

## What changed at 10.8.x and 10.9.x?

The number of Apache Kafka brokers was extended from a single broker to a cluster of three concurrently running brokers. This change applies to ArcGIS GeoEvent Server 10.8 and later releases.

Review the information below before performing an administrative reset of GeoEvent Server. In some cases, deleting only the GeoEvent Server runtime files might be enough to get GeoEvent Server running again.

## ArcGIS GeoEvent Server configuration files

### Backup configuration file

ArcGIS GeoEvent Server uses XML files to capture snapshots of configured elements such as inputs, outputs, GeoEvent Services, and GeoEvent Definitions. Before deleting the ZooKeeper data files to reset a GeoEvent Server's configuration, make sure you have a backup of your GeoEvent Server configuration in an XML file.

Using [GeoEvent Manager](#) to create an explicit snapshot of your ArcGIS GeoEvent Server configuration as a restore point is recommended. Navigate to **Site > GeoEvent > Configuration Store** and click **Export Configuration** to create a snapshot of your configuration.

Beginning with the 10.5 release, a GeoEvent Server configuration file is created automatically each night at 00:00:00 hours (local time). If you cannot access the GeoEvent Manager web application, you may want to confirm configured elements you need were captured in an automatically created configuration snapshot. These snapshot files are found in the directory identified below on the GeoEvent Server machine. Their content is easily reviewed using a text editor.

- (Windows) `C:\ProgramData\Esri\GeoEvent`
- (Linux) `/home/arcgis/.esri/GeoEvent/config.localhostname`

The folder used for configuration snapshots can be changed by browsing to **Site > GeoEvent > Data Stores** and editing the *Automatic Backups* registered folder. When and how often GeoEvent Server creates configuration snapshots can be updated via the **Site > Settings > Configure Global Settings > Automatic Backup Settings** properties.

### Global settings configuration file

The GeoEvent Server [global settings](#) are *not* included in the automatic backups. If you have changed any of the default values on the **Site > Settings** page you will want to explicitly export a configuration snapshot of the global settings prior to a GeoEvent Server reset. To export the global settings manually, navigate to **Site > Settings** and click **Export**.

### Other configuration files

The `*.cfg` files beneath the `GeoEvent/etc` folder are *not* included in the automatic backups. You can copy these configuration files to another location as part of a configuration management strategy. When upgrading to a new release or applying a GeoEvent Server patch it is recommended you backup these configuration files (`*.cfg`).

Use a diff utility to identify any differences after the software installation or patch is complete. Do not overwrite the new files an upgrade or patch installs with your backup of the configuration files. New releases and/or patches may include fixes, enhancements, or other changes not reflected in your backup of the configuration files.

## The ArcGIS GeoEvent Gateway service

A new system component, the ArcGIS GeoEvent Gateway, was introduced with the ArcGIS GeoEvent Server 10.6 release. The GeoEvent Gateway utilizes Apache ZooKeeper and Apache Kafka. ZooKeeper provides the configuration store for both GeoEvent Server and Apache Kafka (which is used as an event message broker by GeoEvent Server). ZooKeeper and Kafka are tightly coupled at recent releases. Do not delete the Kafka data files without also deleting the ZooKeeper data files when performing an administrative reset of GeoEvent Server.

While the synchronization platform service provided by ArcGIS Server is no longer actively used, GeoEvent Server may try to start the ArcGIS Server platform service and check to see if an existing configuration can be upgraded. Other than this one-time upgrade event – which takes place when GeoEvent Server is first installed – the ArcGIS Server platform service used to run ZooKeeper can be left in a stopped state.

Kafka uses on-disk topic queues to manage event records. System files supporting these topic queues are managed according to configurable data retention strategy which specifies when new files will be created and old files deleted.

If GeoEvent Gateway were stopped and its ZooKeeper configuration were deleted Kafka topic queues will likely be orphaned and large data files will potentially not be deleted from disk according to the data retention strategy.

The Kafka on-disk topic queue files and ZooKeeper data files are located beneath the application data folders identified below per operating system.

- (Windows) `C:\ProgramData\Esri\GeoEvent-Gateway\zookeeper-data`  
`C:\ProgramData\Esri\GeoEvent-Gateway\kafka (\logs, \logs1, and \logs2)`
- (Linux) `/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/zookeeper-data`  
`/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs`

For more information on these files and folders refer to [Changing the location of Kafka and ZooKeeper data files](#) in the GeoEvent Server Administration on-line help.

## ArcGIS GeoEvent Server runtime files

When GeoEvent Server initially starts, following a new product installation, files are created as the system framework is built. These files, referred to as cached bundles, are typically written beneath the GeoEvent Server installation directory. On a Windows system look in the `C:\Program Files\ArcGIS\Server\GeoEvent\data\cache` folder. A system administrator might delete these files to force the system framework to be rebuilt rather than deciding to uninstall and then reinstall GeoEvent Server.

Deleting the GeoEvent Server runtime files may be necessary if you continue to see the message *No Services Found* when attempting to access GeoEvent Manager -- even after a browser refresh and waiting several minutes for GeoEvent Gateway to complete self-healing steps. Deleting the runtime files and folders beneath GeoEvent Servers' `data` folder may fix issues with GeoEvent Server startup by forcing a rebuild of the system framework.

A system administrator may also want to force a rebuild of the GeoEvent Server system framework if a message is returned that the *ArcGIS GeoEvent Server Windows service could not be stopped in a timely fashion* when selecting to stop the service using Windows Task Manager. In this case, an administrator should ensure the process identified in the following properties file has been stopped:

```
C:\Program Files\ArcGIS\Server\GeoEvent\instances\instance.properties
```

Abrupt termination of the Java processes that run GeoEvent Server can leave the system runtime files in an unhealthy state, requiring the `data` folder's files to be deleted so the framework can be rebuilt.

## Important considerations

Below are some important considerations when performing an administrative reset of GeoEvent Server or when working with the configuration files.

- If you deployed any custom components developed using the [GeoEvent Server SDK](#), the associated `*.jar` files should be moved to a temporary folder location, outside the GeoEvent Server installation folder. Do this while GeoEvent Server is running and prior to executing the steps below. Folders to check per operating system are:
  - (Windows) `C:\Program Files\ArcGIS\Server\GeoEvent\deploy`
  - (Linux) `/home/arcgis/server/GeoEvent/deploy`

With the GeoEvent Server services running, move any `*.jar` files from beneath the `deploy` folder to a temporary folder to mitigate potential problems with custom component initialization on restart.

Custom components are considered part of your configuration; they will not be backed up in a configuration file but they are registered with the ZooKeeper configuration store. If custom components are deleted after the GeoEvent Server services are stopped they may be restored from the ZooKeeper configuration store when GeoEvent Server restarts.

- Make sure you have a copy of the most recent changes made to your GeoEvent Server configuration prior to an administrative reset. Use [GeoEvent Manager](#) to export configuration snapshots as summarized below:
  - Browse to **Site > GeoEvent > Configuration Store** and click **Export Configuration**.
  - Browse to **Site > Settings** and click **Export**.

Configurable elements such as inputs, outputs, GeoEvent Services and GeoEvent Definitions are maintained in the ZooKeeper configuration store. If you delete the ZooKeeper data files, all the elements you have configured will be deleted and you will need to restore them from a backup of the configuration.

- The lifecycle of the ArcGIS GeoEvent Gateway was intended to mirror that of the operating system. You can administratively reset GeoEvent Server (e.g. delete its runtime files from its `\data` folder) without stopping the ArcGIS GeoEvent Gateway. If you need to also delete the Kafka and ZooKeeper data files from their application folders, you will need to also stop the ArcGIS GeoEvent Gateway.

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## Administrative reset steps for GeoEvent Server 10.8.x and 10.9.x

After backing up all of the GeoEvent Server configuration files using the guidance above, you are now ready to perform an administrative reset using the steps below.

1. Stop the **ArcGIS GeoEvent Server** Windows service (or equivalent Linux daemon).
2. Locate and delete the folders and files beneath the following directories.  
Do not delete the highlighted parent folders.

- (Windows) `C:\Program Files\ArcGIS\Server\GeoEvent\data`  
`C:\ProgramData\Esri\GeoEvent`
- (Linux) `/home/arcgis/server/GeoEvent/data`  
`/home/arcgis/.esri/GeoEvent/config.*`

Note that, on Linux, the GeoEvent and GeoEvent-Gateway application data folders have an additional folder named `config.localhostname` which should be kept, but empty.

3. Stop the **ArcGIS GeoEvent Gateway** Windows service (or equivalent Linux daemon).
4. Locate and delete the GeoEvent Gateway log files.
  - (Windows) `C:\Program Files\ArcGIS\Server\GeoEvent\gateway\log`
  - (Linux) `/home/arcgis/server/GeoEvent/gateway/log`
5. Locate and delete the ZooKeeper and Kafka application data files. Note that at recent releases there are now three subfolders, one for each Kafka broker, whose files need to be deleted.
  - (Windows) `C:\ProgramData\Esri\GeoEvent-Gateway\zookeeper-data`  
`C:\ProgramData\Esri\GeoEvent-Gateway\kafka\logs`  
`C:\ProgramData\Esri\GeoEvent-Gateway\kafka\logs1`  
`C:\ProgramData\Esri\GeoEvent-Gateway\kafka\logs2`
  - (Linux) `/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/zookeeper-data`  
`/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs`  
`/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs1`  
`/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs2`
6. Locate and delete the GeoEvent Gateway configuration file (a new file will be recreated).
  - (Windows) `C:\Program Files\ArcGIS\Server\GeoEvent\etc\com.esri.ges.gateway.cfg`
  - (Linux) `/home/arcgis/server/GeoEvent/etc/com.esri.ges.gateway.cfg`
7. Start the **ArcGIS GeoEvent Gateway** Windows service (or equivalent Linux daemon).
8. Wait a couple of minutes, checking to verify that the following files are created:

Windows:

- `C:\Program Files\ArcGIS\Server\GeoEvent\etc\com.esri.ges.gateway.cfg`
- `C:\ProgramData\Esri\GeoEvent-Gateway\kafka\logs\meta.properties`
- `C:\ProgramData\Esri\GeoEvent-Gateway\kafka\logs1\meta.properties`
- `C:\ProgramData\Esri\GeoEvent-Gateway\kafka\logs2\meta.properties`

Linux:

- `/home/arcgis/server/GeoEvent/etc/com.esri.ges.gateway.cfg`
- `/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs/meta.properties`
- `/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs1/meta.properties`
- `/home/arcgis/.esri/GeoEvent-Gateway/config.localhostname/kafka/logs2/meta.properties`

The GeoEvent Gateway configuration file contains information on the machine and port used to connect to the ZooKeeper configuration store and the Kafka broker(s). The format of the file looks similar to the below content:

```
GeoEvent/etc/com.esri.ges.gateway.cfg
gateway.zookeeper.connect=MY-MACHINE.MY-DOMAIN:4181
gateway.kafka.brokers=MY-MACHINE.MY-DOMAIN:9192
gateway.kafka.topic.partitions=3
gateway.kafka.topic.replication.factor=3
```

The Kafka metaproperties files contain information on the Kafka broker IDs, version, and cluster. The format of the three files looks similar to the below content:

kafka/logs/meta.properties	kafka/logs1/meta.properties	kafka/logs2/meta.properties
#Mon May 09 15:54:36 UTC 2022 broker.id=1003 version=0 cluster.id=0ezLJ0t_S3yRO7MINLa5Ww	#Mon May 09 15:54:36 UTC 2022 broker.id=1002 version=0 cluster.id=0ezLJ0t_S3yRO7MINLa5Ww	#Mon May 09 15:54:36 UTC 2022 broker.id=1001 version=0 cluster.id=0ezLJ0t_S3yRO7MINLa5Ww

Do not edit any of these files, they are autogenerated from information in other system properties files.

9. Start the **ArcGIS GeoEvent Server** Windows service (or equivalent Linux daemon).
10. Confirm you can log in to **ArcGIS GeoEvent Manager**.

If you are still unable to log in to GeoEvent Manager please contact [Esri Support](#).