



ISUG Techcast May 11 & 12, 2005

Sybase ASE 15: A Technical Insight

Questions and Answers:

Question: Which of the system catalog tables are best candidates for row locking?

Answered: System catalogs are automatically changed to row locked by us

Question: Will column name length be increased?

Answered: Yes, it is already done

Question: Will char limit take care of replication def and subs name as well?

Answered: That is correct. rep def and sub names also can be increased

Question: Won't the new default packet size of 2048 require legacy clients to request the larger size?

Answered: No, the default packet size is only for new servers built. If customers are upgrading we will maintain the old packet size

Question: In which rep server is the rep def 30 char limit lifted?

Answered: Rep Server 15.0 will have this functionality

Question: Are there any changes to the backup server and backup archive API?

Answered: yes. Backup server now supports large # of devices. There is no change to the archive API.

Question: For large databases, is there any improvement proposed for dump/load/dbcc etc. activities?

Answered: as such our existing dump/load/dbcc can handle large database.

Question: In a server we have 180 databases, why did you say practical limit is 100?

Answered: in some customer scenarios having 180 dbs checkpoint may become bottleneck, but we have multiple check points now

Question: Any white paper of ASE 15.x features

Answered: A number of whitepapers are being authored, some of which will be released this summer. ASE feature content and documentation can be previewed in the ASE 15 Beta at www.sybase.com/ase15beta

Question: DBCC against a dump file?

Answered: we are working on it. we will have a mini version of this in ASE 12.5.x where you can say dump db with verify full or headers option

Question: Can backup server load 2k to larger page size?

Answered: Not yet.

Question: What is the performance overhead for scrollable cursors?

Answered: We have not done any specific benchmarks yet. In general, the overhead is in materialization of the set of rows for sensitive cursors

Question: Is there a time frame for BS to support page size changes?

Answered: Right now there is no concrete time frame for this

Question: Is OpenClient 12.5 compatible with ASE 15? Do we need to recompile our applications?

Answered: OCS 12.5 is compatible with ASE 15.0

Question: Does ASE 15 support failover cluster?

Answered: Yes. ASE 15.0 support failover cluster (our 2 node HA offering)

Question: Any improvements to isql client?

Answered: isql client can now do large network packets

Question: Can we issue rep server commands and Sybase commands in ASE to manage Rep Server?

Answered: you can put wrappers and execute them. The other option is to do SERVERNAME.dbname.username.rpc

Question: will 15.0 support object level backup/restore?

Answered: It is on our list of feature requests, but not planned for 15.0.

Question: Is the job scheduler a feature within Sybase Central?

Answered: Jobscheduler is an ASE feature. We have support for it in Sybase Central

Question: We noticed that the backup server was 32-bit on Solaris, AIX, and HP. Are there any plans to move to 64-bit backup server? Is the backup server still 32-bit with ASE 15?

Answered: 64-bit is needed only for memory access. Backup server can create shared memory of 2GB size and we have not seen any major requirement to change Backup server to 64-bit

Question: Is the job scheduler available in Unix environment that can be scripted ?

Answered: It can be scripted to some extent with our templates

Question: Is the new ISQL plan viewer utility from Windows or Unix ?

Answered: Plan viewer is available from Sybase Central

Question: For "insensitive" scrollable cursors - what happens to DML operations - do they get blocked by the select, or...?

Answered: Base table is not affected by insensitive scrollable cursors. Actually it is operating on a private copy. Unless there is an update done using the values then the base table page/row is locked.

Question: Does ISQL planviewer work with 12.0, 12.5?

Answered: No. It is available only with ASE 15.0.

Question: Is there a direct migration path from 11.9.x to 15x bypassing 12.5x?

Answered: We will be supporting upgrades from 11.9.x to 15.x

Question: Can the Showplan data be monitored with OpenView?

Answered: Openview can integrate it with the XML generated from ASE

Question: Will the job scheduler be available on HP Tru64 Unix platform?

Answered: We do not have plans to have JS on HP Tru64

Question: Is ISQL Planviewer part of Sybase Central?

Answered: Yes. That is correct.

Question: Is Solaris x86 a supported platform for ASE 15?

Answered: Solaris x64 (Opteron) is planned.

Question: Are there any changes required to existing configuration parms for taking advantage of the new optimizer?

Answered: Yes, there are different optimization methods for different workloads

Question: Is it possible to load dumps created with ASE 12.x into ASE 15?

Answered: Yes. 12.0, 12.5 dumps can be loaded into 15.x

Question: Are there any changes to SQL Advantage

Answered: There are no changes to SQL Advantage

Question: why can't we create functions that are not Java based. Like have our own custom functions like getdate()

Answered: we have User defined T-SQL functions in our roadmap. Look for it in a release following ASE 15.0

Question: Is single object recovery available in 15.0?

Answered: We are definitely working on it. We have not announced a planned release schedule.

Question: Will the new GUI include the SQL for current queries running?

Answered: Sybase central planviewer can provide the SQL for current queries running

Question: Is 15 upgrade supported under basic support upgrade? We're at 12.5.3 and see we could go 12.5.4 path. Will the ASE 15 be considered some type of special purchase upgrade?

Answered: Customers on Sybase's support packages will get ASE 15.

Question: Will the single object recovery made available through the backup archive api as well?

Answered: We have not announced the full feature/function set for this planned capability.

Question: Shinking db in 15 ?

Answered: We do not have shrink db in 15.0 release. It will be available post 15.0

Question: SQL Server 2000 has a feature called federated databases, does Sybase ASE 15 have a similar feature?

Answered: ASE has federated db (look at our ECDA and CIS solutions)

Question: Can we truncate partitioned tables in 15.0

Answered: Yes

Question: Can BCP out be partitioned on an unpartitioned table

Answered: Yes

Question: Can partitioning be done in combination? i.e. hash & range, range & list.

Answered: No

Question: Can we get print out of the slides?

Answered: Yes, a link will be sent in a follow-up email.

Question: Can partitions span databases? servers?

Answered: Partitions cannot span dbs. We are looking at proxy partition support which may provide support for spanning servers

Question: Can you take a partition on/off line?

Answered: No.

Question: When will ASE 15 be available on the linux platform.

Answered: When 15.0 is released. Linux is a Tier 1 platform for Sybase.

Question: Are there any plans to allow a database to be restored without having to maintain the physical structure (create and alters) that the database had when dumped?

Answered: We do not have any plans right now to do this.

Question: Can I partition on part of a column? For instance the last two characters of the Customer Number?

Answered: Not today.

Question: Is there support for sub-partitions?

Answered: No. There is no support for sub partitions

Question: Can index partitions be created with a different fill factor?

Answered: Yes.

Question: If we do not have user defined segments, will the partitioning be still useful? Especially if the number of devices are fewer like in Linux environments

Answered: The numbers of devices can be large in linux also.

Question: Any changes/updates to txtsvr/full-text search function?

Answered: txtsvr will be supported with ASE 15.0. other than that there is no major functionality upgrade

Question: Can you delete data from one partition

Answered: yes

Question: Where can I get more information on Partitions and XML data type info

Answered: Register for the ASE 15.0 beta

Question: Can I save the output of stored proc into temp table?

Answered: Yes. you can do that with mapping sproc as cistable and doing select * into cistablemapped

Question: When will shrinking a DB be available?

Answered: In a future release. It is an important project that is being worked now.

Question: Is there any improvement in the automatic database expansion with the new release?

Answered: automatic db will be supported with large devices

Question: Is there a embedded database of some kind in Sybase which talks to master server (which is ASE 15)... similar to MSDE and SQL Server

Answered: ASE Express Edition

Question: When BCPing data from a partitioned table, is there a way to retrieve data from the entire table, or just each partition individually?

Answered: Yes. you have option to export data at a table or partition level

Question: We treat sybase central as a DBA tool, and only give developers SQL advantage. Any thoughts to support sql view without Sybase Central?

Answered: There are no plans to do this. If there is interest we will look at it

Question: In current versions of Sybase, it is difficult to figure the percentage of rollback done when a large transaction has been killed. Basically recovery/availability time is not available. Any such feature available in 15 ?

Answered: Please look at “kill with status only” feature in 12.5.x

Question: cis table is available in 12.0. Any improvements

Answered: Yes, the optimizer and query plan execution has been greatly improved in ASE 15 to better cost CIS tables.

Question: Will defncopy / ddlgen support reverse engineering of all new syntax elements, including all partition specifiers + ranges?

Answered: Yes. defncopy and ddlgen will support new syntax

Question: Will Sybase ASE 15 support MAC OS X tiger?

Answered: We're working on it.

Question: Any way to turn off transaction log for updates to same row that come in every 10 seconds (scans from telemetry). Need higher performance for large sets of repeating updates.

Answered: we don't have any plans for this specifically

Question: Can I partition based on function, e.g., datepart(dd,mydate)

Answered: Not today.

Question: Is it possible to shrink databases without recreating db?

Answered: This is a planned feature.

Question: What if the inserted value does not match any partition definition? Where will it go then?

Answered: You will get errors from the insert/update statement

Question: Will partitioning work in a replicated environment, especially warm standby setup?

Answered: Yes. with RS 15.0

Question: Will there be ASE 15 for Irix

Answered: We have not announced support for SGI/IRIX with ASE 15.0

Question: Why isn't AMD based Linux listed on that poll

Answered: It should have been AMD/Intel. We plan to fully support the Opteron chip.

Question: Need more information on ASE Express

Answered: Please check our website at <http://www.Sybase.com/linuxpromo>

Question: What's the time frame for RS 15.0?

Answered: Approximately 2 months after ASE 15.0 release

Question: Can we officially resize a database (shrink) without un documental ways.

Answered: Not yet, look for it in a post 15.0 release

Question: When will ASE 15 available?

Answered: in 3Q 2005

Question: Any plan to drop sysusages (one device belongs to one database)?

Answered: no plans to drop sysusages

Question: When is ASE 15.0 available for Windows 2000 and IBM AIX?

Answered: 3Q 2005.

Question: What kind of porting issues can we anticipate? Ct-lib, Db-lib, web service producer/consumer?

Answered: absolutely none except if you are using large identifiers

Question: Any T-SQL enhancements?

Answered: we have user defined SQL functions planned for post ASE 15.0

Question: Will master system tables from ASE 12.5 directly load into ASE 15.0? If not, is there a migration utility?

Answered: No, it won't load as there are catalog changes.

Question: How about exception handling in stored procs?

Answered: We have a serious of t-sql enhancements planned post ASE 15.0

Question: When will ASE 15.0 support the coming release of Windows 64bit platform version

Answered: Support is planned, but no definitive date has been announced.

Question: Any new features in sysmon ?

Answered: As of now there are no new features in sp_sysmon

Question: Will 15 work better with multi threaded intel cpus? Which way is recommended off or on cpu hyperthreading currently and then in 15?

Answered: **In internal experiments**, we have seen about 1.5 to 1.7 improvement with hyperthreading and multicore cpus

Question: When will ASE 12.5 and 15 certified on Solaris 10?

Answered: 12.5 has already been certified on Sol 10. We will try to certify 15 on Sol 10 within a quarter of its release. You can refer to the following link for more info:
<http://certification.sybase.com/ucr/search.do>

Question: what is the default setting for a cursor if not specified (ie: insensitive)?

Answered: Depends on the query. If you do not specify cursor sensitivity, the default value is implied, which means that the cursor's sensitivity depends on the query plan chosen by the optimizer. If the query plan uses hash join or merge join, the cursor is insensitive.

Question: What is an encrypted col. What type of encryption algorithm are you using. While querying, will this column decrypted auto or need to pass a key.

Answered: An encrypted column is a column encrypted with ASE encryption option (available Q3). In the first release, we use the AES algorithm. Keys are managed internally by the server, so application changes are un-necessary. We'll have a webcast on this new feature June 28th & 30th

Question: Which of the following, if anything, is true about the ASE 15.0 optimizer: 1. It uses an improved version of the same ASE 12.5.X algorithm; 2. It has been completely rewritten; 3. It has been taken from ASAnywhere.

Answered: 1. True 2. Partially True; it uses a new Lava-based Query Processing Engine 3. Not True.

Question: What do you mean by optimization goals ?

Answered: Goals can be set to have the optimizer focus more on OLTP-type query solutions versus DSS-type query solutions.

Question: When will the documentation / manuals on ASE 15 be available?

Answered: Beta documentation is already available from the ASE 15 Beta site. Please register at www.sybase.com/ase15beta

Question: Are non-materialized computed columns not much slower than regular columns

Answered: It depends on the complexity of the computation. More complex means more cycles get spent computing the non-materialized column when queried.

Question: What happens when the segment for a particular partition is full?

Answered: It is no different from when any segment is full. You can expand.

Question: How does optimizer react differently when I configure the server as OLTP and DSS?

Answered: The optimizer will search for solutions more in an OLTP vein when the server is set to OLTP, which means that it may not analyze more complex DSS-type plans. If set to DSS, it will search (and spend more time in plan computation) for more complex DSS-type solutions.

Question: Is it possible to dump single partitions?

Answered: No it is not.

Question: Is the job scheduler new to 15 or it is already in 12.5?

Answered: Job Scheduler is available in both 12.5.x and ASE 15

Question: Any loaded database with a dump of database which had encrypted columns can be queied. right??

Answered: Yes.

Question: Does Sybase still recommend using raw devices vs. filesystems in general now.

Answered: Depends on the platform.

Question: Can I put partitions also on char/varchar columns and use "col like 'xxx%' " for partitioning?

Answered: Yes

Question: Any plans to implement dump table or partitions?

Answered: Object-level (e.g table-level) is planned. Partitions can be dumped individually.

Question: Can a partition be mapped to a named cache if needed?

Answered: Not in 15.0. Perhaps post 15.0.

Question: Rumor was the column encryption was not going to make it into ASE 15 GA in Sept. I know 12.5.3A in June will have the functionality. Will ASE 15 day 1 have it as well?

Answered: Encryption Option for ASE 15 is planned. The specific release date is not set.

Question: Can we drop a partition of range partitioned table.

Answered: Drop partition will not be available in 15.0 but will be available post 15.0..

Question: Can you have a table partitioned by rolling months and drop the older months? For example 1/2005,2/2005,3.2005. After 18 months, I want to drop partition 1/2005. Every month I want to add a new partition for the current month.

Answered: Drop partition will not be available in 15.0 but will be available post 15.0. You can however truncate a partition. Also you can add a range partition too.

Question: Are t-sql UDF's supported in 15?

Answered: It's a feature request we're evaluating.

Question: In case there is a requirement, is it okay to defragment partition simultaneously?

Answered: Yes, there are a number of partition level operations you can do. Reorgs can be done on a partition level.

Question: Is the encryption algorithm the same across platforms ? i.e can I bcp out data from Solaris and bcp into Linux for an encrypted column

Answered: The encryption algorithm is the same across platforms.

Question: Can you drop the partition?

Answered: Not in 15.0. But will be available soon after in a post GA release.

Question: Does ASE 15 implement "delete table into other_table where ..."? Now we select into and delete from where exists, so 2 queries!

Answered: We'll look at this as a feature request.

Question: What specific change(s) was made to improve the query performance from 31 hrs (pre 15.0) to 8 seconds (in 15.0)?

Answered: The optimizer used a different query plan (HASH Join)

Question: Sybase plan to add grid function inside ASE?

Answered: Yes.

Question: When is this release due for Windows?

Answered: When 15.0 is released--Q3 2005.

Question: How will the new compute columns affect performance?

Answered: Depends on the computation. The more complex the computation, the more the impact.

Question: We are planning to upgrade this year from 11.9.x to 12.5.x. Would you advise to skip 12.5.x and wait till end of year to migrate to ASE 15?

Answered: That depends on whether you need new features in 15. 12.5.x will continue to be supported till Q3, 2008.

Question: Any changes for High Availability? Archiving?

Answered: Dynamic Archiving is a separate product. HA option is a for fee option.

Question: Is MDA enabled in 12.5?

Answered: Yes. Well in one of the 12.5.x versions Maybe not 12.5.

Question: Are these MDA enabled in ASE 15?

Answered: Yes. User can enable these.

Question: Is there any documentation available (or coming available) regarding the XML and Java capabilities, and/or MDA improvements in ASE15?

Answered: Beta documentation is available as part of the ASE 15 beta program. You can register at www.sybase.com/ASE15beta

Question: Is there any documentation on security changes in ASE 15?

Answered: Beta documentation is available at www.sybase.com/ase15beta

Question: Like the way you can see the isql thro GUI, do we have any GUI to see the performance in ASE 15?

Answered: Performance can be viewed with DB-Xray in a GUI.

Question: What can you control as far as reformatting in query plans; how do you specify what you want to control - in select cmd?

Answered: Using abstract query plans you can control the plan execution at a very granular level.

Question: Is the Java option a standard part of ASE15 or will it be an additional add on that has to be purchased?

Answered: We have not announced the final packaging for ASE 15 yet. Look for upcoming announcements.

Question: Does Sybase recommend raw devices for AIX? If so, why over filesystem.

Answered: you can use both raw device and file system (we now have dsync support)

Question: Do we have any enhancements to the backup server in ASE 15?

Answered:

backup server 15.0 adds support for large devices

Question: Can we expect top 20 resource hogging queries - this will help a lot in performance tuning

Answered: Yes. You can query MDA tables to get this info
