Subject: Re: Determining machine endian-ness Posted by davidf on Wed, 01 Jul 1998 07:00:00 GMT

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Mark Rivers (rivers@cars3.uchicago.edu) writes:

- > Is there a way to determine whether the machine on which IDL is executing is
- > big endian or little endian? I am trying to read a data file which I know
- > contains little-endian data. I need to byte swap this data if IDL is running
- > on a big-endian machine, but not byte-swap if it is running on a little-endian
- > machine.

>

- > It would be nice there were a field in !VERSION which contained this
- > information. Right now I am testing if !VERSION.ARCH eq 'x26', 'alpha', etc.
- > There must be a better way.

I see in the IDL 5.1 on-line help that there are keywords SWAP_IF_BIG_ENDIAN and SWAP_IF_LITTLE_ENDIAN to the BYTEORDER procedure that allow conditional byte ordering depending upon the "endianness" of the machine IDL is running on. Sounds like just the ticket. :-)

Cheers,

David

--

David Fanning, Ph.D. Fanning Software Consulting E-Mail: davidf@dfanning.com

Phone: 970-221-0438

Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Determining machine endian-ness Posted by mallors on Wed, 01 Jul 1998 07:00:00 GMT

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In article <EvBpCE.Hru@midway.uchicago.edu>, rivers@cars3.uchicago.edu (Mark Rivers) writes:

>

- > Is there a way to determine whether the machine on which IDL is executing is
- > big endian or little endian? I am trying to read a data file which I know
- > contains little-endian data. I need to byte swap this data if IDL is running
- > on a big-endian machine, but not byte-swap if it is running on a little-endian
- > machine.

>

- > It would be nice there were a field in !VERSION which contained this
- > information. Right now I am testing if !VERSION.ARCH eq 'x26', 'alpha', etc.

> There must be a better way.

>

Hi,

I think this should do it:

LITTLE_ENDIAN = (BYTE (1, 0, 1))[0]

IF (LITTLE_ENDIAN) THEN \$ PRINT, "I'm little endian"

--

Robert S. Mallozzi http://cspar.uah.edu/~mallozzir/

Subject: Re: Determining machine endian-ness Posted by callen on Thu, 02 Jul 1998 07:00:00 GMT

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- > With IDL 4.0+, !VERSION tells you if your operating system is UNIX or WIN32. I
- > would use this to determine if I need to byte-swap on some occassions. However,

This can't be a good idea, as IDL runs under Linux and FreeBSD on Intel boxes.

-- Charles Allen -- callen@bga.com --

Subject: Re: Determining machine endian-ness Posted by Kelly Dean on Thu, 02 Jul 1998 07:00:00 GMT View Forum Message <> Reply to Message

I check a value in my data that is normally constant. If this value is too big, I byte-swap.

With IDL 4.0+, !VERSION tells you if your operating system is UNIX or WIN32. I would use this to determine if I need to byte-swap on some occassions. However, some people that use my stuff still are using IDL 3.6 - so I stick with checking a number in the data for most of the IDL code I share.

Kelly

Mark Rivers wrote:

> Is there a way to determine whether the machine on which IDL is executing is

- > big endian or little endian? I am trying to read a data file which I know
- > contains little-endian data. I need to byte swap this data if IDL is running
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- > information. Right now I am testing if !VERSION.ARCH eq 'x26', 'alpha', etc.
- > There must be a better way.

>

> _____

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>

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> 9700 South Cass Avenue (630) 252-1713 (beamline)

> Argonne, IL 60439 (630) 252-0443 (FAX)

Subject: Re: Determining machine endian-ness Posted by pit on Thu, 02 Jul 1998 07:00:00 GMT

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In article <6nen9j\$s9s\$1@nnrp1.dejanews.com>, menakkis@my-dejanews.com writes:

- > Mark Rivers (rivers@cars3.uchicago.edu) asked:
- >>> Is there a way to determine whether the machine on which IDL is executing is
- >>> big endian or little endian?

>

- > And David Fanning (davidf@dfanning.com) replied:
- >> I see in the IDL 5.1 on-line help that there are keywords
- >> SWAP_IF_BIG_ENDIAN and SWAP_IF_LITTLE_ENDIAN to the
- >> BYTEORDER procedure that allow conditional byte ordering depending
- >> upon the "endianness" of the machine IDL is running on. Sounds
- >> like just the ticket. :-)

>

- > Even more conveniently, in IDL 5.1 the OPEN routine (now) takes keywords
- > SWAP_ENDIAN, SWAP_IF_LITTLE_ENDIAN and SWAP_IF_BIG_ENDIAN. These pertain to
- > the computer running IDL, not the file. Presumably they make READU/WRITEU
- > (and ASSOC?) smart about byte reordering. Anyone tried them yet?

Unfortunately, both ways are no option for us, as we have to be backward compatible (some of our HP's still run 3.0....).

| But the solution of Robert works fine :-) |
|--|
| Peter |
| |
| Peter "Pit" Suetterlin http://www.uni-sw.gwdg.de/~pit Universitaets-Sternwarte Goettingen Tel.: +49 551 39-5048 pit@uni-sw.gwdg.de * |
| Come and see the stars! http://www.kis.uni-freiburg.de/~ps/SFB Sternfreunde Breisgau e.V. Tel.: +49 7641 3492 |
| |
| Subject: Re: Determining machine endian-ness Posted by menakkis on Thu, 02 Jul 1998 07:00:00 GMT View Forum Message <> Reply to Message |
| Mark Rivers (rivers@cars3.uchicago.edu) asked: >> Is there a way to determine whether the machine on which IDL is executing is >> big endian or little endian? |
| And David Fanning (davidf@dfanning.com) replied: > I see in the IDL 5.1 on-line help that there are keywords > SWAP_IF_BIG_ENDIAN and SWAP_IF_LITTLE_ENDIAN to the > BYTEORDER procedure that allow conditional byte ordering depending > upon the "endianness" of the machine IDL is running on. Sounds > like just the ticket. :-) |
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| Cheers |

----= Posted via Deja News, The Leader in Internet Discussion ==-----

Peter Mason