

Release Bulletin

Sybase MPP™ Release 11.0

for NCR (AT&T) WorldMark 5100 Series

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1. Release Contents

Following are the version numbers of the Sybase MPP components:

Software	Version
Sybase MPP	11.0
Sybase MPP Language Module	11.0
Sybase® SQL Server™	9.1-mpp
Open Client™	10.0.3
Open Server™	10.0.3

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2. Product Summary

Sybase MPP Release 11.0 is compatible with the following configurations:

- NCR WorldMark 5100 UNIX v3.0
- NCR 3600 UNIX v3.0

3. Related Documents

The following documents are referenced in this Release Bulletin:

For Sybase Products

- *Sybase MPP Installation Guide*
- *Sybase MPP Administration Guide*
- *Sybase MPP Manager User's Guide*
- *SQL Server Commands Reference Manual* (release 4.9.2)

For Other Products

- *REELlibrarian Master Guide*

4. Special Installation Instructions

For complete installation instructions, please see the *Sybase MPP Installation Guide*. The specific requirements for this release are described in the following sections.

4.1. Hardware Requirements

The minimum configuration for Sybase MPP on an NCR 5100 hardware system is:

- Two Application Processors (APs), 4 or 8 Pentium CPUs per AP
- An NCR disk subsystem
- NCR high-speed interconnect (optional)
- 512MB memory
- 8-mm 5GB/10GB capacity tape drive
- Optional additional tape drives for Backup and Restore

- Workstation to run Sybase MPP Manager (MPPM) (optional)

4.1.1. Sybase MPP Manager Workstation Hardware Requirements

Sybase MPP Manager (MPPM) can either be run on the machine where Sybase MPP is installed, or it can be run remotely on a workstation (optional). Running MPPM on a remote workstation reduces the demand for CPU time on the mainframe machine.

The minimum hardware requirements for the MPPM workstation are:

- 66MHz workstation
- 64MB RAM
- 100MB disk
- Mouse
- SVGA color (or 256 shade grayscale) monitor
- Video board capable of supporting 256 colors or grayscale shades

See also “MPPM Disk Space Requirements” on page 6.

4.1.2. Memory Requirements

256MB of RAM per node are required; 512MB of RAM per node are recommended.

4.1.3. Failover Pairs and Disks

If you are using failover, assign pairs of nodes as failover pairs. In a failover pair, each node fails over to its partner in case of failure. Each member of a failover pair must be able to read and write to all volume groups used by the realms running on both nodes.

◆ **WARNING!**

If one member of a failover pair cannot access a volume group used by its partner node, mppinstall will fail and display a message describing the problem. If this happens, contact your Sybase Product Line Specialist.

4.1.4. Disk Space Requirements

The amount of disk space required on each node depends on how many realms (base realm and regular realms) you install. Sybase MPP software requires 250MB of disk space regardless of the number of realms, but the amount of space required for log files and database backups depends on the number of realms.

Space for Sybase MPP Software

Make sure that you have 250MB of disk space available on each node where Sybase MPP is to be installed. This includes approximately 100MB for the *SQLSERVER* directory and 100MB for the *MPPSERVER* directory.

Space for Log Files and Database Dumps

Sybase MPP creates and maintains supplemental log files for all running servers except SQL Servers. By default, each log file can grow to approximately 20MB, although the file size is configurable. The Backup and Restore utility requires 16MB per realm for *dumpdb*. In addition, each SQL Server creates a small error log, but the disk space required for it is negligible.

Total Space Required Per Node

- Log file space = (number of primary servers on all realms + number of alternate servers on all realms) x 20MB
- *dumpdb* space = number of realms x 16MB
- Total per node space = 250MB (Sybase MPP software) + log file space + *dumpdb* space.

Sample Configurations

The following table shows a sample configuration for a one-node system with one base realm and two regular realms:

Table 1: Configuration for a one-node system with two regular realms

Server	Supplemental Log
1 DBA Server	Yes
1 Main Split/Merge Server	Yes
1 Schema Server	No
DBA Monitor Server	Yes
2 Split/Merge Servers	Yes
2 Control Servers	Yes
2 SQL Servers	No
Total Logs	7

Minimum space requirements for Sybase MPP, logs, and *dumpdb*:

$$250\text{MB} + (7 * 20\text{MB}) + (3 * 16\text{MB}) = 438\text{MB per node}$$

The following table shows a sample configuration for a two-node system, including four regular realms (two on node 1 and two on node 2):

Table 2: Configuration for a two-node system with four regular realms

Node 1	Supplemental Log	Node 2	Supplemental Log
1 DBA Server	Yes	Alt. DBA Server	Failover
1 Main Split/Merge Server	Yes	Alt. Main Split/Merge Server	Failover
1 Schema Server	No	Alt. Schema Server	No
1 Alt. DBA Monitor Server	Failover	DBA Monitor Server	Yes
2 Split/Merge Servers	Yes	2 Alt. Split/Merge Servers	Failover
2 Control Servers	Yes	2 Alt. Control Servers	Failover
2 SQL Servers	No	2 Alt. SQL Servers	No
2 Alt. Split/Merge Servers	Failover	2 Split/Merge Servers	Yes
2 Alt. Control Servers	Failover	2 Control Servers	Yes
2 Alt. SQL Servers	No	2 SQL Servers	No

Table 2: Configuration for a two-node system with four regular realms

Node 1	Supplemental Log	Node 2	Supplemental Log
Total Logs	11		11

Minimum space required on each node for Sybase MPP, logs, and *dumpdb*:

$$250\text{MB} + (11 * 20\text{MB}) + (3 * 16\text{MB}) = 1318\text{MB (1.3 GB) per node}$$

MPPM Disk Space Requirements

If you install MPPM on a remote workstation, there must be at 90MB of disk space available on the workstation.

4.1.5. Master Device and Global Directory Device Space Requirements

Determine which devices are to be used for the master device and global directory device.

For each user database, it is important to reserve space on the global directory device. This space is needed when the database is created and can vary based on the type of system query plans and the number of stored procedures to be used. The default is currently 20MB per user database.

The following table shows a typical configuration:

Space Needed	Device	Database Size
400MB	Master Device	111MB (95+8+8) 95= <i>master</i> 8= <i>model</i> 8= <i>temp</i>
400MB	Mirrored Master Device (if desired)	
300MB	Global Directory Device	50MB (<i>gdnvdb</i>) + (# of user databases * 20MB)
300MB	Mirrored Global Directory Device	

4.1.6. Tape Drives

Refer to the *REELibrarian Master Guide* for information about supported tape drives.

4.2. Software Requirements

The following table lists the software and version numbers required for use with Sybase MPP:

Table 3: Required software

Software	Version
UNIX V4	3.0
UNIX SVR4 MNLS (required if installing a language other than English)	Any
REELibrarian Tape Management System	3.3.0
X11 Release 5 (included as part of the NCR 5100 base system package)	Any
STREAMware TCP for PM-RAS	05.01.00.02
OSF/Motif (included as part of the NCR 5100 base system)	1.2

4.3. Installation Instructions

4.3.1. Configuring the Schema Server

If you attempt to configure the Schema Server after installing the base realm but before installing user realms, the following error message may be displayed:

```
Internal Error: Unable to allocate memory.
Probable cause: Virtual memory exhausted.
Recommended action: Check operating system memory usage and retry the
operation.
```

If this happens, install user realms and try again.

4.3.2. Installing the Language Module

If you plan to use a language other than `us_english` as your default language, or if you plan to use a Japanese character set, use `sybload` to

install both Sybase MPP and the Sybase MPP Language Module at the same time.

4.3.3. Adding the German Language Module

If you install the german language module with the cp437 character set, some error messages may be truncated.

4.3.4. Deleting Realms

After using `mppinstall` to delete all realms on a node, the node name is still listed in the `$NAVIGATOR/bin/nodes` file. Additionally, `gd_nodes` does not perform the following tasks:

- Delete the node(s) from the table if the table will be left empty
- Re-order the `cabinet_id`

4.3.5. Adding Character Sets

If you add a character set after installing Sybase MPP and choose not to make it the default, `mppinstall` makes it the default in the `RUN_NAVSERVER` script.

Workaround: Before adding a character set that you do not want as your default, backup `$NAVIGATOR/startup/RUN_NAVSERVER` on all nodes in the instance. Then, after adding the character set, restore the `RUN_NAVSERVER` file.

4.3.6. `server.loc` File Installation Error

While installing the language modules, the following error message may appear:

```
Error line nnn: Skipped parameter number in message 9137, version 491.
```

5. Technical Support

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals, or if you need assistance during the installation process, please ask one of the designated people to contact Sybase Technical Support.

6. Documentation Updates — *Sybase MPP Administration Guide*

The information in this section supplements or supersedes the *Sybase MPP Administration Guide*.

6.1. Undocumented Commands

The syntax for the Sybase MPP kill command is not documented. The kill syntax is:

```
kill spid
```

where *spid* represents the 5-digit Control Server ID number or the 4-digit process ID of the Control Server.

7. Documentation Updates — *Sybase MPP Manager User's Guide*

The information in this section supplements or supersedes the *Sybase MPP Manager User's Guide*.

8. Highlighted Known Problems

The following sections contain information on the problems known to exist in this release of Sybase MPP. See 4. "Special Installation Instructions" for installation information.

8.1. Features Not Included in This Release

The following features are not supported:

- `sp_syntax` stored procedure and `sybsyntax` database
- Multiple `xlog` sessions
- Backup scheduling (MPPM)
- Statistics

8.2. Restrictions

8.2.1. Consolidating Supplemental Logs

Only the installation owner can consolidate supplemental logs through Sybase MPP Manager (MPPM).

8.2.2. System Procedure Limitations

The following system procedures do not operate as stated in the *SQL Server Administration Guide*:

- `sp_extendsegment`
- `sp_addsegment`

These procedures must be executed from the user database. Otherwise, database names are not accepted.

8.2.3. Access to Databases During Backups

If a database is accessed in between the time that it is restored from a backup, and the time when its transaction log is subsequently restored from a backup, a fatal error in the Schema Server portion of the restore may occur. This is because access to the database is not allowed during and between restores of both the database backup and the transaction log backup.

Therefore, do not access the database, even with select statements, between loading the database and loading the transaction logs.

8.2.4. Using *dump database* and *dump transaction*

Always run `dump database` and `dump transaction` in the *master* database. Enter the following before executing these commands:

```
use master
go
```

8.2.5. Concurrent Execution of Stored Procedures by the Same User

Certain stored procedures cannot be executed simultaneously by the same user in different sessions. This is because temporary tables or compiler-generated work tables are used by the compiler during execution. The affected stored procedures may produce erroneous

results if executed concurrently by the same user due to the potential reuse of tables with the same name.

The following system procedures are restricted from concurrent execution by the same user:

- `sp_addumpdevice`
- `sp_configure` (if configuration options are changed)
- `sp_diskdefault`
- `sp_dropdevice`
- `sp_dropdumpdevice`
- `sp_help`
- `sp_helpdb`
- `sp_helpdevice`
- `sp_helpindex`
- `sp_helpjoins`
- `sp_helpserver`
- `sp_helpsort`

The following catalog stored procedures are also restricted from concurrent execution by the same user:

- `sp_columns`
- `sp_column_privileges`
- `sp_databases`
- `sp_fkeys`
- `sp_pkeys`
- `sp_statistics`
- `sp_stored_procedures`
- `sp_tables`
- `sp_table_privileges`

If you execute any of these stored procedures concurrently, you may see an error message stating that a necessary recompile of the stored procedure failed. If you see this message, you will not be able to execute the stored procedure again and you will need to contact your Sybase MPP Product Line Specialist or Technical Support.

8.3. Problem Reports

Complete listings of open and closed problem reports for Sybase MPP Release 11.0 can be found in *\$\$SYBASE/install/SPR* after the software is loaded. Open problem reports are listed in *spr_MPP*. Closed problem reports are listed in *cpr_MPP*.

8.4. Known Bugs

8.4.1. Some System Stored Procedures Result in Errors

Executing some system stored procedures in databases other than the *master* database results in a critical internal error.

Workaround: Enter the following before executing the system stored procedure:

```
use master
go
```

8.4.2. *sp_addumpdevice* Displays Misleading Error

If an incorrect device name is given as a parameter to the *sp_addumpdevice* system stored procedure, a misleading error message is printed:

```
Msg 14450, Level 67, State 1: Server 'D0160000', Procedure
'master.dbo.sp_addumpdevice;1': Internal software error with NS
Query Resolver.
```

This occurs if the device names are not in the format:

Q\$DN500XX_devname

where *\$DN* represents the instance ID, *XX* represents the realm ID, and *devname* represents the device name.

Workaround: Refer to the *Sybase MPP Administration Guide* for details on naming conventions for dump devices and rename the dump device.

8.4.3. *sp_configure* Displays Error Message

The first time Sybase MPP is brought up, *sp_configure* may display an error message when certain configuration options are used. For example:

```
1>sp_configure "default network packet size"
2>go

Configuration option is not unique.
duplicate_options
-----
"default network packet size"
```

The following are the configuration options that cause this error message:

- database size
- default character set id
- default language
- default network packet size
- default sortorder id
- engine adjust interval
- language in cache
- recovery flags
- recovery interval
- remote access
- remote connections
- remote logins
- remote sites

Workaround: Shut down and restart Sybase MPP.

8.4.4. *sp_helpdevice* Displays Error Message

sp_helpdevice sometimes displays an error similar to the following:

```
Server message: 3701
Severity: 11
State: 1
Server: D04600001
Line: 1
Message text: Cannot drop the table 'tempdb.dbo.#spdevtab',
because it doesn't exist in the system catalogs.
```

This message can be ignored.

8.4.5. Hash Declustering Causes Some Queries to Hang

If a table is hash declustered on a column and you update a value in that column to a new value that falls in the same slice as the old value, the query may hang.

For example, the following query hangs if *table_t* is hash declustered on *column1*, and *cur_val1* and *cur_val2* hash to a same slice of *table_t*:

```
begin tran t1
delete table_t
where column1 = @cur_val1
go

update table_t
set column1 = @cur_val1
where column1 = @cur_val2
commit
```

Workaround: Do not use `begin tran...commit`, or avoid updating a declustering column with a new value that will fall in the same slice with the previous value.

8.4.6. *drop database* May Display Error Messages

If you use `drop database` to drop a database with which there are still users associated, a message similar to the following is displayed:

```
Msg 3702, Level 16, State 4:
Server 'C0130002':
Cannot drop the database 'wiscFT' because it is currently in use.
```

Workaround: Run `sp_who` to determine if there are any users currently associated with the database to be dropped. Do not run `drop database` until there are no longer any users associated with the database.

8.4.7. *smallint db_name* Problem

When a `smallint` argument is passed to `db_name`, it always returns the name of the current database.

8.4.8. *isql* Crashes with French Language Module

`isql` may dump core on exiting when the French language module is in use.

8.4.9. Sybase MPP Manager Known Bugs

MPPM Interacts Unpredictably with Non-Motif Window Managers

If you use a window manager other than Motif, you may experience window size abnormalities.

Workaround: Use the Motif window manager.

Some Utilities Display Error Messages and Incorrect Colors

Some Sybase MPPM utilities may display error messages and incorrect colors if they cannot allocate the color map.

Workaround: Exit all color-hungry processes (for example, backgrounds).

Individual Components Require a Lot of Memory

The individual components of Sybase MPPM require a large amount of physical memory to run. This may cause memory errors if all components are run at once.

Workaround: Close all other windows opened by other menu choices before clicking on an option in the main Sybase MPPM window.

Configuration Management Utility Known Bugs

- The online help text for Move Servers is missing. Use this command to move an entire realm from one node to another node. After the move, the last digit of each server name is changed to reflect the change from primary to alternate node, or vice versa.

Log Manager Utility Known Bugs

- When consolidating supplemental logs, Sybase MPPM may falsely report that it has succeeded without errors. If errors have occurred, messages will be written in the console window where `xdba` was started.
- When running a trace collection, if you choose the “start immediately/stop after duration” option, Log Manager reports the trace state as “in progress” even after the trace collection is completed.

Stored Procedure Utility Known Bugs

- Entering “sp_helpdb” in the Search For box and then entering any existing database (for example, *master*) as the database name results in Open Client errors.

Workarounds:

- Run sp_helpdb with no parameters (this displays information for all databases), or
 - Use isql to run sp_helpdb.
- If you choose Erase After Timeout and set a timeout value in the Preferences window, messages continue to be displayed indefinitely.

8.5. Third Party Restrictions

Installation Requirements

Third party tools installed using scripts, which are normally installed on SQL Server, must also be installed on Sybase MPP through a Control Server. Log in as “sa” to install these scripts.

Business Objects

Business Objects uses an *image* datatype in one of its internal tables. Because Sybase MPP does not currently support *text* and *image* datatypes, it is necessary to modify the SQL script that creates Business Objects' dictionary (*credico.sql*). The *image* datatype in this script should be changed to *varchar(255)*.