Subject: Re: converting bytarr into strarr Posted by Benjamin Hornberger on Tue, 21 Jun 2005 21:59:44 GMT View Forum Message <> Reply to Message

It's weird that the string function doesn't offer a keyword for this. But how about first converting to integer?

b=string(fix(a))

Benjamin

```
Paul Van Delst wrote:
> Hello there,
>
  This is probably a simple question, but I haven't found out how to do it.
>
  How does one convert a byte array into a equivalent sized string array?
> E.g. consider the following:
>
> IDL> a=bindgen(20,40)
> IDL> help, a
             BYTE
                       = Array[20, 40]
> IDL> b=string(a)
> IDL> help, b
> B
             STRING
                        = Array[40]
> IDL>
> or
>
 IDL> a=bindgen(2,4,5,6)
> IDL> help, a
             BYTE
                       = Array[2, 4, 5, 6]
 IDL> b=string(a)
> IDL> help, b
 В
             STRING = Array[4, 5, 6]
>
>
 What I want to do is convert "a" into a string array, "b", that has the
> same dimensions as the original byte array, [20, 40], or [2, 4, 5, 6]
> i.e. each element of "b" is a single character corresponding to the byte
  value in "a".
> Everything I've read in the IDL help tells me that a byte array will
> always "lose" the first dimension as the bytes are converted into
 concatenated strings.
> Is there a simple way around this? (I could loop over the dimensions of
```

```
"a" I guess).
> thanks,
> paulv
Subject: Re: converting bytarr into strarr
Posted by Benjamin Hornberger on Tue, 21 Jun 2005 22:01:54 GMT
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Or adding another dimension:
b=string(reform(a,1,20,40))
Benjamin Hornberger wrote:
> It's weird that the string function doesn't offer a keyword for this.
  But how about first converting to integer?
>
  b=string(fix(a))
>
 Benjamin
>
  Paul Van Delst wrote:
>> Hello there,
   This is probably a simple question, but I haven't found out how to do it.
>>
>> How does one convert a byte array into a equivalent sized string
   array? E.g. consider the following:
>> IDL> a=bindgen(20,40)
>> IDL> help, a
              BYTE
                       = Array[20, 40]
>> IDL> b=string(a)
>> IDL> help, b
                        = Array[40]
>> B
              STRING
>> IDL>
>>
>> or
>>
```

= Array[2, 4, 5, 6]

>> IDL> a=bindgen(2,4,5,6)

BYTE

>> IDL> help, a

>> A

```
>> IDL> b=string(a)
>> IDL> help. b
               STRING = Array[4, 5, 6]
>> B
>>
>>
>> What I want to do is convert "a" into a string array, "b", that has
>> the same dimensions as the original byte array, [20, 40], or [2, 4, 5,
>> 6] i.e. each element of "b" is a single character corresponding to the
>> byte value in "a".
>>
>> Everything I've read in the IDL help tells me that a byte array will
>> always "lose" the first dimension as the bytes are converted into
>> concatenated strings.
>>
>> Is there a simple way around this? (I could loop over the dimensions
>> of "a" I guess).
>> thanks,
>>
>> paulv
>>
```

Subject: Re: converting bytarr into strarr
Posted by Michael Wallace on Tue, 21 Jun 2005 22:03:55 GMT
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How about doing a two step conversion: byte -> integer -> string.

```
IDL> a = bindgen(20, 40)
IDL> b = string(a)
IDL> c = string(fix(a))
IDL> help, a, b, c
A BYTE = Array[20, 40]
B STRING = Array[40]
C STRING = Array[20, 40]
```

-Mike

Subject: Re: converting bytarr into strarr
Posted by Paul Van Delst[1] on Tue, 21 Jun 2005 23:11:40 GMT
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Michael Wallace wrote:

> How about doing a two step conversion: byte -> integer -> string.

```
>
> IDL> a = bindgen(20, 40)
> IDL > b = string(a)
> IDL> c = string(fix(a))
> IDL> help, a, b, c
> A
             BYTE
                      = Array[20, 40]
> B
             STRING
                      = Array[40]
> C
             STRING
                       = Array[20, 40]
>
>
> -Mike
Hi,
```

Yeah, that was the first thing that occurred to me too, but when you use STRING on a non-byte input, all you get is the number as a string, rather than the ASCII byte code converted to a string:

```
IDL> a = bindgen(2, 4) + 65B
IDL > b = string(a)
IDL > c = string(fix(a))
IDL> help, a, b, c
Α
          BYTE
                    = Array[2, 4]
В
          STRING
                     = Array[4]
С
           STRING
                     = Array[2, 4]
IDL> print, b
AB CD EF GH
IDL> print, c
    65
           66
    67
           68
    69
           70
    71
           72
```

paulv

--

Paul van Delst CIMSS @ NOAA/NCEP/EMC