

Voice over IP Server and Backup Project

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1 Introduction

The purpose of the project was to design an open source telephone exchange, which supports calls between two locations over a wireless network connection and to implement a centrally controlled Domain Controller.

The additional requirements of the project were to design and implement a backup procedure and disaster recovery plan, which fully support the implemented Voice over IP Server and Domain Controller which controls the users access rights.

Training was also provided in the use of the new implemented systems, with all the supporting documentation as a reference.

2 Objectives

- Analysis and implementation of the best suited Voice over IP Server.
- Analysis and implementation of required security/access levels for each staff member at both branches
- Analysis and implementation of the best suited backup procedure.
- For the backup procedure to be supported over the wireless network link.
- Train the staff members in the use of the implemented backup procedure and Voice over IP Server.
- Develop and test a disaster recovery plan, which supports the implemented backup procedure.

3 Methods

- Researched Voice over IP systems and selected which is best suited for the needs of Advance Automotive.
- Analysis of required network resources and user access
- Researched the internet for potential solutions when Voice over IP Server issues arose, which included using trial and error when required.
- Tested all implemented systems to ensure they perform as they should.

4 Results

- An implemented phone exchange which supports a majority of the required criteria according to the project requirements (Trixbox).



- A successfully implemented Domain Controller which controls all access to the computer network.
- Continual data backup which incorporates data redundancy, using data mirroring for the Domain Controller and Voice over IP Server.
- Developed disaster recovery plan, which utilises redundant hard drives to restore data.
- Completed training manual for the operation an use of the Voice over IP Server (Trixbox) and other implemented systems.

5 Conclusion

- The selected telephone exchange still has some issues with regards to the fax capabilities.
- Overall the Voice over IP Server meets most of the requirements, with the flexibility to expand as required.
- Easily configurable Domain Controller which enables Milson branch users to access resources from the Jasper Place branch over the wireless network connection.
- Completed documentation supporting all features



of the implemented systems.

6 References

- Trixbbox (Open Source PABX) – www.trixbox.org
- Voipinfo – www.voip-info.org
- Digium – www.digium.com
- Asterisk – www.asterisk.org

