can be a good alternative to achieve the same objective with minimal cost. This selected approach also has the advantage of having a local backup where the snapshot for the full backup can be executed midnight daily while rysnc is perfect for remote data replication.

The *LVM* technic also is faster than *svn hotcopy-then-sync* method and will use less disk space. Even though, *LVM snapshots* do affect write performance, the difference is very negligible and unlikely to be noticeable and the system performance returns to normal as soon as the snapshot is generated. Therefore, the users will not experience the performance drop. The following are recommendations for others that plan to setup SVN infrastructure. These are findings that can be considered as lesson learnt.

i. Minimum SVN version required is 1.8. This is because the feature *svn freeze* is only available in the said version [9]. Without such feature, it would be hard to have uninterruptible SVN service and through this only replication frequency is able to be scheduled.
ii. Knowledge in *LVM snapshot* is a must and additional disk spaces are required for snapshot creation.
iii. Since, replication is executed very rapidly; there should be regular data verification on the data in the remote site. It is advisable to plan this as part of monthly system maintenance activities.
iv. It requires proper load balancer setup either with software based balancer or hardware based balancer.

Therefore, in any case of primary system failure, the routing of service will be done automatically.
For data repository storage, network storage such as SAN is recommended as compared to NFS. SVN over NFS is very slow as compared to SAN. This will have an impact on user's satisfaction.

REFERENCE

[1] http://svnbook.red-bean.com/en/1.6/svn.intro.whatis.html, last accessed 9 June 2014.
[2] http://www-03.ibm.com/software/products/en/clearcase
[3] http://www.nongnu.org/cvs/
[4] http://www.wandisco.com/subversion/download
[5] http://en.wikipedia.org/wiki/Version_control, last accessed 5 June 2014.
[6] http://tldp.org/HOWTO/LVM-HOWTO/snapshots_backup.html, last accessed 5 June 2014.
http://www.howtoforge.com/linux_lvm_snapshots, last accessed 5 June 2014.
[7] http://www.mysqlperformanceblog.com/2006/08/21/using-lvm-for-mysql-backup-and-replication-setup, last access 20 June 2014
[8] http://serverfault.com/questions/133698/svn-backup-using-rsync-command, last access 20 June 2014
[9] http://subversion.apache.org/docs/release-notes/1.8.html#svnadmin-freeze, last access 20 June 2014