



# Understanding As-a-service: Teradata IntelliCloud™

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## Agenda

TERADATA.





## Key Takeaways

- **Is it real and ready for prime-time?**
  - **Yes!**
  - 50+ customers, growing size & complexity, AWS, Azure, Teradata Cloud
- **What is different about IntelliCloud?**
  - We handle the infrastructure—same Teradata software as on-premises
  - We do not touch or see your data, analytics, users, etc.
- **Will my job go away?**
  - **No!**
  - Freedom to focus on value-add, higher-importance internal needs

TERADATA.

# Teradata Analytics Platform

## Analyze Anything

Deploy **Anywhere**

Buy **Any Way**

Move **Anytime**

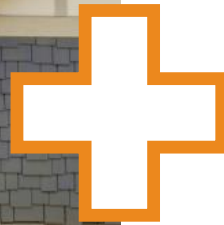


Teradata IntelliCloud™  
is best-in-class  
data & analytic software  
“as-a-service”



# IntelliCloud™

- Ready to move in
- Maintenance & security taken care of



# IntelliCloud = “as-a-service”



# IntelliCloud Business Benefits



## Performance

Maximize resource efficiency and get the most value from your investment

## Security

Peace of mind—because you don't want to be the next news headline!

## Availability

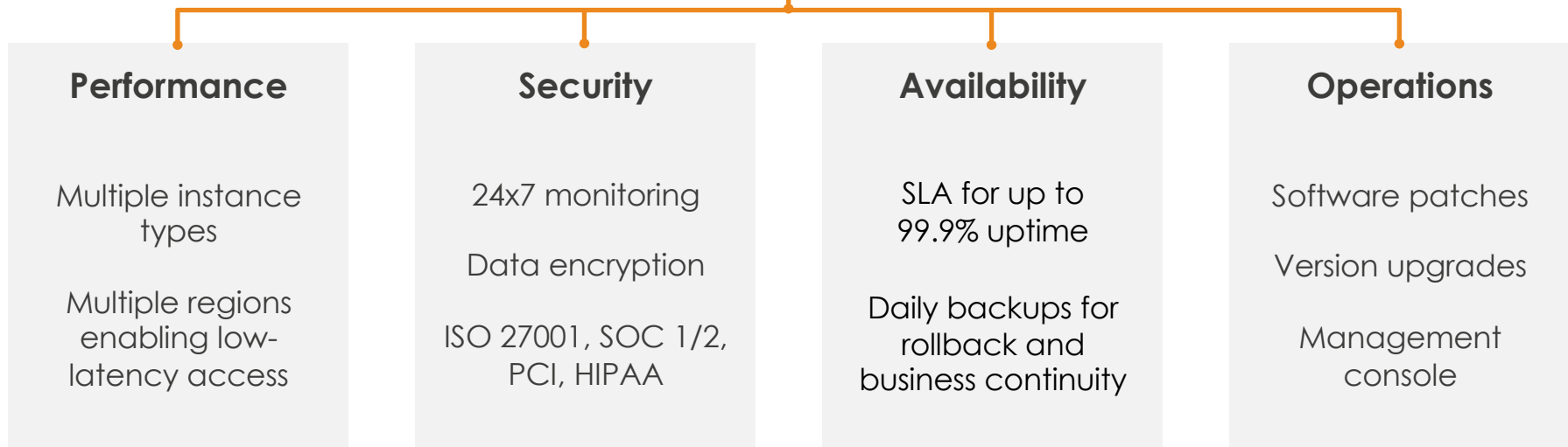
Higher uptime, more productive users, and greater business continuity

## Operations

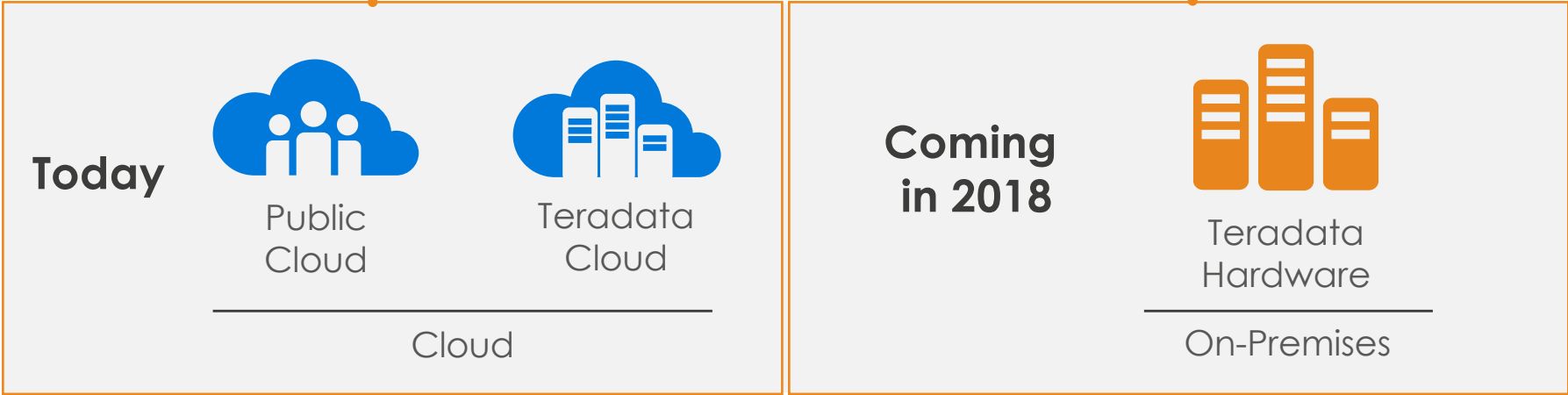
Focus on business, not infrastructure—and always be on the latest release



# IntelliCloud Service Features



# IntelliCloud Deployment Choice





# Use Cases, Customers



# Cloud Use Cases



## Production Analytics

Production workloads driven by cloud capacity on demand and corporate cloud mandates

## Development & Test

Development and test using on demand cloud capacity without impacting production systems

## Proofs of Concept

Prove the business value of new analytics use cases with agile deployment and testing in cloud

## Disaster Recovery

Business Continuity and DR enabled by regionally-separated (yet synchronized) Teradata systems

## Sample Cloud Customers



TERADATA.



# Comparing Deployment Options

Responsibility lies with...



IntelliCloud™



Marketplace, BYOL



Teradata HW



Commodity HW

## Solution Components

Priority Services, Critical System Mgmt

Initial Data Migration

Database Administration

Software Update / Patching

Secure Backup & Restore

Security Compliance

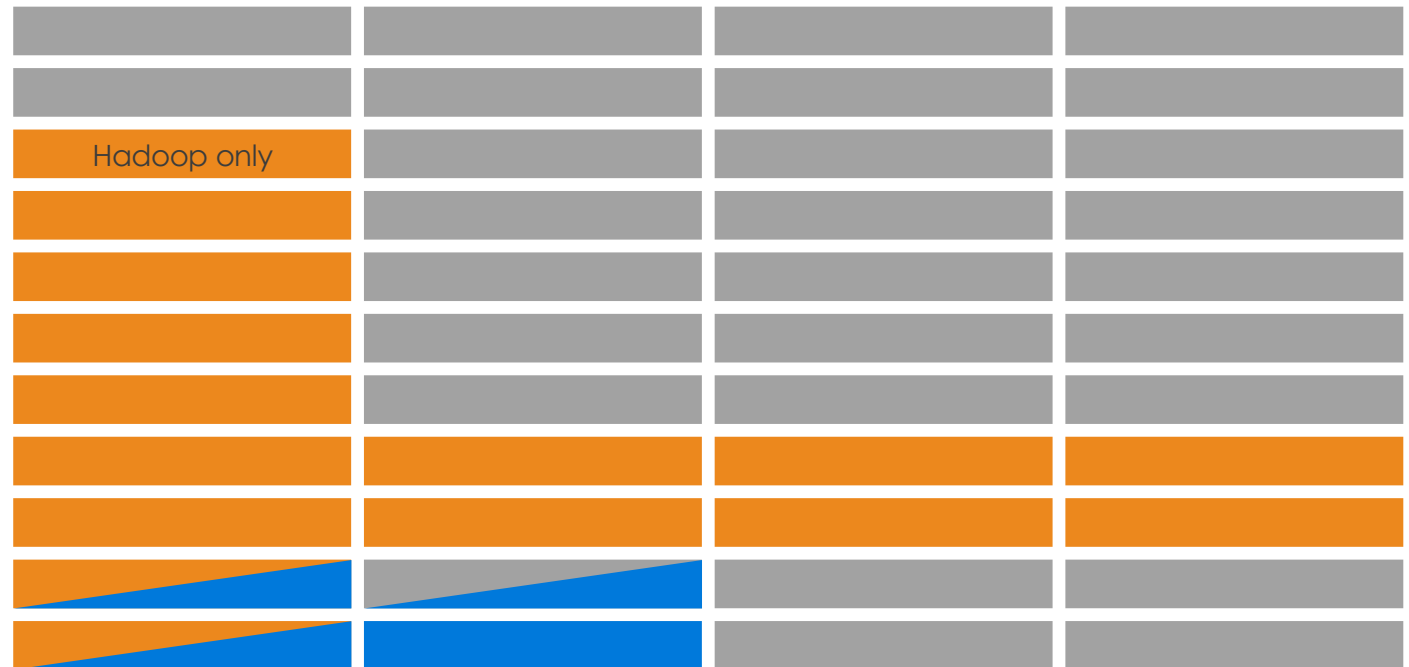
System Monitoring

Premier Support

Best-in-Class Teradata Software

Compute & Storage Infrastructure

Data Center Space, Power, Cooling



# IntelliCloud Customer Resource Comparison

What would it take to Do It Yourself?

Role	FTEs	IntelliCloud
<b>Performance</b> Configuration, VPN / circuit setup, incident resolution, support	0.25	✓
<b>Security</b> Security and certification, monitoring, threat assessment, audits	1.0	✓
<b>Availability</b> Provision and expand system, daily backups, recovery procedures	0.5	✓
<b>Operations</b> Monitoring, problem resolution, escalation, upgrades, patch management	1.0	✓
<b>Totals</b>	<b>2.75</b>	✓

- FTE = Full Time Equivalent resource
- FTE Allocation assumes average system size of 1-8 nodes



# Self-Service Capabilities

Via IntelliCloud Management Console

## Customers can do many things:

- View site details: node types, number of nodes, storage per node, IPs, Viewpoint URL, etc.
- View usage metrics: memory and disk utilization
- Add inbound/outbound firewall rules to allow only desired IPs and protocols\*

\*Currently available with AWS and Azure only

The screenshot displays the Teradata IntelliCloud Management Console interface. At the top, there is a navigation bar with the Teradata logo and 'IntelliCloud'. Below this, the 'Database Sites' section is visible, with a sub-header 'Select a Site to view details and change settings.' and a link 'To add or edit a site, please open a ticket'. The main content area shows details for the 'TDDATADEV' site, including its provider/location (AWS / US-East-1), system name (tdDataD), and creation date (March 20, 2017 @ 3:45 UTC). Key metrics are highlighted: 'Medium Instance' (m4.10xlarge, 40 CPUs, 160GB Memory), '20TB Storage per Node' (120TB Total), and '6 Nodes'. A 'Utilization' section shows '24% Disk Utilized' and '42% CPU Utilized' for the selected 24-hour period. At the bottom, an 'Open Tickets' table lists two tickets: one for upgrading the database site configuration (Priority 1) and another for stopping a backup (Priority 2).

Ticket Number	Priority	Short Description
INC0019792	1	Upgrade database site configuration
INC0043468	2	Stop the backup for TDCloud05TD54

## Advanced and Gold Partner Status

- Ongoing joint engineering, collaboration, and alignment
- Multiple architecture reviews
  - To validate and optimize Teradata on AWS and Azure
- Best practices to leverage AWS and Azure features
  - Security, data movement, hybrid, VPC/VNet interconnects





# Considerations

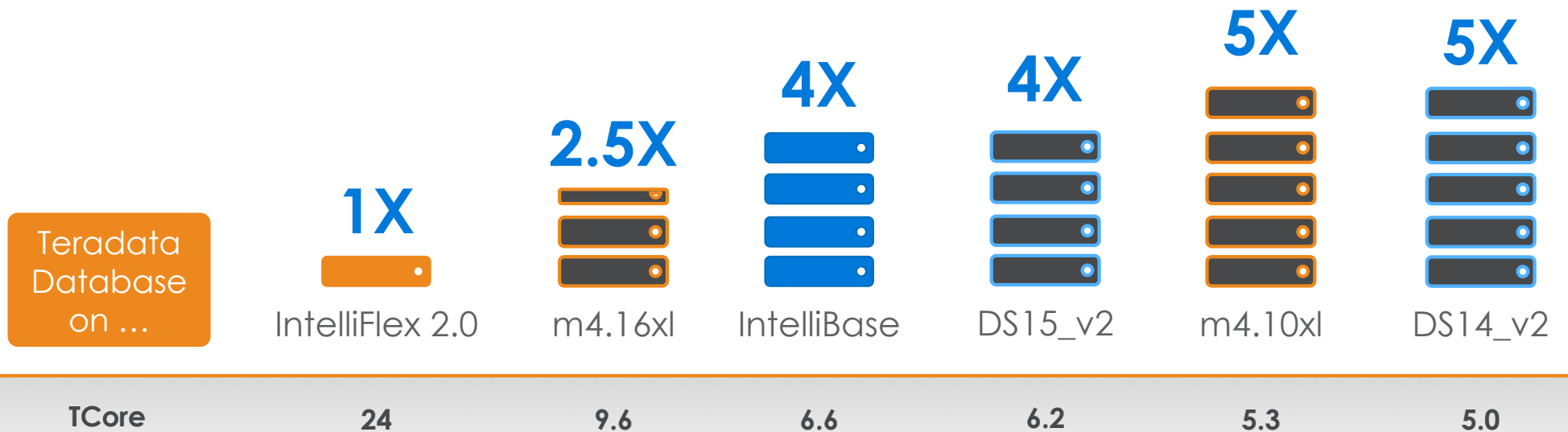




# A Node Is Not a Node

## TCore Comparison

*It takes more nodes in other deployment options to deliver the same performance as a single node of IntelliFlex 2.0.*



# The Public Cloud Is Different



## Multi-Tenant

- Shared environment—compute nodes, I/O, and network (noisy neighbor syndrome)
- Virtualization overhead
- Node-to-node network bandwidth is capped (limits BYNET)



## Limited I/O

- Local storage is fastest but is not resilient
- Network storage is resilient but accessed over the network, and is slower than local
- Bandwidth to network storage is capped and depends on instance types



## Networks

- Dedicated network links from on-prem are 1 Gbps or 10 Gbps
- Dedicated network links can take 90 days to setup with 1 year contract
- AWS Direct Connect or Azure ExpressRoute are options

# The Public Cloud Is Different



## Latency

- Latency is time from source to target
- No faster than the speed of light
- Increases with each network device
- Delay on-prem < 1 ms
- Coast-to-coast 50 ms



## Data Gravity

- Centralize massive data
- Keep data together for easy analysis
- Put data on cheapest storage
- Reduce data movement
  - Costs time and money
  - Introduces latency, both for ETL and downstream consumers



## Moving Data

- Moving takes planning
- < 10 TB, over the wire; otherwise, ship on disk
- How to “catch up” after you’ve restored?
- Will your source system be down during the migration?



# Recommendations





# What Do YOU See in the Cloud?

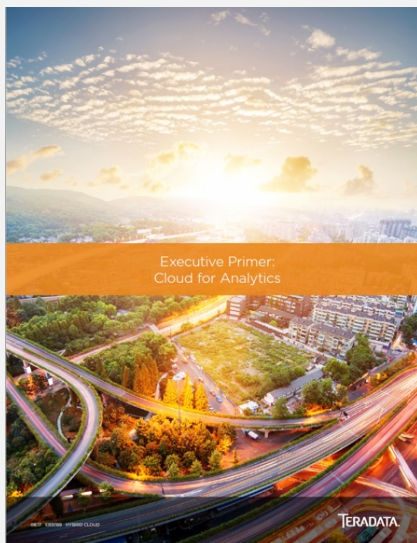
A word cloud of cloud-related terms centered around the phrase "CLOUD MANDATES". The terms are arranged in a circular pattern, with "CLOUD MANDATES" being the largest and most prominent. Other terms include "Capacity Management", "Architecture Complexity", "Skill Building", "Speed to Value", "Data Governance", "Security", "Data Migration & Synchronization", "Vendor Lock-in", "Disaster Recovery", "Which Cloud?", "Focus on Core Competency", "Deployment Flexibility", "Data Protection", "Data Gravity", "Data Volumes", "Agile Innovation", "Price for Performance", "Teradata or Cloud Database?", "Networking", "Optimizing Costs", "Build vs. Buy", "SLAs", "CapEx vs. OpEx", and "In-house vs. Out-source".

**Capacity Management**  
**Architecture Complexity**  
**Skill Building**  
**Speed to Value**  
**Data Governance**  
**Security**  
**Data Migration & Synchronization**  
**Vendor Lock-in**  
**Disaster Recovery**  
**Which Cloud?**  
**Focus on Core Competency**  
**Deployment Flexibility**  
**CLOUD MANDATES**  
**Data Protection**  
**Data Gravity**  
**Data Volumes**  
**Agile Innovation**  
**Price for Performance**  
**Teradata or Cloud Database?**  
**Networking**  
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**Build vs. Buy**  
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**In-house vs. Out-source**

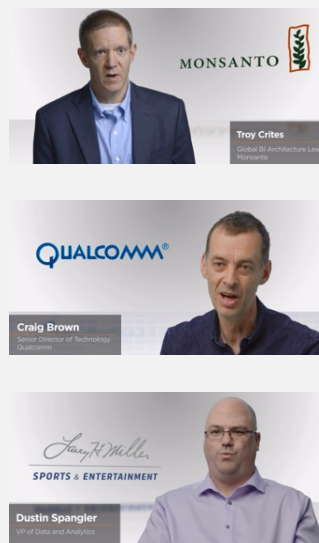


# Start with Education

**Read** our cloud white papers



**View** our customer videos & case studies



**Schedule** a consultation with our team



## PARTNERS Cloud Boot Camp

- Provide a full day “Boot Camp” for students to experience our software and solutions
  - **Data Science Bootcamp** – Get hands on with the Teradata Analytics Platform
  - **Cloud Analytics Bootcamp** – Building scalable analytics in the cloud
- Boot Camps will be on Sunday and Thursday





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For more information, please visit  
[www.teradata.com/cloud](http://www.teradata.com/cloud)