
Subject: Re: idl parallel processing

Posted by [siumtesfai](#) on Wed, 24 May 2017 22:20:20 GMT

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On Tuesday, May 23, 2017 at 8:59:31 AM UTC-4, Markus Schmassmann wrote:

> On 05/22/2017 09:06 PM, Sium T wrote:

>> On Monday, May 22, 2017 at 5:35:49 AM UTC-4, Helder wrote:

>>> On Monday, May 22, 2017 at 4:59:52 AM UTC+2, Sium T wrote:

>>>> On Friday, May 19, 2017 at 10:59:07 AM UTC-4, wlandsman wrote:

>>>> > Yes, you can use the IDL Bridge for this. But if you have

>>>> > IDL 8.4 or later, then more valuable would be using the

>>>> > .HASVALUE() static method. Your code would then be

>>>> >

>>>> > result= bytarr(n_elements(siteN))

>>>> > FOR i= 0,n_elements(siteN)-1 do result[i] = data.hasvalue(siteN[i])

>>>> >

>>>> > The reasons this is much faster are (1) you don't need to

>>>> > compute the output vector of WHERE(). All you care about is

>>>> > whether the siteN[i] value is present in the data array-- you

>>>> > don't care where it is. And (2) the .hasvalue() method will

>>>> > return as soon as it finds a single case where the siteN[i]

>>>> > value is present, so you skip having to search the entire data

>>>> > array

>>>> >

>>>> > --Wayne

>>>> >

>>>> > On Thursday, May 18, 2017 at 6:05:51 PM UTC-4, Sium T wrote:

>>>> >> Hello,

>>>> >>

>>>> >> I have a procedure below. It want to call my procedure in my

>>>> >> main program and do parallel processing on the do loop.

>>>> >>

>>>> >> How can use the IDL_Bridge . Any suggestion

>>>> >>

>>>> >> pro computation,data=data,siteN=siteN,result

>>>> >>

>>>> >> result=fltarr(n_elements(siteN))

>>>> >>

>>>> >> FOR i= 0,n_elements(siteN)-1 do begin

>>>> >> y=where(data eq siteN(i))

>>>> >> if y(0) ge 0 then begin

>>>> >> result(i)=1

>>>> >> endif else begin

>>>> >> result(i)=0

>>>> >> endelse

>>>> >> ENDFOR

>>>> >>

>>>> >> end

```

>>>>
>>>> Thanks Wayne
>>>>
>>>> I tried your method
>>>> result= bytarr(n_elements(siteN))
>>>> FOR i=0,n_elements(siteN)-1 do result[i] = data.hasvalue(siteN[i])
>>>>
>>>> However, I got this error message.
>>>>
>>>> Object reference type required in this context:
>>>
>>> Hi, what do you get if you type at the command line: help,
>>> !version
>>>
>> I have IDL version 8.2.3 . HasValue works with version 8.4 or
>> above.
>>
>> So I need to use idl_bridge. But it becomes challenging to me
>>
>> Here is my trial code . First I have this procedure. It takes for
>> ever to compute Shourly result.
>>
>> Can you help with how to call this procedure in idl_idlbridge ?
>>
>>
>>
>> ;=====
>> pro program1,Rdata,edata,Shourly
>>
>>
>> StateN=reform(edata(0,*))
>> CountyN=reform(edata(1,*))
>> siteN=reform(edata(2,*))
>> ;=====
>> scode=reform(Rdata(0,*))
>> ccode=reform(Rdata(1,*))
>> snum=reform(Rdata(2,*))
>> year=reform(Rdata(3,*))
>> month=reform(Rdata(4,*))
>> day=reform(Rdata(5,*))
>> hour=reform(Rdata(6,*))
>> lats=reform(Rdata(7,*))
>> lons=reform(Rdata(8,*))
>> ;=====
>> Shourly=fltarr(n_elements(siteN),12,31,24)
>>
>> for s=0,n_elements(stateN)-1 do begin
>>

```

```

>> z=where(scode eq fix(StateN(s)) and ccode eq fix(CountyN(s)) and snum eq fix(siteN(s)))
>>
>> if z(0) ge 0 then begin
>>   data2=Rdata(*,z)
>>
>>   FOR mn=1,12 do begin
>>     FOR dy=1,31 do begin
>>       FOR hr=0,23 do begin
>>
>>         b=where(month eq mn and day eq dy and hour eq hr)
>>
>>         if b(0) ge 0 then begin
>>           value=data2(9,b)
>>           Shourly(s,mn-1,dy-1,hr)=value(0)
>>         endif else begin
>>           Shourly(s,mn-1,dy-1,hr)=-9999.0
>>         endelse
>>
>>       ENDFOR
>>     ENDFOR
>>   ENDFOR
>>
>> endif else begin
>>   Shourly(s,*,*,*)=-9999.0
>> endelse
>>
>> endfor
>>
>> end
>>
>> ;=====
> I have no experience with the IDL_IDLbridge, but maybe you can speed up
> your processing using HISTOGRAM and avoid most of the looping.
> Below I did it (without testing) for your trial code, for more see:
> http://www.idlcoyote.com/tips/histogram\_tutorial.html
>
> ;=====
> shourly=fltarr(24,31,12,n_elements(siteN))
> for s=0,n_elements(stateN)-1 do begin
>
>   z=where( scode eq fix(StateN(s)) and ccode eq fix(CountyN(s)) and $
>     snum eq fix(siteN(s)),cnt)
>
>   if cnt ne 0 then begin
>     data2=Rdata[*,z]
>
>     h=histogram(((month-1)*31+(day-1))*24+hour, $
>       min=0,max=12*31*24-1,bin=1,reverse_indices=ri)

```

```
> Shourly[*,*,s]=reform(data2[9,ri[ri[0:(12!*31*24-1)]]],[24 ,31,12])
> w=where(h eq 0,cnt2)
> if cnt2 ne 0 then Shourly[12!*31*24*s+w]=-9999.0
>
> endif else begin
>   Shourly[*,*,s]=-9999.0
> endelse
>
> endfor
> Shourly=transpose(Shourly,[3,2,1,0])
> ;=====
>
> You probably could eliminate the outer loop as well, but that would be a
> bit more complicated.
>
> good luck, I hope this helps,   Markus
```

thanks Markus
