

# WIN-911 Standard/Interactive/Advanced Configuration Backup and Restore

Modified on: 7 November 2019

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## Introduction

WIN-911 Standard, Interactive, and Advanced use Microsoft SQL Server to store its configuration. This document describes the process for backing up and restoring your configuration using Microsoft SQL Server 2014 Management Studio.

**Important:** The backup and restore instructions are only valid for restoring the configuration in the “same host environment.” The “same host environment” is defined as:

- The same version of WIN-911 Standard, Interactive, and Advanced
- The same set of WIN-911 Modules
- The same version of Microsoft SQL Server.

## Purpose

Backing up the WIN-911 configuration is recommended to prevent data loss and should be executed regularly. These instructions can be used for the following reasons, but are not limited to:

- Backing up data to avoid data loss.
- Maintaining snapshots of the configuration.
- Moving the WIN-911 installation to a new computer.
- Moving the configuration from a development machine to the production machine.
- Copying configurations from a primary WIN-911 system to the secondary WIN-911 system (Hot-Backup configuration).

## Applicable Versions

WIN-911 Standard, Interactive, or Advanced **v.3.17.14** and **newer**.

## Configured Passwords in WIN-911

All passwords will have to be reentered if you are restoring the backup files on a different computer or a formatted drive. WIN-911 uses encryption to hide the password in the GUI. The encryption method is unique to the machine they were configured on.

Location of passwords that will require reentry:

- **FactoryTalk A&E** – Applications – Connection tab
- **CIMPLICITY** – Projects – Project tab
- **iFIX** – Source – Source tab
- **System Platform** – Galaxies – Connection Details tab
- **InTouch Edge HMI** – Projects – Project Details tab
- **WIN-911 Mobile** – Gateways
- **Email** – Gateway – Outgoing Server tab & Incoming Server tab
- **Voice** – Gateway – General tab – Voice Hardware (SIP/VOIP only)
- **SMS** – Gateway – Gateway tab – Connection Type (Telnet only)

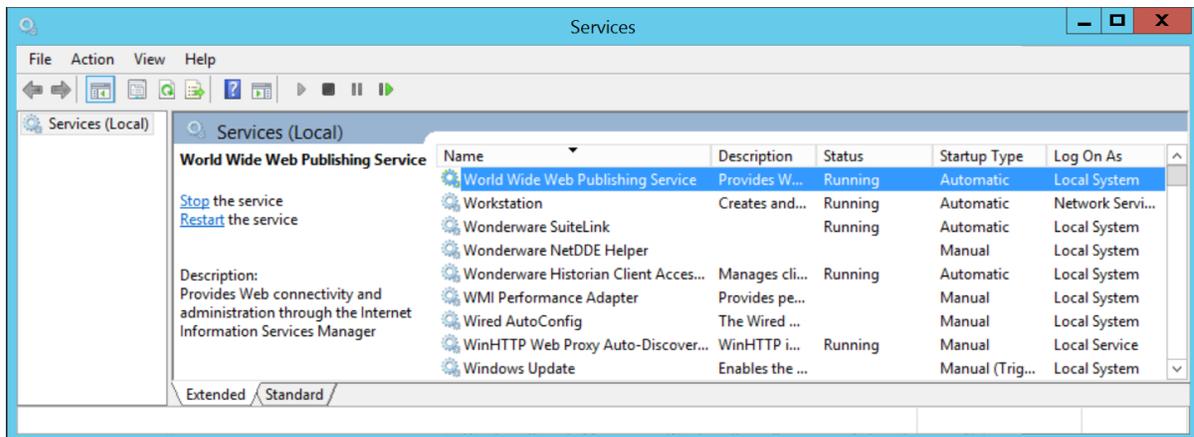
## Preparing the Databases for Backup/Restore

You will need to shut down WIN-911 or temporarily restrict access to its configuration to prevent errors during the backup and restore process. There are two ways to fully shutdown the WIN-911 system.

### Option 1: Stop Internet Information Services

1. The easiest way to stop all WIN-911 Runtime Services and Application Pools is to stop the **World Wide Web Publishing Service** from Windows Services. Stopping this service will stop all WIN-911 Application Pools as well as all WIN-911 Runtime Services.

*Note: Stopping World Wide Web Publishing Service will stop ALL websites published in Internet Information Services (IIS). If this is a problem, follow the procedures in Option 2 below.*



2. **GE iFIX Users Only:** In addition to stopping the World Wide Web Publishing Service, the **iFIX Runtime WPF Host App** must be stopped manually. If the WIN-911 iFIX module is running, the runtime icon  will be in the Windows System tray. Right-click and select **Exit**.
3. **Wonderware InTouch Users Only:** In addition to stopping the World Wide Web Publishing Service, the **InTouch Runtime WPF Host App** must be stopped manually.

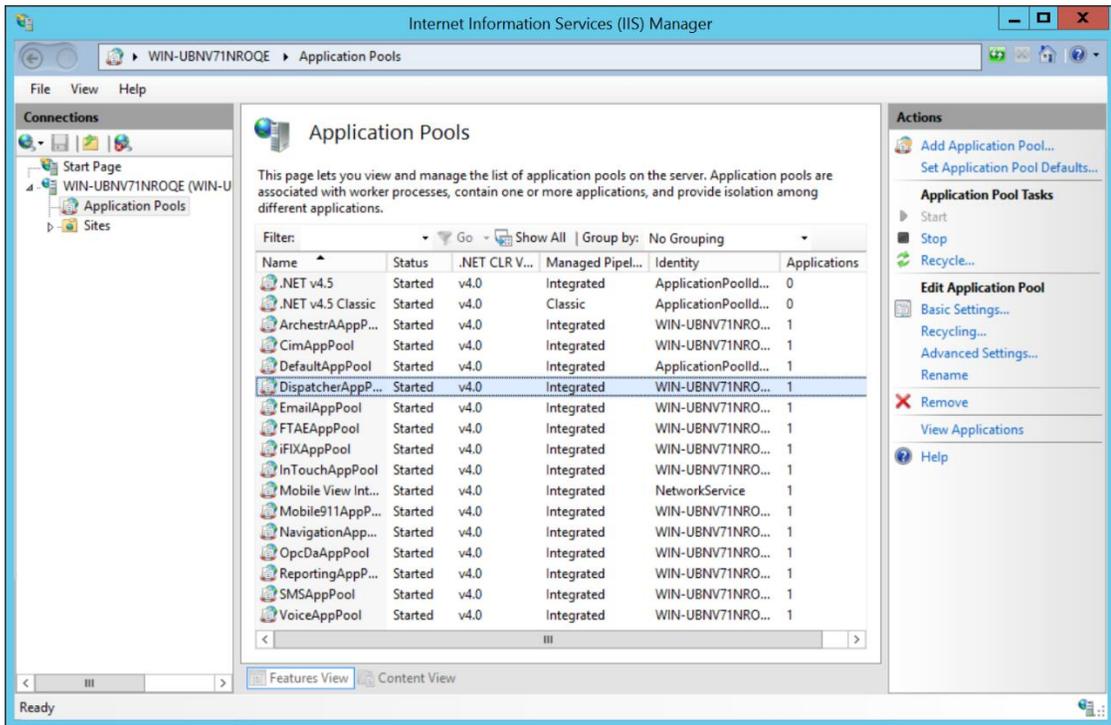
If the WIN-911 InTouch module is running, the runtime icon  will be in the Windows System Tray. Right-click and select **Exit**.

## Option 2: Stop WIN-911 Modules individually

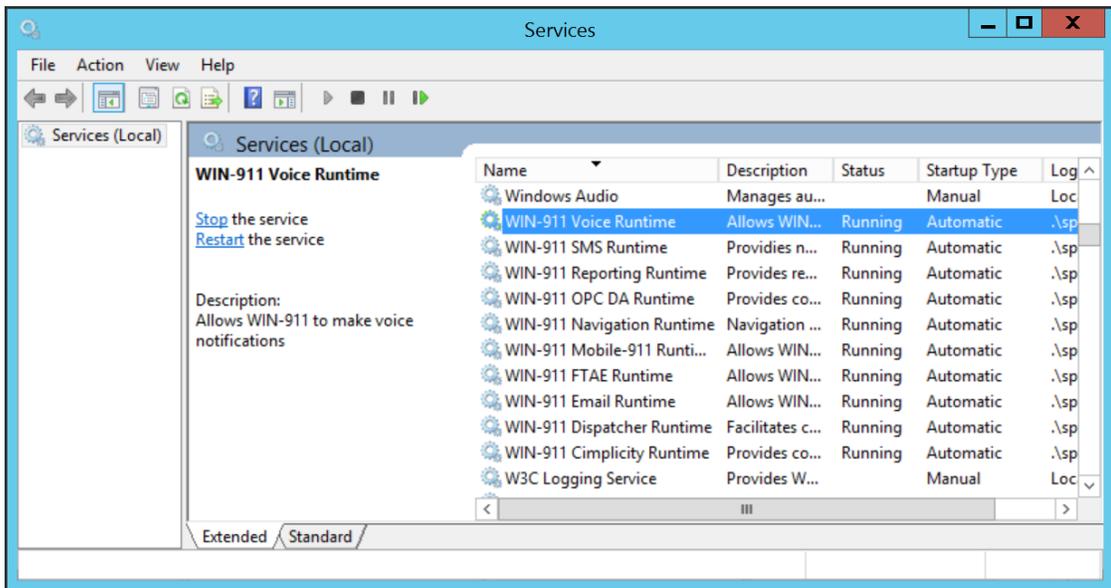
1. If you do not stop the **World Wide Web Publishing Service**, you will need to stop each WIN-911 Module manually. For each module, there is a corresponding Application Pool and Runtime Service. The modules may differ for each system since all WIN-911 modules are not required to be installed. Here is the list of all possible modules with their corresponding Application Pools and Runtime Services:

WIN-911 Module	Application Pool	Runtime Service
CIMPLICITY	CimAppPool	WIN-911 Cimplicity Runtime
Dispatcher	DispatcherAppPool	WIN-911 Dispatcher Runtime
Email	EmailAppPool	WIN-911 Email Runtime
FTAE	FTAEAppPool	WIN-911 FTAE Runtime
iFIX	iFIXAppPool	<i>No Service (runs as an application)</i>
InTouch	InTouchAppPool	<i>Optional Service (runs as an application)</i>
InTouch Edge HMI	WebStudioAppPool	WIN-911 InTouch Edge HMI Runtime
System Platform	ArchestrAAppPool	WIN-911 System Platform Runtime
Mobile-911	Mobile911AppPool	WIN-911 Mobile-911 Runtime
Navigation	NavigationAppPool	WIN-911 Navigation Runtime
OPC DA	OpcDaAppPool	WIN-911 OPC DA Runtime
Reporting	ReportingAppPool	WIN-911 Reporting Runtime
SMS	SMSAppPool	WIN-911 SMS Runtime
Voice	VoiceAppPool	WIN-911 Voice Runtime
WIN-911 Mobile	MobileAppPool	WIN-911 Mobile Runtime

2. To stop all WIN-911 Application Pools, open **Internet Information Services (IIS) Manager**. In the Connections pane on the left, open the local server and click on **Applications Pools**. Select each WIN-911 Application Pool, click “Stop.”



- To stop all WIN-911 Runtime Services, open **Windows Services**. Select each WIN-911 Runtime Service, click “Stop.”



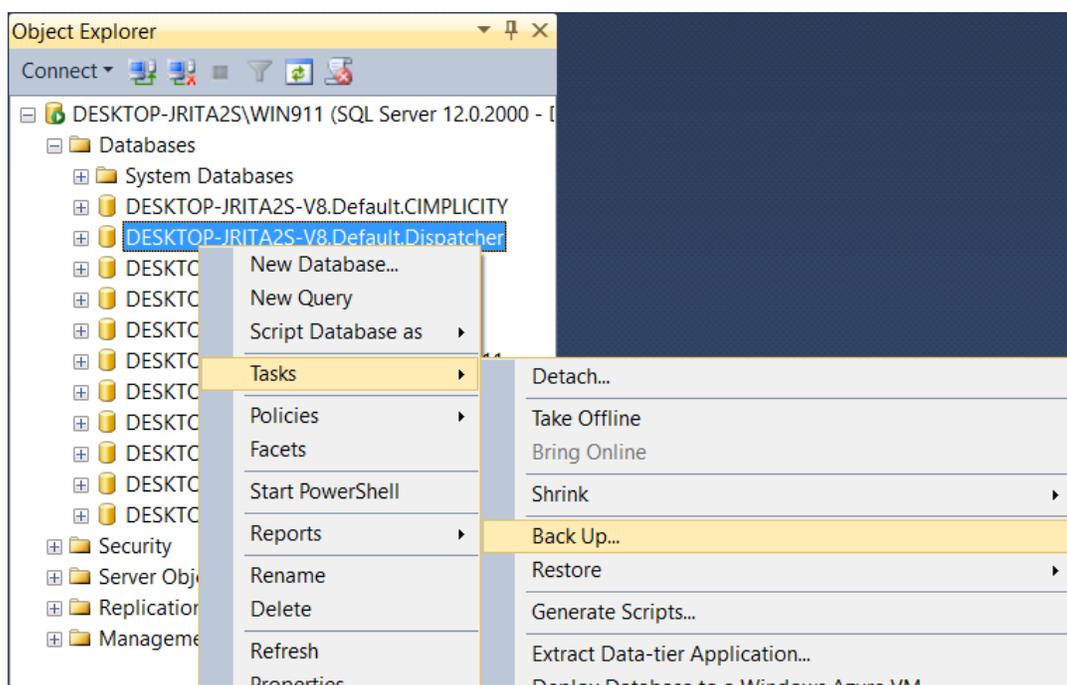
- GE iFIX Users Only:** The WIN-911 iFIX Module is running as a Windows application instead of a Windows service. If the WIN-911 iFIX module is running, the runtime icon  will be in the Windows System Tray. Right-click and select **Exit** to stop the **WIN-911 iFIX WPF Host App**.
- Wonderware InTouch Users Only:** The WIN-911 Wonderware Module is most likely running as a Windows application, instead of as a Windows Service. If the Wonderware module is running, the runtime icon  will be in the Windows System Tray. Right-click and select **Exit** to stop the **WIN-911 InTouch WPF Host App**.

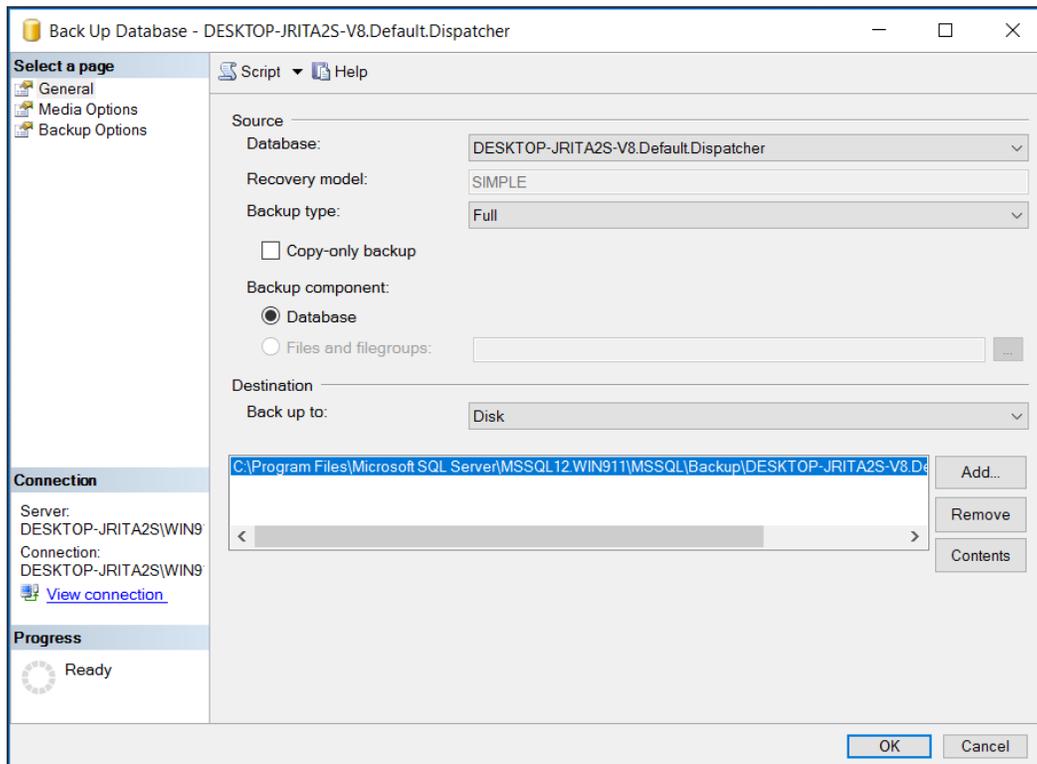
# Backing up the WIN-911 Configuration Databases

SQL Server Management Studio will be used to back up the WIN-911 configuration databases. You must log in to the SQL Server host machine as the WIN-911 user or a user with privileges to the WIN-911 SQL Instance. If WIN-911 installed SQL Server Express, the WIN-911 host system will have the tools required for this process.

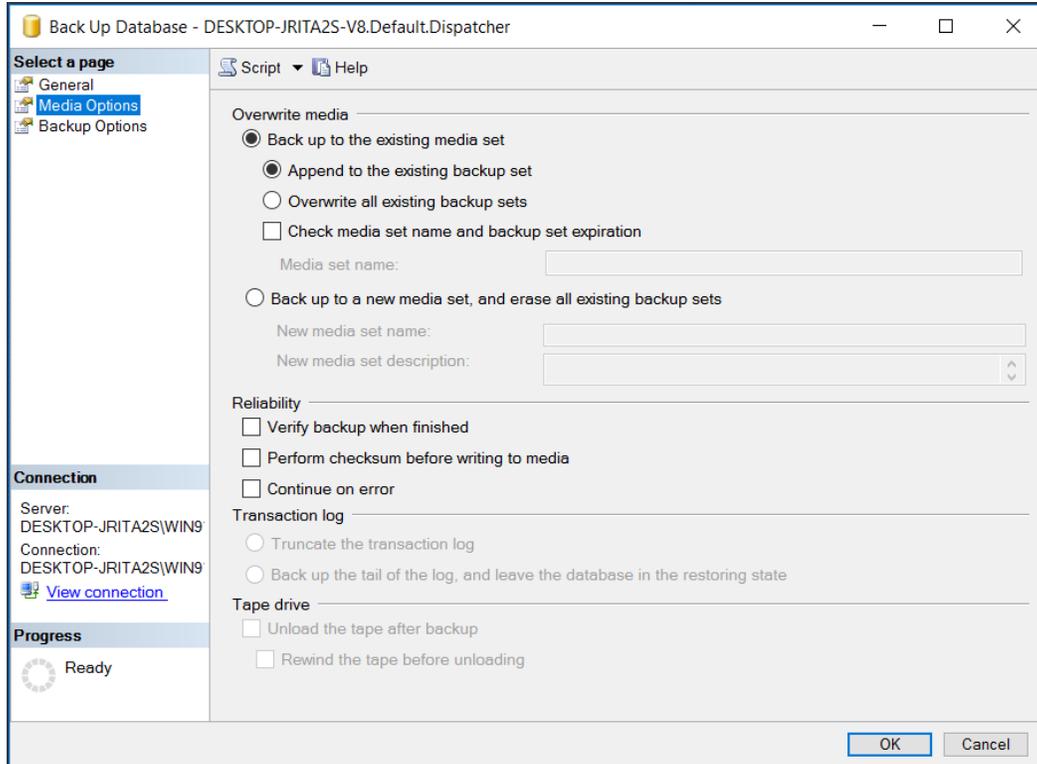
## Backing up a WIN-911 Module's Database

1. Open **SQL Server 2014 Management Studio**.
2. After connecting to the appropriate instance of the Microsoft SQL Server Database Engine ('[COMPUTER NAME]\WIN911' by default), in **Object Explorer**, click the server name to expand the server tree.
3. Expand **Databases**, and select one of the WIN-911 Module databases. The naming convention for each module's database is [Computer Name]-V8.Default.[Module Name].
4. Right-click the database, then **Tasks**, and then click **Back Up**. The **Back Up Database** dialog box appears.





5. Make a note of the backup file location under the **Destination** section.
6. Next, click **Media Options** in the **Select a page** pane.



7. There are two options to choose from under the **Back up to existing media set** selection:
  - Append to the existing backup set
  - Overwrite all existing backup set
8. **Append to the existing backup set** will preserve any prior backups. This option is useful if you want to keep a series of backups. Using this option will allow you to select a specific backup at a given point of time to restore. Restoring from a particular point of time will be discussed more in the [Restoring the WIN-911 Configuration Databases](#) section. Please note your backup files will continue to grow every time a backup is performed with this option selected.
9. **Overwrite all existing backup sets** will overwrite any previous backups stored in the destination location. The backup file will only contain the most recent backup. This option is recommended when moving the configuration from one computer to another.
10. Click **OK** to run the Backup.

## Repeat for all Modules

Repeat the steps in the previous section for the rest of the WIN-911 Modules. All modules of the WIN-911 system must be backed up at the same time to ensure system-wide data integrity.

## Restart WIN-911 Services and Application Pools

After backing up all of the databases, you can now restart the WIN-911 Runtime Services and Application Pools.

1. To restart the WIN-911 Runtime Services, open the **Windows Services** and start each of the WIN-911 Runtime Services. See section – [Preparing the Database for Backup/Restore](#), for a complete list of the WIN-911 Runtime Services.
2. If you stopped the **World Wide Web Publishing Service**, you must restart this service.
3. If you chose not to stop the **World Wide Web Publishing Service**, but instead, you manually stopped each WIN-911 Application Pool, open **Internet Information Services (IIS) Manager**. In the Connections pane on the left, open the local server and click on **Applications Pools**. Select each Application Pool, then click Start. See section – [Preparing the Database for Backup/Restore](#), for a complete list of the WIN-911 Application Pools.

# Restoring the WIN-911 Configuration Databases

Restoring a WIN-911 Configuration will fall under two categories:

- 1) **Restoring a backup to the same WIN-911 system.**
  - Go back to an older configuration.
- 2) **Restoring a WIN-911 configuration to a different WIN-911 system.**
  - Moving the WIN-911 installation to a new computer.
  - Reinstalling WIN-911 on a formatted hard drive.
  - Moving the configuration from a development machine to the production machine.
  - Copying configurations from a primary WIN-911 system to the secondary WIN-911 system in a hot backup environment

SQL Server Management Studio will be used to restore the WIN-911 configuration databases. You must log in to the SQL Server host machine as the WIN-911 user or a user with privileges to the WIN-911 SQL Instance. If you allowed WIN-911 to install SQL Server locally, the WIN-911 host system would have all the tools required for this process.

## Preparing the WIN-911 System for Restore

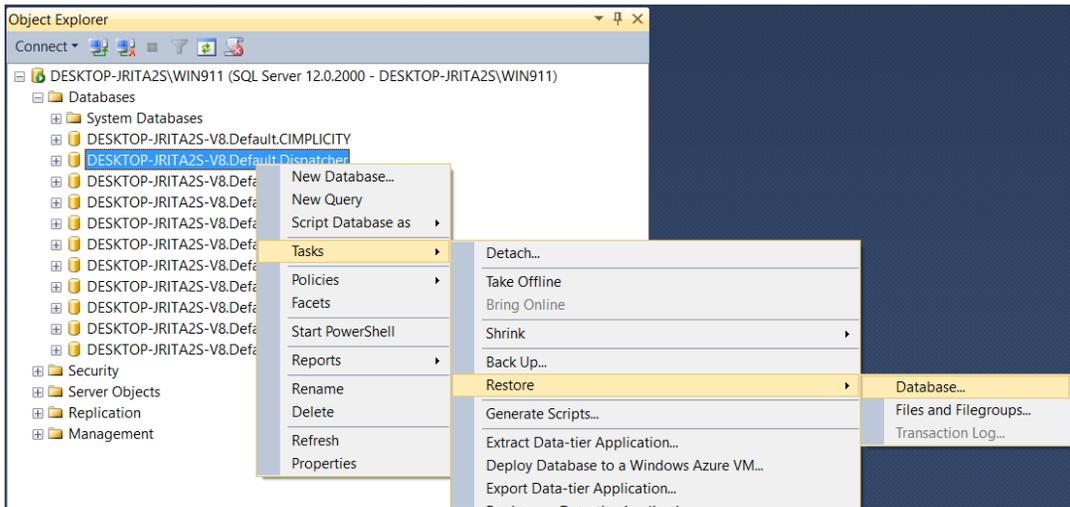
Restoring the WIN-911 Configuration backup files will require you to shut down all running WIN-911 Services and Application Pools. Please refer to the section at the beginning of this document – [Preparing the Database for Backup/Restore](#), for details on how to stop WIN-911.

## Restoring on the same WIN-911 machine

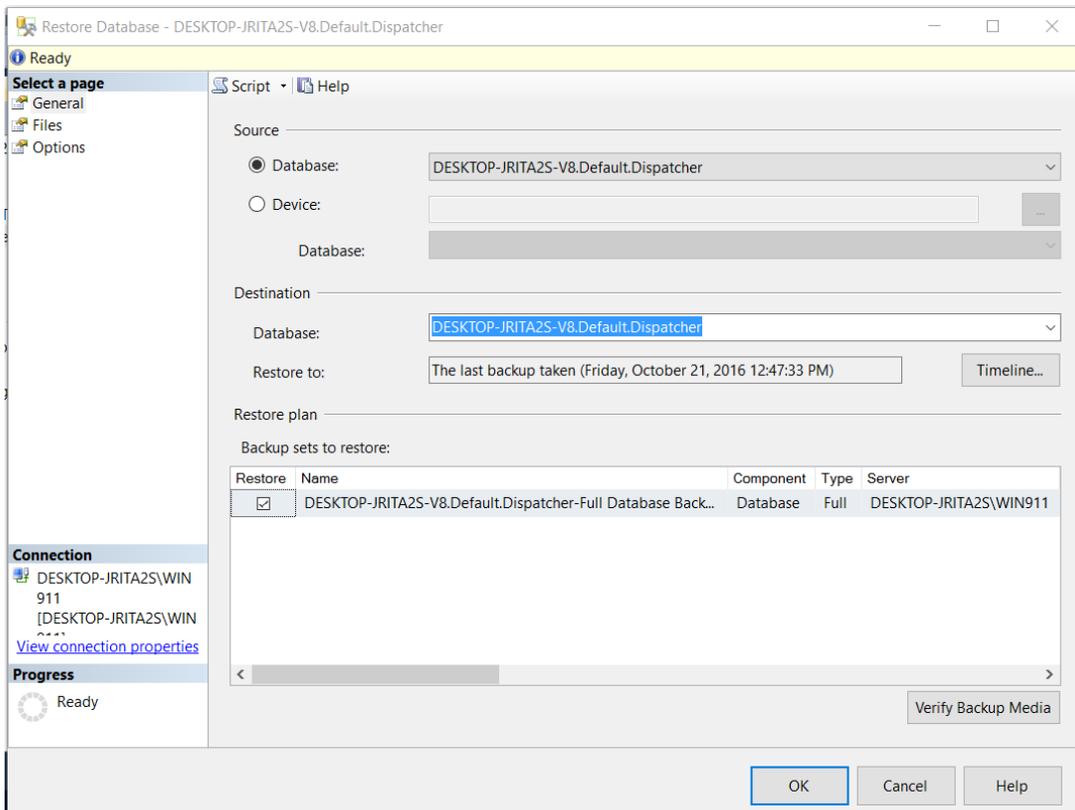
This method would be used to restore a previous database backup on the existing WIN-911 system. Please be aware this restore will overwrite the existing WIN-911 Configuration databases.

1. Open **SQL Server 2014 Management Studio** found in your Start menu.
2. After connecting to the appropriate instance of the Microsoft SQL Server Database Engine ('[COMPUTER NAME]\WIN911' by default), in **Object Explorer**, click the server name to expand the server tree.
3. Expand **Databases**, and select one of the WIN-911 Module databases.

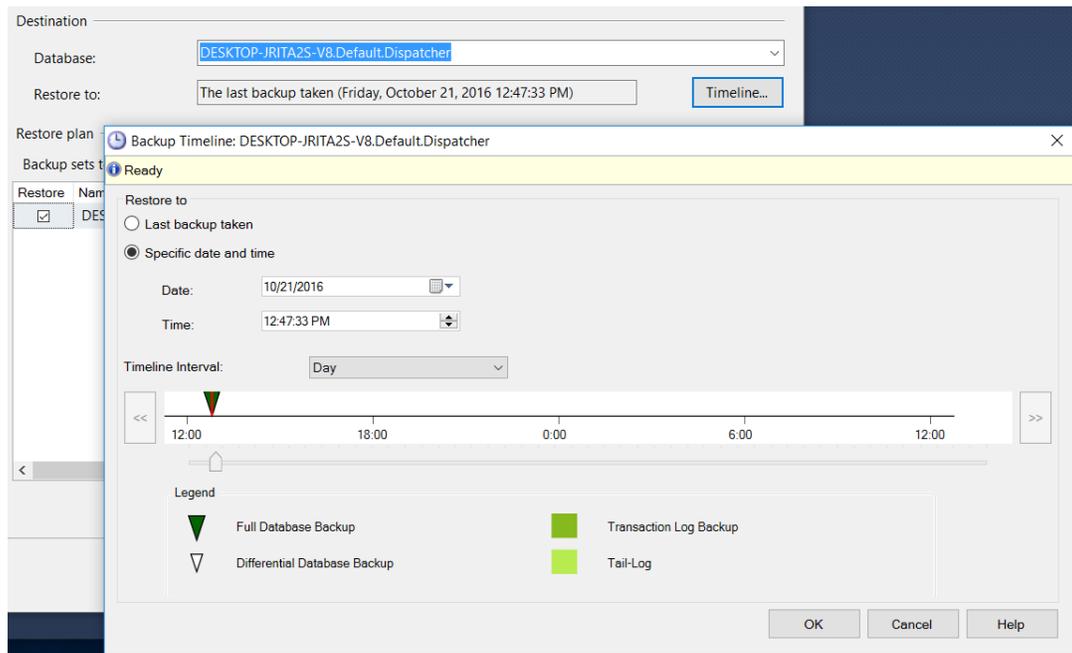
4. Right-click the database, point to **Tasks**, then point to **Restore**, then click **Database**. The **Restore Database** dialog box appears.



5. Simply clicking **OK** will restore the latest backup file, overwriting the existing database.



6. If you would like to restore to an older backup, click the **Timeline** button. The **Backup Timeline** dialog box appears. **Last backup taken** is selected by default. Click **Specific date and time** to manually select an older backup from a specific point in time.



## Repeat for all Modules

Repeat the steps in the previous section for the rest of the WIN-911 Modules. All modules of the WIN-911 system must be restored at the same time to ensure system-wide data integrity.

## Restart WIN-911 Services and App Pools

After you have restored all databases, you must restart the WIN-911 Runtime Services and WIN-911 Application Pools.

1. To restart the WIN-911 Runtime Services, open the Windows Service applet and start each of the WIN-911 Runtime Services. See section – [Preparing the Database for Backup/Restore](#), for a complete list of the WIN-911 Runtime Services.
2. If you chose to stop the World Wide Web Publishing Service, you must start this service.
3. If you chose not to stop the World Wide Web Publishing Service, but instead, you manually stopped each WIN-911 Application Pool, open Internet Information Services (IIS) Manager. In the Connections pane on the left, open the local server and click on Applications Pools. Select each Application Pool click Start. See section – [Preparing the Database for Backup/Restore](#), for a complete list of the WIN-911 Application Pools.

# Restoring on a different WIN-911 machine

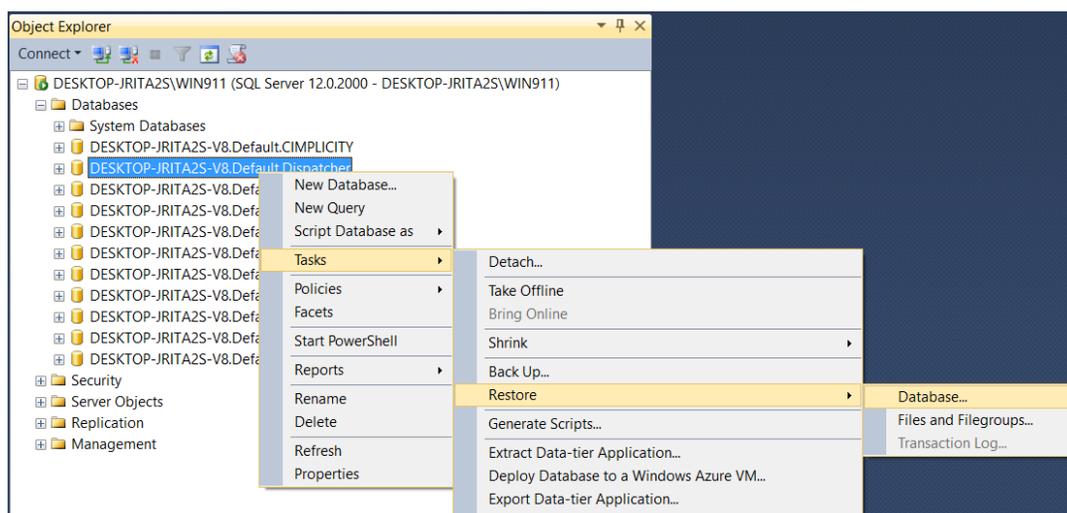
This method would be used to restore a WIN-911 configuration on a different WIN-911 system. Restoring a WIN-911 backup to a different WIN-911 machine may be required if:

- 1) You are moving the WIN-911 installation to a new computer.
- 2) You are reinstalling WIN-911 on a formatted hard drive.
- 3) You are moving the configuration from a development machine to the production machine.
- 4) You are copying the configuration from a primary WIN-911 system to the secondary WIN-911 system in a hot-backup environment.

Note: Restoring a backup configuration to a new WIN-911 system is only valid for the same host environment. The same host environment is defined as:

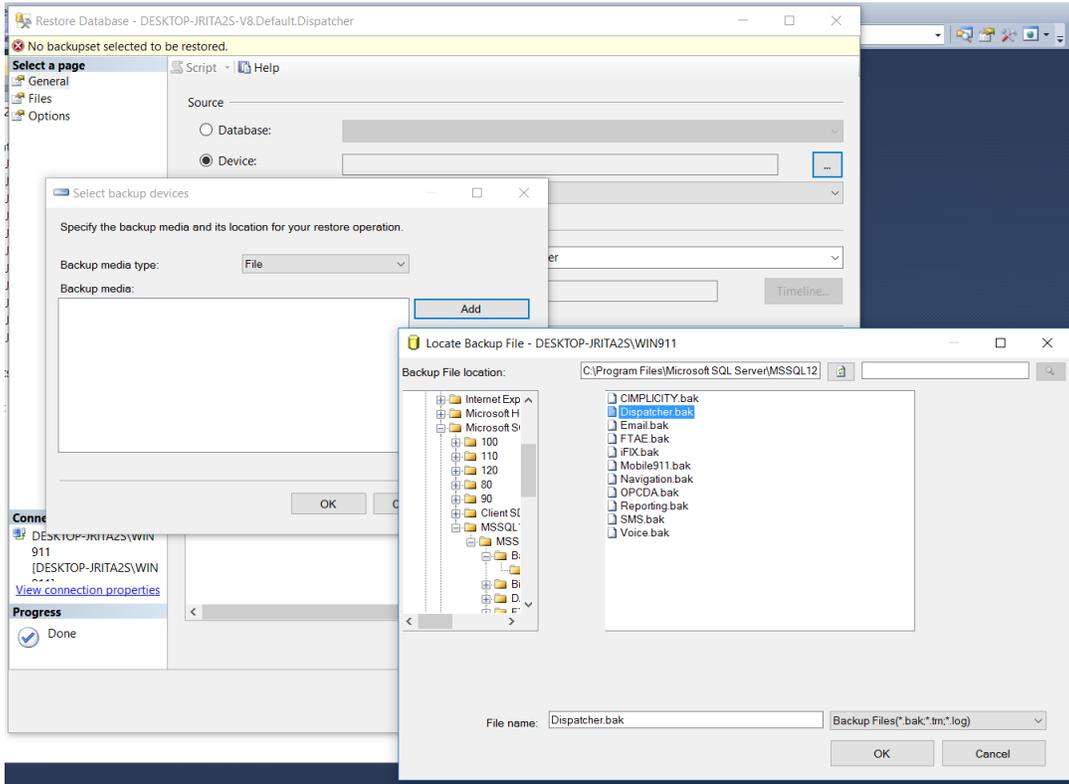
- The same version of WIN-911 Standard, Interactive or Advanced
- The same set of WIN-911 Modules
- The same version of Microsoft SQL Server.

1. Open **SQL Server 2014 Management Studio** found in your Start menu.
2. After connecting to the appropriate instance of the Microsoft SQL Server Database Engine ('[COMPUTER NAME]\WIN911' by default), in **Object Explorer**, click the server name to expand the server tree.
3. Expand **Databases**, and select one of the WIN-911 Module databases.
4. Right-click the database, point to **Tasks**, then point to **Restore**, then click **Database**. The **Restore Database** dialog box appears.

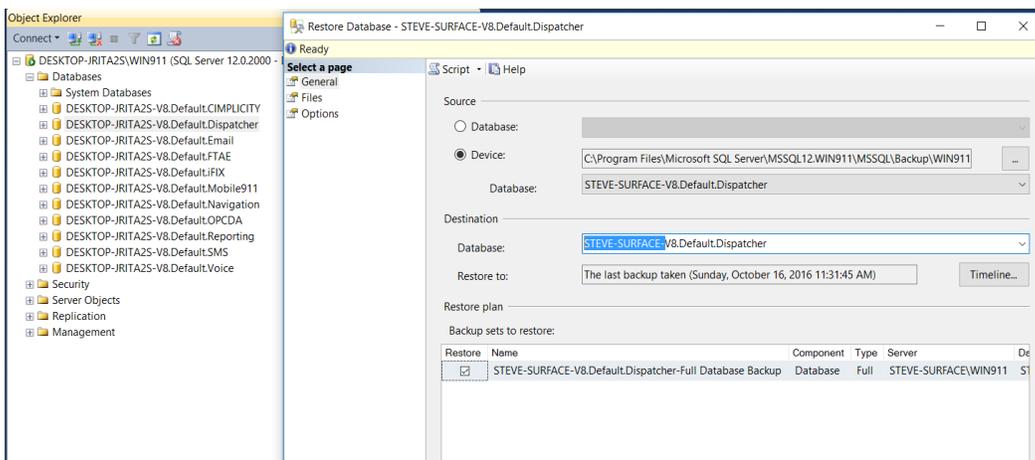


5. Since the backup is taken from a different server, the destination server will not have the backup history information for the specified database. Select **Device** to manually specify the backup file to restore. Click the [...] button. The **Select backup devices** dialog box will appear.

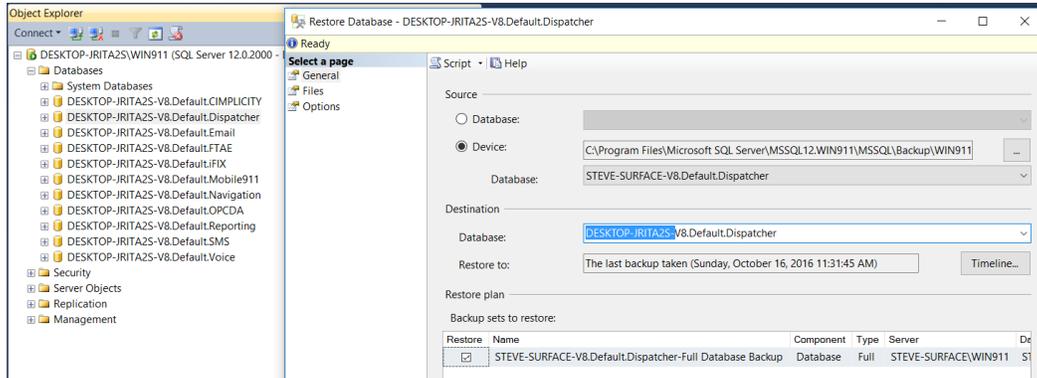
6. Select the backup media type where the database backup resides, **File** is selected by default. Click the **Add** button. The **Locate Backup File** dialog box will appear.
7. Browse for the specific database's backup file (.bak) that will be restored. Click **OK**.



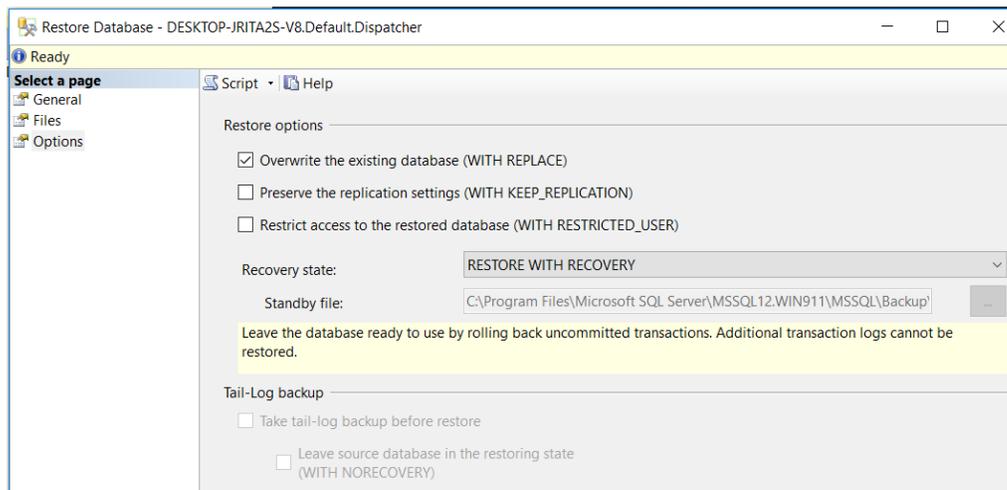
8. Now you must edit the destination database name to match the current system. WIN-911 uses the computer name inside each module's database name. In this example, the backup database was taken from a system named STEVE-SURFACE. The backup database will be restored to a new computer named DESKTOP-JRITA2S.



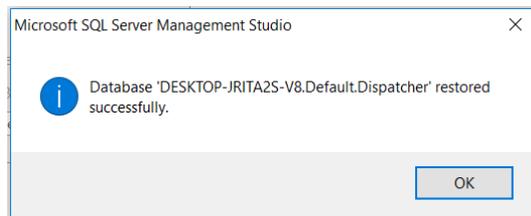
9. Change the destination database name to match the current system, as shown below.



10. Next, click **Options** in the **Select a page** pane. **Overwrite the existing database (WITH REPLACE)**, must be selected. If this option is not checked, an error will appear when attempting to restore the database. Click **OK** to initiate the restore.



11. You should receive a message box showing the restore was successful.



## Repeat for all Modules

You have now successfully restored the configuration of a single WIN-911 Module. This process must be repeated for all other modules. Once all database backups have been restored, a few configuration changes must be made within the WIN-911 software before you have completed the system restore. Please follow the remaining instructions to complete the restore.

## Restart WIN-911 Services and Application Pools

After you have backed up each module's database, as well as the WIN-911 log file, you can now restart the WIN-911 Runtime Services and Application Pools.

1. To restart the WIN-911 Runtime Services, open the **Windows Service** applet and start each of the WIN-911 Runtime Services. See section – [Preparing the Database for Backup/Restore](#), for a complete list of the WIN-911 Runtime Services.
2. If you stopped the **World Wide Web Publishing Service**, you must restart this service.
3. If you chose to not stop the **World Wide Web Publishing Service**, but instead, you manually stopped each WIN-911 Application Pool, open **Internet Information Services (IIS) Manager**. In the Connections pane on the left, open the local server and click on **Applications Pools**. Select each Application Pool click Start. See section – [Preparing the Database for Backup/Restore](#), for a complete list of the WIN-911 Application Pools.

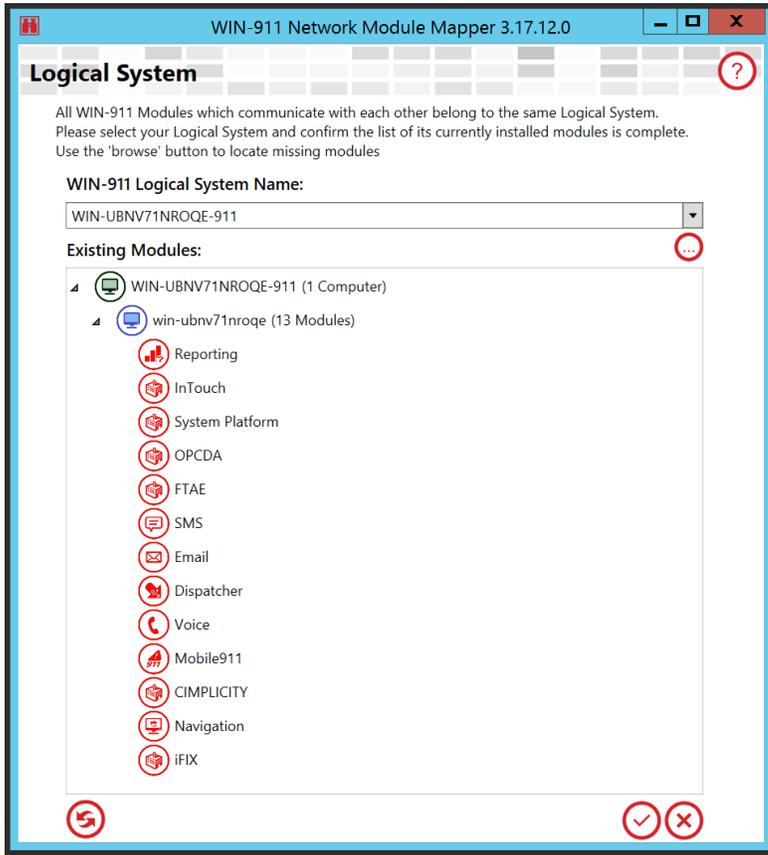
## Remapping the WIN-911 Module Endpoints

After you have restored all databases and restarted the WIN-911 Runtime Services and WIN-911 Application Pools, you must remap the WIN-911 Module endpoints for the new WIN-911 system. These endpoints are saved in each database.

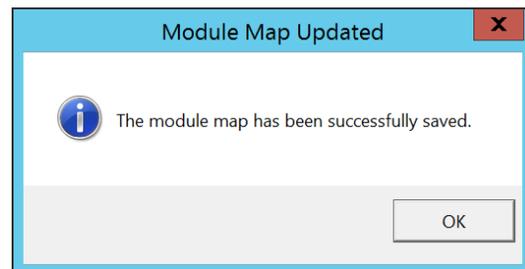
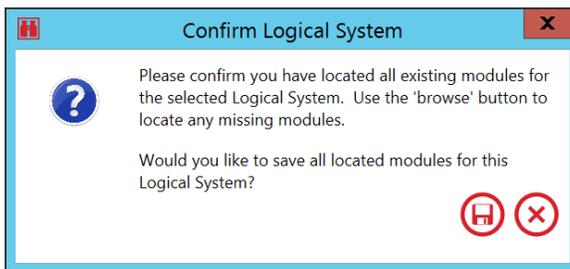
1. Open the **WIN-911 Module Mapper** found in the Start Menu. The **WIN-911 Network Module Mapper** window will appear.



- The module mapper will locate all WIN-911 modules. Once the dialog displays the located modules, make sure that all installed modules appear. If not, click the refresh button in the bottom left corner of the dialog. Once the complete module list is present, click the **Check** in the bottom right corner of the dialog.



- Next, click the Save button on the **Confirm Logical System** dialog. You will then receive a confirmation that the Module Map was updated.



## Configured Passwords in WIN-911

As mentioned earlier in this document, all passwords defined in WIN-911 must be reconfigured if the backup file was restored on a different computer or on a formatted drive. WIN-911 uses encryption to hide the passwords that are entered in WIN-911. The encryption method that is used is unique to the computer the backups originated from.

Open the WIN-911 Configuration using a web browser to make the necessary edits to the passwords. The location of each password that will require reentry are listed below.

- **FactoryTalk A&E** – Applications – Connection tab
- **CIMPLICITY** – Projects – Project tab
- **iFIX** – Source – Source tab
- **System Platform** – Galaxies – Connection Details tab
- **InTouch Edge HMI** – Projects – Project Details tab
- **WIN-911 Mobile** – Gateways
- **Email** – Gateway – Outgoing Server tab & Incoming Server tab
- **Voice** – Gateway – General tab – Voice Hardware (SIP/VOIP only)
- **SMS** – Gateway – Gateway tab – Connection Type (Telnet only)

## Conclusion

If you experience any issues, please submit a support request at <https://supportdesk.win911.com/support/tickets/new>

