



# FSLogix Apps 2.0

App Containerization and User Profile Containers



Virtualization  
Conference  
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Innovative Solutions for Physical and Virtual Desktops/RDSH

# Agenda



- Tiny core components of FSLogix
- **Live Demo:** Basic concepts
- **Live Demo:** FSLogix Apps - Let's get creative
- Commonly asked questions on FSLogix Apps
- FSLogix Profile Containers
- **Live Demo:** FSLogix Profile Containers vs Roaming Profile
- Commonly asked questions on FSLogix Profile Containers
- Conclusion and top reasons using it

# Tiny core components of FSLogix

- **FSLogix Engine**
  - ▣ Filesystem- and Registry-Filter-Driver in kernel mode
  - ▣ running on Windows (no matter if RDSH, phy. or virt. Desktop, XenApp, XenDesktop,...)
- **FSLogix Rule Files**
  - ▣ living in *%ProgramFiles%\FSLogix\Apps\Rules*
  - ▣ text-based files
- **FSLogix Windows Service**
  - ▣ monitoring changes of Rule Files and communicates with Filter Driver
  - ▣ changes to the rules are applied instantly and on the fly.

# Basic concepts

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- **Hiding parts of the filesystem and registry**
  - files and directories
  - registry keys and registry values
- **Faking data of a registry value name**
  - returning a specified value when querying specific registry value name
- **Auto-Attaching VHDs**
  - mount VHDs into specified directories
- **Redirecting parts of the filesystem and registry**
  - redirect an attempt of accessing a file or directory to a specified location
  - redirect an attempt of accessing a registry key or value to specified location
- **Assign and deploy Rule Files**
  - assign rules to Users, Groups, OUs, Processes, Computers, Network Locations
  - deploy Rules Files by copying to %ProgramFiles%\FSLogix\Apps\Rules

# Let's get creative

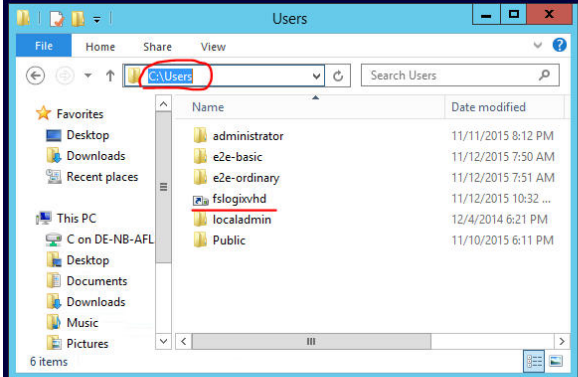
- **Windows Machine with lots of software packages natively installed**
  - Office 2010, 2013, 2016
  - Visio 2013, 2016
  - Visual Studio 2013, 2015
  - Android Studio
  - Libre Office
  - Multiple PDF Readers (Adobe, Foxit, Sumatra)
  - Image Processing Software (Canon DPP, Gimp)
  - Various Tools (Notepad++, WinSCP, PuTTY)
- **Every user gets exactly the software which is needed – without conflicts and correct FTAs**
  - rules, which hide specific software packages based on each user or groups
  - rules, which assign correct user-based FTAs
  - rules, which mount VHDs from fileshare for big software packages to keep base image small.

# ??? on FSLogix Apps

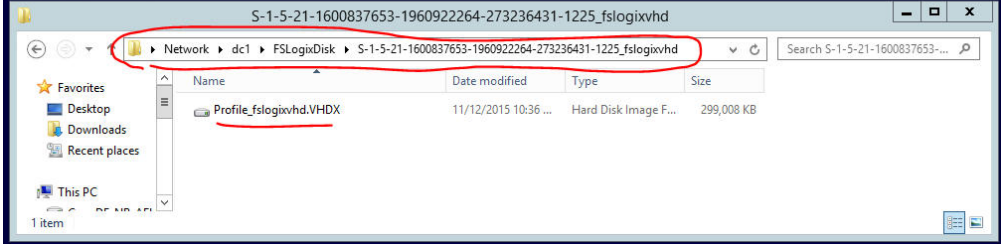
- **How hard is it to created those rules?**
  - most of the rules are created wizard driven
- **How to deploy those rules to multiple servers/desktops**
  - remember that rules are text-base files living in %ProgramFiles%\FSLogix\Apps\Rules. Using a GPO startup script to xcopy rule files from a network share is an easy aproach.
- **What does Microsoft say from a licensing perspective when hiding specific apps?**
  - I don't know, but think about ... FSLogix is a filter driver running in kernel mode. In the past Microsoft has already accepted a tool which only uses NTFS permissions.
- **How big is your C Drive**
  - roughly 40GB. Some big software pakages like Visual Studio and Android Studio live in VHDs, which are readonly mounted.
- **Are there any backend infrastructure services?**
  - No.

# FSLogix Profile Containers

- ❑ FSLogix Profile is an ordinary user profile living in a VHD file
- ❑ Each user has its own VHD on a network share
- ❑ At logon the user's VHD is read/write mounted to `C:\Users\%USERNAME%`



The top screenshot shows the Windows File Explorer window titled 'Users'. The address bar shows 'C:\Users' with a red circle around it. The main pane lists several user profiles: administrator, e2e-basic, e2e-ordinary, fslogixvhd (underlined in red), localadmin, and Public. The 'Date modified' column shows various timestamps.



The bottom screenshot shows a network share path: 'Network > dcl > FSLogixDisk > S-1-5-21-1600837653-1960922264-273236431-1225\_fslogixvhd'. The address bar and the path are circled in red. The main pane shows a single file named 'Profile\_fslogixvhd.VHDX' with a date modified of 11/12/2015 10:36 and a size of 299,008 KB.

Property	Value
Host Name:	AFL3-E2EVC
IP Address:	192.168.248.75
MAC Address:	00-0C-29-FA-93-5C
Memory:	6144 MB
User Name:	fslogixvhd
Volumes:	C:\ 100.00 GB NTFS
Free Space:	C:\ 59.39 GB NTFS

# FSLogix Profile vs. Roaming Profile

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- **Logon with two different users with identical contents in their user profile**
  - ▣ one user has FSLogix Profile (VHD on a fileshare)
  - ▣ the other user has a roaming user profile
- **Checkout the number of open files on the file server**
  - ▣ only a few for the FSLogix Profile
  - ▣ roughly 180 for the roaming profile



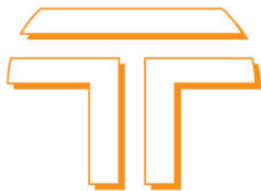
# ?? on FSLogix Profile Containers

- **Are the VHDs automatically created for the users?**
  - Yes, if the server/desktop is configured to use FSLogix Profiles and there is no subkey for the user in the server's/desktop's profilelist (HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\ProfileList). Otherwise FSLogix will not kick in.
- **Can we exclude certain users from FSLogix Profiles?**
  - Yes. There are two local security groups (Include- and Exclude-List), which allows you to granularly control who gets a FSLogix Profile. (Black-, White-List).
- **How to migrate existing profiles?**
  - There is a migration tool, which pre-creates the VHDs and copies the existing profiles into the corresponding VHDs.
- **What happens to my folder redirections during migration?**
  - As long as you do not change anything in your GPO, then they continue to work. The only thing which has changed, is that the profile lives in VHD, which is directly mounted from the fileshare, without the need to copy back and forth. As soon as the profile lives in VHD, then the time has come to get rid of your folder redirections. Simply use the Option „Redirect the folder back to the local userprofile location when the policy is removed“ in your GPO and you are done.
- **Are there any backend infrastructure services in FSLogix Profile Containers?**
  - No.

# Conclusion and top reasons for using it

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- ❑ Reduce number of Windows golden images
- ❑ Eliminate silos/pools in XenApp/VDI
- ❑ Make non-persistent VDI a reality
- ❑ Solve user profile issues and eliminate folder redirection in RDSH/XenApp and VDI
- ❑ Ensure license compliance for all users and apps
- ❑ Manage multiple application versions
- ❑ Granularity to addins, plugins, fonts,...



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