



Teradata IntelliFlex®

*Optimized for Scalable Analytics*

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TERADATA.

# Teradata IntelliFlex®

Next Generation All-Flash Architecture



Data Driven

Storage

Technology

Drives

Teradata

IntelliFlex

TERADATA.

# NetApp Enterprise-Grade Storage

## Fast

Leading Price/  
Performance

## Simple

Optimized  
for  
Integrated  
Solutions

## Reliable

Leading  
Durability and  
Reliability

# NetApp Flash Leadership and Innovation

**1000+**

PB of flash  
shipped

**\$1B+**

Annual revenue  
run rate

**468%**

Year-over-year growth (PB)

\*Compares Q2FY17 and Q2FY16

**14,630+**

All-flash controllers

**210K+**

Hybrid controllers

Metrics through October 2016

# Why NetApp Customers are Running to Flash

## Performance

- **200 IOPS for a 10k drive vs up to 200,000 for an SSD**
- No need to migrate your data “between tiers” in All- Flash environments

## Capacity

- **16TB SSD vs 1.8TB 10k HDD**
- 10 racks to 1 rack in the data center
- Fewer data placement management concerns

## TCO

- **Up to 9x more reliable than HDD**
- Lower lifetime support costs and fewer support cases
- Flash Arrays last longer (up to 6 years and beyond for depreciation)
- Simpler environments (fewer shelves, connections, and parts to fail)
- Co-Location or premium space environments magnify the benefit

# Teradata IntelliFlex®

Next-Generation MPP Architecture



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**Flexible Multi-Dimensional Scalability**

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**Cloud-Like Performance Elasticity**

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**Increased Business Agility**

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**Mission-Critical Availability**

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**Data Center-Friendly**

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**On-Premises or the Teradata Cloud**

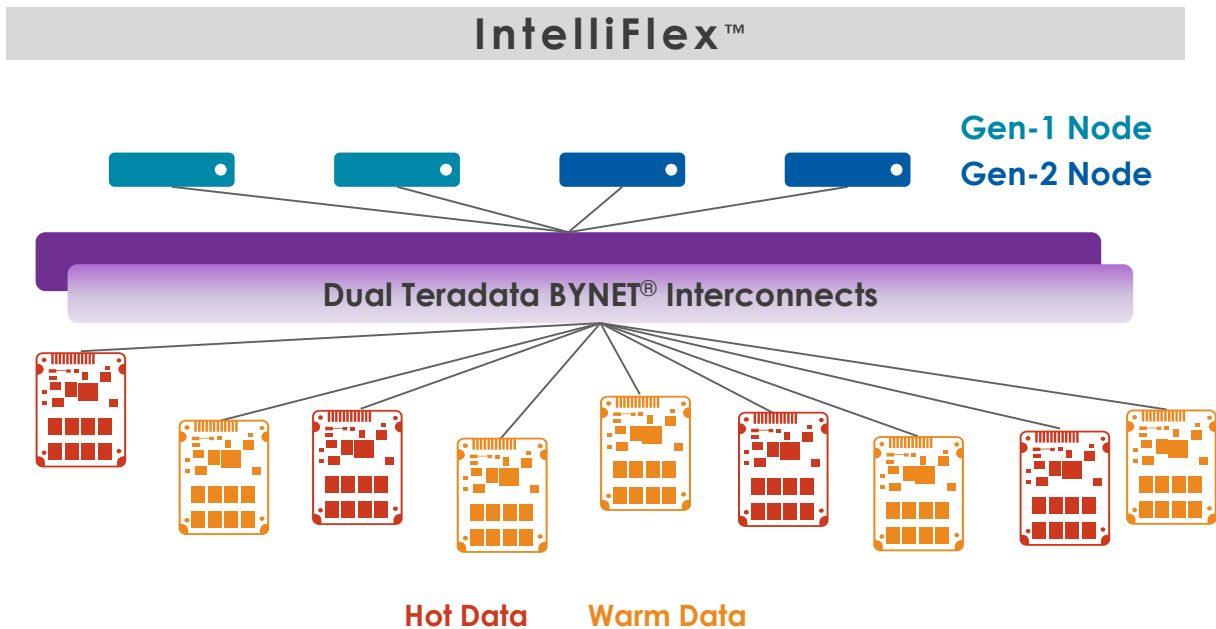
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**Foundation for Teradata Analytics Platform**

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**TERADATA.**

# Fabric Architecture Enables Flexibility



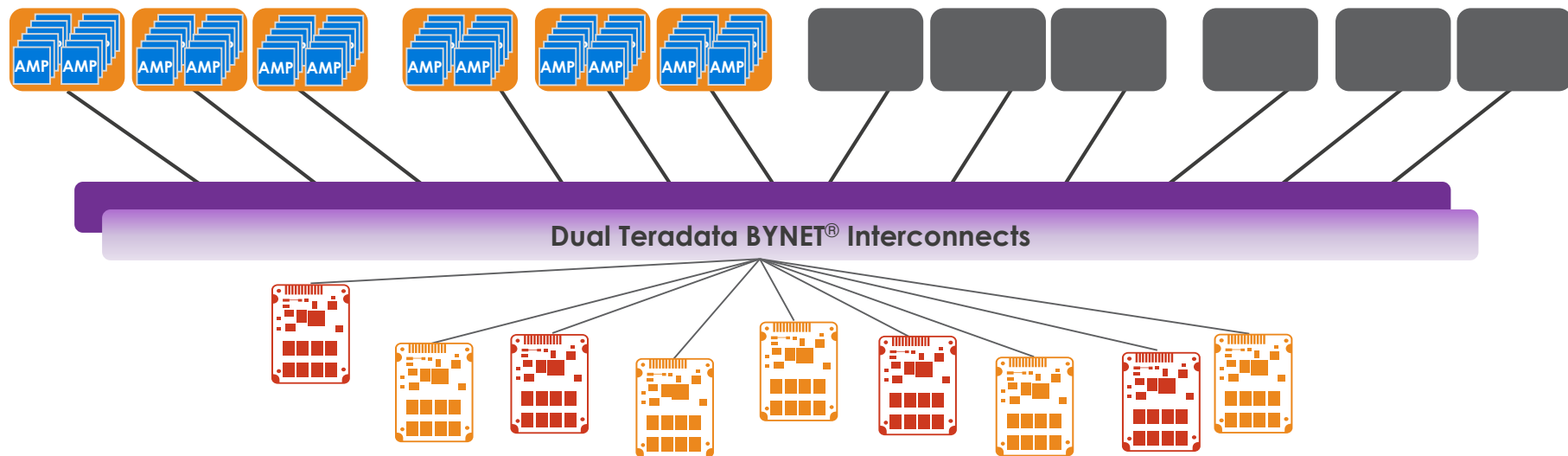
# Flexible Multi-Dimensional Scalability

- **Fabric-attached** compute and storage enable intelligent, flexible configurations
- **Independent scaling of nodes and storage** enables fine-grained system growth that matches changing workload profiles
  - Customers only purchase the processing power and storage capacity they need now



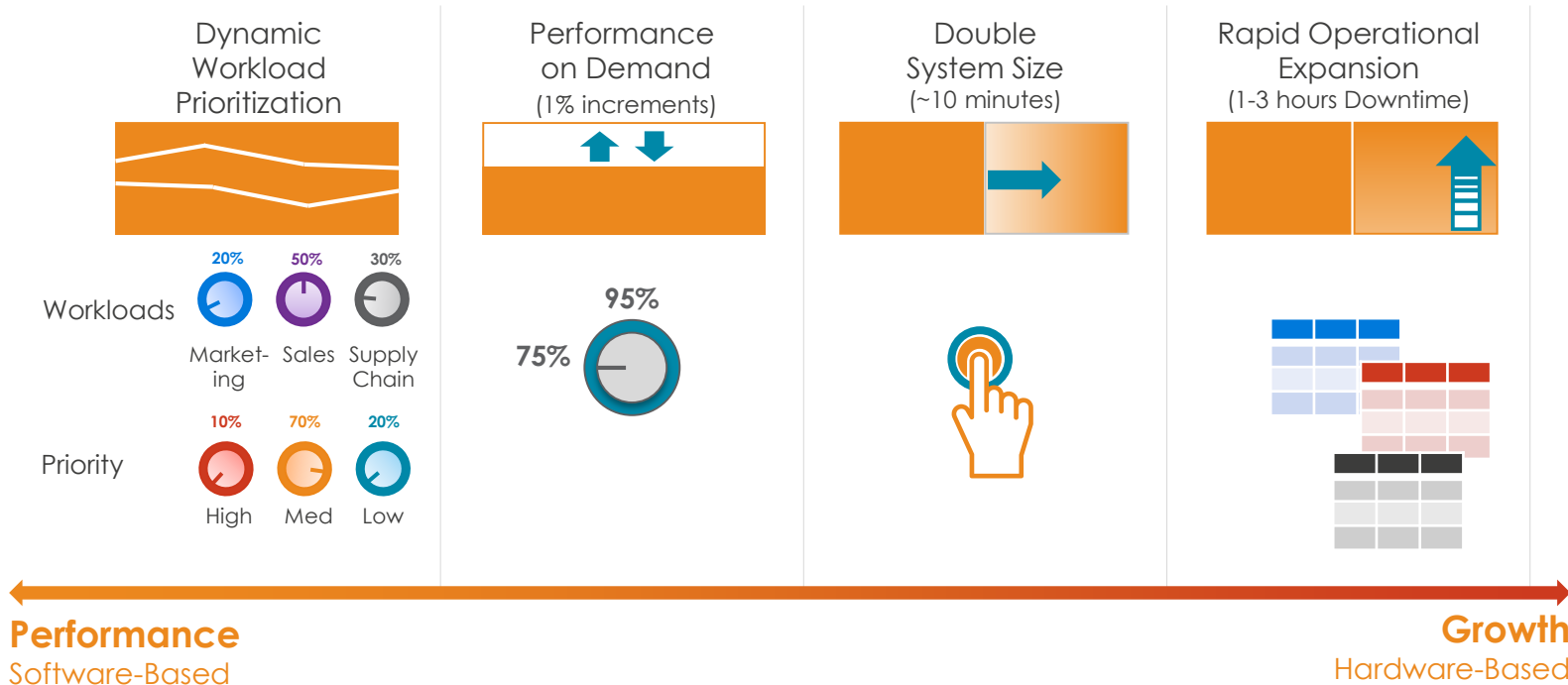


# Teradata IntelliFlex – Performance Elasticity



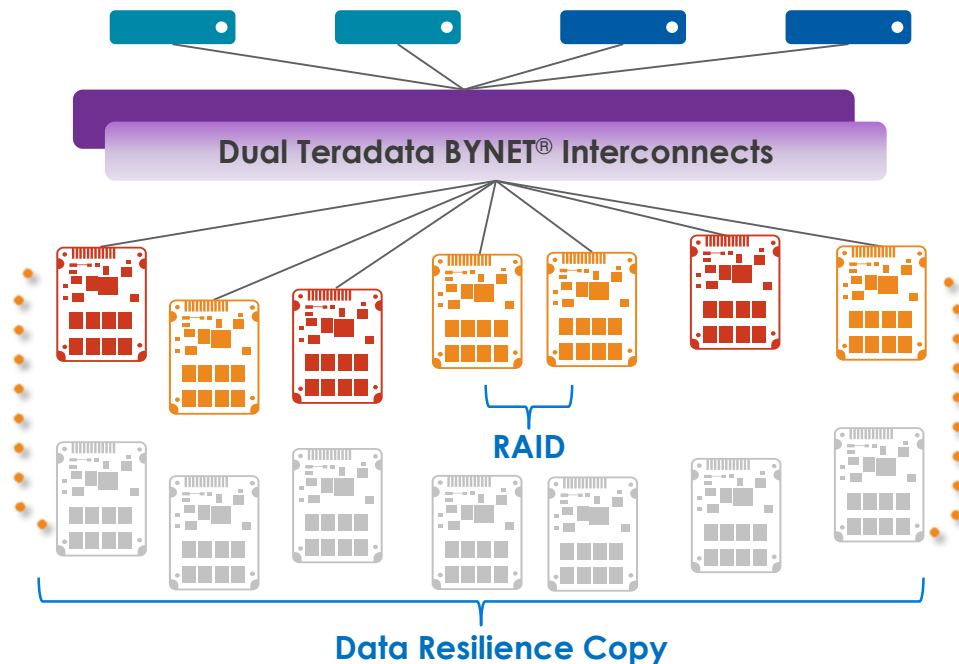
- Purchase hardware up front for a **planned elasticity/expansion** at a later date
- A database restart, followed by AMP migration, enables the new nodes
- You will get the benefit of increased CPU, memory, and I/O bandwidth
- TVS enables storage addition to existing AMPs

# Multi-Dimensional Elasticity

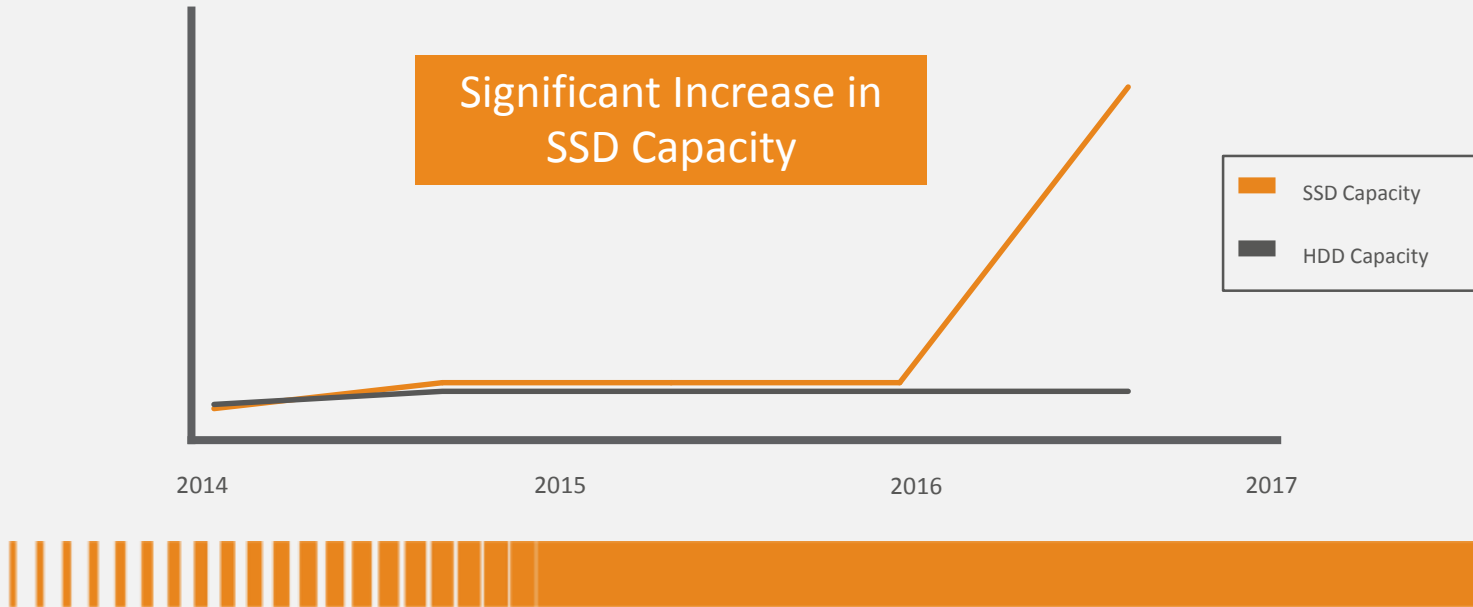


# Benefits of Data Resilience

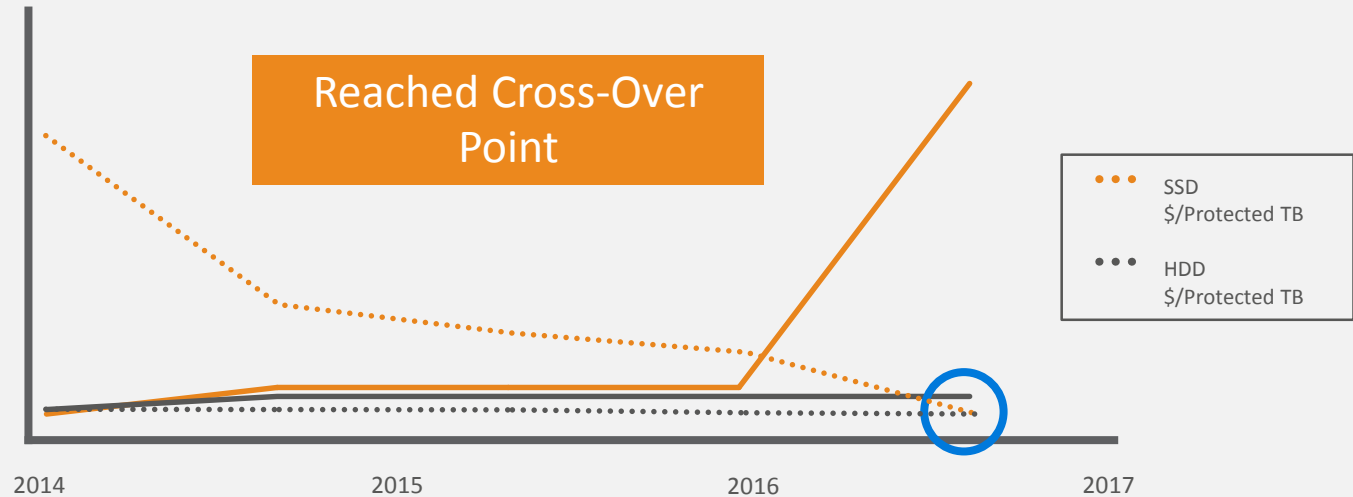
- **Extended downtime incidents are greatly reduced**
  - Systems are more operational
- **Protection against a large set of *unexpected* failure scenarios**
  - Hardware, software, human, zombie
- **Greatly increases data redundancy**
  - Data loss can cripple business
- **Transparent to IT/Users/Applications**
  - System is protected without overhead



# SSD Trends



# SSD Trends



# All-Flash Appliance

## Teradata IntelliFlex®

Extreme Performance  
Extreme Density  
Extreme Green



100% Memory Based SSD Platform



Only Thing Spinning is the Fan!!!!



# Teradata IntelliFlex®

100% Solid State Performance

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**7.5x** Performance for Compute-Intensive Analytics

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**4.5x** Performance for Data Warehouse Analytics

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**3.5x** Data Capacity

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**2.3x** Performance Density

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**2.0x** Performance per kW

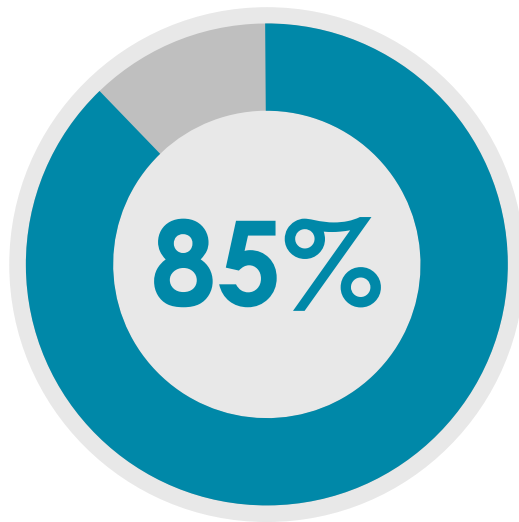
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*Note: comparisons to the previous generation IntelliFlex platform are on a per cabinet basis. Workloads will see up to this amount of benefit.*

# Hybrid Cloud Environments Are Critical for Our Customers



Companies will deploy both **on-premises** and **in the cloud** by 2020



Companies looking to buy **"as-a-service"**

# Teradata Hybrid Cloud Strategy

*IntelliFlex Is Key*



Public Cloud  
(AWS/Azure Marketplaces)



Teradata Cloud  
(IntelliFlex/IntelliBase/AWS)



Teradata Hardware  
(IntelliFlex/IntelliBase)



Commodity Hardware  
(VMware)



Microsoft Azure



vmware®

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# Teradata IntelliFlex®

What's New for 2018



- ✓ Teradata Analytics Platform co-processing nodes
- ✓ Enhanced performance elasticity
- ✓ Always-on compression for improved performance and more storage space
- ✓ Multi-Generation Support

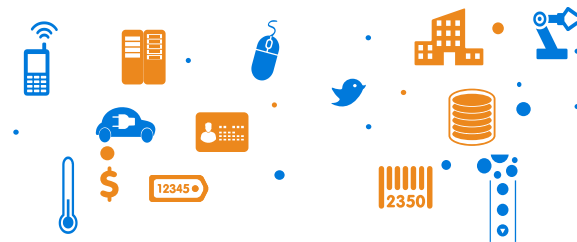
# Advancing from “Data Warehouse” to “Analytics Platform”

Advanced Analytic  
Tools and Languages



**Leverage and Expand**

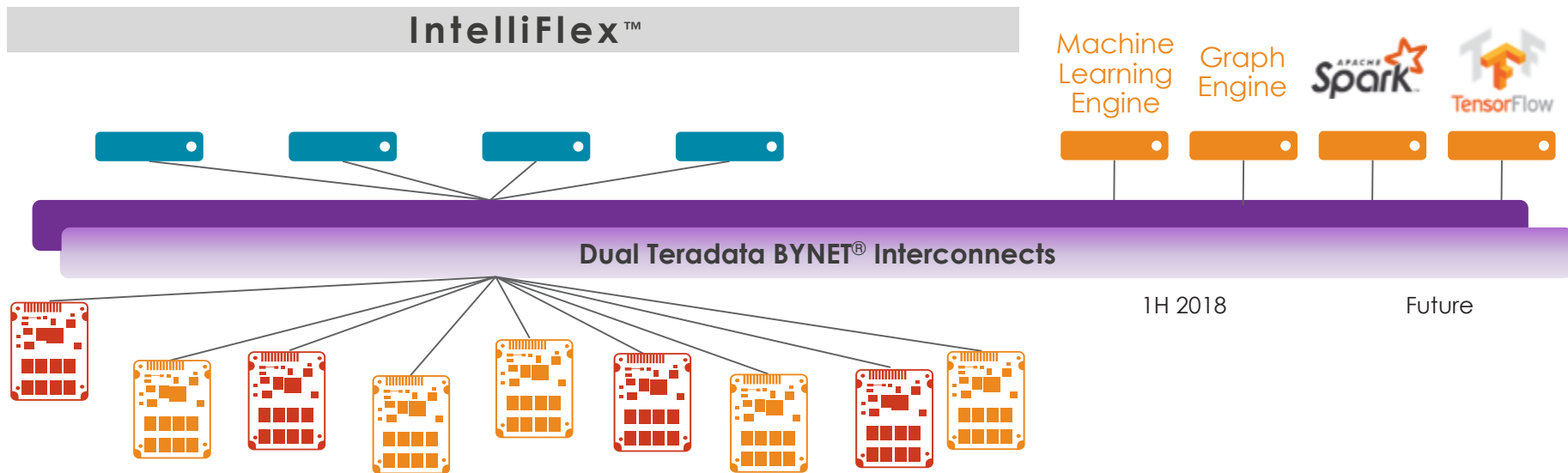
**your existing Data Warehouse investment**



New Data Sources and  
Data Types

# Fabric Architecture Enables Flexibility

Teradata Analytics Platform



## Future Direction

- **Built-In Elasticity**

- On-demand capacity available through software controls
- Independent scaling of CPU and I/O
- Every unit item

- **Compression-Optimized Configurations**

- Increase performance
- Increase storage capacity
- Increase storage density per cabinet



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