PCGenesis
Current Status & Future Plans

GASBO
Augusta, GA
November 6, 2019
Agenda

- Introduction
- PCGenesis Server Requirements
- Migration to Database Technology
- New 2020 Federal W-4 Form
- Recent Enhancements
• Good morning & welcome to the PCGenesis Current Status & Future Plans Session. Steve, Angela & I thank you for coming today. I would also like to introduce our manager, Steven Roache, who is attending GASBO this year as well.
• Please feel free to make comments or ask questions during the presentation. When we get to the future plans portion, we need your input to help us focus on your needs. So all of you, please join in the discussion.
• We have a full schedule here at GASBO this year. We have 10 presenters, including myself.
• Gary Jenkins of Jasper County will be returning this year to offer his insights into the Enhanced Leave System.
• We are also welcoming many new presenters: Angela Adams of Buford City and Julie Wiley of Berrien County will talk about best practices in the FAR system;
• Stephanie Collins of Twiggs County will be presenting Payroll Best Practices along with Gary Jenkins;
• Jamie Ulrich and Beth Covington of Dawson County will talk about Accounts Payable;
• Jeanie Jaworski will present alongside Gary Jenkins in the Enhanced Leave session; and
• Steve Phillips of Terrell County will be offering a session on PCGenesis IT Issues and Tips.
• We are looking forward to all of these sessions!
All of today’s PowerPoint presentations will be available on our documentation website under ‘Release Information’. We will publish the PowerPoint along with the presenter’s notes for future viewing.
PCGenesis Current Status

- The PCGenesis Development Team:
  - Diane Ochala
  - Angela Tennyson
  - Karen McArthur
The PCG development team reports to two different branches at the DOE.

Angela and I directly report to the IT department. Our direct manager is Steve Roache and Steve reports to the Chief Information Officer, Bob Swiggum.
PCGenesis Current Status

• The PCGenesis development team provides updates to:
  ▪ <strong>Amy Rowell</strong>, Director, Financial Review.
  ▪ Amy Rowell reports to <strong>Ted Beck</strong>, Deputy Superintendent of Finance and Business Operations.

• The PCGenesis development team also provides updates to the DOE Financial Review Department, specifically Amy Rowell, the Director of Financial Review.
• Amy reports to Ted Beck, Deputy Superintendent of Finance and Business Operations.
PCGenesis Current Status

• In addition to the three developers, we have two help desk personnel.
  ▪ Katie Green
  ▪ Stephanie Smith

• The PCGenesis help desk reports to:
  ▪ Kathy Aspy, Data Collections & Reporting Manager
  ▪ Kathy Aspy reports to Levette Williams, Chief Privacy Officer and Technology Services Director

• PCGenesis also has two help desk personnel who report to Kathy Aspy: Katie Green, and Stephanie Smith.
• Kathy Aspy reports to Levette Williams, the Chief Privacy Officer and Technology Services Director.
Agenda

• Introduction
• PCGenesis Server Requirements
• Migration to Database Technology
• New 2020 Federal W-4 Form
• Recent Enhancements
PCGenesis Server Requirements

• Supported Windows Server Versions:
  – Windows Server 2012
  – Windows Server 2016
  – Windows Server 2019
• Workstation Windows 8 and Windows 10 are supported

• Here’s the good news....
• All of the latest, greatest Microsoft operating systems are now supported!
• There will be no problem upgrading workstations to Windows 10
• And, there will be no problems upgrading servers to Windows Server 2012 or Windows Server 2016 or Windows Server 2019
• As of June 30, 2020, PCGenesis will no longer support:
  – Windows Server 2008 and
  – 2008_R2 operating system
  – Workstation Windows 7
  – Or any earlier operating systems
PCGenesis Server Requirements

• For sites still running **Windows Server 2008** and **2008_R2**:  
  – Immediately begin the process of upgrading your PCGenesis server

• How many districts have started the process of moving off the 2008 operating systems?  
• If not, discuss this will your IT team now!  
• We recommend that any PCGenesis server older than **4 to 5** years should be replaced with a new server.
PCGenesis Server Requirements

• A **stand-alone** server. No other applications can be on the PCGenesis server.
• The **K:** mapping must be defined as a **stand-alone partition** of at least 500 GB
• The PCGenesis server **must be kept up to date** with all Windows operating system service packs applied.
• 32 GB Memory
• 1 TB Hard Drive
• **C:** 500 GB Minimum
• **K:** 500 GB Minimum

• The **K:** mapping must be defined as a **stand-alone partition** of at least 500 GB
• The PCGenesis server **must be kept up to date** with all Windows operating system service packs applied.
• 32 GB Memory
• 1 TB Hard Drive
• **C:** 500 GB Minimum
• **K:** 500 GB Minimum
PCGenesis Server Requirements

- Create GENUSERS user security group with full access (Read/Write)
- Include all PCG users in this security group
- Map K = \NewServer\PCGenesis$

- The IT administrator must create a user security group called GENUSERS
- The GENUSERS security group must have full read/write access to the entire K:\ drive
- All PCGenesis users should be included in this security group
- K should be mapped from individual workstations as shown above
PCGenesis Server Requirements

- **Remote Desktop Connection** is the preferred method for all users accessing PCGenesis.
- Better network security!
- PCGenesis processes will continue to run even if the network connection goes down
- Much faster processing
- More reliable data integrity

Our recommendation:
- **Remote Desktop Connection** is the preferred method for all users accessing PCGenesis.
- When using Remote Desktop, PCGenesis processes will continue to run on the server, even if the network connection goes down
- Better network security!
- Much **faster** processing
- More reliable data integrity
- **How many districts are now using Remote Desktop Connection to access PCGenesis??**
Agenda

• Introduction
• PCGenesis Server Requirements
• **Migration to Database Technology**
• New 2020 Federal W-4 Form
• Recent Enhancements
Unfortunately (or fortunately, depending on how you look at it), technology is constantly moving forward, which makes it a challenge for all of us to keep up, especially the software developers. Change is never easy, but it is necessary.
PCGENESISS FUTURE
Migration to Database Technology

• For year 2019 and beyond....
• Migration of all PCGenesis data to SQL Server Database

Which brings us to the future of PCGenesis
– For year 2019 and beyond....
– Migration of all PCGenesis data to a SQL Server Database.
PCGENESIS FUTURE
Migration to Database Technology

• TODAY: Most PCGenesis data is stored in VISION files
  – Old technology
  – Indexed, flat files
  – Proprietary to Micro Focus runtime
  – Nothing other than Micro Focus ACUCBL can access the data

TODAY: PCGenesis data is stored in VISION files
Old technology
Indexed, flat files
Vision files use the proprietary Micro Focus runtime
Nothing other than Micro Focus ACUCBL can access the data
In 2019, we started the conversion of PCGenesis Vision files to SQL Server Database. The Ga DOE has Angela Tennyson, a database manager / expert, to design the PCGenesis database. Attend the next session with Angela to find out more about SQL Server Database!
• This is a graphical representation of the difference between our old Vision File technology and database technology.
• As you can see from the picture, the old file structure has lots and lots of individual files. Think about all the separate, individual files contained in your SECOND data directory:
  K:\SECOND\FARDATA\AUDIT
  K:\SECOND\PAYDATA\PAYROLL...
In a database, we essentially have one location/file where all the data is stored. We don’t need to keep track of 80+ individual files.
No SQL Database equals hundreds of files!
PCGENESIS FUTURE
Disadvantages of Vision File System

- Data redundancy and inconsistency
- Difficulty in accessing data
- Concurrent access anomalies
- Security problems
- Integrity problems
- Data isolation

Disadvantages of the old Vision File System

- A lot of data is repeated over and over again (Data redundancy and inconsistency)
- We don’t have a lot of built-in tools to access VISION file data (Difficulty in accessing data)
- The system can hiccup if two users try to access the data at the same time (Concurrent access anomalies)
- Limited security is available for VISION data files (Security problems)
- We frequently need data repairs (Integrity problems)
- Data isolation
PCGENESIS FUTURE
Disadvantages of Vision File System
• Today: Problems with data reliability
• Today: If a posting process is interrupted because of power failure, or network hiccup, etc, half of the PCG data files may be updated and half may not.
• This requires a DATA REPAIR.

• Disadvantages of Vision File System
• Why go to all the trouble of converting the data files?
  • Today, we have problems with data reliability
  • Today, if a posting process is interrupted because of a power failure, or network hiccup, etc, half of the PCG data files may be updated (for instance the Receipt file) and half of the files may not be (for instance the AUDIT file).
  • This requires a data repair!!
• Updating the data files allows us to implement far better transaction processing
• This allows us to modernize PCGenesis data structures
PCGENESIS FUTURE
Migration to Database Technology

• Upgraded the Micro Focus runtime
  – Completed with release 16.03.00
  – Replaced the directory K:\ACUCBL

• In 2016, the DOE upgraded the Micro Focus runtime software
• This step replaced the directory ACUCBL
• Most of the updates took place “behind the scenes” and you were probably not aware of the changes
• Even though you might not be aware of any benefits, these changes are BIG!
The good news....
• The upgrade to MicroFocus Extend 10 came with the ability to execute SQL code from within PCGenesis COBOL programs.
• One of the perks of moving our code to the new MicroFocus runtime was the promise of using the new features available with the product.
• And, now we can do just that...
PCGENESIS FUTURE
Migration to Database Technology

RDBMS =
Relational Database Management System

• **RDBMS** stands for **Relational Database Management System**
The upgrade to **MicroFocus Extend 10** came with the ability to execute **SQL code** from within PCGenesis COBOL programs.

- This feature is called **AcuSQL**.
- Having **AcuSQL** bundled in with the **MicroFocus Extend 10** runtime allows us to make use of database technology **at no extra cost**.
- Industry standard database support is now included as **standard** in **Extend 10 ACUCOBOL** runtime product that the Ga DOE purchased.
PCGENESIS FUTURE
Migration to Database Technology
• Going forward, all PCGenesis data will be stored in a SQL Server database.
• The VerraDyne Print Manager stores data in the FREE version of Microsoft SQL Server.

• PCGenesis uses the FREE version of Microsoft SQL Server called SQL Server Express
• We now use Microsoft SQL Server for our PCGenesis database and for the VerraDyne Print Manager
• Going forward, all PCGenesis data will be stored in a database
Advantages of a Relational Database:

1) **Simplicity** - The table structure is an intuitive organization familiar to most users

2) **Concurrency** - In modern Database Management Systems, we can **concurrently** access data without fear of data corruption

3) **Ease of Data Retrieval**

4) **Indexing** - Indexing of a database helps to improve the **speed** of data retrieval operations

5) **Transaction Processing (ACID)** - Transactions are posted with **ALL or NOTHING**. This prevents partial postings from occurring

6) **Security** - Databases come with robust internal security

7) **Client Supportive** - We can use **any programming language** to access a PCGenesis database
PCGENESIS FUTURE

Advantages of a Relational Database

8) Database Management Tools
   • Database monitoring and security are built in
   • Database backup is important. It ensures availability of stable database in case data gets corrupted.
   • Automatic recovery features that go into effect, without the need for an administrator to intervene.

9) Scalability and Flexibility
   • The SQL database can continue to grow as your needs grows – up to a massive one terabyte in size.
   • Databases are built so that they can continue to grow with no re-designs required!

10) Data Analysis - Data can easily transfer into presentation modes or Excel

Questions?
Microsoft SQL server is one of the most robust database software systems available.
Advantages of a Relational Database

- A relational database provides easy data retrieval
- Has many on-board reporting tools available

• A relational database provides easy data retrieval
• Has many on-board reporting tools available
Converting PCGenesis to RDBMS
• This is all great news for PCGenesis
Converting PCGenesis to RDBMS
• Converting PCGenesis to a relational database is a very, very big project
• It will take several years to convert the software
• During that timeframe, major enhancements to PCGenesis will be limited
• Legislative requirements will always be addressed even during the conversion process
• This is a view of the PCGenesis database from within the **Microsoft SQL Server Management Studio**
• We can see 6 separate databases
The location of the PCGenesis databases is in directory **PCGSQLdb** on the **K:** drive
We can find the corresponding database files in: **K:\PCGSQld**
Each database has an **.mdf** and a **.ldf**:  
- the **.mdf** is the data, and  
- the **.ldf** contains a log
There are six databases for PCGenesis

1) PCGenesisDB
   - PCGenesis financial and payroll production data
   - All of the important PCG data is in this database!

Now, I want to tell you about each of the 6 PCGenesis databases...
First and foremost is the PCGenesisDB database
- This database contains the PCGenesis financial and payroll production data
- All of the important PCG data is in this database!
There are six databases for PCGenesis

2) PCG_Master
- PCGenesis backup and restore logs
- Log information
- Needed if help desk needs to troubleshoot problems with your IT staff

The second database PCG_Master contains...
- PCGenesis backup and restore logs
- Log information
- This log information may be needed if help desk needs to troubleshoot problems with your IT staff
- But normally, this information won’t be used by you.
PCGenesis Databases

There are six databases for PCGenesis

3) PCG_Q_DB
   - Corresponds to PAYDATAQ or FARDATAQ
   - Backup of PAYDATA just before Calculate Payroll & Update YTD (Final) (F4)
   - Backup of FARDATA just before updating budget files with vendor check information (F5)

The third database is PCG__Q_DB
- You can think of this database as containing the files that reside in the backups PAYDATAQ and FARDATAQ
- In other words, the tables in the PCG__Q_DB database correspond to PAYDATAQ or FARDATAQ
- PAYDATAQ is a backup of PAYDATA just before Calculate Payroll & Update YTD (Final) (F4)
- FARDATAQ is a backup of FARDATA just before updating budget files with vendor check information (F5)
PCGenesis Databases

There are six databases for PCGenesis

4) PCG_D_DB
   - Corresponds to PAYDATAD
   - Backup of PAYDATA after printing payroll checks, but before printing payroll direct deposits (F2, F3, F5)

The fourth database is PCG_D_DB

- The tables in the PCG_D_DB database correspond to PAYDATAD
- PAYDATAD is a backup of PAYDATA after printing payroll checks, but before printing payroll direct deposits (F2, F3, F5)
There are six databases for PCGenesis

5) PCG_SANDBOX
   - Backup of SANDBOX that is made just before creating the budget SANDBOX (F5, F1)

The fifth database is PCG_SANDBOX
• SANDBOXQ is a backup of SANDBOX that is made just before creating the budget SANDBOX (F5, F1)
Think of these 3 databases as restore points. Think of them the same way you think of PAYDATAQ, FARDATAQ, PAYDATAQ, and SANDBOX.
There are **six** databases for PCGenesis

6) **VQueueDB**
   - Contains the *VerraDyne Print Manager* associated tables and data

The last and sixth database is **VQueueDB**
- The **VQueueDB** database contains the tables and data associated with the *VerraDyne Print Manager*
PCGenesis Databases

• Working on the FAR conversion first
• Started by converting the following files:
  • K:\SECOND\PAYDATA
    – GACOUNTY to T_Lookup.GA_County (19.01.00)
  • K:\SECOND\FARDATA
    – FACILITY to FAR.Facility (19.02.00)
    – SOURCE to FAR.Revenue_Source (19.02.00)
    – BANK to FAR.Bank_File (19.03.00)

• This slide gives a **history** of what we have converted to the **PCGenesisDB** so far
• The migration of PCGenesis to a relational database will be done in a phased, step-by-step approach.
• This will be a slow conversion over many years
• Let’s take a look at the files that have already been converted
# PCGenesis Databases

**PCGenesisDB** - PCGenesis financial and payroll production data

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAR.Bank_File</td>
<td>Contains the bank codes for the PCGenesis system.</td>
</tr>
<tr>
<td>FAR.Facility</td>
<td>Contains the facility and building records for purchase order processing.</td>
</tr>
<tr>
<td>FAR.Revenue_Source</td>
<td>Contains the Revenue Source records for the financial system revenue subsystem.</td>
</tr>
<tr>
<td>T_lookup.GA_County</td>
<td>Contains the County codes for Georgia counties.</td>
</tr>
</tbody>
</table>

**PCGenesisDB**

- In **19.01.00** we started with the simplest file first – *GACOUNTY*
- In release **19.02.00** we converted the FARDATA **FACILITY** file and the **SOURCE** file
- And, in the last release **19.03.00** we converted the FARDATA **BANK** file
- This slide shows the names of the new database tables
- We are trying to build our conversion from the simplest tables first, and then moving to the more complicated files next
PCGenesis Databases

• With release 19.03.00, starting to use **transaction processing**.
• Transaction processing inserted for processes that update the **FAR.Bank_File** table.
• Transaction processing will prevent partial postings of financial data.

• The **Bank** File conversion was the first time we needed to add **transaction processing**.
• As **all** the files in the PCGenesis system are converted to SQL Server database tables, transaction processing will prevent partial postings of financial data.
• Transaction processing has been started, but won’t be finished until **all** the tables involved in a **process** have been converted – this will take time.
PCGenesis Databases

- Update Budget Files with Vendor Check Information
- Enter / Void Manual Vendor Check/Wire Transfer
- Invest Funds, Cancel/Redeem Investments
- Add/Update General Ledger Account
- Journal Entry
- Cancel / Deposit / Reverse Receipts
- Update Budget Files with Current Pay

• These are some of the **processes** that update the **Bank** table
• This is where transaction processing logic has been started:
An acronym for **Transaction Processing** is **ACID** (you can google this!)

This is exciting! We are building much better data reliability!

**Atomicity:** Transactions are posted with **ALL or NOTHING.** This prevents partial postings from occurring.

**Consistency:** Only valid data is allowed to be saved to the database. Edits are defined within the database itself to further ensure that bad data is never written to the files.

**Isolation:** Transactions do not affect each other, so that one user does not step on the work of another user

**Durability:** Written or saved data will not be lost once it is committed to the database.
PCGenesis Databases

• Release 19.04.00
• K:\SECOND\FAR_DATA\NAME
  – NAME will be split into 10 separate tables
    • FAR.Name_01_Fiscal_Year Fiscal Year
    • FAR.Name_02_Fund Fund
    • FAR.Name_03_FY_Flag Fiscal Year Flag
    • FAR.Name_04_Program Program
    • FAR.Name_05_Function Function
    • FAR.Name_06_Object Object
    • FAR.Name_07_Fac_Bldg Facility/Building
    • FAR.Name_08_Additional Additional
    • FAR.Name_09_Rev_Source Source
    • FAR.Name_10_Blnce_Sheet Balance Sheet

PCGenesisDB

• In release 19.04.00 we hope to have completed the conversion of the NAME file
• We are separating the NAME file into 10 separate tables within the database
• The NAME file is where we define the parts of a GL account number: Fiscal year, fund, program, function, object, facility/building, source, and balance sheet
The data on the **Account Master Description** screen is stored in the **NAME** file.

Do you recognize this screen in PCGenesis?
The **NAME** file defines the **components** for the GL Accounts.
PCGenesis Databases

2020 PCG Releases

- K:\SECOND\FARDATA\ACCOUNT Budget accounts
- K:\SECOND\FARDATA\ACCOUNTR Revenue accounts
- K:\SECOND\FARDATA\ACCOUNTG Balance accounts

- Almost every program in the PCGenesis system uses the GL accounts.
- The changes required for this conversion are significant!

- In the upcoming 2020 PCGenesis releases, we will convert the Budget, Revenue, and Balance Sheet GL accounts into the PCGenesis database.
- **Almost every program in the PCGenesis system uses the GL accounts**
- The changes required for this conversion are significant!
PCGenesisDB

- The drop-down screen for the Budget accounts illustrates the contents of the ACCOUNT, ACCOUNTR, and ACCOUNTG files.
- The GL accounts will become part of the tables in the PCGenesisDB database.
Converting PCGenesis to database

- Once the **NAME** file and the **GL account files** are converted...
- We will concentrate on **Receivables** and **Receipts**
  - K:\SECOND\FARDATA\RECEIPT
  - K:\SECOND\FARDATA\RECEIVE
- The goal is to complete an entire financial subsystem by 2021
Once the “building blocks” are in a SQL Server database, subsequent tables can be built.

For example, the next tier tables would be:
- K:\SECOND\FARDATA\PO (Purchase Order File)
- K:\SECOND\FARDATA\EXPENSE (Invoice File)
- K:\SECOND\FARDATA\INVEST (Investment File)
- K:\SECOND\FARDATA\JEMASTER (JE Journal File)

Questions?
PCGenesis Databases - Backup

• With release 19.03.00, **K:\SECOND cannot be restored** without also restoring the **PCGenesisDB** database.

• These two entities must be kept in sync, otherwise the *Display Bank Balances* screen will not have correct data.

This is important!!!!

• With the last release 19.03.00, **K:\SECOND cannot be restored** without also restoring the **PCGenesisDB** database.

• These two entities must be kept in sync, otherwise the *Display Bank Balances* screen **will not have correct data**.
The Bank **Cash** and **Investment** amounts will not be correct if **SECOND** is restored without the **PCGenesisDB** database!!!
PCGenesis Databases - Backup

- What you need for a disaster recovery:
  - K:\SECOND – PCG payroll & financial data
  - K:\PCGSQLdb – The database data for PCG data and the VerraDyne print queue
  - K:\UCTARCHIVE – Archived PCGenesis reports in pdf format
  - K:\UCTPRINT – PCGenesis report files currently in the VerraDyne print queue

What you need for a disaster recovery:
The two most important directories containing PCGenesis data are SECOND and PCGSQLDB

K:\SECOND – PCG payroll & financial data
K:\PCGSQLdb – The database data for the new print queue
K:\UCTARCHIVE – Archived PCGenesis reports in pdf format. This directory is important if you are using the archive feature of the VerraDyne print queue
K:\UCTPRINT – PCGenesis report files currently in the print queue
PCGenesis Databases - Backup

• These directories contain data and must be backed up...
  – At the same time as the daily backup of K:\SECOND data

• Again, the two most important directories containing PCGenesis data are SECOND and PCGSQldb
• We would like all 4 directories to be backed up daily
• UCTARCHIVE is important if you are using the archive feature of the VerraDyne print queue.
Prior to running a full backup of the K:\ PCGenesis disk drive...

- School districts must stop the VerraDyne Queue Service and the SQL Express services
- Otherwise, the backup will not run to completion.
PCGenesis Databases - Backup

• **Prior** to running a full backup of the K:\*.* PCGenesis disk drive...
  – NET STOP VQueueService
  – NET STOP MSSQL$SQLEXPRESSPCG

• These are the commands required to stop **VQueueServer** and **SQLExpress**
• School districts must stop the **VerraDyne Queue Service** and the **SQL Express** services prior to running a full backup of K:\*.*
After the backup has completed, the following commands can be executed...

- `NET START MSSQL\$SQLEXPRESSPCG`
  - (Make sure to wait at least 2 minutes for `SQLEXPRESSPCG` to start before trying to start `VQueueService`)
- `NET START VQueueService`

After the backup is complete, the services must be restarted using these commands.

**NOTE:** Make sure to wait at least 2 minutes for `SQLEXPRESSPCG` to start before trying to start the `VQueueService`
PCGenesis Databases - Backup

• The VerraDyne Queue Manager automatically runs a clean-up process every night at midnight which should take approximately 15 minutes to run.
• Since this process runs at midnight, make sure that the PCGenesis backups and reorganizations are not scheduled to overlap this timeframe.
• Overlapping processes may cause problems with the clean-up and backups.

Backup considerations:
• The VerraDyne Queue Manager automatically runs a clean-up process every night at midnight which should take approximately 15 minutes to run.
• Since this process runs at midnight, make sure that the PCGenesis backups and reorganizations are not scheduled to overlap this timeframe.
• Overlapping processes may cause problems with the clean-up and backups.
• In release 19.02.00 we came out with a new feature which provides an easy way to backup and restore K:\SECOND and the PCGenesisDB database.
• On the System Utilities Menu, there is a new option called Backup / Restore PCGenesis Data
3 functions are available in this utility:

- Backup PCGenesis Data
- Restore PCGenesis DB
- Restore PCGenesis Schema

To restore any data, you must call the Help Desk. Restore requires the DOE password and the help desk will walk you through the restore process.
Backup PCGenesis Data

- However, the backup can be run by anyone as needed!
- This functions backs up both the PCGenesisDB database and the SECOND directory
Backup PCGenesis Data

When you run the backup function you must pick a letter A thru K
Backup PCGenesis Data

• This function creates a backup of the PCGenesisDB. This is a backup of all the production PCG data in the database.
• The backup is created in the BACKUP folder under PCGSQldb directory.
• The backup creates PCGenesisDBx.BAK where the last letter is the one you chose for the backup.
Backup PCGenesis Data

• The backup function also creates `K: \SECONDx`. This is a backup of `SECOND`!
• The last letter is the one you chose for the backup
PCGenesis Databases - Backup

- **Backup / Restore PCGenesis Data** (F30, F12).
- This is a quick and easy way to get a backup!
- Backs up the important PCGenesis data.

Backup PCGenesis Data

- This backs up ALL the important PCGenesis data!
- It is a quick and easy way to get an adhoc backup of your data

Questions?
Agenda

• Introduction
• PCGenesis Server Requirements
• Migration to Database Technology
• New 2020 Federal W-4 Form
• Recent Enhancements
How many of you are aware that a new **W-4** form goes into effect on January 1, 2020?
New 2020 W-4 Form

2020 W-4 Required:
- For new employees hired as of 01/01/2020
- Existing employees who wish to change their withholding options

- The new W-4 will be required for new employees hired as of 01/01/2020
- It will also be required for existing employees who wish to change their withholding options
Existing employees who do not change their withholding options:

- Withholding based on old W-4 form

- All other existing employees do not need to fill out a new W-4 form

- Withholding will continue to be based on their previous withholding options
New 2020 W-4 Form:  
In **Step 1** of the form the employee selects their **Federal Marital Status**:  
• Before, only Single or Married were available  
• Now, the IRS is adding a filing status for **Head of Household**
New 2020 W-4 Form

Step 2: Multiple Jobs or Spouse Works

If there are only two jobs total in the household, the employee can check this box.

The employee should do the same on the W-4 for the other job.
New 2020 W-4 Form:
Step 3: Claim Dependents
• The new W-4 requires an **amount** to be entered for the **dependent allowance** in Step 3
New 2020 W-4 Form:
Step 4: Other Adjustments
• Box 4(a) requires an **amount** to be entered for other income
New 2020 W-4 Form:
Step 4: Other Adjustments
- Box 4(b) requires an amount to be entered for deductions
- Box 4(b) should be entered if the employee expects to claim deductions other than the standard deduction
New 2020 W-4 Form:

Multiple job households:

• According to the instructions: the employee should enter amounts into **Steps 3 and 4** on only **one** W-4 form in the household

• **Steps 3 and 4** should be filled out for the highest paying job
New W-4 fields are being added to the **Payroll Withholding / Direct Deposit Data** screen:
The first new field is **2020 W-4?** – This is a new **Yes / No** flag for whether the employee has filled out a new W-4 form.
New 2020 W-4 Form

- Step 2 – Two jobs flag
- Step 3 – Dependent amount
- Step 4a – Other income amount
- Step 4b – Deduction amount

4 additional W-4 fields are being added to the Payroll Withholding / Direct Deposit Data screen:
- Box 2: Two jobs flag (Yes / No flag)
- Box 3: Dependent amount
- Box 4(a): Other income amount
- Box 4(b): Deduction amount
IRS Publication 15-T provides calculation instructions for automated payroll systems:

- The new 2020 Federal Tax Calculation requires 6 withholding tables!
IRS Publication 15-T provides calculation instructions for automated payroll systems:

- **3** withholding tables are for **Standard** withholding rate schedules
  - Needed for employees who filled out a W-4 prior to 2020
  - and for employees when the “Two Jobs” box in **Step 2** is not checked

New 2020 Federal Tax Calculation:
- **3** tables for **STANDARD** withholding rate schedules
  - W-4 prior to 2020 or,
  - When “Two Jobs” box in **Step 2** is **not** checked
New 2020 Federal Tax Calculation:
• 3 tables when the “Two Jobs” box is checked in Step 2 of the 2020 W-4

IRS Publication 15-T provides calculation instructions for automated payroll systems:
• 3 withholding tables needed for when the “Two Jobs” box is checked in Step 2
New 2020 Federal Tax Calculation:
- Married Filing Jointly
- Single
- Head of Household

IRS Publication 15-T provides calculation instructions for automated payroll systems:
- 3 withholding tables needed
  - Married Filing Jointly
  - Single
  - Head of Household
Personnel Data screen:

- With so many new fields on the W-4, the tax data is removed from the Personnel Data screen
**New Employee Data** screen:

- With so many new fields on the W-4, the tax data is **moved from screen 1 of the New Employee Data** screen
New Employee Data screen:

- And is moved to screen 2 of the New Employee Data screen

New Employee Screen
- Tax data is moved to screen 2
New 2020 W-4 Form

• The November release (19.03.01) will make the **new W-4 fields available**

• The December release (19.04.00) will **update the Federal income tax** calculation per IRS publication 15-T

• The November release (19.03.01) will make the **new W-4 fields available**

• The December release (19.04.00) will **update the Federal income tax** calculation per IRS publication 15-T
Agenda

• Introduction
• PCGenesis Server Requirements
• Migration to Database Technology
• New 2020 Federal W-4 Form
• Recent Enhancements
40 Items Allowed Per Wire Transfer:

- An enhancement has been made to Wire Transfer processing (F1, F4, F7).
- Before, only 13 expenditures could be selected per wire transfer.
- Now, up to **40 expenditures** may be selected for a single wire transfer.
- Reduces the number of wire transfers that are necessary for paying claims.
- Saves time and effort and improves reliability by reducing data entry.

Has this been helpful?
### 40 Items Allowed Per Wire Transfer:
- Also, we have added the ability to **select** or **deselect** an entire page of expenditures.
- Has this been helpful?

<table>
<thead>
<tr>
<th>Function F9 (Select page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function F10 (Deselect page)</td>
</tr>
</tbody>
</table>
40 Items Allowed Per Wire Transfer

• Up to **40 items** may be selected for a **wire transfer**.

• Up to **13 items** may be selected for a **vendor check**.
  – Only **13** items on a vendor check because of space limitations on the check form

**40 Items Allowed Per Wire Transfer:**

• We allow up to **40 items** for a **wire transfer**
• You are still limited to **13 items** for a **vendor check**
  • Only **13** items can print on the vendor check form
40 Items Allowed Per Wire Transfer:
• The wire transfer will display up to 40 payables

Questions?
SHBP Audit Report for the Fiscal Year

- A new option is available on the *Monthly/Quarterly/Fiscal/Biennial Reports Menu*

- This report was requested by the folks in Financial Review to help with the audit process
SHBP Audit Report for the Fiscal Year

The report lists GHI payments by month for the entire calendar year.

How many of you found this report useful?

Does this address all the documentation needed for the SHBP audit?
SHBP Audit Report for the Fiscal Year

- The **Duplicate Social Security and Merged Records Report** shows how information is combined when one employee has two or more Employee IDs.
Avoid having to process JE’s to transfer money between GL accounts after payroll completed!

Employer Contribution GL Account Distributions for Deductions

- A new option available for when the employer contribution is a **Fixed Amount** (value = 1)
- This option allows you to avoid having to process JE’s to transfer money between GL accounts after the payroll is completed!
Employer Contribution GL Account Distributions for Deductions

- This option allows you to select the **Process Type Codes** for GL distribution
- The GL distribution can be limited to **Process Types** ‘S’, ‘D’, and ‘H’, for example.
Fatal error on Payroll Exceptions Report:
• If an employee is not paid using one of the Process Type Codes defined for the deduction
• “CAN’T DISTRIB FIXED EMPLR CONTRIB, NO SEL GROSS”

Employer Contribution GL Account Distributions for Deductions
• If an employee is not paid using one of the Process Type Codes defined for the deduction, a fatal error will appear on the Payroll Exceptions Report
Payroll Deduction Reports
This is a new option designed to protect sensitive payroll data
### Payroll Deduction Reports

Here is an example of a **Payroll Deduction Report** with only the last four digits of the Social Security Number displayed on the report.

#### New SSN Options:
- Allows sensitive payroll data to be protected

<table>
<thead>
<tr>
<th>Employee Name</th>
<th>SSN</th>
<th>Deducted Amount</th>
<th>W2 Amount</th>
<th>W2 Gross</th>
<th>W2 Gross</th>
<th>Act W2 Gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, John</td>
<td>123-45-6789</td>
<td>$100.00</td>
<td>$50.00</td>
<td>$200.00</td>
<td>$200.00</td>
<td>$200.00</td>
</tr>
<tr>
<td>Smith, Jane</td>
<td>987-65-4321</td>
<td>$150.00</td>
<td>$75.00</td>
<td>$300.00</td>
<td>$300.00</td>
<td>$300.00</td>
</tr>
<tr>
<td>Brown, Robert</td>
<td>456-78-9012</td>
<td>$200.00</td>
<td>$100.00</td>
<td>$400.00</td>
<td>$400.00</td>
<td>$400.00</td>
</tr>
</tbody>
</table>
PCGENESIS FUTURE

- These are very exciting changes for PCGenesis!

Questions?

- We are very excited about the upgrades for PCGenesis
- Questions?
Site Recommendations

• Upgrade any server > 3 to 5 years old
• Implement Remote Desktop access !!!!
• Weekly full system backup of K:\*.* (Retain 3 weeks)
• Daily backups of data (K:\SECOND and K:\PCGSQLDB) to CD/DVD/USB (Retain for 1 month)
• Document restore procedures for emergencies

• Upgrade any server > 3 to 5 years old
• Implement **Remote Desktop** access !!!!
• **Weekly** full system backup of K:\*.* (Retain 3 weeks)
• **Daily** backups of data (K:\SECOND and K:\PCGSQLDB) to CD/DVD/USB (Retain for 1 month)
• Document **restore procedures** for emergencies
Agenda

• PCGenesis Broadcast E-mail List
• Getting Ready for 2020 GHI
• User Input
- The PCG team has implemented a new e-mail user list for PCGenesis.
- PCGenesis users can use the e-mail list to broadcast e-mails to all users enrolled in the group. The e-mail list can be used as a discussion forum.
The PCGenesis e-mail list already has 209 registered users.

Any user involved with PCGenesis can join:

- Financial Directors
- Payroll Administrators
- IT Specialists
PCGenesis User List

• Those PCGenesis districts and RESAs that join the user list will be able to:
  – Share ideas
  – Discuss problems
  – Have many more resources available for gaining insight into PCGenesis operations

The e-mail list can be used to:
• Share ideas
• Discuss problems
• The list provides many more resources for gaining insight into PCGenesis operations and everyday issues
PCGenesis User List

• Join by sending a blank e-mail to:
  
  join-pcgenesis@list.doe.k12.ga.us

• After joining, users can take advantage of discussion forums by sending e-mails to:
  
  pcgenesis@list.doe.k12.ga.us

We include instructions for joining the PCGenesis User List when we send out PCGenesis releases, in the **Release Installation Instructions**.

• Join by sending a blank e-mail to:
  
  join-pcgenesis@list.doe.k12.ga.us

• After joining, users can take advantage of discussion forums by sending e-mails to:
  
  pcgenesis@list.doe.k12.ga.us
Agenda

• PCGenesis Broadcast E-mail List
• Getting Ready for 2020 GHI
• User Input
The GHI options B1, B2, and B3 are still available for BCBS Gold, Silver and Bronze plans. The GHI option B6 has been added for BCBS HMO. The GHI option H1 has been added for United HealthCare HMO. The GHI option H2 has been added for United HealthCare HDHP. The GHI option K1 has been added for Kaiser HMO.

GHI premium amounts have NOT changed for 2020.
This is a complete list of the 2020 GHI options. Blue Cross/Blue Shield, United Healthcare, Kaiser and TriCare Supplement make up the available options for employees.
• GHI tiers 10, 40, 90, 91, 94 – 97 are the same.
Getting Ready for 2020 GHI
How to Install 2020 GHI

1) Install PCGenesis Release 19.03.01. This release will automatically upload the new 2020 GHI premium amounts into the Benefit Plan/Option/Tier Maintenance File.
2) Download the DCH open enrollment file.
3) Import State Health Options & Tiers from DCH File.
4) Set State Health Deduction Amount For Active Employees.

Several steps are necessary to get ready to process GHI in 2020. Before your December payroll, you will be able to install the 19.03.01. This release will contain the 2018 GHI premiums. The new premiums will be uploaded automatically by the release.

After open enrollment is completed, the new employee GHI elections must be downloaded from the DCH website before the enrollment data can be imported into the PCG personnel screen.

Once the GHI elections have been finalized, the last step is to update the employees’ deduction screen with the 2020 premium amounts for the GHI deductions based upon the employees’ GHI option and tier information on the personnel screen.
Getting Ready for 2020 GHI

• Download the DCH open enrollment file

The most difficult part of this process is downloading the enrollment data from DCH. It seems that every year the DCH website changes and honestly, I don’t know what to expect this year with the new ADP interface.

Typically, SHBP will send all districts an e-mail which identifies the correct SHOEUPDT file which contains the open enrollments. You must know the exact name and date of this file from SHBP or you will download an incorrect file!

In this example, the correct file was SHOEUPDT dated November 18, 2011.

Select the correct file.
### Getting Ready for 2020 GHI

- Download the DCH open enrollment file

The open enrollment file is displayed.

Select the download icon.
Getting Ready for 2020 GHI
• Download the DCH open enrollment file

The following dialog box will be displayed. It is important to enter the selections as shown above:

- All pages
- Selected data
  - Download as CSV
  - Policy SHOEUPDT
- Do NOT compress the file

Then select the download icon.
Getting Ready for 2020 GHI

• Download the DCH open enrollment file

Select SAVE to save the file to your C drive.
Getting Ready for 2020 GHI

• Download the DCH open enrollment file

Once the open enrollment file has been downloaded, do NOT edit the file in Excel! Editing the file in Excel causes the formatting of the file to change. Instead, make any changes using NOTEPAD.
Now the final two steps of the GHI Open Enrollment process:

1) Import State Health Option & Tier from DCH File = F6
2) Set State Health Deduction Amount For Active Employees = F8

You must execute BOTH of these steps!!!
Getting Ready for 2020 GHI

Open Enrollment – Import GHI Option and Tier Elections

- Personnel System (F3)
- Special Functions Menu (F13)
- Import State Health Option & Tier from DCH File (F6)

Personnel and deduction screens must be updated for the December payroll with the new options that the employee selected during open enrollment.

The file downloaded from SHBP can be imported into PCGenesis.
**Getting Ready for 2020 GHI**

Open Enrollment – Import GHI Option and Tier Elections

Use F10 to browse for the file.

Importing the County is optional.

Using this process only enters the **option** and **tier** from the imported file to the personnel screen. It does NOT update any amounts on the deduction screen.
Getting Ready for 2020 GHI

Set GHI Deduction Amounts

- Personnel System (F3)
- Special Functions Menu (F13)
- Set State Health Deduction Amount For Active Employees (F8)

After the correct option and tier is entered (or imported) on the personnel screen for each employee, the premium can be updated on the deduction screen using this procedure.

The premium was not updated with the prior import, so this procedure must also be completed.
Before running this procedure, the new option and tier choices should be entered on the personnel screen. It is also important to have the correct GHI deduction code entered on the personnel screen.

This procedure should be run in **trial mode** first. The trial mode will not update the deduction screen, but a report will be produced that contains all of the changes that will be made.

Review the report to make sure it is correct and then run the update again with the **trial mode flag** switched to **N**. **This will update all of the employee premiums on the deduction screen** to match the premiums set in the GHI Plan/Option/Tier maintenance file.
Verify the enrollment data and premium data on this report before running the process in FINAL mode.
Agenda

• Introduction
• PCGenesis Recent History
• Upgrade of PCGenesis Print Queue
• PCGenesis Future
• PCGenesis Broadcast E-mail List
• Getting Ready for 2020 GHI
• User Input
Future Plans
Help us focus our efforts

• What major feature/function do you need?
• We welcome your input/requests in writing
• Complete the ‘Comments and Requests’ today
• Provide your input during the discussions

• In order for the PCGenesis development team to focus our efforts, we would greatly appreciate your input.
• We welcome your requests in writing – you can complete the ‘Comments and Requests’ forms today.
• We also welcome your input during the roundtable discussions which are on the GASO schedule.
PCGenesis Documentation

- Financial Accounting and Reporting System Operations Guide
- Payroll System Operations Guide
- Personnel System Operations Guide
- Certified/Classified Personnel Information (CPI) System Operations Guide
- Budget System Operations Guide
- LUAS Manual
- Technical System Operations Guide
- Release Information
Questions?
Thank you for attending!