# Folder Poll

## Document Overview

This document provides the incremental specifications for the project. As new changes are required this document will be updated with changes tracked.

## Project Overview

The **Folder Poll** application is a utility application that can be run as a Windows service which polls folders for changes content. When changes are detected (such as the creation of a new file in a folder) operations are performed, such as launching an application and/or copying/moving the file.

The application is configured using an XML file (an XSD file is provided).

## Key Requirements

Continuously monitor one or more specified folder for new files.

When a new file is created an operation can be performed on this file including:

* Copy
* Move
* Launch Another Application

The folder to poll might be a protected folder and will require impersonation to perform operations on the file in the protected folder. In this case impersonation credentials can be specified/or the service is ran under an administrator level account.

The service is configured using an XML configuration (XSD provided).

XML Configuration (from and XSD)

## Provided XML/XSD files

### XML

An example XML configuration is provided which illustrates how to configure the folder poll application to:

1. Poll a specific folder

2. Perform operation when a new TXT file appears in that folder

3. Copy the new file to a specific folder

4. Launch Notepad passing in the file path of the copied file.

### XSD

An XSD file is provided which defines the valid structure of the XML configuration files. This document also contains documentation describing the required functionality of the application.

The XSD file can be used in VS2013 to validate edited configuration XML. Also, the XSD file should be used to generate the object model for the data representation.

## Required Platform

C# NET 4.0 Application

VS2013 Solution

No 3rd party dependencies

xcopy deployment

## Suggested Implementation

### Technologies

Use

* Microsoft’s XSD tool to generate an XSD object model from the XSD file (http://msdn.microsoft.com/en-us/library/x6c1kb0s(v=vs.110).aspx)
* Implemented as a WCF Service
* .NET FileSystemWatcher class

### Solution Architecture

The Folder Poll solution should comprise of the following elements:

* Class-library for folder poll operations, this can be initialised from an XML file/string
* Console application – simple client of the class-library to conveniently test the folder polling operations (for developer testing)
* Unit Test – tests the class library (uses XML strings to create configuration) and provides a test harness which creates files
* EXE Service – this is an WCF Windows service which can be started and is ran continuously. A Configuration file in the same folder as the EXE service is used to configure the service. The service can be started/stop using standard Windows Services tools.