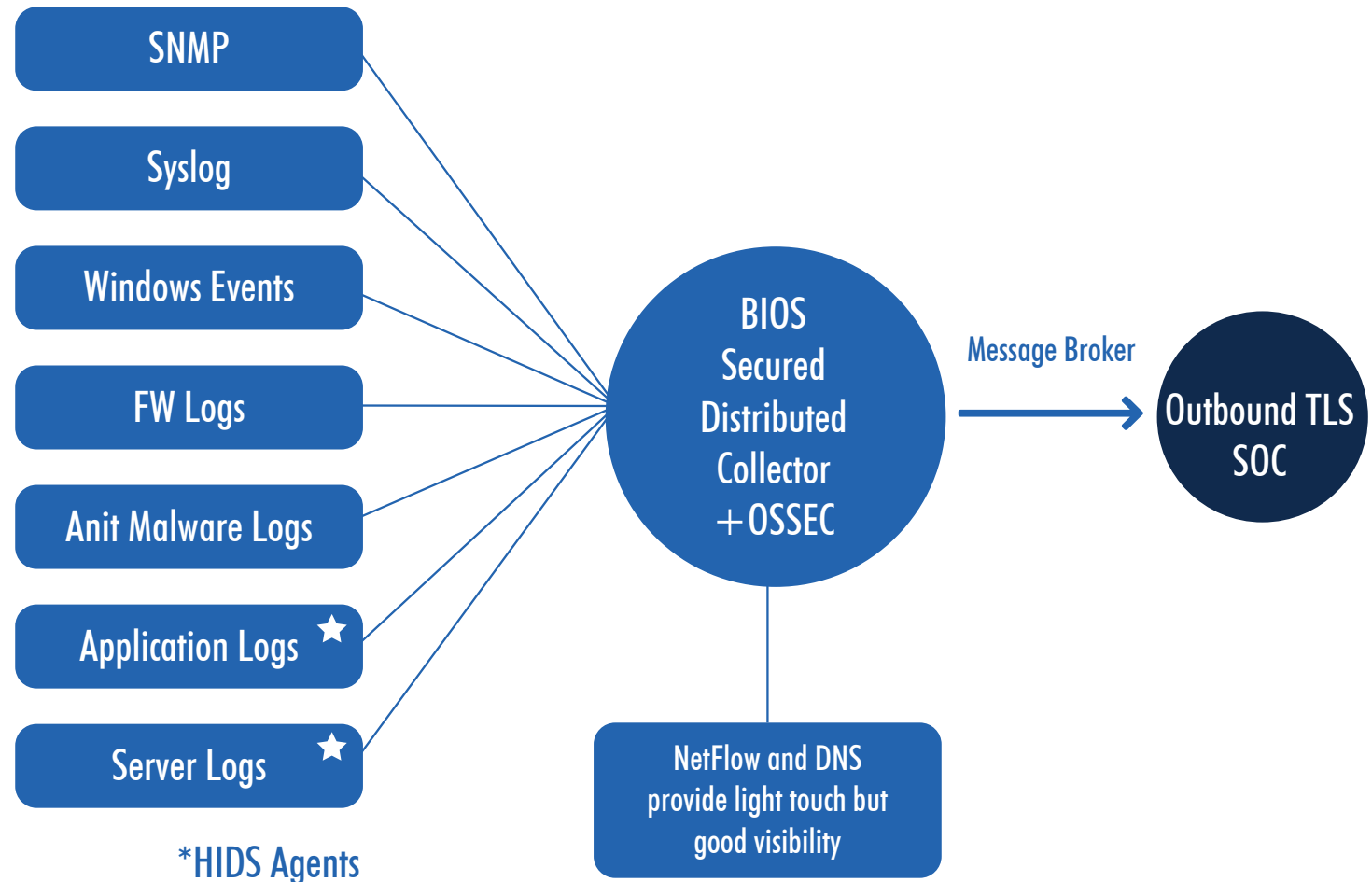- Logging events for forensic analysis
- Reporting

In essence we look at every single connection in and out of your cloud environment and use deep analytics to understand which are bad actors and block them via our 24x7 SOC
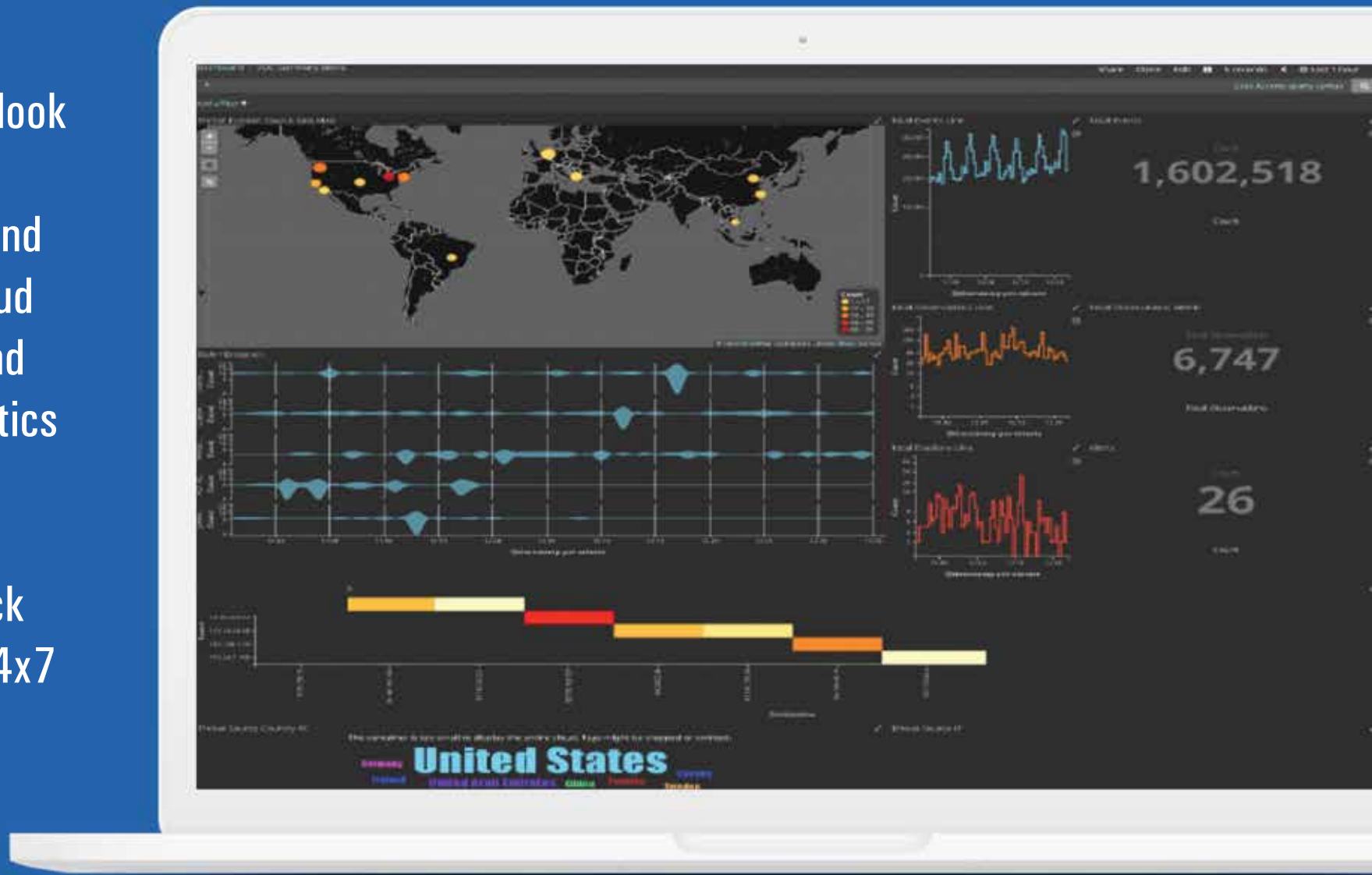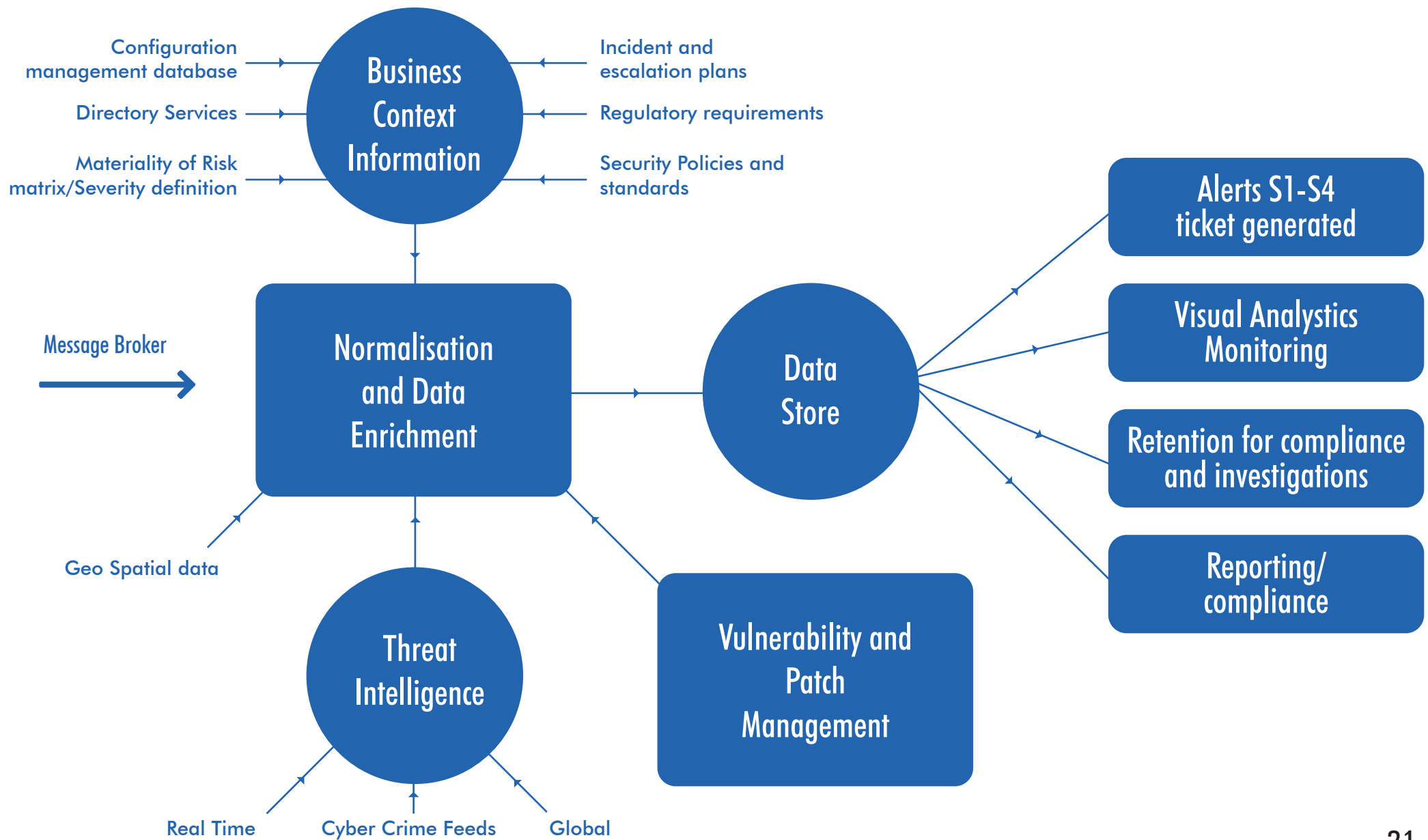

BIOS Secured dashboard view

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The Topology of BIOS Secured

How BIOS Secured monitors every aspect of your cloud environment and feeds logs in real time to a big data platform that matches connections to a reputational database and blocks bad actors.

SNMP

Syslog

Windows Events

FW Logs

Anit Malware Logs

Application Logs ★

Server Logs ★

*HIDS Agents

BIOS Secured Distributed Collector +OSSEC

Message Broker

Outbound TLS SOC

NetFlow and DNS provide light touch but good visibility

Configuration management database

Directory Services

Materiality of Risk matrix/Severity definition

Business Context Information

Incident and escalation plans

Regulatory requirements

Security Policies and standards

Message Broker

Normalisation and Data Enrichment

Data Store

Alerts S1-S4 ticket generated

Visual Analytics Monitoring

Retention for compliance and investigations

Reporting/ compliance

Geo Spatial data

Threat Intelligence

Vulnerability and Patch Management

Real Time

Cyber Crime Feeds

Global

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The emergence of Multi-Cloud in 2019

Multi-Cloud drivers

Freedom of Choice
No two clouds are the same. Multi-Cloud allows you to use the right cloud for the right workload.

Reliability
Multi-Cloud eliminates a single point of failure. As rare as major outages are, it pays to use multiple clouds, especially for Disaster Recovery.

Cost
Using a Multi-Cloud approach allows companies to have access to the most advanced technology available at a price, but only where they need it.

Eliminating Vendor Lock in
Multi-cloud prevents vendor lock in. As IT strategies develop flexibility can pay dividends.

90%
of organizations will use multiple clouds by 2021

2/3
companies say operational cost reduction will drive multi cloud

22

Challenges of Multi-Cloud

- Lack of visibility - can lead to cloud sprawl

- Unpredictable billing - which can lead to 'Bill shock'

- Governance - across multiple clouds can be a challenge

- Management - is complicated if not unified across multiple clouds

- Security is perhaps one of the most important considerations. As applications and data migrate outside a company's firewalls they become more vulnerable than ever, if not properly secured

Answering the challenges of Multi-Cloud with BIOS Multi-Cloud

BIOS Multi-Cloud is a Customer Experience Portal that connects to CloudHPT, Azure, AWS and other clouds. It provides a single interface to provision, manage and check usage and billing from. In addition it is connected to BIOS Assured and BIOS Secured to auto enroll new environments.

BIOS Multi-Cloud combines best in class processes and services, giving our customers a truly customized, hybrid cloud platform that is fully managed and secured, 24X7.
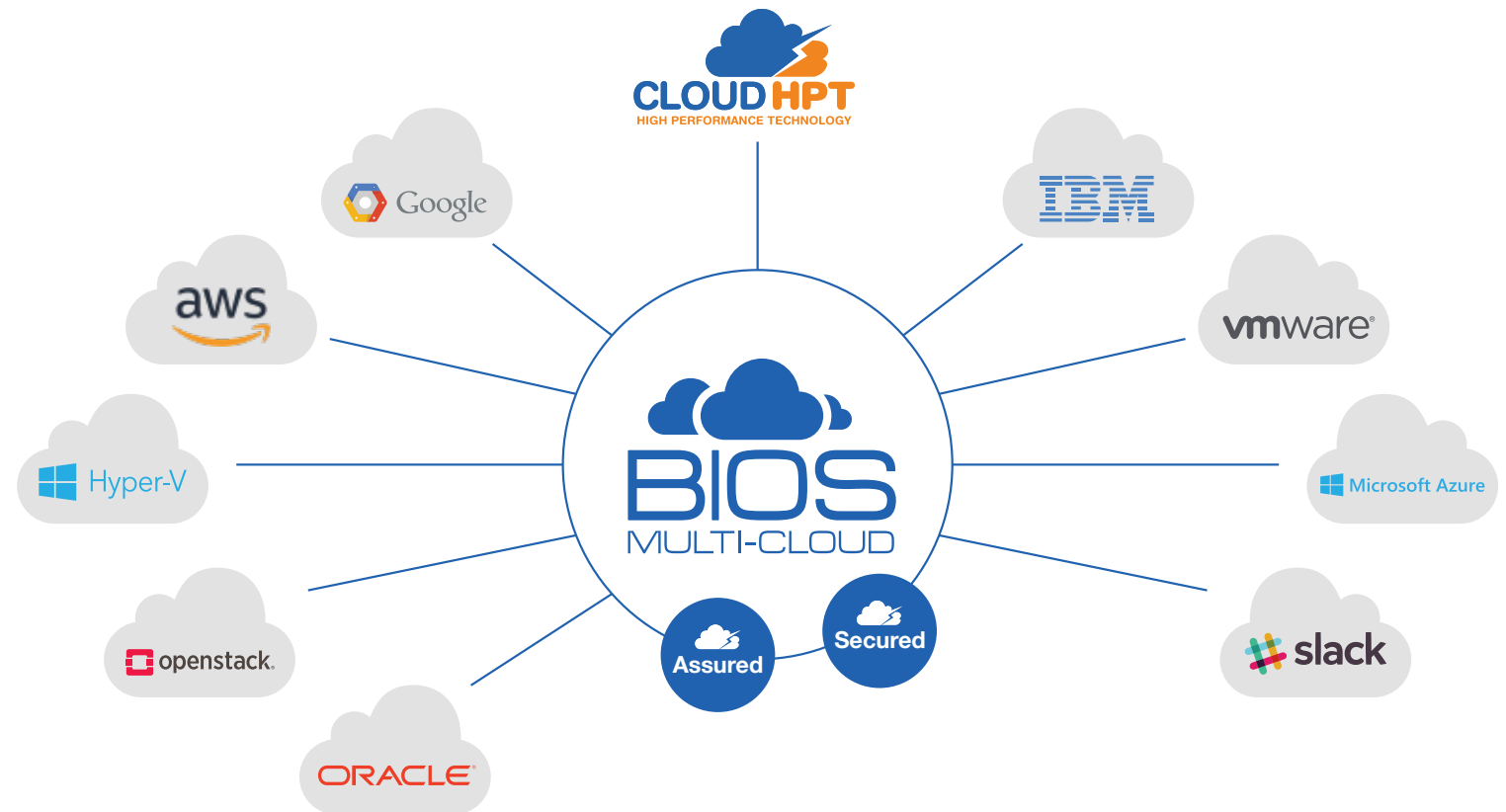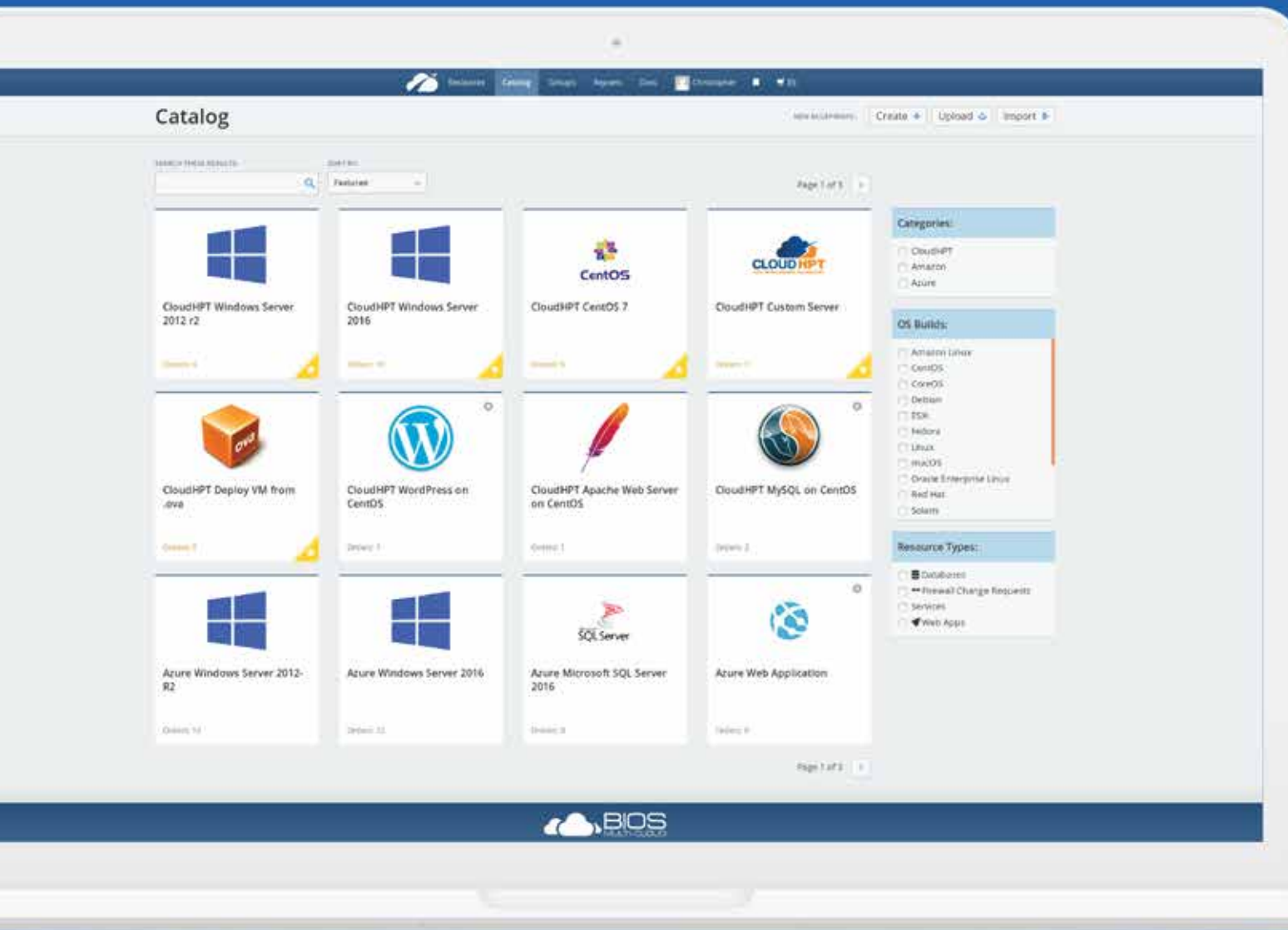
- A view of the BIOS Multi-Cloud portal from which users can provision VMs across multiple clouds.

- Check utilization, billing and much more.

BIOS Multi-Cloud features

Visibility

BIOS Multi-Cloud gives you complete visibility of all your workloads, regardless of which clouds they are on, through a single pane of glass. As well as seeing workloads across cloud, you can provision them and access them from a single place.

Governance

Ensuring server builds comply to corporate standards on different clouds can be difficult. BIOS Multi-Cloud addresses this by allowing for custom catalogues to be built, that contain specific workloads or even networks that comply to your unique corporate standards across clouds.

Cost savings

A centralized reporting dashboard allows you to see the cost associated to workloads in AWS and Azure in real-time and compare them. Limits can be set in advance, requiring approvals and built in custom workflows.

Managed

Different cloud environments have different tools for managing workloads. This can be extremely confusing. BIOS Multi-Cloud includes a single Managed Service platform and 24x7 support that operates across clouds.

Security

Multiple Clouds mean multiple environments to secure. We enroll all workloads regardless of where they are provisioned into our SIEM and monitor them from our 24x7 SOC across clouds.

Availability

Multiple clouds can be used to provide Cloud Disaster Recovery ensuring in the event of any major cloud failure, your business and customers are not impacted. BIOS provides managed cross cloud DRaaS.

By Combining CloudHPT, BIOS Assured, BIOS Secured and BIOS Multi-Cloud

we deliver your business the following advantages:

- ✓ An IT platform that is at least 50% cheaper than on premise, with higher availability and scalability
- ✓ An In-Country, super low latency, High Performance cloud
- ✓ In-cloud Disaster Recovery between Dubai and Abu Dhabi
- ✓ Turnkey Cloud readiness and migration strategy
- ✓ Hybrid Strategy including co-location for physical servers
- ✓ Fully managed services and 24x7 NOC
- ✓ Fully managed security and 24x7 SOC
- ✓ Direct and immediate access to high quality engineers
- ✓ Single fixed low price and simple billing
- ✓ The ability to connect to any cloud seamlessly and have it fully integrated into your IT platform

Testimonials

"Migrating our production environment to CloudHPT's in-county cloud eliminated a major capital expenditure and protected us from future technical obsolescence. BIOS helped us determine where to focus our spend for maximum impact. Our data is now secured in T3 datacenters, with enterprise-class security and a 24x7 command center to protect our data."

Abu Dhabi Finance

"BIOS Middle East is a partner who really understands our business as the media industry moves very quickly and our deadlines are usually half of what is required in other industries. They came in at the right time to support the design our consolidation of storage, design of our virtualization, and recommended us the right technologies which makes our life easier. They are flexible and their 24x7 NOC team have the right skills and knowledge to fix our issues immediately. We need 99.99% uptime and BIOS gives us that. We managed to reduce power usage by 20%, reduce server space by 80% and more by working with BIOS"

OSN

"As one of the largest and most respected contractors in the Middle East, our clients expect the best. BIOS's in-region infrastructure has made a dramatic improvement in our client experience."

ALEC

"We're very proud to be working alongside BIOS Middle East to make our digital transformation strategy a reality. BIOS Middle East gives us the flexibility needed to develop and innovate our services, giving us the agility we need to meet the challenges facing the real estate sector both now and in the future"

Azizi Developments

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BIOS
Be secured. Be assured

TRUSTED
400 private & public COMPANIES

2018 NPS - 8.65
Customer Satisfaction

10,000 servers & endpoints under management

Assured 24x7 NOC and SOC in Dubai & Banglore

17 years Experience delivering end-to-end technology solutions

100 Technical Experts

Secured 24x7 SOC SIEM as a Service Vulnerability scanning

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4 cloud platforms inside the UAE

UAE's No.1 Cloud & Managed Service Provider

BIOS MULTI-CLOUD

CLOUD HPT HIGH PERFORMANCE TECHNOLOGY

TECHNICAL EXPERTS
Azure
aws

Cisco Master Managed Service Provider, Gold Partner, Cloud Partner
CISCO

veeam
Gold Partner

solarwinds
Elite Partner

Zerto
Gold Partner

Industry recognition

Gartner Magic Quadrant 2 YEARS RUNNING **DRaaS**

CISCO Service
Provider of the year

CISCO Cloud
Provider of the year

veeam
Provider of the year

✓ ISO 9001   ✓ ISO 27001   ✓ ISO 23001   ✓ ISO 20001   PCI

?

Do you want to move your business to the Cloud with confidence?

Could your business benefit from reduced IT cost?

Could your business benefit from better IT uptime, agility and scalability?

If you are thinking about moving your business to the Cloud, we would love to help.

Let's connect to see how BIOSME can help your business move to the Cloud with confidence.

Move to the cloud with confidence.
www.BIOSME.com

BIOS

Be secured. Be assured

CLOUD HPT

HIGH PERFORMANCE TECHNOLOGY