**How to query using getrastersubset and read cells into memory as numbers**

--Note, This example code queries and crops a raster using a window and then reads cells in the resulting BLOB one by one and print out the numbers. If needed, put the numbers into an array as you wish.

--Also this script deals with different cell depths. If cell depth is only one byte or one type, the script can be much simplified.

create or replace function getCellValue  
  (gr sdo\_georaster, pl number,bno number, win sdo\_number\_array)  
return number as  
  cdp  varchar2(80);  
  flt  number := 0;  
  cdl  number;  
  parm varchar(200);  
  lb   blob;  
  buf  raw(32767);  
  r1   raw(1);  
  r2   raw(2);  
  r4   raw(4);  
  r8   raw(8);  
  amt0 integer;  
  amt  integer;  
  off  integer;  
  len  integer;  
  maxv number := null;  
  val  number;  
begin  
  
  cdp := gr.metadata.extract('/georasterMetadata/rasterInfo/cellDepth/text()',  
            'xmlns=<http://xmlns.oracle.com/spatial/georaster>').getStringVal();  
  
  if cdp = '32BIT\_REAL' then  
    flt := 1;  
  end if;  
  cdl := sdo\_geor.getCellDepth(gr);

-- to simplify, cast cells of less than 8 bit into bytes (8 bit unsigned integers)  
  if cdl < 8 then  
    cdl := 8;  
    parm := 'celldepth=8bit\_u';  
  end if;  
  
  parm := parm || ' compression=none';  
  
  dbms\_lob.createTemporary(lb, true);  
  
  sdo\_geor.getRasterSubset(gr,pl,win,to\_char(bno),lb,parm);  
  len := dbms\_lob.getlength(lb);  
  
  dbms\_output.put\_line('lob length: ' || len);  
  
  cdl := cdl / 8;  
  
  amt := floor(32767 / cdl) \* cdl;  
  amt0 := amt;  
  
  off := 1;  
  while off <= len loop  
    dbms\_lob.read(lb, amt, off, buf);  
    for i in 1..amt/cdl loop  
      if cdl = 1 then  
        r1 := utl\_raw.substr(buf, (i-1)\*cdl+1, cdl);  
        val := utl\_raw.cast\_to\_binary\_integer(r1);  
      elsif cdl = 2 then  
        r2 := utl\_raw.substr(buf, (i-1)\*cdl+1, cdl);  
        val := utl\_raw.cast\_to\_binary\_integer(r2);  
      elsif cdl = 4 then  
        r4 := utl\_raw.substr(buf, (i-1)\*cdl+1, cdl);  
        if flt = 0 then  
          val := utl\_raw.cast\_to\_binary\_integer(r4);  
        else  
          val := utl\_raw.cast\_to\_binary\_float(r4);  
        end if;  
      elsif cdl = 8 then  
        r8 := utl\_raw.substr(buf, (i-1)\*cdl+1, cdl);  
        val := utl\_raw.cast\_to\_binary\_double(r8);  
      end if;  
      dbms\_output.put\_line(val||'--');  
    end loop;  
    off := off+amt;  
    amt := amt0;  
  end loop;  
  
  dbms\_lob.freeTemporary(lb);  
  
  return 1;  
  
end;  
  
/  
  
show errors;  
  
  
SQL> set serveroutput on  
select getCellValue(georaster,0,0,sdo\_number\_array(0,0,4,4)) from georaster\_table where georid=1;SQL>  
  
GETCELLVALUE(GEORASTER,0,0,SDO\_NUMBER\_ARRAY(0,0,4,4))  
-----------------------------------------------------  
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lob length: 25  
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SQL>