
Subject: [FEATURE] Accessing to Alternate Win Registry View (patch included)
Posted by [omari](#) on Thu, 02 Jun 2016 14:46:33 GMT

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Hi,

in a Win64 OS, the registry is divided in tow part.

by default, a binary compiled 64 bit, acceses only to the 64 part of the rgistry
and a binary compiled 32 bit, acceses only to the 32 part of the rgistry.

in order to acceses to the 64 part, a 32 binary shall specify the key KEY_WOW64_64KEY.
in order to acceses to the 32 part, a 64 binary shall specify the key KEY_WOW64_32KEY.

U++ now has this functions:

```
String GetWinRegString(const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE);
int  GetWinRegInt(const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE);
bool SetWinRegString(const String& string, const char *value, const char *path, HKEY base_key
= HKEY_LOCAL_MACHINE);
bool SetWinRegExpandString(const String& string, const char *value, const char *path, HKEY
base_key);
bool SetWinRegInt(int data, const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE);
void DeleteWinReg(const String& key, HKEY base = HKEY_LOCAL_MACHINE);
```

my proposal is to:

1 - Add a new dword argument to this funcions, with default value set to zero (0).

```
String GetWinRegString(const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE, dword wow = 0);
int  GetWinRegInt(const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE, dword wow = 0);
bool SetWinRegString(const String& string, const char *value, const char *path, HKEY base_key
= HKEY_LOCAL_MACHINE, dword wow = 0);
bool SetWinRegExpandString(const String& string, const char *value, const char *path, HKEY
base_key, dword wow = 0);
bool SetWinRegInt(int data, const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE, dword wow = 0);
void DeleteWinReg(const String& key, HKEY base = HKEY_LOCAL_MACHINE, dword wow =
0);
```

this is backware compatible.

2 - in the functions bodys:

- GetWinRegString/GetWinRegInt : replace KEY_READ by KEY_READ | wow
- SetWinRegString/SetWinRegExpandString/SetWinRegInt: replace KEY_ALL_ACCESS by KEY_ALL_ACCESS | wow
- DeleteWinReg :
replace KEY_READ by KEY_READ | wow
AND replace
RegDeleteKey(base, key);
by

if(wow)
RegDeleteKeyEx(base, key, wow, 0);
else
RegDeleteKey(base, key);

3 - Next, add a set of function to access to specific part of the registry

- 3.1 : access to the others part (the 32 part for 64 bin, or the 64 part for the 32 bin):
- define this macro WOW :

```
#ifdef CPU_64
#define WOW KEY_WOW64_32KEY
#else
#define WOW KEY_WOW64_64KEY
#endif
```

- Add the new functions,

```
String GetWinRegStringWOW ( const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
return GetWinRegString ( value, path, base_key, WOW );
}
```

```
int GetWinRegIntWOW ( const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
return GetWinRegInt ( value, path, base_key, WOW );
}
```

```
bool SetWinRegStringWOW ( const String& string, const char *value, const char *path, HKEY
base_key = HKEY_LOCAL_MACHINE ){
```

```

return SetWinRegString ( string, value, path, base_key, WOW );
}

bool SetWinRegExpandStringWOW ( const String& string, const char *value, const char *path,
HKEY base_key ){
return SetWinRegExpandString ( string, value, path, base_key, WOW );
}

bool SetWinRegIntWOW ( int data, const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
return SetWinRegInt ( string, value, path, base_key, WOW );
}

void DeleteWinRegWOW ( const String& key, HKEY base = HKEY_LOCAL_MACHINE ){
DeleteWinReg ( key, base, WOW );
}

```

3.2 : functions to access to specific part:

64 bits:

```

String GetWinRegStringWOW64 ( const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
return GetWinRegString ( value, path, base_key, KEY_WOW64_64KEY );
}

int GetWinRegIntWOW64 ( const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
return GetWinRegInt ( value, path, base_key, KEY_WOW64_64KEY );
}

bool SetWinRegStringWOW64 ( const String& string, const char *value, const char *path, HKEY
base_key = HKEY_LOCAL_MACHINE ){
return SetWinRegString ( string, value, path, base_key, KEY_WOW64_64KEY );
}

bool SetWinRegExpandStringWOW64 ( const String& string, const char *value, const char *path,
HKEY base_key ){
return SetWinRegExpandString ( string, value, path, base_key, KEY_WOW64_64KEY );
}

bool SetWinRegIntWOW64 ( int data, const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
return SetWinRegInt ( string, value, path, base_key, KEY_WOW64_64KEY );
}

```

```
void DeleteWinRegWOW64 ( const String& key, HKEY base = HKEY_LOCAL_MACHINE ){
    DeleteWinReg ( key, base, KEY_WOW64_64KEY );
}
```

and 32 bits:

```
String GetWinRegStringWOW32 ( const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
    return GetWinRegString ( value, path, base_key, KEY_WOW64_32KEY );
}
```

```
int GetWinRegIntWOW32 ( const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
    return GetWinRegInt ( value, path, base_key, KEY_WOW64_32KEY );
}
```

```
bool SetWinRegStringWOW32 ( const String& string, const char *value, const char *path, HKEY
base_key = HKEY_LOCAL_MACHINE ){
    return SetWinRegString ( string, value, path, base_key, KEY_WOW64_32KEY );
}
```

```
bool SetWinRegExpandStringWOW32 ( const String& string, const char *value, const char *path,
HKEY base_key ){
    return SetWinRegExpandString ( string, value, path, base_key, KEY_WOW64_32KEY );
}
```

```
bool SetWinRegIntWOW32 ( int data, const char *value, const char *path, HKEY base_key =
HKEY_LOCAL_MACHINE ){
    return SetWinRegInt ( string, value, path, base_key, KEY_WOW64_32KEY );
}
```

```
void DeleteWinRegWOW32 ( const String& key, HKEY base = HKEY_LOCAL_MACHINE ){
    DeleteWinReg ( key, base, KEY_WOW64_32KEY );
}
```