**information
technology
infrastructure**

protected

ENS Cloud Services

DISASTER RECOVERY
BACKUP AND RESTORE
HOSTED ENVIRONMENT
BUSINESS CONTINUITY

Planning, Implementation, and
Hosted Cloud Services

Business Continuity & Disaster Recovery Cloud Solutions
by Enterprise Networking Solutions, Inc

ens-inc

Cuttinge Edge Technology that Meets Business Needs and Requirements

- **ENS DR**
  Disaster Recovery

- **ENS BR**
  Cloud Backup and Restore

- **ENS HE**
  Cloud Hosted Environments

- **ENS BC**
  Business Continuity

- *Protect your mission-critical data and applications.*

- *Reduce the costly impact of downtime*

- *Enable high availability access and data integrity*

- *Reduce costs and change CapEx to OpEx*

- *Reduce complexity and streamline operations*

- *Keep your business running in the event of a business disruption*

Failure to plan is planning to fail!

Agility. Efficiency. Protection.

ENS Cloud Services bridges the gap between your business objectives and your information technology integrity.

ENS Cloud Services provide IT agility, efficiency, and protection through comprehensive, cost effective, and flexible enterprise-level services. Enterprise-class performance with VM-based protection, storage specifically optimized for virtualization, and real-time server based replication integrates with your latest Microsoft technologies.

ENS DR | Disaster Recovery
Designed for VMware virtualized systems with VMDK-level protection, protects mission-critical data and apps and meets your recovery objectives.

ENS BR | Cloud Backup and Restore
Powerful and reliable backup services ensures data integrity and availability with the ability to locate and utilize specific data and restore at a seat level.

ENS HE | Cloud Hosted Environment
A cost-effective, comprehensive, and protected cloud-hosted solution with high availability, scalability and multiple security levels. Includes Disaster Recovery and Backup and Restore solutions.

ENS BC | Business Continuity
More than just your data, BC goes beyond Disaster Recovery addressing broader issues of technology and business survival with a customized plan.

ENS DR | Disaster Recovery

> **DISASTER RECOVERY**

Reduce the Costly Impact of Downtime

Failure to plan is planning to fail. Information from a variety of sources including FEMA, Red Cross, and Homeland Security, claim disaster-affected business failure rates of anywhere from 25% to 80% for businesses who do not have a Disaster Recovery Plan (DRP) in place. Regardless of the specific percentages, it is a fact that any kind of a disastrous business interruption can cause irrecoverable damages and significant loss of financial resources and revenues.

Is your data protected? Can you access your data if your building and/or equipment succumb to disaster?

ENS DR | Disaster Recovery

ENS-Inc DR engineers work with your organization to develop strategies and procedures for mitigating risks and restoring functions as quickly as possible when a disruptive event occurs.

Data is replicated in national data centers located in Rancho Cordova, California, and Las Vegas, Nevada. iBridge DR connects you with your data via an internet connection or by a direct access line ("Direct Connect") between you and our data centers (IPSec tunnel, SSL VPN, RDP connection).

ENS DR allows enterprises to host their production environment within their own data center, but use ENS DR as the recovery site and replication target at multiple data centers as needed and supporting a varied range of SLAs.

Mission-Critical Disaster Recovery in a Virtual World

Disaster Recovery (DR) and Data Protection have become critical challenges in deploying applications on a virtual infrastructure. ENS DR's hypervisor-based remote replication technology provides the necessary granularity without compromising performance, simplicity of operation, or scalability. ENS DR's virtual replication combines near-continuous replication with block-level, application-consistent data protection across hosts and storage.

ENS Cloud replication separates the application from its physical constructs at the data-protection level. It is fully storage vendor and protocol agnostic and is suited for both data centers and cloud infrastructures.

Better Disaster Recovery, Lower TCO - Dramatically Reduce Complexity and Streamline IT Operations

ENS DR Virtual Replication is a software-only product that simplifies and automates the entire application protection lifecycle by utilizing hypervisor-based replication technology, enabling VM-level protection. Many of the manual tasks are automated, reducing or eliminating errors.

- Select a VM in vSphere vCenter and, with a few clicks, it is replicated and protected. No need for back and forth communication between the storage and application teams and no need to consolidate LUNs or create new ones.

- iENS DR fully automates the entire failover and failback process, including creation of all the VMs, reconfiguring IP addresses and executing custom scripts. Failover takes only a matter of minutes, enabling you to move workloads around whenever necessary.

- Unique 'Virtual Protection Group' concept allows you to protect an entire application spanning multiple VMs with a single policy and a single automated failover and failback process.

- Seamlessly supports VMware VMotion, DRS and HA, plus Storage VMotion and DRS. Fully realize the benefits of VMware and ensure your data protection strategy is maintained exactly as you have specified. ENS Cloud adjusts to any changes made by VMware vSphere specifications.

- Software-automated installation does not require any changes to your storage or server infrastructure, making deployment simple, straightforward, and timely. Your production environment is protected faster and more accurately.

Designed for VMware virtualized systems with VMDK-level protection, ENS DR works with your organization to:

- *Identify risks and weigh impacts.*

- *Protect mission-critical data for business resiliency.*

- *Access and use your data in the aftermath of a disaster.*

- *Realize your business-required RTO, RPO, and RGO.*

Realize your business-required RTO, RPO, & RGO

How quickly do you need your data (RTO – Recovery Time Objective), from what point do you need to recover it (RPO – Recovery Point Objective), and how granular does it need to be (RGO - Recovery Granularity Objective)?

ENS DR offers varying levels of response time from as little as 4 hours to 48 hours, depending on your business needs, budget, and location.

In a global disaster recovery preparedness survey, Forrester Research and Disaster Recovery Journal found that more than 25 percent of the respondents experienced a disaster situation in the past five years! That's one in every four companies.

ENS DR | Disaster Recovery

Protect and Recover Tier-One and Multi-Tier Applications

ENS DR ensures quick and safe recovery of the entire application, including all components running on different servers and storage, utilizing Virtual Protection Groups (VPGs). VPGs ensure applications are replicated and recovered with consistency, regardless of the underlying infrastructure, maximizing performance and capacity while reducing complexity.

- Group VMs and VMDKs into VPGs
- Maintain all properties of a VPG's VMs
- Test recovery, failover and failback of the entire VPG
- Seamless support for vMotion, DRS and HA while replicating
- Application protection policy and QoS
- Leverage built-in support for VSS and VMware vApp objects

Tier-One Disaster Recovery for Virtual Environments

- Near-synchronous replication
- Scalable management and deployment
- Zero application performance impact
- Recovery Point Objective (RPO) of seconds
- Application recovery enabling a Recovery Time Objective (RTO) of a minute
- WAN degradation and outage resiliency
- Compression and WAN optimization

Supported Environments

Designed for VMware virtualized systems with VMDK-level protection.

- *ESX/ESXi 4 and up*

- ***Storage:*** *SAN, NAS, FC, iSCSI, DAS, and all external and internal storage supported by VMware, including replication between different storage types*

- ***Volumes:*** *VMFS, Virtual RDM, Physical RDM, including replication between volume types*

- ***Guest OS****: all OS supported by VMware*

- ***Virtualization Features****: vAPP, HA, DRS, vMotion, Storage vMotion*

The Security of Knowing!

Built to run on a hosted environment... and, when needed, with the performance of a production-grade solution.

What if you went to the office and it just wasn't there?

ENS BR | Cloud Backup and Restore

BACKUP & RESTORE

High-Availability Access and Data Integrity

ENS BR | Cloud Backup and Restore

With the increase in voluminous amounts of data and file sizes, data backups have become highly unmanageable and often corrupted during recovery. Costs have skyrocketed related to storage requirements and administrative management. ENS BR enables powerful and dependable backup services with the ability to locate and utilize the specific data you need when you need it.

ENS BR empowers efficient backup windows. Whether backing up server, desktop, or laptop files, you determine and manage your needs, ENS BR ensures the data integrity and availability with the ability to restore at each seat level.

Don't wait for an emergency to discover that your virtual machine backup has failed!

Secure and Reliable Services for Cloud Backup with Seamless and Unlimited Scalability

ENS BR features outstanding benefits for cloud backup customers:

- **Ease of Use**: 2-step-wizard helps inexperienced users schedule data backup jobs

- **DVR-like Technology**: Speeds the restore with an innovative technology automatically assembling all files and storage devices needed to restore a certain state

- **Seamless Offline Restore:** Seamlessly transfers exceptionally large data volumes on a transport device from iBridge to customer. A unique wizard ensures compatibility of online and offline backup and restore

- **Virtual Machines**: Agentless virtual machine backup with Microsoft Hyper-V and VMware ESXi/vSphere

- **Optimized**: High speed and low bandwidth use with block level technology

- **Safe Data Transfer**: 256 bit end-to-end AES encryption guards against unauthorized access during transmission and storage

- **Reliable Automation**: All processes can be automated so that users do not have to remember to back up their data, including open files

- **Cloud Restore**: Customers can sign-in at ENS-Inc's iBridge web portal to restore data directly from the cloud – anytime, anywhere

- **Complete Protection**: A single service protects Office data, SQL databases, e-mail (Exchange) and virtual environments

- **Reports**: Users can view reports about the status of backup jobs

Complete data protection service with:

- *Offsite cloud backup*

- *Easy-to-use interface*

- *Support for Microsoft Windows, SQL, and Exchange*

- *Support for virtual machines (VMware, Hyper-V)*

- *End-to-end 256bit AES encryption and virus protection*

- *Efficient use of bandwidth and storage infrastructure*

- *Simple administration*

- *Seamless scalability*

Cloud backup platform combines world-class technology with strategic business advantages.

- *Easy administration*

- *Central management and reporting*

ENS BR customers can also select the Imaging option as business needs demand. This is full incremental and differential imaging with Universal Restore for recovery on dissimilar hardware. There is a Bare Metal Restore option available via WinPE boot media for reliable restore in addition to Image to VHD conversion for single file and folder restore.

Low Costs of Operation

- Fast implementation and seamless scaling for easy growth (disk spanning, etc.)

- High-speed data transmission, efficient bandwidth usage

- Economic user authentication using an integrated database

- Pay-as-you-grow storage

ENS BR | Cloud Backup and Restore

- Superior data security and protection (virus protection, end-to-end AES-encryption)
- Individual services with remote management of each installation up to file level
- Continuous development and software technology updates
- Short backup windows for user convenience
- Support of standard business applications (MS SQL, Exchange, VMware and Hyper-V)

Systems Supported

Server OS: Windows Server 2012 and 2012 R2, Windows Server 2008 R2, Windows Server 2008 64 Bit, Microsoft SQL 2012 / Express, Microsoft SQL 2008 R2/Express

Client: Windows Server 2012 and 2012 R2, Windows Server 2008 R2, Windows Server 2008, Windows Server 2003 (32/64 Bit), Windows SBS 2011, Windows SBS 2008, Windows SBS 2003, Windows 8.1, Windows 8, Windows 7 (32/64 Bit), Windows Vista (32/64 Bit), Windows XP (32/64 Bit)

Microsoft Exchange / SQL: Microsoft Exchange 2013, Microsoft Exchange 2010, Microsoft Exchange 2007, Microsoft Exchange 2003, Microsoft SQL 2012, Microsoft SQL 2008 R2, Microsoft SQL 2008, Microsoft SQL 2005

Virtual Machine: Microsoft Hyper-V on Windows Server 2012/2008 R2/2008, VMware ESX(i)/vSphere 4.x/5.0/5.1/5.5 licensed with the vStorage APIs

ENS HE | Cloud Hosted Environment

HOSTED ENVIRONMENT

Reduce Costs and Change CapEx to OpEx

Your business can be complex and the information technology requirements for today's business functions demand often expensive and frequently changing IT assets. The IT investments can mean the difference between business success and business failure, but they can also eat up your profits through equipment and upgrade costs, server sprawl, heating and cooling costs… and the list goes on.

An ENS Cloud Hosted Environment provides you with:

- Improved financial flexibility
- A secure, scalable infrastructure without increased complexity
- Agility to respond to changing business needs
- High availability SLAs based on fault tolerant technologies

ENS HE offers a cost-effective, comprehensive, and protected cloud-hosted solution for your data and applications. We work with you to migrate and build your secure environment with high availability. Once set up, you manage your own virtual infrastructure. Disaster Recovery and Backup and Restore are part of your Cloud-Hosted Environment, with options to expand based on your mission-critical requirements. Support services are available with flexibility determined by your business needs and budget.

Extend your data center into the cloud...quickly, seamlessly.

99.95% Uptime

ENS-Inc is committed to protecting your environment. Your Cloud Hosted Environment includes:

- *ENS DR
  Disaster Recovery*

- *ENS BR
  Backup & Restore*

ENS HE | Cloud Hosted Environment

Benefits of your ENS Cloud Hosted Environment include:

- **Cost Savings**: Save on provisioning, hardware, and ongoing maintenance costs when you move all or selected parts of your on-premise private cloud or dedicated servers into an ENS HE hosted private cloud.

- **Physical Isolation**: By segregating cloud resources and the hypervisor from other customers through utilization of dedicated firewalls, ENS HE ensures the security, integrity, and availability of mission-critical information in addition to high performance capabilities.

- **Hardware Refresh**: ENS HE handles all infrastructure upgrades, so you never have to worry about your hardware being out of date. Saves time, money, resources… and stress.

- **Server Consolidation**: Through resource pooling, your ENS cloud is an efficient way to consolidate servers, storage, and database workloads into a shared hardware and software infrastructure. ENS HE helps you consolidate your physical server workloads into virtualized servers to minimize your hardware requirements.

- **On-Demand Scalability**: Grow as you need by increasing capacity as resource demand grows. Buy only what you need to get started, and expand or reduce your performance seamlessly to accommodate changing demands.

- **Geographically Dispersed Data Centers**: Utilize the benefits of having your cloud environments in multiple data centers including disaster-recovery scenarios, remote backup, dedicated failover options, and more. ENS HE clouds are in Rancho Cordova, CA, and Las Vegas, NV.

- **Outstanding Support Services:** Take advantage of ENS HE support options or know that emergency assistance is available 24x7 with our in-house data center experts.

- **Fully Customizable**: Your ENS Cloud-Hosted Environment is completely customizable with flexible CPU, RAM, and block storage, Customers can clone virtual servers as well as easily implement a development environment mirrored from production. Resources such as firewalls, load balancing, snapshots, and images can be added on demand.

ENS Next-Generation Security for Your Hosted Environment

ENS-Inc's Next-Generation Firewall offers multiple security levels. It provides fundamental security like firewalling, networking tools, routing, and secure remote access. Our modular approach lets you add layers to protect as your needs evolve.

Network Protection stops sophisticated attacks that a firewall alone can't stop. Configurable intrusion protection system and flood protection against denial-of-service attacks. IPsec and SSL tunnels provide flexible site-to-site and remote-access VPN connections.

Endpoint Protection provides desktops, laptops, and servers with antivirus, device, and web control. Scans files, webpages, and devices, blocking or cleaning threats. Device control reduces the risk of data loss and malware by managing removable devices. Built-in URL filtering ensures users get the same level of protection.

Webserver Protection hardens web servers and apps ensuring compliance with a web application firewall. Protects personally identifiable information like credit card and social security numbers. Inspects information submitted via forms on your websites to prevent server exploits.

Built on VMware. The world leader in cloud and virtualization technology.

vmware®

Drive Business Agility through IT Agility

- *Operational Efficiency*
  Simplified operations management drives greater resource utilization and staff productivity, greater CapEx and OpEx savings.

- *Infrastructure Agility*
  On-demand deployment of IT services in minutes with full control over critical business and IT policies; automatically match infrastructure resources to continually changing business demand and workload needs.

- *Operational Control*
  Delivers the highest levels of application uptime, through automated business continuity along with virtualization-aware security and compliance; enables greater control over the cost of, access to, and placement of IT services.

ENS HE | Cloud Hosted Environment

Email Protection stops spam and viruses and keeps sensitive data safe. Lets users manage their spam quarantine and search a personalized mail log. Keeps infected emails out of your mailbox and protects confidential emails against illegitimate access.

Web Protection lets you protect your employees from web threats and control their time online. Limits use of unwanted applications while giving priority to business critical resources. Create dynamic reports on the fly to check if your policy is working and make adjustments.

Wireless Protection gives you secure Wi-Fi in minutes. Centrally manages access points through the built-in wireless controller. Easily set up wireless hotspots and grant guest access with a simple voucher-based system.

We work with you to migrate and build your secure environment.
You manage it. We protect it.
ENS DR and ENS BR are already built in.

Multiple Security Levels:

- *Network Protection*
- *Endpoint Protection*
- *Webserver Protection*
- *Email Protection*
- *Web Protection*
- *Wireless Protection*

ENS BC | Business Continuity

BUSINESS CONTINUITY

A Customized Approach to Unique Business Needs

Business Continuity vs. Disaster Recovery

What is the difference between Business Continuity and Disaster Recovery? Do you really need a Business Continuity Plan (BCP) if you have a Disaster Recovery solution in place?

Disaster Recovery is when the infrastructure is significantly impacted and no longer available, most often due to a major natural disaster or other "act of God". The primary requirement is that the data is protected offsite. Your DRP involves the recovery of your irreplaceable data.

Business Continuity is the ability to keep vital business operations running in the event of failure in the existing infrastructure. These failures can include power failures, application errors, network failures, human error, or any other issue where the majority of the infrastructure may or may not still be in place but operations are halted and need to resume. A BCP involves both proactive and reactive strategies. Business Continuity is the enhancement of your Disaster Recovery.

Most incidents, or series of events, are not full-blown natural disasters. According to Strategic Research Corp., the primary causes of BC incidents are:

- 44% - Hardware Failure
- 32% - Human Error
- 14% - Software and Firmware Errors

Failing to plan is planning to fail.

Of companies that have had a major loss of data, 43% never reopen, 51% close within two years, and only 6% will survive long-term*.

*Cummings, Haag & McCubbrey (2005), "Management Information Systems for the Information Age"

Nearly 50% of businesses that suffer from a major disaster without an Information Technology Disaster Recovery Plan (IT DRP) in place never re-open for business*.

*Patel, Nikunj 2004. "Survey of Business Continuity Practices," Masters Thesis, Stevens Institute of Technology

ENS BC | Business Continuity

- 7% - Virus/Security Breach
- 3% - Natural Disaster

A survey of small businesses (no more than 1,000 employees) in North America by VMware[1] showed that 33% had experienced a "significant outage" in a two-year period because of "a disaster or emergency such as a power outage, server crash, storage failure, cooling failure, fire, flood, earthquake, hurricane, or tornado."

Another study by Forrester and the *Disaster Recovery Journal*[2] cites that within the five years prior to 2010, more than 52% of survey respondents who had crisis communication plans had been forced to invoke their business continuity plans. Severe weather, power failures, and IT failures topped the list of causes.

[1] *"The Benefits of Virtualization for Small and Medium Businesses", VMware, 2009*
[2] *Disaster Recovery Journal, January 2010*

ENS BC Goes Beyond Disaster Recovery

Your customized BCP goes beyond the recovery of your data and working access to it. Considering your unique business needs, the bigger question is: How do you seamlessly *continue* your business after a disruption?

Business Continuity embraces and enhances your Disaster Recovery Plan. Business Continuity digs deeper and addresses broader issues of your technology survival including:

- A working location or office base
- Communication with employees, vendors, and customers
- Print and FAX solutions
- Technology security

Do you have a plan to keep your business running in the event of a business disruption or disaster?

Developing a reliable BCP can spell the difference between continued operation or permanent shut down of your organization should a disaster occur. Your company's BCP should answer the question "What if...?" and serve as a proactive guide to preventing, mitigating, and responding to a business disruption.

Your ENS BCP begins with a Business Impact Analysis to identify time-sensitive or critical business functions and processes and the resources that support them. Based on your unique business needs, we work with you to develop your customized BCP recovery priorities and strategies.

Disaster Recovery, Cloud Backup and Restore, and Cloud-Hosted Environments are all elements contributing to your Business Continuity. Tested and proven solutions assure continued communication with your customers, vendors, and internal staff. Your data AND your applications are accessible so you can continue to do what you do best: your business.

Remember... Failure to plan is planning to fail!

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10 BC/DR Questions You Need to Ask Yourself:

1. Do you have agreed-upon SLAs for all systems that drive revenue, operations, and communications for your company?

2. Have you tested your plans in the last 6 months to make sure they work?

3. Do your business leaders know what is in the SLAs and what to expect in the event of a failure?

4. Do you have spares for key hardware components?

5. Do you have Recovery Time Objective (RTO) for your storage system?

6. Do you have a Recovery Point Objective (RPO) for you storage system?

7. Do you have a Recovery Granularity Objective (RGO) for your business?

8. If you were gone, could the team function without you to recover from a BC event?

9. Do you have backup off-site in case of a disaster?

10. Have you tried a recovery to make sure it works?

VIRTUALIZATION

CLOUD INTEGRATION

BUSINESS CONTINUITY

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DR **BR** **HE** **BC**

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