



White Paper

BEYOND MODERN DATA PROTECTION

Stepping into the new realm of data management

By: David A. Chapa, Sr. Analyst
The CTE Group

December, 2019

This paper commissioned by NetApp. The purpose of this paper is to educate those in IT about the technologies and solutions offered by the sponsoring company. The information contained within this document has been obtained by The CTE Group (The CTE) through multiple sources including the sponsor and is considered to be trustworthy and reliable but is not warranted by The CTE. The CTE may share opinions in this paper which are subject to change. This paper is copyrighted by The CTE Group LLC. Any repurposing, distribution, redistribution, or reproduction, of this publication, in whole or in part, in any format whether that be hard-copy, electronic, electronically replicated, or otherwise to individuals, persons, or organizations not authorized to receive it without the express written consent of The CTE Group LLC is in violation of the US copyright law and will be subject to an action for civil damages and, if applicable, criminal prosecution. Please contact The CTE Group with any further questions, info@thectegroup.net. All trademark names are property of their respective companies. Distributed by NetApp, Inc under license by The CTE Group LLC



Contents

INTRODUCTION.....	3
MODERN DATA PROTECTION	4
THE EVOLUTIONARY CYCLE OF DATA PROTECTION.....	4
TRENDS IN DATA PROTECTION	5
PUBLIC, PRIVATE, HYBRID CLOUD	5
HARVESTING VALUE.....	6
SAMPLE LIST OF REQUIREMENTS TO MAXIMIZE VALUE	6
CONCLUSION	7
NEXT STEPS.....	7



Introduction

What does it mean to have a modern solution today? So many messages exist that scream at you that you should modernize to be on top of the wave, but what exactly does modern look like for your organization? Some claim modernization means replacing the “legacy” backup solution you have. Others may claim legacy simply means it is tried and true and operates within your guidelines for data protection. Still some will say a complete rip and replace is what you need to modernize your environment. Modernization or beyond modernization of data protection to us at The CTE Group means you have identified a solution to meet your current needs and expanding needs into the future. When virtualization hit mainstream in the 2000s, there were some who were hesitant to adopt and for very good reason. Some applications were not a fit for virtualization, or the distribution of the compute resources doesn’t meet expectations, or a host of other issues. Does this mean you aren’t modern? It means you have evaluated the best course of action and path for your organization and are moving forward with, hopefully, a plan and strategy to offer the best possible service to your customers.

So, let’s forget the idea that “modern” or “modernization” means it has to be new, it simply means you are maximizing the effectiveness of the solution based on your environmental needs. Or as it is defined in the Oxford dictionary, “it is the process of making a system, methods, etc. more modern and suitable for use at the present time.” In data protection that may look like a rip and replace, it may look like a software update, or it may look like rearchitecting the solution using more advanced features found in the solution you are already using. Whatever it looks like, a modernization of your data protection solution should always start with a strategy, one that defines why. In this paper we will look at how some of the solutions were designed and architected in the past, and what the data protection trends look like moving forward, as well as taking a look at some of the platforms we need to consider, such as cloud, as we embark on this journey to modernize or go beyond modernization of data protection.



Modern Data Protection

In the technology industry there is an assumption anything new is modern and everything else must be legacy. The reality is a modern approach simply means you are leveraging the best technology to meet your needs today and in the future. This requires planning and strategic alignment. I have often used the automobile industry as an example of modern v. legacy. For example, the fastest car in 2009 was the Nissan Greddy GR43 GT-R clocking in 0-60 mph at 2.5 seconds. Ten years later Bugatti comes out with a car that hits 0-60 in less than 2.4 seconds. Does that make the Nissan a legacy model just because it is ten years old and less than .1 second slower than the Bugatti? I'd venture to say, we'd all still get a rush whether we were going 0-60 in a Nissan Greddy GR43 GT-R or a Bugatti Chiron, with a top speed of 304 mph. If you are a motorcycle enthusiast like me, this may be a better reference. My 2008 Harley Davidson Road King Classic is plenty fast for me, able to perform 0-60 mph in 5.0 seconds, but it certainly won't win any competitions. In my circle of friends who ride sport bikes for fun and in competition, Ducati is the brand that comes to mind when talking speed. One of the fastest production motorcycles on the market is the 2019 Ducati Diavel 1200 S. Capable of 0-60mph in 2.5 seconds, twice as fast at my Harley. By the way, if you want to see how Ducati leverages a NetApp Data Fabric to accelerate its innovation, you'll want to read [this case study](#).

My point is, based on what our needs are should determine what solutions we adopt for our environment. The reality is whether our solution is ten years old or less than one year old we really need to gauge its value based on its ability to adapt to the environment we plan on using it within.

Now, I don't know many of us who absolutely need to have a street legal car that tops 304 mph, or a motorcycle that tops out at 169 mph, but I could be wrong, in fact I know that I'm wrong because I have a few friends who ride that Ducati. I think you see my point here. Sometimes we tend to look at the "new" versus the "need". Same is true for the data protection solutions we decide to employ. The most important factor is will it meet my needs today and will it meet my expanding needs of tomorrow and beyond?

The Evolutionary Cycle of Data Protection

Data protection certainly has changed over the years. If we look in the past just a few years many IT organizations selected the solution they needed based on a few factors such as, Agent Support, ease of use, OS support, and Speed/Performance of backup & restore. However today we look at the selection process a bit differently. Perhaps it may look more like this list of features: Hypervisor support, DR capabilities, Agent support (for aging physical machines or those not candidates for virtualization), mutli-cloud, cross support integration with my storage solutions or hypervisors, data security with replication and inflight/at-rest encryption. Using the car example, while we may have never needed to go 60MPH in 2.5 seconds, the Nissan ten years later can still deliver that performance. So, is the existing backup solution you have today able to deliver what you need but you just haven't yet tapped into it? Or the reality is in fact you do need some of the features of a new platform based on what your overall needs assessment present. If that's the case, then full steam ahead! My only suggestion here when talking about "modernizing" is take a step back and evaluate your current and future needs to get a good picture of what the organization requires.

Whether you are a 100% NetApp customer or you are a heterogenous storage customer with NetApp on the floor, chances are you may find you have a Bugatti or a Nissan that you just haven't yet opened up. Often times in data protection we always think faster is better, but I believe the trends are shifting a bit as performance has become somewhat balanced with our focus on the value we can extract. We'll talk about that more in the coming paragraphs of this paper.



Trends in Data Protection

I have been in data protection for 30 years, been tracking statistics from a variety of research firms for nearly 20 years and I can tell you that data protection has always been top of mind in all of the research I have reviewed. Many have asked me why I believe this to be true, well it comes down to the simple fact that data protection to organizations is like breathing to humans, it has just become a part of our normal. Data continues to increase in volume and the velocity at which data is being created dwarfs in comparison to even five years ago. Some have said data is the new oil, well, I would say data is data and the importance of that data to any organization is crucial to its continued success. Too often the headlines are covered with companies who have experienced a breach, a system failure, or significant downtime. This is why having a solid continuity strategy and DR plan in place is so important. When disaster strikes, and we all know that it will, what will be your course of action to mitigate the downtime, data loss, and potentially loss of customers and/or customer loyalty?

Public, Private, Hybrid Cloud

One of the things I took note of several years ago when consulting with one of my clients was the exposure they and so many others were open to on a daily basis. In other words, backup occurred from 6pm – 6am on a daily basis, a 12-hour window. And from 6:01am to 6:00pm, we had production. 12 hours of productivity was on the line without any backup until the window opened again. Once I revealed this to my customer, it became apparent something needed to change. Fortunately for this customer they were already a NetApp customer so we took advantage of snapshots throughout the day to ensure we could recover from any business interruption throughout the day before the backup window opened up again. Fast forward to today, many understand the importance of more tightly integrating the backup solution with storage solutions you have on the floor. This is the real difference between modernization and going beyond modernization. It isn't just about the backup software, it isn't just about the most elegant storage solution, it is about marrying the two and taking a quantum leap forward in your data protection strategy. Some may argue that we have had this type of integration for some time, and you are correct, but the important thing to consider is the continued evolution of the solutions together. Take for instance, Cloud. When you think of cloud, first of all, think of it as an extension of your own datacenter, your own storage infrastructure. Sure, there are different protocols, etc. but what you should be looking at is not the bit and bytes of cloud, but how the combined solutions work with the cloud you have chosen to use in your environment. Ease of management, ease of use, ease of tracking the location of data is all critically important as you consider which solution you are considering. As we look at the trends in data protection, more and more cloud adoption is rising year after year. To create a seamless experience for you users and for your data protection solution, it is imperative to consider how your software and storage solutions will support the cloud of your choosing. For example:

1. Are you considering a hybrid cloud approach?
2. Does data need to be pushed/pulled to/from the cloud?
3. Is cloud just for long term retention (LTR)?
4. Is cloud a DR platform you have selected?

The list could be endless, quite candidly, but if you're in any of these camps or others not mentioned, how will the solution you are using or ones you are evaluating integrate with your storage solution to provide you with the best possible outcome? Have you opted to deploy mutli-cloud? Multi-cloud is not just using more than one cloud, but rather using compute from one and data in another in a heterogenous architecture. Where the trends



seem to be heading is in the multi-cloud direction, making it even more important the combined solutions support this architecture. Consistently coming up in many of the research is the idea of a single pane of glass or a management view, especially as it relates to multi-cloud. Again as you decide on a data management platform combined with your storage solution, you want so know if you will have access or a view to the full environment across all deployments of cloud, multi-cloud, and on-prem architectures.

Harvesting Value

Much has been said about the features, speeds/feeds, etc. of solutions but what about getting to the real value of the solution. When you decide to truly transform your data protection and disaster recovery solutions, it may take some due diligence on the part of you and your team. No doubt you want to select the right solution, but you also want to make sure you don't find yourself stuck in strategic paralysis either. For this reason, it is important to understand the needs of your business or business units you are working with so you are able to select the best option going forward. Many solutions are available today, so making that choice can seem a bit daunting at first, but when you begin to piece together the desired outcomes you and your business leaders are looking for, it becomes much easier to create a short list of solution. For example, perhaps leveraging cloud for disaster recovery is of the utmost importance for your company, and you want this to be done by taking advantage of the technology solutions you already have on the floor to minimize costs. This becomes a selection criteria you use during your initial evaluation period. Once you create your selection criteria and it is accepted with your cross functional team, you will begin to see the value you can extract from the remaining solutions you are evaluating. This is where the rubber hits the road, what is the ultimate value and how will it help us achieve the goals we have established or agreed to for the business or business units?

Sample List of Requirements To Maximize Value

- I. Replication
- II. Recovery Options
- III. Long Term Retention (cloud)
- IV. Tape Options (not dead yet)
- V. Compliance and Search Capabilities
- VI. Backup Data for:
 - a. Dev/Test
 - b. Audits
 - c. Upgrade validations
 - d. DR testing
- VII. Scalability
- VIII. Manageability



And the list can go on based on your own unique requirements and goals. The key here is to fully outline the capabilities you require and to match the value each solution offers with your list of requirements.

Selecting a solution doesn't have to be daunting, it just requires planning and a solid strategy to work by as you progress through this process.

- I. Summarize the main points
- II. Reinforce key elements
 - a. Develop cross functional strategy with the business. Identify goals and desired outcomes
 - b. Reviewing Solutions with full integration into existing technology stack
 - c. Support for Cloud
 - i. Hybrid
 - ii. Private/Public
 - iii. Multi-Cloud
- III. Identify key areas where you can extract additional value
- IV. How does it align with your stated plan and strategy today and in the future

These are just some of the concepts to address when considering your next step in the evolution of modernizing your data protection management platform and strategy.

Conclusion

If this is the direction you are headed, to look beyond modern data protection, then hopefully this paper was able to give you some insights to consider as you wade through the available options in the market. I mentioned earlier in this paper one of my clients in particular using NetApp to mitigate their data protection exposure, this was well before NetApp had these well-defined strategic alliances with companies such as Commvault, Veeam, and Rubrik. Given these established partners and the core value NetApp brings to the table, it opens the door to many more possibilities based on your specific needs, goals and objectives. It is certainly a consideration worthy of your time and effort to see how this may align with your existing and future plans.

Next Steps

If you are interested in learning more, we encourage you to visit the [NetApp website](#), contact your reseller or system integrator, or a NetApp representative. Also, be sure to read the other two papers in this series we have published, *The Beat Goes On: Why Data Protection Presents So Many Challenges* and *NetApp Data Fabric: Their answer to the data protection dilemma*.



Practical | Direct | Candid

165 Caprice Court, Suite A

Castle Rock, CO 80109

info@thectegroup.net

720-924-8161