PCGenesis:
Current Status & Future Plans

GASBO

Augusta, GA

November 5, 2020

Incremental Phased Approach

ADVANTAGES

- Minimize disruption to operations
- Provide transparency
- Quickly adjust to issues arising after a release
- Instill confidence in the project

PCGenesis Upgrade Phases

- **DATA - Convert old technology flat files to relational database**
- **Implement data change logging**
- **Convert Cobol report processes to SQL stored procedures**
- **Implement new technology user interface for reports only**
- **Move Cobol processes(FAR/Payroll/CPI) to SQL**
- **Implement new technology user interface for processes**

Phased Approach will:

- Minimize disruption to operations
- Provide transparency
- Quickly adjust to issues arising after a release
- Instill confidence in the PCGenesis upgrade project

PCGenesis DATA storage

CURRENT	FUTURE
• 78% : Microfocus Vision Version 3 Indexed Sequential *note:* *(Version 3 is no longer supported by Microfocus)*	• 99% - Microsoft SQL Server Express Relational Database
• 22% - Microsoft SQL Server Express Relational Database	• User friendly Screens

Data Conversion Progress

Financial Accounting & Reporting

\FARDATA\FACILITY	* Completed *
\FARDATA\BANK	* Completed *
\FARDATA\NAME	* Completed *
\FARDATA\ACCOUNT	* Completed *
\FARDATA\ACCOUNTG	* Completed *
\FARDATA\ACCOUNTR	* Completed *
\FARDATA\SOURCE	* Completed *
\FARDATA\VENDOR	* Completed *
\FARDATA\RECEIPT	* Completed *
\FARDATA\RECEIVE	* Completed *
\FARDATA\PO	2021 Q1
\FARDATA\POPRINT	2021 Q1
\FARDATA\EXPENSE	2021 Q1
\FARDATA\CHEKMSTR	2021 Q1
\FARDATA\WXFER	2021 Q1
\FARDATA\ASSET	
\FARDATA\AUDIT	
\FARDATA\BANKMICR	
\FARDATA\CLAIMCTL	
\FARDATA\CONTROL	
\FARDATA\INVEST	
\FARDATA\JECONTRL	
\FARDATA\JEMASTER	
\FARDATA\MANUALS	
\FARDATA\MONITOR	
\FARDATA\PAYSTATF	
\FARDATA\SNUIFUND	

Personnel

- \PERDATA\LGROSDAT
- \PERDATA\LVADV
- \PERDATA\LVCLASS
- \PERDATA\LVHIST
- \PERDATA\LVINPUT
- \PERDATA\LVSYS
- \PERDATA\PERS
- \PERDATA\PROCTL
- \PERDATA\ACA1095
- \PERDATA\DEPENDS
- \PERDATA\ACAIRSR
- \PERDATA\ACAIRSD

Payroll

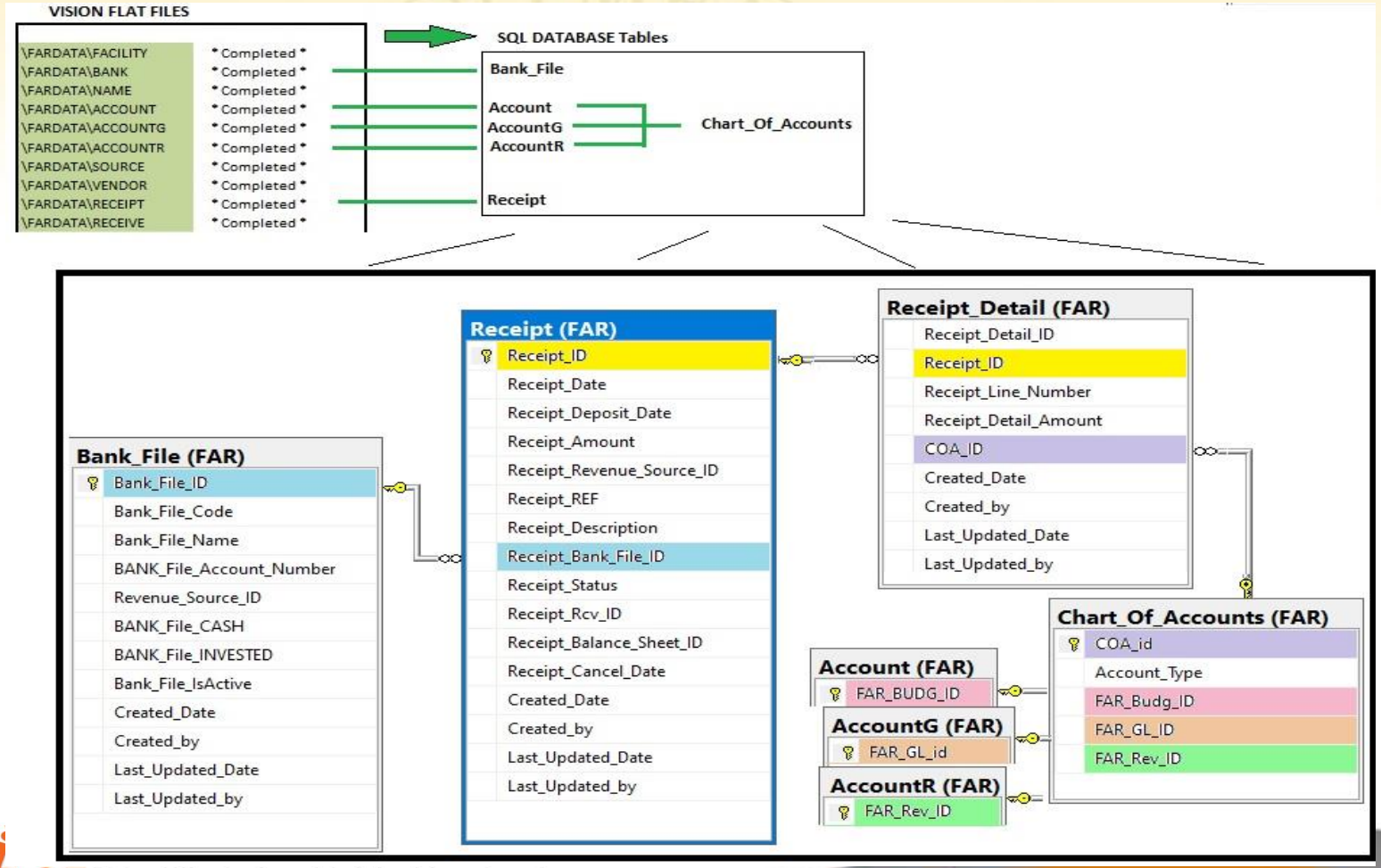
- \PAYDATA\ANNUITY
- \PAYDATA\BENEDED
- \PAYDATA\CHEKMSTR
- \PAYDATA\DATEFL
- \PAYDATA\DDP
- \PAYDATA\DEDCTL
- \PAYDATA\DEDS
- \PAYDATA\DESC
- \PAYDATA\DESCA
- \PAYDATA\DISTRIB
- \PAYDATA\EMPCHG
- \PAYDATA\GACOUNTY
- \PAYDATA\GARVEN
- \PAYDATA\GROSSDAT
- \PAYDATA\HISTORY
- \PAYDATA\MPAYROLL
- \PAYDATA\MSG
- \PAYDATA\PAYROLL
- \PAYDATA\PAYS
- \PAYDATA\PAYSTAT
- \PAYDATA\PDEDUCT
- \PAYDATA\PREVVOID
- \PAYDATA\PRSTATE
- \PAYDATA\TAXES

CPI

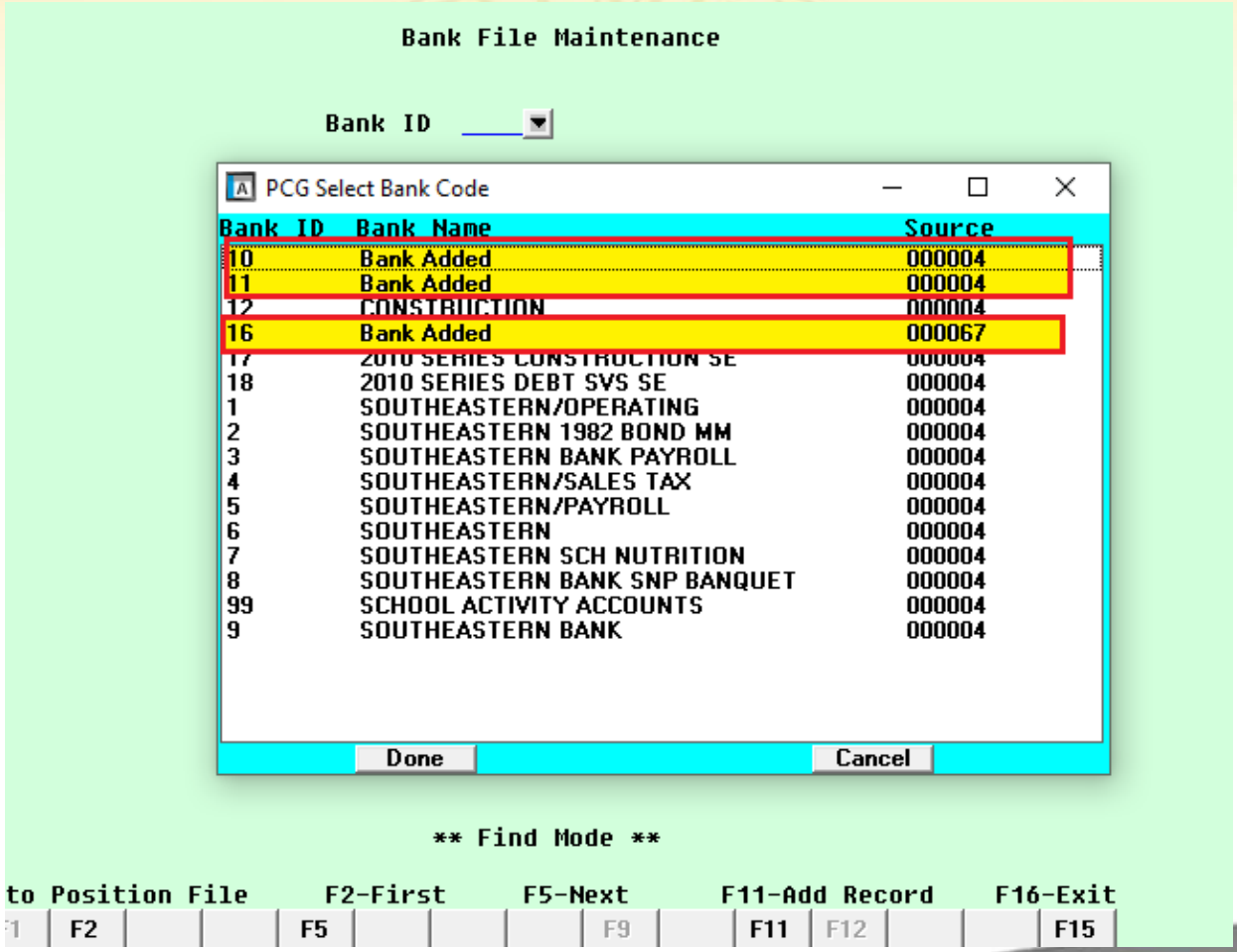
- \CPIDATA\CPIFILE
- \CPIDATA\CPIPCNTL
- \CPIDATA\CPIXREF
- \CPIDATA\DESCTBL
- \CPIDATA\SALSCHED

Benefit of Data Conversion

- Referential Integrity



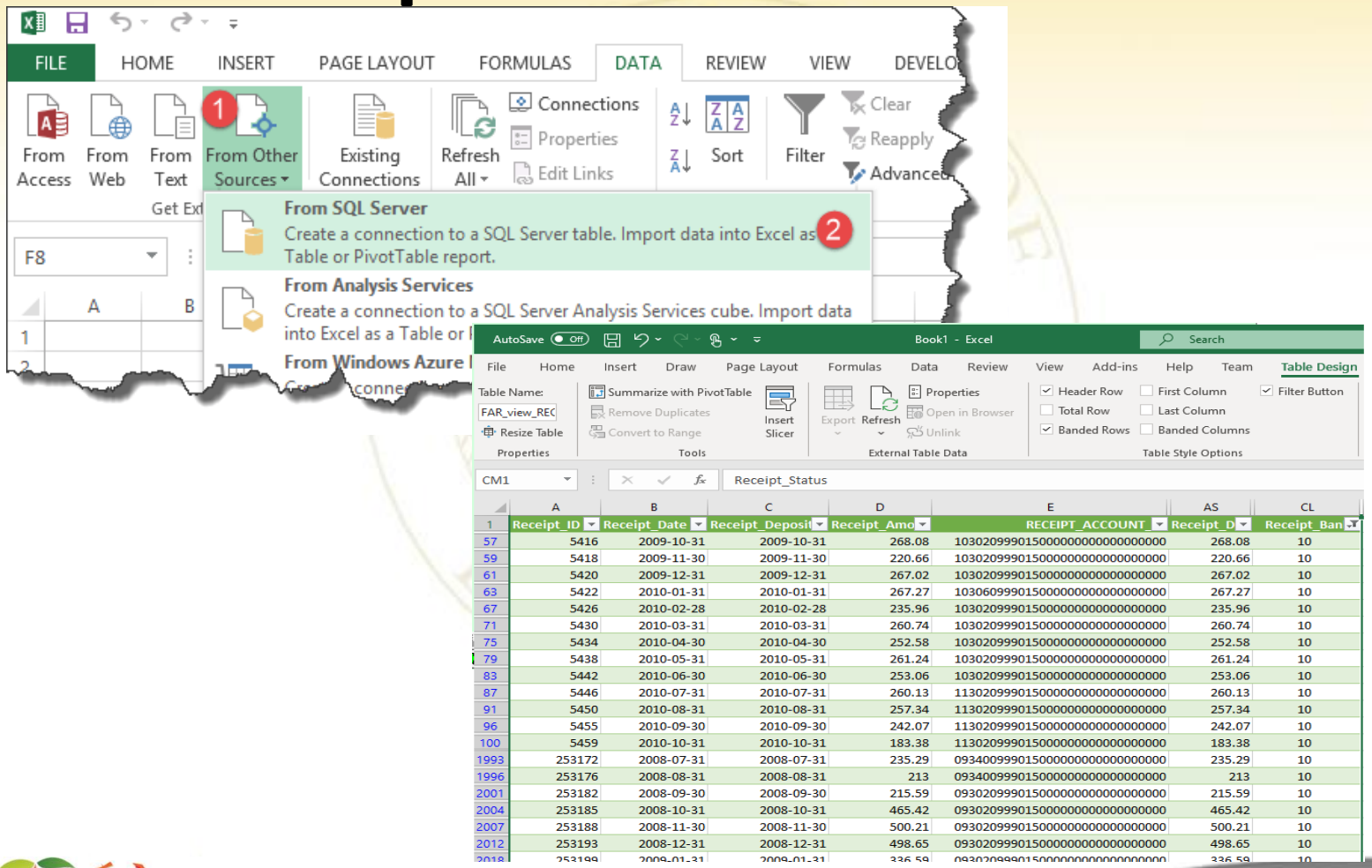
Example of Referential Integrity Enforcement #1



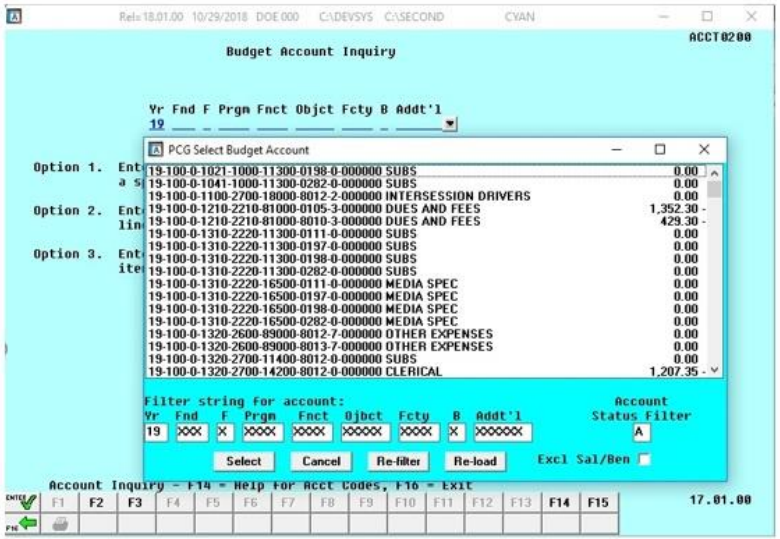
Example of Referential Integrity Enforcement #2

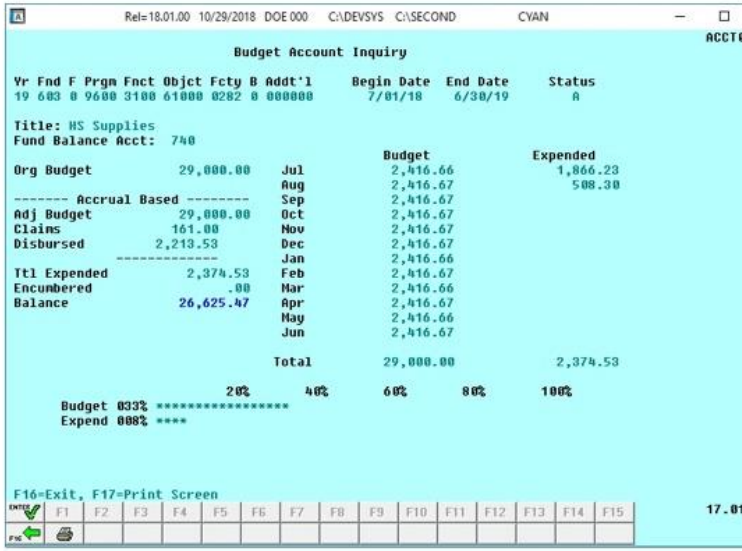
```
                    CRITICAL SQL ERROR ENCOUNTERED

Called By:        CA09P01

File name:        FAR.BANK

SQL Server:       DOE-ATENN-W10\SQLEXPRESSPCG;

SQL Database:     PCGENESISDB

SQL Procedure:    FAR.USP_BANK_FILE_MAINTENANCE

SQL Error Type:   23000
                  The DELETE statement conflicted with the REFERENCE con
                  straint "FK_Rece


   Capture this screen and call the Help Desk.  F16 = Exit
```

Benefit of Data Conversion – Ability to import PCG data to excel



	A	B	C	D	E	AS	CL
1	Receipt_ID	Receipt_Date	Receipt_Deposit	Receipt_Amo	RECEIPT_ACCOUNT_	Receipt_D	Receipt_Ban
57	5416	2009-10-31	2009-10-31	268.08	10302099901500000000000000000	268.08	10
59	5418	2009-11-30	2009-11-30	220.66	10302099901500000000000000000	220.66	10
61	5420	2009-12-31	2009-12-31	267.02	10302099901500000000000000000	267.02	10
63	5422	2010-01-31	2010-01-31	267.27	10306099901500000000000000000	267.27	10
67	5426	2010-02-28	2010-02-28	235.96	10302099901500000000000000000	235.96	10
71	5430	2010-03-31	2010-03-31	260.74	10302099901500000000000000000	260.74	10
75	5434	2010-04-30	2010-04-30	252.58	10302099901500000000000000000	252.58	10
79	5438	2010-05-31	2010-05-31	261.24	10302099901500000000000000000	261.24	10
83	5442	2010-06-30	2010-06-30	253.06	10302099901500000000000000000	253.06	10
87	5446	2010-07-31	2010-07-31	260.13	11302099901500000000000000000	260.13	10
91	5450	2010-08-31	2010-08-31	257.34	11302099901500000000000000000	257.34	10
96	5455	2010-09-30	2010-09-30	242.07	11302099901500000000000000000	242.07	10
100	5459	2010-10-31	2010-10-31	183.38	11302099901500000000000000000	183.38	10
1993	253172	2008-07-31	2008-07-31	235.29	09340099901500000000000000000	235.29	10
1996	253176	2008-08-31	2008-08-31	213	09340099901500000000000000000	213	10
2001	253182	2008-09-30	2008-09-30	215.59	09302099901500000000000000000	215.59	10
2004	253185	2008-10-31	2008-10-31	465.42	09302099901500000000000000000	465.42	10
2007	253188	2008-11-30	2008-11-30	500.21	09302099901500000000000000000	500.21	10
2012	253193	2008-12-31	2008-12-31	498.65	09302099901500000000000000000	498.65	10
2018	253199	2009-01-31	2009-01-31	336.59	09302099901500000000000000000	336.59	10





Financial Accounting & Reporting | Payroll | Personnel | CPI | Help | Setup

Financial Account Inquiry

Year: 2019

Financial Account Inquiry

Fund: 603 - SFS-MCHS | Program: 9600 - SFS UNDISTRI. | Function: 3100 - EXP SCHOOL NUTR

Filter | Object: Select Object... | Facility/Building: Select Facility/Building...

Line	YY Fnd Prgm Fnct Objct Fcty B Addt1	Account Name	Budget	Expended	Remaining	Status
9.	19-603-0-9600-3100-33200-0282-0-000000	HS FP	49.00	0.00	0.00	A
10.	19-603-0-9600-3100-41000-0282-0-000000	HS Water/Sewer	300.00	25.00	0.00	A
11.	19-603-0-9600-3100-43000-0282-0-000000	HS Rep/Maint.	10,000.00	1,155.52	0.00	A
12.	19-603-0-9600-3100-49000-0282-0-000000	HS Purch/prof	0.00	0.00	0.00	A
13.	19-603-0-9600-3100-52000-0282-0-000000	HS Ins Bonds	500.00	200.00	0.00	A
14.	19-603-0-9600-3100-53000-0282-0-000000	HS Postage & phone	50.00	0.00	0.00	A
15.	19-603-0-9600-3100-58000-0282-0-000000	HS Travel	100.00	0.00	0.00	A
16.	19-603-0-9600-3100-59100-0282-0-000000	HS Commodity Hauling	1,200.00	0.00	0.00	A
17.	19-603-0-9600-3100-61000-0282-0-000000	HS Supplies	29,000.00	2,374.53	0.00	A
18.	19-603-0-9600-3100-61100-0282-0-000000	HS Computer Supplies	100.00	0.00	0.00	A
19.	19-603-0-9600-3100-61200-0282-0-000000	HS Computer Software	0.00	0.00	0.00	A
20.	19-603-0-9600-3100-61500-0282-0-000000	HS Exp Equip	0.00	0.00	0.00	A
21.	19-603-0-9600-3100-61600-0282-0-000000	HS comp. equip	1,000.00	0.00	0.00	A
22.	19-603-0-9600-3100-62000-0282-0-000000	HS Electricity	10,000.00	0.00	0.00	A
23.	19-603-0-9600-3100-63000-0282-0-000000	HS Food Purchased	215,000.00	0.00	0.00	A
24.	19-603-0-9600-3100-63500-0282-0-000000	HS Food Acquisitions USDA	43,811.00	0.00	0.00	A
25.	19-603-0-9600-3100-73000-0282-0-000000	HS Other Equip.	10,000.00	0.00	0.00	A
26.	19-603-0-9600-3100-73400-0282-0-000000	HS Purch. Comp.	0.00	0.00	0.00	A
27.	19-603-0-9600-3100-81000-0282-0-000000	HS Registration	1,900.00	0.00	0.00	A
28.	19-603-0-9600-3100-89000-0282-0-000000	HS Other Exp.	600.00	0.00	0.00	A

<Prev | Page 1 of 1 | Next> | 1 | Display 50 records per page. Go to Page: 1 Go | 28 record(s) meeting criteria.

YY Fnd Prgm Fnct Objct Facility/B Addt1 Begin Date End Date Status
19 603 9600 3100 61000 0282 0 000000 07/01/2018 06/30/2019 A Edit...

Title: HS Supplies
Fund Balance Acct: 740

Original Budget 29,000.00
-------- Accrual Based --------
Adjusted Budget **29,000.00**
Claims 161.00
Disbursed 2,213.53

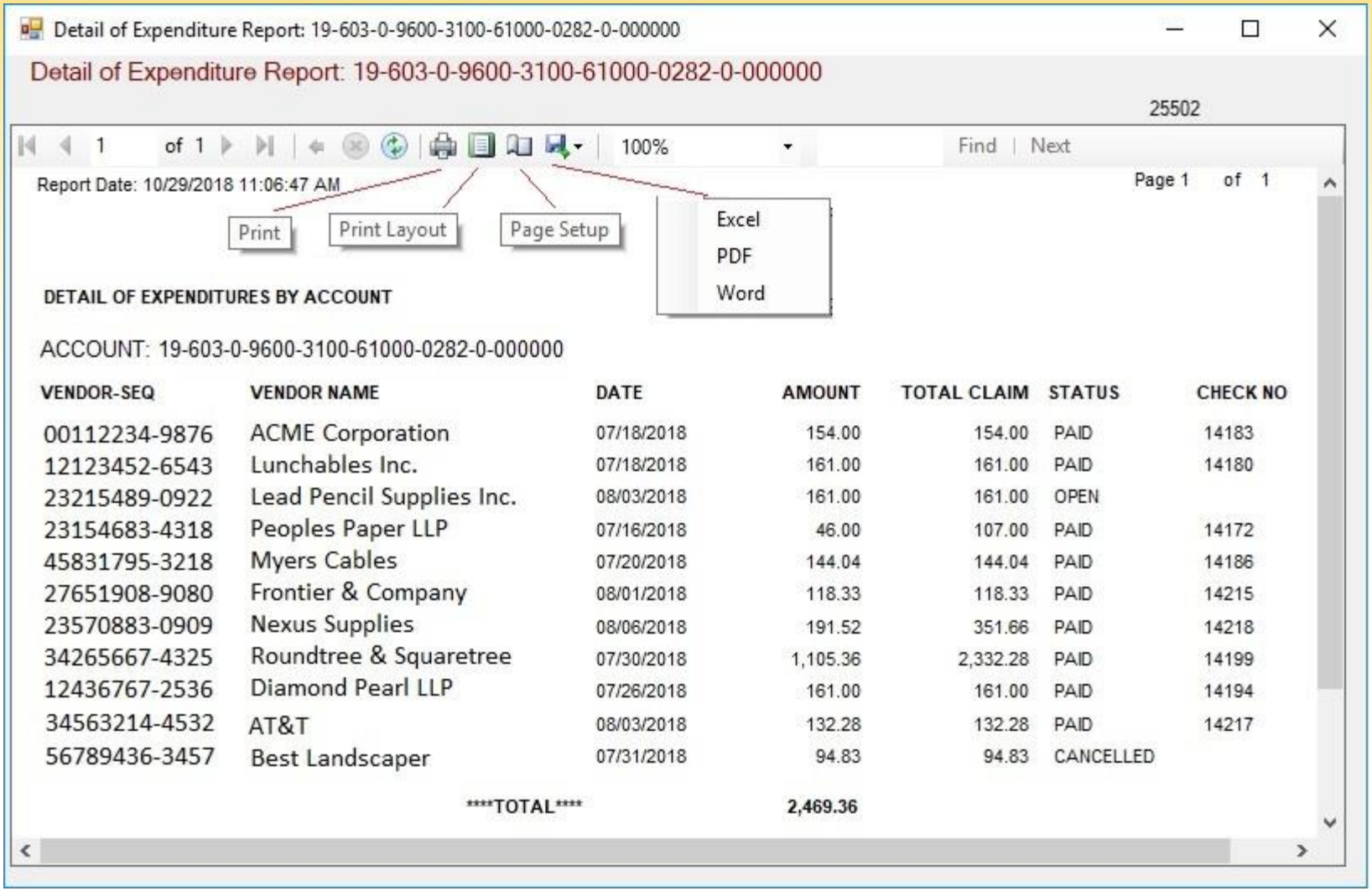
Total Expended **2,374.53**
Encumbered 0.00
Remaining Funds **26,625.47**

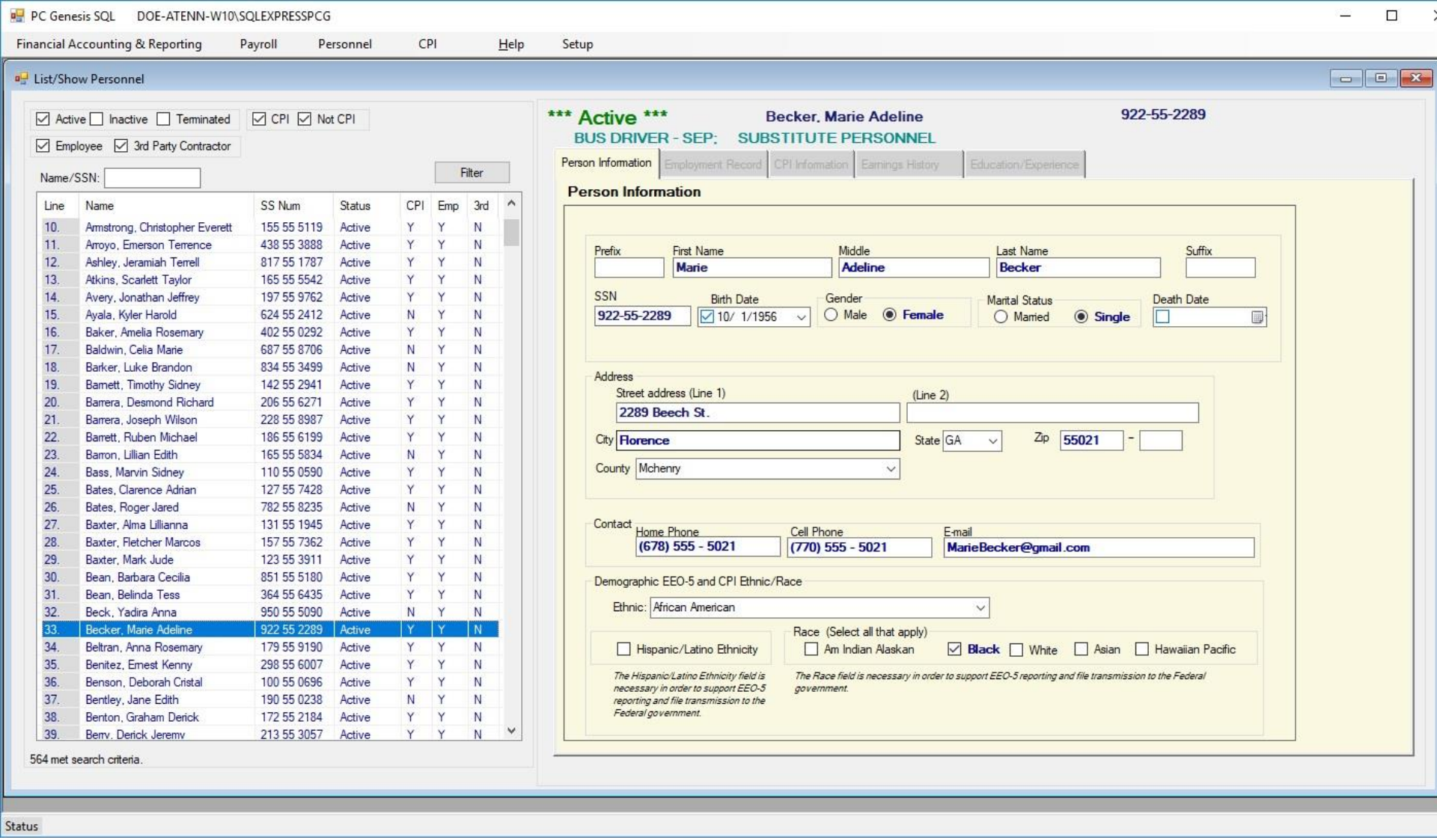
	Budget	Expended
Jul	2,416.66	1,866.23
Aug	2,416.67	508.30
Sep	2,416.67	
Oct	2,416.67	
Nov	2,416.67	
Dec	2,416.67	
Jan	2,416.66	
Feb	2,416.67	
Mar	2,416.66	
Apr	2,416.67	
May	2,416.66	
Jun	2,416.67	
Total	**29,000.00**	**2,374.53**

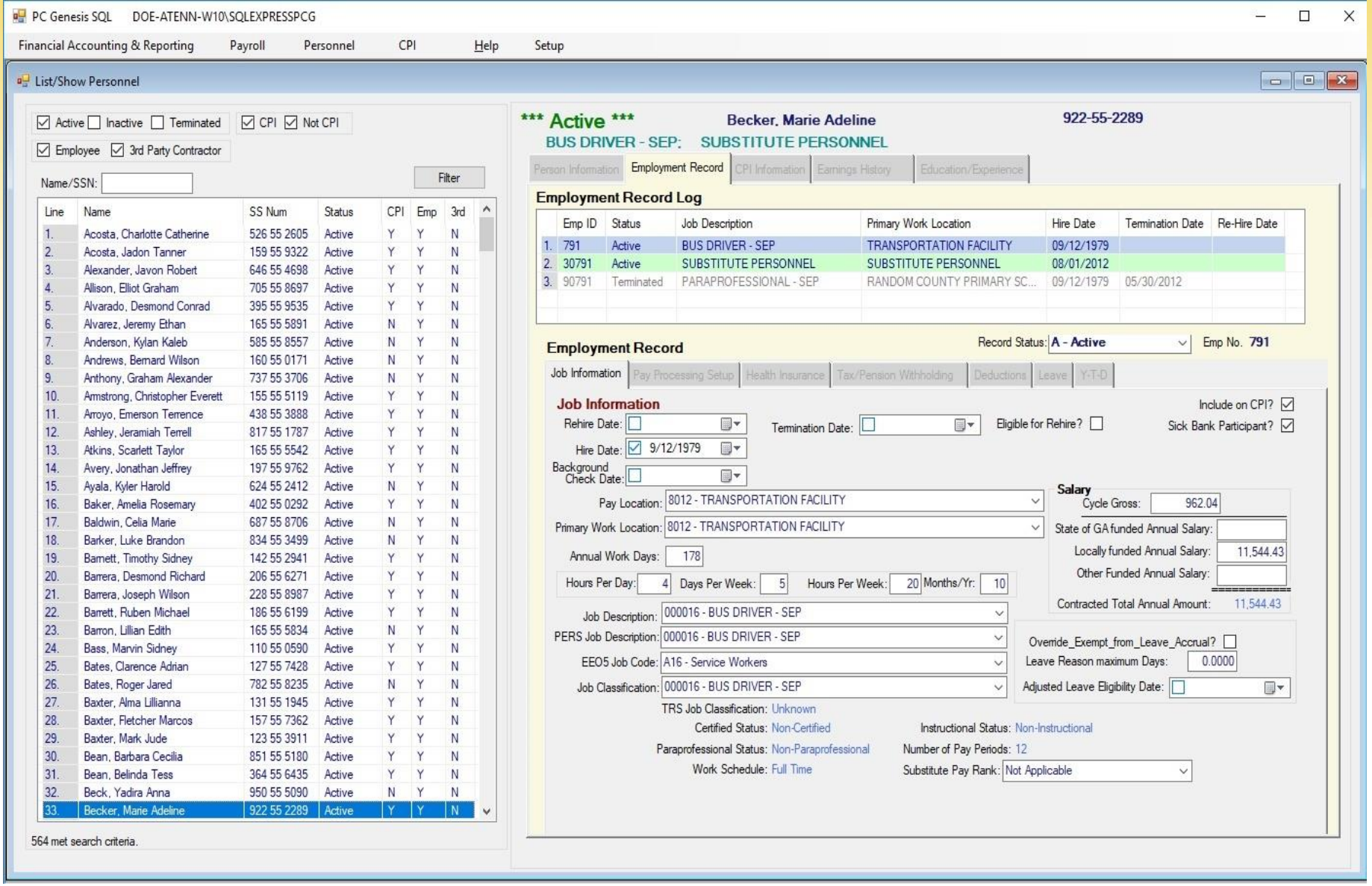
Budget 33%
Expend 8%

19-603-0-9600-3100-61000-0282-0-000000

Expenditure Detail Report:


Detail of Expenditure Report: 19-603-0-9600-3100-61000-0282-0-000000
Detail of Expenditure Report: 19-603-0-9600-3100-61000-0282-0-000000
25502
1 of 1
100%
Find | Next
Report Date: 10/29/2018 11:06:47 AM
Page 1 of 1
Print
Print Layout
Page Setup
Excel
PDF
Word
DETAIL OF EXPENDITURES BY ACCOUNT
ACCOUNT: 19-603-0-9600-3100-61000-0282-0-000000
VENDOR-SEQ VENDOR NAME DATE AMOUNT TOTAL CLAIM STATUS CHECK NO
00112234-9876 ACME Corporation 07/18/2018 154.00 154.00 PAID 14183
12123452-6543 Lunchables Inc. 07/18/2018 161.00 161.00 PAID 14180
23215489-0922 Lead Pencil Supplies Inc. 08/03/2018 161.00 161.00 OPEN
23154683-4318 Peoples Paper LLP 07/16/2018 46.00 107.00 PAID 14172
45831795-3218 Myers Cables 07/20/2018 144.04 144.04 PAID 14186
27651908-9080 Frontier & Company 08/01/2018 118.33 118.33 PAID 14215
23570883-0909 Nexus Supplies 08/06/2018 191.52 351.66 PAID 14218
34265667-4325 Roundtree & Squaretree 07/30/2018 1,105.36 2,332.28 PAID 14199
12436767-2536 Diamond Pearl LLP 07/26/2018 161.00 161.00 PAID 14194
34563214-4532 AT&T 08/03/2018 132.28 132.28 PAID 14217
56789436-3457 Best Landscaper 07/31/2018 94.83 94.83 CANCELLED
****TOTAL**** 2,469.36


PC Genesis SQL DOE-ATENN-W10\SQLEXPRESSPCG
Financial Accounting & Reporting Payroll Personnel CPI Help Setup
List/Show Personnel
Active Inactive Terminated CPI Not CPI
Employee 3rd Party Contractor
Name/SSN:
Filter
Line Name SS Num Status CPI Emp 3rd
10. Armstrong, Christopher Everett 155 55 5119 Active Y Y N
11. Arroyo, Emerson Terrence 438 55 3888 Active Y Y N
12. Ashley, Jeramiah Terrell 817 55 1787 Active Y Y N
13. Atkins, Scarlett Taylor 165 55 5542 Active Y Y N
14. Avery, Jonathan Jeffrey 197 55 9762 Active Y Y N
15. Ayala, Kyler Harold 624 55 2412 Active N Y N
16. Baker, Amelia Rosemary 402 55 0292 Active Y Y N
17. Baldwin, Celia Marie 687 55 8706 Active N Y N
18. Barker, Luke Brandon 834 55 3499 Active N Y N
19. Barnett, Timothy Sidney 142 55 2941 Active Y Y N
20. Barrera, Desmond Richard 206 55 6271 Active Y Y N
21. Barrera, Joseph Wilson 228 55 8987 Active Y Y N
22. Barrett, Ruben Michael 186 55 6199 Active Y Y N
23. Barron, Lillian Edith 165 55 5834 Active N Y N
24. Bass, Marvin Sidney 110 55 0590 Active Y Y N
25. Bates, Clarence Adrian 127 55 7428 Active Y Y N
26. Bates, Roger Jared 782 55 8235 Active N Y N
27. Baxter, Alma Lillianna 131 55 1945 Active Y Y N
28. Baxter, Fletcher Marcos 157 55 7362 Active Y Y N
29. Baxter, Mark Jude 123 55 3911 Active Y Y N
30. Bean, Barbara Cecilia 851 55 5180 Active Y Y N
31. Bean, Belinda Tess 364 55 6435 Active Y Y N
32. Beck, Yadira Anna 950 55 5090 Active N Y N
33. Becker, Marie Adeline 922 55 2289 Active Y Y N
34. Beltran, Anna Rosemary 179 55 9190 Active Y Y N
35. Benitez, Ernest Kenny 298 55 6007 Active Y Y N
36. Benson, Deborah Cristal 100 55 0696 Active Y Y N
37. Bentley, Jane Edith 190 55 0238 Active N Y N
38. Benton, Graham Derick 172 55 2184 Active Y Y N
39. Berry, Derick Jeremy 213 55 3057 Active Y Y N
564 met search criteria.
*** Active ***
Becker, Marie Adeline
922-55-2289
BUS DRIVER - SEP: SUBSTITUTE PERSONNEL
Person Information
Employment Record
CPI Information
Earnings History
Education/Experience
Person Information
Prefix
First Name Marie
Middle Adeline
Last Name Becker
Suffix
SSN 922-55-2289
Birth Date 10/ 1/1956
Gender Male Female
Marital Status Married Single
Death Date
Address
Street address (Line 1) 2289 Beech St.
(Line 2)
City Florence
State GA
Zip 55021
County Mchenry
Contact
Home Phone (678) 555 - 5021
Cell Phone (770) 555 - 5021
E-mail MarieBecker@gmail.com
Demographic EEO-5 and CPI Ethnic/Race
Ethnic: African American
Hispanic/Latino Ethnicity
Race (Select all that apply)
Am Indian Alaskan Black White Asian Hawaiian Pacific
The Hispanic/Latino Ethnicity field is necessary in order to support EEO-5 reporting and file transmission to the Federal government.
The Race field is necessary in order to support EEO-5 reporting and file transmission to the Federal government.
Status


PC Genesis SQL DOE-ATENN-W10\SQLEXPRESSPCG
Financial Accounting & Reporting Payroll Personnel CPI Help Setup
List/Show Personnel
Active Inactive Terminated CPI Not CPI
Employee 3rd Party Contractor
Name/SSN:
Filter
Line Name SS Num Status CPI Emp 3rd
1. Acosta, Charlotte Catherine 526 55 2605 Active Y Y N
2. Acosta, Jadon Tanner 159 55 9322 Active Y Y N
3. Alexander, Javon Robert 646 55 4698 Active Y Y N
4. Allison, Elliot Graham 705 55 8697 Active Y Y N
5. Alvarado, Desmond Conrad 395 55 9535 Active Y Y N
6. Alvarez, Jeremy Ethan 165 55 5891 Active N Y N
7. Anderson, Kylan Kaleb 585 55 8557 Active N Y N
8. Andrews, Bernard Wilson 160 55 0171 Active N Y N
9. Anthony, Graham Alexander 737 55 3706 Active N Y N
10. Armstrong, Christopher Everett 155 55 5119 Active Y Y N
11. Arroyo, Emerson Terrence 438 55 3888 Active Y Y N
12. Ashley, Jeramiah Terrell 817 55 1787 Active Y Y N
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23. Barron, Lillian Edith 165 55 5834 Active N Y N
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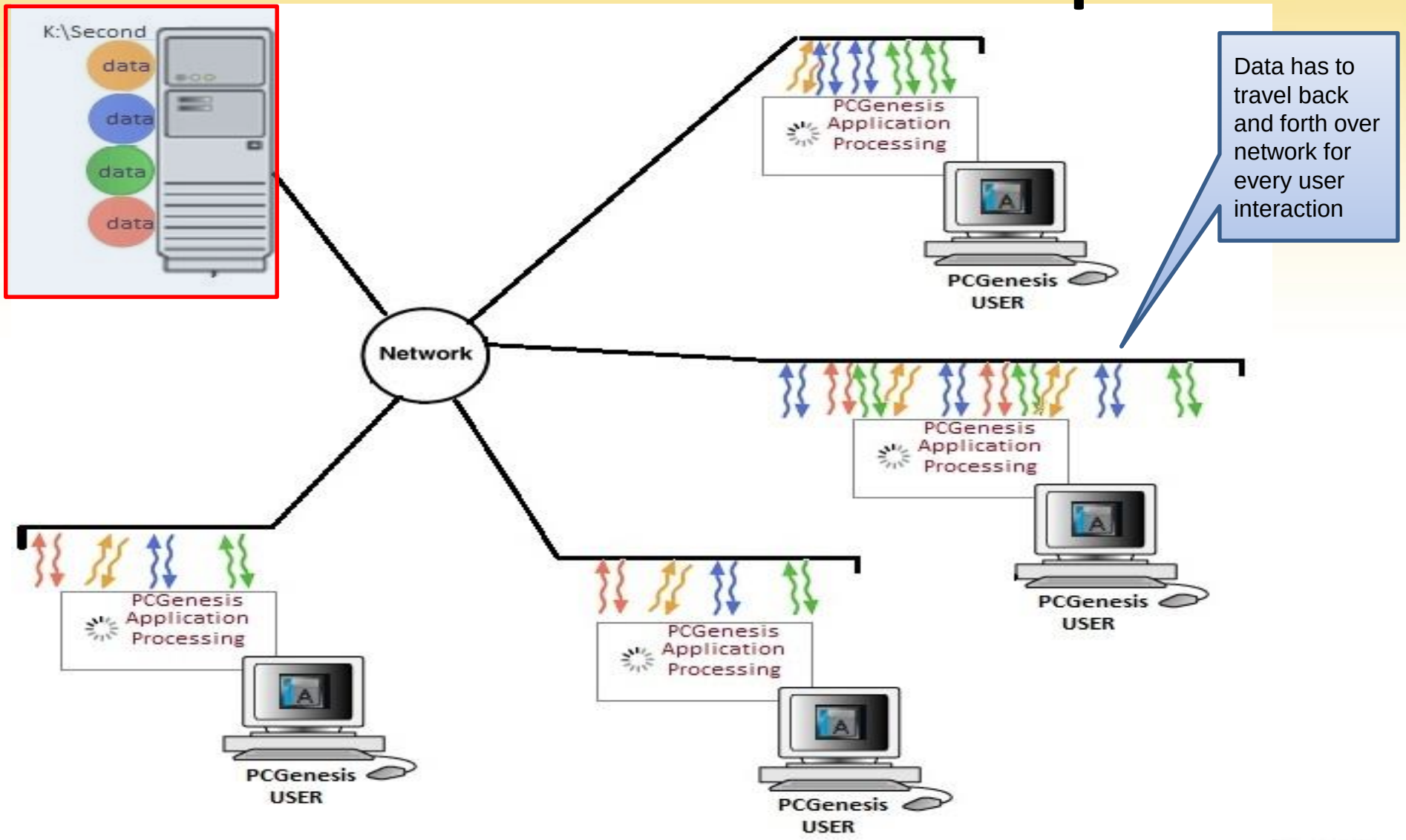
25. Bates, Clarence Adrian 127 55 7428 Active Y Y N
26. Bates, Roger Jared 782 55 8235 Active N Y N
27. Baxter, Alma Lillianna 131 55 1945 Active Y Y N
28. Baxter, Fletcher Marcos 157 55 7362 Active Y Y N
29. Baxter, Mark Jude 123 55 3911 Active Y Y N
30. Bean, Barbara Cecilia 851 55 5180 Active Y Y N
31. Bean, Belinda Tess 364 55 6435 Active Y Y N
32. Beck, Yadira Anna 950 55 5090 Active N Y N
33. Becker, Marie Adeline 922 55 2289 Active Y Y N
564 met search criteria.
*** Active ***
Becker, Marie Adeline
922-55-2289
BUS DRIVER - SEP; SUBSTITUTE PERSONNEL
Person Information Employment Record CPI Information Earnings History Education/Experience
Employment Record Log
Emp ID Status Job Description Primary Work Location Hire Date Termination Date Re-Hire Date
1. 791 Active BUS DRIVER - SEP TRANSPORTATION FACILITY 09/12/1979
2. 30791 Active SUBSTITUTE PERSONNEL SUBSTITUTE PERSONNEL 08/01/2012
3. 90791 Terminated PARAPROFESSIONAL - SEP RANDOM COUNTY PRIMARY SC... 09/12/1979 05/30/2012
Employment Record
Record Status: A - Active
Emp No. 791
Job Information Pay Processing Setup Health Insurance Tax/Pension Withholding Deductions Leave Y-T-D
Job Information
Include on CPI?
Rehire Date:
Termination Date:
Eligible for Rehire?
Sick Bank Participant?
Hire Date: 9/12/1979
Background Check Date:
Pay Location: 8012 - TRANSPORTATION FACILITY
Primary Work Location: 8012 - TRANSPORTATION FACILITY
Annual Work Days: 178
Hours Per Day: 4 Days Per Week: 5 Hours Per Week: 20 Months/Yr: 10
Job Description: 000016 - BUS DRIVER - SEP
PERS Job Description: 000016 - BUS DRIVER - SEP
EEO5 Job Code: A16 - Service Workers
Job Classification: 000016 - BUS DRIVER - SEP
TRS Job Classification: Unknown
Certified Status: Non-Certified
Paraprofessional Status: Non-Paraprofessional
Work Schedule: Full Time
Salary
Cycle Gross: 962.04
State of GA funded Annual Salary:
Locally funded Annual Salary: 11,544.43
Other Funded Annual Salary:
Contracted Total Annual Amount: 11,544.43
Override_Exempt_from_Leave_Accrual?
Leave Reason maximum Days: 0.0000
Adjusted Leave Eligibility Date:
Instructional Status: Non-Instructional
Number of Pay Periods: 12
Substitute Pay Rank: Not Applicable

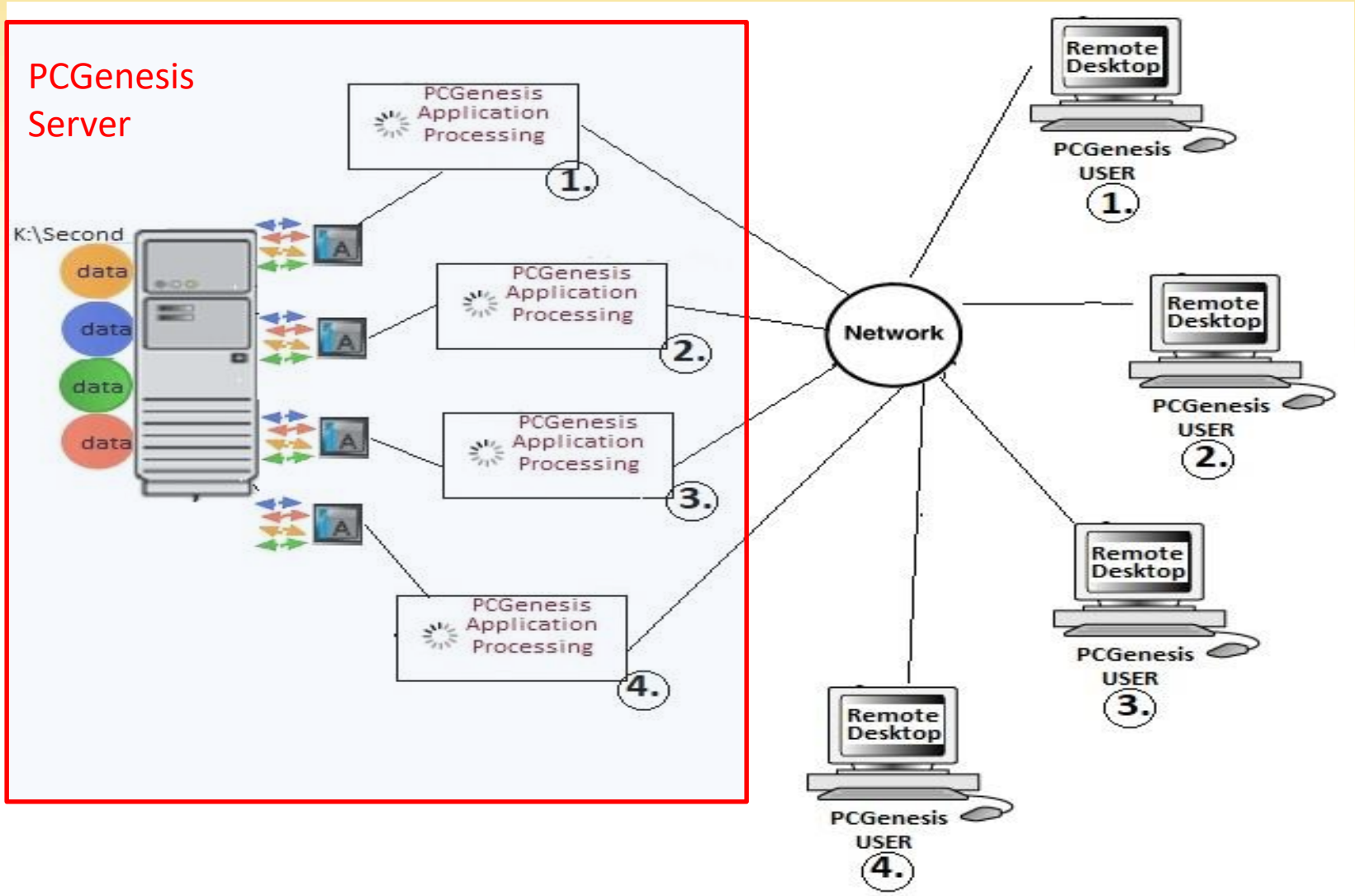
Site Recommendations

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

PCGenesis run on User Computer



PCGenesis through Remote Desktop

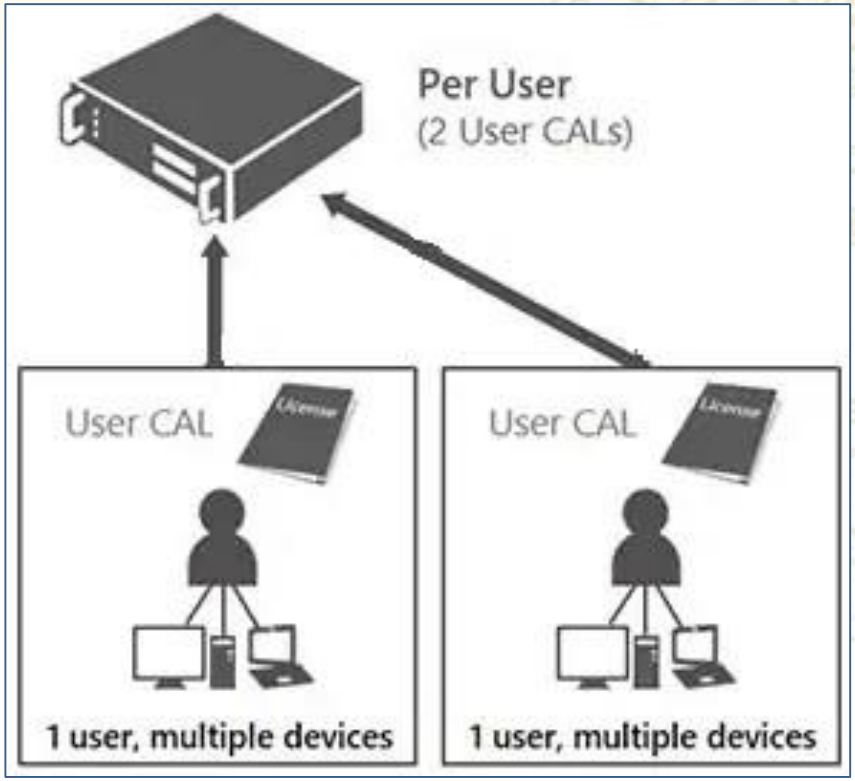


Remote Desktop Licensing

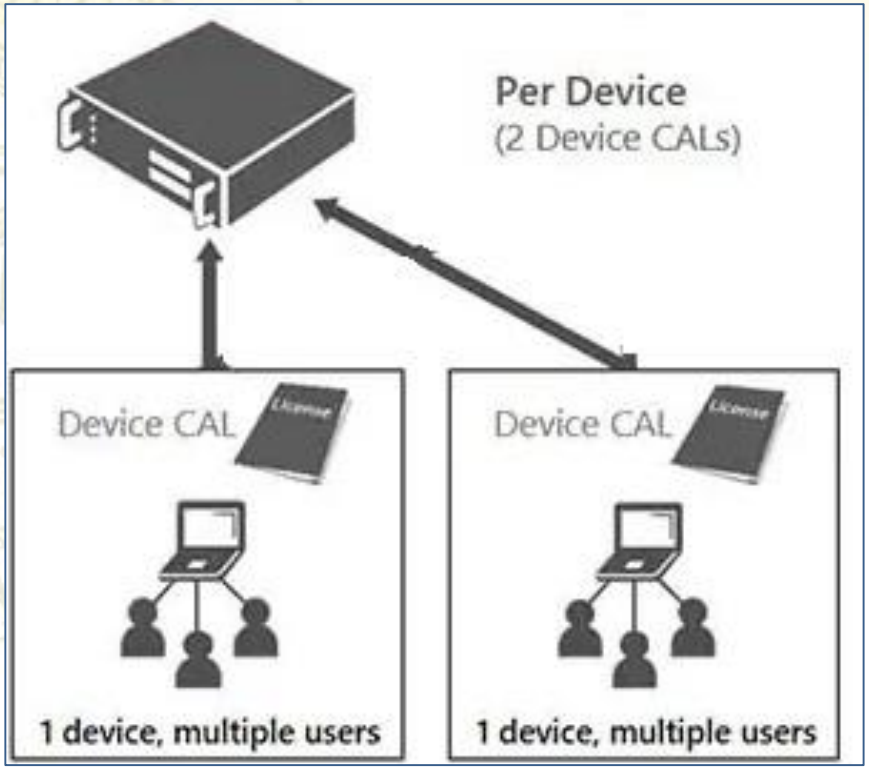
Client Access License (CAL)

based on user

1-User CAL $199.00
5-User CAL $779.00



based on device



Ransomware

What is ransomware?

Ransom malware, or ransomware, is a type of malware that prevents users from accessing their system or personal files and demands ransom payment in order to regain access.

How do you get ransomware?

The most common method today is through malicious spam, or malspam, which is unsolicited email that is used to deliver malware.

The email might include booby-trapped attachments, such as PDFs or Word documents. It might also contain links to malicious websites.

How do you get ransomware?

Transferred from connected devices

If Windows malware is on the smartphone, you plug it into your computer, and autorun is running, the Windows-based malware could start running and infect your machine.

Do not charge your devices using your USB port.

Encrypting Ransomware

This is the one we have been seeing in our districts. The perpetrators snatch up your files and encrypt them, demanding payment in order to decrypt and redeliver. The reason why this type of ransomware is so dangerous is because once cybercriminals get ahold of your files, no security software or system restore can return them to you.

Unless you contact the cybercriminals and pay the ransom, they're gone. Even if you pay them, there is no guarantee will give you those files back.

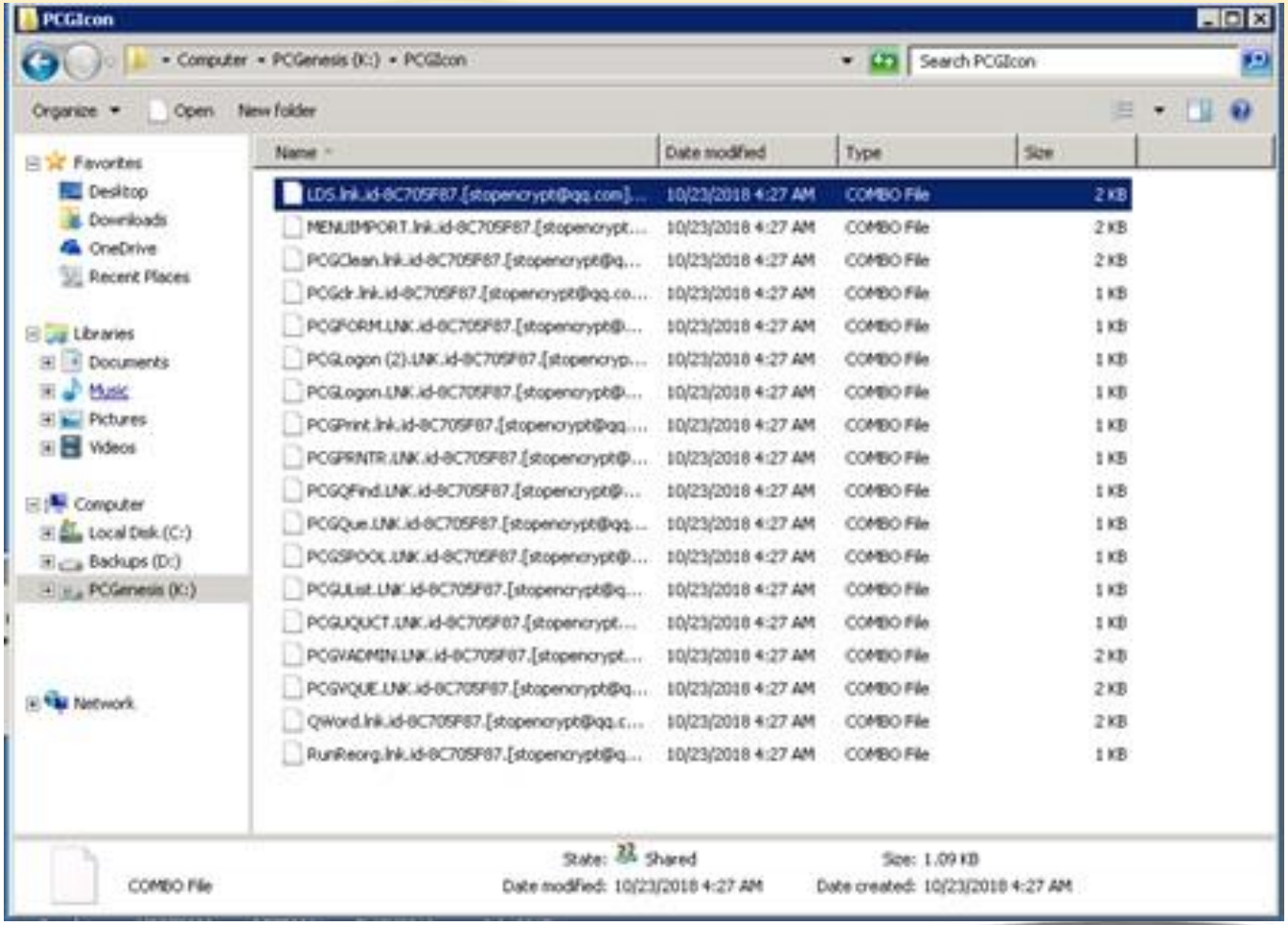
Who do ransomware authors target?

When ransomware was first unleashed, its initial victims were sent to the general public.

However, they began to realize its full potential when they rolled out ransomware to businesses and now public institutions, such as school districts. Multiple Georgia districts have already been hit.

How do you know if you have been infected?

Filenames will all be changed, nothing works and everything you click sends you to a website announcing to fix your files for a fee.



What to do if infected?

The number one rule if you find yourself infected with ransomware is to **never pay the ransom**.

(This is now advice endorsed by the FBI.)

Nothing on a computer exposed to ransomware can be trusted. The computer must be completely reformatted.

How to recover from a ransomware attack

- Due to multiple attacks, we now can advise districts on streamlining the recovery effort.

- If you see your PCGicon folder files looking distorted, you have been infected. The entire PCGenesis server has been compromised and must be reformatted. Nothing on this server should be trusted.

- Please contact the DOE immediately for instructions on moving forward in the event of a ransomware attack.

How to protect from ransomware

- Create secure daily backups of your PCGenesis data to a new thumb drive and label with date and time.

- Invest in cybersecurity—a program with real-time protection that's designed to thwart advanced malware attacks such as ransomware. You should also look out for features that will both shield vulnerable programs from threats (an anti-exploit technology) as well as block ransomware from holding files hostage (an anti-ransomware component).

  Be sure your systems and software are updated. The WannaCry ransomware outbreak took advantage of a vulnerability in Microsoft software. While the company had released a patch for the security loophole back in March 2017, many folks didn't install the update—which left them open to attack.

  – We recommend changing your settings to enable automatic updating.

Backing up PCGenesis data files

BACKUP GUIDELINES		
✓	Step	Action
	1	Include a **full backup** of ***K:*.**** in the site's standard server backup process ▸ Recommend **full backup** of ***K:*.**** every night if possible • Minimum of one full backup of ***K:*.**** every week **(Required)** • Retain at least 4 weeks of ***K:*.**** **(Required)**
	2	Daily backup of ***K:\SECOND*.**** and ***K:\PCGSQLdb*.**** **(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)** • Retain daily backups of ***K:\SECOND*.**** and ***K:\PCGSQLdb*.**** for 4 weeks **(Required)** • Retain one daily backup each month of ***K:\SECOND*.**** and ***K:\PCGSQLdb*.**** for at least one year **(Required)**
	3	PCGenesis data is split between files contained in the directory ***K:\SECOND*** and the *SQL Server* database tables located in ***K:\PCGSQLdb***. Therefore, it is very important to backup ***K:\PCGSQLdb*.**** and ***K:\SECOND*.**** during the nightly backup. One directory cannot be backed up without the other directory, and they must be maintained together.

Thumb drives now can hold up to a terrabyte of data.

You can get multi packs of thumb drives cheaply eg 10 pack of 16 gig each for $30

Thank you for attending!