**DCJS’s upgrade to the Spectrum Justice System’s (SJS) backup utility for Oracle 11 G Express users only. By Jeff Ellman NYSITS DCJS SJS ITS2P**

**Disclaimer**: DCJS is not responsible for an agencies backup and recovery disaster plan or maintenance of their computer systems. This backup utility update is offered as a tool to assist SJS users in securing viable backup. You are free to enhance it as needed at your own risk.

Release notes:

* Implement time control for preventing file corruption
* Implement file comparison for preventing file corruption
* Implement archiving
* Implement backup and archiving retention
* Implement new naming convention for backup directories: *YYYYMMDDHHMMSS*
* The utilities root directory and the backup/archive directories will now contain two new log files
	+ sjs\_coldbackup11xe.log
		- Logging of events
	+ compare.log
		- Logging of file comparisons of production database files to backup database files
* Steps to recover from backup.

Outline

1. Deploy
2. Configure
	1. Location Options
3. Backup and recovery
4. **Deploy**
* Download the self-extracting zip file and extract to the root of the SJS installation drive; change the drive letter in the “Unzip to folder” as needed to reflect your SJS installation.

<http://www.criminaljustice.ny.gov/ojis/sjs/sjs70.htm>

* SJS\_ColdBackup11xe.exe
* Click “Unzip”:



* Enter password obtained from DCJS and click “OK”:



* Click “OK”:



* In this example the following directory structure would have been extracted to your C drive:
1. **Configure**
* To configure you need to edit the file: \ SJS\_ColdBackup11xe \sjs\_coldbackup11xe.bat
	+ To edit right click on select “Edit”.

Perform the following edits:

* Set the Backup retention value to specify how many days to keep a backup:
	+ Edit the value assigned on line 7:
		- set retain\_backup=7
* Set the Archive retention value to specify how many days to keep an archived backup:
	+ Edit the value assigned on line 8:
		- set retain\_archive=14
			* **In this example, this value will keep 7 days of backups in the archive location for seven days will have passed before being moved from the backup directory.**
* Set the correct drive letter for your SJS’s Oracle installation:
	+ Edit the value on line 9:
		- set sjs\_drive=c:\
* Next, choose either a local, mapped, or network location for your backup and archiving locations. There are two options:
	+ Backup Location Option 1: Local Drive or Mapped Network Drive
	+ Backup Location Option 2: UNC paths
* Location Option 1: Local Drive or Mapped Network Drive
	+ If using the default settings for the local drive option, create at the following folder structure as depicted on 17-18
		- Line 17: set backup\_location=%util\_folder%backups
			* Create folder “backups” at: C:\SJS\_ColdBackup11xe\backups
		- Line 18: archive\_location=%util\_folder%archives
			* Create folder “archives” at: C:\SJS\_ColdBackup11xe\archives
	+ If you using a mapped drive, edit line’s 17 and 18 to reflect the examples in lines 20-21; or comment lines 17 and 18 and uncomment lines 20-21 and update to reflect your mapped drive (a comment is the command “rem” (without quotes)- add and remove as needed. Ex from above; what’s highlighted is what you need to edit to reflect your SJS:
		- Line 17: rem set backup\_location=%util\_folder%backups
		- Line 18: rem set archive\_location=%util\_folder%archives
		- Line 20: set backup\_location=Y:\test\backups
		- Line 21: set archive\_location=Y:\test\archives
	+ Go to the steps for “Scheduled Task”
* Location Option 2: UNC paths
	+ Comment out lines 17 and 18 under “Option 1” by adding “rem”:
		- Line 17: rem set backup\_location=%util\_folder%backups
		- Line 18: rem set archive\_location=%util\_folder%archives
	+ Uncomment lines 26-27 by removing “rem” and editing to reflect your UNC Path as highlighted below:
		- Line 26: set backup\_location=\\pvwap22\sjsdata\test\backups
		- Line 27: set archive\_location=\\pvwap22\sjsdata\test\archives
	+ Add the comment “rem” to lines 65 through 68, used with Option 1, exampled below:
		- Line 65: rem (
		- Line 66: rem %util\_tool%forfiles /p %backup\_location% /d -%retain\_backup% /c "cmd /c move @file %archive\_location%"
		- Line 67: rem %util\_tool%forfiles /p %archive\_location% /m \* /d -%retain\_archive% /c "cmd /c rmdir /s/q @file"
		- Line 68: rem ) >> sjs\_coldbackup11xe.log 2>&1
	+ Remove the comment “rem” from linkes 73-80, as show below:
		- Line 73: (
		- Line 74: pushd %backup\_location%
		- Line 75: %util\_tool%forfiles /d -%retain\_backup% /c "cmd /c move @file %archive\_location%"
		- Line 76: popd
		- Line 77: pushd %archive\_location%
		- Line 78: %util\_tool%forfiles /m \* /d -%retain\_archive% /c "cmd /c rmdir /s/q @file"
		- Line 79: popd
		- Line 80: ) >> sjs\_coldbackup11xe.log 2>&1
	+ Proceed to next step, #3 Schedule Task
1. **Backup and Recovery**

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* Schedule Task
* Recover From Backup

Schedule Task:

* Go Start/Administrative Tools/Task Scheduler



* Click Create Basic Task



* Name must be: sjsbackup



* Click Next; select “Daily”; click Next



* Schedule the start time; click “Next”:



Select “Start a program”; click “Next”:



* Browse to and select the batch file C:\SJS\_ColdBackup11xe\sjs\_coldbackup11xe.bat
* Add a backslash \ in the Start input box; click “Next”:
* Check “Open the Properties dialog box for this task when I click Finish”; click “Finish”:



* Check “Run with highest privileges”.
* Select “Configure for” “Windows 7, Winders Server 2008 R2.
* Click “Ok”:
* Run the task, select from the list, right click and select “Run”:



**Recover from Backup**

* Stop the following services
	+ Apache Tomcat
	+ OracleServiceXE
* Review of database files
* Backup existing database files
* Deploy backup

Stop the following services before backup recovery:

* Apache Tomcat
* OracleServicesXE

Review of database files

11 G Express database directories:

* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG
	+ 2 LOG files
* \oraclexe\app\oracle\oradata\XE
	+ 6 DBF files
* \oraclexe\app\oracle\product\11.2.0\server\database
	+ 5 Files: 2 ORA, 1 DAT, 1 LOG, 1 EXE

11 G Express database files directory path:

* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_1\_***B3BJB33C\_.LOG \****
* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_2\_***B3BJB4NO\_.LOG \****
* \oraclexe\app\oracle\oradata\XE\CONTROL.DBF
* \oraclexe\app\oracle\oradata\XE\SYSAUX.DBF
* \oraclexe\app\oracle\oradata\XE\SYSTEM.DBF
* \oraclexe\app\oracle\oradata\XE\TEMP.DBF
* \oraclexe\app\oracle\oradata\XE\UNDOTBS1.DBF
* \oraclexe\app\oracle\oradata\XE\USERS.DBF
* \oraclexe\app\oracle\product\11.2.0\server\database\hc\_xe.dat
* \oraclexe\app\oracle\product\11.2.0\server\database\initXE.ora
* \oraclexe\app\oracle\product\11.2.0\server\database\oradba.exe
* \oraclexe\app\oracle\product\11.2.0\server\database\oradim.log
* \oraclexe\app\oracle\product\11.2.0\server\database\pwdxe.ora

Backup utilities database file directory path in either designated “backups” or “archives” locations

* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_1\_***B3BJB33C\_.LOG \****
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_2\_***B3BJB4NO\_.LOG \****
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\oradata\XE\CONTROL.DBF
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\oradata\XE\SYSAUX.DBF
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\oradata\XE\SYSTEM.DBF
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\oradata\XE\TEMP.DBF
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\oradata\XE\UNDOTBS1.DBF
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\oradata\XE\USERS.DBF
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\product\11.2.0\server\database\hc\_xe.dat
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\product\11.2.0\server\database\initXE.ora
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\product\11.2.0\server\database\oradba.exe
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\product\11.2.0\server\database\oradim.log
* \*YYYYMMDDHHMMSS*\oraclexe\app\oracle\product\11.2.0\server\database\pwdxe.ora

\* File name will verify by installation.

Backup existing database files

To recover from backup- do not delete the existing database files; create a subdirectory and move them for temporary storage. **OracleServiceXE MUST BE STOPPED.**

* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\backup
* \oraclexe\app\oracle\oradata\XE\backup
* \oraclexe\app\oracle\product\11.2.0\server\database\backup

Move:

* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\backup \O1\_MF\_1\_B3BJB33C\_.LOG
* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\backup \O1\_MF\_2\_B3BJB4NO\_.LOG

To:

* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_1\_B3BJB33C\_.LOG
* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_2\_B3BJB4NO\_.LOG

Move:

* \oraclexe\app\oracle\oradata\XE\CONTROL.DBF
* \oraclexe\app\oracle\oradata\XE\SYSAUX.DBF
* \oraclexe\app\oracle\oradata\XE\SYSTEM.DBF
* \oraclexe\app\oracle\oradata\XE\TEMP.DBF
* \oraclexe\app\oracle\oradata\XE\UNDOTBS1.DBF
* \oraclexe\app\oracle\oradata\XE\USERS.DBF

To:

* \oraclexe\app\oracle\oradata\XE\backup \CONTROL.DBF
* \oraclexe\app\oracle\oradata\XE\backup \SYSAUX.DBF
* \oraclexe\app\oracle\oradata\XE\backup \SYSTEM.DBF
* \oraclexe\app\oracle\oradata\XE\backup \TEMP.DBF
* \oraclexe\app\oracle\oradata\XE\backup \UNDOTBS1.DBF
* \oraclexe\app\oracle\oradata\XE\backup \USERS.DBF

Move:

* \oraclexe\app\oracle\product\11.2.0\server\database\hc\_xe.dat
* \oraclexe\app\oracle\product\11.2.0\server\database\initXE.ora
* \oraclexe\app\oracle\product\11.2.0\server\database\oradba.exe
* \oraclexe\app\oracle\product\11.2.0\server\database\oradim.log
* \oraclexe\app\oracle\product\11.2.0\server\database\pwdxe.ora

To:

* \oraclexe\app\oracle\product\11.2.0\server\database\backup\hc\_xe.dat
* \oraclexe\app\oracle\product\11.2.0\server\database\backup\initXE.ora
* \oraclexe\app\oracle\product\11.2.0\server\database\backup\oradba.exe
* \oraclexe\app\oracle\product\11.2.0\server\database\backup\oradim.log
* \oraclexe\app\oracle\product\11.2.0\server\database\backup\pwdxe.ora

To recover from backup

Move:

* \YYYYMMDDHHMMSS\oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_1\_B3BJB33C\_.LOG \*
* \YYYYMMDDHHMMSS\oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\O1\_MF\_2\_B3BJB4NO\_.LOG \*

To:

* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\backup \O1\_MF\_1\_B3BJB33C\_.LOG
* \oraclexe\app\oracle\fast\_recovery\_area\XE\ONLINELOG\backup \O1\_MF\_2\_B3BJB4NO\_.LOG

Move:

* \YYYYMMDDHHMMSS\oraclexe\app\oracle\oradata\XE\CONTROL.DBF
* \YYYYMMDDHHMMSS\oraclexe\app\oracle\oradata\XE\SYSAUX.DBF
* \YYYYMMDDHHMMSS\oraclexe\app\oracle\oradata\XE\SYSTEM.DBF
* \YYYYMMDDHHMMSS\oraclexe\app\oracle\oradata\XE\TEMP.DBF
* \YYYYMMDDHHMMSS\oraclexe\app\oracle\oradata\XE\UNDOTBS1.DBF
* \YYYYMMDDHHMMSS\oraclexe\app\oracle\oradata\XE\USERS.DBF

To:

* \oraclexe\app\oracle\oradata\XE\CONTROL.DBF
* \oraclexe\app\oracle\oradata\XE\SYSAUX.DBF
* \oraclexe\app\oracle\oradata\XE\SYSTEM.DBF
* \oraclexe\app\oracle\oradata\XE\TEMP.DBF
* \oraclexe\app\oracle\oradata\XE\UNDOTBS1.DBF
* \oraclexe\app\oracle\oradata\XE\USERS.DBF

Move:

* *\YYYYMMDDHHMMSS\oraclexe\app\oracle\product\11.2.0\server\database\hc\_xe.dat*
* *\YYYYMMDDHHMMSS\oraclexe\app\oracle\product\11.2.0\server\database\initXE.ora*
* *\YYYYMMDDHHMMSS\oraclexe\app\oracle\product\11.2.0\server\database\oradba.exe*
* *\YYYYMMDDHHMMSS\oraclexe\app\oracle\product\11.2.0\server\database\oradim.log*
* *\YYYYMMDDHHMMSS\oraclexe\app\oracle\product\11.2.0\server\database\pwdxe.ora*

To:

* \oraclexe\app\oracle\product\11.2.0\server\database\hc\_xe.dat
* \oraclexe\app\oracle\product\11.2.0\server\database\initXE.ora
* \oraclexe\app\oracle\product\11.2.0\server\database\oradba.exe
* \oraclexe\app\oracle\product\11.2.0\server\database\oradim.log
* \oraclexe\app\oracle\product\11.2.0\server\database\pwdxe.ora

Restart Services in the following order:

* OracleServiceXE
* Apache Tomcat

3rd option for keeping the backup utility similar to the old but to allow for backup retention

Here's a third option, keep just a backup folder/ retention day only.

To start:

* Comment line 8 by adding a "rem" at the start:
	+ Line 8: rem set retain\_archive=14
* Comment line 18 by adding a "rem" at the start:
	+ Line 18: rem set archive\_location=%util\_folder%archives

For Option 1 Local or mapped drives do the following:

* Comment line 66 by adding a "rem" at the start:
	+ Line 66: rem %util\_tool%forfiles /p %backup\_location% /d -%retain\_backup% /c "cmd /c move @file %archive\_location%"
* Change line 67 from:
	+ Line 67: %util\_tool%forfiles /p %archive\_location% /m \* /d -%retain\_archive% /c "cmd /c rmdir /s/q @file"
* Change line 67 to:
	+ Line 67: %util\_tool%forfiles /p %backup\_location% /m \* /d -%retain\_backup% /c "cmd /c rmdir /s/q @file"

For Option 2 UNC Paths

* Be sure you've commented the Location Option 1 path assignments between lines 17-21.
	+ Comment out line 27 by adding a rem to the start:
		- Line 27: rem set archive\_location=\\pvwap22\sjsdata\test\archives
* Comment lines 65-68 by adding a "rem" at the start:
	+ Line 65: rem (
	+ Line 66: rem %util\_tool%forfiles /p %backup\_location% /d -%retain\_backup% /c "cmd /c move @file %archive\_location%"
	+ Line 67: rem %util\_tool%forfiles /p %archive\_location% /m \* /d -%retain\_archive% /c "cmd /c rmdir /s/q @file"
	+ Line 68: rem ) >> sjs\_coldbackup11xe.log 2>&1
* Uncomment lines 73-76, and line 80. Edit line 75 as depicted in the before and after shots below:
	+ Change from:
* Line 73: rem (
* Line 74: rem pushd %backup\_location%
* Line 75: rem %util\_tool%forfiles /d -%retain\_backup% /c "cmd /c move @file %archive\_location%"
* Line 76: rem popd
* Line 77: rem pushd %archive\_location%
* Line 78: rem %util\_tool%forfiles /m \* /d -%retain\_archive% /c "cmd /c rmdir /s/q @file"
* Line 79: rem popd
* Line 80: rem ) >> sjs\_coldbackup11xe.log 2>&
* Change to:
	+ Line 73: (
	+ Line 74: pushd %backup\_location%
	+ Line 75: %util\_tool%forfiles /m /d -%retain\_backup% /c "cmd /c rmdir /s/q @file%"
	+ Line 76: Popd
	+ Line 77: rem pushd %archive\_location%
	+ Line 78: rem %util\_tool%forfiles /m \* /d -%retain\_archive% /c "cmd /c rmdir /s/q @file"
	+ Line 79: rem popd
	+ Line 80: ) >> sjs\_coldbackup11xe.log 2>&