iBRIDGE

YOUR DATA IS YOUR BUSINESS!

iBRIDGE CLOUD TECHNOLOGIES, INC

# TECHNOLOGY SOLUTIONS

IBRIDGECLOUD.COM


# THE IBRIDGE APPROACH

iBridge Cloud Technologies is a cloud services provider that has a long history of delivering the highest quality data solutions to both government and commercial businesses. We pride ourselves on being a strategic partner with our customers for their technology and infrastructure challenges.

As a leader in technology solutions, iBridge innovaties with their newest in cloud technology: DCExtend™. Drawing on decades of expertise and familiarity, our approach ensures customers receive nothing less than the best  This comprehensive platform is designed to meet clients' needs across storage, network, memory and compute architectures and is engineered with features such as high availability, virtualization, monitoring, alerting and instant failover.

Our Certified Engineers and Engagement Managers partner with customers to deliver personalized solution architectures to ensure results are cost-effective, align with all needs, available 24/7, and are secure.

Our consultative approach guides customers through the key elements of virtualization, cloud, network latency, giving them the resources and assistance they need for a high functioning environment. With the DCExtend™ platform, your instance is always available wherever you access to your data - it's better than traditional cloud technology!

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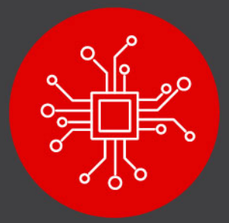
**iBridge’s approach is to work intimately with our clients to provide the ‘Right-Fit’ solution for them. We tailor the solutions to the clients’ needs and provide required technology capabilities and capacity. What makes us different, we bring the cloud to you, providing the client with a boundless private, public or hybrid cloud environment.**

**PAUL SMITHAM** President & CEO

# SERVICE OFFERINGS

## DCEXTEND/IAAS

Providing effective access to computing resources on demand, with flexibility, cost savings, and scalability, allowing businesses to focus on their core operations and growth.



## NETWORK

Provide various connectivity service options to customer that are powerfully secure and built on high availability industry grade platforms.

## SECURITY

Allowing businesses to protect their networks and systems ensuring cloud computing environments are protected against various cyber threats.

## PROTECTION

A critical component of cloud security is the importance of leveraging various technical elements to ensure that network environments remain secure, accessible and always resilient against disasters and threats.

## CONTAINER

An essential component of private cloud environments that provides developers with the ability to develop, deploy, and manage containerized applications in a private cloud environment.

## MONITOR & MANAGE

Ensuring the smooth functioning of cloud services, through monitoring and management servers that leverage ServiceNow and custom APIs to monitor and manage alerts.

## STORAGE

Offers a range of scalable storage options with greater flexibility, accessibility and security features to access data from anywhere with an internet connection.

# DCEXTEND (IaaS)

DCExtend is an iBridge designed infrastructure service (IaaS) that provides on-demand access to computing resources, including servers, storage, and networking, over the internet. This model manages the underlying infrastructure, including a direct data center extension to servers and storage, while the customer is responsible for managing the operating system, applications, and data.

### VIRTUAL MACHINES

Virtualization technology that allows users to create and run virtual instances of servers, operating systems, and applications in a cloud environment.

### DYNAMIC RESOURCES

Automatically allocate and de-allocate resources based on the changing demands of users and applications.

### VIRTUAL APPLICATIONS

Pre-configured virtual machines that contain multiple virtual machines and the necessary applications to support a specific workload or application.

### HIGH AVAILABILITY

Designed to minimize or eliminate downtime or service disruptions and be continuously operational, even in the event of hardware, software, or network failures.

### VIRTUALIZED DATA CENTER

Physical hardware such as servers, storage devices, and networking equipment are abstracted into virtual resources such as virtual machines, virtual storage, and virtual networks.

### VIRTUAL GRAPHICS PROCESSING UNIT

Virtualization technology that allows multiple virtual machines (VMs) to share a physical GPU on a host machine for a high-performance, graphics-intensive experience for tasks such as video editing, 3D rendering, and gaming.

### DEDICATED CLUSTERS

Virtualized environment that provides users with a dedicated set of physical resources, such as servers, storage devices, and networking equipment, that are exclusively allocated.

### AUTO SCALING

Capability that automatically adjusts the amount of computing resources allocated to an application or workload based on changing demands.

**SCALABLE, FLEXIBLE AND ON-DEMAND ACCESS**

# NETWORK (NaaS)

The iBridge Optical Fabric Services (OFS) solution is delivered on high-speed fiber optic access and transmission networks. OFS provides businesses the ability to utilize high-speed, low latency technology to interconnect their physically disparate infrastructure and cloud providers. OFS offers intelligence above simple data transport.

### LOGICAL ROUTING & SWITCHING

Virtualization and abstraction of network routing and switching functions from physical hardware, providing greater flexibility, scalability, and ease of management.

### PUBLIC IP

Public IP addresses are utilized to enable customers to access the internet, web hosting, email services and VPN services from anywhere on the internet.

### LOAD BALANCING

Distribute incoming traffic across multiple servers or network resources in an intelligent and efficient manner, with the goal of optimizing performance, availability, and scalability.

### EXTERNAL NETWORKS

provide their customers with access to a wider range of resources and services that may not be available within their own data centers or private networks.

### DATA CENTER NETWORKING

Maximizing the performance, scalability, and efficiency of networking infrastructure within a data center environment through advanced networking technologies.

### VIRTUAL PRIVATE NETWORK

Allows for secure communication between two or more devices over a public network, such as the internet by creating a private, encrypted tunnel between two devices.

### DYNAMIC HOST CONFIGURATION PROTOCOL

DHCP is used to automatically assign IP addresses and other network configuration settings to devices on a network to simplify network management and ensure that virtual machines can communicate with each other and with external resources.

### DOMAIN NAME SYSTEM (DNS)

DNS is used to translate domain names into IP addresses. DNS is important in a virtualized environment because it enables virtual machines to communicate with each other and with external resources using domain names, rather than IP addresses.

## HIGH-SPEED FIBER WITH REDUNDANCY & PROTECTION

# SECURITY (SaaS)

iBridge understands, implements, and monitors critical risks of cloud security in the design, implementation, and managed secure cloud environments. By leveraging these technical elements, clients can be assured that their cloud environment remains secure, available, and resilient against various threats.

### FIREWALL

Our virtual firewalls from Palo Alto Networks are designed to protect virtual machines and other virtualized resources, providing network security for multi-tenant cloud environments and other virtualized infrastructures.

### SECURITY GROUPS

Control access to resources and applications within a network utilizing a collection of network rules that dictate which traffic is allowed and which traffic is blocked.

### EDGE SECURITY

Protocols that are implemented at the edge of a network, where the network interfaces with the outside world helping to protect against cyber threats and other security risks that can compromise the security and integrity of the network.

### DISTRIBUTED FIREWALL

Designed to protect distributed computing environments, such as cloud computing or virtualized environments, allowing for protection at multiple points in the network.

### NETWORK ADDRESS TRANSLATION

NAT is used to translate private IP addresses into public IP addresses, allowing devices on a private network to communicate with devices on a public network, such as the internet.

### INTRUSION PREVENTION & DETECTION

IPS (Intrusion Prevention System) and IDS (Intrusion Detection System) are two critical components of cloud security, designed to identify and prevent malicious traffic on the network.

### WEB APPLICATION FIREWALL

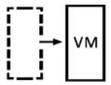
WAF is designed specifically to protect web applications from attacks such as cross-site scripting (XSS), SQL injection, and other types of web-based attacks.

### COMPLIANCE

Compliance regulations often require specific security measures and controls, iBridge can help to address these concerns and reduce the risk of data breaches and other security incidents.

# DATA PROTECTION (DPaaS)

By implementing disaster recovery, data migration, and data protection solutions such as Veeam, JetStream, and Rubrik, private cloud data protection as a service providers can ensure that private cloud environments are protected against data breaches, unauthorized access, and other cyber threats, while also complying with various regulatory standards.




## DATA MIGRATION

Seamless migration between private or public cloud environments provide organizations with the flexibility and scalability they need to meet their business requirements.

**Cold Migration:** The process of migrating data from one location to another while the system is offline. Typically used for large-scale data migrations or when the system needs to be moved to a new location.

**Warm Migration:** The process of migrating data from one location to another while the system is still running. Typically used for smaller-scale data migrations or when the system needs to be moved to a new location with minimal disruption to operations.

**Hot Migration:** The process of migrating data from one location to another while the system is still running and serving data to users. Typically used when the system needs to be moved to a new location with zero downtime or when the system needs to be load balanced across multiple locations.

## DISASTER RECOVERY

Replication, backup, recovery and disaster solutions for cloud-native applications are crucial to ensuring that private cloud environments can recover from various disasters.

**Business Conitinuity:** Disasters such as natural disasters, cyber-attacks, and hardware failures can cause significant disruptions to business operations, resulting in lost productivity, revenue, and customers.

**Regulatory Compliance:** Many industries are subject to regulatory requirements that mandate disaster recovery planning and testing which handle sensitive data and must maintain continuity of services even in the event of a disaster.

**Reputation Protection:** A disaster can cause significant damage to an organization's reputation, particularly if sensitive data is lost or compromised. Disaster recovery planning and testing helps to minimize the impact of a disaster and protect the organization's reputation.

## DATA PROTECTION

Encryption, backup, recovery and data loss prevention mechanisms are critical to ensuring that sensitive data is protected and can be recovered in case of a disaster.

**Simplified Management:** Designed to work seamlessly with public and private cloud environments.

**Regulatory Compliance:** Designed to simplify data management and protection, reducing the complexity of managing and protecting data across multiple environments.

**Scalability:** Designed to be highly scalable, allowing organizations to easily scale their data protection and management as their data volumes grow.

**Innovation:** Innovative solution designed to address the latest data protection and management challenges.

## EVOLVING DATA PROTECTION & MANAGEMENT NEEDS

# CONTAINER (CaaS)

iBridge understands the technical details of CaaS and how it can be used to accelerate the development and deployment of applications in private cloud environments. CaaS is a critical component of private cloud environments that enables developers to develop, deploy, and manage containerized applications in a scalable, efficient, and secure manner.

### NATIVE KUBERNETES CLUSTERS

Important in cloud computing because they provide organizations with greater scalability, portability, automation, and flexibility for their cloud applications. By taking advantage of cloud infrastructure, organizations can leverage the benefits of Kubernetes clusters while also taking advantage of the benefits of cloud computing.

- **Scalability**
- **Portability**
- **Automation**
- **Flexibility**

### APPLICATION CONTAINER SERVICES

Provide several benefits for organizations, including improved scalability, agility, and efficiency. By leveraging containerization and cloud computing, organizations can more easily deploy and manage applications at scale, while also reducing costs and minimizing downtime.

- **Amazon Elastic Container Service (ECS)**
- **Google Kubernetes Engine (GKE)**
- **Microsoft Azure Kubernetes Service (AKS)**
- **Red Hat OpenShift**

### TANZU KUBERNETES CLUSTER SERVICES

Deploy and manage Kubernetes clusters in the cloud. It provides a range of features and benefits that can help organizations improve scalability, efficiency, and security, while also simplifying the process of deploying and managing Kubernetes clusters in the cloud.

- **Simplified Deployment**
- **Scalability**
- **Management Tools**
- **Integration with Other Services**
- **Security**

### KUBERNETES BACKUP

The process of creating a copy of Kubernetes resources, including applications, configuration, and data, in order to protect against data loss or corruption. Kubernetes backup is important because Kubernetes resources are often complex and dynamic, making it difficult to recover from data loss or corruption without a backup.

- **Backup of Persistent Volumes**
- **Backup of Application Configuration**
- **Backup of Kubernetes Objects**

## ORCHESTRATION, NETWORKING & IMAGE REGISTRIES

# MONITOR & MANAGE

Monitoring and management services provides a comprehensive and automated approach to monitoring and managing the cloud infrastructure. This approach helps to ensure the high availability and reliability of the cloud infrastructure, enabling iBridge to deliver high-quality cloud services to its customers.

### MONITORING & ALERTING

ServiceNow Monitoring and Alerting is a process of tracking and analyzing system events and metrics in a virtualized environment, and notifying relevant parties when thresholds or conditions are met.

### METERING

Applications that are used to track and analyze resource utilization in a virtualized environment. By providing visibility into how resources are being used, metering apps can help organizations optimize their virtualized experience

### LOG MONITORING

Important for managing applications and VMs in a virtualized environment because it provides visibility into how these systems are performing and enables organizations to proactively identify and address issues before they become a problem.

### CAPACITY PLANNING

Forecasting and planning for future demand of IT resources, such as compute, storage, and network capacity. It is critical to ensuring that sufficient resources are available to support the needs of the organization and to prevent performance issues and downtime.

### REPORTS AND REPORTING

Provides transparency in a virtualized environment, as it enables organizations to track and report on key metrics related to system performance, utilization, and availability. Reporting helps to ensure transparency and accountability in the management of virtualized environments.

### PATCHING

By ensuring that all virtualized systems are patched and up-to-date, organizations can minimize these risks and ensure that critical systems and applications remain available and secure.

**ENSURE HIGH AVAILABILITY AND RELIABILITY**

# STORAGE (STaaS)

Cloud storage service solutions that allows users to access and use storage resources over the internet or direct connect to their WAN, SDWAN or private cloud provider and provides on-demand access to resources that are typically delivered as a service. iBridge's four tier levels are scalable, flexible and cost effective for every environment.

### REPLICATION SERVICES

vMotion enables administrators to move VMs between hosts for load balancing, hardware maintenance, or disaster recovery purposes, while ensuring that critical applications and services remain available.

### DATA REPLICATION

By replicating data to multiple locations, organizations can ensure that critical data is available and can be recovered quickly in the event of an issue. This can help to minimize downtime, improve performance, and ensure that critical applications and services remain available and performant.

### HYPERCONVERGED INFRASTRUCTURE

an approach to IT infrastructure that combines compute, storage, and networking resources into a single, software-defined system. Typically use virtualization technology to abstract and pool resources from multiple physical servers, enabling organizations to manage their infrastructure more efficiently and cost-effectively.

### SCALABILITY

ability of a system, application, or service to handle increasing workloads and demand by adding or removing resources dynamically, without causing downtime or degradation in performance. Scalability is important in cloud computing because cloud environments are dynamic and constantly changing.

### IOPS POLICIES

Input/Output Operations per Second (IOPS) is a performance metric that measures the rate at which data can be read from or written to storage devices. IOPS policies are settings that can be configured to control the behavior of storage devices in a virtualized environment, such as adjusting the number of IOPS allocated to a specific virtual machine (VM) or storage volume.

### STORAGE SERVICES

Tiered storage is a storage architecture that uses multiple tiers of storage devices to store data based on its access patterns and usage. In a tiered storage environment, data is moved between tiers based on predefined policies, with the goal of optimizing performance, capacity, and cost.

- **Block Storage**
- **Object Storage**
- **File Storage**

**DESIGNED FOR COST, PERFORMANCE & ACCESSIBILITY**

iBRIDGE

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