
Posted by on Tue, 28 Feb 2023 15:14:14 GMT

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Posted by [Dmitry Kovalenko](#) on Tue, 28 Feb 2023 17:59:52 GMT

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isc_portable_integer:

<https://github.com/FirebirdSQL/firebird/blob/96013f48b185078245117a1553be0aec14190ad7/src/yvalve/gds.cpp#L681-L721>

gds__vax_integer (isc_vax_integer):

<https://github.com/FirebirdSQL/firebird/blob/96013f48b185078245117a1553be0aec14190ad7/src/yvalve/gds.cpp#L2633-L2660>

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Pascal.

```

SLONG API_ROUTINE gds__vax_integer(const UCHAR* ptr, SSHORT length)
{
    if (!ptr || length <= 0 || length > 4)
        return 0;

    SLONG value = 0;
    int shift = 0;

    while (--length > 0)
    {
        value += ((SLONG) *ptr++) << shift;
        shift += 8;
    }

    value += ((SLONG)(SCHAR) *ptr) << shift;

    return value;
}

```

Pascal

```

function gds__vax_integer(ptr: PChar; length: Smallint): Longint;
var
    value: Longint;
    shift: Integer;
begin
    Result := 0;
    if (ptr = nil) or (length <= 0) or (length > 4) then
        Exit;

    value := 0;
    shift := 0;

    while PreDec(length) > 0 do
        begin
            value := value + (Longint(PostInc(ptr)^) shl shift);
            shift := shift + 8;
        end;

    value := value + (Longint(Shortint(ptr^)) shl shift);
    Result := value;
end;

```

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0000000000000000 = 00 (length 1)
0000000000000001 = 01 (length 1)
ffffffffffffff = ff (length 1)
000000000000007f = 7f (length 1)
ffffffffffff7f = 7f ff (length 2)
0000000000000080 = 80 00 (length 2)
ffffffffffffed5 = d5 fe (length 2)
0000000012345678 = 78 56 34 12 (length 4)

Posted by _____ on Fri, 03 Mar 2023 12:04:16 GMT
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```
procedure Test_vax_integer;

function DumpBuff(S: string): string;
var
  i: Integer;
begin
  Result := '';
  for i := 1 to Length(S) do
    if Result = '' then
      Result := Result + IntToHex(Ord(S[i]), 2)
    else
      Result := Result + ' ' + IntToHex(Ord(S[i]), 2);
  end;

procedure DoTest(S: string);
var
  Res: Integer;
  HexSrc: string;
  HexRes: string;
begin
  HexSrc := DumpBuff(S);
  Res := gds__vax_integer(@S[1], Length(S));
  HexRes := IntToHex(Res, 8);
```

```
    WriteLn(format('%s = %s (length %d)', [HexRes, HexSrc, Length(S)]));  
end;  
  
begin  
    DoTest(#0);  
    DoTest(#1);  
    DoTest(#$FF);  
    DoTest(#$7F);  
    DoTest(#$7F#$FF);  
    DoTest(#$80#$00);  
    DoTest(#$D5#$FE);  
    DoTest(#$78#$56#$34#$12);  
end;
```

Posted by [VladF](#) on Thu, 09 Mar 2023 10:48:23 GMT
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