

Richard Woods, Georgia's School Superintendent "Educating Georgia's Future"

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#### **MEMORANDUM**

TO: PCGenesis System Administrators

FROM: Steven Roache, Senior Information Systems Manager

#### SUBJECT: Release 21.03.00 – Miscellaneous Changes / Conversion to PCGenesisDB Database / Installation Instructions

This document contains the PCGenesis software release overview and installation instructions for *Release 21.03.00*.

PCGenesis supporting documentation is provided at:

http://www.gadoe.org/Technology-Services/PCGenesis/Pages/default.aspx

#### September 2021 Payroll Completion Instructions

Install this release <u>after</u> completing the September 2021 payroll(s). Install this release <u>before</u> executing F4 – Calculate Payroll and Update YTD for the October 2021 payroll.

#### A PCGenesis E-mail User List Is Available

The Georgia Department of Education has created an e-mail user list for PCGenesis. PCGenesis users can join the list by sending a blank e-mail to:

#### join-pcgenesis@list.doe.k12.ga.us

After joining the PCGenesis user list, users can take advantage of discussion forums by sending e-mails to:

#### pcgenesis@list.doe.k12.ga.us

An e-mail sent to <u>pcgenesis@list.doe.k12.ga.us</u> will broadcast the e-mail to all PCGenesis users enrolled in the group. Those PCGenesis districts and RESAs that join the user list will be able to share ideas, discuss problems, and have many more resources available for gaining insight into PCGenesis operations. Join today!

#### Mark Your Calendars!

#### PCGenesis Sessions and Training at GASBO 2021

The Georgia Department of Education is pleased to announce that the PCGenesis team will be attending GASBO 2021 this year <u>in person</u>. PCGenesis will be offering two full days of sessions and training at this year's GASBO conference in November. PCGenesis will have a dedicated room and will be offering eight sessions. So, mark your calendars and hopefully we can all celebrate a return to normal!

# Table of Contents

Section A: Overview of Release	4
A1. PCGenesis System Enhancements	4
A1.1. Conversion of AUDIT and CONTROL to PCGenesisDB SQL Server Database Tables	4
A1.2. Backup of PCGenesis Data	5
A2. Payroll System	6
A2.1. First Payroll of Fiscal Year	6
A3. Financial Accounting and Reporting (FAR) System	7
A3.1. CONTROL File Converted to Database Table	7
A3.2. AUDIT File Converted to Database Table	7
A3.3. Financial Transaction Processing Completed!	8
A3.5. Create DE 0046 Transmission File	8 11
A3.6. Finalize Current Monthly/Year-End Figures	11
A4. Personnel System	12
A4.1. Salary Projection Menu Removed	12
Section B: Installation Instructions for Release 21.03.00 Software	13
B1. Perform a PCGenesis Full Backup	13
B2. Verify Windows Security Group GENUSERS	14
B3. Install PCGenesis Release 21.03.00	15
B4. Verify Release 21.03.00 Was Successfully Installed	22
B5. Perform a PCGenesis Full Backup After Release 21.03.00 is Installed	23
Section C: After PCGenesis Release 21.03.00 Has Been Installed	24
C1. Verify Contents of the End-of-August Backup	24
Appendix A. Summary of PCGenesis Database Components	26

# Section A: Overview of Release

## A1. PCGenesis System Enhancements

## A1.1. Conversion of AUDIT and CONTROL to PCGenesisDB SQL Server Database Tables

The GaDOE is happy to announce a major upgrade of PCGenesis. Release 21.03.00 continues the conversion of PCGenesis Vision data into *SQL Server* database tables. The migration of PCGenesis to a *SQL Server* database platform is a major undertaking, but a step that it is imperative to take for the longevity of the product.

Today, the PCGenesis data is stored in VISION files which are indexed, flat files, and are proprietary to *MicroFocus*. Nothing other than *MicroFocus* **ACUCOBOL** can access the data from VISION files. VISION files represent very old technology. *SQL Server* is a relational database management system (RDBMS). Relational databases are faster, more efficient and more powerful than VISION files. The database name is **PCGenesisDB**.

In release 21.03.00, the file K:\SECOND\FARDATA\CONTROL is converted into the SQL Server database tables *FAR.Control\_95\_Budget*, *FAR.Control\_96\_Annuity*, *FAR.Control\_97\_Message*, *FAR.Control\_98\_Phrase*, and *FAR.Control\_99\_System*. These tables store control records for the PCGenesis system.

The file K:\SECOND\FARDATA\AUDIT is converted into the *SQL Server* database table *FAR.Audit\_File*. This table stores all of the financial transaction records associated with the PCGenesis financial system.

Converting PCGenesis into a relational database management system (RDBMS) is a very, very big project. We estimate that it may take several years to convert the software. During that timeframe, major enhancements to PCGenesis will be very limited. However, legislative requirements and ongoing maintenance will always be addressed even during the conversion process.

The PCGenesis database is in the following location for Windows Server 2012, 2016 or 2019:

- K:\PCGSQLdb\MSSQL13.SQLEXPRESSPCG\MSSQL\DATA\ PCGenesisDB.mdf
- K:\PCGSQLdb\MSSQL13.SQLEXPRESSPCG\MSSQL\DATA\ PCGenesisDB\_log.ldf

Why go to all the trouble of converting the old VISION data files? First, updating the data files allows us to implement far better transaction processing. Today, we have problems with data reliability. Today, if a posting process is interrupted because of a power failure, or network hiccup, half of the PCGenesis data files may be updated (for instance the RECEIPT file) and half of the files may not be updated (for instance the AUDIT file). This requires a data repair!!

Second, we can modernize the PCGenesis data structures and allow access to the data from programs other than COBOL programs. This means that as COBOL programmers retire, the data will be accessible to more modern programming languages such as C#, Java, Crystal Reports, etc., and a new generation of programmers will more easily take over maintenance of the product.

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 4 of 31 All Rights Reserved. The upgrade to *MicroFocus Extend 10* in September of 2016 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 the Ga DOE to make use of database technology at no extra cost. Industry standard database support is now included in the *MicroFocus Extend 10 AcuCOBOL* runtime product.

## A1.2. Backup of PCGenesis Data

This information must be forwarded to your Technology Representative or you may not have everything you need for a successful restore of your PCGenesis production data.

Going forward, PCGenesis data will be split between files contained in the directory **K:\SECOND** and the new *SQL Server* database table located in **K:\PCGSQLdb**. Therefore, it is very important to backup **K:\PCGSQLdb** and **K:\SECOND** during the nightly data backup. One directory cannot be backed up without the other directory, and they must be maintained together. To create a complete data backup of the PCGenesis system, the two directories need to be backed up together.

Starting with release 19.04.00, **K:\SECOND** <u>cannot be restored</u> without also restoring the **PCGenesisDB** database. These two entities must be kept in sync, otherwise <u>receipts, receivables, and investments will be lost</u>.

The following directories are needed for disaster recovery:

- K:\SECOND PCG payroll & financial data
- **K:**\**PCGSQLdb** The *PCGenesisDB* database for the PCGenesis production data, and the *VQueueDB* database for the *VerraDyne* print queue data
- K:\UCTARCHIVE Archived PCGenesis reports in pdf format
- K:\UCTPRINT PCGenesis report files currently in the print queue

Prior to running a backup of the K:\PCGSQLdb directory

- School districts must <u>stop</u> the *VerraDyne Queue Service* and the *SQL Express* services for the backup to successfully run to completion.
- The following commands should be entered in the command prompt for *Windows* or added to the backup bat file to <u>stop</u> the services:

### NET STOP VQueueService

### NET STOP MSSQL\$SQLEXPRESSPCG

After the K:\PCGSQLdb directory backup has completed – Start Services

• The following commands should be entered in the command prompt for *Windows* or added to the backup bat file to <u>start</u> the services:

## NET START MSSQL\$SQLEXPRESSPCG

- (Make sure to **wait at least 2 minutes** for **SQLEXPRESSPCG** to start before trying to start **VQueueService**)

### NET START VQueueService

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# A2. Payroll System

## A2.1. First Payroll of Fiscal Year

A problem has been corrected when running the first payroll of the fiscal year in the *Update Budget Files with Current Pay* payroll step (F2, F3, F14). Before, the system would abort when trying to create a payroll claim using the payroll clearing account for the new fiscal year (for example the account 22-199-0-9990-9000-000000-0-000000), when the clearing account did not exist yet. In this case, the *Update Budget Files with Current Pay* aborted with the message "Account not valid. Expense record create failed". This problem has been corrected.

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# A3. Financial Accounting and Reporting (FAR) System

## A3.1. CONTROL File Converted to Database Table

Release 21.03.00 converts the VISION indexed file *K*:\*SECOND*\*FARDATA*\**CONTROL** into the following PCGenesis database tables:

- FAR.Control\_95\_Budget
- FAR.Control\_96\_Annuity
- FAR.Control\_97\_Message
- FAR.Control\_98\_Phrase
- FAR.Control\_99\_System

These tables store control records for the PCGenesis system.

## A3.2. AUDIT File Converted to Database Table

The VISION indexed file K:\SECOND\FARDATA\AUDIT is converted into the *SQL Server* database table *FAR.Audit\_File*. This table stores all of the financial transaction records associated with the PCGenesis financial system.

With release 21.03.00, **K:\SECOND** <u>must be restored with</u> the **PCGenesisDB** database. These two entities must be kept in sync, otherwise financial transactions will be lost which will result in reporting inconsistencies with the General Ledger. Call the help desk when any data needs to be restored.

## A3.3. Financial Transaction Processing Completed!

With release 21.03.00, the important financial tables are now in the PCGenesis database and are processed within a transaction. This release converts the final important financial file, the **AUDIT** file. Now that the **AUDIT** file is converted, full transaction processing is available for all financial transactions. *Data repairs should now be a thing of the past!* 

With release 21.03.00, the PCGenesis system continues to add the logic for transaction processing. In a database management system, a transaction is a single unit of logic or work, sometimes made up of multiple operations. For example, when transferring money from one bank account to another, the complete transaction requires subtracting the amount to be transferred from one account and adding that same amount to the other. Transaction processing provides reliable units of work that allow correct recovery from failures and keeps a database consistent even in cases of system failure, when many operations upon a database remain uncompleted. Transaction processing commits <u>all</u> of the operations or none of the operations, keeping the database consistent.

Any system programs that update purchase orders, claims, receivables, receipts, journals, vendor checks or wire transfers in the database tables have been updated to support transaction processing. These programs update numerous PCGenesis data tables. Now that all the files in the PCGenesis system are converted to SQL Server database tables, transaction processing will prevent partial postings of financial data.

In the past, if a posting process was interrupted because of a power failure, or network hiccup, half of the PCGenesis data files might be updated (for instance the BANK file) and half of the files might not be updated (for instance the AUDIT file). This required a data repair!! From now on, this problem will be solved by not "committing" all the data to the database until the entire transaction is complete.

## A3.4. DE Form 0396 Report

The *DE Form 0396 Report* (F1, F9, F26, F1) has been enhanced to facilitate reporting required for Senate Bill 68. The *DE 0396* report can now be run for any fund or range of funds. The report can also be run for any period from the beginning of the fiscal year to the ending period date. If the range of funds selected includes 100 thru 199, the user can optionally select whether to also include funds 150 and 151. If any funds are selected in the range of 100 thru 199, the payroll clearing account, fund 199, will automatically be included.

To make reporting to school districts' boards easier, in accordance with Senate Bill 68, an *Encumbrances* column has been added to the *Expenditures* section of the *DE Form 0396 Report*, as shown below.

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PERIOD END: 06/30/2021 GENERAL FUND EXPENDITURES RUN DATE: 09/20, BEGINNING JULY 1, 2020 THROUGH THE END OF JUNE, 2021						
		100.00 PERCENT OF FI	ISCAL YEAR COMPLETE			
		SCHOOL SYSTEM: BOARD OF	F EDUCATION			
DECODEDITION	! ! ! ITEM	! ! ! 12 MONTHS/FY 21 ! ! ACTUAL !	01 EV DUDOPT	PERCENT ! ! (COL. 3 ! ! DIVIDED !		
(1)	-! ! (2)	(GENERAL LEDGER)	(4)	·   (5)	(6)	
EXPENDITURES:	-! !			- 	······	
INSTRUCTION	! ! 1000-000	10,691,584.26	11,065,992.00	96.62 <del>%</del>	4,624.14	
SUPPORT SERVICES (PUPIL)	2100-000	723,132.68	626,633.00	115.40%	1,283.50	
IMPROVEMENT OF INSTRUCTIONAL SERVICES	2210-000	469,109.25	431,505.00	108.71%	121.65	

Example DE Form 0396 Report with Added Encumbrances Column

To allow the input of these new options, the DE 0396 report has been removed from the F17 *Monthly Reports Menu* (F1, F9, F17) and moved to the *DE Form 0396 Menu* (F1, F9, F26, F1).

A	PCG Dist=8644 Rel=21.02.00 08/25/2021 PCG 003 SV C:\SQLSYS C:\SECOND WHITE	_		×
	Monthly Reports		MNTHOO	50
	Enter Period Ending: <u>09</u> <u>30</u> <u>21</u> (MMDDYY)			
	Enter 'X' next to Reports to be Printed:			
	<ul> <li>MRPTU010 - Detail of Investments</li> <li>MRPTB010 - Combined Journal by Bank and Fund</li> <li>MRPTB020 - Summary of Balances by Bank and Date</li> <li>MRPTB030 - Cash Journal by Bank and Date</li> <li>MRPTR010 - Revenue Journal Detail</li> <li>MRPTE020 - Revenue Journal Detail</li> <li>MRPTE020 - Expenditure Journal Summary</li> <li>MRPTE020 - Expenditure Journal Summary by Function and Object</li> <li>MRPTE030 - Expenditure Journal Summary by Function and Object</li> <li>MRPTE030 - Combined Balance Sheet</li> <li>MRPTM010 - Revenue and Expenditure Comparison</li> <li>MRPTM010 - Revenue and Expenditure Comparison</li> </ul>	ports h from tł ts Men	ave le u	
	ENTER = Continue, F16 = Reenter/Exit			
			21.03.0	00

Monthly Reports Menu (F1, F9, F17)

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 9 of 31 All Rights Reserved.

A	PCG Dist=8644 Rel=21.02.00 08/25/2021	PCG 003 SV C:	SQLSYS C:\SECC	OND	WHITE	 · 🗆	×
		Financial A	ccounting &	Reporting		MT26P	
	FKey	DE F	orm 0396 Men	u			
		_					
	<u>1</u> DE Form 0396 Re	port					
	Report Control File: 8 Maintain Records 9 Print Control Rec	ords					
Mast	uer Userii					21.03.	.00

DE Form 0396 Menu (F1, F9, F26)

CG Dist=8644 Rel=21.02.00 08/25/2021 PCG 003 SV C:\SQLSYS C:\SECOND WHITE	_	□ × MRPT 03 0 0
DE FORM Ø396 REPORT		
ENTER PERIOD OF FUNDS TO BE PRINTED:		
07 01 <u>21</u> thru <u>09</u> <u>30</u> <u>21</u>		
ENTER RANGE OF FUNDS TO BE PRINTED:		
<u>100</u> thru <u>199</u>		
IF THE RANGE INCLUDES FUNDS 100 - 199: INCLUDE FUNDS 150 & 151? <u>N</u> (Y or N)		
NOTE: If any funds in the range of 100 – 199 are selected, the payroll clearning account, fund 199, will automatically be included.		
<pre><enter> - CONTINUE F16 - EXIT</enter></pre>		21.03.00

Report Options for DE Form 0396 Report

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 10 of 31 All Rights Reserved.

## A3.5. Create DE 0046 Transmission File

A problem has been corrected in the *Create DE0046 Transmission File* (F1, F9, F27, F4). Before, if fund 100 had a balance account 0740, the open purchase orders in balance account 0603 netted into balance account 0740 when they should have netted into 0799. This problem was actually caused a couple of years ago when Financial Review gave advice to book school food service *on-behalf-of* adjustments into fund 100 instead of a 600 fund. The School Food Services funds (funds 600 - 689) correctly net the open purchase orders (0603) into balance account 0740, but this applies only for School Food Services funds. The problem of fund 100 netting into balance account 0740 has been corrected.

## A3.6. Finalize Current Monthly/Year-End Figures

Two problems have been corrected with the fiscal year-end close process, *Finalize Current Monthly/Year-End Figures* (F1, F9, F21). Before, when running the fiscal year-end close, the program would abort with a message indicating that the **PO** file couldn't be found. If the fiscal year-end close process got past this error, the program might also abort with a critical SQL error in **FAR.USP\_AccountG\_Update\_Status** with the message, "*UPDATE failed because the following SET options have incorrect setting*". These problems have been corrected.

## A4. Personnel System

## A4.1. Salary Projection Menu Removed

The Salary Projection Menu option has been removed from the Personnel System Master Menu. F12 is no longer available on the Personnel System Master Menu.

	PCG Dist	=8991	Rel=15	5.02.00	07/13/2	2015 P	CW 002	SV C	:\DEVS	S C:\S	ECOND	)	W	HITE	0	<b>x</b>
								Pers	onnel	Syst	en				PER	IENU
		FKey	,					Ма	ster	Menu						
		1	P	ersonr	nel Upo	date M	enu									
		4 5 6	E   L   P	nhanc egacy ersonr	ed Sub Leave nel Rej	stitute Menu ports M	Paya Menu	nd Le	ave Sy	/stem						
		11 12 13	E S S	mplov alary f pecial	ee Cor Project Functi	itract f ion Me ons M	file Exp enu enu	port								
		20	F	ile Rec	organiz	zation										
Mast	er <sup>Ilser</sup> list														15.0	92.00
F16	• • •	Tort	PAY	PHONETOP												

F12 – Salary Project Menu Has Been Removed

# Section B: Installation Instructions for Release 21.03.00 Software

## **B1.** Perform a PCGenesis Full Backup

Proceed to section *B2*. *Verify Windows Security Group GENUSERS* in this document if these two conditions are met:

- 1. The prior evening's full system backup of the entire **K**: drive was successful.
  - In addition to its current labeling, also label the prior evening's backup media as "Data Backup Prior to Release 21.03.00".
  - Continue to use the backup in the normal backup rotation.
- 2. <u>No work</u> has been done in PCGenesis since the prior backup.

Otherwise, continue with the instructions in section *B1*. *Perform a PCGenesis Full Backup* if these two conditions are <u>not</u> met.

Step	Action
1	Verify all users are logged out of PCGenesis.
2	Stop the VerraDyne Queue Service ( <b>VQueueService</b> ) and the SQL Express Service ( <b>SQLEXPRESSPCG</b> ) prior to running a full backup of the entire <b>K</b> :\ PCGenesis disk drive or else the backup will not run to completion.
3	Perform a <b>PCG Full Backup</b> to CD or DVD or USB.
4	When the PCGenesis backup completes, label the backup CD or DVD or USB <b>"Full System Backup Prior to Release 21.03.00</b> ".
5	Start the SQL Express Service: SQLEXPRESSPCG must be running before starting the release installation. If <i>SQL Server</i> is not running, the PCGenesisDB cannot be updated during the release installation. If you run a full backup prior to installing the release and <i>SQL Server</i> has been stopped, the following commands can be executed to restart SQLEXPRESSPCG.
	<ul> <li>The following commands should be entered in the command prompt for <i>Windows</i> or added to the backup bat file to start the services.</li> <li>NET START MSSQL\$SQLEXPRESSPCG</li> </ul>
6	Proceed to B2. Verify Windows Security Group GENUSERS.

## **B2.** Verify Windows Security Group GENUSERS

The DOE is continuing the conversion of PCGenesis data tables into a *SQL Server* database in the 21.03.00 release.

Operating System Requirements for the PCGenesis Database

1. Prior to release 19.01.00, the PCGenesis document *New Server Installation Checklist* recommended setting up **GENUSERS** as the Windows Server security group for all PCGenesis users, but this requirement was not enforced. Please refer to *Page 2*, *Step 4* in the following document:

http://www.gadoe.org/Technology-Services/PCGenesis/Documents/Tech\_A1\_New\_Server\_Install.pdf

Starting with release 19.01.00, the security user group GENUSERS is now required.

2. Please forward this notice to your IT support team and ask them to verify the setup of **GENUSERS** on your PCGenesis Windows Server. If **GENUSERS** is not the current security group for PCGenesis users, please have the IT staff set up **GENUSERS** as directed in the document referenced above.

If you have any questions or need further assistance, please contact the Technology Management Customer Support Team by logging into the MyGaDOE Portal and clicking on the Help Desk Portal link and entering your request there.

To Login to the MyGaDOE portal please follow this link: <u>https://portal.doe.k12.ga.us/Login.aspx</u>

# **B3. Install PCGenesis Release 21.03.00**

## FROM THE PCGENESIS SERVER

## Important Note

## The person installing the PCGenesis release must be a member of the <u>system</u> administrator security group on the PCGENESIS server!

Step	Action
1	<b><u>NOTE</u></b> : The person installing the PCGenesis release must be a member of the system administrator security group on the PCGenesis server. This is required to properly install the <i>PCGenesisDB</i> database components contained in this release.
2	Start the SQL Express Service: SQLEXPRESSPCG must be running before starting the release installation. If <i>SQL Server</i> is not running, the PCGenesisDB cannot be updated during the release installation.
3	Verify all users are logged out of PCGenesis.
4	Open Windows® Explorer.
5	Navigate to the K:\INSTAL directory.
6	Verify PCGUNZIP.EXE, RELINSTL.BAT, and INSTLPCG display.
	<i>If PCGUNZIP.EXE and RELINSTL.BAT and INSTLPCG do not display, return</i> to the <i>MyGaDOE Web portal, and detach the files from the Web portal again.</i>
7	*** ALERT ***
	After downloading the files we need to make sure they are not blocked, otherwise when we unzip, ALL the files will all be blocked. This is a new security feature of the Windows Server 2012 / 2016 / 2019 operating system.
	To check whether the files have been blocked, <b>right-click</b> on each of the downloaded files and select <b>Properties</b> . If you see a security message at the bottom, as shown below, you will need to click the ' <b>Unblock</b> ' button. This is a very important step!
	For each of the downloaded files in K:\INSTAL, right-click on the filename and select 'Properties'.

After right-clicking on each file, select the 'Properties' option:

Open with Scan with Windows Defender Restore previous versions Send to Cut Copy Create shortcut Delete Rename
Properties

Depending on the version of the Windows operating system, the following screen displays:

INSTLPCG P	roperties ×	- 2	۳	pcgunzip.exe Properties
General Secur	ity Details Previous Versions		General Comp	patibility Security Details Previous Versions
	INSTLPCG		1	pcgunzip.exe
Type of file:	File		Type of file:	Application (.exe)
Description:	INSTLPCG		Description:	pcgunzip.exe
Location:	K:\INSTAL		Location:	K:\INSTAL
Size:	158 KB (162,304 bytes)		Size:	31.0 MB (32,552,342 bytes)
Size on disk:	160 KB (163,840 bytes)		Size on disk:	31.0 MB (32,555,008 bytes)
Created:	Today, July 27, 2018, 2 minutes ago		Created:	Today, July 27, 2018, 9:24:21 AM
Modified:	Today, July 27, 2018, 2 minutes ago		Modified:	Today, July 27, 2018, 9:24:22 AM
Accessed:	Today, July 27, 2018, 2 minutes ago		Accessed:	Today, July 27, 2018, 9:24:21 AM
Attributes:	<u>R</u> ead-only <u>H</u> idden A <u>d</u> vanced		Attributes:	Read-only Hidden Advanced
Security:	This file came from another computer Unblock and might be blocked to help protect Unblock this computer.		Security:	This file came from another computer and might be blocked to help protect this computer.
	OK Cancel Apply			OK Cancel Apply

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 16 of 31 All Rights Reserved.

#### Release 21.03.00 – Miscellaneous Changes / Conversion to PCGenesisDB Database / Installation Instructions

Step	Action
8	Check the bottom of the ' <i>Properties</i> ' dialog box to see if the following security warning is displayed:
	"This file came from another computer and might be blocked to help protect this computer."
	If the option is presented, select $\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$
	Do this for each of the files in the K:\INSTAL directory.
9	Right-click <b>RELINSTL.BAT</b> and select <i>Run as administrator</i> to perform the installation.
10	If the message " <i>Do you want to allow this app to make changes to your device</i> ?" is displayed, select Yes (Yes) to continue.
	<i>Next, a release installation status screen will display showing the release steps as they are completed.</i>

User Account Control	User Account Control X						
Do you want to allow this app to make changes to your device?							
Windows Command Processor							
Verified publisher: Microsoft W	lindows						
Show more details							
Yes	No						

A screen will display showing the progress of the installation:

A	PCG Dist=8991	Current Release 19.04.00 0 03/11/2020	SV 8991	K:\SECOND	- 0 ×
		Install	PCGenesis	Release	Inst1PCG
		2	1.nn.nn		
		Installation Action  PCGOS PCGTYPE Check Previous Install PCGenesis Status		Status  2K 2016 SU Continue Installation No Active User	
		PCGUnzip	WinZip	Self-Extractor - PCGUNZIP.exe	×
		Copy Files	To una folder p	ip all files in PCGUNZIP.exe to the specified press the Unzip button.	Unzip
		Conversion	Unzip t	o folder:	Run WinZip
		Finish Installation	KNIN	Browse	Close
			MOM	erwrite files without prompting	About
					Help
	Installatio	on in Process			21.nn.nn

For PCGenesis *Release 21.03.00* successful installations, the following message displays:

Ā	PCG Dist=8991	Current Release 19.04.00 0 03/11/2020	SV 8991	K:\SECOND -	
		Install	PCGenesis	Release	Inst1PCG
		2	21.nn.nn		
		Installation Action		Status	
		PCGOS		2K 2016	
		PCGTYPE		SU	
		Check Previous Install		Continue Installation	
		PCGenesis Status		No Active User	
		PCGUnzip		Files Unzipped	
		Copy Files		Files Copied	
		Conversion		Conversion Completed	
		Finish Installation		Installation Successful	
-	Any Key to	Continue			21.nn.nn

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 18 of 31 All Rights Reserved.

Step	Action
11	Select Enter to close the window.
12	If the installation was successful: Proceed to B4. Verify Release 21.03.00 Was Successfully Installed.
	If the installtion was unsuccessful: Proceed to Step 13.

A problem message displays if an error occurred:

A	PCG Dist=8991	Current Release 19.04.00 0 03/11/2	2020 SV 899	K:\SEC	COND	_	٥	×
		In	stall PCGenesi	s Releas	se		Instlf	PCG
			04 00					
			21.00.00					
		Installation Action		St	tatus			
		PCGOS		2K	K 2016			
		PCGTYPE		SU	V			
		Check Previous Insta	11	Co	ontinue Installation			
		PCGenesis Status		No	o Active User			
		PCGUnzip		Pr	roblem with PCGUNZIP.E	XE		
		Copy Files				-		
		Conversion						
		Finish Installation						
	Problem with		Call Hele J	lack				
-	LLODIGH MI		carr werp i	esk				
-	F16 = Exit						21.nn	.nn

Step	Action
13	Select <b>F16</b> to close the window.
14	Return to the <i>MyGaDOE</i> Web portal, and detach the files again.
15	Contact the Technology Management Customer Support Team for additional assistance if needed. A description of the error will display with instructions to call the Help Desk.

A warning message will display if the release installation is repeated:

A	PCG Dist=8991 Current Release 19.04.00 0 03/11/2020 SV 8991 K:\SECOND	_	٥	×
	Check Master conversion for Release 21.nn.nn		CHANEX	Р1
	* * * Warning on Check Master File Conversion * * *			
	CHECK MASTER conversion			
	has already run successfully			
	Press Any Key to Continue		21.nn.	nn

A warning message will display if the release installation is repeated, but in this case, the installation is considered successful. In this instance, select any key to continue:

A	PCG Dist=8991	Current Release 19.04.00	0 03/11/2020	SV 8991	K:\SECC	DND	_	D	×
			Install	PCGenesis F	Release			InstlP	PCG
				21.nn.nn					
		Installation	Action		Sta	itus			
		PCGOS			2K	2016			
		PCGTYPE			su				
		Check Previou	s Install		Cor	tinue Installation			
		PCGenesis Sta	tus		No	Active User			
		PCGUnzip			Fil	les Unzipped			
		Copy Files			Fil	les Copied			
		Conversion			Cor	version Completed			
		Finish Instal	lation		Ins	stallation Successful	>		
<	Release Tal	ole Already Update	d)						
-	Any Key to	Continue						21.nn.	.nn

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 20 of 31 All Rights Reserved.

Step	Action
16	Proceed to B4. Verify Release 21.03.00 Was Successfully Installed.

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 21 of 31 All Rights Reserved.

# B4. Verify Release 21.03.00 Was Successfully Installed

Step	Action
1	Log into PCGenesis.
2	From the <i>Business Applications Master Menu</i> , select <b>30</b> ( <b>F30</b> - System Utilities).
3	From the <i>System Utilities Menu</i> , select <b>17</b> ( <b>F17</b> - Display Current Release Number).

#### The following screen displays:

A	PCG Dist=6791	Rel=21.02.00	05/28/2021	PCG 002	SV C:\SQLSYS	C:\SECOND	WHITE			×
-		The	Followinq	D.O.E.	Releases	Have Been	Successfully	Loaded:	DET MAL	1
		DOE	19.01.00	03/2	9/2019		-			
		DOE	19.02.00	09/3	0/2019					
		DOE	19.03.01	11/2	7/2019					
		DOE	20.01.00	03/3	1/2019					
		DOE	20.02.00	06/3	0/2020					
		DOE	20.03.00	09/3	0/2020					
		DOE	21.01.00	03/3	1/2021					
		DOE	21.02.00	06/3	0/2021					
	NET Fr	amework 3	-5: N	SOL SER	UFR EXPRES	S 2012: N				
	.NET Fr	amework 4	.5: Y	SQL SER	VER EXPRES	S 2016: Y	SQL MANA	AGEMENT STUDIO	2016: Y	
	-1 1			Press <	ENTER> or	F16 to Ex	<b>i</b> t			
ENTER	/								18.01	. 00
F16										

Step	Action
4	Verify Release 21.03.00 displays.
	The number of releases and the release installation date displayed may not correspond with the preceding screenshot example. This is acceptable as long as <b>DOE 21.03.00</b> displays. If Release 21.03.00 does not display, contact the Technology Management Customer Support Center for assistance
	Support Conterfor assistance.
5	Select (Enter).
6	Log off the PCGenesis server.
7	Verify users remain logged out of PCGenesis.

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 22 of 31 All Rights Reserved.

# **B5.** Perform a PCGenesis Full Backup After Release 21.03.00 is Installed

Step	Action
1	Verify all users are logged out of PCGenesis.
2	Stop the VerraDyne Queue Service ( <b>VQueueService</b> ) and the SQL Express Service ( <b>SQLEXPRESSPCG</b> ) prior to running a full backup of the entire <b>K</b> :\ PCGenesis disk drive or else the backup will not run to completion.
3	Perform a <b>PCG Full Backup</b> to CD or DVD or USB.
4	When the PCGenesis backup completes, label the backup CD or DVD or USB <b>"Full System Backup After Release 21.03.00</b> ".
5	Restart the SQL Express Service ( <b>SQLEXPRESSPCG</b> ). After waiting <u>at least two minutes</u> , restart the <b>VQueueService</b> in View local services ( <b>View local services</b> ).

# Section C: After PCGenesis Release 21.03.00 Has Been Installed

# C1. Verify Contents of the End-of-August Backup

This step is very, very important! The PCGenesis development team wants to ensure that all school districts are creating a backup of the PCGenesis data, including the contents of the **PCGSQLdb** database directories as well as the **SECOND** data. Our concern is that school districts do not have a good backup of the <u>database</u> data, in which case you may not realize that you have an incomplete backup and *a critical problem*. School districts are under increasing pressure from hackers and malware attacks and therefore, it is nothing short of imperative that you can recover your PCGenesis data in case of an attack, or other data center catastrophe. To that end, please follow the steps below.

Step	Action		
1	Verify you have a <u>weekly full backup of K:</u> that you retain for at least 4 weeks.		
	Include a <b>full backup</b> of <i>K</i> :\*.* in the site's standard server backup process		
	Recommend full backup of K:\*.* every night if possible		
	• Minimum of one full backup of <i>K</i> :\*.* every week ( <b>Required</b> )		
	• Retain at least 4 weeks of <i>K</i> :\*.* (Required)		
2	Verify you have a daily data backup of K:\SECOND\*.* and K:\PCGSQLdb\*.* that you		
	retain for at least 4 weeks		
	Daily data backup of <i>K</i> :\ <i>SECOND</i> \*.* and <i>K</i> :\ <i>PCGSQLdb</i> \*.* (Required)		
	• Use of CD, DVD, or USB is recommended		
	Nightly backup following each work day		
	Nightly media may remain under control of PCG administrator		
	Proper security and offsite storage measures     (Required)		
	<ul> <li>Retain daily backups of K:\SECOND\*.* and K:\PCGSQLdb\*.* for 4 weeks (Required)</li> </ul>		
	<ul> <li>Retain one daily backup each month of K:\SECOND\*.* and K:\PCGSQLdb\*.* for at least one year</li> <li>(Required)</li> </ul>		
3	Request your IT representative obtain the August 30 <sup>th</sup> backup of PCGenesis data. Obtain either the weekly <b>full backup of K:</b> or the <b>daily data backup of K:</b> \SECOND\*.* and <b>K:\PCGSQLdb\*.*</b> , but make sure it is the end-of- <u>August 2021</u> backup.		

Step	Action	
4	Verify that this file exists on the August 30 <sup>th</sup> , 2021 backup:	
	For Windows Server 2012, 2016, or 2019:	
	K:\PCGSQLdb\MSSQL13.SQLEXPRESSPCG\MSSQL\DATA\PCGenesisDB.md	
	If this file does not exist on your backup media, you will <u>not</u> be able to recover all your PCGenesis data!!!	
5	Verify that this directory exists on the August 30 <sup>th</sup> , 2021 backup, including all subdirectorie and files within this directory:	
	K:\SECOND	
6 If you do not have both <b>PCGenesisDB.mdf</b> and <b>K:\SECOND</b> , you will <u>not</u> be a from a data center catastrophe! Make sure your IT team immediately corrects		
	Follow this link to the <i>PCGenesis Technical System Operations Guide</i> :	
	https://www.gadoe.org/Technology-Services/PCGenesis/Pages/Technical-System- Operations-Guide.aspx	
	Review the information in Section B: PCGenesis Backup / Reorganization / Restore.	
7	If your district's backup procedures needed to be remediated, create a new backup by following the instructions in <i>Step 6</i> and then start this procedure over again at <i>Step 1</i> to verify the backup.	

# Appendix A. Summary of PCGenesis Database Components

	SQL Server Databases and Tables for PCGenesis System			
1		<b>PCGenesisDB</b> - PCGenesis financial and payroll production data.		
		Table Name	Purpose	
	1.1	Conversion_LOG	Conversion Log shows successful or unsuccessful conversion of a VISION file to a SQL Server table.	
	1.2	Conversion_LOG_Detail	Conversion Log Detail shows the total number of rows imported for each database table.	
	1.3	Conversion_LOG_Error	Conversion Error Log shows any errors encountered during the conversion of a VISION file to a SQL Server table.	
	1.4	Transaction_Gatekeeper	Stores a single record which controls the financial system transaction postings, enforcing single-threaded processing for a multi-user system.	
	1.5	Transaction_Gatekeeper_Log	Stores a log of financial system transactions which includes the user id, transaction description, start and end times, and the transaction's final disposition.	
	1.6	FAR.Account	Stores the <u>budget</u> general ledger account codes.	
	1.7	FAR.AccountR	Stores the <u>revenue</u> general ledger account codes.	
	1.8	FAR.AccountG	Stores the general ledger <u>balance account</u> codes.	
	1.9	FAR.Audit_File ( <i>New with this release</i> )	Stores a record of all financial transactions including audit information of the person who created the transaction and the date/time the transaction was created.	
	1.10	FAR.Bank_File	Stores the bank codes.	
	1.11	FAR.Control_95_Budget (New with this release)	Stores the <i>Create Budget Sandbox Control Screen</i> parameters.	
	1.12	FAR.Control_96_Annuity (New with this release)	Stores the Annuity Deduction Control parameters.	
	1.13	FAR.Control_97_Message (New with this release)	Stores the PCGenesis <i>System Message Administration</i> control parameters for system broadcast messages.	
	1.14	FAR.Control_98_Phrase (New with this release)	Stores the PCGenesis System Password Administration parameters.	
	1.15	FAR.Control_99_System (New with this release)	Stores the PCGenesis System Control screen parameters and the 1099 System Control data.	
	1.16	FAR.Chart_Of_Accounts	Stores <u>all</u> general ledger account codes, including budget, revenue, and balance account codes on one table.	

SQL Server Databases and Tables for PCGenesis System - continued		
<b>PCGenesisDB</b> - PCGenesis financial and payroll production data, continued.		
	Table Name	Purpose
1.17	FAR.Expense	Stores the claim/invoice master records.
1.18	FAR.Expense_Distribution	Stores the claim GL account detail records associated with the claim/invoice master record. A maximum of 20 GL account records are allowed per claim.
1.19	FAR.Facility	Stores the facility and building records for purchase order processing.
1.20	FAR.Invest	Stores investment records.
1.21	FAR.Journal_Entry	Stores the general ledger journal master records.
1.22	FAR.Journal_Entry_Detail	Stores the general ledger journal detail records associated with the journal master record. A maximum of 999 account detail lines are allowed per journal.
1.23	FAR.Name_01_Fiscal_Year	Stores the two-digit year description of the account number.
1.24	FAR.Name_02_Fund	Stores the 3-digit fund description of the account number.
1.25	FAR.Name_03_FY_flag	Stores the 1-digit fiscal year description of the account number. (Not used.)
1.26	FAR.Name_04_Program	Stores the 4-digit program code description of the account number.
1.27	FAR.Name_05_Function	Stores the 4-digit function code of the account number, for expense accounts.
1.28	FAR.Name_07_Fac_Bldg	Stores the 5-digit facility/building code description of the account number.
1.29	FAR.Name_06_Object	Stores the 5-digit object code description of the account number.
1.30	FAR.Name_08_Additional	Stores the 6-digit additional code description of the account number.
1.31	FAR.Name_09_Rev_Srce	Stores the 4-digit source code description of the account number, for revenue accounts.
1.32	FAR.Name_10_BLNC_SHEET	Stores the 4-digit balance sheet code description of the account number, for GL accounts.
1.33	FAR.Purchase_Order	Stores the purchase order master records.

SQL Server Databases and Tables for PCGenesis System - continued		
<b>PCGenesisDB</b> - PCGenesis financial and payroll production data, continued.		
	Table Name	Purpose
1.34	FAR.Purchase_Order_ Distribution	Stores the purchase order GL account detail records associated with the purchase order master record. A maximum of 20 GL account records are allowed per purchase order.
1.35	FAR.Purchase_Order_ Expense	Stores the purchase order claim detail records associated with the purchase order master record. A maximum of 24 claim/invoice records are allowed per purchase order.
1.36	FAR.Purchase_Order_Print	Stores the purchase order inventory detail records associated with the purchase order master record.
1.37	FAR.Receipt	Stores the receipt master records.
1.38	FAR.Receipt_Detail	Stores the receipt GL account detail records associated with the receipt master record. A maximum of 40 GL account records are allowed per receipt.
1.39	FAR.Receivable	Stores the receivable master records.
1.40	FAR.Receivable_Distribution	Stores the receivable GL account detail records associated with the receivable master record. A maximum of 40 GL account records are allowed per receivable.
1.41	FAR.Receivable_Receipt	Stores the receivable receipt detail records associated with the receivable master record. A maximum of 12 receipt records are allowed per receivable.
1.42	FAR.Revenue_Source	Stores the Revenue Source records for the financial system revenue subsystem.
1.43	FAR.Vendor	Stores the vendor records for the financial system expense subsystem.
1.44	FAR.Vendor_Check_Control	Stores the vendor check master records associated with the accounts payable subsystem.
1.45	FAR.Vendor_Check_Control_ Payable	Stores the claim/invoice records associated with the vendor check master record. A maximum of 13 claim records are allowed per vendor check.
1.46	FAR.Wire_Transfer	Stores the vendor wire transfer master records associated with the accounts payable subsystem.
1.47	FAR.Wire_Transfer_Payable	Stores the claim/invoice records associated with the vendor wire transfer master record. A maximum of 40 claim records are allowed per vendor wire transfer.
1.48	T lookup.GA County	Stores the County codes for the Georgia counties.

Georgia Department of Education Richard Woods, State School Superintendent September 27, 2021 • 11:11 AM • Page 28 of 31 All Rights Reserved.

2	PCG_Master - PCGenesis backup and restore logs.		
		Table Name	Purpose
	2.1	PCG_Backup_LOG	Backup log shows successful or unsuccessful completion of a PCGenesis backup operation.
	2.2	PCG_Backup_LOG_Message	The system messages associated with the backup operation.
	2.3	PCG_Information	Stores the location of the SQL Server database backup directory.
	2.4	PCG_Restore_LOG	Restore log shows successful or unsuccessful completion of a PCGenesis restore operation.
	2.5	PCG_Restore_LOG_Message	The system messages associated with the restore operation.
	2.6	PCG_Runtime_Errors	Stores PCGenesis runtime errors that occur during a backup or restore operation.

	SQL Server Databases and Tables for PCGenesis System - continued			
3		PCG O DB		
	The Upd with	The <b>PCG_Q_DB</b> database is a backup of PAYDATA that is made just before Calculate Payroll & Update YTD (Final) (F4) or is a backup of FARDATA that is made just before updating budget files with vendor check information (F5).		
		Table Name	Purpose	
	3.1	PAY.tablename	<ul> <li>PAYDATAQ and PCG_Q_DB database tables: The PAYDATAQ directory (inside of the SECOND directory) is a backup of PAYDATA that is made just before <i>Calculate Payroll &amp; Update YTD (Final)</i> (F4).</li> <li>Restore from PAYDATAQ if a problem occurs during check printing.</li> </ul>	
	3.2	FAR.tablename	<ul> <li>FARDATAQ and PCG_Q_DB database tables: The FARDATAQ directory (inside of the SECOND directory) is a backup of FARDATA that is made just before updating budget files with vendor check information (F5).</li> <li>Restore from FARDATAQ if a problem occurs with posting to budget files.</li> <li>Also restore from FARDATAQ if a problem occurs in financial data after posting but before the nightly backup is processed.</li> <li>FARDATAQ should not be restored if any interaction from payroll has occurred (posting payroll or processing an earnings history record gross data transfer). When both financial and payroll records are affected, all of SECOND should be restored.</li> </ul>	
4			PCG D DB	
	The <b>PCG_D_DB</b> database is a backup of PAYDATA that is made after printing payroll checks, but just before printing payroll direct deposits (F2, F3, F5).			
		Table Name	Purpose	
	4.1	PAY.tablename	<ul> <li>PAYDATAD and PCG_D_DB database tables: The PAYDATAD directory (inside of the SECOND directory) is a backup of PAYDATA that is made just after checks print (F5) and before direct deposits print.</li> <li>Restore from PAYDATAD if a problem occurs during or after printing direct deposits but before posting to payroll earnings history (F13).</li> </ul>	

SQL Server Databases and Tables for PCGenesis System - continued			
5	PCG_SANDBOX		
	The <b>PCG_SANDBOX</b> database is a backup of SANDBOX that is made just before creating the budget SANDBOX (F5, F1).		
		Table Name	Purpose
	5.1	SAND.tablename	<b>SANDBOXQ</b> and <b>PCG_SANDBOX</b> database tables: The <b>SANDBOXQ</b> directory (inside of the <b>SECOND</b> directory) is a backup of <b>SANDBOX</b> that is made just before a new <i>Budget SANDBOX</i> is created (F5, F1).
			• Restore from <b>SANDBOXQ</b> if it is desired to return to a prior iteration of the budget forecasting parameters.
6	<b>VQueueDB</b> The <b>VQueueDB</b> database contains the <i>VerraDyne Print Manager</i> associated tables.		