MEMORANDUM

TO: PCGenesis System Administrators

FROM: Steven Roache, Senior Information Systems Manager


This document contains the PCGenesis software release overview and installation instructions for Release 18.S.16.

PCGenesis supporting documentation is provided at:

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

Timing Instructions

This release must be installed before June 30, 2018.

The installation of the print queue components does not impact the running of the PCGenesis application in any way. The installation of the Microsoft components is totally independent of any PCGenesis software. If any problems arise during the installation, PCGenesis will continue to run without being interrupted.
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Section A: Overview of Release

A1. PCGenesis System Enhancements

A1.1. PCGenesis Print Queue Upgrade – Work In Progress

The GaDOE is happy to announce that we will be rolling out a major upgrade of the PCGenesis Print Queue in the second quarter of 2018. The DOE has purchased the VerraDyne Print Manager for a cost of $25,000 to replace the existing PCGenesis print queue software. The new VerraDyne Print Manager will have much in common with the existing PCGenesis print queue because the same company created both systems.

Operating System Requirements for VerraDyne Print Manager

1. The new VerraDyne Print Manager will not be supported on Windows Server 2003. As of June 30, 2018, PCGenesis will no longer support the Windows Server 2003 operating system.

2. For school systems running Windows Server 2008 R2, the new VerraDyne Print Manager will require Service Pack 1 to be installed. We encourage all school systems running Windows Server 2008 to verify that the Microsoft Service Pack 1 has been installed on your PCGenesis server.

3. For school systems running Windows Server 2008 R2, Windows Server 2012, and Windows Server 2016, the new VerraDyne Print Manager will require the PCGenesis server to have all maintenance and service packs installed on your PCGenesis server so that the Windows Server operating system is fully up to date.

A1.2. Installation of Print Queue Components

This release starts the process of upgrading software in order to support the new VerraDyne Print Manager software. The first part of the upgrade is to load the Microsoft components required to run a database. The GaDOE would like school systems which meet the operating system requirements listed above to download and install the appropriate software packet at some point between May 17, 2018 and June 30, 2018.

This release supports the software packet for systems running a version of Windows Server 2012 or Windows Server 2016. The software packet contains the following components:

Windows Server 2012 / 2016 Software Packet

- .NET 4.5 Framework (required for VerraDyne Print Manager software)
- Microsoft SQL Server Express 2016
- Microsoft SQL Server 2016 Management Studio
- Adobe Reader (to be loaded to the server)
The installation of the print queue components does not impact the running of the PCGenesis application in any way. The installation of the Microsoft components is totally independent of any PCGenesis software. If any problems arise during the installation, PCGenesis will continue to run without being interrupted.

**A1.3. Print Queue Components Added to Current Release Number Screen**

The print queue component fields, highlighted below, have been added to the *Display Current Release Number* screen (F30, F17). These fields are needed for the new VerraDyne Print Manager software to access the SQL Server database. The print queue component fields on the *Display Current Release Number* screen are available for informational purposes only.

```
The Following D.O.E. Releases Have Been Successfully Loaded:

- DOE 16.01.00  03/31/2016
- DOE 16.01.01  05/15/2016
- DOE 16.02.00  06/30/2016
- DOE 16.03.01  11/30/2016
- DOE 16.04.00  12/31/2016
- DOE 17.01.00  02/28/2017
- DOE 17.02.00  06/30/2017
- DOE 17.03.00  09/25/2017
- DOE 17.04.01  12/01/2017
- DOE 17.04.00  12/22/2017
- DOE 18.01.00  02/19/2018
- DOE 18.01.00  03/26/2018
- DOE 18.01.00  03/29/2018

.NET Framework 3.5:  H  SQL Server Express 2012:  H

Press <ENTER> or F16 to Exit
18.01.00

Display Current Release Number
```
Section B: Installation Instructions for Release 18.S.16 Software

B1. Perform a PCGenesis Full Backup

When the prior evening’s backup was successful, and when installing Release 18.S.16 before performing any work in PCGenesis for the day, proceed to B2. Install PCGenesis Release. In addition to its current labeling, also label the prior evening’s backup CD/DVD/USB as “Data Backup Prior to Release 18.S.16”. Continue to use the backup CD/DVD/USB in the normal backup rotation.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify all users are logged out of PCGenesis.</td>
</tr>
<tr>
<td>2</td>
<td>Close Uspool at the server.</td>
</tr>
<tr>
<td>3</td>
<td>Perform a PCG Full Backup to CD or DVD or USB.</td>
</tr>
<tr>
<td>4</td>
<td>When the PCGenesis backup completes, label the backup CD or DVD or USB “Full System Backup Prior to Release 18.S.16”.</td>
</tr>
</tbody>
</table>
## B2. Install PCGenesis Release 18.S.16

### FROM THE PCGENESIS SERVER

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify that all Windows Server operating system updates have been applied to your system before starting this installation!</td>
</tr>
<tr>
<td>2</td>
<td>Verify all users are logged out of PCGenesis.</td>
</tr>
<tr>
<td>3</td>
<td>Open Windows® Explorer.</td>
</tr>
<tr>
<td>4</td>
<td>Navigate to the K:\INSTAL directory.</td>
</tr>
</tbody>
</table>
| 5    | Verify the following five files display:  
  - PCGUNZIP.EXE  
  - SQLINSTL16.BAT  
  - INSTLNET  
  - Win2012_Win2016_SQLEXPR_x64_ENU.exe  
  - Win2012_Win2016_SSMS-Setup-ENU.exe  
  
*If these five files do not display, return to the MyGaDOE Web portal, and detach the files from the Web portal again.*

---

*Georgia Department of Education  
Richard Woods, State School Superintendent  
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All Rights Reserved.*
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 operating system.

To check whether the files have been blocked, right-click on each of the five downloaded files and select **Properties**. If you see a security message at the bottom, as shown below, you will need to click the ‘Unblock’ button. This is a very important step!
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 7    | In the K:\INSTAL directory, right click on PCGUNZIP.EXE and select the ‘Properties’ option. Verify that the size of the file is **67.8 MB** as shown below.  

*If the size of the file is **not 67.8 MB** as shown below, return to the MyGaDOE Web portal, and detach the file from the Web portal again.* |

**PCGUNZIP.exe:**

![Properties Window](image_url)
Step | Action
--- | ---
8 | In the K:\INSTAL directory, right click on Win2012_Win2016_SQLEXPR_x64_ENU.exe and select the ‘Properties’ option. Verify that the size of the file is 411 MB as shown below.

*If the size of the file is *not* 411 MB as shown below, return to the MyGaDOE Web portal, and detach the file from the Web portal again.*

### Win2012_Win2016_SQLEXPR_x64_ENU.exe:

![Win2012_Win2016_SQLEXPR_x64_ENU.exe Properties](image-url)
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>In the <strong>K:INSTAL</strong> directory, right click on <strong>Win2012_Win2016_SSMS-Setup-ENU.exe</strong> and select the ‘Properties’ option. Verify that the size of the file is <strong>802 MB</strong> as shown below. If the size of the file is <strong>not</strong> <strong>802 MB</strong> as shown below, return to the MyGaDOE Web portal, and detach the file from the Web portal again.</td>
</tr>
</tbody>
</table>

![Win2012_Win2016_SSMS-Setup-ENU.exe](image-url)
**Step** | **Action**  
--- | ---  
10 | Right-click **SQLINSTL16.BAT** and select *Run as administrator* to perform the installation.  

The following screen displays:

![User Account Control dialog](image)  

**Step** | **Action**  
--- | ---  
11 | When prompted with *Do you want to allow this app to make changes to your device?* select *Yes*.  

---
The following screen displays briefly:

![WinZip Self-Extractor](image1)

If the PCGenesis server already has **Microsoft .NET Framework 4.5** installed, the following screen displays:

![Microsoft .NET Framework 4.5](image2)

More information about(blocked).NET Framework 4.5.2 installations.
If the PCGenesis server does not have **Microsoft .NET Framework 4.5** installed, the following screen displays:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 12   | If the PCGenesis server already has **Microsoft .NET Framework 4.5** installed, proceed to **Step 8**.  
   If the PCGenesis server does not have **Microsoft .NET Framework 4.5** installed, accept the license term and click ’**Install**’.  
   Click ’**Done**’ when the **Microsoft .NET Framework 4.5** installation is completed. |

The following screen displays:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>When prompted with ’Choose Directory For Extracted Files’, select ‘<strong>OK</strong>’.</td>
</tr>
</tbody>
</table>
The following screen displays briefly:

![Microsoft SQL Server 2016 Express SPI](image)

Preparing: `K:\INSTALL\Win20\Microsoft\MSDE\DEPLOYMENT\RESOURCES\WMSQL\WMSQL\SSID\Express\Setup\Setup.exe`

The following screen displays:

![SQL Server 2016 Setup](image)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>When prompted with ‘SQL Server 2016 Setup – License Terms’, select ‘Next’.</td>
</tr>
</tbody>
</table>
The following screen may be displayed in certain instances:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>If prompted with ‘SQL Server 2016 Setup – Microsoft Update’, decide whether or not you would like your Windows Server to use Microsoft Update to automatically check for updates. If you would like Microsoft Update to check for updates, check the box and select ‘Next’. If you do not want Microsoft Update to check for updates, do not check the box and select ‘Next’. Generally, it is considered good operating practice to keep your PCGenesis Windows Server operating system and other components constantly up-to-date with the latest security patches.</td>
</tr>
</tbody>
</table>
The following screen displays:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>When prompted with ‘SQL Server 2016 Setup – Feature Selection’, verify that ‘Database Engine Services’ is checked, and select ‘Next’.</td>
</tr>
</tbody>
</table>
The following screen displays:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>When prompted with ‘SQL Server 2016 Setup – Instance Configuration’, verify that the ‘Named instance’ and ‘Instance ID’ are SQLEXPRESSPCG, and select ‘Next’.</td>
</tr>
</tbody>
</table>
The following screen displays:

**Server Configuration**

Specify the service accounts and collation configuration.

<table>
<thead>
<tr>
<th>Service Accounts</th>
<th>Collation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQL Server Database Engine</td>
<td>NT AUTHORITY\SYSTEM</td>
</tr>
<tr>
<td>SQL Server Browser</td>
<td>NT AUTHORITY\LOCAL</td>
</tr>
</tbody>
</table>

Microsoft recommends that you use a separate account for each SQL Server service.

- **Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service**
  - This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.
  - [Click here for details](#)

The following table outlines the steps and actions:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>When prompted with <em>SQL Server 2016 Setup – Server Configuration</em>, select ‘Next’.</td>
</tr>
</tbody>
</table>
The following screen displays:

### Step 19

When prompted with `SQL Server 2016 Setup – Database Engine Configuration`, select `Next`. 
The following screen displays:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>When prompted with ‘<strong>SQL Server 2016 Setup – Complete</strong>’, select ‘Close’.</td>
</tr>
</tbody>
</table>

The following screen may or may not display:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 21   | When prompted with ‘**Computer restart required**’, select ‘OK’.  
Do not **RESTART** the PCGenesis server at this time. The PCGenesis server should be rebooted as the **last** step of the procedure. |
The following screen displays:

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>When prompted with the ‘Microsoft SQL Server Management Studio’ screen, select ‘Install’.</td>
</tr>
</tbody>
</table>
The following screen displays briefly:
One of the following screens will display:

![Restart required in order to complete setup.](image-url)

- **Release 17.4**
- **Microsoft SQL Server Management Studio**

**Restart required in order to complete setup.**

All specified components have been installed successfully.

The computer needs to be restarted before setup can continue.

[Restart] [Close]
Or, this screen may display:

![Microsoft SQL Server Management Studio](image)

**Step 23**  
When prompted with the ‘Microsoft SQL Server Management Studio’ screen, select ‘Close’.  
Do not **RESTART** the PCGenesis server at this time.
If the PCGenesis server does **not** have Adobe Acrobat Reader installed, the following screen may display briefly:

The following screen displays:
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>When prompted with the ‘Adobe Acrobat Reader DC: Installation Complete’ screen, <strong>uncheck</strong> the box for ‘Launch Adobe Acrobat Reader DC’ and select ‘<strong>Finish</strong>’.</td>
</tr>
<tr>
<td>25</td>
<td>Now, <strong>REBOOT</strong> the PCGenesis server.</td>
</tr>
</tbody>
</table>
### B3. Verify Release 18.S.16 Was Successfully Installed

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into PCGenesis.</td>
</tr>
<tr>
<td>2</td>
<td>From the Business Applications Master Menu, select (F30 - System Utilities).</td>
</tr>
<tr>
<td>3</td>
<td>From the System Utilities Menu, select (F17 - Display Current Release Number).</td>
</tr>
</tbody>
</table>

The following screen displays:

```
Step Action
4 Verify the necessary components are installed. Check that a 'Y' is displayed next to each of the following components.
.NET Framework 4.5: Y
SQL SERVER EXPRESS 2016: Y
SQL MANAGEMENT STUDIO 2016: Y

If the above components do not display a 'Y', contact the Technology Management Customer Support Center for assistance.
5 Select Enter.
6 Log off the PCGenesis server.
```
Step | Action
--- | ---
7 | Verify users remain logged out of PCGenesis.

### B4. Perform a PCGenesis Full Backup After Release 18.S.16 is Installed

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Verify all users are logged out of PCGenesis.</td>
</tr>
<tr>
<td>2</td>
<td>Close <em>Uspool</em> at the server.</td>
</tr>
<tr>
<td>3</td>
<td>Perform a <strong>PCG Full Backup</strong> to CD or DVD or USB.</td>
</tr>
<tr>
<td>4</td>
<td>When the PCGenesis backup completes, label the backup CD or DVD or USB &quot;<strong>Full System Backup After Release 18.S.16</strong>&quot;.</td>
</tr>
</tbody>
</table>