

Ruby master - Feature #11216

inode for Windows

06/03/2015 01:32 PM - naruse (Yui NARUSE)

Status:	Closed
Priority:	Normal
Assignee:	
Target version:	

Description

Windows File::Stat#inode
logrotate...rotate...inode

Windows GetFileInformationByHandle() API BY_HANDLE_FILE_INFORMATION
nFileIndexHigh/Low 64bit unique ID inode

File::Stat struct stat.ino 16bit
struct stati64
dev udev uid gid
<https://msdn.microsoft.com/ja-jp/library/ms350241%28v%3Dvs.71%29.aspx>

```
diff --git a/file.c b/file.c
index ac99de6..761ff1f 100644
--- a/file.c
+++ b/file.c
@@ -548,7 +548,18 @@ rb_stat_dev_minor(VALUE self)
 static VALUE
 rb_stat_ino(VALUE self)
 {
-#if SIZEOF_STRUCT_STAT_ST_INO > SIZEOF_LONG
+#ifdef _WIN32
+ struct stat *st = get_stat(self);
+ unsigned short *p2 = (unsigned short *)st;
+ unsigned int *p4 = (unsigned int *)st;
+ uint64_t r;
+ r = p2[2];
+ r <<= 16;
+ r |= p2[7];
+ r <<= 32;
+ r |= p4[5];
+ return ULL2NUM(r);
+#elif SIZEOF_STRUCT_STAT_ST_INO > SIZEOF_LONG
+ return ULL2NUM(get_stat(self)->st_ino);
+ #else
+ return ULONG2NUM(get_stat(self)->st_ino);
diff --git a/win32/win32.c b/win32/win32.c
index b23e9af..fcfc0a6 100644
--- a/win32/win32.c
+++ b/win32/win32.c
@@ -4975,6 +4975,48 @@ static time_t filetime_to_unixtime(const FILETIME *ft);
 static WCHAR *name_for_stat(WCHAR *buf, const WCHAR *path);
 static DWORD stati64_handle(HANDLE h, struct stati64 *st);

+/* License: Ruby's */
+static void
+stati64_set_ino(PBY_HANDLE_FILE_INFORMATION pinfo, struct stati64 *st)
+{
+ /* struct stati64 layout
+ *
+ * dev: 0-3
+ * ino: 4-5
+ * mode: 6-7
+ * nlink: 8-9
```

```

+   * uid: 10-11
+   * gid: 12-13
+   * _: 14-15
+   * rdev: 16-19
+   * _: 20-23
+   * size: 24-31
+   * atime: 32-39
+   * mtime: 40-47
+   * ctime: 48-55
+   *
+   */
+   unsigned short *p2 = (unsigned short *)st;
+   unsigned int *p4 = (unsigned int *)st;
+   DWORD high = pinfo->nFileIndexHigh;
+   p2[2] = high >> 16;
+   p2[7] = high & 0xFFFF;
+   p4[5] = pinfo->nFileIndexLow;
+}
+
+/* License: Ruby's */
+static DWORD
+stati64_set_inode_handle(HANDLE h, struct stati64 *st)
+{
+   BY_HANDLE_FILE_INFORMATION info;
+   DWORD attr = (DWORD)-1;
+
+   if (GetFileInformationByHandle(h, &info)) {
+   stati64_set_inode(&info, st);
+   }
+   return attr;
+}
+
+#undef fstat
+/* License: Ruby's */
+int
+@@ -5000,7 +5042,11 @@ rb_w32_fstati64(int fd, struct stati64 *st)
+   struct stat tmp;
+   int ret;
+
+   if (GetEnvironmentVariableW(L"TZ", NULL, 0) == 0 && GetLastError() == ERROR_ENVVAR_NOT_FOUND)
+   return _fstati64(fd, st);
+   if (GetEnvironmentVariableW(L"TZ", NULL, 0) == 0 && GetLastError() == ERROR_ENVVAR_NOT_FOUND)
+   {
+   ret = _fstati64(fd, st);
+   stati64_set_inode_handle((HANDLE)_get_osfhandle(fd), st);
+   return ret;
+   }
+   ret = fstat(fd, &tmp);
+
+   if (ret) return ret;
+@@ -5022,6 +5068,7 @@ stati64_handle(HANDLE h, struct stati64 *st)
+   st->st_mtime = filetime_to_unixtime(&info.ftLastWriteTime);
+   st->st_ctime = filetime_to_unixtime(&info.ftCreationTime);
+   st->st_nlink = info.nNumberOfLinks;
+   stati64_set_inode(&info, st);
+   attr = info.dwFileAttributes;
+   }
+   return attr;

```

Associated revisions

Revision 0a550264 - 06/13/2015 11:50 AM - naruse (Yui NARUSE)

add news about inode for Windows [Feature #11216]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@50871 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 50871 - 06/13/2015 11:50 AM - naruse (Yui NARUSE)

add news about inode for Windows [Feature #11216]

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Revision 50871 - 06/13/2015 11:50 AM - naruse (Yui NARUSE)

add news about inode for Windows [Feature #11216]

History

#1 - 06/03/2015 01:49 PM - akr (Akira Tanaka)

Windows [ino] test("-", f1, f2)

```
% ruby -e '
File.write("z", "")
f = File.open("z")
p test("-", f, "z")
File.write("z.new", "")
File.rename("z.new", "z")
p test("-", f, "z")
'
true
false
```

#2 - 06/04/2015 04:52 AM - naruse (Yui NARUSE)

Akira Tanaka wrote:

Windows [ino] test("-", f1, f2)

test

#3 - 06/11/2015 05:01 AM - usa (Usaku NAKAMURA)

go ahead!

#4 - 06/13/2015 11:50 AM - naruse (Yui NARUSE)

- Status changed from Open to Closed

Applied in changeset r50871.

add news about inode for Windows [Feature [#11216](#)]