Explore the modern data protection under “Bimodal IT”
The information technology develops rapidly, especially the risen of social, mobile, cloud, information and analytics. All of these lead to the data amount surge. A report from IDC indicated that the global data amount would reach 40ZB in 2020, approximately eightfold more than that in 2013.

The digital transformation has brought tremendous changes to enterprises, which makes an obvious gap on data capabilities between what they have and what they want to have. Simply, traditional IT infrastructures can no longer satisfy the current demands.

It is in such background that CIOs have to reconsider the IT infrastructure to better adapt to the digital era. However, this kind of transformation cannot be completed overnight, besides, there are some critical businesses that cannot simply, and absolutely should not be divested. This causes the contradiction.
What is Bimodal IT?

Bimodal is the practice of managing two separate but coherent styles of work: one focused on predictability; the other on exploration.

— Gartner

Originally, Bimodal IT is a way to deal with agile development, devoting to iterating products agilely and rapidly, but the concept has expanded greatly, and adopted as well. Currently, Bimodal IT indicates two separate, but coherent styles of work.

As Gartner explains, Mode 1 is optimized for areas that are more predictable and well-understood. It focuses on exploiting what is known, while renovating the legacy environment into a state that is fit for a digital world. So it is mainly for traditional businesses.

Mode 2 is quite different. It is exploratory, experimenting to solve new problems and optimized for areas of uncertainty. These initiatives often begin with a hypothesis that is tested and adapted during a process involving short iterations, potentially adopting a minimum viable product (MVP) approach. Thus it is geared to an innovative architecture.

Both modes play an essential role in digital transformation, which creates substantial value and drives significant organizational changes, and neither is static. Thus combining a more predictable evolution of products and technologies (Mode 1) with the new and innovative ones (Mode 2) is the essence of an enterprise bimodal capability.
Bimodal IT is a sustainable solution which helps enterprises solve the problems brought by digitalization. Thus more and more enterprises are adopting this into their IT strategies. According to statistics, currently 6% enterprises has formally implemented Bimodal IT, 42% enterprises already have some kind of agile operation mode, and 19% enterprises are to implement Bimodal IT in the future 12 months.

Have You Implemented Bimodal IT?
- Have Already Implemented Bimodal IT
- Have Agile Operation Mode
- Will Implement in the Future 12 Months
- Will Not Implement in the Future 12 Months
Changes to Operational Modes

Mode 1 and Mode 2 have different goals. Mode 1 typically focuses on cost reduction, personnel free-up from routine management and maintenance, and robustness guarantee, while Mode 2 mainly focuses on quick response to new business demands, rapid seize of new opportunities, quick utilization of new technologies, and fast product development and delivery.

But becoming bimodal does not mean to simply split the current IT infrastructure into two parts. It's the differentiated decision model, governance criteria, work styles and related skills that make the differences between bimodal IT and traditional IT. Thus bimodal IT will, and do bring large changes to the operational modes for enterprises.

Absolutely, the road to implement Bimodal IT is not a flat path, as lots of problems will be encountered. On one hand, stable and reliable environment to satisfied daily operations must be provided, and on the other hand, flexibility is also needed to rapidly respond to the demands in digital era to promote new businesses. These two totally different requirements will cause conflicts. In addition, the lack of true best practices and complete expertise on Bimodal IT make it quite difficult to manage two different types of teams, creating unprecedented challenges.
As an important information carrier, data is such significant reference for enterprises to do production, operation and strategic policies that it cannot be neglected. Once data loss occurs, immeasurable losses will be caused, thus data protection has always been one of the most important issues for enterprises. 63% enterprises consider data protection to be critical to their organization’s success and 85% of the IT sectors consider data protection as totally critical.

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Data Protection Challenges in Bimodal IT

However, Bimodal IT makes data more complex. With the coexisting of traditional IT and Bimodal IT, data surges, not only the data amount, but the data source as well, which increases the complexity for data protection.
Challenge 1: More Complex Cloud Architecture

*Rapid growth of cloud adoption continues, trending toward public cloud. Hybrid cloud scenarios will increasingly dominate cloud implementations.*

——Gartner

Most enterprises want to achieve two goals during cloud construction, one is higher efficiency, and the other is higher agility, which coincide with Bimodal IT. Higher efficiency is associated with Mode 1, while higher agility is associated with Mode 2, although Mode 1 may be used to obtain incremental improvements in agility, and Mode 2 may result in efficiency gains, the priorities of each mode are sharply different.

Recently, with the prevailing of cloud computing, enterprises are optimizing their architecture. According to statistics, enterprises are allocating 40% of their IT budget to cloud-related spending, and it will continuously increase. And the ratio of working in private cloud and public cloud reaches 65%, much higher than working in traditional environment.

![Cloud vs. Traditional](chart.png)

Evidences indicate that using public cloud, with private cloud accompanied, will become the best cloud-related service. One report shows that the ratio of hybrid cloud has increased to 55%, being far ahead of other cloud strategies.
Although cloud has become one of the most hot tendencies, reports also show that enterprise will not migrate all workloads to cloud. In other words, traditional and cloud will coexist, and enterprises need to manage the heterogeneous environment in both traditional and cloud mode, and meanwhile, the businesses on cloud will tend to hybrid cloud strategies. It cannot be denied that this kind of hybrid mode has presented higher requirements on the management capabilities.

**Challenges 2: Rapidly Increasing Data Amount**

In the recent years, the global data amount explodes. The whole data amount will reach 40ZB in 2020, with an annual 50% rate of increase.

The large data increase has posed great challenges on enterprises. The big data contains large commercial value, thus more and more enterprises are dependent on data, thus data protection becomes rather critical.
• How to satisfy the backup window when backing up PB level data?
• How to restore quickly to ensure continuous business operation if the server crashes?
• How to achieve long-term archive for mass data?
• …

These are all the problems that will be met in the digital transformation.

**Challenges 3: Higher SLA Requirements**

Accidents happen anytime, and anywhere. According to the research, the average number of annual unplanned downtime events in 2014 was 15, and it increased to 18 in 2015, and each unplanned downtime event cause $570,000 loss. In addition, some hidden losses will be caused as well, such as customer confidence loss, low working efficiency, reputation damage, and mode.

![The Average Number of Annual Unplanned Downtime](image)

Thus enterprises are demanding higher RPO and RTO to reduce the data loss cost, thus higher SLA requirement are proposed. Meanwhile the management cost, maintenance cost and other hidden costs shall be eliminated.
Conclusion

Bimodal IT enables enterprises to run in two different modes, not only ensuring the normal operation of traditional businesses, but also flexibly responding to the market opportunities, helping enterprises for digital transformation. However, data protection poses great challenges on enterprises, thus how to protect data under Bimodal IT has become one of the most important issues in the next years.
Contact us

**Address:** Unit 2010, Metro Center II, NO.21 Lam Hing Street, Kowloon, Hong Kong

**Tel:** +852 3956 4277

**Email:** globalsupport@eisoo.com