

WHITE PAPER

# Teradata Vantage TCO Comparisons: On-Premises and Cloud



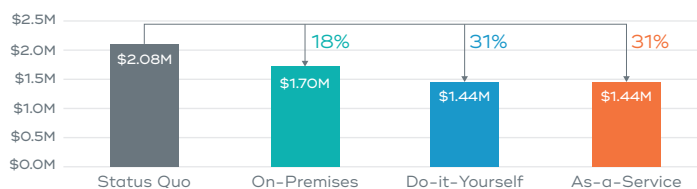
## Executive Summary

Teradata Vantage™, the company’s flagship analytics software platform, is unique in capabilities and deployment options. Customers with an existing, on-premises Teradata system naturally want to know how total cost of ownership (TCO) stacks up when their current system is nearing replacement. Should a legacy system be replaced with a newer one? If going to the cloud, should one implement on one’s own or go with a fully managed service instead?

This paper compares the three-year TCO of four scenarios:

- 1. Status Quo** = Maintain a previously purchased, earlier-generation Teradata system
- 2. On-Premises** = Replace the legacy system with Vantage on Teradata IntelliFlex
- 3. Do-it-Yourself** = Migrate to Vantage in the cloud and operate on one’s own
- 4. As-a-Service** = Move to Vantage in the cloud but have Teradata manage the resources

To ensure apples-to-apples comparisons, each scenario supports the same requirements, which are modest yet representative: Advanced tier software, 20 TCore, and 15 TB of customer data space (CDS). Summaries and detailed explanations follow; here are the headline results:



Three-year TCO Comparison of Teradata Vantage Deployment Options

## Back in the Day

It used to be that in order to become a data-driven company using Teradata-powered analytics, a customer had one option: deploy and run a Teradata system within one’s own data center. Given the strategic and centralized nature of the enterprise data warehouse, it was common for such customers to quickly consume the full capacity of their Teradata systems—and because

upgrades could be significant events, companies would delay expansions to avoid any disruptions. To ensure enough capacity for the business’ most mission-critical workloads, DBA and IT staff had to be selective as to which data could remain on the production analytics platform and which users would be allowed access.

Constrained resources made it difficult for all potential users to get, store, and process the information they needed. A popular workaround was to copy or offload data from the Teradata system to smaller servers that were under users’ own control, thus undercutting the concept of a single source of truth. Data duplication and data drift became common, not to mention the added costs, security and governance challenges, and skirmishes over whose figures were correct. The rise of low-cost storage and cloud services exacerbated the “shadow IT” trend even more: indeed, using a corporate credit card and a few mouse clicks, it was easy to create department-level data marts, leading to further data silo proliferation and inefficiency.

## New Capabilities and Expectations

Customers today are understandably looking for an alternative to the old reality. Business users expect access to answers in minutes, not months. DBAs and IT staff want to accommodate internal requirements and work with easily managed architectures that can scale with the growth of the organization. CFOs want invoice predictability and certainly don’t want to be paying for hordes of one-off environments just because users can’t wait for upgrades to the main system.

The new reality is quickly shifting toward the cloud as well as the incorporation of cloud-like benefits for on-premises systems. Secure, enterprise-scale cloud deployments can now meet customers’ demand for access and immediacy by virtue of flexible, globally available services.

For some companies, cloud has become the new default. For others, keeping infrastructure in their own data centers—but with cloud-like benefits such as subscription licensing and separation of compute and storage—is the preferred choice. For most enterprises, having a hybrid environment of both cloud and on-premises is considered the best way to go.

## A Modern Cloud Architecture

Teradata fully embraces the cloud and its benefits. In fact, we have simplified customer decision-making by making Teradata Vantage available across nearly every cloud option: public cloud, private cloud, hybrid cloud, and multi-cloud. With consistent Vantage software across each option—a key industry differentiator—customers can have a modern cloud architecture to meet their needs today and in the future without having to rearchitect ecosystems, retrain personnel, or rewrite applications. License portability also means low-risk migrations from one environment to another.

While there is never one best answer for all customers, this paper compares the three-year TCO of four scenarios, each of which supports the same operational requirements: Advanced tier software, 20 TCore, and 15 TB of customer data. Other assumptions include:

- The Status Quo system cannot be upgraded. It’s nearing End of Life (EOL).
- Maintenance and support levels are consistent. Backup and recovery (BAR) is included.
- Migration costs are consistent (except in Status Quo, which requires no migration).
- DBA/IT FTE compensation and benefits for a composite resource are \$125,000 annually.
- For simplicity, the consumer price index (CPI) and the discount rate are both set to 0 percent.

We’ve opted to use Amazon Web Services (AWS)-based resources for the two cloud options, but because Vantage uses the same price per TCore (a pricing metric based on compute and I/O) per tier, regardless of deployment type, there is effectively no difference in outcome if we were to use Microsoft Azure- or (coming soon) Google Cloud Platform-based resources instead.

## TCO Comparison Summaries

### Status Quo

**Establishes the baseline TCO at \$2.08M.** The Status Quo scenario is one in which a customer, who had purchased a

\$1M on-premises Teradata system on a perpetual license three years prior, opts to simply maintain what they have and “sweat” their existing assets.

Key assumptions:

- Teradata Database Advanced Tier perpetual license
- Teradata 4N 2850 Appliance with 20 TCore and 15 TB CDS
- 1.0 FTE DBA/IT required to manage software, hardware, and system administration

### Status Quo

	One-Time	Year 1	Year 2	Year 3	Total
Maintenance & support		\$460,000	\$460,000	\$660,000	\$1,580,000
Data center		\$42,000	\$42,000	\$42,000	\$126,000
DBA/IT		\$125,000	\$125,000	\$125,000	\$375,000
<b>Total</b>		<b>\$627,000</b>	<b>\$627,000</b>	<b>\$827,000</b>	<b>\$2,081,000</b>

The Status Quo scenario has a three-year TCO of \$2.08M; details are shown in the appendix.

## On-Premises

**Staying on-premises but upgrading brings the latest features and \$380K savings.** On-Premises is the scenario when a customer replaces its legacy Teradata system with a like-for-like modern subscription consisting of Vantage software and IntelliFlex infrastructure.

Key assumptions:

- Teradata Vantage Advanced subscription (new software and pricing model)
- Teradata IntelliFlex with 20 TCore and 15 TB CDS (new infrastructure)
- 1.0 FTE DBA/IT staff required to manage the complete system (no change)

### On-Premises

	One-Time	Year 1	Year 2	Year 3	Total
Vantage + IntelliFlex		\$366,717	\$366,717	\$366,717	\$1,100,150
Data center		\$42,000	\$42,000	\$42,000	\$126,000
DBA/IT		\$125,000	\$125,000	\$125,000	\$375,000
Migration	\$100,000				\$100,000
<b>Total</b>	<b>\$100,000</b>	<b>\$533,717</b>	<b>\$533,717</b>	<b>\$533,717</b>	<b>\$1,701,150</b>

On-Premises has a three-year TCO of \$1.70M, an 18 percent reduction compared to Status Quo.

### Do-it-Yourself

**Migrating to the cloud and managing the environment brings current features and \$640K savings.** The third scenario is when a customer migrates to Vantage in the cloud on a Do-it-Yourself basis. This means that the customer subscribes to Vantage (in this case via AWS Marketplace) and then deploys and operates the environment on its own, including management of compute, storage, software, security, patching, updates, and daily backups.

In the cloud a customer does not have to manage physical infrastructure, so we factor in a 33 percent reduction in DBA/IT requirements. We also include the cost of a 1 Gbps dedicated network connection from the customer’s LAN to the cloud provider.

Other assumptions:

- Teradata Vantage Advanced (DIY) subscription (new software and pricing model)
- Amazon EC2 compute, Amazon EBS persistent storage, and Amazon S3 for backups
- 0.67 FTE DBA/IT to manage the system (33 percent reduction vs. Status Quo, On-Premises)

#### Do-it-Yourself

	One-Time	Year 1	Year 2	Year 3	Total
Vantage		\$273,565	\$273,565	\$273,565	\$820,696
Compute + Storage		\$75,056	\$75,056	\$75,056	\$225,167
DBA/IT		\$83,750	\$83,750	\$83,750	\$251,250
Connectivity		\$14,592	\$14,592	\$14,592	\$43,776
Migration	\$100,000				\$100,000
<b>Total</b>	<b>\$100,000</b>	<b>\$446,963</b>	<b>\$446,963</b>	<b>\$446,963</b>	<b>\$1,440,888</b>

Do-it-Yourself has a three-year TCO of \$1.44M, a 31 percent reduction compared to Status Quo and a 15 percent reduction compared to On-Premises.

### As-a-Service

**Migrating to an as-a-service cloud offer provides the latest features, a managed environment, and \$638K savings.** The final scenario is when a customer migrates to Vantage in the cloud on an As-a-Service basis. This is a subscription with Vantage software, cloud infrastructure, and services required to securely maintain resources such as monitoring, patches, and backups.

Given the long list of environment-level services that are included with the as-a-service offer, we reduce the DBA/IT staff requirements by half from Do-it-Yourself down to 0.33 FTE.

Other assumptions:

- Teradata Vantage Advanced (SaaS) subscription (new software and pricing model)
- Amazon EC2 compute, Amazon EBS persistent storage, and Amazon S3 for backups
- 0.33 FTE DBA/IT to manage the system (50 percent reduction vs. Do-it-Yourself)

#### As-a-Service

	One-Time	Year 1	Year 2	Year 3	Total
Vantage delivered as-a-service		\$391,981	\$391,981	\$391,981	\$1,175,943
DBA/IT		\$41,250	\$41,250	\$41,250	\$123,750
Connectivity		\$14,592	\$14,592	\$14,592	\$43,776
Migration	\$100,000				
<b>Total</b>	<b>\$100,000</b>	<b>\$447,823</b>	<b>\$447,823</b>	<b>\$447,823</b>	<b>\$1,443,469</b>

As-a-Service has a three-year TCO of \$1.44M, a 31 percent reduction compared to Status Quo and a 15 percent reduction vs. On-Premises. As-a-Service has virtually the same TCO as Do-it-Yourself.

### Status Quo Is the Least Attractive

The TCO comparisons clearly show that maintaining the Status Quo is the most expensive of the four. For many readers this is a counterintuitive result because we often think that replacing an older version of something—say, a car—with a newer one would be more expensive. But if we play the analogy forward, it’s the case here that

automobile reliability and fuel efficiency have improved so much that it is indeed less expensive on a TCO basis to get a new daily driver than continue paying for gas and maintenance on the older vehicle.

There are other drawbacks associated with the Status Quo:

- **Missed opportunities.** Enterprise-class analytics have evolved significantly in recent years but taking advantage of the latest capabilities requires one to be using the latest software. Hanging back on a legacy system with old bits means missing out on the best opportunities to better understand customers, supply chains, inventory levels, financial risk, and more.
- **Lack of support for new data types.** Data types and data sources have been multiplying—just think about clickstreams, social media feeds, digital twins, and IoT-based sensor data. Harnessing such information for a complete picture of one’s business is now table stakes, yet older software likely means that tapping into potential insights is simply not feasible.
- **Previous-generation systems can hold a business back.** Legacy systems typically have fixed coupling between compute and storage, which means changing one necessarily requires changing the other. That is inefficient. Modern systems now have separation of compute and storage, enabling each to be scaled independently and only when needed.

## On-Premises Requires the Least Change for Modernization

The On-Premises scenario offers 18 percent TCO improvement from the Status Quo. Like-for-like replacement requires the least change to obtain modern analytic capabilities. Indeed, this approach means there is no need to retrain personnel or recode applications—it’s plug-and-play.

Key benefits include better performance due to newer infrastructure, support for new data types and functions, separation of compute and storage, and subscription licensing (typically funded from operational budgets) rather than perpetual (classified as capital

expense). Another advantage is having complete control over the infrastructure. There’s also the reality that large enterprises typically have huge amounts of information stored onsite (colloquially known as “data gravity”), so having the entire analytic ecosystem in one physical location yields simplicity and very low latency. Last, whether due to regulation or corporate policy, cloud deployment is a non-starter for some, which makes the choice easy: On-Premises.

There is one main drawback with On-Premises:

- **Inability to quickly scale beyond what’s already provisioned.** Keeping up with shifting business demands can be a real challenge. The speed that physical infrastructure may be approved, procured, delivered, configured, and integrated before putting it into use can easily be months—often not fast enough to satisfy the needs of a quickly-evolving organization. Miss the capital budget approval window or under-forecast demand and it can be many more months of constrained capacity.

## Migrating to the Cloud Offers the Lowest TCO

The two cloud approaches offer the lowest TCO. Both the Do-it-Yourself and As-a-Service scenarios are 31 percent lower than the Status Quo and only \$2.5K apart. Migrating from a legacy system to either of the cloud options for Vantage opens the door to a long list of improvements:

- **Faster time-to-production.** The time to launch a new project is reduced from months to minutes in the cloud. System resources are readily available and there is no requirement for a large, up-front investment. It’s a radical change.
- **Start small, grow as needed.** With legacy systems, companies often over-bought to ensure they had enough for busy periods. In the cloud, rapid provisioning and on-the-fly scalability can accommodate surges in demand, eliminating the need to buy anything before needed. Time spent on capacity planning is significantly reduced, and in fact consumption pricing offers the ability to simply pay as you go and not think about utilization rates whatsoever.

- **Performance improvements.** Customers are often pleasantly surprised by significant boosts in performance when migrating from legacy systems to Vantage in the cloud. In some cases, this is due merely to capacity expansion, and in others Moore’s Law is at play: cloud resources are current while legacy infrastructure can be generations behind.
- **Lack of a learning curve.** Compared to alternatives, a key benefit of Vantage in the cloud is the lack of a learning curve for existing Teradata customers as it is literally the same software used on-premises. Analytics can be run in the cloud the same way they are in the data center with zero code changes needed for applications, data models, processes, etc.
- **Better access to data.** Real fears about bringing down production systems can lead to situations where those who need access to analytics often do not get it—or they must employ painstaking workarounds to offload subsets of data onto separate platforms. With Vantage in the cloud, a sandbox environment that is separate from (but connected to) production can be spun up quickly, thus avoiding performance degradation.
- **Greater employee satisfaction.** It’s frustrating when new business initiatives are put on hold or cancelled due to capacity constraints. IT teams struggle to establish themselves as strategic partners to business users but are often viewed as friction-inducing naysayers when the system is full. Yet with fast provisioning and rapid scaling, migrating to Vantage in the cloud empowers IT to say “yes.” This reduces stress and improves employee morale.

Additional benefits specific to As-a-Service:

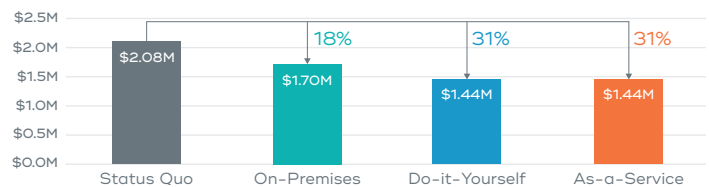
- **Reduced need for specialized skills.** Finding qualified DBA/IT resources can be difficult, even in the best of times. Vantage on AWS, Azure, and soon GCP requires minimal customer involvement; a lean team can sustain a large environment. Staff are not required to monitor, patch, or back up the system as these items are all included in the subscription.
- **Fewer mistakes.** Automation is at the foundation of Vantage delivered as-a-service. This leads to fewer opportunities for human error. When manual intervention is needed, Teradata personnel doing

the work have usually performed tasks dozens or even hundreds of times. There’s no substitute for experience, detailed runbooks, sophisticated monitoring, and verification tools to ensure maximum reliability and uptime for complex IT environments.

- **Better security and compliance.** In many cases the security and compliance offered in the cloud is much higher than companies can provide on their own. Vantage delivered as-a-service includes enterprise-class security monitoring and has been independently audited for compliance with GDPR, PCI, HIPAA, ISO 27001, and SOC 1 and 2.

## Conclusion: Moving to a Modern Environment Offers Best TCO

Teradata Vantage is unique in capabilities and deployment options. Having an apples-to-apples TCO comparison is useful when evaluating choices as legacy systems near replacement. As we’ve just seen, upgrading from an older asset to a modern environment offers substantial reductions in a three-year TCO.



Three-year TCO Comparison of Teradata Vantage Deployment Options

To be clear, the purpose of this exercise was to compare the TCO of four scenarios rather than point to one as the only winner. Each option comes with its own benefits and costs, some of which we’ve quantified and discussed. Use the detailed calculations and explanations in the appendix for even greater insight into how the TCO numbers compare.

The best choice for any one organization is unique. Business decisions are rarely based only on financial metrics, as strategy, timing, and competing priorities must also be considered. Knowing the costs is necessary but often not enough for decision-making.



For example:

- If a company is not yet ready to migrate to the cloud, then Do-it-Yourself and As-a-Service would not be on the table for consideration.
- If a company is looking to vacate its data centers, then Status Quo and On-Premises are non-starters.
- A corporate mandate to focus on unique value-add while outsourcing non-differentiating tasks might point to As-a-Service as being the one best choice.

Regardless of deployment preference, Teradata has a range of Vantage offers that can align with nearly any enterprise requirement. The software is consistent, and subscriptions are portable, which means any choice can be changed or reversed—which de-risks decisions and provides peace of mind for budget-conscious executives. As shown in this paper, literally any of the modern options yields a lower TCO than simply staying with Status Quo.

**To Learn More**

To learn more about any of the scenarios in more detail, contact your Teradata Account Team to arrange a discussion with subject matter experts.

**Appendix—TCO Details: Status Quo**

1. Perpetual license maintenance and support for 4N Teradata 2850 and Teradata Database:
  - Base rate is flat at 20% for the first three years of ownership (which occur just prior to the start of this paper’s three-year TCO scenario)
  - Base rate increases to 40% for Years 4-5 of ownership for extended maintenance and support (EDM) (corresponding with Years 1-2 of this scenario)
  - Base rate increases to 60% for Year 6 of ownership for post-End of Life (EOL) sustaining support (corresponding with Year 3 of this scenario)

As is typical for enterprise software maintenance and support, the point of the cost ramp is to incentivize upgrading to the latest software. Since our scenario assumes the customer has already owned the 2850 for three years, maintenance and support costs for this TCO exercise are:

- TCO Year 1 = 40% EDM (4th year of physical ownership)
  - TCO Year 2 = 40% EDM (5th year of physical ownership)
  - TCO Year 3 = 60% EOL (6th year of physical ownership)
2. For data center hosting, we assume two racks with each costing \$1,750 per month for data center space, power, and cooling.
  3. We assume that we need 1.0 FTE DBA/IT to manage the physical system—not necessarily just one human being, but a composite representing the equivalent of one full-time person.

**Status Quo**

	One-Time	Year 1	Year 2	Year 3	Total
Maintenance & support		\$460,000	\$460,000	\$660,000	\$1,580,000
Data center		\$42,000	\$42,000	\$42,000	\$126,000
DBA/IT		\$125,000	\$125,000	\$125,000	\$375,000
<b>Total</b>		<b>\$627,000</b>	<b>\$627,000</b>	<b>\$827,000</b>	<b>\$2,081,000</b>

<b>Maintenance &amp; support</b>			
On-prem system value (\$)	\$1,000,000	\$1,000,000	\$1,000,000
EDM perpetual 4-5 (%)	40%	40%	0%
Sustaining perpetual 6+ (%)	0%	0%	60%
Advocated BAR value (\$)	\$300,000	\$300,000	\$300,000
BAR maintenance (%)	20%	20%	20%
<b>Maintenance &amp; support</b>	<b>\$460,000</b>	<b>\$460,000</b>	<b>\$660,000</b>
<b>Data center</b>			
2 Racks, 2.4KW monthly (\$)	\$3,500	\$3,500	\$3,500
<b>Data center</b>	<b>\$42,000</b>	<b>\$42,000</b>	<b>\$42,000</b>
<b>DBA/IT</b>			
DBA/IT staff (#)	1.0	1.0	1.0
DBA/IT comp + benefits (\$)	\$125,000	\$125,000	\$125,000
<b>DBA/IT</b>	<b>\$125,000</b>	<b>\$125,000</b>	<b>\$125,000</b>

## Appendix–TCO Details: On-Premises

1. Vantage + IntelliFlex subscription. Teradata has shifted completely from a perpetual to a subscription licensing model. Subscriptions for on-premises deployments include Vantage software and purpose-built IntelliFlex infrastructure. We also include Teradata Essential service as a replacement for maintenance and support. We assume that the same BAR infrastructure is used for On-Premises as was used for Status Quo.
2. Data center hosting: we assume two racks with each costing \$1,750 per month for data center space, power, and cooling (no change from Status Quo)
3. DBA/IT staff: we assume that we still need 1.0 FTE (no change from Status Quo)
4. Migration costs cover the transfer of data from the old system to the new. We assume a) six months' worth of half an FTE's time; b) 75 hours of assistance from professional services; and c) a Teradata NPARC engagement to complete and validate the successful migration.

### On-Premises

	One-Time	Year 1	Year 2	Year 3	Total
Vantage + IntelliFlex		\$366,717	\$366,717	\$366,717	\$1,100,150
Data center		\$42,000	\$42,000	\$42,000	\$126,000
DBA/IT		\$125,000	\$125,000	\$125,000	\$375,000
Migration	\$100,000				\$100,000
<b>Total</b>	<b>\$100,000</b>	<b>\$533,717</b>	<b>\$533,717</b>	<b>\$533,717</b>	<b>\$1,701,150</b>
<b>Vantage + HW</b>					
Vantage + HW subscription (\$)		\$286,651	\$286,651	\$286,651	
Teradata Essential service (\$)		7%	7%	7%	
Advocated BAR value (\$)		\$300,000	\$300,000	\$300,000	
Teradata BAR maintenance (%)		20%	20%	20%	
<b>Vantage + HW</b>		<b>\$366,717</b>	<b>\$366,717</b>	<b>\$366,717</b>	
<b>Data center</b>					
2 Racks, 2.4KW monthly (\$)		\$3,500	\$3,500	\$3,500	
<b>Data center</b>		<b>\$42,000</b>	<b>\$42,000</b>	<b>\$42,000</b>	
<b>DBA/IT</b>					
DBA/IT staff (#)		1.0	1.0	1.0	
DBA/IT comp + benefits (\$)		\$125,000	\$125,000	\$125,000	
<b>DBA/IT</b>		<b>\$125,000</b>	<b>\$125,000</b>	<b>\$125,000</b>	
<b>Migration</b>					
DBA/IT staff (#)	0.5				
Migration months (#)	6				
DBA/IT comp + benefits (\$)	\$125,000				
PS hours (#)	75				
PS hourly rate (\$)	\$250				
NPARC (\$)	\$50,000				
<b>Migration</b>	<b>\$100,000</b>				



## Appendix—TCO Details: Do-it-Yourself

1. Teradata Vantage Advanced (DIY) software subscription. Vantage software is the same as used On-Premises and the pricing shown (based on TCore) is for a three-year subscription.
2. Public cloud compute + storage resources. We've chosen three m5.12xlarge Amazon EC2 instances with 8 TB Amazon EBS raw storage each to yield 15 TB CDS. The cost for 30 TB of Amazon S3 storage (for two days' worth of backups) is also factored in, as are the compute resources for Data Stream Controller, Viewpoint, and Server Management.
3. DBA/IT staff requirements. Cloud deployment reduces time spent maintaining physical infrastructure. We assume a 33% reduction for the FTE requirement from 1.0 to 0.67.
4. 1 Gbps dedicated network connectivity. Going from a data center to the cloud requires enhanced network connectivity between the local area network (LAN) and the cloud.

### Do-it-Yourself

	One-Time	Year 1	Year 2	Year 3	Total
Vantage		\$273,565	\$273,565	\$273,565	\$820,696
Compute + Storage		\$75,056	\$75,056	\$75,056	\$225,167
DBA/IT		\$83,750	\$83,750	\$83,750	\$251,250
Connectivity		\$14,592	\$14,592	\$14,592	\$43,776
Migration	\$100,000				\$100,000
<b>Total</b>	<b>\$100,000</b>	<b>\$446,963</b>	<b>\$446,963</b>	<b>\$446,963</b>	<b>\$1,440,888</b>

#### Vantage

m5.12xl count (#)	3	3	3
TCore value for m5.12xl (#)	7.51	7.51	7.51
Advanced tier per TCore (\$)	\$9,923	\$9,923	\$9,923
Teradata Essential service (\$)	\$50,000	\$50,000	\$50,000
<b>Vantage</b>	<b>\$273,565</b>	<b>\$273,565</b>	<b>\$273,565</b>

#### Compute + Storage

m5.12xl instances (#)	3	3	3
m5.12xl monthly effective (\$)	\$741.68	\$741.68	\$741.68
EBS storage per instance TB (#)	8	8	8
EBS monthly per GB (\$)	\$0.10	\$0.10	\$0.10
S3 monthly per GB (\$)	\$0.023	\$0.023	\$0.023
DSC m4.4xl monthly effective (\$)	\$252.29	\$252.29	\$252.29
VP: m4.2xl monthly effective (\$)	\$126.14	\$126.14	\$126.14
SM: m4.xl monthly effective (\$)	\$63.07	\$63.07	\$63.07
<b>Data center</b>	<b>\$75,056</b>	<b>\$75,056</b>	<b>\$75,056</b>

#### DBA/IT

DBA/IT staff (#)	0.67	0.67	0.67
DBA/IT comp + benefits (\$)	\$125,000	\$125,000	\$125,000
<b>DBA/IT</b>	<b>\$83,750</b>	<b>\$83,750</b>	<b>\$83,750</b>

#### Connectivity

Connectivity	\$14,592	\$14,592	\$14,592
--------------	----------	----------	----------

#### Migration

Migration	\$100,000		
-----------	-----------	--	--

## Appendix–TCO Details: As-a-Service

1. Vantage delivered as-a-service subscription. When delivered as-a-service, Vantage in the cloud provides Teradata software, compute and storage infrastructure, and environment services, enabling customers to focus on answers, not IT.
2. DBA/IT staff. Vantage delivered as-a-service manages the performance, security, availability, and operations of customers’ analytic infrastructure and includes automated administration and daily backups to eliminate customers’ time spent on necessary but non-differentiating tasks. As such, we estimate 50% FTE workload reduction when compared to Do-it-Yourself, yielding the need for 0.33 FTE.

### About Teradata

With all the investments made in analytics, it’s time to stop buying into partial solutions that overpromise and underdeliver. It’s time to invest in answers. Only Teradata leverages all of the data, all of the time, so you can analyze anything, deploy anywhere, and deliver analytics that matter most to your business. And we do it on-premises, in the cloud, or anywhere in between. We call this pervasive data intelligence. It’s the answer to the complexity, cost and inadequacy of today’s analytics. And how we transform how businesses work and people live through the power of data. Get the answer at [teradata.com](http://teradata.com).

### As-a-Service

	One-Time	Year 1	Year 2	Year 3	Total
Vantage delivered as-a-service		\$391,981	\$391,981	\$391,981	\$1,175,943
DBA/IT		\$41,250	\$41,250	\$41,250	\$123,750
Connectivity		\$14,592	\$14,592	\$14,592	\$43,776
Migration	\$100,000				\$100,000
<b>Total</b>	<b>\$100,000</b>	<b>\$447,823</b>	<b>\$447,823</b>	<b>\$447,823</b>	<b>\$1,443,469</b>
<b>Vantage delivered as-a-service</b>					
m5.12xl instances (#)		3	3	3	
TCore value for m5.12xl (#)		7.51	7.51	7.51	
Advanced tier per TCore (\$)		\$13,368	\$13,368	\$13,368	
Storage in TB (#)		24	24	24	
Cost per TB (\$)		\$1,700	\$1,700	\$1,700	
Teradata Essential service (\$)		\$50,000	\$50,000	\$50,000	
Vantage delivered as-a-service		\$391,981	\$391,981	\$391,981	
<b>DBA/IT</b>					
DBA/IT staff (#)		0.33	0.33	0.33	
DBA/IT comp + benefits (\$)		\$125,000	\$125,000	\$125,000	
DBA/IT		\$41,250	\$41,250	\$41,250	
<b>Connectivity</b>					
Connectivity		\$14,592	\$14,592	\$14,592	
<b>Migration</b>					
Migration	\$100,000				