iboss™

CYBERSECURITY

Leveraging node based cloud containers to secure borderless networks

Issue: Traditional security appliances were designed to protect web browsing

Example: Secure Web Gateways

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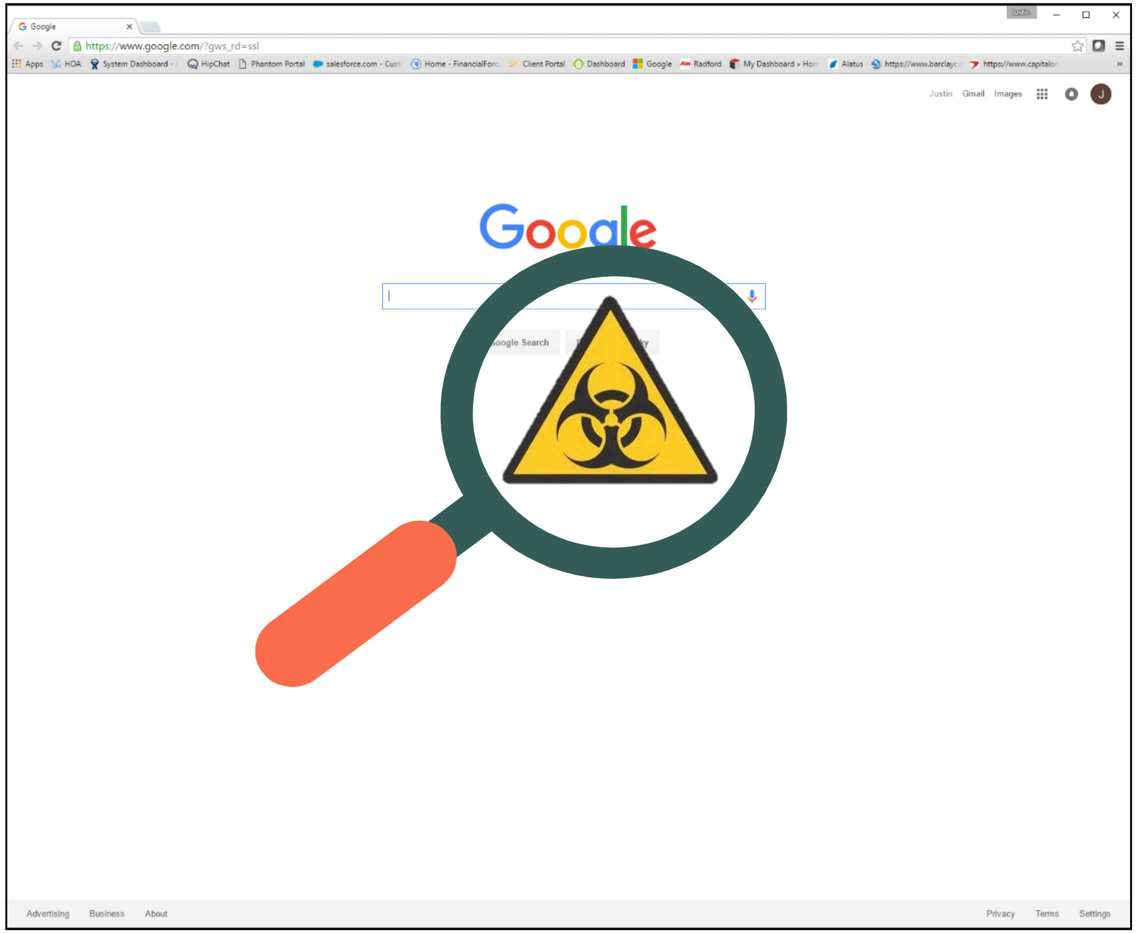
Secure
Web
Browser
Gateway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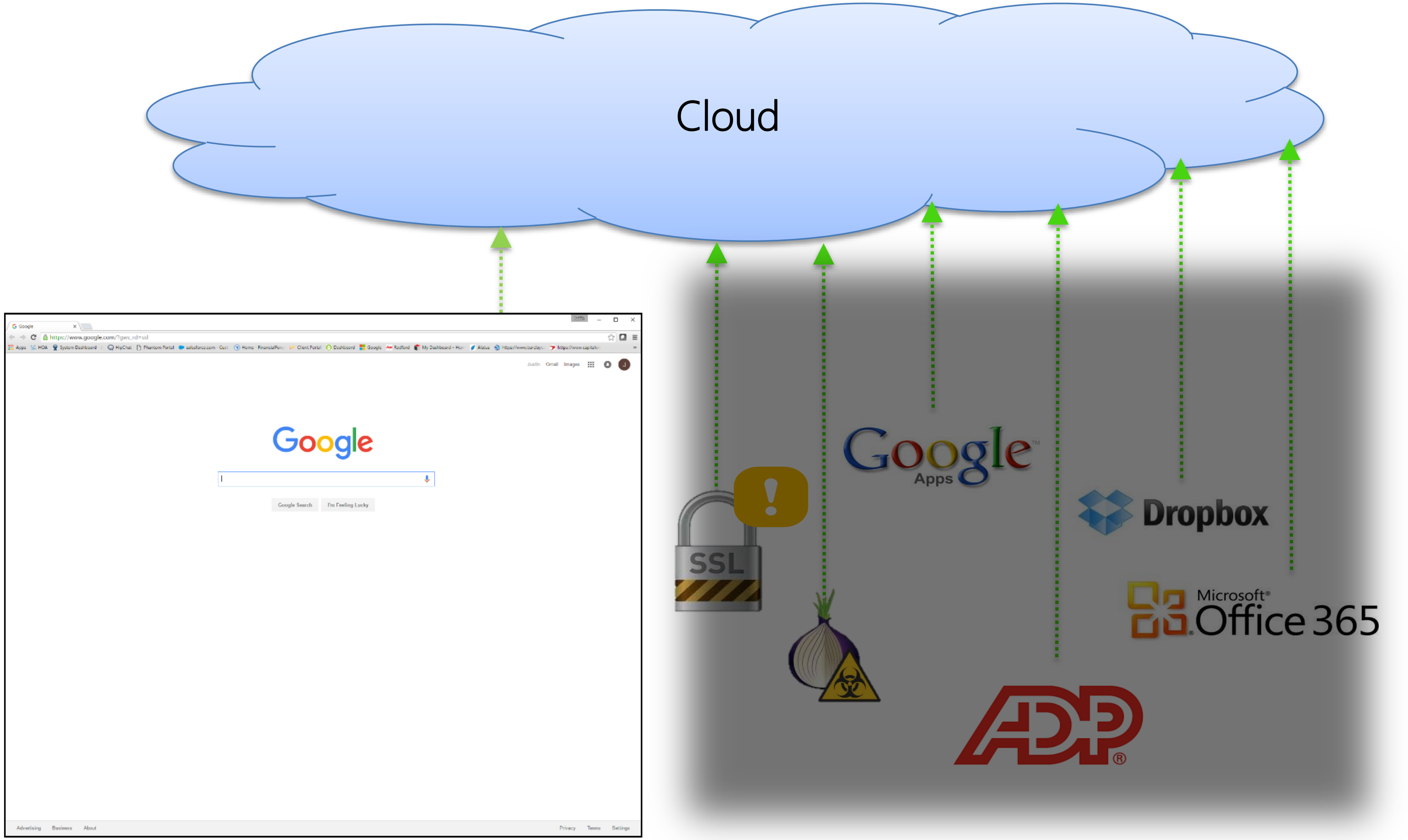
Only scans for exploits & malware on web pages

Challenge: Internet access consists of more than web pages

Applications & Malware co-exist outside of the web browser and are connected to the Internet

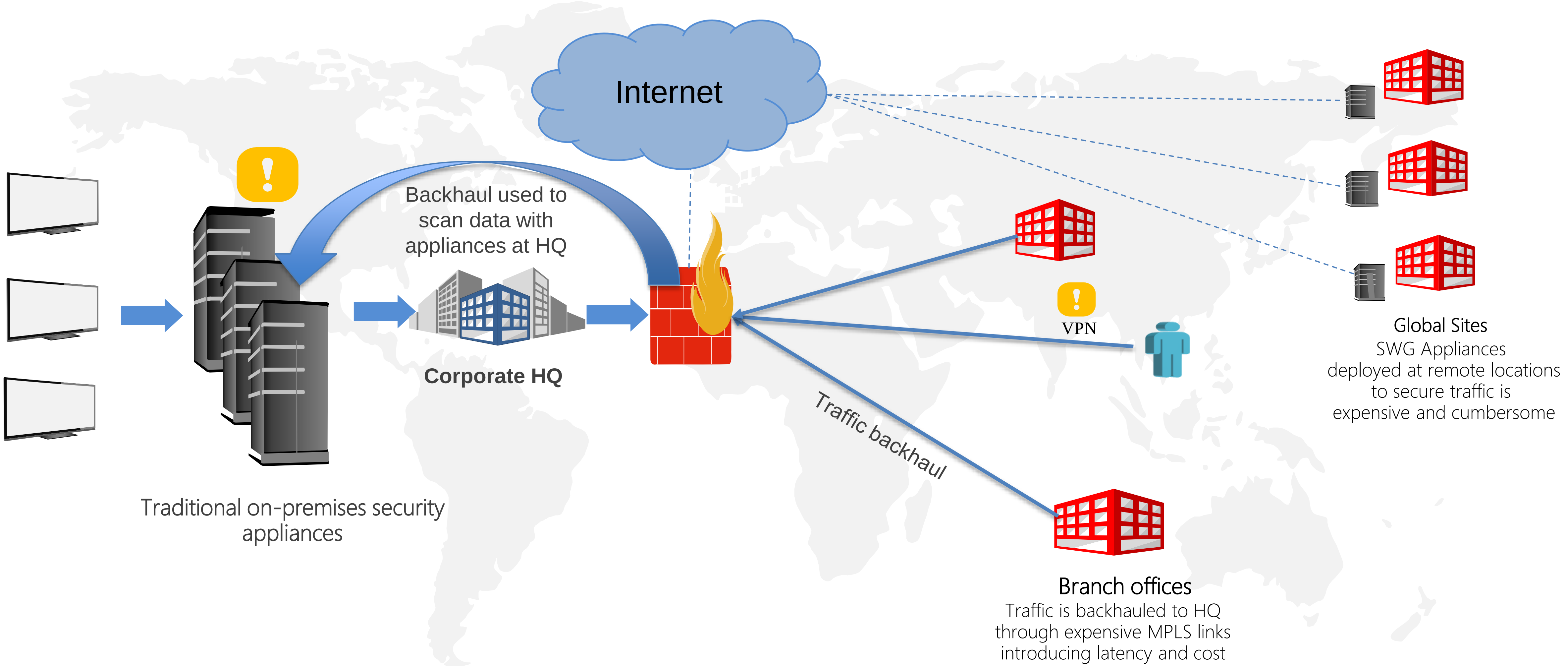


They focus on web browser activity

- Are blind to non-web browser Internet traffic on the device
- Applications and evasive protocols (i.e.TOR) exist outside of the web browser
- Legacy solutions lack effective approaches to managing SSL traffic
- This leaves a massive security blind spot which is leveraged by malware, ransomware and exploits

Increasing this challenge is the growth of remotes sites and mobile employees

Legacy approach responds by deploying more appliances or backhauling data which is inefficient & costly



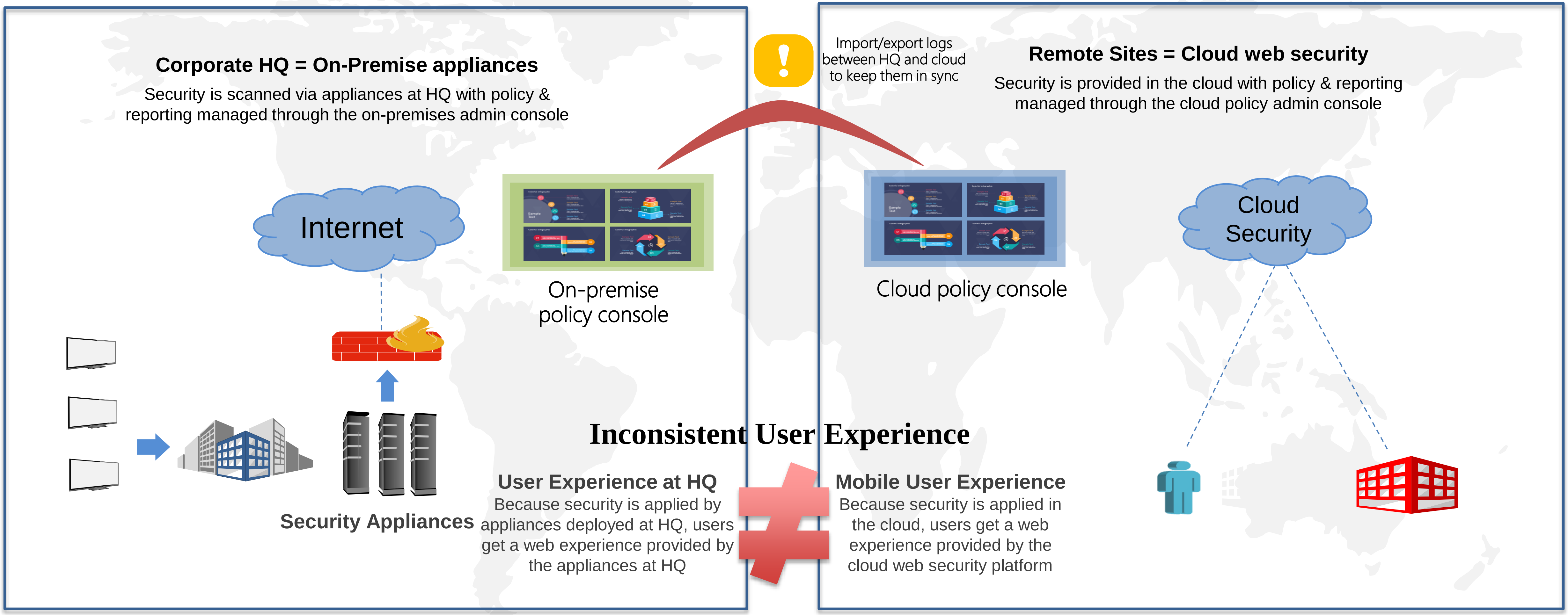
Traditional on-premises security appliances

Global Sites
SWG Appliances deployed at remote locations to secure traffic is expensive and cumbersome

Branch offices
Traffic is backhauled to HQ through expensive MPLS links introducing latency and cost

Alternatively, hybrid cloud deployments are utilized which only complicates matters

Requires managing multiple consoles which increases demand for administrative resources and limits network visibility



Corporate HQ = On-Premise appliances

Security is scanned via appliances at HQ with policy & reporting managed through the on-premises admin console

Import/export logs between HQ and cloud to keep them in sync

Remote Sites = Cloud web security

Security is provided in the cloud with policy & reporting managed through the cloud policy admin console

Inconsistent User Experience

User Experience at HQ
Because security is applied by appliances deployed at HQ, users get a web experience provided by the appliances at HQ

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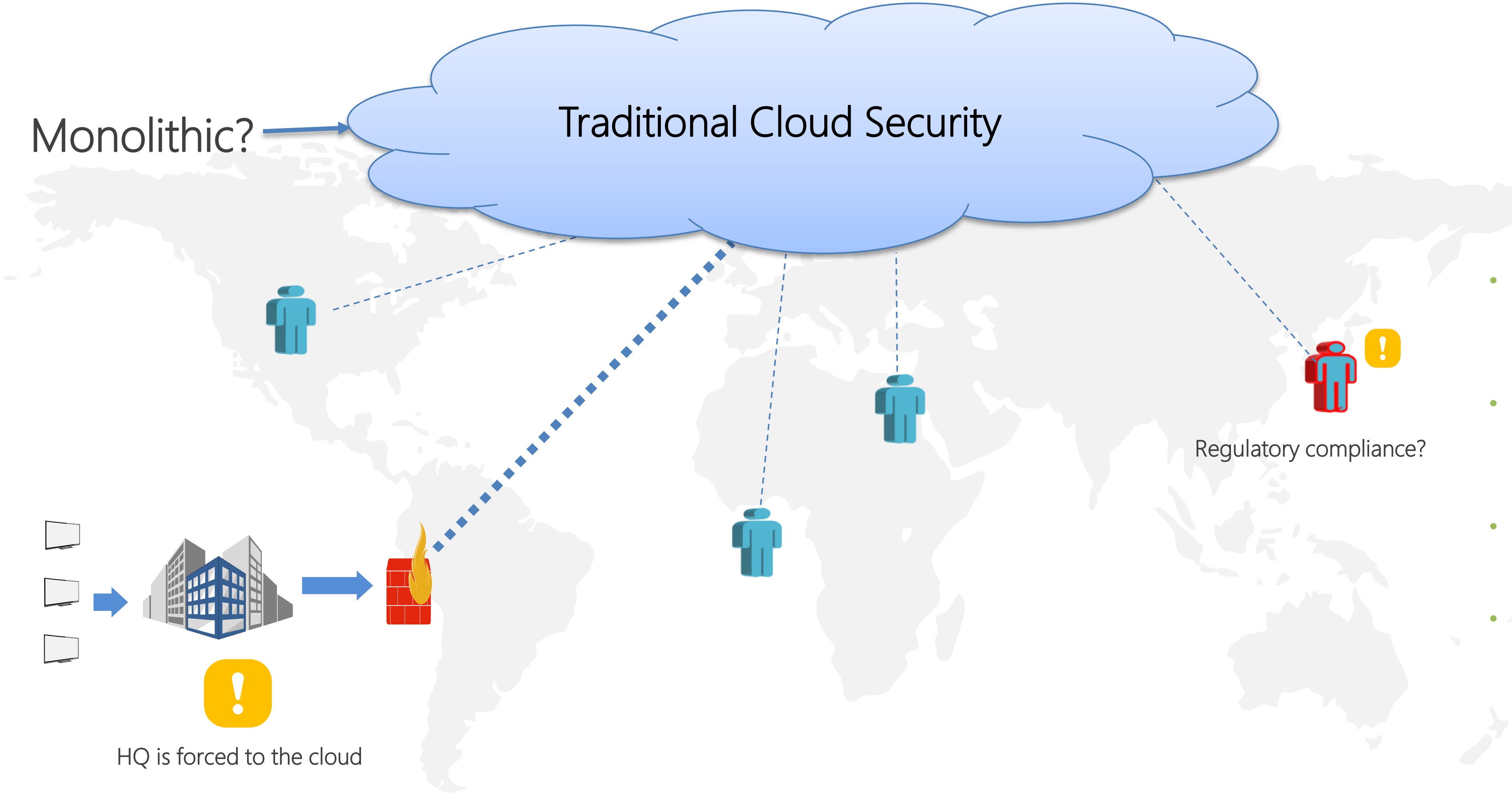
Mobile User Experience
Because security is applied in the cloud, users get a web experience provided by the cloud web security platform

All-cloud web security's monolithic cloud architecture becomes a concern

Data is shared across one massive cloud increasing compliance concerns for the mobile workforce



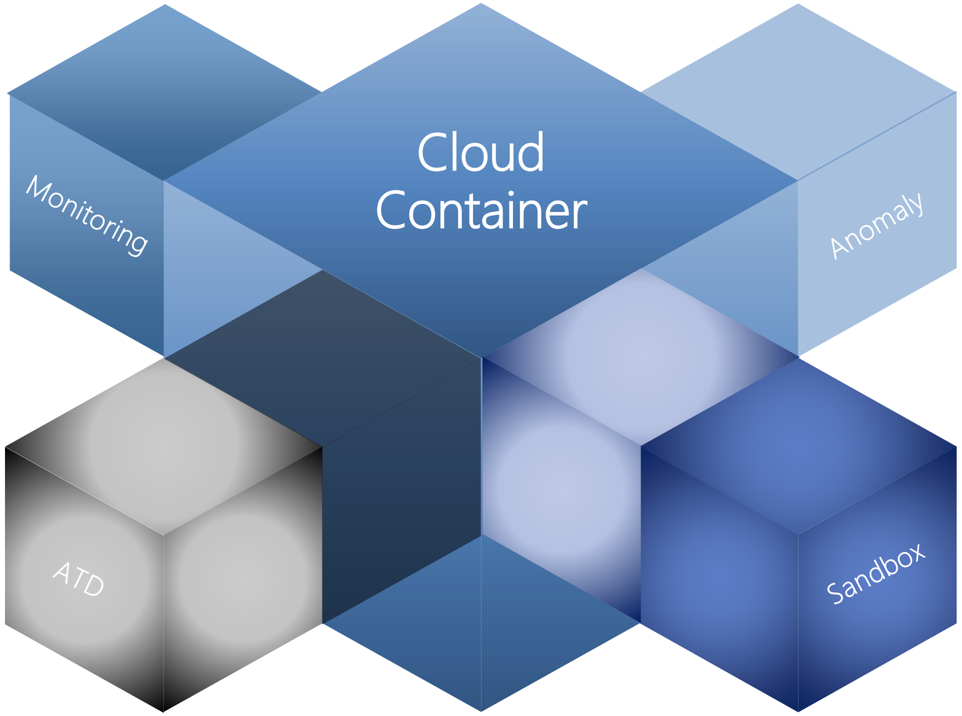
Concerns with traditional cloud security

- A **monolithic** cloud architecture which **shares sensors** and **databases** across many customers
- This cloud can **fracture** leading to latency as well as expose organizations to security breaches
- Concerns meeting **regulatory compliance** such as Safe Harbor
- Corporate **data is forced** to the cloud, which may not be desirable

We can solve these challenges by leveraging a flexible node-based elastic container cloud architecture

Advantages:

- Benefit from the infinite **scalability** and **elasticity** of the cloud
- **Comprehensive** security to protect remote sites and mobile users with security that **follows users** in the cloud
- Cloud **nodes are elastic** and can be customer-hosted, reside in the cloud virtualized fabric, or both
- **Eliminates hybrid** deployment pain points of managing hardware and multiple policy consoles
- Provides a **seamless** node-based solution for customers who are cloud adverse or restricted from adopting the cloud



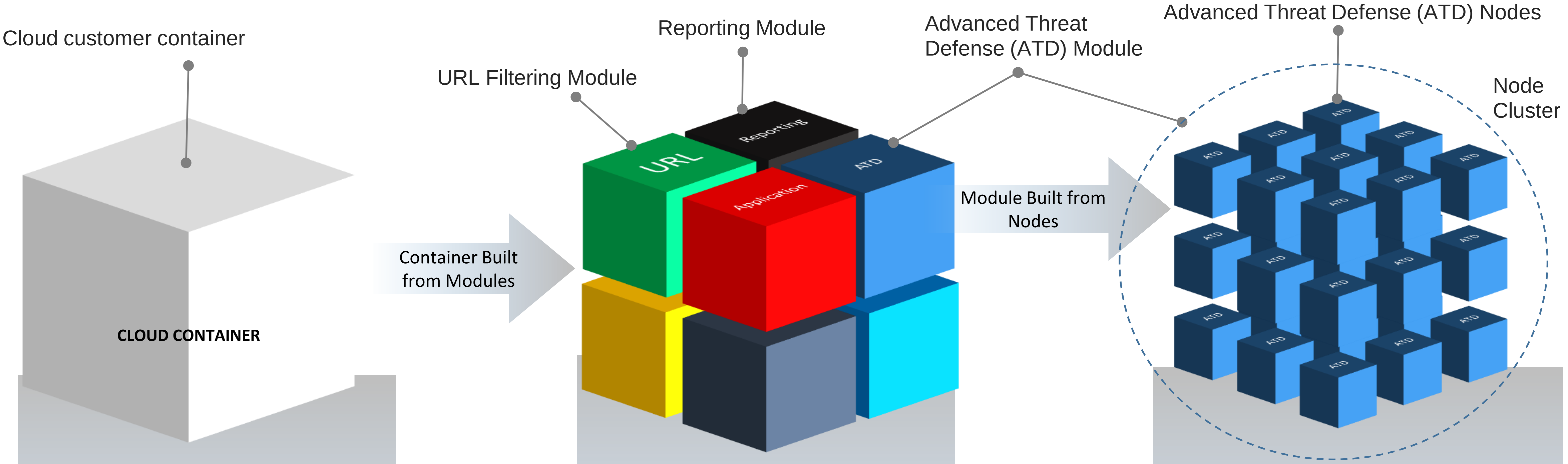
Node based cloud containers

Containers vs. Virtual Appliances

Cloud architecture is **fundamentally different** from conventional security cloud architectures

- **Does not rely** on virtual appliances instantiated in the cloud to replace traditional appliances
- Cloud utilizes a **proprietary container-based** virtualized architecture
- Leveraging **nodes to deliver an infinitely scalable**, dynamic and elastic cloud

How the Cloud container is built



Cloud customer container

URL Filtering Module

Reporting Module

Advanced Threat Defense (ATD) Module

Advanced Threat Defense (ATD) Nodes

Node Cluster

Container Built from Modules

Module Built from Nodes

Cloud Container

- Built from individual modules working together (e.g. URL, Reporting, ATD)
- Represents all of the iboss cloud functionality for a customer

1 Container = Multiple Modules

- Modules represent a component (e.g., URL, Reporting, ATD), and together they create a customer container.
- They independently scale on demand, resulting in a more resilient cloud architecture

1 Module = Multiple Virtualized Nodes

- Multiple cloud nodes performing the same functions cluster together.
- Module functionality is identically replicated in each node.
- Each node is a virtual instance (VM), and can be created or destroyed in seconds across the node fabric

The flexibility of a node-based elastic cloud container architecture is unmatched

1 **Corporate HQ**

Traffic is scanned through customer hosted nodes that reside locally at corporate HQ

2 **Remote sites and branch offices**

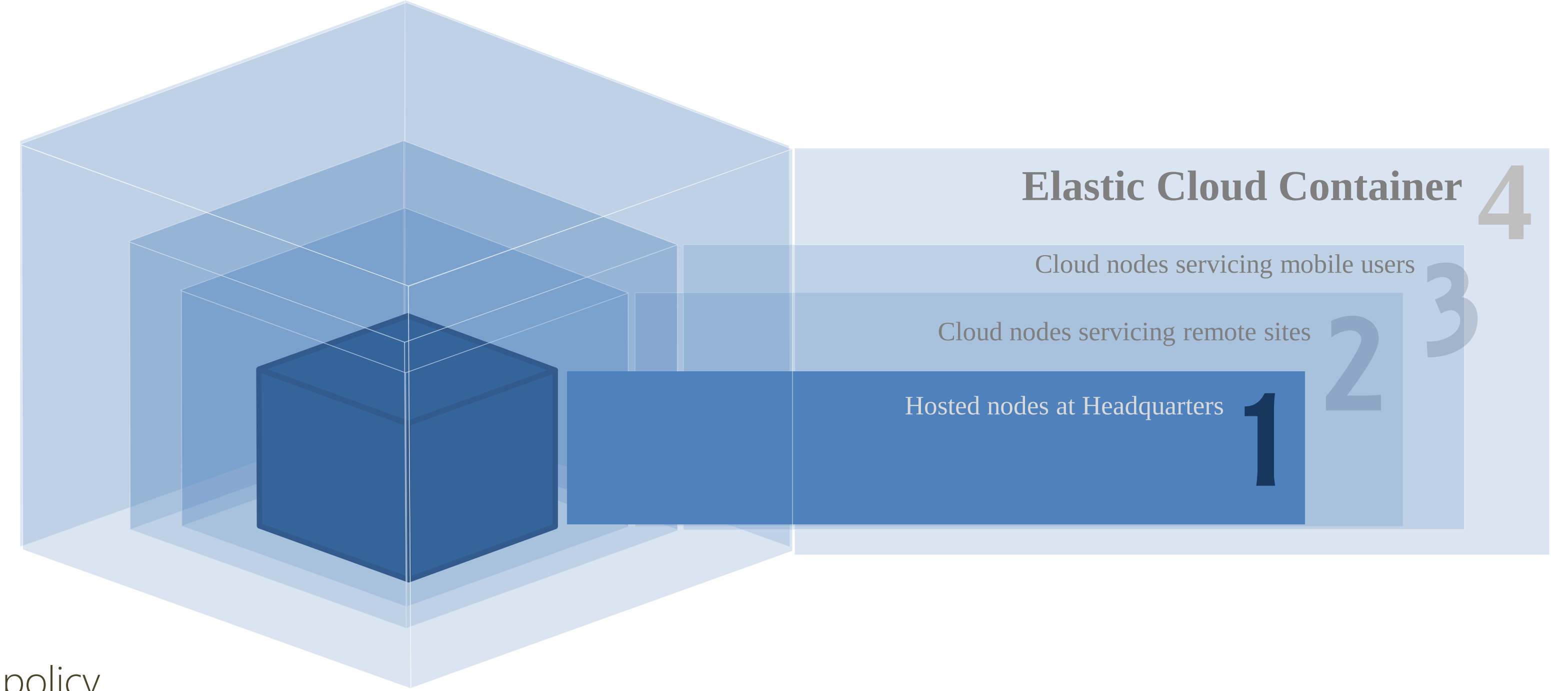
Traffic is scanned through virtualized cloud nodes residing in the cloud fabric

3 **Mobile Users**

Traffic is scanned through virtualized cloud nodes residing in the cloud fabric

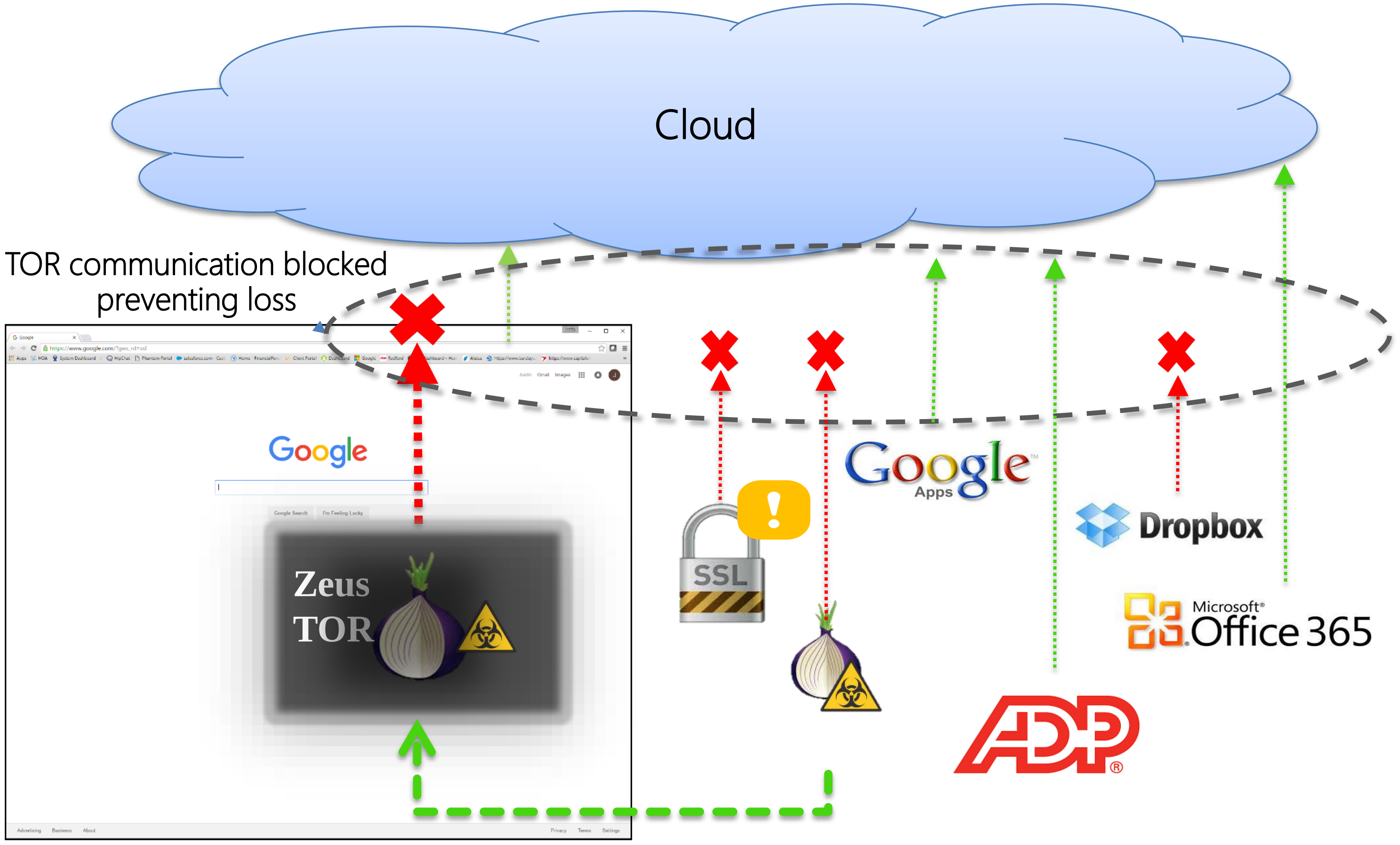
4 **Cloud Container**

Encapsulates all nodes, providing consistent policy & reporting across all users and managed through one central management console in a secure isolated environment


Elastic Cloud Container 4
Cloud nodes servicing mobile users 3
Cloud nodes servicing remote sites 2
Hosted nodes at Headquarters 1

Stream based security leveraging elastic containers eliminates blind spots

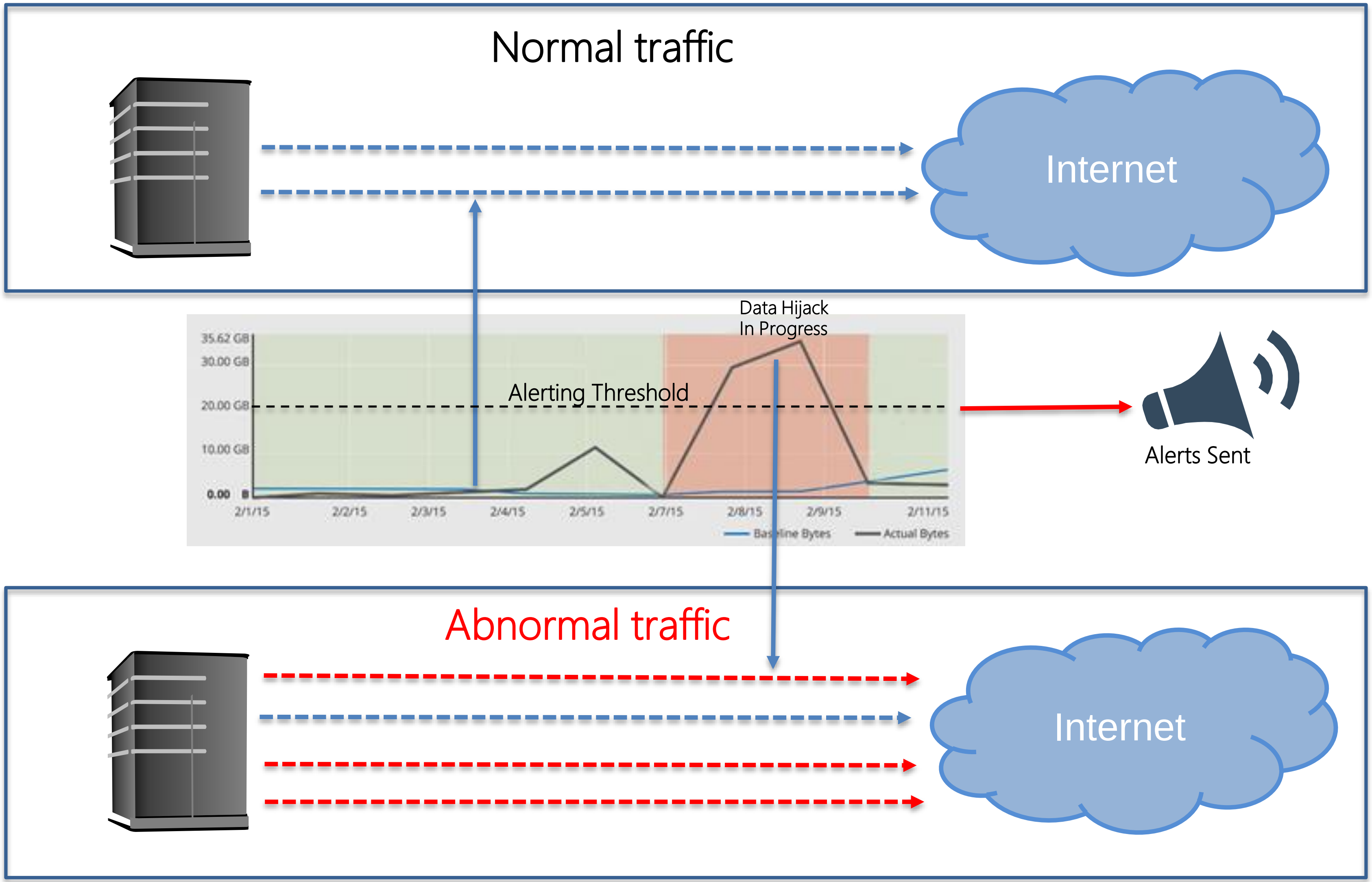
Deep stream-based packet scanning engine with full traffic visibility provides security beyond the web browser



Stream based advantages:

- Security that extends beyond web browser traffic to secure **all Internet traffic**
- Leverages a node based elastic container cloud architecture to **secure all users and locations with ease**
- Enables safe access to approved SaaS applications ensuring uninterrupted business operation
- Detects evasive, polymorphic malware including those masking communication via TOR (ex. Zeus64, Locky)

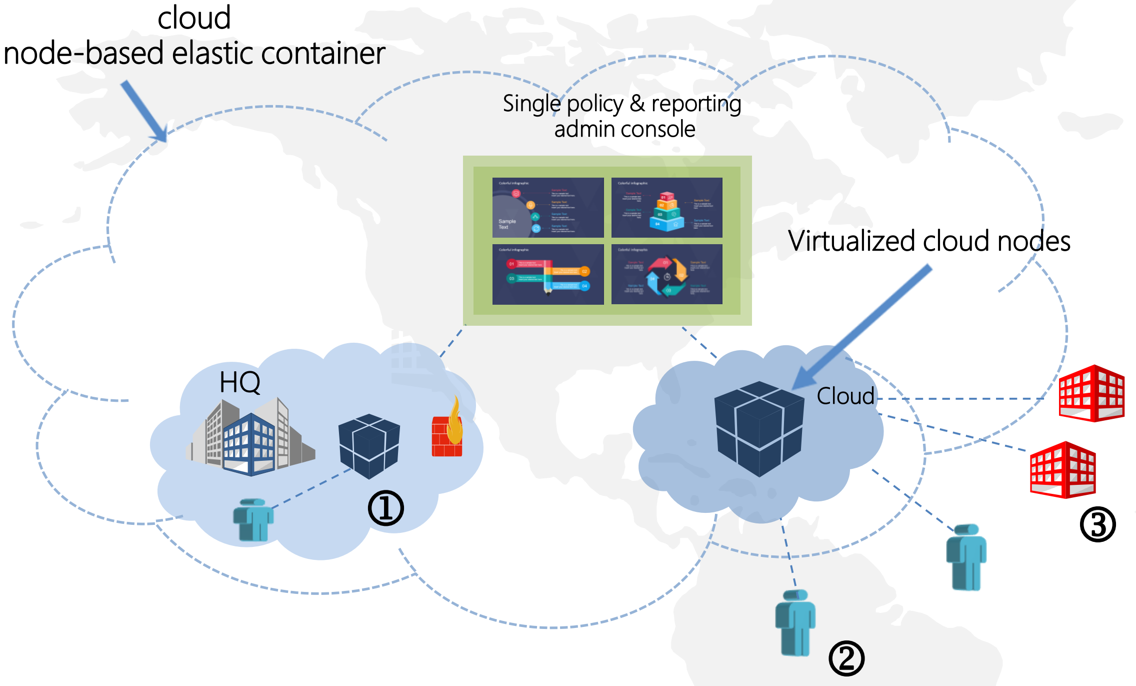
Module for anomaly does not rely on known malware samples



Protection against even the most advanced polymorphic malware

- Triggers based on behavior of the current data compared to normal data baseline
- Does not rely on malware signature updates
- This makes it capable of detecting malware even if it has never been seen in the wild and is unclassified
- Shortens the data loss window. For every passing minute that elapses waiting for a signature update, thousands of files are stolen resulting is massive losses

Secures borderless networks in a node-based containerized environment



cloud
node-based elastic container

Single policy & reporting
admin console

Virtualized cloud nodes

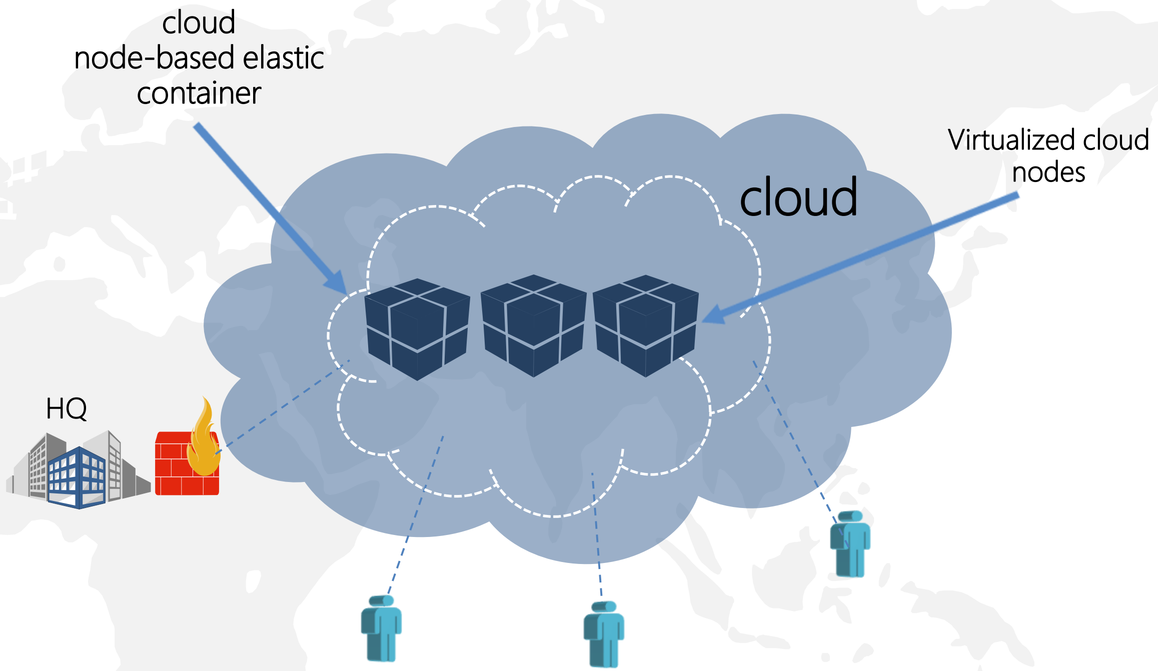
HQ

Cloud

①

②

③



cloud
node-based elastic
container

Virtualized cloud
nodes

cloud

HQ

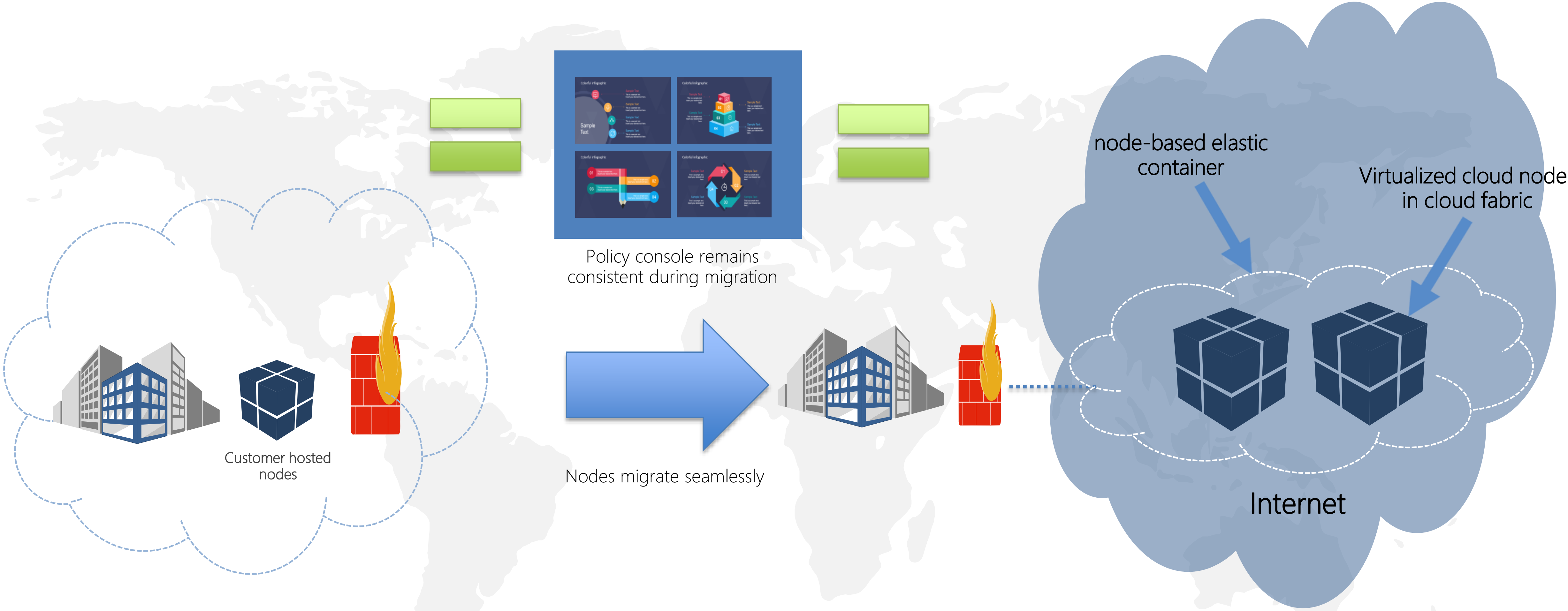
① Customer hosted cloud nodes servicing HQ

② Hosted cloud node servicing mobile users

③ Hosted cloud node servicing branch offices

HQ, remote sites, and mobile users secured by hosted cloud nodes

Cloud node-based containers prepare you for the future



Policy console remains consistent during migration

Customer hosted nodes

Nodes migrate seamlessly

node-based elastic container

Virtualized cloud nodes in cloud fabric

Internet

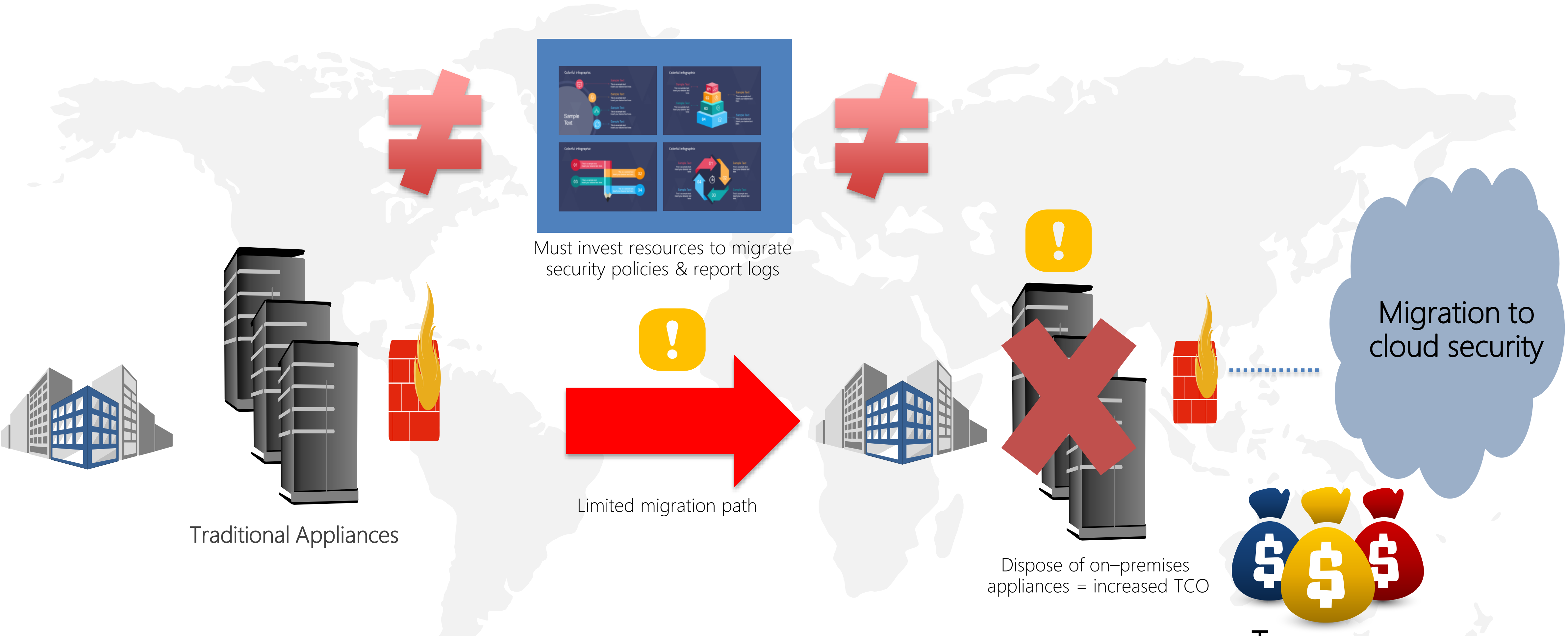
Today

Tomorrow

Hosted node migrates to cloud nodes

Are you prepared for the future?

On-premises appliances and hybrid solutions require network restructuring and purchasing new products



Must invest resources to migrate security policies & report logs

Traditional Appliances

Limited migration path

Migration to cloud security

Dispose of on–premises appliances = increased TCO

Today

Tomorrow

Massive network restructuring

For more information, visit www.iboss.com

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