

## MergerTree Stratastation Pro™ Technical Details

Caring for your data  
backup and disaster  
recovery so you can have  
"piece of mind"!

### Why do you need an offsite storage solution?

- Most small businesses (SMBs) don't do backup well (if at all). Gartner's statistics say the 70% of tape backup restorations fail...
- Most SMBs don't have an offsite backup for DR
- SMBs don't secure their backup. (no encryption)
- SMBs will likely go out of business if they lose their data
- Be strategic about business continuity. You are purchasing data business continuity insurance at an affordable cost.

The MergerTree Stratastation Pro™ combined product and service addresses the Business Owner's Business Continuity and True Disaster Recovery needs.

### MergerTree Stratastation Pro™ - A Breakthrough Approach!

MergerTree is introducing a Disaster Recovery Solution as well as a replacement for onsite backup. This will be a fully-managed solution with near real-time backup (every 15 minutes). The MergerTree Stratastation Pro™ not only provides data backup, but also incorporates timely bare metal application restore capabilities.

- The MergerTree solution is a block level backup where the entire volume of a server is captured at the 1's and 0's level
- Block level data is raw data which does not have a file structure imposed on it
- The block-level image is an exact digital duplicate of the on-site server
- Database applications such as Microsoft SQL Server and Microsoft Exchange Server transfer data in blocks without having to worry if files are open or being used
- This technology allows for complete server restorations using last functioning server system state before the failure occurred

### How the MergerTree Stratastation Pro™ Works

MergerTree Stratastation Pro™ is based on the Incremental Forever technology, which allows more restore points than a traditional tape backup. An initial base image backup of the server is taken then incremental snapshots with the changes on the server are taken as frequent as every 15 minutes. These snapshots are then collapsed into synthetic Daily Incremental and Monthly Incremental.

## Security

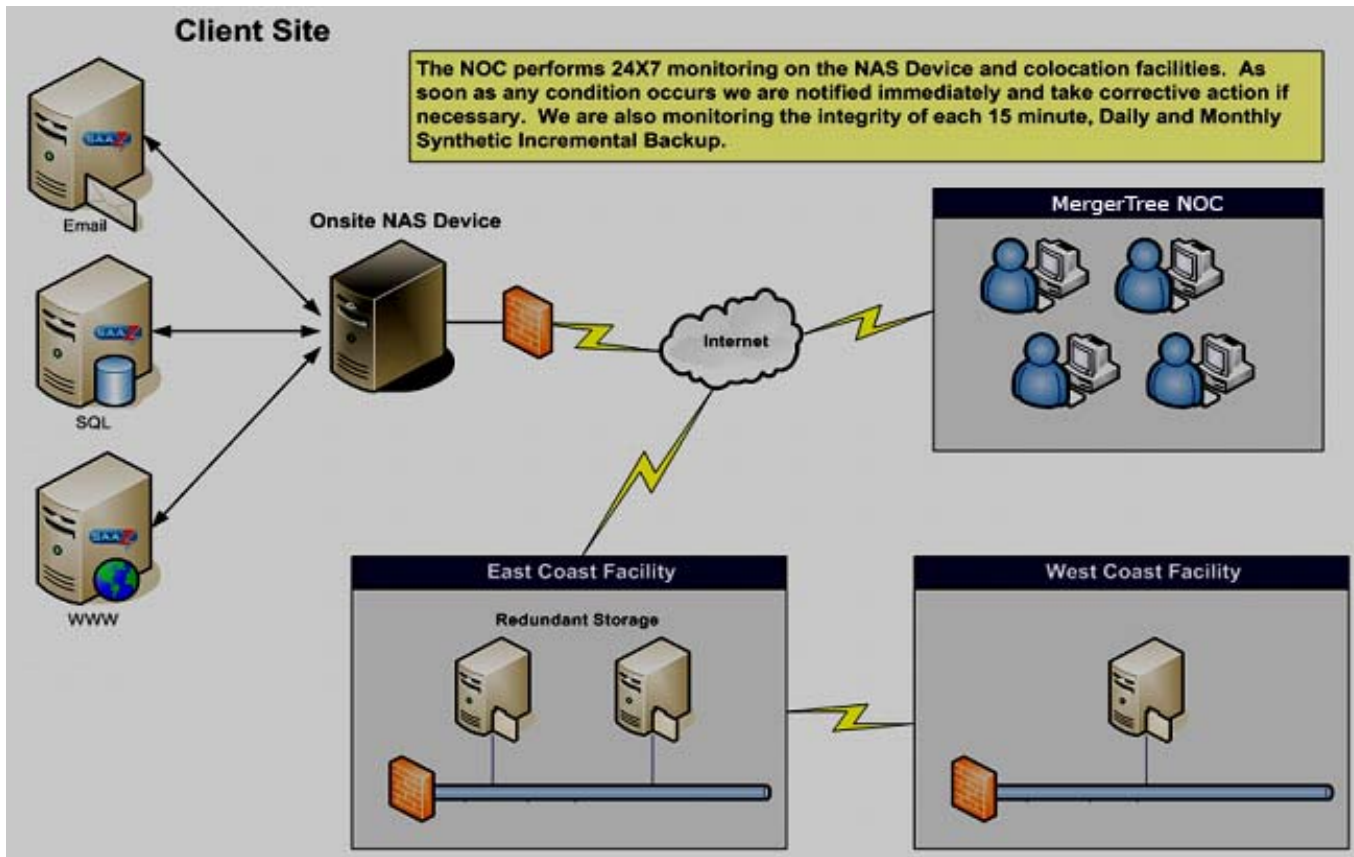
- After imaging the servers to which it is attached, the MergerTree Stratastation Pro™ creates an independent 256-bit encrypted tunnel and transmits the imaged data to a secure offsite location where it resides in an encrypted, compressed format. That remote site then replicates again to an alternate data center, creating a total of three copies of the data in three geographically distinct regions. Since the data is encrypted and only you have the pass key, no one at MergerTree has access to the data on the MergerTree Stratastation Pro™ or either of the remote storage facilities.
- Encryption is an important step in the process of transmitting data between the MergerTree Stratastation Pro™ and the remote sites because it greatly reduces the risk of data loss incidents that plague magnetic tape and prevents man-in-the-middle attacks during transmission. We employ the 256-bit Advanced Encryption Standard (AES) algorithm because it has never been broken and is currently considered the gold standard of encryption techniques and renders transmitted data immune to theft.

## How is the MergerTree Stratastation Pro™ Managed?

The MergerTree Stratastation Pro™ is monitored and managed 24x7 by our NOC Team. Once the MergerTree Stratastation Pro™ unit arrives it is placed on your local area network and our NOC does the rest of the work over the Internet. Normal set up time is approximately 4-6 hours per MergerTree Stratastation Pro™. If an issue occurs during any backup or with the hardware we are immediately notified and take corrective action. Not only do we monitor the entire solution-Servers, MergerTree Stratastation Pro™ and Remote Storage facilities, but we also manage it by performing restorations and virtualization of servers as needed. Your staff will have complete visibility of the backups via a portal you will be provided.

**The major advantage of the MergerTree Stratastation Pro™ is the capability to provision a bare metal restore to dissimilar hardware!**

## MergerTree Stratastation Pro™ Architecture



### What Happens in Disaster Recovery and Fail Over Using Virtualization?

The MergerTree Stratastation Pro™ comes with built-in virtualization software. This allows a server which has failed to be restored on the MergerTree Stratastation Pro™ as a virtual image giving the customer a standby server in a matter of hours. Since the total image of the server is being restored no configuration changes are needed as the virtual image has the same properties, IP address, NetBIOS name as the failed server and backups continue to happen even when running the virtual image. When new hardware/spares arrive, the virtual image can be shutdown and the latest backup image can be used to perform a bare metal install on the new hardware.

### What Happens in the event of a catastrophe?

In the event of catastrophe (such as a natural disaster or fire), you order a new MergerTree Stratastation Pro™ that will be imaged and sent out next-day business air. Depending on the MergerTree Stratastation Pro™ model, multiple servers can be virtualized on one MergerTree Stratastation Pro™ while the MergerTree Stratastation Pro™ can also continue to perform backups. Your data will not be hosted at the colocation facility.

A major advantage of the MergerTree Stratastation Pro™ is the capability to provision a bare metal restore to dissimilar hardware.

In the event of catastrophe or server hardware failure we can perform a bare metal restore to dissimilar hardware by manipulating the HAL Layer (Hardware Abstraction Layer) to install the proper drivers. We install the correct drivers for the new motherboard and components on the server machine. Operating System and Application reinstallations not needed. This is done by restoring the image from the on-site MergerTree Stratastation Pro™ or from a new MergerTree Stratastation Pro™ which is imaged at the colocation facility and shipped to your designated delivery point.

## Details of Offsite Remote Storage

- Stored at two XO high availability data centers in Phoenix and Baltimore.
- 3 encrypted copies of backup images are stored at the data centers with data stored on mirrored storage area network at the primary facility, then replicated to the secondary facility.
- Connectivity provided by multiple providers with automatic failover capabilities.
- Facilities provide two fiber optic network drops for our backbone.
- Full physical security at each facility including security cameras, key card and biometric access.
- Network is secured with high end redundant, automatic failover firewalls.
- Fire suppression and environmental control provided.
- Automatic back up power provided by on site generators.
- Your data is never hosted at the colocation facility. This is done because we do not want or have access to the data, for security purposes. Only you should have the encryption key.

## MergerTree Stratastation Pro™ is offered in two models

### MergerTree Stratastation Pro™ 500 GB

- This model can be used to backup up to 2 Servers and is based on the AMD Athlon FX2 Dual Core 3800
- Storage up to 250GB real space provided/backs up 500GB compressed (based on average 2:1 compression ratio) (NO RAID)
- This device is a small form factor chassis that can be placed vertically or horizontally
- The Operating System that is Windows Storage Server 2003 R2 based
- Processor AMD Athlon FX2 Dual Core 3800
- 2 GB memory

### MergerTree Stratastation Pro™ 1.5 TB

- This model can be used to backup up to 8 Servers
- Storage up to 1TB real space provided/backs up 1.5TB compressed (based on average 2:1 compression ratio)
- The device is a tower based model with hot swappable hard drives (RAID 5)
- The Operating System that is Windows Storage Server 2003 R2 based
- Processor Intel Core 2 Duo 6300
- 4GB memory

## Disaster Recovery Costs

- In a disaster, where you lose your entire office, servers and on-site MergerTree Stratastation Pro™ included, we will coordinate with you to order a new MergerTree Stratastation Pro™ with the virtual images live on them to be shipped out via next-business day air transportation to a location of your choice. This can be to your alternate site or to our collocated data center.
- When the new MergerTree Stratastation Pro™ arrives, it is simple to install and you're up and running. There is an additional cost for this "recovery service" plus all freight and shipment costs. Please contact [sales@mergertree.com](mailto:sales@mergertree.com) for details. This will allow you to use the replacement MergerTree Stratastation Pro™ for 2 weeks before it must be returned, at your expense to MergerTree. This will allow you to get a new server ordered and in place and do a "bare metal restore" from the MergerTree Stratastation Pro™ before returning the MergerTree Stratastation Pro™ if you so desire. Alternatively you can choose to keep the MergerTree Stratastation Pro™ and you will be billed for the list price of the new MergerTree Stratastation Pro™.
- Be aware, if a catastrophic event occurs we do not host the data at the collocation facility. This is done because we do not want to have access to the data, for security purposes. You'll have the encryption key.

## MergerTree Stratastation Pro™ Warranty

MergerTree Stratastation Pro™ replacement parts will be shipped via standard ground transportation and prepaid by MergerTree. The faulty MergerTree Stratastation Pro™ part will be returned in the time allotted and following the MergerTree Stratastation Pro™ RMA process or else you will be charged for the part. Costs are identified in the RMA process. If it is determined the MergerTree Stratastation Pro™ has been tampered with or is not faulty, the client will bear the freight and shipping cost for the replacement part as well as the shipping costs of the original part.