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EOS Windows Native Client

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The current EOS version (Citrine v4.6.8) supports access to Windows clients using the Samba interoperability suite. As Samba is just an additional layer between EOS on Linux and Windows clients, it is an additional possibility for unexpected issues:
1. Access and data transfer speed
2. Problems with access/read/write file and directories
3. Problems with ACLs
4. Filename issues

EOS Windows Native Client (EOS Wnc) is an implementation of EOS Linux client for Windows platform and it should improve EOS usability for Windows clients. Development of EOS Wnc is provided as Comtrade's research project within EOS openlab R&D Topic 1: Data-centre technologies and infrastructures.

Following steps are proposed ad a starting point for the development of a prototype for the EOS Wnc:
1. Study of the architecture of existing EOS Linux Client
2. Identify potential risks and incompatibilities with Windows philosophy
3. Resume of available Windows disk-based storage systems
4. Setup the Windows development environment with native Windows libraries
5. Porting of EOS Linux Client with Microsoft Visual Studio IDE
6. Identify functionalities from Linux that are not possible to simply port

Implementation of EOS Wnc is the most important step in porting to EOS Wnc. The proposed high-level design of EOS client porting using Microsoft Visual Studio:
1. Provide a prototype version of EOS Wnc with basic functionalities
- Access to Windows filesystem
- Read/write Windows filesystem
 2. Upgrade of the prototype
- Add user roles and permissions
- Adjust Windows and Linux ACL policy
- Check and finalize security model
- Check and finalize file authentication process
- Improve performance
- Improve Windows code (possible refactoring)

The first prototype of the EOS Wnc is proposed for March 2020 and the first release version is proposed for September 2020.

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