
Subject: Re: Unknown #INFO
Posted by [davidf](#) on Wed, 11 Nov 1998 08:00:00 GMT
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Eric J. Korpela (korpela@islay.ssl.berkeley.edu) writes:

```
> David Fanning <davidf@dfanning.com> wrote:
>>
>> That is the IDL notation for "infinite value".
>>
>> IDL> Print, !Values.F_Infinity
>> 1.#INFO
>>
>
> Whatever happened to 'Inf' and '-Inf'? Is this new notation
> with the latest IDL version? If so, what's the new notation for
> 'NaN'?
```

```
IDL> Help, !Values, /Structure
** Structure !VALUES, 4 tags, length=24:
  F_INFINITY    FLOAT      1.#INFO
  F_NAN         FLOAT      1.#QNAN
  D_INFINITY    DOUBLE     1.#INF000
  D_NAN         DOUBLE     1.#QNAN00
```

```
IDL> Print, !Version
{ x86 Win32 Windows 5.1.1 Jul 20 1998}
```

I don't know. This may be a Windows thing. Looks a little
Bill Gatesh, doesn't it. :-)

Cheers,

David

David Fanning, Ph.D.
Fanning Software Consulting
E-Mail: davidf@dfanning.com
Phone: 970-221-0438, Toll-Free Book Orders: 1-888-461-0155
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Unknown #INFO
Posted by [korpela](#) on Wed, 11 Nov 1998 08:00:00 GMT
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In article <MPG.10b38b6d3b35c1d2989719@news.frii.com>,
David Fanning <davidf@dfanning.com> wrote:

>
> That is the IDL notation for "infinite value".
>
> IDL> Print, !Values.F_Infinity
> 1.#INFO
>

Whatever happened to 'Inf' and '-Inf'? Is this new notation with the latest IDL version? If so, what's the new notation for 'NaN'?

Eric

--
Eric Korpela | An object at rest can never be
korpela@ssl.berkeley.edu | stopped.
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Subject: Re: Unknown #INFO
Posted by [davidf](#) on Wed, 11 Nov 1998 08:00:00 GMT
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Luis Oliveira (eu_luis@hotmail.com) writes:

> I have received this output from PRINT, when I passed it an array:
>
> prf->tpfrdata::get(w='velocitycomponents')
> 1.#INFO 1.#INFO 1.#INFO 1.#INFO 1.#INFO
>
> Please, if you have stepped already in this "1.#INFO" or "-1#INFO" thing let
> me know,

That is the IDL notation for "infinite value".

```
IDL> Print, !Values.F_Infinity  
1.#INFO
```

Cheers,

David

David Fanning, Ph.D.
Fanning Software Consulting
E-Mail: davidf@dfanning.com
Phone: 970-221-0438, Toll-Free Book Orders: 1-888-461-0155
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Note: A copy of this article was e-mailed to the original poster.

Subject: Re: Unknown #INFO

Posted by [mgs](#) on Thu, 12 Nov 1998 08:00:00 GMT

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In article <72fd75\$isf\$1@hammer.msfc.nasa.gov>, mallors@msfc.nasa.gov
(Robert S. Mallozzi) wrote:

> In article <MPG.10b49db91db8b3ae98971b@news.frii.com>,
> davidf@dfanning.com (David Fanning) writes:

>>

>> Hang on there. Here is what I get in IDL 5.2 beta 2:

>>

>> IDL> Print, !Version

>> { x86 Win32 Windows 5.2 Beta2 Sep 14 1998}

>>

>> IDL> Help, !Values, /Structure

>> ** Structure !VALUES, 4 tags, length=24:

>> F_INFINITY FLOAT Inf

>> F_NAN FLOAT NaN

>> D_INFINITY DOUBLE Infinity

>> D_NAN DOUBLE NaN

>>

>> IDL> Print, !Values

>> { Inf NaN Infinity NaN}

>>

>> IDL> Print, Float(['Inf', 'NaN', 'Infinity', 'NaN'])

>> Inf NaN Inf NaN

>>

>

> FYI,

>

> Identical results on

> { x86 linux unix 5.2 Beta2 Sep 14 1998}

And Identical results on

IDL> print,!version

{ PowerMac MacOS MacOS 5.2 Beta2 Sep 22 1998}

--

Mike Schienle

mgs@ivsoftware.com

Interactive Visuals, LLC

<http://www.ivsoftware.com/>

Subject: Re: Unknown #INFO
Posted by [mallors](#) on Thu, 12 Nov 1998 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <MPG.10b49db91db8b3ae98971b@news.frii.com>,
davidf@dfanning.com (David Fanning) writes:

```
>
> Hang on there. Here is what I get in IDL 5.2 beta 2:
>
> IDL> Print, !Version
> { x86 Win32 Windows 5.2 Beta2 Sep 14 1998}
>
> IDL> Help, !Values, /Structure
> ** Structure !VALUES, 4 tags, length=24:
> F_INFINITY    FLOAT      Inf
> F_NAN          FLOAT      NaN
> D_INFINITY    DOUBLE     Infinity
> D_NAN          DOUBLE     NaN
>
> IDL> Print, !Values
> {      Inf      NaN      Infinity      NaN}
>
> IDL> Print, Float( [ 'Inf', 'NaN', 'Infinity', 'NaN' ] )
>      Inf      NaN      Inf      NaN
>
```

FYI,

Identical results on
{ x86 linux unix 5.2 Beta2 Sep 14 1998}

--

~~~~~

|                                                                                       |                              |
|---------------------------------------------------------------------------------------|------------------------------|
| Robert S. Mallozzi                                                                    | 256-544-0887                 |
|                                                                                       | Mail Code ES 84              |
| Work: <a href="http://www.batse.msfc.nasa.gov/">http://www.batse.msfc.nasa.gov/</a>   | Marshall Space Flight Center |
| Play: <a href="http://cspar.uah.edu/~mallozzir/">http://cspar.uah.edu/~mallozzir/</a> | Huntsville, AL 35812         |

~~~~~

Subject: Re: Unknown #INFO
Posted by [Martin Schultz](#) on Thu, 12 Nov 1998 08:00:00 GMT
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Stein Vidar Hagfors Haugan wrote:

```
> In article <72d8sr$9at$1@agate.berkeley.edu>
> korpela@albert.ssl.berkeley.edu (Eric J. Korpela) writes:
>
> [...]
```

Oh yeah, I love it!

```
IDL> print,!version
{ mipseb IRIX unix 5.1.1 Jul 20 1998}
IDL> print,!values
{      inf nan0x2000000      inf  nan0x700000000}
```

```
> IDL> print,float(['INF','Inf','NaN','nanq'])
```

```
IDL> print,float(['INF','Inf','NaN','nanq'])
% Type conversion error: Unable to convert given STRING to Float.
% Detected at: $MAIN$
% Type conversion error: Unable to convert given STRING to Float.
% Detected at: $MAIN$
% Type conversion error: Unable to convert given STRING to Float.
% Detected at: $MAIN$
% Type conversion error: Unable to convert given STRING to Float.
% Detected at: $MAIN$
0.00000  0.00000  0.00000  0.00000
```

"All [systems] are equal, but some are more equal than others."
(G.Orwell)

BTW: I would say that it is alright for IDL to pick up the sign in
-float('Inf'). That's what people write below integrals all the time ;-)
So at least in theory you could test
for -Inf and replace it by the smallest (largest negative) number that
your system represents. But, I realize that
symbolic algebra seems rather mathematica's realm, and an average IDLer
would rather only have to test for
value eq !values.Inf instead of abs(value) ...

So long,
Martin.

PS: Hope they fixed this inconsistency across all platforms in 5.2

Dr. Martin Schultz
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phone: (617)-496-8318

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e-mail: mgs@io.harvard.edu

Internet-homepage: <http://www-as.harvard.edu/people/staff/mgs/>

Subject: Re: Unknown #INFO

Posted by [davidf](#) on Thu, 12 Nov 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

Stein Vidar Hagfors Haugan (steinhh@ulrik.uio.no) writes:

>> David Fanning <davidf@dfanning.com> wrote:

>>>

>>> IDL> Help, !Values, /Structure

>>> ** Structure !VALUES, 4 tags, length=24:

>>> F_INFINITY FLOAT 1.#INFO

>>> F_NAN FLOAT 1.#QNAN

>>> D_INFINITY DOUBLE 1.#INF000

>>> D_NAN DOUBLE 1.#QNAN00

>>>

>> My sun gives this:

>> IDL> print,!version

>> { sparc sunos unix 5.0 Apr 28 1997}

>> IDL> print,!values

>> { Inf NaN Infinity NaN}

>> IDL> print,float('Inf')

>> Inf

>> IDL> print,float('1.#INF0')

>> 1.00000

>

> I guess you're right on the spot with the assumption that the

> compiler (or rather, the c library) makes the difference:

>

> IDL> print,!version

> { alpha OSF unix 5.1.1 Jul 20 1998}

> IDL> print,!values

> { INF NaNQ INF NaNQ}

> IDL> print,float(['INF','Inf','NaN','nanq'])

> % Type conversion error: Unable to convert given STRING to Float.

> % Detected at: \$MAIN\$

> INF INF 0.00000 NaNQ

Hang on there. Here is what I get in IDL 5.2 beta 2:

```
IDL> Print, !Version  
{ x86 Win32 Windows 5.2 Beta2 Sep 14 1998}
```

```
IDL> Help, !Values, /Structure  
** Structure !VALUES, 4 tags, length=24:
```

F_INFINITY	FLOAT	Inf
F_NAN	FLOAT	NaN
D_INFINITY	DOUBLE	Infinity
D_NAN	DOUBLE	NaN

```
IDL> Print, !Values  
{      Inf      NaN      Infinity      NaN}
```

```
IDL> Print, Float( [ 'Inf', 'NaN', 'Infinity', 'NaN' ] )  
      Inf      NaN      Inf      NaN
```

Cheers,

David

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Subject: Re: Unknown #INFO
Posted by [steinhh](#) on Thu, 12 Nov 1998 08:00:00 GMT
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In article <72d8sr\$9at\$1@agate.berkeley.edu>
korpela@albert.ssl.berkeley.edu (Eric J. Korpela) writes:

> In article <MPG.10b3c2392717b0898971a@news.frii.com>,
> David Fanning <davidf@dfanning.com> wrote:

>>

>> IDL> Help, !Values, /Structure

>> ** Structure !VALUES, 4 tags, length=24:

>> F_INFINITY	FLOAT	1.#INFO
>> F_NAN	FLOAT	1.#QNAN
>> D_INFINITY	DOUBLE	1.#INF000
>> D_NAN	DOUBLE	1.#QNAN00
>>		

>> I don't know. This may be a Windows thing. Looks a little

>> Bill Gatesh, doesn't it. :-)

```

>
> Yes it does look windowish. It probably has something to do
> with the compiler they used to make their windows version. What
> concerns me is how this affects reading and writing of text files.
> In the past I have relied on IDL correctly parsing 'Inf' and 'NaN'
> in input files. You can see the obvious portability problem.
>
> I'm not sure if IEEE specifies the text representation of 'Inf'
> and 'NaN' or if a program is required to be able to correctly parse
> them on input.
>
> Out of curiosity, could you try the following?
>
> print,float('Inf')
> print,float('1.#INF0')
>
> My sun gives this:
> IDL> print,!version
> { sparc sunos unix 5.0 Apr 28 1997}
> IDL> print,!values
> {      Inf      NaN      Infinity      NaN}
> IDL> print,float('Inf')
>      Inf
> IDL> print,float('1.#INF0')
>      1.00000

```

I guess you're right on the spot with the assumption that the compiler (or rather, the c library) makes the difference:

```

IDL> print,!version
{ alpha OSF unix 5.1.1 Jul 20 1998}
IDL> print,!values
{      INF      NaNQ      INF      NaNQ}
IDL> print,float(['INF','Inf','NaN','nanq'])
% Type conversion error: Unable to convert given STRING to Float.
% Detected at: $MAIN$
      INF      INF      0.00000      NaNQ

```

So apparently, case doesn't matter, but the particular *spelling* convention does make a difference, and that's even between two unix flavors! What a bummer.. So much for the days when ascii files were portable.. :-)

One other caveat:

```

IDL> print,float(['-Inf','Inf']),-float('Inf')
      INF      INF
      -INF

```

So the sign isn't picked up. But this again may be platform specific.... then again, I never expected it to be possible to do float('NaNQ') in the first place :-)

Regards,

Stein Vidar

Subject: Re: Unknown #INFO

Posted by [korpela](#) on Thu, 12 Nov 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

In article <MPG.10b3c2392717b0898971a@news.frii.com>, David Fanning <davidf@dfanning.com> wrote:

>

> IDL> Help, !Values, /Structure

> ** Structure !VALUES, 4 tags, length=24:

> F_INFINITY FLOAT 1.#INFO

> F_NAN FLOAT 1.#QNAN

> D_INFINITY DOUBLE 1.#INF000

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> I don't know. This may be a Windows thing. Looks a little

> Bill Gatesh, doesn't it. :-)

Yes it does look windowish. It probably has something to do with the compiler they used to make their windows version. What concerns me is how this affects reading and writing of text files. In the past I have relied on IDL correctly parsing 'Inf' and 'NaN' in input files. You can see the obvious portability problem.

I'm not sure if IEEE specifies the text representation of 'Inf' and 'NaN' or if a program is required to be able to correctly parse them on input.

Out of curiosity, could you try the following?

```
print,float('Inf')
print,float('1.#INF0')
```

(I'm guessing that this will give the same result as read on the same strings.)

My sun gives this:

```
IDL> print,!version
```

```
{ sparc sunos unix 5.0 Apr 28 1997}
```

```
IDL> print,!values
```

```
{      Inf      NaN      Infinity      NaN}
IDL> print,float('Inf')
      Inf
IDL> print,float('1.#INFO')
      1.00000
```

Thanks,

Eric

--

Eric Korpela | An object at rest can never be
korpela@ssl.berkeley.edu | stopped.
Click for home page.

Subject: Re: Unknown #INFO
Posted by [davidf](#) on Fri, 13 Nov 1998 08:00:00 GMT
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From one of my Aussie friends:

Using v5.2 Beta on OpenVMS I get :-

```
** Structure !VALUES, 4 tags, length=24:
F_INFINITY FLOAT  Inf
F_NAN FLOAT  NaN
D_INFINITY DOUBLE  Infinity
D_NAN DOUBLE  NaN
```

Looks like a nice pattern shaping up here. :-)

Cheers,

David

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