

# Usage of macros in config

## Introduction

The configuration files allow customers to change paths like path to cache etc. These paths need to be absolute, which makes it difficult to specify a path that would work for multiple users, because the paths usually differ e.g. by a user name or a user home folder. To overcome this limitation, the Drive since version 1.6 allows usage of special values – macros.

## Basic principles

### Default macros list

Here is the list of default macros:

Macro name	Macro value	Macro value type	Remarks
%COMPANY_FOLDER%	company folder	single name	
%SHORT_COMPANY_FOLDER%	short company folder	single name	
%PRODUCT_FOLDER%	product folder	single name	
%DOCUMENTS%	folder to store user's documents, like "My Documents"	absolute path	
%APPLICATION_DATA%	roamable application data	absolute path	
%LOCAL_APPLICATION_DATA%	non-roamable application data	absolute path	
%COMMON_APPDATA%	application data folder shared by all users	absolute path	
%DESKTOP%	current user's desktop folder	absolute path	
%COMMON_DESKTOP%	all users common desktop	absolute path	On Windows, users don't have Write permission to this folder by default
%USER_HOME%	current user's home folder	absolute path	
%TEMP%	default temporary directory	absolute path	
%PROGRAM_FILES%	program files directory	absolute path	
%COMMON_PROGRAM_FILES%		absolute path	
%STARTUP%		absolute path	
%COMMON_STARTUP%		absolute path	
%LOG%	default log folder	absolute path	
%USERS%	folder with all users accounts	absolute path	
%USERNAME%	current user name	single name	

### System environment variables

Besides the macros described above, it is possible to use all the system environment variables. All these variables have their macros formed by prefixing the name of the variable with SYSENV\_ string. So for example if we want to use the TMP system environment variable in the config, we can do so by using macro named SYSENV\_TMP. Following the same pattern one can use SYSENV\_USERNAME macro for USERNAME variable, etc.

### "gen:macros" attribute

The macros are expanded only if the node containing the value was enabled to use the macros. This can be done simply by adding xml attribute gen:macros (where gen is xml namespace "http://www.xythos.com/jconf/schema" as usual) to that particular xml node definition. The attribute can have either value "true" (to enable the expanding of macros) or "false" (to forbid the expanding). Moreover, the value has to be of the type STRING.

If you want to add or change a value containing a macro, you need to make sure the macro expanding is enabled for that value. If the value is not enabled in any higher-level config file, you need to add the *gen:macros="true"* next to the tag name, for example:

## Enabling macro expansion when changing a value

```
...
<username gen:macros="true">
  <gen:value>%USERNAME%</gen:value>
</username>
...
```

### Macro usage

Each macro starts and ends with "%" mark (as can be seen in above table in "Macro name" column). Currently it is possible to use macros from above list anywhere under user settings node in the config.

### Escaping "%" character

If it is necessary to use the "%" character in path, it needs to be escaped with another "%" character.

e.g. "/aaa/%b" will be expanded to "/aaa/%b"

### Macro usage example

For example, user wants to change logging directory using macro to user's desktop folder.

There is "logDirectory" element in "userSettings" node (it is of string type and has the expanding of attributes enabled by gen:macros attribute in the main config file xdconfig.xml).

The default logging directory value for user "x" would look like:

## Default logging directory on Windows 7

```
...
<logDirectory>
  <gen:value>C:\Documents and Settings\x\Local
  Settings\Temp\logs\Xythos\Drive64</gen:value>
</logDirectory>
...
```

## Default logging directory on OS X

```
...
<logDirectory>
  <gen:value>/Users/x/Library/Logs/Xythos/Drive</gen:value>
</logDirectory>
...
```

We can change this default value to directory "logs" in user's desktop using macros in an xdng configuration file, e.g. xdconfig\_customer.xml, like this:

### Example of configuration file to change logging directory on Windows 7

```
<?xml version="1.0" encoding="UTF-8"?>
<gen:config xmlns:gen="http://www.xythos.com/jconf/schema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" gen:version="1">
  <xdConfig>
    <usersSettings>
      <userList>
        <gen:updateListType>
          <logDirectory>
            <gen:value>%DESKTOP%\xdlogs</gen:value>
          </logDirectory>
        </gen:updateListType>
      </userList>
    </usersSettings>
  </xdConfig>
</gen:config>
```

### Example of configuration file to change logging directory on OS X

```
<?xml version="1.0" encoding="UTF-8"?>
<gen:config xmlns:gen="http://www.xythos.com/jconf/schema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" gen:version="1">
  <xdConfig>
    <usersSettings>
      <userList>
        <gen:updateListType>
          <logDirectory>
            <gen:value>%DESKTOP%/xdlogs</gen:value>
          </logDirectory>
        </gen:updateListType>
      </userList>
    </usersSettings>
  </xdConfig>
</gen:config>
```

When value of "logDirectory" is read at xdng startup, the %DESKTOP% is expanded to user's desktop directory, e.g. "c:\Users\x\Desktop" on Windows 7 or "/Users/x/Desktop" on OS X, resulting in "c:\Users\x\Desktop\xdlogs" or "/Users/x/Desktop/dlogs" respectively.