

Reseller Partner FAQ

1. What is the best way to describe Symform?

Symform is an online data protection and disaster recovery service. It is not a back-up application. It's an *offsite* back-up to your *onsite* back-up system. The concept was predicated on the realization that millions of small businesses have computers with an excess of inexpensive storage capacity, power running 24x7, and unlimited Internet bandwidth - especially nights and weekends. Accordingly, the Symform team has developed software that aggregates this relatively unreliable and un-trusted capacity over the Internet and has transformed it into a secure and reliable global storage system.

Symform provides you with secure, reliable, and inexpensive online storage. It is "cooperative" because you contribute local storage equal to the amount that you consume online.

2. What was the inspiration behind this idea?

Call it upside down economics. You can buy a 1 TB USB drive (just about anywhere) for about 80 bucks. Cheap right? It will last 2-3 years give or take. Now, if you want to back-up that 1 TB drive to a traditional online storage service, you would normally pay \$.40 to \$4.00 per GB per month – every month. So, when you do the math on 1 TB, you would pay \$400 to \$4,000 per month for online storage. These economics simply don't make sense – especially for SMBs. Symform decided that there must be a better way.

3. Man, why is online storage so expensive?

No big mystery here. Data center capital investment and operating expenses are unbelievably oppressive. About 85% of data center costs are sunk into power consumption, real estate, and Internet bandwidth. As you know, prices for power continue to rise due to worldwide energy demand. And you can't just have one data center in that business. You need two in order to keep data safe and secure.

4. How does Symform avoid this?

We don't require data centers to store data. We are aggregating the millions of computers all over the world (they become Symform "nodes") that run power 24/7, have excess local storage capacity, and have reliable Internet access. In short, we decided to create the world's largest "global storage system." A bit out of the box, right?

5. Wait a minute, if you rely on random computers worldwide, how is the data kept secure and always available?

This is the million dollar question. We *assume* that all Symform nodes are insecure and unreliable. This is the basic foundation of our architecture. We address this by encrypting the data using the 256-bit Advanced Encryption Standard (AES) at source. AES has been adopted by the U.S. federal government. We then divide the encrypted data into 64MB blocks. Each block is then shredded in 64 1MB fragments. Then, we add 32 parity fragments to every block using an error correction algorithm called Reed-Solomon. These resulting 96 encrypted fragments are then distributed randomly to 96 nodes within the Symform Cooperative Storage Cloud. We call this RAID-96™.

6. Could someone breach this security?

Not bloody likely. It would require the *right* 64 people to find each other then “collude” to re-construct a single block of encrypted data. Just a single encrypted block. Then they would have to break the military-grade 256 AES encryption, of course. Finally, you have to repeat this process for each of the other blocks of the file with a new set of 64 people and a new key! The probability of a breach is infinitesimally small.

7. Can we encrypt our files and manage our own keys?

Sure. You can encrypt the data before Symform ever sees it. Your choice.

8. What about nodes failing in the network – hardware failure, power loss, user error?

Again, we assume nodes will fail. Symform operates a service called “Cloud Control” which lives within Amazon Web Services. Cloud Control monitors the uptime of all nodes continuously. If a node fails (it doesn’t call home on schedule), we regenerate the lost fragments (remember the 32 parity fragments?) then re-locate them to other operating nodes.

9. Could data ever be lost?

In our RAID-96 system, 33 nodes (the right ones) would have to *simultaneously* fail for data loss to occur. The probability of this happening is infinitesimal. For comparison, a RAID-5 system allows for only 1 disk failure and is considered highly reliable.

10. How does Symform address back-up?

Symform is not a back-up application. We’re an *offsite* back-up to your onsite back-up. You may use any back-up application (e.g. StorageCraft, NT Backup, Backup Exec, et al) that you prefer. Once you make a local back-up and store it on an internal disk or USB drive, you point Symform at the folder(s) that hold the local back-up files. These are the folders that get “mirrored” into the Symform Cooperative Storage Cloud.

11. How does Symform deal with Exchange and database files like SQL?

Again, your back-up application should be designed to gracefully manage these files. Symform will mirror the backup files into the storage cloud.

12. What about versioning, incrementals, differentials, etc?

Your back-up software and standard procedures will govern how, what, and on what schedule you back-up your data. Symform will mirror the resulting back-up files to the storage cloud.

13. Does Symform mirror all the data in the folders every time we complete a back-up?

Symform continuously monitors changes in your local back-up folders. It “de-dupes” automatically at the block level. So, only those blocks that have changed are mirrored into the cloud. This makes it very efficient and fast.

14. What is the recommended Symform configuration?

There are a lot of options, but here’s a typical scenario:

1. Designate one computer to be the Symform node. Download the Symform software to this node.
2. Point Symform at the folder(s) that hold your local back-up files. The folder(s) can be anywhere on the LAN. Symform just needs a Windows UNC (universal naming convention) path to locate them.

3. Designate a “contribution folder” on a drive somewhere on the LAN. This could be an internal disk, a NAS drive, USB drive, etc.
4. Open a port (on your firewall) for this node so that Symform can identify where to place encrypted fragments from other nodes.

15. *Why do I need to open a port for this node?*

It is necessary for the Symform Contribution service to listen on a port for incoming traffic (encrypted fragments coming in from other nodes). This port is picked randomly (or you can choose your own) to ensure that it is not identical across all nodes in the network in order to protect against port scanning attacks.

16. *Do I need to change the settings on the router/firewall?*

Yes. This is very important. You must configure a port mapping rule on the edge firewall to allow inbound traffic to this port. This is very easy to do. The External Port on the mapping rule **MUST** match what is configured here. If port number selected is already in use by another application, you need to select a different port number. The rule should allow traffic from ANY external IP address. The Internal IP address should be of the machine on which Symform Node is configured – we therefore recommend using a static IP address for the computer running Symform Node software.

17. *How does contribution work?*

This is very simple. You contribute local storage equal to the amount you consume in the cloud. Since our model creates a 1.5X redundancy (remember 32 fragments are added to every 64), a 100 GB back-up would consume 150 GB of online storage in the Symform Cooperative Storage Cloud. Therefore, you would need to have 150 GB of available storage for contribution. This folder can be on any storage device on the LAN that you desire. The minimum contribution requirement is 10GB. The minimum up time percentage of a contributing node is 80%.

18. *Does Symform “cordon off” this contribution folder?*

No. Symform won’t “lock” this space so that it is unavailable for normal use. Should Symform find that there isn’t an adequate amount of space available in the contribution folder, it will send a notification to the Partner. We provide a grace period for the Partner to remedy the situation.

19. *Can I contribute excess storage from my office or another location?*

Yes. A feature called “**Flexible Contribution**” enables you to contribute storage and bandwidth from another node or nodes. You are able to set-up additional storage in your office (or co-lo) so that your clients won’t have to manage this. You’ll also be able to “pool” resources and contribute from multiple nodes that you have organized in a Symform resource group -- example: your client has multiple offices and wants to contribute from more than one on behalf of the entire group.

20. *What if my client has laptops?*

Symform’s software runs on a laptop where it can continuously sync data from the laptop to the Symform Cooperative Storage Cloud. Since laptops aren’t frequently in the office or tethered to the Internet, the Flexible Contribution function makes it easy for a laptop node to be “sync only” and contribute storage from another node or nodes in a Symform resource group.

21. *Does Symform support the Mac or Linux?*

Not presently. We will add support for these clients in 2010.

22. How long does it take to complete the initial “seed” of data?

This depends upon two things: the amount of data and the speed of available bandwidth. If your client has slow bandwidth, you can copy their data to a portable storage device (e.g. a USB drive) then do the initial seed (via a temporary node) from a location with faster bandwidth. Your office, a colo facility or wherever. Once the data is seeded, you can install/configure a permanent node at your client’s office then begin to upload changes. Pointers from this new node to the data that you uploaded from the temporary node will be created automatically. Remember, Symform automatically dedupes the data that is already in the cloud.

23. Is Symform slow when uploading and downloading data? I notice that most online services are extremely slow.

Symform creates up to 96 parallel channels up and down so throughput is extremely fast. This is a key architectural benefit. Unlike traditional online services, we don’t use one pipe for thousands of customers. We also don’t throttle or pay for bandwidth. Traditional online services throttle bandwidth intentionally in order to avoid paying expensive peak bandwidth rates in data centers.

24. How should I think about bandwidth and the speed of moving data into the cloud?

Most bandwidth is asymmetric – example: 2mb/sec up and 10mb/sec. Your up-link is your most precious resource. The table below will give you a basic understanding of how much data you can move during off-hours and in one day.

Basic bandwidth and backup metrics							
BW in Business hours (10hrs)	BW in Off hours (14hrs)	1day (max)	1wk (max)	Data Set Bandwidth →	<=1Mbps	<10Mbps	>=10Mbps
384Kbps	768Kbps	4GB	32GB	<=50GB total, <50MB/day	Monthly	Weekly	Weekly
1.5Mbps	2Mbps	12GB	90GB	<=500GB total, <1GB/day	Quarterly	Monthly	Weekly
4Mbps	5Mbps	32GB	230GB	500GB or more, <5GB/day	3 C’s not possible	Quarterly	Monthly/Weekly*
9Mbps	10Mbps	50GB	350GB				

25. Can I manage how Symform utilizes my client’s bandwidth?

Yes. There are controls to manage when Symform operates. For example, you may set Symform to operate during non business hours. Think about how much resource you have during nights and weekends.

26. In the event of a disaster is there a super-fast way to recover my client’s data?

You are able to restore your client’s data extremely fast using the current system. Of course, this depends on the available download bandwidth at the customer site or at one of your facilities.

In addition, the “Instant Restore” feature enables you to sync a Symform node (your client’s data) to the Symform Cooperative Storage Cloud and simultaneously sync it with another node -- like one in your office, the SMB owner’s home, or in a co-lo facility. This way, a client's data is always "hot" and ready to be restored immediately should a disaster occur. SLAs of a few hours instead of a few days are now achievable.

27. What is the pricing?

We sell to our Partners only. Our Partners sell to their customers.

Standard License

	Partner Pricing	Customer Pricing *
Server license	\$20 per month	\$40-80 per month
Desktop license	\$3 per month	\$6-20 per month

Professional License

	Partner Pricing	Customer Pricing *
Server license	\$30 per month	\$60-100 per month
Desktop license	\$5 per month	\$10-25 per month

This is for an *unlimited* amount of data. No per GB prices!

Volume Discount Schedule

We provide a Volume Discount Schedule that provides additional margin to you based on your total monthly commitment:

<u>Level</u>	<u>Minimum Monthly Commitment</u>	<u>Discount</u>
Bronze	\$100	10%
Silver	\$500	20%
Gold	\$1,000	25%
Platinum	\$2,000	30%

Example: if you spend \$100 with Symform in a given month, your actual charge will be \$90

*We don't publish a suggested retail price (SRP), but this is a rough guess. Partners are free to set their own prices and include Symform in existing service bundles.

28. How does licensing work?

The Symform software is only downloaded to one system at a customer site (a node). Every computer that is backed-up (that is, data on the computer is being placed in the cloud) requires a license. It's all about the source of the data. Since there is no technical way for us to monitor compliance, we trust our Partners to sell the appropriate number of licenses. We believe that our Partners will optimize their revenue while considering the economic constraints of their customers. When our Partners make money we make money.

Note: "contribution only" nodes do not pay a license fee

29. Do I have to constantly tune and manage my Symform implementation?

No. Once it is implemented, it is set-and-forget. You will receive regular reports and alerts in email from the service communicating the status of your customer nodes. You can also log into the Partner online dashboard at <https://control.symform.com> to get real-time status of your nodes.

30. What about compliance with HIPAA, Sarbanes-Oxley, GLB, et al?

Yes, we comply with these regulations. By implementing the best practices for onsite data backup using a mature, 3rd party local backup application of your choice and combining it with automatic mirroring of the local backups into the secure, redundant,

geo-distributed Symform Cooperative Storage Cloud, customers are able to meet the various compliance requirements as follows:

- Backup files are encrypted locally using federally certified 256-bit AES encryption before any transmission of the data.
- Encrypted data are redundantly geo-distributed using RAID 96™ technology to prevent data loss, tampering, alteration, or unauthorized access.
- Data is available 24x7 via a broadband connection.
- When needed, data are recoverable by authorized personnel only at authorized locations like the customer premises or an authorized service provider premises using secure, randomly-generated security credentials.

31. *Is my client legally liable for other people's data stored in the contribution folder on his/her system? What if it's copyrighted material or illegal pornography?*

No. The law is very clear about this. Please refer to the U.S. Digital Millennium Copyright Act and the U.S. Communications Decency Act for detailed information. The legal test within these statutes is whether a person is storing illegal data "knowingly." Since Symform is encrypting then shredding data into fragments, there is no way for anyone to know what is contained in the data stored in their contribution folder.

32. *Is Symform green?*

Very. We don't operate massive data centers. We leverage the existing power consumption of computers worldwide. That's as green as Kermit the Frog.