Release Notes

1Integrate

Version 3.0.1

15 July 2021

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1 Introduction

1.1 Scope

The purpose of the Release Note is to document the new functionality provided by the release and any known issues or limitations. The release notes will also record any administrative instructions that are specific to this release and not recorded elsewhere.

1.2 Purpose of Release

A standard release of 1Integrate.

For users of previous versions, 1Spatial recommends the following before applying any changes to your live environment:

- Please read these release notes and the **Installation Guide** for your application server carefully before installing this release
- Ensure all running and paused sessions are completed
- Back up your repository database
- Deploy the new version and test the release on your test platform

1.3 System Requirements

Operating Systems

This version of 1Integrate is supported on the following platforms:

Operating System	Prerequisites
Oracle Linux 7.9	
Windows Server 2019	Microsoft Visual C++ 2019 64 bit Redistributable packages Download from this link and pick vcredist_x64.ex https://support.microsoft.com/en-gb/help/2977003/the-latest-supported-visual-c-downloads

Application Servers

1Integrate requires an application server and the following are supported (Note that WildFly is provided as part of the installation package and Oracle WebLogic is a pre-requisite that must be installed beforehand):

Application Server	Notes
Oracle WebLogic Server 14.1.1	Any Edition, must be pre-installed
WildFly 23.0.2	Delivered as part of the 1Integrate installation

Java JDK

The supported Java 8 (64-bit) JDK depends on which application server you are using.

Application Server	Java JDK
Oracle WebLogic Server 14.1.1	Oracle JDK (8 update 291)
WildFly 23.0	AdoptOpenJDK (8 update 292)

Database Platforms

A database is required to act as the 1Integrate repository to store **configuration**. In addition, databases can be used as a source for **spatial data**. The following database platforms are supported with the following restrictions:

Database	Restrictions
Oracle Database 12c R2 (Any Edition) Oracle Database 19c R1 (Any Edition)	None
Microsoft SQL Server 2019	When used as data source, requires FME desktop (see below). When used as a rules repository, only supported on WildFly application server.
PostgreSQL 12.4/12.6 (with PostGIS 3.1)	When used as rules repository, only supported on WildFly application server.

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Optional FME desktop integration

Certain data formats are available only with an FME Desktop installation and license. For full data format support please check the 1Integrate online help under "Basic Steps-> Data Stores -> Supported Data Stores": https://1spatial.com/documentation/1integrate/v2_10/Topics/Data%20Stores/Supported_Datastores.htm

Component	Edition	Reason
FME Desktop 2018.1 (64-bit)	Professional Edition	Read or write Bentley Microstation DGN, Autodesk DWG/DXF Write Esri File Geodatabase
FME Desktop 2018.1 (64-bit)	Esri Edition	Formats listed above plus read or write Esri Enterprise Geodatabase. Requires installation of one of: • ArcGIS for Desktop 64-bit Background Geoprocessing • ArcGIS Pro 64bit • ArcGIS for Server
FME Desktop 2018.1 (64-bit)	Database Edition	Formats listed above plus write to Microsoft SQL Server

Web Browsers

This product works with most of the recent versions of Chrome, Firefox and Edge. Internet Explorer does not work with the session data viewer. The specific versions that have been tested for this release are:

Tested Browsers
Microsoft Edge ~~Microsoft Internet Explorer 11~~ IE 11 does not work with the Session Data Viewer and support for the rest of the 1Integrate user interface will be removed in a later release. Microsoft Edge is recommended as the Microsoft browser to use.
Google Chrome 90+
~~Mozilla Firefox 80~~ Not currently run through automated tests so correct behaviour cannot be guaranteed until a future release.

Other browser clients can be used, but support requests can only be progressed if the issue can be replicated on a tested browser.

Monitor Resolution

We recommend a minimum resolution of 1080p (1920×1080) for the best experience using the 1Integrate interface.

2 Release details

2.1 Summary of Changes

Notable differences in 1Integrate 3.0

- Note that starting this release will upgrade the repository which may prevent the previous version of 1Integrate from starting. Use *Admin->Repository Administration->Backup Repository* to create a parallel repository for use by different versions.
- Full 3D support (licensed option) for 1Integrate
  - o Read and write 3D data via Oracle data store
  - o (Beta) Read and write 3D data via: PostGIS, SQL Server, Esri File and Enterprise GDB, Shape File, Tab file, DWG/DXF, DGN.
  - o Full 3D support for spatial operators
  - o New 3D built-in functions such as extrude, solid, volume
- New built-in function change_dimension,
- New built-in function get_geometry_as_WKT
- New built-in functions to report the locations and descriptions of invalidities within a geometry: report_invalid, report_invalid_get_geometry, report_invalid_get_description
- Other fixes and improvements

Notable differences in 1Integrate 2.10

- Note that starting this release will upgrade the repository which may prevent the previous version of 1Integrate from starting. Use *Admin->Repository Administration->Backup Repository* to create a parallel repository for use by different versions.
- New and improved 1Integrate Session Data Viewer
  - o 3d view mode (ctrl-drag to rotate)
  - o Download and upload layer styles
  - o View Selected feature's geometry details on Attribute panel
  - o Zoom to Coordinate (or copy existing)
  - o Improved navigation controls on map
  - o Configure viewer performance settings
- New standard superclasses for rule/action writing
  - o Three standard classes now available for writing rules and actions against
    - ▪ All
    - ▪ All Non-Geometric
    - ▪ All Geometric
- Group engines using labels and control which groups of engines a session can run on
- New Nearest n objects quantifier for Actions and Rules
- New Collections Element value for getting nth element from Geometry, array or collection (note, this will replace Array Element value which is now deprecated and will be removed in future release)
- New built-ins:
  - o Splitting polygon and line geometries: Beta, currently does not support 2d geometries; use make_2d and make_3d to convert to and from 2D geometries.
  - o Forming polygons from lines
- Support Wildfly 23.0.0 Application Server
- Support Oracle Linux 7.9 Operating system

- Other fixes and improvements to DSV, ArcGIS Feature Service, WFS and GDAL datastores and REST API improvements
- Note: IE 11 is not supported for use with the new Session Data Viewer and support for the rest of the 1Integrate user interface will no longer be supported after this release

Notable differences in 1Integrate 2.9

- When running multiple actions in a task, run all features through each action in order, rather than individual features through all actions
- 1Integrate is now available as Docker image (contact 1Spatial support for access)
- Ability to generate a Placekey for a location or address
- Ability to set session parameters
    - Access session parameter value in Rules and Actions
    - Set and get session parameters via REST API
- Easy configuration of Wildfly logging levels from config file
    - **Note:** This means that structure of the Widfly settings.properties file has changed. When upgrading, do not replace the new settings file with the old one. Instead, copy all the settings values from the old file to the new one, or re-use the old file but copy over the commented-out logging level setting from the new file.
- New native Delimited Separated Values datastore (For DSV/CSV delimited text files)
    - Note: Support for FME CSV Datastore has now been removed in favour of this new datastore
    - Note: The datastore has the following limitations
        - Support for two automatically detected data types – String and Geometry.
        - WKT geometries support is 2D only
        - Invalid geometries are always read in but reported as errors in Open Data task
- Enhanced Backup/Restore capabilities:
    - 1Integrate Repository Synchronisation Tool (for use cases such as integration with source code management tools and workflows)
    - Backup/restore subsets of repository as zipped folders structure with one file per entity
    - Backup/restore a full repository via an Admin Page option
- Grid Statistics endpoint includes hostname details
- New and improved UI Components - Admin Page
- Support WebLogic Server 14.1.1
- Note: Due to recent updates, Firefox is no longer tested automatically so support cannot be guaranteed. The aim is to recontinue support in a future release.

Notable differences in 1Integrate 2.8.1

- WFS data store: New OGC Web Feature Service data store supporting GeoJSON and OAuth.
- Support for PostgreSQL 12.4 and PostGIS 12.4 (as both a repository and data store format).
    - **Note:** Only this version is now officially supported and 1Integrate will not start when using PostgreSQL 9.4 or older repository.
- Remove PostGIS FME datastore (Note: PostGIS support is now only via inbuilt PostGIS data store)
- Support XYZM in SQL Server Data Store
- Configure security settings via settings.properties
    - Note: Configuring HTTPS or LDAP or Securing cookies on WildFly is now made simpler by using settings.properties rather than modifying the WildFly files directly. If upgrading from a previous release then be sure to follow the new instructions in the Security Settings topic.

- New API call to get the number of engines, their availability and the queued jobs
- Can clone an entity via REST API
- Java version Support:
    o Oracle Java 8 update 281 with WebLogic
    o AdoptOpenJDK 8 update 282 with included WildFly
- **Note:** The structure of the settings.properties file has changed. When upgrading, do not replace the file in the new installation with the previous installation's settings.properties. Instead, open both settings.properties files and update the appropriate settings from the old installation to the new installation.
- Note: Due to recent updates, Firefox is no longer tested automatically so support cannot be guaranteed. The aim is to recontinue support in a future release.

Notable differences in 1Integrate 2.8.0

- Support for MS SQL Server 2019 (as both a repository and data store format). Note: Only this version is now supported.
- Support for Microsoft Visual C++ 2019 64 bit Redistributable
- Support for Oracle Enterprise Linux 7.8
- Added support for ArcGIS Portal and related tables in the Esri Feature Service Data Store
- Ability to temporarily disable a task within a session
- Ability to override the session extent for an open data task
- New "Singleton" system class (sys:singleton) for performing action or rule logic exactly once
- New "session" scoped temporary value, and renaming of existing "local" and "global" scope to "object" "task" respectively within the UI (API functionality is unchanged)
- Support for deploying 1Integrate as a service on WildFly, on Windows only. See installation guide for details.
- Note: Backups taken from 1Integrate 2.8 onward may not work in older versions of 1Integrate if they use some of the new features
- Other fixes, improvements

2.2 Full list of functionality and bugs fixed in this release

New functionality

3.0.0	
MSINT-2838	Support Full 3D data as a licensed option:
	• Oracle Data Store: full support for read and write of Full 3D geometries
	• Beta support for read and write of full 3D geometries via: PostGIS, SQL Server, Esri File GDB and Enterprise GDB, Shapefile, Tab file, DWG/DXF, DGN
	• Full 3D support for existing built-ins such as union, difference, intersection, dimension, boundary, count_parts, is_valid etc.
	• New 3D built-in functions: count_surfaces, extrude, outer_shell, solid, volume,
	• Full 3D support for most spatial operators
GL3D-1087	New built-in function change_dimension

GL3D-446	New built-in function get_geometry_as_WKT
GL3D-1130	Is_valid takes tolerance as a parameter
GL3D-1087	Built-in functions to report the locations and descriptions of invalidities within a geometry: report_invalid, report_invalid_get_geometry, report_invalid_get_description

Bugs fixed

3.0.1	
MSINT-3143	Sync Tool 'Force Update Filesystem' error if folder names don't match across entity types
MSINT-2629	Action Map with Filter Rule shows incorrect summary count
MSINT-3130	Renamed entities cause errors when synching or restoring backups
MSINT-3060	When a restore is blocked by a referenced entity being deleted, list the items blocking it
MSINT-2035	When loading by extent of previously loaded data, use the convex hull of the data rather than the MBR.
3.0.0	
MSINT-3065	Engine can crash when using nearest N objects functionality
MSINT-2883	SQL Server Datastore does not report the Z value when Reporting on geometry with Z enabled
MSINT-1210	Report XML should include heights when reporting heighted geometries.
MSINT-3049	Cannot commit to a PostgreSQL table with a foreign key constraint enabled
MSINT-3085	Parallel heavy use of Session Map Viewer can cause interface crashes

2.3 New functionality in previous releases

Note that not all releases add new functionality - bug fixes are listed in a separate table.

2.10.0	
MSINT-2842	New and improved 1Integrate Session Data Viewer
MSINT-2201	New Standard Superclasses for rule/action writing
MSINT-1185	Support creation of Metadatastores via REST API
MSINT-2609	Support creation of shortcuts via REST API
MSINT-2715	New built-in function split_geometry (handles heighted geometries only, convert using change_dimension)
MSINT-2716	New built-in polygons_from_lines
MSINT-2717	New Collection Element value to handle "Array, collection or geometry element"
MSINT-1091	Allow finding of nearest n objects
MSINT-2919	Improve ArcGIS Feature server datastore's error handling - catch non-successful status codes early
MSINT-2925	Support Oracle Linux 7.9
MSINT-2926	Support latest Wildfly 23.x
MSINT-3010	Add UK Patent number to 1Integrate footer

2.9.0	
MSINT-2823	When running multiple actions in a task, run all features through each action (in UI order), rather than individual features through all actions
MSINT-2198	Enable simple configuration of Wildfly logging levels in config file

MSINT-2237	Support WebLogic Server 14.1.1
MSINT-2546	Native Delimited Separated Values datastore (CSV) that supports geometry
MSINT-2695	Ability to set and retrieve session parameters via REST API
MSINT-2687	New session parameter value in Rules and Actions to access session parameters
MSINT-2690	Ability to generate a Placekey for a location or address
MSINT-2703	Backup/Restore improvement and new repository synchronisation tool
MSINT-2829	Make 1Integrate docker images available (contact customer support)
MSINT-2877	Update admin page to new style
MSINT-2910	Full repository backup/restore from admin page
MSINT-2932	Update grid statistics endpoint to include hostname details

2.8.1	
MSINT-2046	Introduce a system warning when within 30 days of licence expiration date
MSINT-2416	Allow users to choose between XYZ or XYM for XYZM data via SQL Server Data Store
MSINT-2434	Configure Wildfly security settings via settings.properties
MSINT-2476	New API call to get the number of engines, their availability and the queued jobs
MSINT-2569	Show which tasks were disabled in the Cache Viewer session tasks tab.
MSINT-2585	WFS data store: New OGC Web Feature Service data store supporting GeoJSON and OAuth.
MSINT-2666	Clone an entity via REST API
MSINT-2623	Remove PostGIS FME datastore (PostGIS support is now only via inbuilt PostGIS data store)
MSINT-2622	Support PostgreSQL 12.4 and PostGIS 12.4
MSINT-2639	Java version Support: Oracle Java 8 update 281 with WebLogic
MSINT-2653	Java version Support: AdoptOpenJDK 8 update 282 with included WildFly

2.8.0	
MSINT-453	New "Singleton" system class (sys:singleton) for performing action or rule logic exactly once
MSINT-1400	Support for Microsoft Visual C++ 2019 64 bit Redistributable
MSINT-1570	Support for Oracle databases that have no locator or spatial module installed
MSINT-2103	Ability to temporarily disable a task within a session
MSINT-2132	Support for MS SQL Server 2019
MSINT-2200	Support for deploying 1Integrate as a service on WildFly, on Windows only. See installation guide for details.
MSINT-2262	New "session" scoped temporary value, and renaming of existing "local" and "global" scope to "object" "task" respectively within the UI (API functionality is unchanged)
MSINT-2454	Esri Feature Service Data Store: Authentication via Portal
MSINT-2481, MSINT-1569	Scripts and documentation for installing 1Integrate as a service on WildFly, on Windows.
MSINT-2512	Ability to override the session extent for an open data task, to open all data.
MSINT-2520	Latest Java patch support
MSINT-2529	Esri Feature Service Datastore: Related Non Spatial Objects
-	Support for Oracle Enterprise Linux 7.8

2.4 Bugs Fixed in previous releases

2.10.0	
MSINT-3040	Unable to read WFS with data format defined using lower case geojson.
MSINT-1269	00022194 GDAL Data Store type doesn't offer 'Fix ring direction and inclusion errors' option.
MSINT-2497	Uploading a file through the REST API does not update the upload credential
MSINT-2886	Shortcuts in restored backups not detecting clashing existing element/name
MSINT-2969	DSV Datastore reads invalid geometries regardless of Allow Invalid flag
MSINT-2981	REST API and UI backup doesn't include all parameters
MSINT-2982	DSV WKT polygon ring direction not being handled correctly.
MSINT-2991	New Repo Sync Tool returns blank error message when synching from an old-style filesystem structure.
MSINT-3007	00036010: Regression: gdal_datetime parsing issue in FGDB date types from 1Int 2.8.1 "Unparseable date: "2018/09/07 00:00:0"
MSINT-3026	Unable to backup shortcuts
MSINT-2960	NullPointerException when writing to ArcGIS feature layer that doesn't exist
MSINT-3006	Unable to clone datastore with multiple file uploads

2.9.0	
MSINT-2902	SQL Server Integrated Security has a missing a file in v2.8.1
MSINT-2942	ArcGIS Feature Service data store writes null for multipart polygons read in from other formats.
MSINT-2802	Datastore parameters containing XML special characters cause session run failures
MSINT-2920	ArcGIS/AGOL Feature Service Data store not recognising some layers as spatial
MSINT-2691	Recycle Bin records Radius Studio as the user who created the folder
MSINT-2900	WFS datastore should attempt retry for schema fetch calls not just data fetch

2.8.1	
MSINT-2799	Unable to run a session with special characters in datastore password
MSINT-1907	copy_attributes builtin not locating class attributes when specifying attributes to exclude
MSINT-2119	The error details text on the Licence validation error page is almost invisible
MSINT-2329	Actions or rules referencing All Classes fails with UNKNOWN CLASS if run before any Open Data tasks
MSINT-2350	00032528: Unable to backup Session with no classes selected in open data task
MSINT-2385	REST API doesn't return correct state for a partitioned session
MSINT-2470	Don't show the FME datastores if the environment's FME build number is below the minimum supported version
MSINT-2525	Do not load 1Spatial news on the landing page
MSINT-2557	CAD datastore unable to change attribute type mapping
MSINT-2567	Opening non-spatial File Geodatabase data using the inbuilt GDAL Data Store in a session with an extent restriction causes the engine to crash.
MSINT-2574	1Integrate ignores the temp.directory setting
MSINT-2607	Copying a file based datastore does not copy the uploaded file
MSINT-2613	1Integrate REST API doesn't support CORS (cross-origin resource sharing) requests
MSINT-2705	Installation guide update to clarify SQL Server repository user creation

MSINT-2709	Large files between 500Mb and 1Gb fail upload to a data store when using a PostgreSQL repository.
MSINT-2725	ArcGIS Feature Service Data Store does not handle incorrect polygon ring direction
MSINT-2730	1Integrate status is incorrectly set to warning even with supported SQL server version
MSINT-2731	Datastore input mapping attribute indexes are unset on upgrade to 1Integrate v2.8.0 (workaround if already upgraded is to download and re-upload the data store through the UI or API).
MSINT-2735	REST API - Data store GET request is not returning the correct value for whether input mapping attributes are set to "report"
MSINT-2739	ArcGIS Server Service that does not expose layer types can't be spatially filtered
2.8.0	
MSINT-1912	Error message "unexpected geometry type: 12" when dealing with multisurface feature
MSINT-2328	Accented characters corrupted in xml backups
MSINT-2401	Cache viewer not always finding the feature for a non-conformance, when stepping through non-conformance report
MSINT-2437	Unable to dismiss large error pop-ups
MSINT-2515	The order object reports are retrieved from the database is not always the same order with which they were inserted

2.5 Known Issues and Unresolved Bugs

ID	Description
MSINT-3055	split_geometry built-in function does not support 2d geometry inputs (workaround is to use change_dimension or make_3d on the inputs and output)
MSINT-3051	DSV data store can throw NullPointerException when saving an input mapping with unexpected attribute types.
MSINT-2628	Esri ArcGIS Server feature service returns GEOJSON in WGS84 regardless of data or 1Integrate SRS
MSINT-2927	Microsoft SQL Server Datastore with a where clause does not read all returned data, workaround is to set the 'command timeout' parameter to 0 (unlimited) or a large number of seconds
MSINT-2970	DSV Datastore loads WKT Heighted features as 2D
MSINT-2912	Open data task showing classes not selected in input mappings
MSINT-2911	Open data task link missing when workspace defined
MSINT-2884	SQL Server Datastore when applying Z value to an existing datastore need to delete all mappings to apply the change
MSINT-2820	Data store input mapping re-applies selected text after switching datastores
MSINT-2779	REST API returns EntityRef member in RulesTask
MSINT-1465	Using FME 2018 via Data Stores on Linux when running on WebLogic can cause crashes.
MSINT-1605	'javax.naming.NameNotFoundException: Name "PersistenceUnit"' errors occasionally seen in the logs when running on Linux. This can be avoided by using a different random number generator or by adding a start server argument to 1Integrate by adding the following startup parameter on the application server: -Djava.security.egd=file:/dev/./urandom
MSINT-859	Uploading very large files (several Gb) to a data store may result in timeout errors. To increase the timeouts:

	On Wildlfy: go to ..\wildfly-23.0.2.Final\standalone\configuration and edit stanadalone.xml line 381 to increase from 300s (5 mins) to a larger value e.g. 1200s (20 mins): <subsystem xmlns="urn:jboss:domain:transactions:2.0"> … <coordinator-environment default-timeout="**300**"/> **On WebLogic** Increase TransactionTimeout property in Configuration tab of DataStoreController in the WebLogic admin server
	FGDB data cannot be downloaded from a data store containing non-standard characters in its name, or with a name longer than 145 characters.
MSINT-688	The Session Description fails on CheckRules and ApplyAction tasks containing a mixture of folders and single entities.
	The Microsoft SQL Server Spatial data store does not support reading or writing tables that contain multiple geometry columns.
	1Integrate allows spatial columns to contain a mixture of geometry types – many formats force a geometry column to contain only points, lines or areas. When such data is written to Shapefile format via FME, there will be a shapefile for each geometry type whose name will have the geometry type appended, e.g. "Road_line."
	It is not possible to create any geometry properties when importing data through the FME Comma Separated Values data store, use the as-standard DSV data store instead
	Unzipping the main 1Integrate zip file can fail using the built-in Windows "Extract All" facility due to a "Path too long error". Use a third party zip program such as 7-Zip or extract the release to the top level directory of a drive and move it afterwards to the desired location.
RST-4779	When an object fails to import through FME, the co-ordinates of the MBR of the feature are reported when known. However, the values for maxX and minY are transposed.
RST-4781	1Integrate may fail to load the FME Objects DLL, with an error message similar to: java.lang.UnsatisfiedLinkError: C:\Program Files (x86)\FME_2013_b13450\fmeobj_java.dll: The specified procedure could not be found and /or java.lang.NoClassDefFoundError: Could not initialize class COM.safe.fmeobjects.FMEObject The most common cause of the error is a problem with the configuration of the PATH environment variable. If FME is installed on Windows to a location where the path to the file includes spaces – for example C:\Program Files (x86)\FME, it must appear in the PATH environment variable in the shortened 8.3 name, e.g. C:\Progra~2\FME. It may be necessary for the FME entry to be the first entry in PATH to avoid an error similar to the one described above. On Linux, a similar error may be reported if the <FME_HOME>/fmecore directory has not been added to LD_LIBRARY_PATH as described in the Installation Guide.
	When loading MapInfo TAB data via FME on Linux environments, the Data Store does not automatically identify the Coordinate Reference System (CRS). Users can work around this by specifying the CRS in the 'Coordinate Reference System' field on the 'Input Details' tab of the Data Store. The string required starts 'FME=' followed by the required FME CRS. For example if WGS84 is required, enter the following: FME=LL-WGS84 Or FME=EPSG:4326

MSINT-155	The Gothic native library could not be initialised (Linux only) – often caused by the ICU libraries needing to be relinked after a machine reboot
MSINT-381	Sessions will not run if a networked drive is set in the PATH Environment Variable on an Server that is offline

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3 Installation

Follow the instructions in the Installation Guide for your application server.

1Integrate will automatically upgrade the repository from the existing release on initial startup. Ensure that all running and paused sessions are stopped before upgrading, and we recommend creating a backup of the repository database first, as that repository may not be usable by older versions of 1Integrate once it has been upgraded.

Follow the installation guide to install the new release in alongside the existing version and use the same database connection details for the repository. For WildFly installations the easiest way to configure is usually to copy the files from the SETTINGS folder from the old installation folder to the new installation folder, however **check the release notes as some versions (e.g. 2.8.0 or 2.8.1) contain changes to the structure of the settings file and so cannot be replaced by the older settings file.**

When the new version is started it will automatically upgrade the repository if necessary.

Note that for some upgrades (these should be noted in the release notes) this can be a one-way upgrade, once you have started the new version then the repository is upgraded and can no longer be used by the older version, or easily downgraded. For this reason, it is recommended that the repository schema is backed up first.

When performing an upgrade of 1Integrate on WebLogic (an uninstallation of an old version followed by the installation of a newer version) it is important to uninstall the existing version of 1Integrate using the installer that was packaged with that release. Using a newer, incompatible version of the installer will result in errors.

For example, if you are replacing 1Integrate v2.6.2 with 1Integrate v2.7.1, your steps will be:

1. Uninstall 1Integrate v2.6.2 with the installer packaged in the v2.6.2 release
2. Install 1Integrate v2.7.1 with the installer packaged in the v2.7.1 release

3.1 Special notes for upgrading to 1Integrate 2.8.0 or 2.8.1 on WildFly

From **2.8.0** the **start-SessionQueue.cmd** and **start-SessionQueue.sh** scripts have been renamed to **start-Engine.cmd** and **start-Engine.sh**.

From **2.8.0** some properties in the **settings.properties** file have been renamed (e.g. engine.http.port) and from **2.8.1** some new properties were added, so you cannot copy across an old **settings.properties** file from a previous version of 1Integrate. Instead open the old and new settings.properties files and copy across the appropriate settings.

From **2.8.1**, Configuration of HTTPS or LDAP is now easier and done from the settings.properties file. Follow the updated Security Settings topic in the 1Integrate online documentation.

3.2 NIC/Network Adaptor Configurations

For servers with multiple network adaptors, you must specify which adaptor/network to use for grid communication between the components. The Grid discovery used to find session queues by default uses the first found non-loopback address, for example a machine with Ethernet adaptors 'eth0' & 'eth1' and Local Loopback 'lo' will likely use 'eth0'.

For Servers with multiple Networked Adaptors

The following properties must be set to specify the adaptor to use:

- **grid.local.address** - specifies the IP address of the network adaptor used for grid communication.
- **grid.communication.tcp.port** and **grid.discovery.tcp.port** - allows environments to specify known ports (for example, when using a firewall).

The communication port must be a minimum of 100 greater than the discovery port, in order to avoid conflict.

If there is only one adaptor and you do not need to modify the adaptor behaviour, then the properties can be omitted to provide the default behaviour.

For WildFly, the following properties must be included in the **settings.properties** file:

```
grid.local.address=[NIC Address]
grid.discovery.tcp.port=[default: 51300]
grid.communication.tcp.port=[default: 51401]
```

For WebLogic, include the following in the Server Start Arguments (within the WebLogic Server Administration Console):

```
-Dgrid.local.address=[NIC Address]
-Dgrid.discovery.tcp.port=[default: 51300]
-Dgrid.communication.tcp.port=[default: 51401]
```

Standalone off-network environment

For non-networked standalone environments where there is not an active NIC/Network Adaptor, the loopback localhost can be used:

```
(-D)grid.local.address=127.0.0.1
```

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4   1Spatial Product Assistance

If assistance is required while deploying this release, contact either your distributor or 1Spatial Support.

To contact 1Spatial Support, please visit our website: http://www.1spatial.com/services/support

Maximise the value of this release with 1Spatial foundation and advanced training courses. For training enquiries please contact your Account Manager or email training@1spatial.com

5 Third Party Software Libraries

1Integrate uses (and often contributes fixes and enhancements to) open-source or redistributable libraries, listed below. 1Spatial respects the licensing and copyright terms of these open-source libraries and hence does not claim copyright over these libraries and ensures that the source code of the libraries is available to users.

5.1 Open-Source Libraries

Boost

Boost Software License - Version 1.0 - August 17th, 2003

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B. Gladman, W. Hart, J. Moxham, et al. MPIR: Multiple Precision Integers and Rationals, 2015. version 2.7.0, A fork of the GNU MP package (T. Granlund et al.)

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