Disaster Recovery Plan

ELV Alliance CORE System

Bryan Shannon

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Alliance CORE IT Disaster Recovery Plan

Businesses use information technology to quickly and effectively process information. Employees use electronic mail and Voice Over Internet Protocol (VOIP) telephone systems to communicate. Electronic data interchange (EDI) is used to transmit data including orders and payments from one company to another. Servers process information and store large amounts of data. Desktop computers, laptops and wireless devices are used by employees to create, process, manage and communicate information. What do you do when your information technology stops working?

The scope of this document is directed at restoring Alliance CORE and related systems (Kiosk, Parent Portal, Provider Payment, and Mobile). An information technology disaster recovery plan (IT DRP) should be developed taking into consideration business continuity planning, impacts to the business and the client businesses, and identify the priorities and recovery time objectives for information technology resources. Technology recovery strategies should be developed to restore hardware, applications and data in time to meet the needs of the business recovery.

Businesses large and small create and manage large volumes of electronic information or data. Much of that data is important. Some data is vital to the survival and continued operation of the business. The impact of data loss or corruption from hardware failure, human error, hacking or malware could be significant. A plan for data backup and restoration of electronic information is essential.

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Codero Hosting
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Username: levelnextsoftware@comcast.net
Password: <Contact Manager for passwords>

Codero will generate a support ticket if the server is unreachable for a minimal amount of time, the default customer contact for Codero is Bryan Shannon at LevelNextSoftware@comcast.net. The first steps in recovering the Alliance CORE systems will be to contact Codero to determine if the server can be restarted, or a new server needs to be deployed. Codero is incredibly responsive, and the amount of time required to have them stand up a new server will be minimal. The assumption made within this document is that a new server is required.

Recovering Alliance CORE

Backups currently consist of production and demonstration instances of Tomcat (application server), "elv" directory of server C drive which contains installs, documents, photos, scripts and videos, and finally full/log database backups. This includes everything needed to restore the server as it was at the time the system went down, excluding perhaps up to the last 15 minutes of data.

This document assumes that in the event of a server being replaced, that the IP addresses currently in use will remain, only the hardware will change. This topology diagram identifies the IP addresses currently in use:
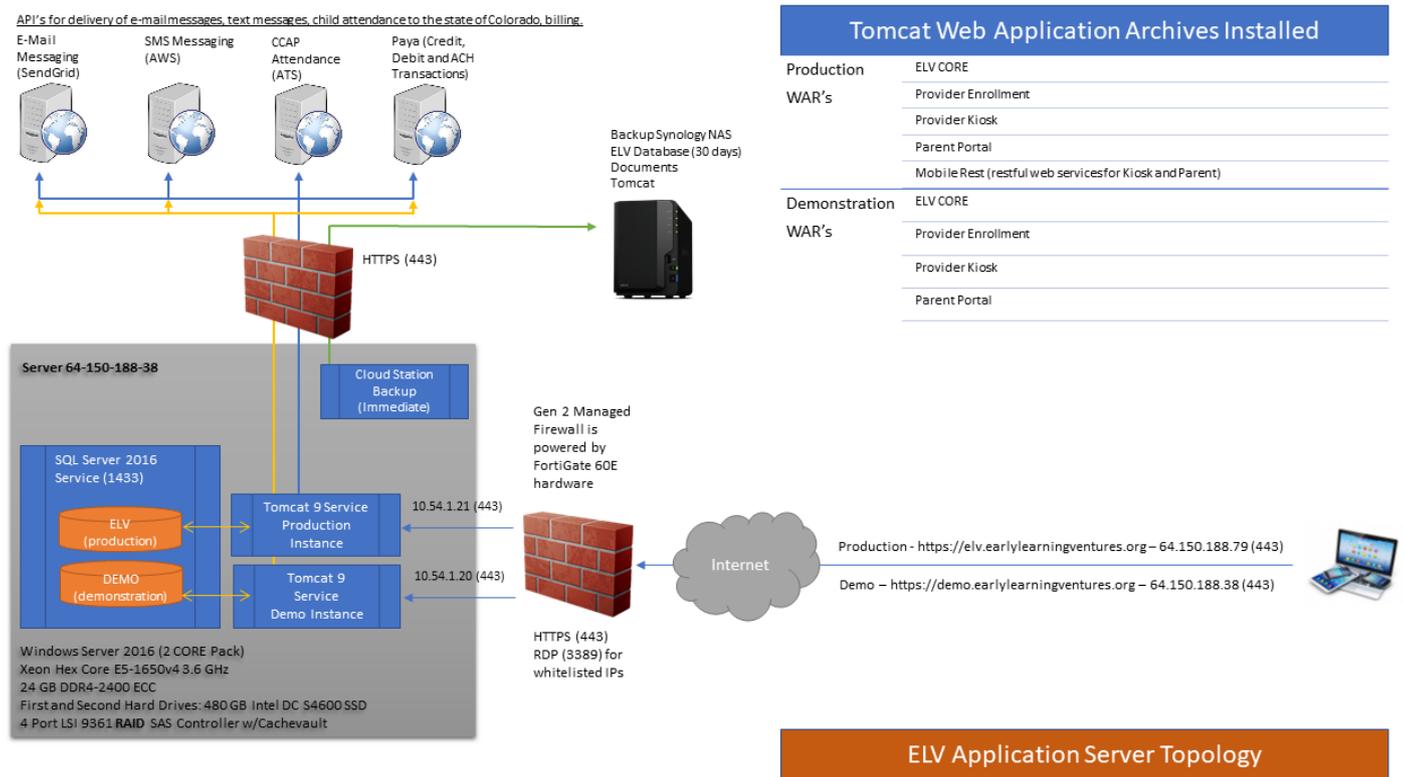
In the event that Codero assigns new IP addresses, the new addresses will need to be utilized for RDP Access, VPN Access, GoDaddy.com DNS assignments, and server.xml configuration for both the Demo and Production application instances.

Currently if you run ipconfig on the server, the IP addresses assigned are 10.64.1.20 (assigned to connector in Demo server.xml), and 10.64.1.21 (assigned to connector in Production server.xml).

```
Command Prompt
   IPv4 Address. . . . . . . . . . . : 10.64.1.20
   Subnet Mask . . . . . . . . . . : 255.255.0.0
   IPv4 Address. . . . . . . . . . . : 10.64.1.21
   Subnet Mask . . . . . . . . . . : 255.255.0.0
   Default Gateway . . . . . . . . . : 10.64.1.1
```

Within GoDaddy.com, here are the current DNS records for the demo, and elv subdomains:

☐	A	demo	64.150.188.38
☐	A	elv	64.150.188.79

The firewall re-routes the IP addresses for both demo and production from an external IP address, to an internal IP address:

External -> Internal
64.150.188.38 -> 10.64.1.20
64.150.188.79 -> 10.64.1.21

RDP Access

To use Remote Desktop to connect to the server, your own IP address must first be whitelisted with Codero. Submit a support ticket to Codero, providing your IP address and ask that it be whitelisted. This process normally takes around 30 minutes.

To find your IP address, run https://whatismyipaddress.com/. You want to provide the IPv4 IP address to Codero.

Once your IP address has been whitelisted, you can connect via RDP using the IP address:

64.150.188.38
Username: Administrator2
Password: <Contact Manager for passwords>

Codero uses the account:
Username: Administrator
Password: <Contact Manager for passwords>
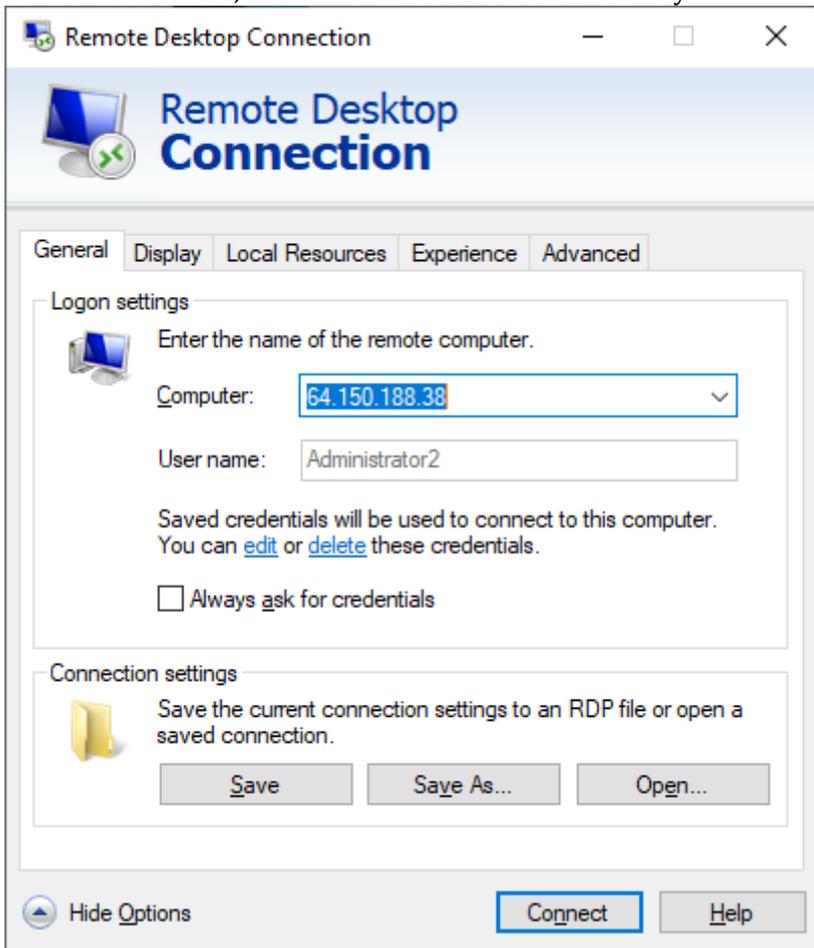
Codero VPN Access

Download the VPN software (FortiClientVPNOnlineInstaller_7.0.exe):
https://www.forticlient.com/downloads

Configure the VPN as follows:
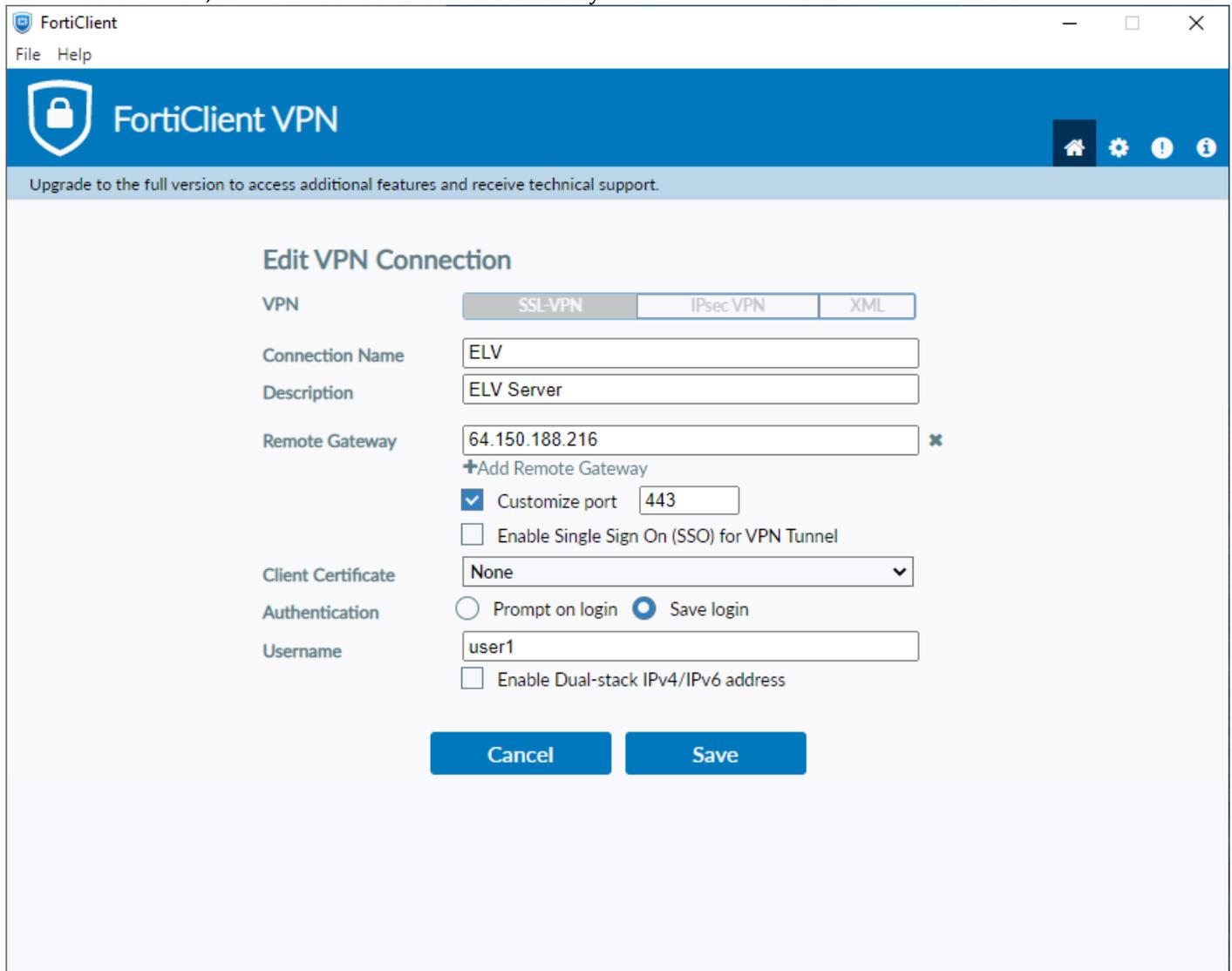
then Save.

Then enable this option. To enable this option you need to click on the far-right icon (top right – not shown in above screenshot) to enable Security options first:
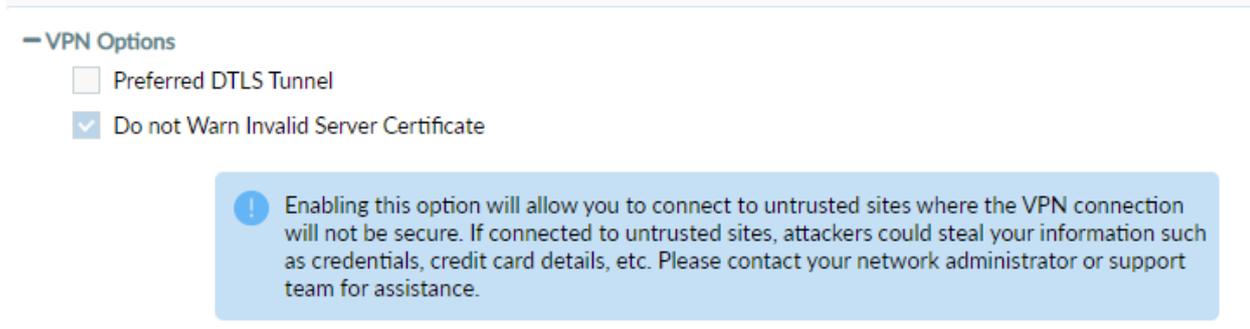
Then to connect to the VPN, select the ELV connection, and enter username/password (of the Fortis firewall):

Username: user1
Password: <Contact Manager for passwords>

or

Username: user2
Password: <Contact Manager for passwords>

Once the VPN is connected, you can RDP to the ELV hosted server using IP address **10.64.1.20**.

Note that all of this information, Remote Gateway IP address, and Username/Passwords are provided by Codero. If IP addresses are changed because the server is replaced, submit a new support ticket to get whatever is required to re-enable VPN connections (new user accounts/new remote gateway IP addresses, etc).

Generate Recovery Directory

Run the restore server batch file d:/restore-server-create.bat, which will generate a directory on the F drive containing all the files needed for the server restore.

This batch file creates a directory for the last full database backup, and all log files that were backed up following the last full backup. However, it does not move any database files. Instead, it instructs the user to move the files manually from the backup drive.

```
mkdir F:\restore-server\DatabaseBackups

pause Note Database files must be moved manually from S:\DatabaseBackups\ELV-Compressed
to F:\restore-server\DatabaseBackups

pause Database files must include last full backup plus all log files with a later date
and time
```

Navigate to the backup drive using the path S:\DatabaseBackups\ELV-Compressed, find the most current full backup, plus all log files with a later date and time, and move them to F:\restore-server\DatabaseBackups:

ELV_backup_2022_06_01_060000_8530032_trn.zip	6/1/2022 6:38 AM	WinRAR ZIP archive	4,639 KB
ELV_backup_2022_06_01_050001_3900297_trn.zip	6/1/2022 5:38 AM	WinRAR ZIP archive	40,093 KB
ELV_backup_2022_06_01_040000_9671245_trn.zip	6/1/2022 4:38 AM	WinRAR ZIP archive	97 KB
ELV_backup_2022_06_01_030001_7076889_trn.zip	6/1/2022 3:38 AM	WinRAR ZIP archive	316 KB
ELV_backup_2022_06_01_020001_1458161_trn.zip	6/1/2022 2:38 AM	WinRAR ZIP archive	635 KB
ELV_backup_2022_06_01_010001_6536538_trn.zip	6/1/2022 1:38 AM	WinRAR ZIP archive	101,056 KB
ELV_backup_2022_06_01_000001_4599528_trn.zip	6/1/2022 12:40 AM	WinRAR ZIP archive	1,334,262 KB
ELV_backup_2022_05_31_230041_4690708_bak.zip.003	5/31/2022 11:43 PM	003 File	116,825 KB
ELV_backup_2022_05_31_230041_4690708_bak.zip.002	5/31/2022 11:43 PM	002 File	2,097,152 KB
ELV_backup_2022_05_31_230041_4690708_bak.zip.001	5/31/2022 11:43 PM	WinRAR archive	2,097,152 KB

The remainder of the script does the work of moving all needed files from the backup drive to the recovery folder it's building on the F drive:

```
xcopy S:\apache-tomcat-9-elv\*.* F:\restore-server\apache-tomcat-9-elv\*.* /S /Q
xcopy S:\apache-tomcat-9-demo\*.* F:\restore-server\apache-tomcat-9-demo\*.* /S /Q
xcopy S:\elv\installs\*.* F:\restore-server\elv\installs\*.* /S /Q
xcopy S:\elv\scripts\*.* F:\restore-server\elv\scripts\*.* /S /Q
xcopy S:\elv\Desktop\*.* F:\restore-server\elv\Desktop\*.* /S /Q
pause Basic Files Complete...Press any key to restore documents photos and videos
```

Note that the script pauses here so that if desired, the recovery directory can be pushed up to the new server now, before documents and photos are fetched from the backup drive. Documents, photos and video's will require the most time to push to the new server, and they are not required

to get the new server up and running. It is recommended that these files be moved up to the new server as a second step, immediately, once the new server is up and running.

```
xcopy S:\elv\photostore\*.* F:\restore-server\elv\photostore\*.* /S /Q
xcopy S:\elv\videos\*.* F:\restore-server\elv\videos\*.* /S /Q
xcopy S:\elv\documentstore\*.* F:\restore-server\elv\documentstore\*.* /S /Q
pause Document photos and videos Complete...All Restore files are in F:\restore-server
```

Copy F:\restore-server up to the new server C drive using a destination folder of the same name (C:\restore-server).

Installs

Here is the list of files that are copied up in the Installs directory:

7z1900-x64.exe	6/18/2019 2:00 PM	Application	1,414 KB	
apache-tomcat-9.0.54-windows-x64.zip	10/22/2021 2:14 PM	WinRAR ZIP archive	12,538 KB	
BackupsCompressAndMove.bat	6/18/2019 2:02 PM	Windows Batch File	3 KB	
EnvironmentVars.txt	1/6/2022 6:11 PM	Text Document	1 KB	
jdk-8u311-windows-x64.exe	10/22/2021 1:38 PM	Application	174,667 KB	
npp.7.7.Installer.x64.exe	6/17/2019 2:02 PM	Application	3,857 KB	
star_earlylearningventures_org.zip	1/4/2022 11:53 AM	WinRAR ZIP archive	8 KB	
Synology Drive Client-2.0.4-11112.exe	3/11/2021 7:55 PM	Application	90,950 KB	
Task - ELV Database Backup compress an...	7/4/2022 11:16 AM	Microsoft Edge H...	5 KB	
winrar-x64-571.exe	6/15/2019 8:58 AM	Application	3,925 KB	

File	Description
7z1900-x64.exe	7 zip file compression utility. Used to compress database back files (full and log).
Apache-tomcat-9.0.54-windows-x64.zip	Apache Tomcat 9 application server
BackupsCompressAndMove.bat	Batch file that is stored in the C:\DatabaseBackups directory, run by the Windows task defined below to maintain 5 days of database backups, and kick-off the compression of database backups.
EnvironmentVars.txt	Windows environment variables that need to be created for Java, SendGrid (E-Mail services), and AWS (text messaging SNS).
Jdk-8u311-windows-x64.exe	Java 8 v 311
Npp.7.7.Installer.x64.exe	Notepad ++ editor
Star_earlylearningventures_org.zip	SSL certificate already present in backed up instances of Tomcat (demo and prod).
Synology Drive Client-2.0.4-11112.exe	Synology NAS backup client software used to backup files to the remote NAS.
Task – ELV Database compress and move.xml	Windows TASK that kicks of the database file compression batch job.
Winrar-x64-571.exe	WinRar file compression utility (optional, used is preferred file compression utility as needed).

First steps

Run the installs, using the default file installation location for each:

```
7z1900-x64.exe, 7 Zip.
Jdk-8u311-windows-x64.exe, Java 8.
Npp.7.7.Installer.x64.exe, Notepad ++.
Winrar-x64-571.exe, WinRar file compression utility.
```

Set Windows Environment Variables

Step 1: Open **File Explorer** and choose **This PC** to continue. Then right-click it and choose **Properties** from the context menu to continue.
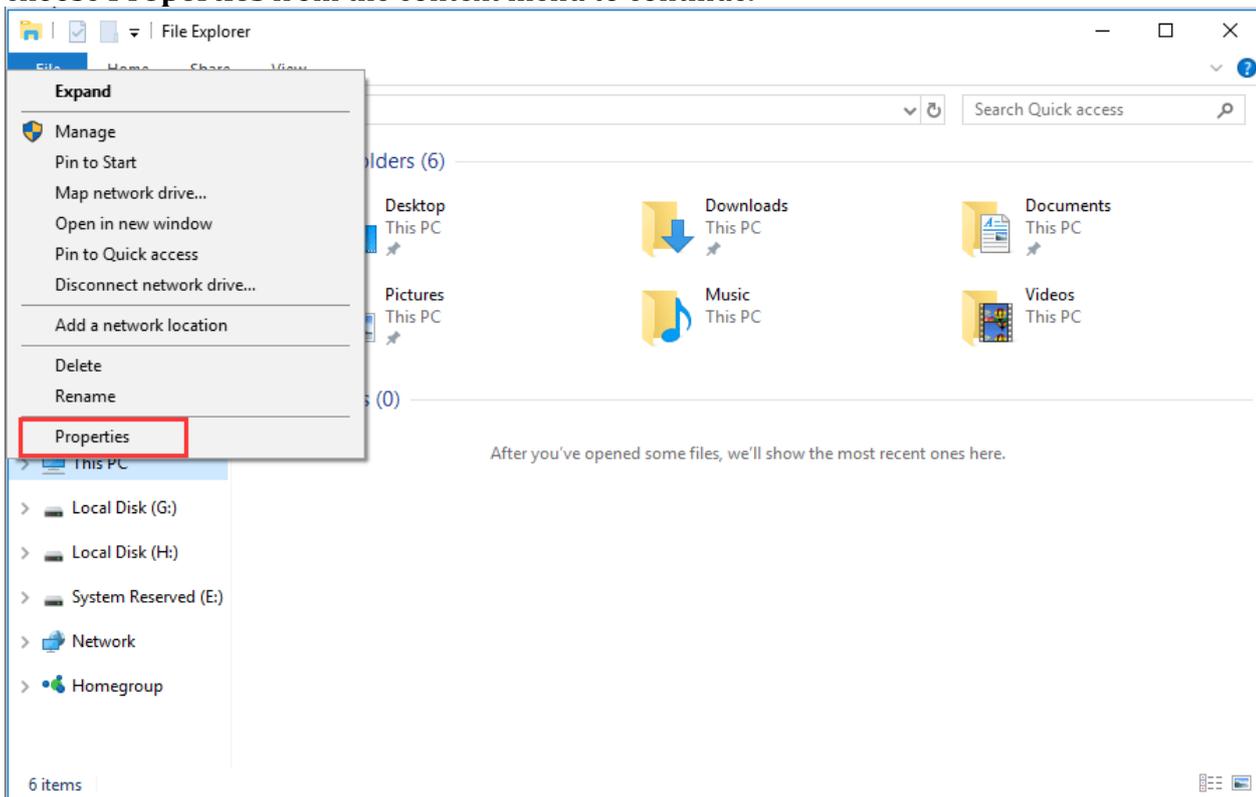
Step 2: In the pop-up window, click **Advanced system settings** to continue.
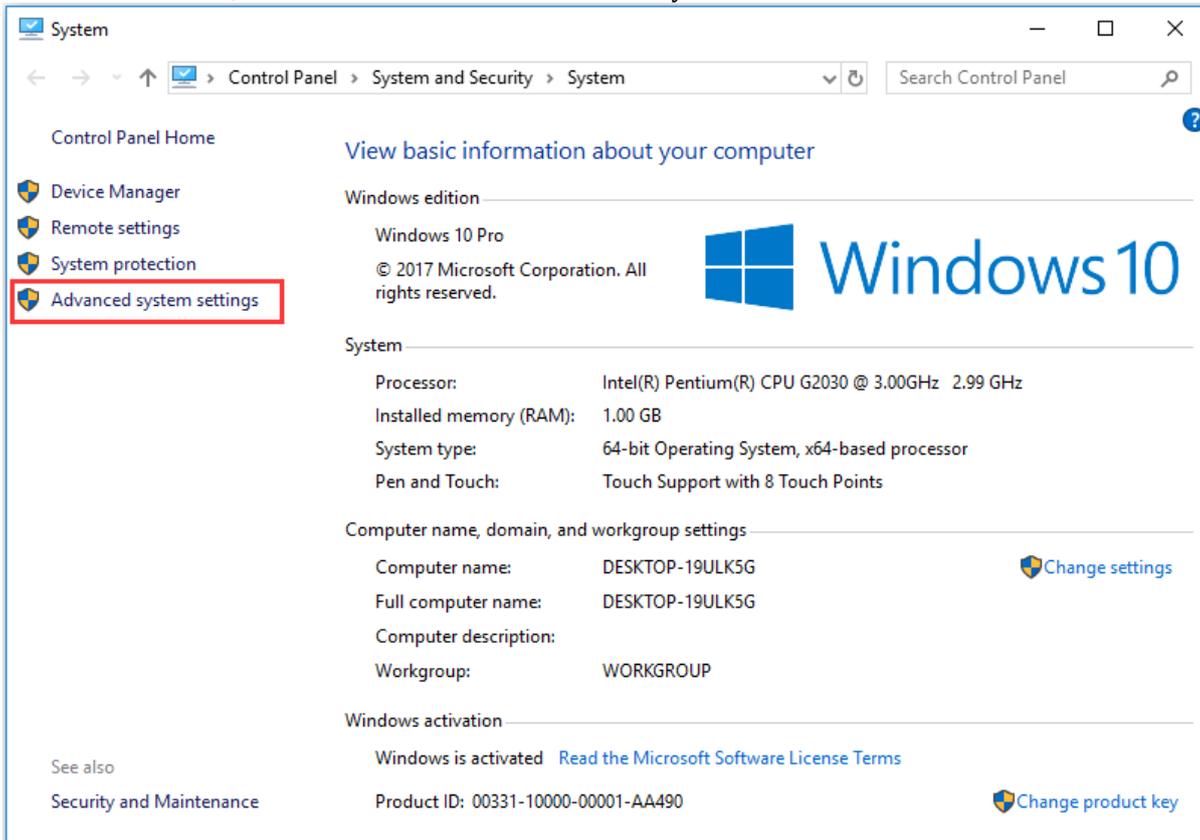
Step 3: In the popup **System Properties** window, please go to the **Advanced** tab and click **Environment Variables…** to continue.
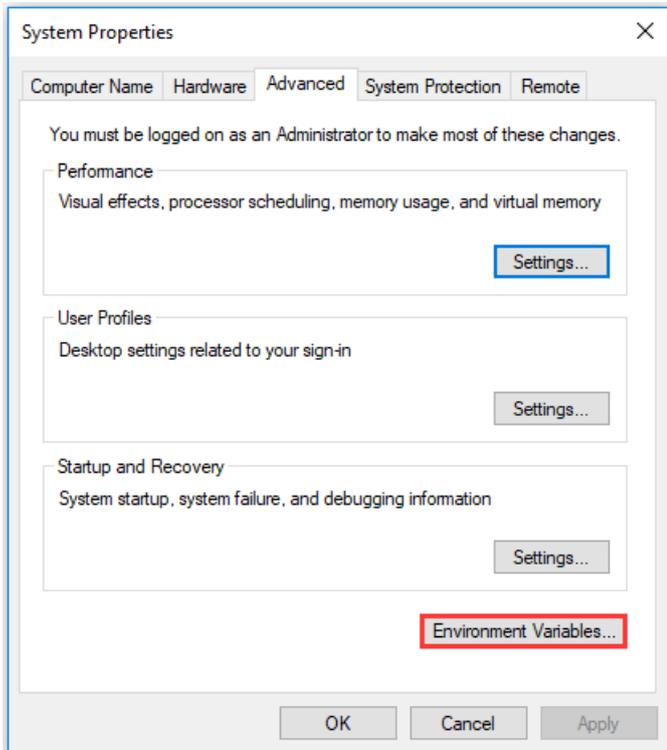
Step 4: In the pop-up window, you can find there are a lot of variables. If you want to edit or change the variables, select them and click **Edit…**to continue. You can see there are two types of variables which are user variables and system variables. The main difference between system and user variable is the system one is global and designed to for all users on the system while the user variables are designed for particular users for whom you are adding it. The variables we will add are System Variables.
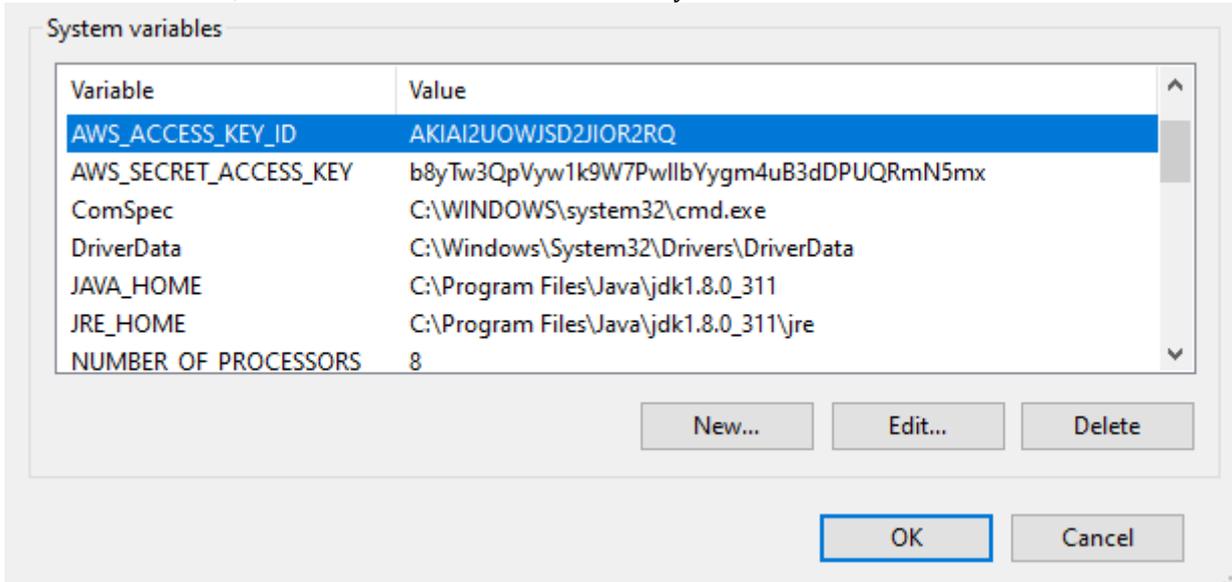
Here are the 5 Server Variables that are required:

Key /
Value
Key: AWS_ACCESS_KEY_ID Value: AKIAI2UOWJSD2JIOR2RQ
Key: AWS_SECRET_ACCESS_KEY Value: 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
Key: JAVA_HOME Value: C:\Program Files\Java\jdk1.8.0_311
Key: JRE_HOME Value: C:\Program Files\Java\jdk1.8.0_311\jre
Key: SENDGRID_API_KEY Value: SG.aMOiewt_TJOG63nsWkuO8g.vMvCVE-r33KRdm8AhqtYWY5kgjVGqUbVNlARyEWHRf

These keys are used for authorization purposes for AWS and SendGrid. And their used for the Java runtime environment.

Setup Tomcat Servers

In its current location (c:\restore-server\elv\installs), copy the two folders:

apache-tomcat-9-demo
apache-tomcat-9-elv

into the root of the C:\ drive. This is the Demo and production instance of Tomcat that was backed up from the failed server.

IP Address Reassignment

Now, for each of these systems we will need to open the file:

C:\apache-tomcat-9-elv\conf\server.xml

And assign the new internal IP address that each server will listen on. The IP address that the application server listens for requests on is bound to the connector:

<Connector address="10.64.1.21"

Change the old IP address with the new IP address that has been assigned to the new server. This has to be done for both production and demonstration instances, each will have its own IP address. These New IP addresses have to be assigned by Codero, because external IP addresses will be mapped to internal IP addresses by the firewall.

Running Tomcat as a Service

We want both the production and demonstration environments to run as services within Windows. The following steps will need to be done twice, once for production, and once for demonstration.

Production

Open the windows command prompt and direct it to the tomcat bin directory:

```
Command Prompt

C:\>cd c:\apache-tomcat-9-elv\bin

c:\apache-tomcat-9-elv\bin>
```

Install the tomcat service by using the command "service.bat install ELVTomcat9". We are giving it the name ELVTomcat9 as the last parameter. If you just call the command "service.bat install" it will install it with the service name tomcat9 (wrong).

```
C:\apache-tomcat-9-elv\bin>service.bat install ELVTomcat9
Installing the service 'ELVTomcat9' ...
Using CATALINA_HOME:     "C:\apache-tomcat-9-elv"
Using CATALINA_BASE:     "C:\apache-tomcat-9-elv"
Using JAVA_HOME:         "C:\Program Files\Java\jdk1.8.0_311"
Using JRE_HOME:          "C:\Program Files\Java\jdk1.8.0_311\jre"
Using JVM:               "C:\Program Files\Java\jdk1.8.0_311\jre\bin\server\jvm.dll"
The service 'ELVTomcat9' has been installed.
```

Now that the service is installed, you will need to configure the memory settings required by the application for java. Start tomcat9w.exe as follows:

```
Command Prompt

c:\apache-tomcat-9-elv\bin>tomcat9w.exe //ES/ELVTomcat9

c:\apache-tomcat-9-elv\bin>
```

A properties window will open and the following java options need to be added at the bottom of java options. Make sure there are no spaces at the end of each line.
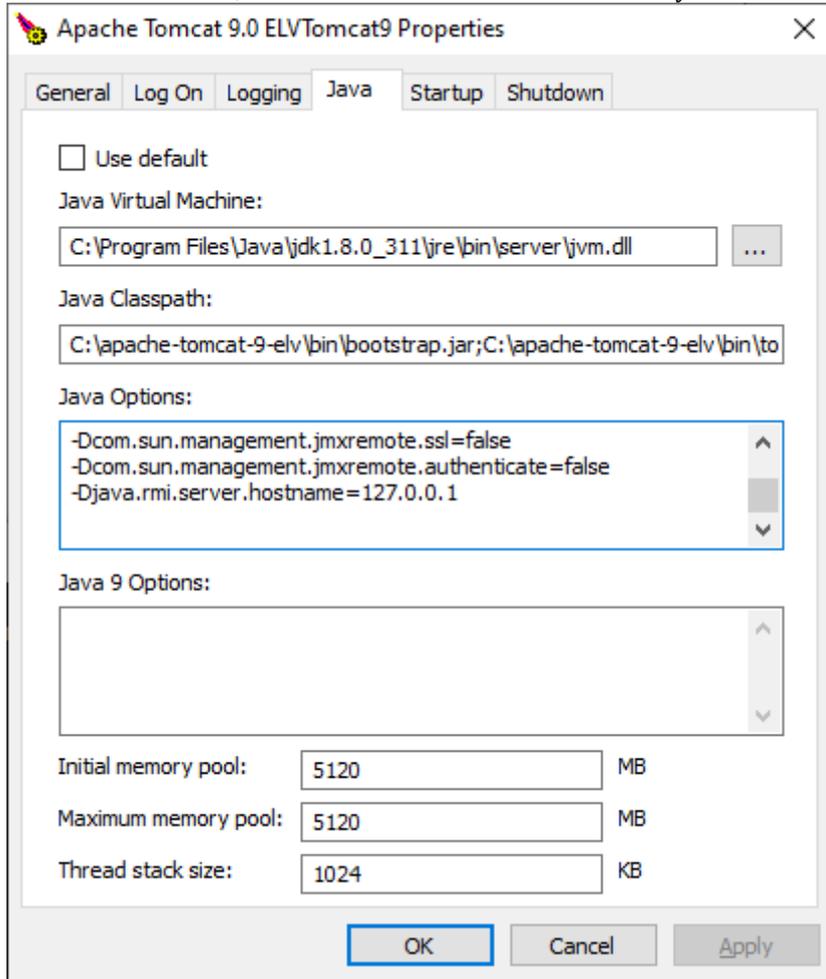
Apply the following lines to the Java Options text area:

-Dcatalina.home=C:\apache-tomcat-9-elv
-Dcatalina.base=C:\apache-tomcat-9-elv
-Dignore.endorsed.dirs=C:\apache-tomcat-9-elv\endorsed
-Djava.io.tmpdir=C:\apache-tomcat-9-elv\temp
-Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager
-Djava.util.logging.config.file=C:\apache-tomcat-9-elv\conf\logging.properties
-Dcom.sun.xml.bind.v2.bytecode.ClassTailor.noOptimize=true
-Dsun.reflect.noInflation=true
-Dfile.encoding=UTF-8
-XX:+UseG1GC
-XX:MaxGCPauseMillis=500
-XX:ParallelGCThreads=20
-XX:ConcGCThreads=5
-XX:InitiatingHeapOccupancyPercent=70
-XX:CompressedClassSpaceSize=256m
-XX:ReservedCodeCacheSize=384m
-XX:MetaspaceSize=300M
-XX:MaxMetaspaceSize=2G
-Dcom.sun.management.jmxremote=true
-Dcom.sun.management.jmxremote.port=9090
-Dcom.sun.management.jmxremote.ssl=false
-Dcom.sun.management.jmxremote.authenticate=false
-Djava.rmi.server.hostname=127.0.0.1

Then change the three text boxes as the bottom of the page to set the initial/maximum memory to 5120M, and the thread stack size to 1024K.

If you open up the Services module in Windows, you will find the new service listed as "Apache Tomcat 9.0 ELVTomcat9"
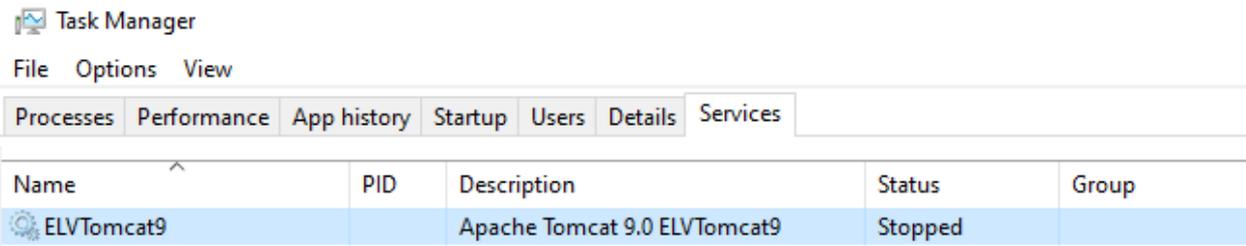

Demonstration

Now we are going to do the same first steps for the demonstration environment, but the demonstration environment does not require us to setup any Java Options.

Open the windows command prompt and direct it to the tomcat bin directory:
cd c:\apache-tomcat-9-demo\bin
c:\apache-tomcat-9-demo\bin> service.bat install ELVTomcat9Demo

The response will indicate that "The service 'ELVTomcat9Demo' has been installed". Now we should see both ELVTomcat9 and ELVTomcat9Demo listed as services.
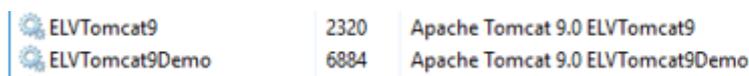
# Database Restore

Open SQL Server 2016.

The compressed backup file set that needs to be restored will look something like this:

| Name	Date	Type	Size
ELV_backup_2022_07_04_230035_8346950_bak.zip.001	7/4/2022 11:43 PM	WinRAR archive	2,097,152 KB
ELV_backup_2022_07_04_230035_8346950_bak.zip.002	7/4/2022 11:43 PM	002 File	2,097,152 KB
ELV_backup_2022_07_04_230035_8346950_bak.zip.003	7/4/2022 11:43 PM	003 File	6,992 KB
ELV_backup_2022_07_05_000001_5608410_trn.zip	7/5/2022 12:39 AM	WinRAR ZIP archive	714,888 KB
ELV_backup_2022_07_05_010000_9864347_trn.zip	7/5/2022 1:38 AM	WinRAR ZIP archive	86,985 KB
ELV_backup_2022_07_05_020001_5079172_trn.zip	7/5/2022 2:38 AM	WinRAR ZIP archive	115 KB
ELV_backup_2022_07_05_030000_9101370_trn.zip	7/5/2022 3:38 AM	WinRAR ZIP archive	70 KB
ELV_backup_2022_07_05_040001_2714544_trn.zip	7/5/2022 4:38 AM	WinRAR ZIP archive	66 KB
ELV_backup_2022_07_05_050001_6869266_trn.zip	7/5/2022 5:38 AM	WinRAR ZIP archive	33,393 KB
ELV_backup_2022_07_05_060001_2648514_trn.zip	7/5/2022 6:38 AM	WinRAR ZIP archive	7,798 KB
ELV_backup_2022_07_05_070001_7477725_trn.zip	7/5/2022 7:38 AM	WinRAR ZIP archive	11,370 KB
ELV_backup_2022_07_05_080001_3070788_trn.zip	7/5/2022 8:38 AM	WinRAR ZIP archive	93,240 KB
ELV_backup_2022_07_05_090001_0726954_trn.zip	7/5/2022 9:38 AM	WinRAR ZIP archive	129,420 KB
ELV_backup_2022_07_05_100001_6261582_trn.zip	7/5/2022 10:38 AM	WinRAR ZIP archive	259,207 KB
ELV_backup_2022_07_05_110001_1315648_trn.zip	7/5/2022 11:38 AM	WinRAR ZIP archive	312,794 KB
ELV_backup_2022_07_05_120001_7121282_trn.zip	7/5/2022 12:38 PM	WinRAR ZIP archive	197,004 KB

The files ending with _bak.zip.* make up the full database backup. The files ending with _trn.zip are the transaction logs that were created after the full backup. All must be restored. The first step is to uncompress these files. You can do this in one step using WinRar by highlighting file 001 of the full back, plus all compressed transaction logs, right clicking, and selecting the option Extract Here. That will unzip the .bak (full backup), and all transaction log files within the same folder as the compressed files. When they are successfully uncompressed, they will appear as:

|			
ELV_backup_2022_07_04_230035_8346950.bak	7/4/2022 11:01 PM	BAK File	16,295,192 ...
ELV_backup_2022_07_05_000001_5608410.trn	7/5/2022 12:00 AM	TRN File	3,099,516 KB
ELV_backup_2022_07_05_010000_9864347.trn	7/5/2022 1:00 AM	TRN File	281,300 KB
ELV_backup_2022_07_05_020001_5079172.trn	7/5/2022 2:00 AM	TRN File	788 KB
ELV_backup_2022_07_05_030000_9101370.trn	7/5/2022 3:00 AM	TRN File	532 KB
ELV_backup_2022_07_05_040001_2714544.trn	7/5/2022 4:00 AM	TRN File	468 KB
ELV_backup_2022_07_05_050001_6869266.trn	7/5/2022 5:00 AM	TRN File	125,732 KB
ELV_backup_2022_07_05_060001_2648514.trn	7/5/2022 6:00 AM	TRN File	18,004 KB
ELV_backup_2022_07_05_070001_7477725.trn	7/5/2022 7:00 AM	TRN File	40,468 KB
ELV_backup_2022_07_05_080001_3070788.trn	7/5/2022 8:00 AM	TRN File	146,900 KB
ELV_backup_2022_07_05_090001_0726954.trn	7/5/2022 9:00 AM	TRN File	196,436 KB
ELV_backup_2022_07_05_100001_6261582.trn	7/5/2022 10:00 AM	TRN File	322,600 KB
ELV_backup_2022_07_05_110001_1315648.trn	7/5/2022 11:00 AM	TRN File	377,464 KB
ELV_backup_2022_07_05_120001_7121282.trn	7/5/2022 12:00 PM	TRN File	244,532 KB

Now, within SQL Server Management Studio, right click on Databases
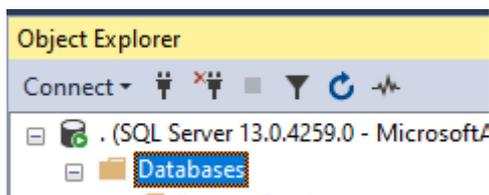
And select the option Restore Database.
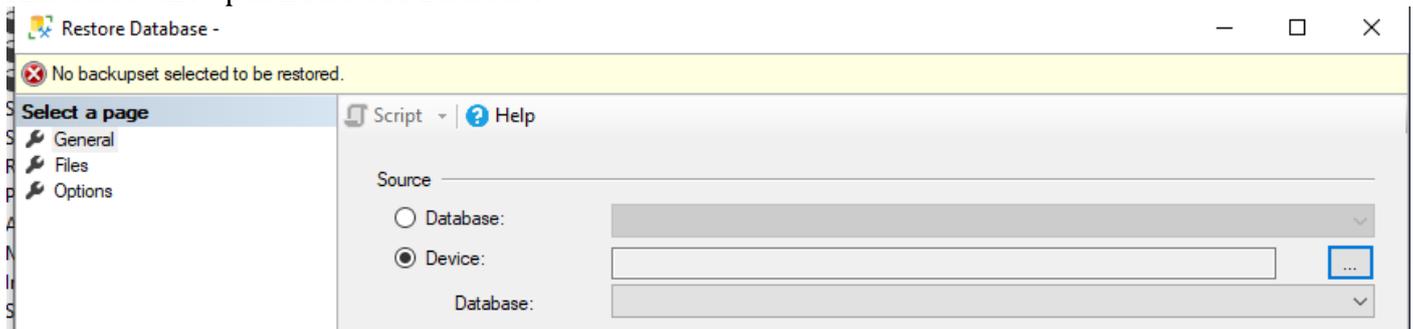
Select the "Source" Device option, and click on the button on the far right in the same row as the Device option.
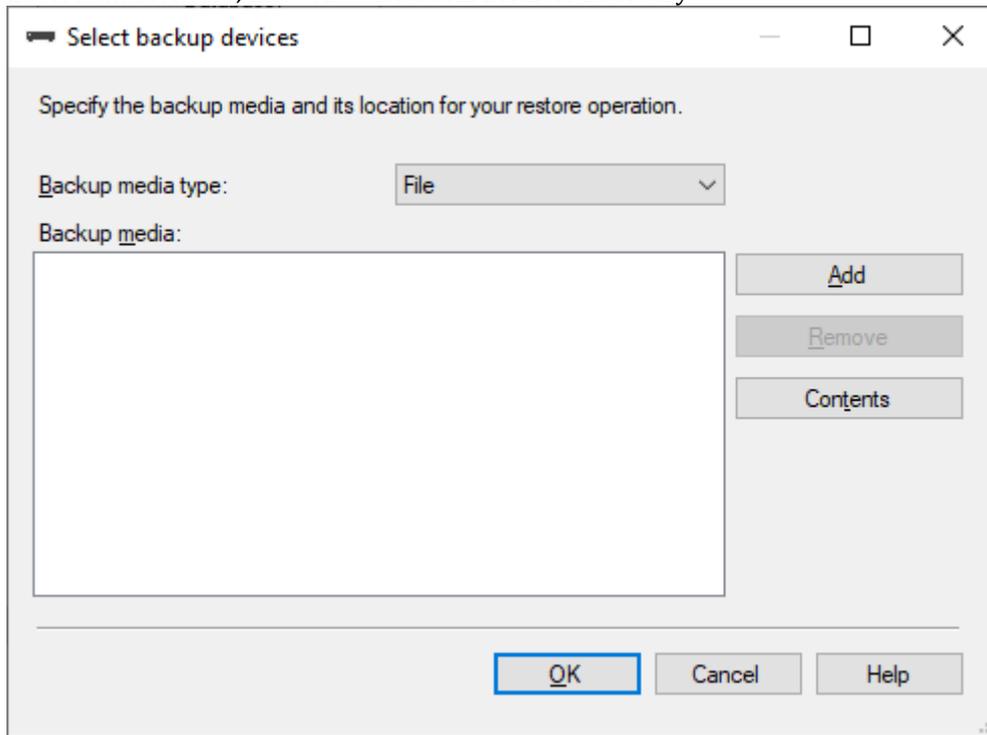
Click Add, and then navigate to the folder containing the uncompressed full backup and transaction log files. Select them all so they appear highlighted, and click OK.
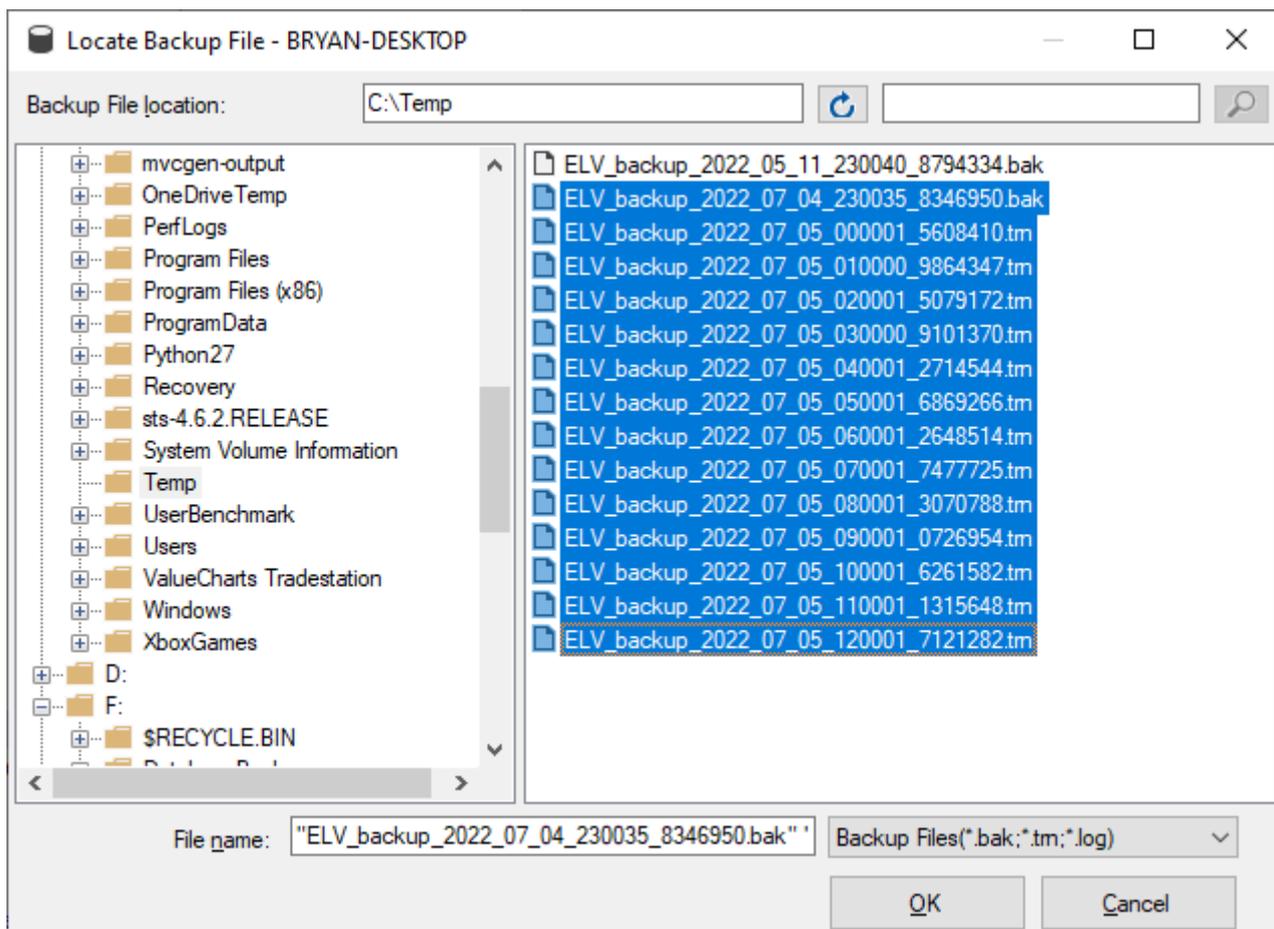

The Select backup devices dialog will be displayed again showing the files you selected.
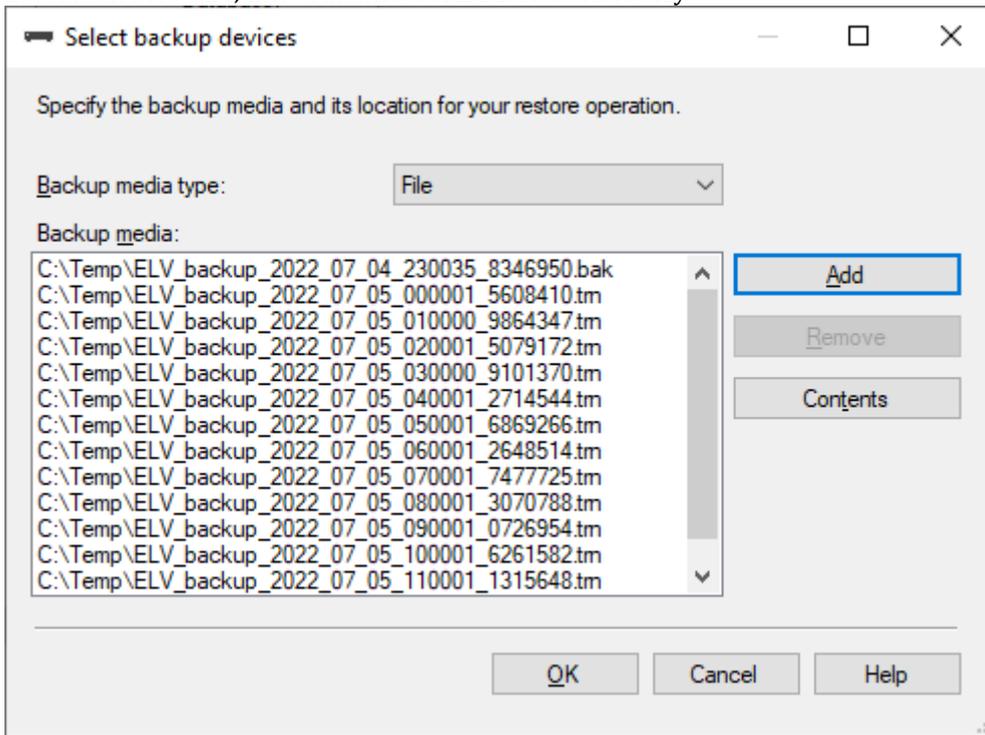
Click OK. The Restore Database dialog will display again, and will evaluate the files you have selected. You should have one Full file in the backup set, and one row for each transaction log that you selected.
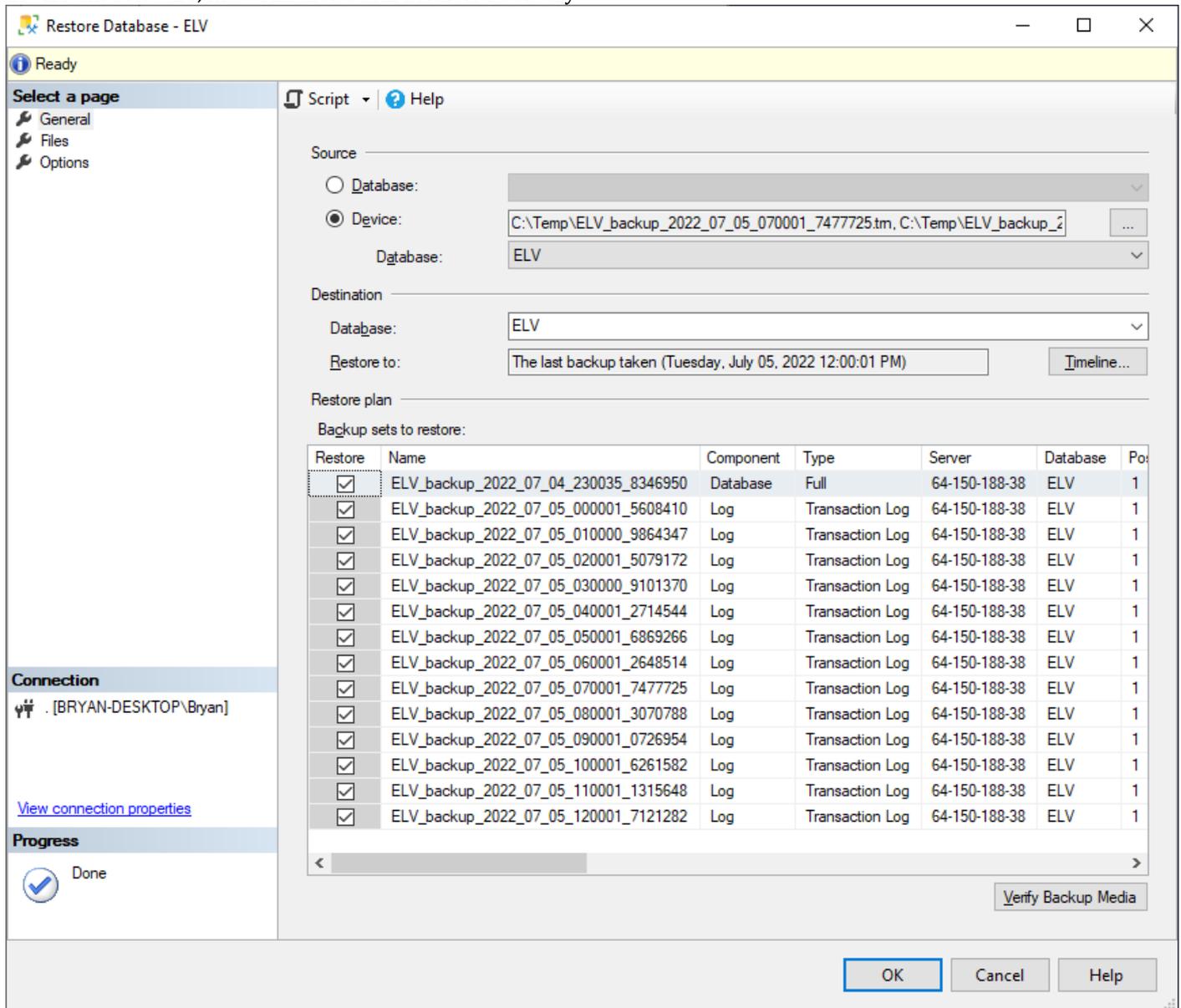
Click OK. The restore process will take a few minutes to complete.
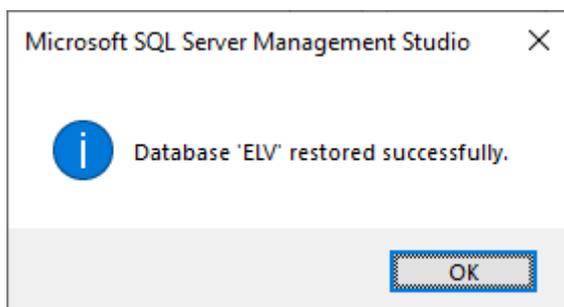
Click OK when the restored successfully dialog is displayed. The ELV database will now appear in the list of databases:
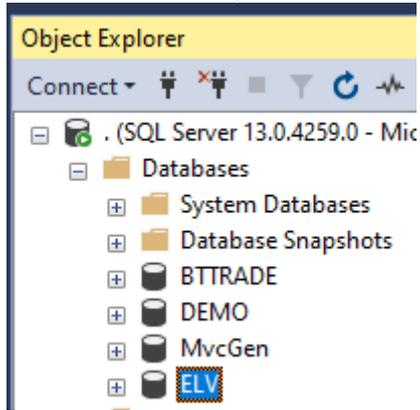
Restore Login/User

In the C:\restore-server\scripts folder, we need to execute a file with the name "01-create or restore login and user.sql". This file will recreate the login/user that is utilized by the system to access the ELV database.

Open and execute this script within SQL Server Management studio.

Restore Grants

In the C:\restore-server\scripts folder, we need to execute a file with the name "RecreateTableGrants.sql". This file will recreate the grants to database objects like tables, stored procedures, views, and functions to the application users we created in the previous step.

Open and execute this script within SQL Server Management studio.

Backup Database

The database is now ready for system access. We need to create a full backup now that the database has been restored. Create a directory on the server C drive called "DatabaseBackups".

mkdir c:\DatabaseBackups
cd c:\DatabaseBackups
mkdir ELV

The C:\DatabaseBackups\ELV directory are the location where full database backups and transaction logs will be written.

Within SQL Server Management Studio, click on the ELV Database, then right click and select Tasks | Back Up.

Database: ELV
Backup Component: Database

Destination
Back up to: disk
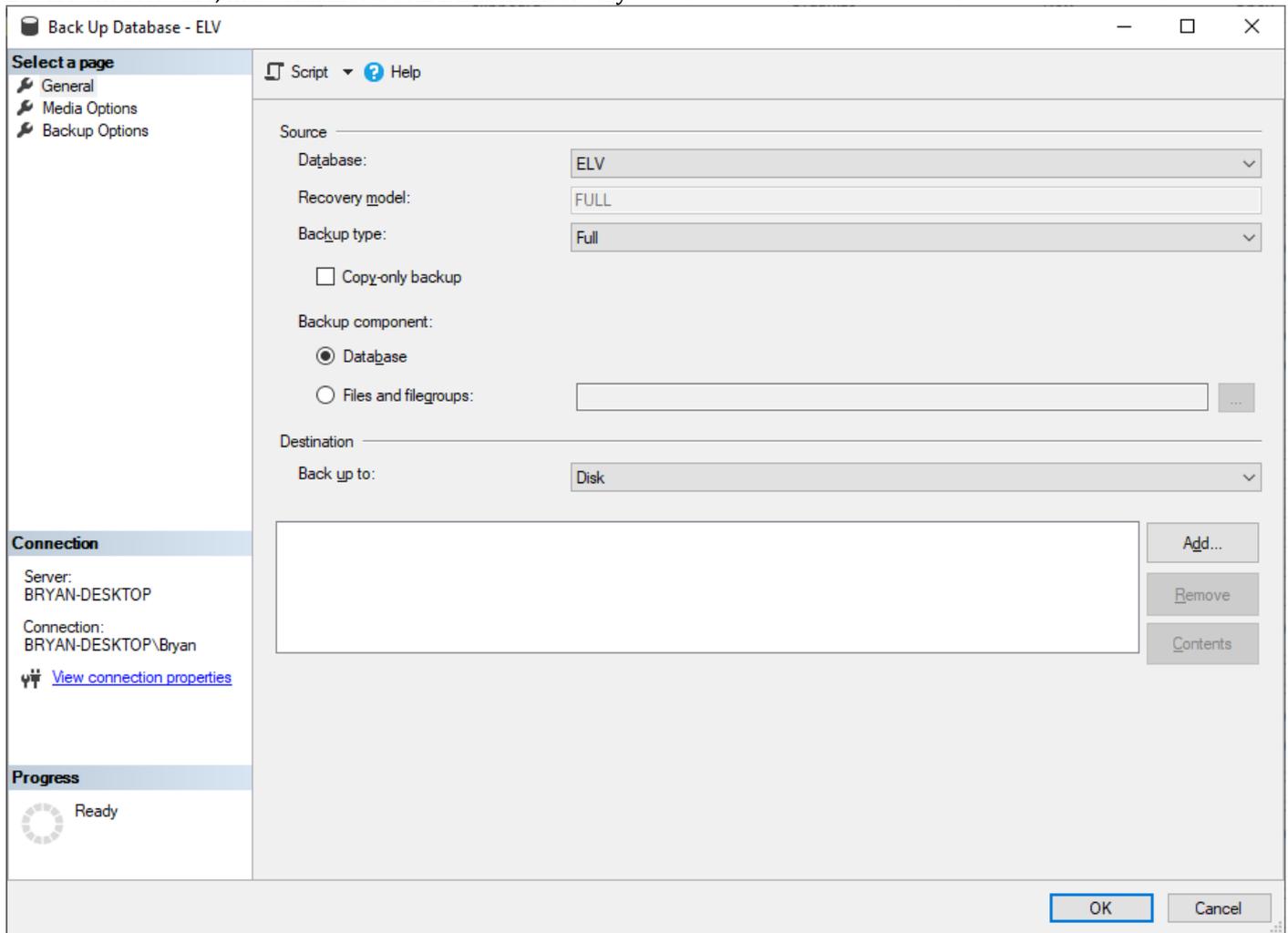
Click the Add button to select the destination folder (C:\DatabaseBackups\ELV), and to give the backup a file name.
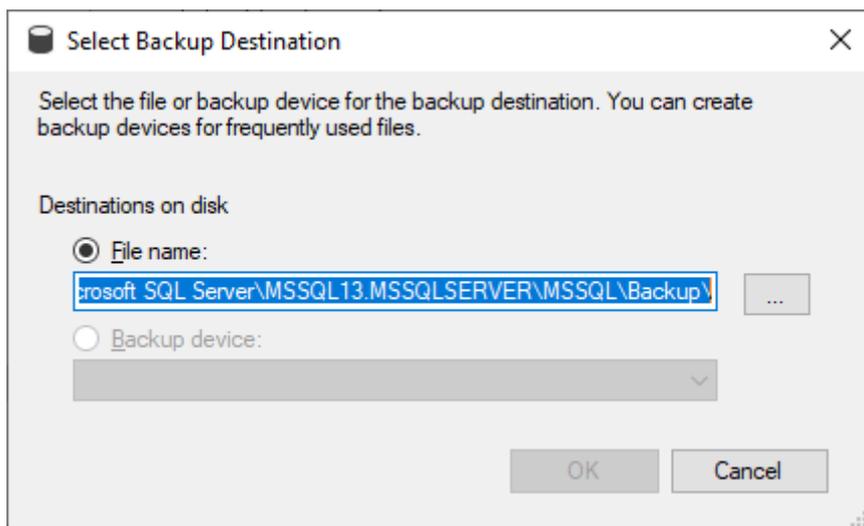
Click the button to the right of the file name, and then navigate to the folder C:\DatabaseBackups\ELV. Enter the file name in the format "Full-Backup-yyyy-mm-dd.bak"
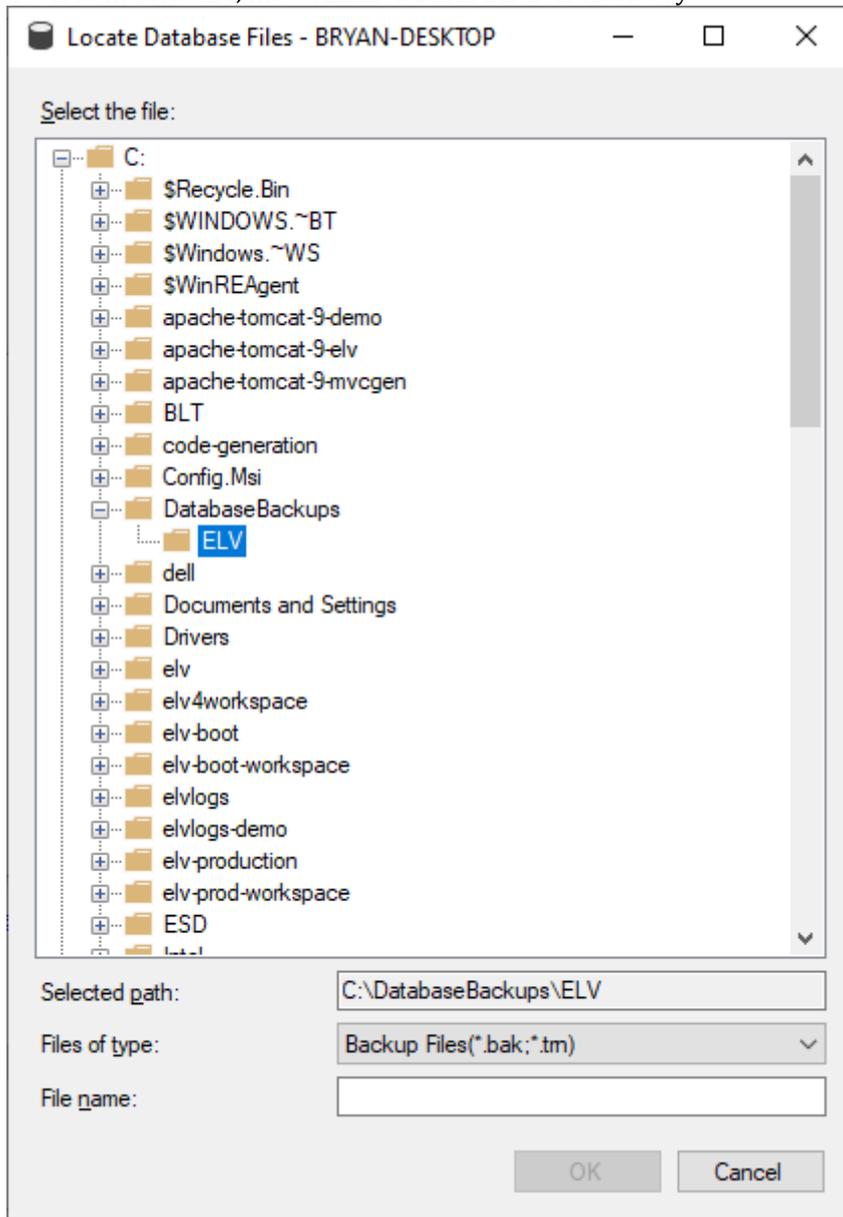
Once the file name is entered, click OK. Verify the path and file name, and click OK if both are correct.
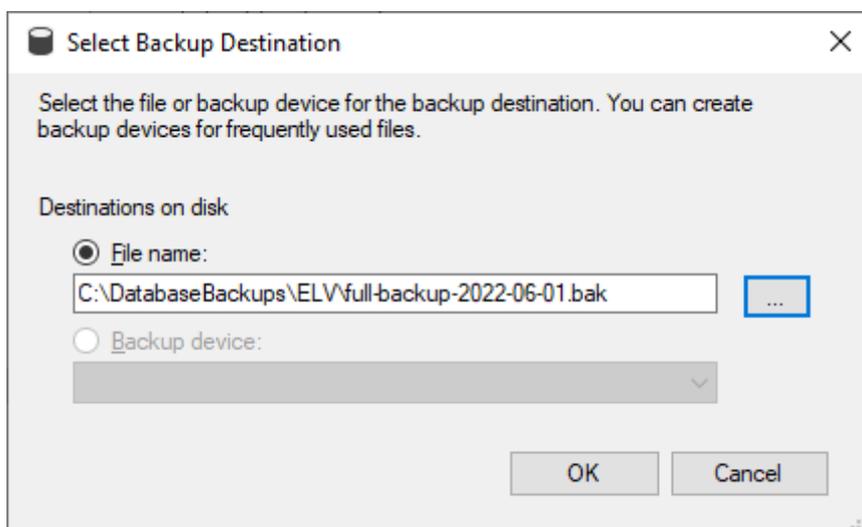
Now the destination directory and file name are displayed:
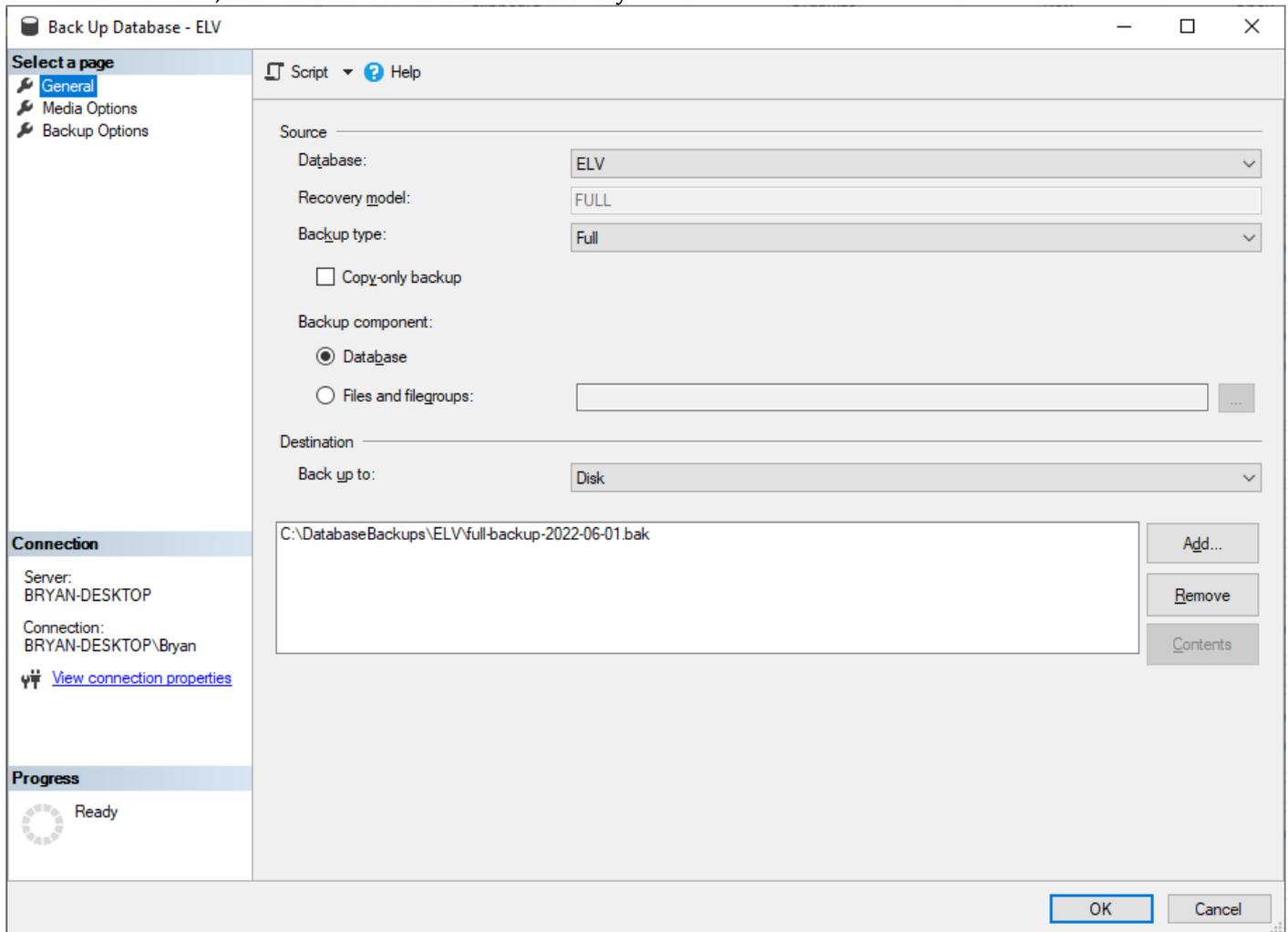
Click on Media Options, and select the option to Overwrite all existing backup sets (there should be none to overwrite).
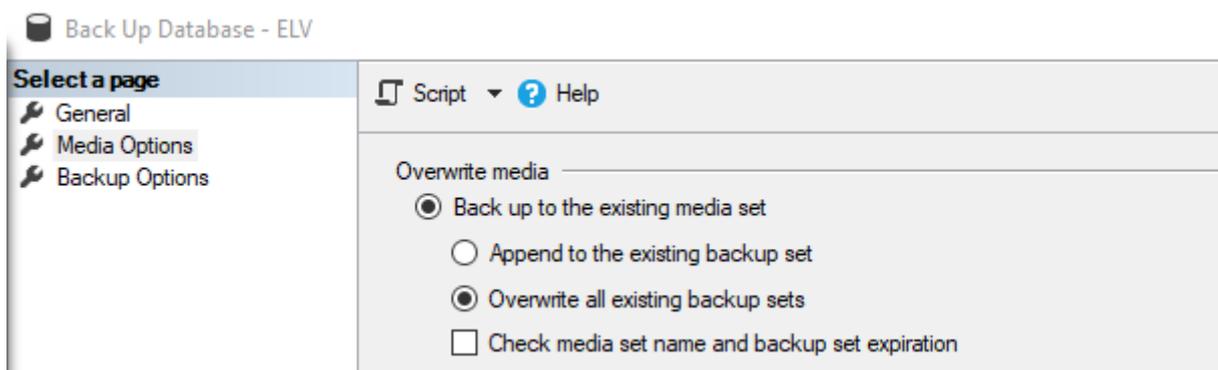
Click OK to begin the backup. When the backup is complete, copy the file:

copy c:\restore-server\installs\BackupsCompressAndMove.bat C:\DatabaseBackups

This batch file is executed by a Windows task to look for database backups and transaction logs, compress these files, and move them into a folder C:\DatabaseBackups\ELV-Compressed. From the ELV-Compressed folder, the compressed database backup files are moved to a backup location.

Windows Task
In the folder C:\restore-server\elv\installs, a Task definition named "Task - ELV Database Backup compress and move.xml" can be found.

Open Computer Management, click on System Tools | Task Scheduler, and click Import Task on the right side under Actions. Select the file c:\restore-server\elv\installs\ Task - ELV Database Backup compress and move.xml, and click Open.

The user account will need to be changed from the user it was setup under on the older server. Chose your administrative account, and select the option to Run the task whether the user is logged on or not, and Run with the highest privileges.
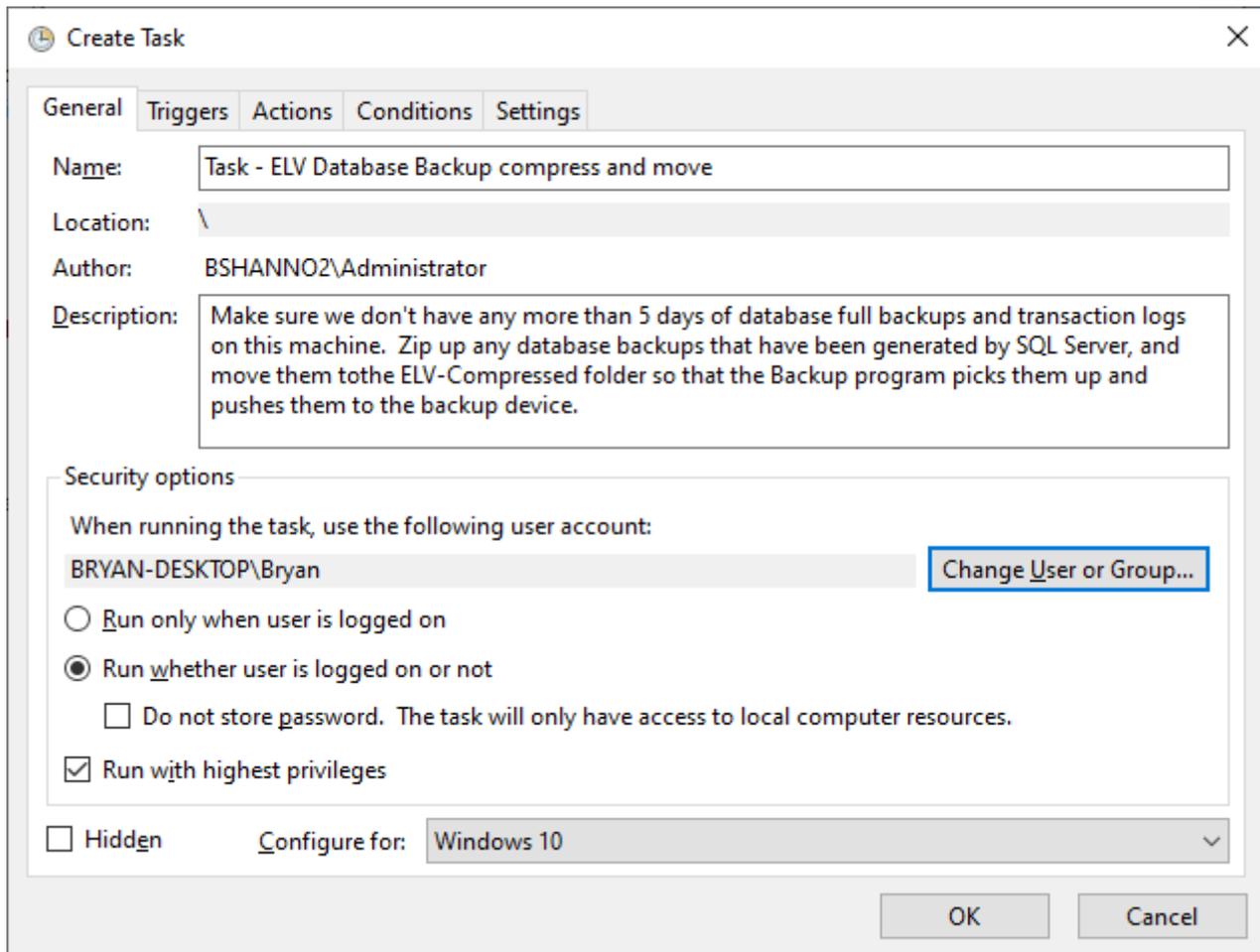
Click OK.

Add SQL Server Backup Jobs
We configure SQL Server to automatically generate a full backup each night, and transaction log backups throughout the day.

The backup jobs must be running in SQL Server Agent before the system is brought back up.

A script that defines these jobs can be found in c:\restore-server\elv\scripts. The file name is SQLQueryJobs.sql. Open SQL Server Management Studio, and open this SQL script. Two values need to be changed within the script before it is run. The older server name needs to be changed to the new server name, and the User Identifier that was previously used to setup these backup scripts needs to be replaced with the administrative user account that is restoring this server.

Level Next Software, Inc. – Alliance CORE Disaster Recovery
Replace: 64-150-188-38
With: New Server Name

Replace: Administrator2
With: Administrative User ID on New Server.

Start SQL Server Agent. Make sure that this service is setup to run Automatically if it is currently setup to be run Manually.

Execute this script.

DNS

The last step in getting the system up and running is to edit the DNS settings for demo/elv subdomains of earlylearningventures.org. ELV uses GoDaddy.com to manage these settings.

Navigate to https://www.godaddy.com/, and click Sign-In.

Sign In ⌄

Username or Customer #: 38415475
Password: <Contact Manager for passwords>

Click Sign In

Click on earlylearningventures.org to work on that domain:

earlylearningventures.org
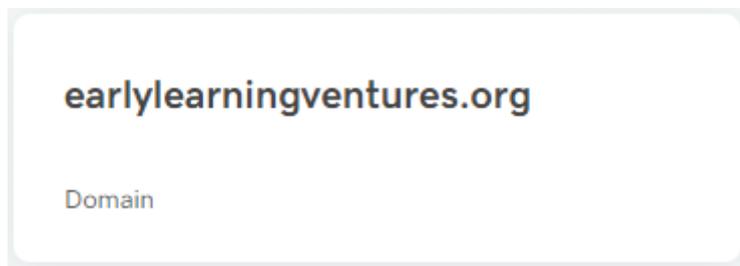
Domain

Click on Domain on the left nav:

⊞ Dashboard
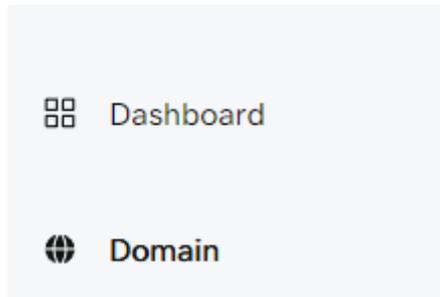
⊕ Domain

Then click on Manage DNS

Domain

View All Domains ›

⊕ earlylearningventures.org   Forward Domain | Manage DNS | **Domain Settings**

We need to modify these two subdomains

	A	demo	64.150.188.38	600 seconds	Delete	Edit
	A	elv	64.150.188.79	600 seconds	Delete	Edit

To utilize the two new external IP addresses assigned by Codero.

Edit each of these domains, assign the newly assigned external IP address and click Save.

Start the Application Servers

Since we are running the ELV Applications as a service, right click on the task bar, select Task Manager, and then select the Services tab within Task Manager.

Find the services that start with ELV, highlight ELVTomca9, right click and select Start.
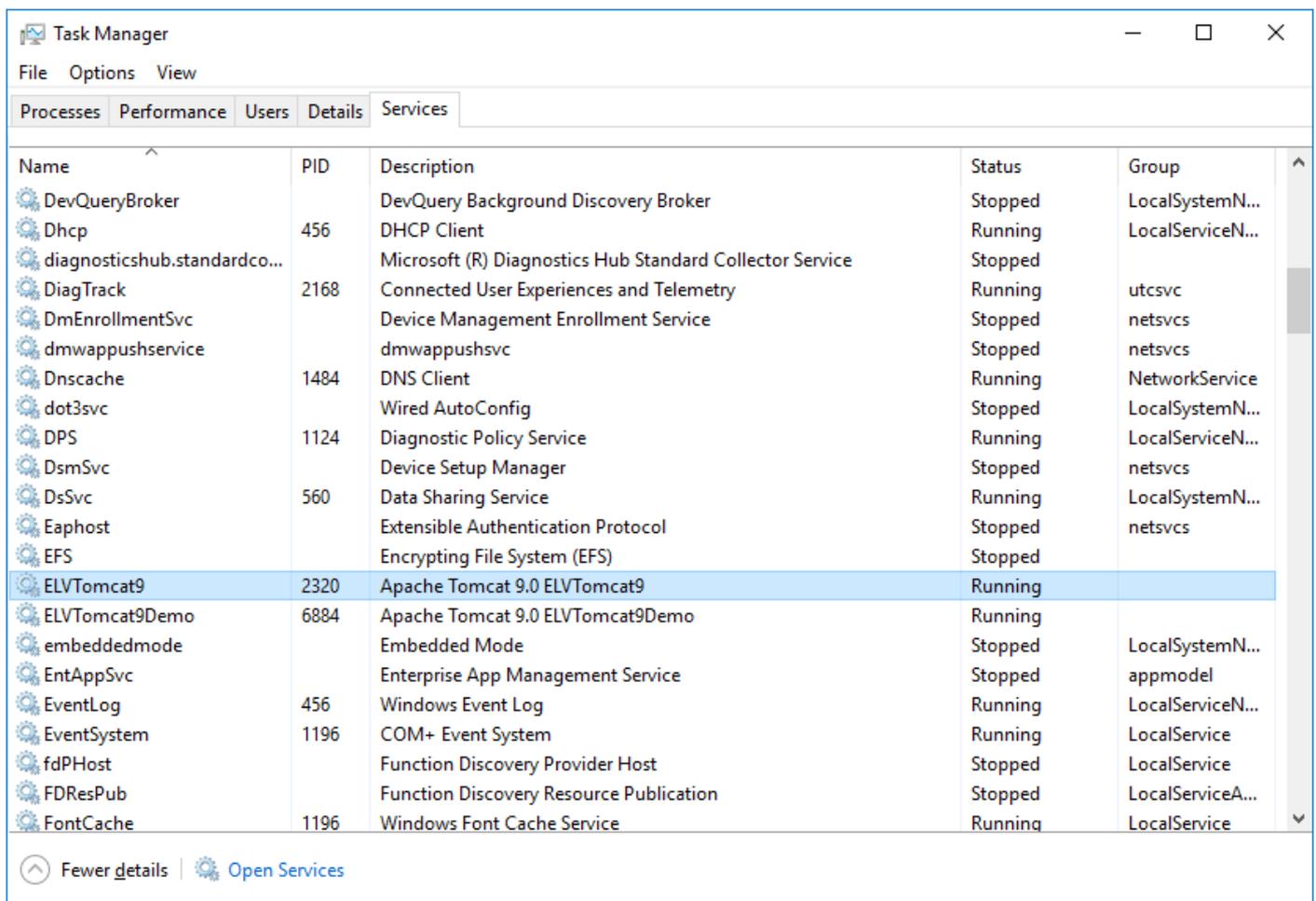
All web-based systems plus the mobile Rest services should be accessible within approximately 3 minutes.

Test the URLs:
https://elv.earlylearningventures.org/elv/login
https://elv.earlylearningventures.org/kiosk/login

Level Next Software, Inc. – Alliance CORE Disaster Recovery
https://elv.earlylearningventures.org/portal/login
https://elv.earlylearningventures.org/enroll/payment/provider/start

Using the mobile apps, test access with ELV Provider/Staff, ELV Parent, ELV Kiosk, and ELV Authorized Pickup.

Restoring Desktop Batch Files

There are a set of batch files that reside on the Desktop that are used to deploy application updates for both production and demonstration systems.

Copy c:\restore-server\elv\Desktop*.* into the Windows Desktop folder. The icons for these batch files should appear on the Windows Desktop.

Restoring Photos, Documents and Videos

Photos and Documents are extracted from the ELV database and persisted to disk. A record for each remains in the database and is essentially a pointer to the photo or document on disk. Videos are used for training purposes within Alliance CORE and within the Parent Portal. All of these files are present in the c:\restore-serve\elv directory.

Move c:\restore-server\elv into the root directory of the C drive, so that it becomes C:\elv. This will make the photos, documents and videos accessible to the web-based applications.

Backup to NAS

Database files, photos and documents are all backed up to a NAS, this occurs throughout the day. Database files are backed up nightly, and log files throughout the day. Photos and Documents are backed up immediately as soon as they are written to disk.

Run the executable c:\restore-server\elv\installs\Synology Drive Client-2.0.4-11112.exe

Once installed, go to Backup Tasks | Connection
Server: ShannonNAS-QC
Username: administrator
Password: <Contact Manager for passwords>
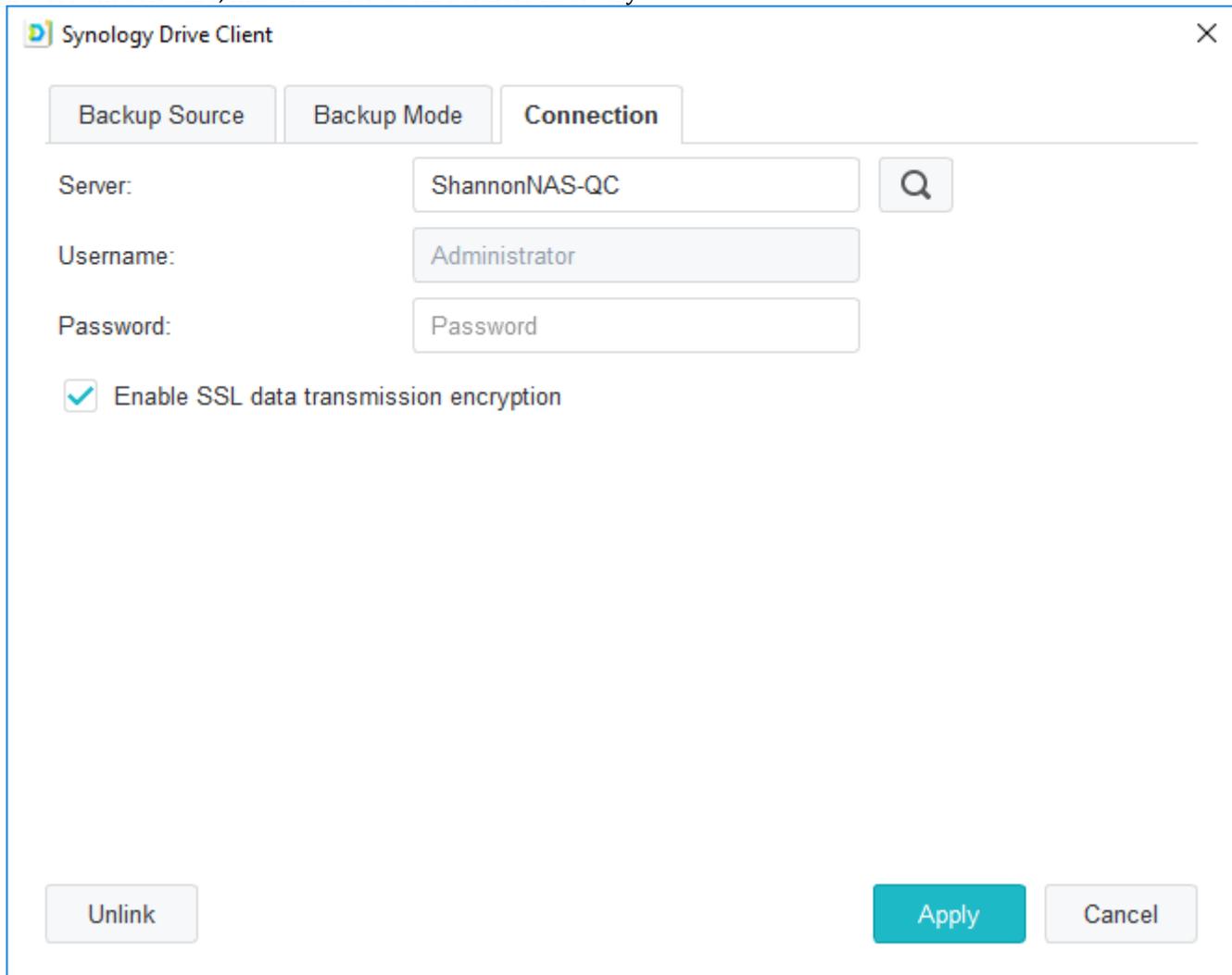
Click apply making sure that the Enable SSL data transmission encryption is enabled. Backup Mode is continuous:
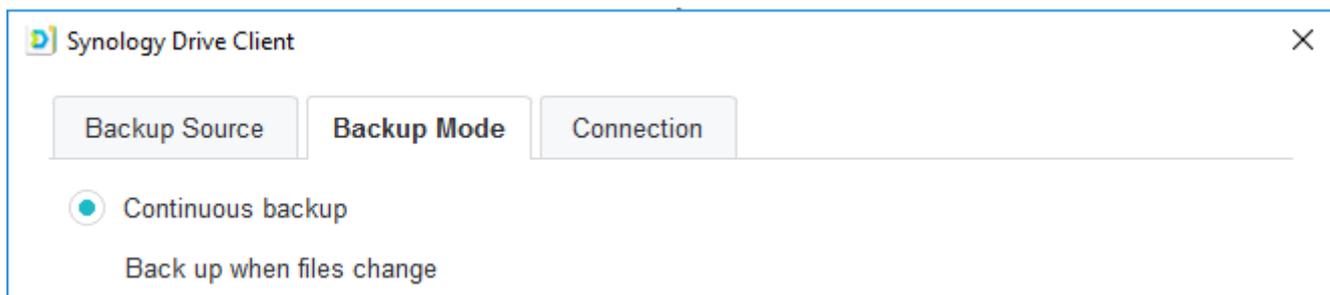
And finally we need to identify which directories are backed up, which will include:
Tomcat Demo
Tomcat Production
Database Backups
ELV

Note that within Tomcat directories, the "-" indicator means that no subfolders are selected.

Level Next Software, Inc. – Alliance CORE Disaster Recovery

- ▼ ☐ apache-tomcat-9-demo
  - ▸ ☑ bin
  - ▸ ☑ certificate
  - ▸ ☑ certificate-2019
  - ▸ ☑ certificate-2022
  - ▸ ☑ certificate-old
  - ▸ ☑ conf
  - ▸ ☑ lib
  - ▸ ☐ logs
  - ▸ ☐ temp
  - ▸ ☐ webapps
  - ▸ ☐ work
- ▼ ☐ apache-tomcat-9-elv
  - ▸ ☑ bin
  - ▸ ☑ certificate
  - ▸ ☑ certificate-2019
  - ▸ ☑ certificate-2022
  - ▸ ☑ certificate-old
  - ▸ ☑ conf
  - ▸ ☑ lib
  - ▸ ☐ logs
  - ▸ ☐ temp
  - ▸ ☐ webapps
  - ▸ ☐ work
- ▼ ☐ DatabaseBackups
  - ▸ ☐ ELV
  - ▸ ☑ ELV-Compressed
- ▼ ☐ elv
  - ▸ ☐ demo
  - ▸ ☑ Desktop
  - ▸ ☑ documentstore
  - ▸ ☑ installs
  - ▸ ☑ photostore
  - ▸ ☑ scripts
  - ▸ ☑ videos

Click Apply to save the changes.

Demonstration Database

The Demonstration database is not backed up today. In the event of a server failure, the Demonstration database will be built from script files. The development group creates scripts that are checked into GIT and are present within Spring Tool Suite (the development environment) along with all web-based system code.

The first two script to run create the login/user account needed for the application to log into the database. The second contains helper stored procedures that are utilized within other scripts.
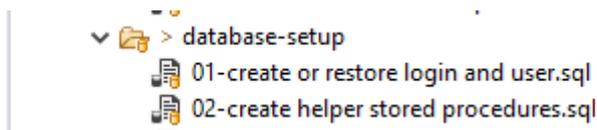
The database-definition scripts create all tables, stored procedures, views, functions, and seeds some tables with data need to run the system. Execute each script starting with script 01, and ending with script 26.

- database-definition
  - 01-create tables.sql
  - 01a-create udt.sql
  - 02-script stored procedures.sql
  - 03-insert select list CA.sql
  - 03-insert select list HI.sql
  - 03-insert select list IN.sql
  - 03-insert select list LA.sql
  - 03-insert select list MD.sql
  - 03-insert select list MI.sql
  - 03-insert select list NE.sql
  - 03-insert select list NY.sql
  - 03-insert select list TX.sql
  - 03-insert select list UT.sql
  - 03-insert select list VA.sql
  - 03-insert select list WI.sql
  - 03-insert select list WY.sql
  - 03-insert select lists SC.sql
  - 03-insert select lists.sql
  - 04-insert grants.sql
  - 05-insert grid columns.sql
  - 06-insert database queries.sql
  - 07-insert jasper reports.sql
  - 08-create functions.sql
  - 09-application stored procedures.sql
  - 10-create views.sql
  - 11-Immunizations.sql
  - 12-insert application user (for elv access).sql
  - 13-createTriggers.sql
  - 14-restoreGrants.sql
  - 15-EHS PIR stored procedures_old.sql
  - 15-EHS PIR stored procedures.sql
  - 16-attendance stored procedures.sql
  - 17-food program stored procedures.sql
  - 18-billing stored procedures.sql
  - 19-ehs report stored procedures.sql
  - 20-authorized pickup stored procedures.sql
  - 21-dynamic reports views.sql
  - 22-chart stored procedures.sql
  - 23-parent portal stored procedures.sql
  - 24-new billing stored procedures.sql
  - 25-new billing ccap stored procedures.sql
  - 26-ELVCoreHealthCheck.sql

After running these scripts, the Demo database can be backed up and uploaded to the sever for restore. Once the Demo database is restored, the scripts referenced in sections Restore Login/User and Restore Grants need to be run, but this time against the Demo database.

Following the database restore, the Tomcat instance for the Demonstration environment can be started.