

Performance tuning for Data Loading

1. Loading tool

- Informix tool : SQL LOAD , DBLOAD, ONLOAD, HPL
- ESQL/C insert cursor 가
-

SQL LOAD	<ul style="list-style-type: none"> ❖ Ascii , delimiter file loading 가 ❖ ❖ transaction 가 , long transaction
DBLOAD	<ul style="list-style-type: none"> ❖ Command file 가 ❖ ❖ Commit interval ❖ field mapping
ESQL/C	<ul style="list-style-type: none"> ❖ insert cursor ❖ HPL 가 loading ❖ 가 loading
HPL	<ul style="list-style-type: none"> ❖

- Data Loading

```

Loading
device
Log
  → DB
    ▪ $ONCONFIG TAPEDEV /dev/null
    ▪ Ontape -s -N DB
  → Table
    ▪ Table index, constraint
    ▪ Alter table type (raw);
    ▪ Load (standard)
    ▪ Ontape -s
(PK,FK, )
Load checkpoint
  → onmode -c
Extent
Load checkpoint
  → onmode -c
Load index
    
```

SQL LOAD, DBLOAD

1. SQL UNLOAD/LOAD

- **UNLOAD Syntax**

UNLOAD TO 'file' SELECT *column_list* FROM *table_name*;

- **LOAD syntax**

LOAD FROM 'file' INSERT INTO *table_name*(*column_list*,...);

-

```
LOAD FROM 'customer.unl' insert into customer;
UNLOAD TO 'customer.unl' SELECT * FROM customer;
```

2. DBLOAD

- **Dbload : command file option 가**
 ✕ Command file : , table
 file

- **Command file Syntax**

FILE *file_name* DELIMITER '*delimiter*' *num_column*;
 INSERT INTO *table_name*;

- **Command file**

```
FILE orders.txt DELIMITER ',' 10;
insert into orders;
file items.txt delimiter '|' 4;
insert into items(item num order num stock num manu code);
```

- **DBLOAD Syntax**

```
dbload [-d dbname] [-c cfilename] [-l logfile] [-e errnum] [-n nnum]
      [-i inum] [-s] [-p] [-r | -k] [-X]
-d database name
-c command file name
-l bad row(s) log file
-e bad row(s) # before abort
-s syntax error check only
-n # of row(s) before commit
-p prompt to commit or not on abort
-i # or row(s) to ignore before starting
-r loading without locking table
-X recognize HEX escapes in character fields
-k loading with exclusive lock on table(s)
```

- **DBLOAD**

Dbload -d stores7 -c command.txt -l error.log -e 10 -n 100
 → Stores7 DB command.txt error log
 error.log file , 10 100
 commit .

Optimizing HPL Loading

1. HPL .

- HPL X window GUI ipload loading onpload database .
- Unload load 가 .
- Load 가 가 .

Express Mode		Deluxe Mode	
Action	Performed by	Action	Performed by
Object disabled	onpload	Object filtering	Onpload
data file record table data table 가	Onpload	Data file record table data table 가	Onpload
Object enabled 가 record _vio table	Onpload	Object non-filtering	Onpload
table 가 backup 0-level	User		
	User		user

- unload , read isolation level 가 .

2. Deluxe Mode

- - ◆ **NUMCPUVPS**
CPU
 - ◆ **NETTYPE**
CPU VP poll thread
 - ◆ **BUFFERS**
 - ◆ **CLEANERS**
Loading chunk
 - ◆ **CKPTINTVL**
3000
 - ◆ **LRUS**
500~750 4*NUMCPUVPS (MAX:128)
 - ◆ **LRU_MAX_DIRTY**

- 80
- ◆ **LRU_MIN_DIRTY**
70
- ◆ **PHYFILE** (가)

3. Express mode

- - ◆ **NUMCPUVPS**
CPU
 - ◆ **NETTYPE**
CPU VP , CPU poll thread
 - ◆ **SHMVIRTSIZE**
가 . loading onstat -g seg
virtual portion ,
virtual portion .
- **Onstat -j**

4. **PLCONFIG** (default:\$INFORMIXDIR/etc/plconfig.std)

- ◆ **CONVERTVPS**
CPU
- ◆ **CONVERTTHREADS**
device 2 (conversion 1 , 2)
- ◆ **STRMBUFSIZE**
AIOBUFSIZE , 1 2 (32 or 64)
- ◆ **STRMBUFFERS**
CONVERTTHREADS +4
- ◆ **AIOBUFSIZE**
Tape driver block size .
- ◆ **AIOBUFFERS**
CONVERTTHREADS+4 2 , .