



Texas Skyward User Group Conference

Technical Intro to SMS 2.0



Technical Introduction to Skyward



- Progress OpenEdge and Components
- SMS 2.0 Architecture
- OpenEdge Explorer
- Backups
- SMS 2.0 Updates
- IT Services Support

What is OpenEdge?

- OpenEdge is a software development product of Progress, Inc. Skyward SMS 2.0 uses the ABL (fka 4GL) and WebSpeed languages to program the Skyward SMS 2.0 Applications. Skyward SMS 2.0 uses the OpenEdge Enterprise Relational Database Management System to store the data.

OpenEdge Components

- **Database** – A database is a collection of files used to store data and indexes.
- **AppServer** – A Progress software product that allows processing to run using the resources of the server, rather than the client.
- **WebSpeed** – WebSpeed can be used for applications where users are accessing the application using a web browser, mobile device or a system making requests using XML and HTTP/S as the transport protocol.
- **Broker / Agent** – Brokers/Agents are used to communicate with the database.

OpenEdge Components

- **NameServer™** - A Progress software product that controls access to the AppServer and WebSpeed processes.
- **Messenger** – The WebSpeed Messenger picks up incoming application service requests from WebSpeed clients and directs them to a WebSpeed broker that supports the application service; either cgiip program or ISAPI process.
- **Program Files** – Skyward writes and compiles program code. These program files are what is included in the Skyward Release, Addendum and RMA files.

Database Structure

- **TYPE 2 storage v4:**
 - Made up of multiple storage areas and one extent for each area.
 - Multiple areas allow for storing specific data types in their own area, for quicker access.
 - Uses large files
 - More data extents for even more separation of tables, history-type or larger tables.
 - More efficient than Type 1.
- Student/Combined database extents are located in
- ?:\Skyward\data folder on database server
- Finance database extents are located in
- ?:\Skyward\data\skyfin folder on database server

SKYWARD.b1	128,256 KB		
SKYWARD.d1	25,216 KB		
SKYWARD	640 KB		
skyward.db.lg	0 KB		
SKYWARD.lg	2,988 KB		
SKYWARD.lic	22 KB		
SKYWARD.st	3 KB		
SKYWARD_7.d1	512 KB		
SKYWARD_8.d1	128 KB		
SKYWARD_9.d1	17,920 KB		
SKYWARD_10.d1	6,016 KB		
SKYWARD_11.d1	34,816 KB		
SKYWARD_12.d1	17,280 KB	CYWARD_116.d1	128 KB
SKYWARD_13.d1	40,960 KB	CYWARD_117.d1	53,248 KB
SKYWARD_14.d1	12,544 KB	CYWARD_118.d1	11,392 KB
SKYWARD_15.d1	9,216 KB	CYWARD_119.d1	6,656 KB
SKYWARD_16.d1	512 KB	CYWARD_120.d1	8,320 KB
		SKYWARD_121.d1	8,192 KB
		SKYWARD_122.d1	384 KB
		SKYWARD_123.d1	8,192 KB
		SKYWARD_124.d1	512 KB

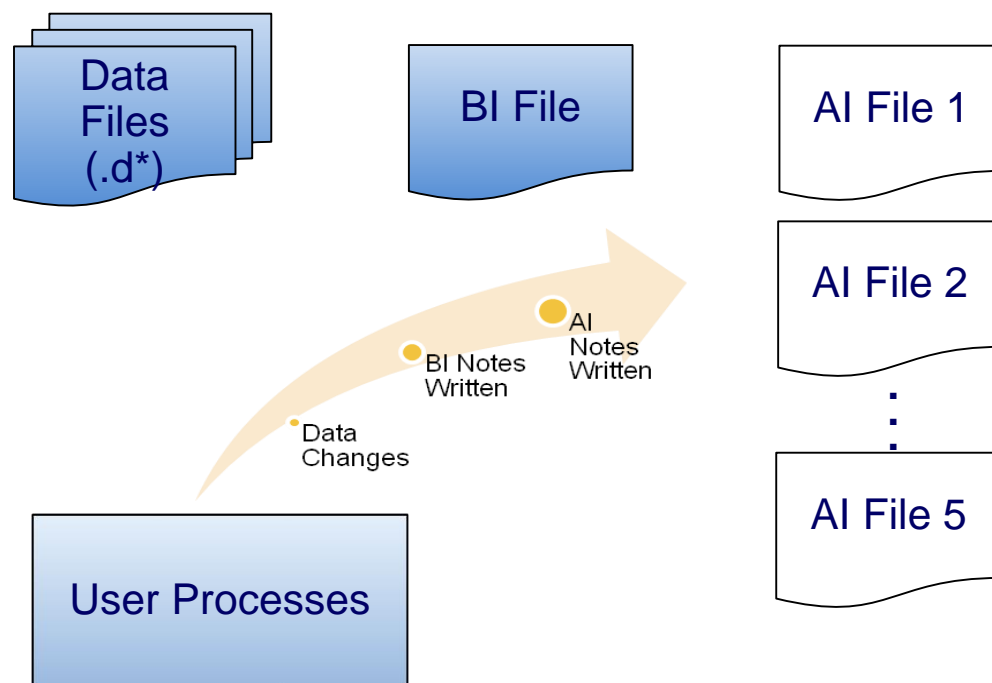
Database Structure

- **Extents – Individual database files used to store data.**
- **TYPE 1 storage:**
 - Formatted extents are formatted space on the hard drive.
 - Extents have a maximum size of 2Gb.
- Student/Combined database extents are located in
- ?:\Skyward\data folder on database server
- Finance database extents are located in
- ?:\Skyward\data\skyfin folder on database server

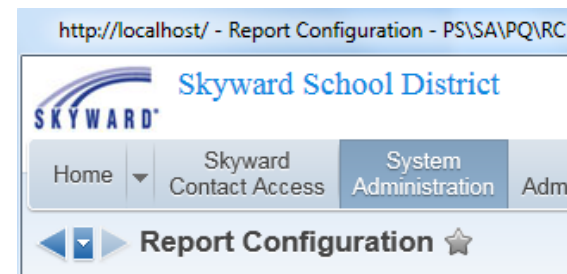
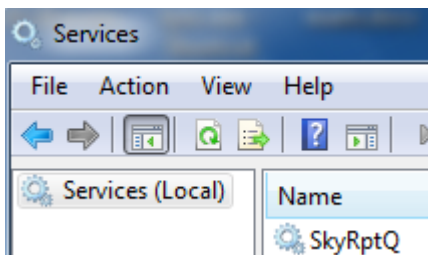
SKYWARD.b1	2,000,000 KB	B1 File
SKYWARD.b2	16 KB	B2 File
SKYWARD.conversion.lg	1,031 KB	LG File
skyward.d1	512,000 KB	D1 File
skyward.d2	512,000 KB	D2 File
skyward.d3	512,000 KB	D3 File
skyward.d4	512,000 KB	D4 File
skyward.d5	32 KB	D5 File
skyward.db	256 KB	Data Base File
skyward.db.lg	36 KB	LG File
skyward.lg	91,200 KB	LG File
skyward.lic	2,050 KB	LIC File
skyward.lk	1 KB	LK File
skyward.st	1 KB	ST File

Database Structure

After Imaging



Report Queue Processing



How To Create Reports

Use Environment Variables
 Use UNC Path ?

UNC Path (\\servername\directory\):

How To Display Reports

Use IIS Virtual Directory
 Use Link Override
 Stream Files To Browser ?

Link Override (http://server):

Stream From (\\servername\directory\):

How Long to Keep Reports

Number of days to keep reports not counting Saturday/Sunday: ?

Scheduled Task Processing

▼ District Print Queue - PQ

- Report Configuration - RC
- View District Queue - VQ
- Scheduled Tasks - ST
- Monitoring Tasks - MT
- Process Tracking - PT
- Program History - PH

```
-AppService asSkyRpt -ct 2
-AppService asSkyRpt -ct 2 [3]
```

http://localhost/ - Scheduled Tasks - PS\ISA\PQ\ST - 12734 - 05

Skyward School District

Home | Skyward Contact Access | System Administration | Data Administration

Scheduled Tasks ☆

Views: General | Filters: *All Scheduled Tasks

Task Description ▲

- ▶ Addendum System Table Load - Loads addendum system tabl
- ▶ Calculate Available Funds for Account Groups
- ▶ Current Print Queue Appserver Log
- ▶ Dual Enrollment Exceptions Email
- ▶ Gradebook Auto Post - Post Gradebook Grades to Report Card

Edit

Delete

Run Now

Clone

Resume All Paused Scheduled Tasks

Pause All Scheduled Tasks

Assign Scheduled Task Blackout

▶ Print Queue Maintenance - Deletes old reports and verifies schedule success.	Skyward	Active	N	10:00 pm
▶ Addendum System Table Load - Loads addendum system tables.	Skyward	Active	N	11:00 pm

Monitoring Task Processing

Tasks

- [Schedule This](#) Create a Scheduled Task with the selected report/utility
- [Scheduled Tasks](#) View all of your scheduled tasks
- [Monitor This](#) Create a Monitoring Task with the selected report/utility
- [Monitoring Tasks](#) View all of your monitoring tasks

▼ District Print Queue - PQ

- Report Configuration - RC
- View District Queue - VQ
- Scheduled Tasks - ST
- Monitoring Tasks - MT
- Process Tracking - PT
- Program History - PH

```
-AppService asSkyRpt -ct 2
-AppService asSkyRpt -ct 2 [3]
```

http://localhost/ - Monitoring Tasks - PS\ISA\PQ\MT - 25833 - 05.15.10.00.05 - Internet Explorer

Skyward School District

Home Skyward Administration Data Administration Student Management Human Resources Financial Management

Monitoring Tasks ☆

Views: **General** Filters: *All Monitoring Tasks

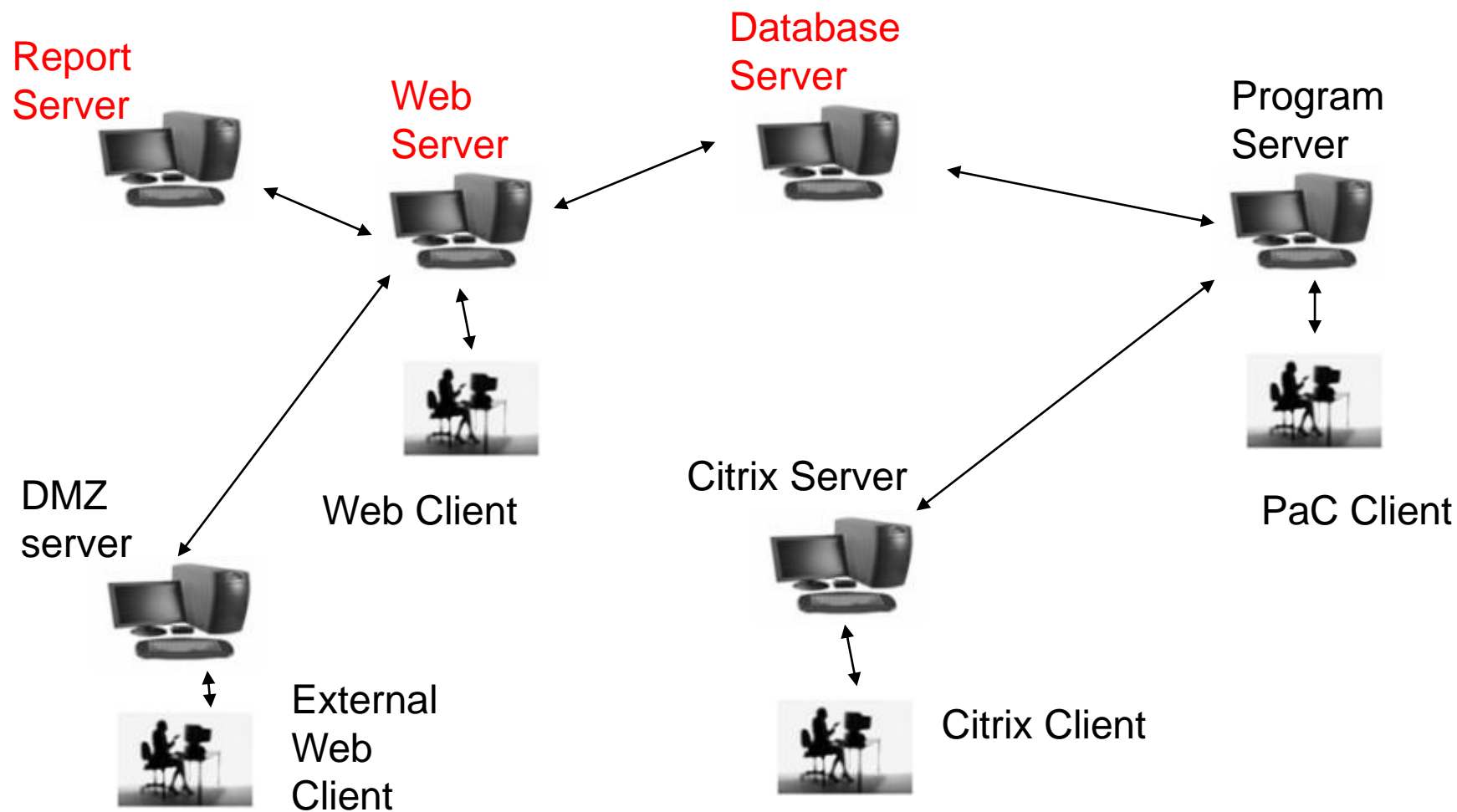
Task Description ▲	Status	Sync Params	User	Frequency
▶ BI file size monitoring with email alerts	Active	N	Skyward	60
▶ Load Release Notifications	Active	N	Skyward	240

- [Edit](#)
- [Delete](#)
- [Run Now](#)
- [Clone](#)
- [Pause All Monitoring Tasks](#)

Server Configuration

- Servers
 - All-in-one server
 - Program server
 - DMZ web server
 - Multiple servers
- Specification
- Anti-virus Protection

Server Configuration



Server Specifications

<https://support.skyward.com/Page.ashx/ITServices/TechnicalInformation/SystemNetRequirements>

Current Requirements

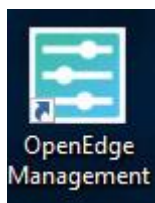
Servers

Data Warehouse
ExComm SIF Agent
School Business Suite (SBS)
Student Management Suite (SMS)
Program Servers (SBS PaC only)
School Management System (SBS and SMS)
OpenEdge Management

PaC and Web Clients

- **The PaC Client supports both 32 bit and 64 bit operating systems.**
- <https://support.skyward.com/Page.ashx/ITServices/TechnicalInformation/SystemNetRequirements>
- **Web-based Workstation Requirements**
- <https://support.skyward.com/DeptDocs/Corporate/IT%20Services/Public%20Website/Technical%20Information/Workstation%20Requirements/Web%20Based%20Workstation%20Requirements.pdf>
- **Web-based SkyScan Install Guide**
- <https://support.skyward.com/DeptDocs/Corporate/IT%20Services/Public%20Website/Technical%20Information/Workstation%20Requirements/Web%20Based%20SkyScan%20Install%20Guide.pdf>
- **Web Food Service SkySerial Install Guide**
- <https://support.skyward.com/DeptDocs/Corporate/IT%20Services/Public%20Website/Technical%20Information/Workstation%20Requirements/Web%20Food%20Service%20SkySerial%20Install%20Guide.pdf>

OpenEdge Explorer Tool



Progress OpenEdge Management

Login

Username

Password

LOGIN

- AdminService
- Logging in
- Navigation
- Components
- Stopping
- Starting

Resource status

- Pass
- Fail
- Not Checked
- Not Running
- Disabled
- Inactive
- Offline

[Resources](#) / [OpenEdge](#) / [AppServer](#) / [asSky](#)

AdminServer: esdemo1

AppServer: asSky

STOP APPSERVER

AdminServer: esdemo1
 Host: ESDemo1
 Broker: ACTIVE
 Operating mode: State-reset
 Broker statistics available: True
 Servers available: 1
 Should register with NameServer: True

Command and Control

 **Broker Control**
 Start or stop broker

Resources

| -Search on resource name

Select Resource ▾

- AdminServer (1 Item)
 - esdemo1
- AppServer (5 Items)
 - esdemo1.asADFSMon
 - esdemo1.asSky
 - esdemo1.asSkyMon
 - esdemo1.asSkyRAS
 - esdemo1.asSkyRpt

Backup Overview

- **How does the database get backed up**
 - Dbscan.bat file is the current backup batch file.
 - Runs the OpenEdge PROBkup Utility
 - The probkup utility checks the integrity and validity of all database blocks and copies them to a physical backup file.
 - If database blocks are found corrupt, the display message will indicate this and the backup file will not be created.
 - You can be emailed the backup log contents on a daily basis for notification of success or failure of the backup task.

- **Other backup products**
 - Some customers use a backup software like Unitrends/Veeam to create a backup of the Skyward server.
 - Even though many backup software packages have open file options, integrity of the database cannot be guaranteed when backing up the live database files in the \data folders.

SMS 2.0 Updates

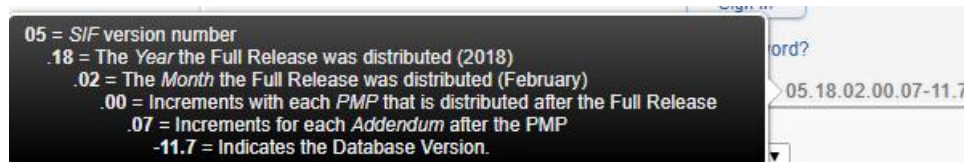
Releases

- Skyward puts out a new release about twice each year, usually in June and December (some exceptions will apply). In 2014, release files were posted, February, June and October.
- This release will contain enhancements and new features, as well as updating the db schema.
- Releases are named for the release number (ex. V117d122.skyrel for June 2018)

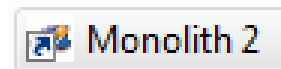
Addendums

- Addendums are updates that happen between releases or PMPs.
- Users will be notified via email that an addendum is available and why it may be necessary.
- There may also, on occasion, be state or even site specific addendums that will contain important software. Instructions for loading are included with the email. Addendums are usually named for only the DF level for PMP0 (ex. V117d122a01.skysfs of 11.7).

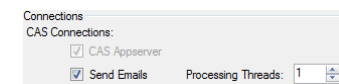
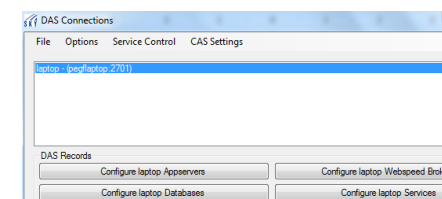
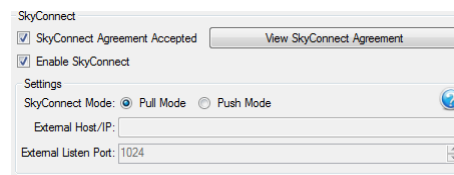
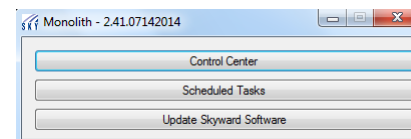
Note: The Skyward program current version number can be found on the blue Title bar of the Skyward client screen Or beneath the login box on the Skyward Web logon page.



Monolith



Skyward Monolith CAS Service
 Skyward Monolith DAS Service



Scheduled Tasks

Task Type	Occurrence	Start Date	Run On
Update Read Only Us...	Daily	09/10/2015 06:47 PM...	DB: School (Stu)
Run DBTool	Weekly	09/12/2015 10:35 AM...	DB: School (Stu)
Update Statistics	Weekly	09/13/2015 10:36 AM...	DB: School (Stu)

Live Chat Call

- Live Chat calls are an option for customers.
- The end user needs to choose the Live Chat button when entering a call.
- The end user will then enter the live chat queue and the call will be accepted as soon as someone is available.
- The IT Services engineer may find the need to change the Live Chat call to a IT Services or Hardware call if the issue cannot be resolved by live chat messaging.





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THANK YOU FOR ATTENDING!

