



## Release Notes

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## 1Validate

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Version 1.6.0

16 March 2018

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# Contents

1	Introduction .....	3
1.1	Scope .....	3
1.2	Purpose of Release.....	3
1.3	System Requirements.....	3
1.3.1	Operating system .....	3
1.3.2	Hardware.....	3
1.3.3	3rd Party Software.....	3
2	Release details .....	5
2.1	Notable differences since 1Validate 1.5.....	5
2.2	Notable differences since 1Validate 1.4.....	5
2.3	Notable differences since 1Validate 1.3.....	5
2.4	Notable differences since 1Validate 1.2.....	5
2.5	Notable differences since 1Validate 1.1.....	5
2.6	Notable differences since 1Validate 1.0.....	6
2.6.1	Session cache garbage collection.....	6
2.7	New Functionality in this release.....	6
2.8	Bugs Fixed in this release .....	8
2.9	Known Issues and Unresolved Bugs .....	12
2.10	Upgrading from a previous release .....	12
2.10.1	Repository .....	12
2.10.2	Upgrading from a version older than 1.2.3.....	12
3	Providing Feedback .....	14
4	Oracle JDBC Driver Distribution License Terms .....	15

# 1 Introduction

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## 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

This is a standard maintenance release

## 1.3 System Requirements

### 1.3.1 Operating system

This version of 1Validate is supported on the following operating systems:

- Microsoft Windows Server 2012
- Oracle Linux 6.7

### 1.3.2 Hardware

Minimum hardware configuration:

- Minimum of 4Gb RAM
- Minimum of 2 CPU cores
- Hardware is dependent on required response times and throughput. Heavily used multi-user systems will need higher server specifications, please contact 1Spatial support (see below) for guidance on server configurations.

### 1.3.3 3rd Party Software

#### 1.3.3.1 Database Platforms

A database is required to act as the **1Validate rules repository**. 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 11g R2 (Any Edition)	None
Oracle Database 12c R1 (Any Edition)	None
Microsoft SQL Server 2008 R2	As data source only, requires FME desktop (see below).
PostgreSQL 9.5	As data source only, requires FME desktop (see below).

### 1.3.3.2 Optional FME desktop integration:

Component	Edition	Reason
FME Desktop 2015 SP1 (64-bit)	Professional Edition	Read or write CSV, Bentley Microstation DGN, PostGIS Write Esri File Geodatabase
FME Desktop 2015 SP1 (64-bit)	Esri Edition	Formats listed above plus read or write Esri Enterprise Geodatabase
FME Desktop 2015 SP1 (64-bit)	Database Edition	Formats listed above plus write to Microsoft SQL Server

### 1.3.3.3 Application Server

Application Server	Notes
Oracle WebLogic Server 12.1.3	Standard edition or Enterprise edition (Enterprise Edition only needed if clustering multiple WebLogic servers for resilience and scalability). Recommend with patch 17754607 applied, which upgrades to JPA 2.1.

### 1.3.3.4 Browser Support

This product works with most of the recent versions of Chrome, Firefox and Internet Explorer. The specific versions that have been tested for this release are:

Browser
Microsoft Internet Explorer 11
Google Chrome 64
Mozilla Firefox 47.0.2

## 2 Release details

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The following sections provide a description of this release of 1Validate.

### 2.1 Notable differences since 1Validate 1.5

- Support for reading DWG/DXF data when an FME Desktop license is available
- New built-in functions to get inner rings, create a point, lookup metadata store keys or values, convert WKT to geometry and get the extents of the session's spatial metadata.
- Hyperlinks from session to data store and from rules to templates
- Improved UI for uploading backup files
- Tooltips on built-in function list

### 2.2 Notable differences since 1Validate 1.4

- Read Esri Shapefile and Mapinfo Tab file without the need for FME desktop integration

### 2.3 Notable differences since 1Validate 1.3

- New builtin to calculate Jaro-Winkler similarity between strings
- Note a fix to the Sum and Product value calculation which used to ignore anything beyond second parameter.
- Note a fix to the Boundary builtin which now works for mixed-type multi-part geometries, which used to return null in that case.
- Note a fix to the Soundex builtin which returns correct results in all cases according to the published algorithms
- Simplified release package structure
- Cache viewer: Many improvements including highlighting the hotspot location of non-conformances

### 2.4 Notable differences since 1Validate 1.2

- Support reading Esri File Geodatabase formats (requires FME).

### 2.5 Notable differences since 1Validate 1.1

There are no known changes to the product API in this release. The main changes to existing behaviour are described in the New Functionality section below and are primarily changes to the user interface for:

- Running partitioned Sessions using 'Multiple predefined regions'
- The session cache viewer
- Error and Timing summaries for sessions
- A session description page to document the contents of a session

## 2.6 Notable differences since 1Validate 1.0

### 2.6.1 Session cache garbage collection

Stopping any paused session or deleting any session will now happen rapidly (for deleting via the UI, this applies to deleting from the recyclebin). The session data cache for these sessions will be cleaned up either when any session is run again, or else within 15 minutes, whichever comes first. Sessions which are stopped while running or run to completion behave as before and have their cache deleted immediately on stopping. The result of this change is that it is now possible to completely delete sessions without stopping them and stopping paused sessions is much faster

## 2.7 New Functionality in this release

1.6.0	
MSINT-1364	Allow cache viewer map panels to be resized by dragging
MSINT-1322	Add rewind hyperlink to paused tasks
MSINT-1300	Schema context selection is remembered between sessions
MSINT-1282	New built-in function to get inner rings of a polygon
MSINT-486	Read DWG files (requires FME Desktop license)
MSINT-1177	New built-in functions to lookup values or keys based on Metadata Store Named constants
MSINT-1187	New built-in function getJobExtentBuilt-in to get the geometry of the session's spatial metadata extents
MSINT-1188	New built-in function ParseWellKnownText to create a geometry from a WKT string
MSINT-1070	New built-in function to create a point from x, y and optionally z values
MSINT-938	Templates used within a rule show the location of the template and a hyperlink to it
MSINT-1047	Hyperlinks from Data store task on session page, back to the Data store page
MSINT-1073	Present user with a friendlier message when running a session in which the data does not match the rules
MSINT-1089	Display certain error messages in a more user friendly popup box without a stack trace
MSINT-801	XML backup upload UI allows drag and drop and provides better feedback
MSINT-1175	Add built-in function description as tooltip when browsing list of built-in functions
MSINT-1189	In Open Data task, Grey out classes where there were no features read
1.5.0	
MSVALIDATE-605	<p>Allow custom server start parameters to be defined for use by custom builtins and that won't be lost on re-installation. The format for this is</p> <pre>validate_par_user_defined=-D&lt;param name&gt;=&lt;param value&gt;</pre> <p>e.g.</p> <pre>validate_par_user_defined=-D1Spatial.classFormFuncComboFile=C\:/1Spatial/csv/class_form_func_combinations.csv</pre>

MSVALIDATE-608	Read Esri Shapefile and Mapinfo Tab file without the need for FME desktop
<b>1.4.1</b>	
MSINT-508	Read Esri Enterprise geodatabase (Requires FME Desktop)
MSINT-871	New builtin to calculate Jaro-Winkler similarity between strings
MSINT-621	Simplify the release package structure – ensure the latest installer (bundled with the release) is used
MSINT-720	More precise and detailed session timing metrics
MSINT-787	Include more task information on "Timing Statistics" and "View Map" pages
MSINT-619	Cache viewer: Highlight the hotspot location of non-conformances
MSINT-597	Added buttons for timing page navigation
<b>1.3.2</b>	
MSINT-583	New builtins: vertices (returns vertices of a geometry as a multi-point) and segments (returns geometry segments as a multi-line)
<b>1.3.1</b>	
MSINT-728	Sessions page now gives text feedback of running status
MSINT-700	Read/Write Esri File Geodatabase (FGDB) format (via FME)
<b>1.2.1</b>	
MSINT-587	New Cache Viewer available for any task: Can step through state of each task, improved UI for seeing non-conformances and selecting features
MSINT-300	Configurable styling of cache viewer
MSINT-320	Improve data partitioning via 'Several Predefined Regions'. By adding map overview and statistics page and seeing partition sub-sessions running in sub-folder
MSINT-636	Session description button to document contents of session including details of all rules and actions run
MSINT-582	New style for online help including improved search and structure and ability to use offline
MSINT-564	Shifting: Each constraint checked immediately so invalid constraints can be identified
MSINT-500	Shifting: Multi-part geometries can now be shifted
MSINT-596	New timings summary page for session
MSINT-587	New errors summary page for session
<b>1.1.111</b>	
MSINT-629	Switch to garbage collection of the session data cache. This means that paused sessions can be deleted via the API or UI immediately, without having to stop each one
<b>1.1.110</b>	
MSVALIDATE-556	Remove the requirement to use multicast for node discovery - uses JDBC instead
MSVALIDATE-515	Remove the need to install a Gothic DAM
MSINT-441	When opening Shapefile data, treat empty strings as NULL
<b>1.1.107</b>	
MSCOMMON-540	Support for Oracle Linux 6.7
<b>1.1.104</b>	
MSVALIDATE-526	Remove the need to refresh contextual data store mappings in 1Validate after restoring data store backup
MSVALIDATE-509	Enhance hotspots to handle more types of rule
MSCOMMON-444	Improve resilience by removing the dependency on having a constantly running

	AdminServer
MSINT-169	Support Java 1.7 update 80
<b>1.1</b>	
New platform support	<ul style="list-style-type: none"> <li>- Oracle Weblogic 12.1.3</li> <li>- Oracle Database 12c Release 1</li> <li>- Windows Server 2012</li> <li>- 64 bit Java 1.7.0_76</li> </ul>

## 2.8 Bugs Fixed in this release

<b>1.6.0</b>	
MSVALIDATE-609	Contextual datastore should pull in referenced features AND have them loaded as a primary table too without creating duplicates
MSINT-1370	Upgrading repository from older versions of 1Validate fails
MSINT-1232	Cache Viewer map legend style doesn't handle classes with spaces
MSINT-1346	Tolerance for sessions loading built-in (GDAL) non-Oracle data stores is much too small, and changes when resuming a paused session
MSINT-1313	Rules author: Setting a value node to be 'built-in function' should put focus on the function name drop down
MSINT-1330	Cache Viewer location changes when stepping tasks
MSINT-1329	Aggregate value class and name fields should be above description
MSINT-1304	Change description for 'loop over collection' to mention geometry
MSINT-1101	Dragging statement fails when all others below are collapsed
MSINT-753	Displaying polygons with holes in the cache viewer causes error to be written to the log file
ADVKARTO-3502	Support larger numbers in the coordinates (greater than two million) in shifting built-ins
MSINT-756	Cache Viewer doesn't support class names starting with numbers
MSINT-1228	Open data task for DWG data opens all classes, not the classes specified by the task
MSINT-1250	CSV Data Store only loads data from files called CSV.csv
MSINT-1251	CSV Data Store errors when encountering empty fields
MSINT-1280	Deadlock when deleting sessions in parallel
MSINT-1289	Built-in function selector doesn't show the name of missing built-ins
MSINT-1312	Typo in help text for difference_between_bearings built-in function
MSINT-1325	Grid communication error: "Failed to initialize NIO selector" due to garbage collector not releasing files
AIDUAPS-7345	Remove_spikes not correctly removing all spikes from line geometries
MSINT-1227	Cache viewer cannot zoom in or out when accessing features from the 'View Results' page in some cases
MSINT-1237	Cache viewer reports show wrong feature for features without primary keys
MSINT-1261	Cache viewer fails to highlight features with special characters in the name
MSINT-1255	Some geometry self-intersections not detected
MSINT-1236	Cache viewer select tool limited to showing attributes only for first 10 features
MSINT-1193	The data store format type drop-list is displaying a wrong name for MapInfo Tab (FME)



MSINT-727	Busy spinner background flashes grey once per spin
MSINT-883	When adding rules to a session, it should expand to the folder of the existing rule
MSINT-1136	Cache viewer improvements to error handling of map requests
MSINT-1224	Re-name "Topological" group of built-in functions to "Topology"
USCEN-1114	Running multiple sessions in parallel can cause error: "Unhandled Exception... DAMDBATTACHED"
USCEN-1118	Running sessions can cause error: "ORA-00001: unique constraint (*.UNQ_TASK_RESULT_0) violated"
USCEN-1119	Running sessions can cause error: "Unhandled Exception... MSG: Space Storage not in operation"
<b>1.4.1</b>	
MSVALIDATE-603	Hotspot calculation wrong for overlaps – should not consider intersection of boundaries otherwise hotspots incorrectly appear along shared boundary
USCEN-1042	Install error on service startup on some environments "[Error]...Server start failed:"
USCEN-1032	Soundex builtin now produces correct results in all cases according to the published algorithm.
MSINT-1006	00021222 Job continues to show as running when reaching java.lang.OutOfMemoryError: Java heap space
MSINT-1007	Cache Viewer: Refresh Map action is needed after Regenerate All or Save button (style configuration page)
MSINT-1009	View Results Page: The 'View' link of a non-conformance is always pointing to the first item of the page
GOTH-25811	Boundary builtin now succeeds for mixed type multi-part geometries instead of returning null
MSINT-980	Sum and Product values ignore anything beyond second parameter
MSINT-979	Cache viewer style configuration – make button visible even with no style
MSINT-941	Timing Page - Started column is not being filled with the value for partition items
MSINT-909	Data Store formats should be listed alphabetically in the drop-down
MSINT-902	Multi part line geometry not being displayed in the cache viewer
MSINT-847	Closed line features not being displayed in the cache viewer
MSINT-880	Map view does not start zoomed to the actual data
MSINT-795	Cache viewer: Map doesn't zoom in far enough
MSINT-790	Cache viewer: Long layer names should not wrap to a new line in legend
MSINT-789	Cache viewer: Layer on/off selection is not always remembered
MSINT-694	Cache Viewer: The user needs to click twice to be redirect to the correct page/action
MSINT-596	Timing page - task ordering wrong
MSINT-811	Startup logs contain warning messages about missing argument descriptions in builtins
<b>1.3.2</b>	
MSVALIDATE-586	Hotspots location not correct for 'gaps' rule
MSINT-839	Hotspots not being created correctly for rules containing 'And' operator
MSINT-840	Hotspots not being created correctly for rules containing 'Or' operator
MSINT-841	Hotspots not being created where no shared vertex at T junction
MSINT-844	Session status text says 'running' when it is actually 'waiting' in some situations.
MSINT-896	User defined classes are not shown in the session cache viewer
MSINT-907	Cache viewer session restart makes map unresponsive or makes legend get out of synch

MSINT-850	Wildfly Install Guide: Error in documentation for SQL Server config XML files
MSINT-845	ForAll Predicate should return all the hotspots in validation report rather than only the first one
MSINT-806	ForAll Predicate does not create hotspots properly in validation report
MSINT-762	Garbage Collector throws errors in idle SessionQueue logs
<b>1.3.1</b>	
MSINT-783	Cannot read features with null values from Postgres
MSCOMMON-637	Special characters not supported when role mapping via WLST
MSVALIDATE-592	00020424 'ORA-20156: there are active sessions using the workspace' when running sessions with a datastore with JNDI connection
MSINT-726	Use Windows-style line endings for Wildfly startup batch files and uncomment JAVA_HOME to reduce installation steps
MSINT-741	Integrate user username and password is used by browsers to autocomplete datastore database connection credentials
MSINT-759	00020077 Installing on Postgres repository throws "Unable to create Radius Studio repository...com.onespatial.radius.studio.buildrepo.SchemaCreateException"
MSINT-760	00020077 Installation of Postgres repository always deploys to public schema, cannot control target schema.
MSINT-768	Running a session containing a datastore created in previous releases causes "Credentials Parameters missing parameter 'Reverse coordinate axis order (y,x)". Workaround is to save the datastore again.
MSINT-778	Do not override JAVA_HOME if already defined on the environment
<b>1.2.3</b>	
MSINT-734	Session starting from beginning when resumed after a task is paused due to an error
MSINT-747	Scheduled dataroot garbage collection fails with long running sessions
<b>1.2.2</b>	
MSINT-718	DataStore transaction timeout when reading datastore details, change from 120 seconds to 300 seconds. (any longer timeout indicates database connection problems).
MSINT-613	Error running a session with One Predefined Region but ticking the 'multiple partitions' option
MSINT-701	Sessions opened using 'One Predefined Region' load entire dataset instead of filtering to the region specified
<b>1.2.1</b>	
MSINT-120	Cache viewer labels disappear/attribution not visible
MSINT-175	00017828 "MSG: Seem to be lost during geometry combination" error while doing a geometric union
MSINT-176	00017845 "CLARGEOM" error while doing a geometric union
MSINT-214	Deselecting all legend items in the cache viewer causes invalid map tiles and multiple stacktraces
MSINT-441	Empty values are loaded as "" (empty strings) instead of null values when opening Shapefile datastores
MSINT-457	Cache viewer does not allow selection of lines and points.
MSINT-502 + MSINT-375	A session that kills a session queue gets load balanced and cascades to all session queues
MSINT-628	Resumed sessions are not assigned to idle session queue
MSINT-638	Admin interface still refers to goth_dam_host & database.id
MSINT-640	Shifting: error "Unable to triangulate - There are 2 constraints that were not applied due to conflicting requirements."
MSINT-647	Shifting: process freezes while registering constraint vectors within a predefined

	region.
MSINT-653	Hotspot reporting causes log errors for 2.5d geometries
MSINT-669	Filter rule UI dialogue broken
MSINT-698	Cache viewer fails to display feature classes with numbers at the start of the class name
RST-3874	Cache Viewer unable to display >200 classes
RST-3875	Cache viewer, no case sensitivity for classes different only in case
RST-4678	Right clicking on the cache viewer when measuring causes the values to disappear but the measure line still stays
RST-4805	Cache viewer issues with the map data not displaying, the attributes not displaying or a mixture of both
RST-4854	Odd multiple class selection popups in Cache viewer
RST-4882	14448 Cache viewer is too zoomed on a feature
<b>1.1.110</b>	
MSINT-490	Node Drag and drop is not set to the cursor position when editing rules and actions
MSINT-389	Stopped sessions do not clean up the cache
MSCOMMON-497	Remove redundant JDK selection from installer and warn users when installing into a domain having an unsupported Java version
MSCOMMON-556	Authentication Provider Setup is failing to connect to a SSL enabled Admin Server because is not possible to specify the protocol to t3s. (Note, the SSL trust certificate must be installed in JDK or WebLogic trust store before installing the authentication providers or the connection to WebLogic will hang indefinitely with no feedback)
<b>1.1.109</b>	
MSGEN-1396	Reading from an Oracle data store through JNDI fails on Wildfly with error: "Couldn't find the Oracle Spatial Connection object from the provided connection."
MSVALIDATE-563	Running a session containing a pause causes "setIgnoreExtent: NoSuchMethod" exception.
MSGEN-1396	Reading from an Oracle data store through JNDI fails on Wildfly with error: "Couldn't find the Oracle Spatial Connection object from the provided connection."
MSVALIDATE-563	Running a session containing a pause causes "setIgnoreExtent: NoSuchMethod" exception.
<b>1.1.107</b>	
MSVALIDATE-553	Authentication issue: CacheViewerPage is not being displayed
<b>1.1.106</b>	
MSVALIDATE-537	Validation Report is missing primary key information causing 1Edit to throw an Error when opening a Job
MSVALIDATE-548	Hotspotting locations for duplicate points, spikes and kickbacks not included in Validation report
<b>1.1.104</b>	
MSVALIDATE-523	1Validate is leaving behind non-conformance XML data in the database

## 2.9 Known Issues and Unresolved Bugs

ID	Description and work around
MSCOMMON-436	Installing clustered 1Validate using a configuration in a config.properties file that was saved using an older version of the installer (pre-1.1) causes the 'clustered' option to be set to off. Workaround is to re-check the 'clustered' setting in the installer UI.
MSVALIDATE-352	Load Policy for a ContextualDataStore should update a tables primary geometry as it is stated in the load policy.xml.
MS-VALIDATE	Under heavy load some concurrent sessions may fail to run
MSVALIDATE-451	1Validate doesn't remember the primary geometry selection when a data store is refreshed.
MSVALIDATE-458	Errors when a session is running can result in a corrupt version and hence session state does not match version list.

## 2.10 Upgrading from a previous release

### 2.10.1 Repository

This release will automatically upgrade the repository from the 1Validate 1.1 or higher release on initial startup.

Ensure that all running and paused sessions are stopped before upgrading, particularly any paused sessions that are partitioned using 'Multiple Predefined Regions'. It is recommended that you take a database backup of the repository before doing the upgrade.

Follow the installation guide to install the new release in place of the existing version, using the same database connection details for the repository. When the new version is started it will automatically upgrade the repository.

**Note that this is a one-way upgrade, once you have started the new version then the repository is upgraded and can no longer be used by an older 1Validate or downgraded. This is why it is recommended that you backup the repository first.**

### 2.10.2 Upgrading from a version older than 1.2.3

Due to an issue found where clearing a managed server's listen address causes null pointer exceptions in the security token verification code, there is a requirement to replace the current ms-common-weblogic-security-provider.jar.

If you are installing into a newly created WebLogic domain then ensure that you first use the latest installer to install the authentication providers.

If you want to upgrade an existing domain then there are two options:

#### Option 1

The simplest option is:

1. Shut down ALL servers in system including AdminServers for all domains
2. Delete old ms-common-weblogic-security-provider.jar from each domain's lib directory

3. Copy new ms-common-weblogic-security-provider.jar (provided by customer support) into each domain's lib directory in place of the old jar
4. Start AdminServer
5. Use 1SMS installer (a version from 1.1.118 to 1.1.132) to uninstall and then re-install the authentication providers

NOTE: This resets any 1SMS role mappings for your usernames, and so 1SMS roles will need to be re-assigned.

## **Option 2**

A more complicated approach but one which retains any existing role 1SMS role mappings is:

1. Shut down ALL servers in system including AdminServers for all domains
2. Delete old ms-common-weblogic-security-provider.jar from each domain's lib directory
3. Copy new ms-common-weblogic-security-provider.jar (provided by customer support) into each domain's lib directory in place of the old jar
4. Start AdminServer
5. Open WebLogic admin console
6. Navigate to Security Realms, myrealm, providers
7. Remove MSCustomDBMSAuthenticator & MSLDAPAuthenticator
8. Re-install authentication providers using the latest installer.

## 3 Providing Feedback

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

1Spatial Support is a dedicated support channel to users of the software to raise bugs and ask questions specific to 1SMS.

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

Maximise the value of this release with 1Spatial training courses. For training enquiries please contact your Account Manager or email: [training@1spatial.com](mailto:training@1spatial.com).

## 4 Oracle JDBC Driver Distribution License Terms

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This 1Spatial product when deployed on Wildfly includes Oracle JDBC drivers which can fall within these license terms:

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