



Collabora Productivity

Central configuration management of LibreOffice in Windows server environment

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Collabora Productivity

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What do we want?

- Customize persistent settings (~20000)...
 - Repeatably
 - Large scale deployments
 - Lockdown (policy compliance)



What to set centrally?

- Disable features
- Set paths (e.g. templates)
- Lock down security settings
- Set company name in user data
- Force UI language and locale
- Set default fonts
- Etc.



Configuration architecture

- Layered configuration data, typically 3 layers
 - Hardwired
 - The defaults, come with the installed software
 - Administrative
 - Read-only for normal users
 - User
 - Customizations by the user
- Highest layer „wins”
- Possible to lock settings in a lower layer



Configuration backends

- XML files (platform independent)
- System dependent backends ([shell/source/backends](#))
 - Locale
 - Internet proxy
 - Accessibility
 - User name
- Dconf (since 2015)
 - Only on Linux
- Windows Registry (since 2013)
 - Only on Windows



Windows registry backend

- Implemented in [configmgr/source/winreg.cxx](#)
- Simplistic approach
 - On startup it reads registry tree
 - First HKLM\SOFTWARE\Policies\LibreOffice\
 - Then HKCU\Software\Policies\LibreOffice\
 - Dumps registry tree to temporary XCU file
 - Parses that temporary XCU file, then deletes it
- **Policies...** the location is on purpose:
 - Configuration with Group Policy Objects is possible



Group Policy

- **Group Policy** is a feature of the Microsoft Windows NT family of operating systems that control the working environment of user accounts and computer accounts. Group Policy provides the centralized management and configuration of operating systems, applications, and users' settings in an *Active Directory* environment.

– *from Wikipedia*



How to find the keys?

- Expert Config page
- Change a setting on UI, find the difference in registrymodifications.xcu before/after the change
- Use existing documentation and/or read source code ([officecfg](#))
- Some important settings have been collected already → [ADMX file](#)



Example 1 – Set Company Name

Windows registry:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Policies\LibreOffice\org.openoffice.User
Profile\Data\o]
"Value"="Example Corp."
"Final"=dword:00000001
```

And the same setting in LibreOffice's XML configuration file:

```
<!-- set the Company name -->
<item oor:path="/org.openoffice.UserProfile/Data">
  <prop oor:name="o" oor:finalized="true">
    <value>Example Corp.</value>
  </prop>
</item>
```



Example 2 – Hide an Option panel

Windows registry setting:

```
[HKEY_LOCAL_MACHINE\Policies\LibreOffice\org.openoffice.Office.OptionsDialog\OptionsDialogGroups\ProductName/#fuse\Pages\Java/#fuse\Hide]
"Value"="true"
```

And the same setting applied to the application's own XML configuration file:

```
<!-- Hide Tools - Options - LibreOffice - Advanced panel -->
<item oor:path="/org.openoffice.Office.OptionsDialog/OptionsDialogGroups">
  <node oor:name="ProductName" oor:op="fuse">
    <node oor:name="Pages">
      <node oor:name="Java" oor:op="fuse">
        <prop oor:name="Hide">
          <value>true</value>
        </prop>
      </node>
    </node>
  </node>
</item>
```



DEMO

ADMX file

- ADMX is Administrative Template for Group Policy settings
 - XML format
 - Accompanied with localizable ADML files
- Collabora maintain a sample ADMX file with ~100 settings
 - <https://www.collaboraoffice.com/windows-group-policy-admx/>
 - Call for action!
 - Extend, or at least suggest new settings
 - Localize (we have English, French and Italian)



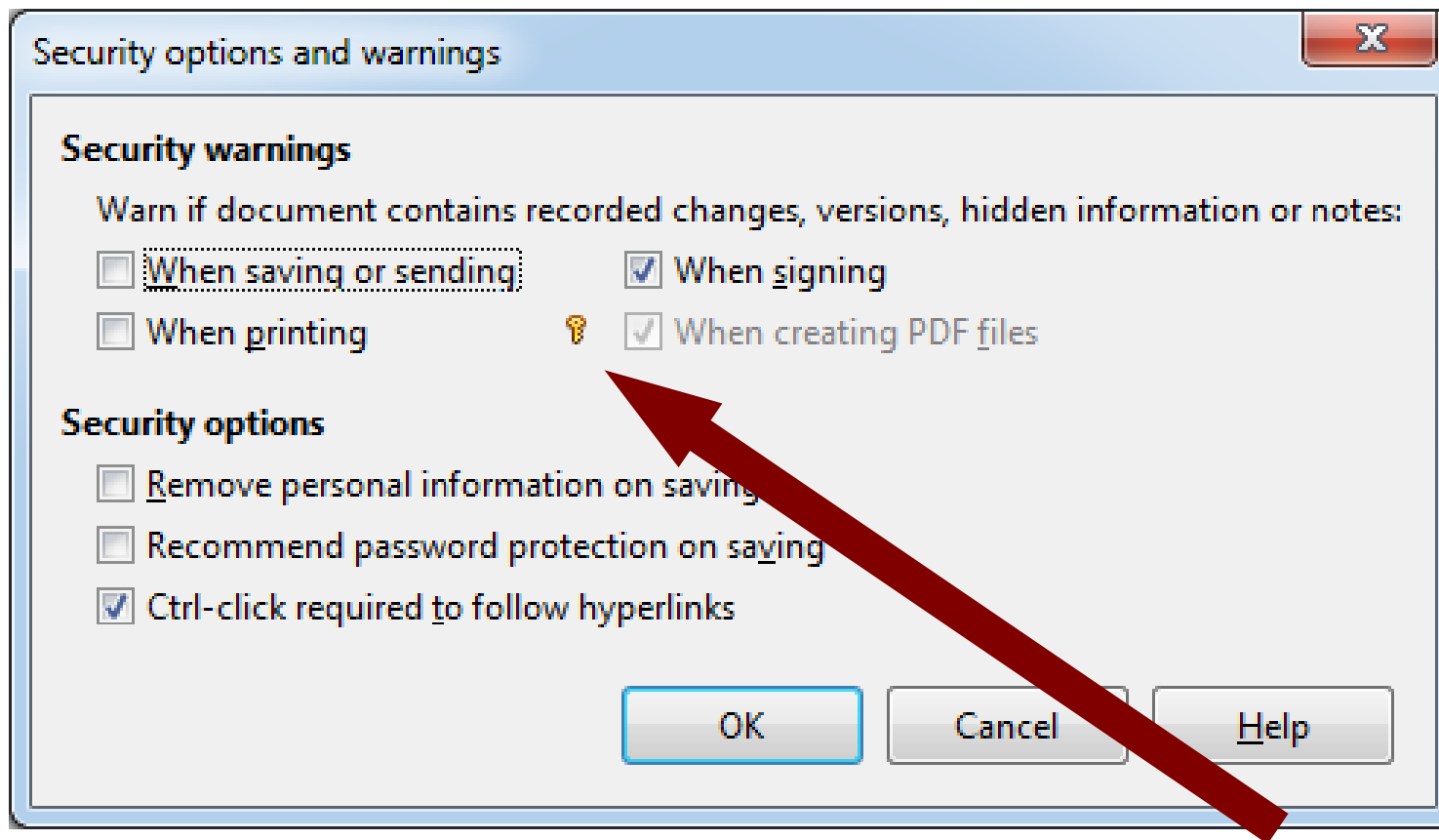
DEMO

Lockdown issues

- Easy hacks: improve UI underlying implementation of config lockdown
- The user should not be able to modify a locked-down setting
- The user should be informed that a setting is locked-down
- 5 cases...



Case 1: greyed + lock icon



Case 2: greyed

Options - Collabora Office - User Data

Collabora Office

- User Data
- General
- Memory
- View
- Print
- Paths
- Colors
- Fonts
- Security
- Personalization
- Appearance
- Accessibility
- Advanced
- Basic IDE Options
- OpenCL

Load/Save

Language Settings

Collabora Office Base

Charts

Internet

Address

Company: Collabora Productivity Ltd.

First/last name/initials:

Street:

City/state/zip:

Country/region:

Title/position:

Telephone (home/work):

Fax/e-mail:

Use data for document properties

Help OK Cancel Reset

Case 3: not greyed

- But effectively read-only
- ... so the user can edit the value, but it will not be saved, and next time when the user opens the dialog, the locked-down value is displayed again



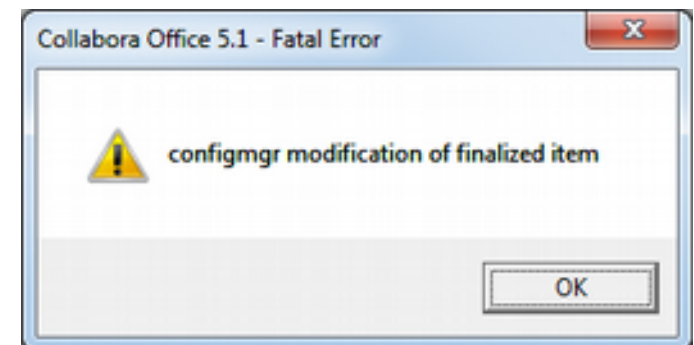
Case 4: not greyed

- And the user can effectively overwrite the locked-down value
- Serious bug, can be a design issue of Windows registry backend implementation or something else → investigation needed each case
- Seen e.g. with font replacement table settings, Tools – Options – LibreOffice – Advanced – Enable macro recording



Case 5: not greyed

- And the user can effectively overwrite the locked-down value
- ... and LibreOffice crashes, because configmgr tries to write a read-only setting and an assertion fails.
- Critical bug
- Fixed 1-2 cases, probably there are more



Call for action

- Go through LibreOffice UI
- Find keys of persistent options that are configurable on UI
- Check whether lockdown is reflected properly on UI, and fix the issues
 - Control is greyed + lock icon
- Clean up code, e.g. [tdf#46037](#)

