

# DBMaker/DBMaster FAQ Document

## Question:

How to use the NCHAR (unicode) data type for host variables in ESQL/C?

## Answer:

Please check **esqltype.h** has defined NCHAR like below:

```
typedef char    nchar;          /* for unicode #004 */ typedef varchar nvvarchar;  
/* for unicode #004 */ typedef longvarchar nclob;      /* for unicode #004 */
```

If **esqltype.h** has this define, user can use nchar in ESQL/C, but user should put correct unicode (transfer local code to unicode by themselves) data into nchar buffer.

## For example:

```
create table nt1 (c1 int, c2 nchar(10));  
  
/*****  
* test nchar: test nchar  
  
* NOTE: user must make sure their input unicode data is correct, we do not provide  
unicode <-> local utility function  
  
*****/  
test_nchar()  
{  
    EXEC SQL begin declare section;  
    nchar tc2[22];  
    nchar hvstring[300];  
    char buf[300];  
    int tc1, ind1, ind2;  
    EXEC SQL end declare section;  
    int i;  
  
    printf("\ntest nchar: -----\\n");  
  
    $ delete from nt1;
```

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```
// this is a local string
sprintf(buf, "insert into nt1 values (1, '1234567890')");
// The following is a lazy way to convert ascii string
for (i = 0; i < strlen(buf); i++)
{
    hvstring[i*2] = buf[i];
    hvstring[i*2+1] = 0;
}
// Add NULL terminate 0x0000 for unicode string
hvstring[i*2] = hvstring[i*2+1] = 0;

// execute the unicode sql command
$ execute immediate from :hvstring;
chkErr();

// select the result to a unicode string buffer
$ select * from nt1 into :tc1 :ind1, :tc2 :ind2;
chkErr();

printf("tc1=%d, ind2=%d, tc2=", tc1, ind2);

// print out the hex for the unicode string
for (i = 0; i < ind2; i++)
    printf("%02x", (unsigned char)tc2[i]);

$ delete from nt1;
chkErr();

// insert the unicode string data to table
$ insert into nt1 values (:tc1 :ind1, :tc2 :ind2);
chkErr();

printf("\n");

$ commit;
chkErr();
}
```

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