RELEASE NOTES – SENTINEL 2018.00.00

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System Requirements

Windows Server 2016
Windows 10 x86/x64
Windows Server 2012 R2
Windows Server 2012
Windows 8.1 x86/x64
Windows 8 x86/x64
Windows 7 x86/x64 SP1
Windows Server 2008 R2 SP1
Windows Server 2008 x86/x64 SP2
Windows Vista x86/x64 SP2

Installation requires Administrator's privileges.
Before updating/upgrading a SENTINEL license you must quit the notification icon and stop the service.

Warnings:
The System must not be configured with automatic update of Windows printer drivers, as this entails the restart of the Windows spooler service. During that time, print jobs cannot be processed by the sentinels and an error is logged.

Virtual Environment:
This product has been tested on the following Virtual Environment platforms:

- VMWare vCenter Server 5.1.0
- Citrix XenServer 6.5 SP1
- Microsoft Hyper-V Server 2012 R2
- Microsoft Hyper-V Server 2016
- Oracle VM Virtual Box 5.2.0
- VMWare Workstation 14

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New Features & Enhancements

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- Implemented an ability to set the priority for each sentinel:
  0 - Real Time: Sentinel Service will process data in the separate thread and won't be blocked by other sentinels
  1 - High: Sentinel Service will process high priority sentinels at first.
  2 - Medium: Sentinel Service will process medium priority sentinels after high priority sentinels
  3 - Low: Sentinel Service will process low priority sentinels after medium priority sentinels
- **<OwnPrintEngine>** tag was removed. After upgrade to SENTINEL 2018.00.00 in case of enabled the Real Time processing priority will be set.
- Added **<NonStopDelay>** option for File Capture plugin. Option can be defined in TkxInput.xml configuration file, this setting is specific for each sentinel. When NonStop processing mode activated the sentinel will wait for a time defined in **<NonStopDelay>**(milliseconds) before next processing.
  The minimum(default) value: 0, the feature is disabled.
  The maximum value: 14400000 (4 hours).
- For Database Watch and Print Capture plugin the **<MaxConcurrencyLevel>** option was implemented. It defines the maximum number of threads that SENTINEL will use for the parsing.
  The minimum(default) value: 5
  The maximum value: 150
  If **<MaxConcurrencyLevel>** value less than the maximum number of print engines, the value would be raised automatically.
  To define the new value just add **<MaxConcurrencyLevel>** into general section for appropriate plugin.
- Implemented the following internal control variables that would be set by SENTINEL itself:
  - @**GET_SENTINEL** - contains sentinel name
  - @**GET_GROUP** - contains sentinel group
  - @**GET_MAP** - contains filename without path and without extension
  - @**GET_INPUT_PATH** - contains full path to the File Capture plugin input folder
  - @**GET_INPUT_SPOOL** - contains printer spool name selected in Print Capture plugin
  These control variable could be used in Database process plugin. Values for this control variables that defined in the work file will be ignored.

- Implemented ability do define multiple ports for WebServer plugin. Each sentinel can have the own **Port** value and watch the defined port.
- Added the ability to define specific default labels folder for each sentinel in Sentinel Manager. The LABELARCHIVE directories could be defined as well.
- The **<jobErrors>** option is implemented in the Sentinel Manager. It is possible for the users to enable this option and specify the location of job errors log file.
- Implemented ability to select the tray (paper source) for the printer. Control variable @**PRINTER_TRAY** is implemented. The value must be real tray name (e.g. "Cassette 1", "Manual Feed", "Auto"). This way the custom tray can be specified in the job. The @**PRINTER_TRAY** control variable is ignored if the printer is set in @PRINTER_NAME by alias where tray is specified.
  The **'Tray...'** button is added to CODESOFT Printing Plug-in, Printers tab (right below 'Rename' button). It will call dialog where the user is able to see the list of trays and set aliases. The **'Tray...'** button is enabled if the selected printer has trays. More than one alias can be set and alias has to be unique.
- Added deactivation count for the license to the About dilog.
- Added @**PAGE_ORIENTATION** control variable that defines portrait or landscape page orientation.
  1 - Portrait
  0 - Landscape
- "Label Printing Module" menu item from the Sentinel Launcher is disabled if the current session (user name) is different from the one set for the Label Print Manager service.
- Label Printing Module now shows the data sources and the objects.
- Added Spanish localization
- Updated UI style for the Sentinel Manager
- @**LABEL_ROTATION** control variable allows to set the rotation for the label at the time of print. Available values: 0, 90, 180, or 270 degrees. In case of incorrect value, the rotation would be taken from the settings.
- **ORDER BY** feature allows processing records by order. When the "ORDER BY" checkbox is set, SENTINEL will extend its "Update" query with ORDER BY, a space, and the text as exactly typed in the ORDER BY textbox. The user interface will display a checkbox and a textbox in the Detection Method group, only when the method is "Status".

SENTINEL 2016.00.00

- Codesoft Printing plugin timeout settings:
  <OperationTimeout> setting sets timeout(in minutes) for all operations with Codesoft via ActiveX except printing. The default value is 1.

<PrintingTimeout> setting sets timeout(in minutes) for printing. The default value is 240.
Sentinel will check the print engine state each minute, once the timeout is exceeded then Sentinel will shut down the print engine if it is not responding.
If the print engine stopped responding before printing started then sentinel will try to print the job with a new print engine, otherwise the job will be marked as error.
The number of tries can be defined by the **<RetryPrint>** setting (default value is 1 retry).
These settings can be defined in **TkxCS.xml <General>** section. They are global settings for all sentinels.

- Extend @LAB_VARS control variable. Add 'DisplayInForm' value to variables' description in the output file.
- A new setting is available for the Print Capture plug-in. This is a time in milliseconds to tell SENTINEL at which interval to look for pending jobs.
  The default value is 250ms and it is global: it affects all sentinels.

  To change the default value, edit the TkxSpool.xml file and modify the value below the node **<Interval>** .
  The node should appear only once under the root node <TKXSpool> as:

  <?xml version="1.0" encoding="UTF-16"?>
  <TKXSpool xml:space="preserve">
  ...
  <Interval>250</Interval>
  ...
  <Sentinel name="xxx">
  <Printer>yyy</Printer>
  </Sentinel>
  ...
  </TKXSpool>
  Then recycle the SENTINEL service to take the new settings into effect.

  The minimum allowed value is 50ms.
  Reduce the value to have a faster responding system. Increase the value to reduce the stress on the CPU and lower the power consumption.

SENTINEL 2015.01.00

- The **Load the printer saved in the label** and **Load the printer settings saved in the label** options are unchecked by default now.
- **<Timeout>** setting: it is now possible to define the maximum time in seconds that the WebServer waits for the processing to complete before it returns. In previous version this value was 20 seconds. The default value is 140 if omitted or outside of the range 20~3600. This setting can be defined in TkxWebServer.xml

for all sentinels. Example:
<TKXWebServer>
<General>
<Port>8080</Port>
<Address>172.21.161.166</Address>
<Timeout>140</Timeout>
</General>
</TKXWebServer>

- The XML job file processing will be failed in case of incorrect XML format of job file or incorrect XPath format in map file. Log file will contain details on XML or XPath error.
- The **Open merge database** option is now available in Sentinel Manager UI.
- A new control variable **@START_LABEL** allows to specify the index number of the label to start printing from on the first page.
- **<OwnPrintEngine>** setting: if the option is enabled the sentinel will use its own dedicated instance of the print engine for printing. This setting can be defined in TkxCS.xml for any sentinel separately. Note that this will create an additional instance of the print engine.

SENTINEL 2015.00.00

- SENTINEL has been ported to Windows 10
- **<RetryPrint>** setting: In case of failed label print, CS Printing plugin will wait 500ms then try to print again. Number of retries is set by RetryPrint value, which is a global setting for all sentinels. Default is 1.

SENTINEL 2014.01.00

- "Sentinel Controller" functionality moved to "Sentinel Manager".
- New redesigned "Web Manager".
- Stable under high work load with large number of printers and sentinels.
- New setting option for File capture plugin: **<joblistupdatelimit>**. This value sets the threshold below which SENTINEL refreshes the list of pending jobs. This setting has no effect for sentinels that don't have a lot of pending jobs.
- Now the user can activate/deactivate the tracing without having to stop/restart Label Print Service

SENTINEL 2014.00.00

- The PlugIn, "Database Watch", has been extended to allow working with a Polyzone field in a database. With this feature it is now possible in one column, to specify the variable names and their values that will be used for the data processing. For example a column of the Table could be used to specify the following data for Label Printing : VARNAME0 = VARVALUE0 | VARNAME1 = VARVALUE1 | VARNAMEN = VARVALUEN.
- The SBS's performances on backup phases have been greatly improved. This is particularly visible when the system needs to backup a large amount of files.
- An option is now available within the SBS to specify that file dates must be kept when synchronizing files between primary and secondary server.
- The about dialog box has been changed in order to display the same Licensing information that is used in the context of the SENTINEL service, if it is running. In such case the information is displayed in blue.
  If the service is not running, the Licensing information read by the starter module is displayed in black.

SENTINEL 2012.00.02

- SENTINEL has been ported to **Windows Server 2012** and **Windows 8**.
- The **dbWatch** plug-in has been made compatible with the ORACLE database.

  Note: when SENTINEL is installed on a x64 system (Windows 2012 / Windows 2008 R2 / Windows 2003 R2 …), it is required to install both the 64 bits and 32 bits versions of the ORACLE client. Also the 64 bits version must be installed first.
- SENTINEL allows for a **TRIAL period of 30 days without limitation** . 3 printers can be used at that time.
  When the trial period is over, all the sentinels will stop running.
- Without a valid license it is not possible to start the sentinels.
- 45 days before a license expires – at the end of a trial period or end of a subscription period - the sentinels will start issuing :

  1) a simple log and report entry every hour, that can be activated or not in the report plug-ins, using the option: “Detailed events”

  2) a new entry every hour, within the Windows Event System, that can be used to monitor License expiry warnings.
  The event is registered in the Event Log named: “Label Printing Service”.
  The following errors/warnings can be tracked:

EventID	Type	Meaning
1	Error	No Valid License found

2	Error	An error has been found when reading the License (see message to get more information)
3	Warning	The internet connection for checking the online License seems to be broken.
4	Warning	The License is going to expire soon.

3) a special **"License expiry" report** every day. This special “License expiry” report is always active in the File Report plug-in. It can be activated in the E-Mail Report plug-in by configuring the email recipient address. The frequency of this report increases as the term approaches (12 hours from 10 days left, 6 hours from 5 days left, 3 hours from 2 days left).

- Likewise, when a running SENTINEL using an Online license fails to connect to Internet to verify the license during more than 24 hours, a 5-day countdown starts during which special "License expiry" reports are generated. If the Internet connection is still not fixed at the end of this 5-day period, the sentinels stop running. .

  Note: this situation can be tracked using the email plug-in and/or by monitoring the records that are created within the Windows event system as mentioned above.

- The **dbWatch** plug-in now validates the more obvious parameters before start (missing table or field names)

- Third party software submitting a job can now check if it caused an error.
  When a path to a folder is defined in a **<jobErrors>** entry of a sentinel in Sentinel.xml, the sentinel produces a one line log file named after @JOB_NAME if the job fails.
  This file is created before the actual submitted file is deleted. So the third party software can check if the error log is there (there was an error) or not (no error) at the time its submitted file disappears.
  Note: by default, @JOB_NAME equals the submitted file name. But it can be changed at each analyzed bloc by matching some unique ID to @JOB_NAME in the map.

- The **maximum size of the log file** produced by the File Report plug-in can now be selected as up to 10240 Kb.
  Note: this is a about 10 Mb for the log file (+10 Mb for its back-up). With 50 sentinels, this would end up with 1 Gb of reports (double that if tracing is also activated with the same value for the filesize parameter).
  This should be taken into account if SENTINEL is running in a somewhat limited disk space system.

- Some minor optimizations were introduced in **Sentinel Backup Server** :
  - File sync is optimized to use less memory: the actual file content is only loaded

at the time the TCP/IP message is sent to the secondary server, not when preparing the list of messages to be sent.
- When SBS is stopped during a file synchronisation it will prompt a message to inform it is busy and it will complete the sync.
- When it is stopped at another time, it will respond faster.

10.00

- SENTINEL automatically installs the correct version of CODESOFT.
- SENTINEL now requires only one activation code (there is no need to activate a CODESOFT Runtime License).
- The SENTINEL installation has been simplified so you are no longer required to select between the two product ranges: SENTINEL Print Pack and SENTINEL Data Exchange. Based on your license, the software automatically activates the correct features.
- SENTINEL prerequisites (.NET framework 3.5 SP1, MDAC 2.8, Adobe ReaderX, Windows Installer 4.5) are now automatically installed if necessary.
- New licensing model:

  Four types of license are now available
  - Software-Offline
  - Software-Online
  - Software-Platinum
  - Hardware

6.10

- **A new input plug-in called dbWatch** can retrieve data from an existing database. This feature is only available in the Data Exchange version of SENTINEL.
  The plug-in can catch either all records from a table, only newly added records, or only some records based on a value of a dedicated **Status** field.
  See the plug-in help for available features and configuration tips.
- **New options in the Sentinel Backup Server** (SBS) allows a **notification email** to be sent upon server switching.
  See the SBS manual for configuration procedure.
- **New options in the Sentinel Backup Server** (SBS) allows **strict synchronisation** of Secondary server files. For example, to:

  - delete the files on the Secondary when deleted from the Primary,

  - overwrite files modified directly on the Secondary with files of the Primary, independently of the file modification date.
  See the SBS manual for configuration procedure.

6.00

- SENTINEL is fully compatible with Windows 7 and Server 2008 R2.
- It is possible to specify a waiting time before the SENTINEL service actually starts. This allows the service to wait for other applications to be ready when experiencing long boot sequences on a server.

  The waiting period can be defined in the `sentinel.xml` file under the `<general>` node.
  For example: `<waitatstartup>30</waitatstartup>`to wait 30s before the service starts.
- In the file input plug-in, a setting allows the application to check incoming files' signature with certificates. See the SENTINEL Plug-in Help file for more information.
  Checking for the digital signature of the captured files ensures that the sentinel is not processing a file that has been altered or modified since it was first generated. This provides a high level of security for the data printed on the labels.
- In the CODESOFT Printing plug-in, a parameter can be set to accommodate for printers having trouble handling large amount of labels. It can be set by modifying the TKXCS.xml plug-in file in the General section by adding a **MaxQuantity** element with the desired label quantity. Print jobs where the label quantity exceeds this value will be split into several print commands. For example: if **MaxQuantity** = 1000, a job asking for 2500 labels will issue three printer jobs, containing 1000, 1000, and 500 labels respectively. TKXCS.xml element syntax for this example would be …`<MaxQuantity>1000</MaxQuantity>`…
  The default value is the maximum value for a 32-bit integer (2 147 483 647). The minimum value is 1.
- A new control variable @**WATERMARK** allows you to automatically add a watermark to the next printed label.

  The value that is set in this variable is simply used as a watermark message printed on the label.

Note: This feature is only available with CODESOFT 9.00.02.

- A new control variable @**IMAGE_MODE** allows you to dynamically change the configuration of the sentinel for the next print job.
  - If set to 0, the sentinel prints a label.
  - If set to 1, the sentinel generates a preview image of the label but does not print it.
  - If set to 2, the sentinel prints the label and generates a preview image of the label.
- A new control variable @**IMAGE_SIZE** allows you to specify the zoom factor of the image preview.
- A new control variable @**IMAGE_FORMAT** allows you to specify the format of the image preview.

The value for this variable can be one of the following: BMP, JPG, PCX, PNG, EPS, TIF, DCX.

- A new control variable **@LAB_VARS** allows you to output in an xml file with the description of the form and free variables of the label.

  To output this file, set this control variable with the value of the file name.

- New control variables are available with this version that allows you to change the object properties on the label. After printing, the object properties automatically revert back to their initial value.

  @PROP_Printable : Indicates if the object will be printed or not. The value can be 0 (Not Printable) or 1 (Printable).
  @PROP_Rotation: Sets the rotation of the object. The value can be one of the following: 0, 900, 1800, 2700.
  @PROP_BackColor: Sets the background color of the object.
  @PROP_ForeColor: Sets the foreground color of the object.
  @PROP_Width: Sets the width of the object (in millimeter x 100 or inch x 100 depending on the designer's configuration).
  @PROP_Height: Sets the height of the object (in millimeter x 100 or inch x 100 depending on the designer's configuration).
  @PROP_Top: Sets the distance between the top edge of the anchor point of the object and the top edge of the document (in millimeter x 100 or inch x 100 depending on the designer's configuration).
  @PROP_Left: Sets the distance between the left edge of the anchor point of the object and the left edge of the document (in millimeter x 100 or inch x 100 depending on the designer's configuration).
  @PROP_MarginLeft: Sets the internal left margin of the object.
  @PROP_MarginRight: Sets the internal right margin of the object.
  @PROP_MarginTop: Sets the internal top margin of the object.
  @PROP_MarginBottom: Sets the internal bottom margin of the object.
  @PROP_ AnchorPoint: Sets the anchor point of the object.

  The assignment to these variable use the following syntaxe:
  `@PROP_XXXXXX = <Object name on the label>,<Value>| <Object name on the label> ,<Value>| …`

  For example:
  `@PROP_Printable = Address,1|MyBarcode13,1|MyBarcode128,0`

  The wildcard character * can be used to modify the same property for a group of objects. For example:
  `@PROP_Printable = HRText*,0`
  …will prevent printing of all objects having a naming starting with HRText for this time.

5.10

- A new CODESOFT Printing plug-in is introduced to accommodate for CODESOFT 9 changes. This plug-in does not work with CODESOFT 8. That is, upgrading to SENTINEL 5.10 requires upgrading the CODESOFT Runtime application used by SENTINEL to version 9.

5.06

- The CODESOFT Printing plug-in will now automatically restart the print engine if it was unloaded from memory for any reason. This feature is enabled by default. It can be disabled by modifying the TKXCS.xml plug-in file in the General section by setting the **RestartPE** node to 0 instead of 1. This feature was introduced to avoid the propagation of an error from one failing sentinel to the other sentinels through a defective print engine. After a print failure, the error was correctly reported for the sentinel trying to print but after that, other sentinels would get the hanged shared print engine and would also fail.

- When issuing many print commands for a single label, the printer can waste approximately half a second in communication and memory management between printing each label. If you are printing many labels, the overall printing time increases greatly. A new option in the CODESOFT Print plug-in allows buffering all the print orders of one job (same incoming file, same label on same printer). The group of print commands is sent in one message to the printer. To test if this option can speed up your printings, modify the TKXCS.xml plug-in file in the General section by setting the **JobBuffering** node to -1 instead of 0.

- A new option for the File Capture plug-in allows sorting files by name instead of sorting them by date. This is useful if file groups are created so rapidly that they have the same creation date and time. To use this option, the generated file names must follow a strict convention. For example, they could use a counter on 8 digits (with padding zero) like 0000001.txt, 0000002.txt, and so on. To activate the alphabetical sort, open the TKXINPUT.xml file and set the **SortAlpha** node to -1 instead of 0.

- New control variable: @**PAGE_BREAK**. By setting a value in the @PAGE_BREAK control variable, the next print job will be followed by an End of Page command. It allows reproducing of the side-effect of the @FORMFEED control variable that was part of previous versions of SENTINEL.

  -1 : force the ending of the print job before printing
  1 : force the ending of the print job after printing
  2 or -2 : force the ending of the print job without printing

- In Sentinel Backup Server (SBS), when the communication between the two SENTINEL servers was lost due to network failure (not server failure), the backup server correctly switched to primary mode. But on returning to the network, it would stay in this mode, leaving two primary servers running. Now, the backup

server continues to test the main server to detect the return of network communications. When the main server is detected running in primary mode, the backup server automatically returns to secondary mode. When the main server is detected running in secondary mode, the backup server stays in primary mode until manual action is taken. While network communication is down, the backup server displays that it is in backup primary mode instead of primary mode.

5.05

- SENTINEL is now certified for the Works With Windows Server 2008 designation.

- In the Mapper Test window, the control variable @JOB_NAME now has its own column. It is no longer mixed with dynamically generated values in the column labeled *.

- During data mining, the control variable @JOB_NAME now always retains its value across blocs. This overrides the **Keep Value** setting.

- The control variables @OFFSETX and @OFFSETY now accept relative values: if the value begins with a plus (+) sign, the value is added to the print offset saved in the label. Without a plus sign, the offset is absolute and overrides the print offset saved in the label. For example, if a horizontal print offset of 100 is saved in the label:
  - a value of 20 for @OFFSETX gives a final offset of 20.
  - a value of +20 gives a final offset of 120.
  - a value of -20 gives a final offset of -20.
  - a value of +-20 gives a final offset of 80.

5.04

- SENTINEL is now compliant with the Windows Vista security system. No user file or setting is written in the Sentinel program file folder. All settings are stored in the Document folder common to all users.

- The Mapper conversion method "replace string" has been extended to allow for multiple replacements. If the search string starts with **((list;))=** it defines a list of strings separated by a semi-colon. To use another separator, modify the character following the "list" keyword. For example, **((list+))=** uses the + sign as separator. The idea is to use a character that never appears in the listed strings. To do multiple replace, use the list keyword in the 'search string' parameter and a plain string in the 'replace with' parameter.

  Example 1:
  - Search `((list,))=\,:,<,>`
  - Replace with `_`

  > Means: characters 'back slash', 'colon', 'less than', 'greater than' are all replaced by an underscore.

To do parallel replace, use the list keyword in both parameters.

Example 2:
- Search `((list,))=à,â,ä,é,è,ê,ë,î,ï,ô,ö,û,ü,ÿ`
- Replace with `((list,))=a,a,a,e,e,e,e,i,i,o,o,u,u,y`

> Means: accentuated characters are replaced by their non-accentuated form.

Example 3:
- Search `((list:))=commande:archive:client:€:{EOF}`
- Replace with `((list:))=order::customer:$:<END>`

> Means: French word 'commande' and 'client' are translated to English. The 'archive' word is replaced by nothing (dropped). The euro sign is replaced by the dollar sign. The end of file is replaced by the string <END> (i.e. the string is appended to the end of file).

To achieve a string swap, you have to use a temporary string (not appearing in your data). For example, to swap characters ‘a’ and ‘b’ use the setting:
- Search `((list,))=a,b,????`
- Replace with `((list,))=????,a,b`

5.03

- The CODESOFT Printing plug-in is able to connect to LABEL ARCHIVE Server. You can then print the labels that are stored into the central database of the LABEL ARCHIVE Server and keep track of the printing history of your labels.

- New control variable: **@JOB_NAME**. The @JOB_NAME control variable gives a name to the transaction or group of transactions executed by the process plug-in.
  If the variable is not explicitly assigned, the file name will be used as the job name. This information is used for the archiving system’s print history log to help you to quickly find and retrieve a print job.

- New control variable: **@PRINT_IMAGE**. A new feature of the plug-in allows generating a bitmap image of your labels using the data provided by the analyzing process. This feature can be used to display the image of the label into your application before it is printed.

  Warning: This feature slows down the SENTINEL printing process and is not recommended in massive label production environments. To activate this feature you need to assign a filename to the @PRINT_IMAGE variable. In addition you may also modify the sentinel settings in the TKXCS xml file to define how the image generation should work.
  Here is the description of the settings:

  <ImagePath>C:\Output image</ImagePath>
  Allows you to specify the default directory where to store the images if the

control variable @PRINT_IMAGE doesn't provide this information.

<ImageName>0</ImageName>
0: The image filename uses the value in @JOB_NAME variable followed by date and hour.
1: The image filename uses the value in @LABEL_NAME followed by date and hour.
16: The image filename uses the value in @JOB_NAME variable only (files are overwritten if the Job Name is identical between two image output).
17: The image filename uses the value in @LABEL_NAME. The same label always output the same image filename.

<ImageMode>0</ImageMode>
0 (auto): The sentinel outputs an image if a value is assigned to @PRINT_IMAGE. If this variable is not set, then the sentinel works normally and prints a label.
1 (image): The sentinel never prints any label but only outputs images.
2 (both): The sentinel prints a label and outputs an image according to its settings or/and the @PRINT_IMAGE variable.
3 (print): The sentinel always prints a label and does not use image settings or the value of @PRINT_IMAGE.

- New control variables: @**OFFSETX** and @**OFFSETY**. The numerical values in these variables will introduce a print shift in tenth of millimetres (the value for one inch would be 254). Allowed values range from -32768 to 32767.

  Note: These variables may not be available depending of your label design software.

5.02

- A new setting can be set for the File Capture plug-in. It introduces a delay between file detection and file opening. This is useful when several files are dropped in the watched folder. Without this delay, the first copied file is open before the end of the copy and then the order in which files are processed does not follow date and time.
  This setting is only accessible by edition of the TKXINPUT xml file by adding a node called **Retention** in the sentinel node. The value is in milliseconds.
  Example: To wait 1 second **:** …<Retention>1000</Retention>…

- A new setting can be set for the File Capture plug-in. It uses a temporary file naming to avoid locking the original file name. In detail, the incoming ready file is renamed to <sentinels name>.tmp before processing. That way, the sending application can reuse the same filename without having to wait for the file to be deleted at the end of processing. This setting is only accessible by edition of the TKXINPUT xml file by adding a node called **UseTemp** in the sentinel node. Value is 0 for Off and 1 for On. Example : …<UseTemp>1</UseTemp>…

- A new setting can be set for the File Capture plug-in. It forces continuous processing of the same file data until a new file is received (then the printing can be remotely controlled from the printer ‘online’ button). If the newly received file is 1 to 4 octect's long, the processing stops. This setting is only accessible by edition of the TKXINPUT xml file by adding a node called **NonStop** in the sentinel node. Value is 0 for Off and 1 for On. Example: …<NonStop>1</NonStop>…

  Note: This setting only works if the UseTemp setting is activated.

- A new setting can be set for the CODESOFT Print plug-in when using direct mode printing (serial, parallel or TCP/IP). It defines a timeout delay for aborting printing. This setting is only accessible by edition of the TKXCS xml file by adding a node called **PrintTimeout** in the sentinel node. Value is in seconds. Example : …<PrintTimeout>30</PrintTimeout>…

- A new setting can be set for the CODESOFT Print plug-in. It allows for a designated printer to override the label orientation saved in the label file. This is useful when printing the same label on printers physically facing different directions. This setting is available for each printer in the printer list of the plug-in window.

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Fixed Defects

Version	Ticket ID/ Defect ID	Description
2018.00.00		
	34999	DB Watch: Time for detection changes in the table is increased with number of sentinels when STATUS method is used
	34735	Print Capture: It is impossible to process XML files using Print Capture input plugin
	TKX-98276-L7Z2 (30090)	@PRINT_IMAGE does not work as in version 10
	30069	XML settings is written in one line for the new created sentinel if XML header contains 'xml:space="preserve"' string
	TKX-99184-M4Z9 (30093)	Sentinel stops monitoring shared AS/400 directory
	34103	CS Printing plug-in: Incorrect FormFeed is invoked with Adobe PDF
	32432	CS Printing plug-in: TCP/IP printers isn't displayed in the printer's list when Print Spooler service is stopped
	TKX-105964-C8J6 (32463)	Sentinel hangs in parsing or waiting state
	TKX-106076-V0G5 (32590)	Randomly, customer get error on job during processing
	35534	Sentinels do not start automatically after Windows reboot.
	36795	Relative path for map files not accepted anymore in sentinel configuration
2016.00.00		
	33194	TCP/IP port listening plug-in: Sometimes it is impossible to use Socket client due to error that 'target machine is actively refused'
	33195	Print Capture: Incorrect order of files processing
	33196	Print Capture: Handle count for TKXKernel process are rapidly increased during start/stop of multiple (~350) sentinels with Print Capture plug-in
	33197	Print Capture: Some job/jobs processed twice when spool in an error state
	33198	Miner conversion "from UTF-8" fails on Arab characters
	33199	TkxProgrammer script targeted in the map definition takes precedence over the script defined for the sentinel
	33242	Web Server, ENHANCEMENT: Improve Err_Process status with details about error
	33200	Private Bytes counter is increased for TkxKernel.exe with remote workfiles usage and unstable network connection
	33201	CS Printing: Printers font is changed to graphic in case of unsuccessful label opening in the previous job
	33202	Sentinel Launcher: Unexpected message is occurred after PC restart if Label Print Manager has Automatic Startup type
	33193	CS printing plug-in: Close label is asynchronous if a VBS event is implemented with Lppa print engine
	33351	Sentinel.xml tag: It is impossible to write .log files to a custom folder
	33350	Mapper: Namespaces from XML files aren't handled by Mapper

2015.01.00		
	TKX-89400-C4Q9 (25058)	@label_name issue in S/2 map type
	TKX-84834-L3N4 (25059)	duplicate variables in S2 map type generate data assignment errors
	25709	Calling WebServer plugin through the service interface returns value "WasOk" not definied in the WSDL
	TKX-89400-C4Q9 (25034)	Mapping, Assignments and tables: 'End of process' field with 'None' value is processed in different way
	TKX-94566-Z7P0 (25546)	Event Scripts not executed with version 2015
	TKX-94818-W5R5 (25574)	Not possible to select printers with "enable printer pooling"
	TKX-94628-L1Y0 (25544)	@LABEL_QUANTITY is set correctly when printing via SENTINEL
	TKX-53466-P4J3 (25760)	SBS fails to replicate printer ports and logs an error "#13 invalid data"
2015.00.00		
	24290	The Query Manager kept trying to connect to an unreachable DB each time it was selected. Now If the Query Manager fails once to connect to a DB server it will not retry. So if this DB server has resumed normal operation, close and re-open Query Manager to let it try the connection again. On the other hand, if this DB connection is deprecated you should correct/delete it and change the related tasks accordingly.
	24293	The Query Manager displayed all records for the select table; with millions of rows this could take a while. Now it will not display more than 10 000 rows
2014.01.00		
	TKX-80450-Y4B5 (25060)	SBS Backup starts and stop instead of taking over
	18676	SF12586 Modify w/o confirmation is possible under User/Guest accounts in Win2008
	18681	SF12871 Sentinel Manager cannot quit on logoff with some plug-ins settings opened
	19237	Sentinel 2012, Database watch: connection to excel becomes inaccessible after processing, file locked
	19456	Sentinel 2012: CS printing plugin – Default values – Document – dialog opening takes a long time, CPU is fully loaded
	20048	Input plug-in hangs when scanning a folder with several thousands files.
	20051	Sentinel 2012: sentinels are not processed while properties are opened
	20143	TKXDatabase fails to insert value in query when value placeholder is combined with literal
	20474	Sentinel 2012.00.02 : Sentinel handles increase when internet connexion is blocked with IPSEC
	21498	Sentinel service cannot be started after Repair if application was installed to non-default directory
	19988	Sentinel 2012: hostname is not accepted as Server name in “Socket client example”, only IP
2014.00.00		

	TKX-53940-Q2Y2 (20980)	Sentinel service crashes on sending email if sender is not properly defined.
	TKX-44872-Z2K6 (20321)	SBS2012 doesn't work when large number (>1000) of files must be transferred to the secondary server.
	TKX-39674-N1Z1 (20087)	SBS 2012 : An option is now available to specify that file dates must be kept when synchronizing files between primary and secondary server
	TKX-51341-F8Y6 (20805)	validation box for email is not correct
2012.00.02		
	20063	The SENTINEL service could fail to stop properly from the Windows control panel when the sentinels had to process some files.
		The dbWatch plug-in would stop the sentinel when an error was reported by any process plug-in ; without consideration for the "Stop on error" setting.
	19137	In the Web Manager with passwords shorter than 6 characters, several values would be considered valid if they had the same pattern (i.e. loging with password "abcabc" would be considered correct for the password defined as "abc"). Input of new passwords enforces that it be at least 6 characters long; but it won't affect older passwords. So it is recommended to change existing passwords if they are shorter.
	19064	Double-clicking a map file in a shared folder would open the Mapper but would not open the map automatically.
	18783	The data mapping failed for zones having a name starting with a number.
	18663	Mapper removes @SERIALQTY formula after "Update target" operation
	18561	In the Web Manager, when trying to connect to a SENTINEL server advertising several IP address, the manager would only test the first address; it would not test the following addresses in case of failure.
	18541	When migrating from older SENTINEL version to SENTINEL 10 whilst installing in a new folder, the SENTINEL service - having kept the previous path to the plug-ins folder - would now report finding none of them.
10.00		
		Some printer errors that occurred during the closure of a print job were not caught by the SENTINEL process.
		Upon a custom configuration of the dbWatch plug-in, some input jobs were misdirected to the correct sentinel when two sentinels were targeting the same input table.

	16945	The Mapper application was crashing when defining more than 600 actions.
	15827	With CODESOFT and LABEL ARCHIVE (using the three states approval rules), new labels in the “in approval” state could not be printed, even when SENTINEL was configured with administrator rights regarding LABEL ARCHIVE. The previous state of the label (“draft”) was printed.
6.10		
	12870 (TFS:14493)	In the Mapper, when selecting the same Web method target but with modified parameter names, the Mapper would not update its list of available variable names. As a consequence, the “rename zone” list and the zone icons in the tree area may have shown the wrong symbol (green/red flag). Now, even if the selected target seems the same (same name), the Mapper asks the plug-in to refresh their list of target variable to compute a correctly updated list.
	12869 (TFS:14492)	In the Web Service plug-in window, the Window Close button from the window caption bar would have unexpected result. The button has been removed.
	12578 (TFS:14483)	In the Query Manager, a single space could be entered as table, field, query or task name.
	12392 (TFS:14482)	Non valid character could be input as spool name when creating a new spool in the Spool Capture plug-in. Forbidden characters are: `./\!|:%<>*?`
	12868 (TFS:14475)	In the Mapper, the command Update Target for a Database Task could not have the Query Manager open the right task definition file (XDB) if it was different than default (or the last open one).
	12867 (TFS:14474)	Database and Web Service plug-in windows were wrongly displaying the “minimize” button on their window caption bar. Since the function was not implemented, using the button would generate an exception.
	12783 (TFS:14470)	The Mapper would hang on selection of a new DB task target if the current target file (XDB file) was not found (moved or deleted).
	12769 (TFS:14469)	In the Query Manage direct SQL command window, the list of available connections to select from is now a non-editable kind. This avoids trying to execute a query with an inconsistent connection string.
	12755 (TFS:14467)	With the TkxDatabase plug-in, SQL queries were not correctly computed for missing fields. The token ?<field name>? would remain and the query would fail. Now unassigned query tokens are replaced by the keyword NULL. Warning: the table will not

		accept a NULL whatsoever if the field is designed as “no null allowed”.
	12753 (TFS:14456)	SQL tables of type “View” where displayed in the Query Manager even when the corresponding option was unchecked.
	11223 (TFS:14452)	After adding a CODESOFT printer through the Labeling plug-in window, the plug-in would also display any spool created for the Spool input plug-in. They should never be listed there because they do not need to be selected and must never be used as print target or an infinite loop may occur.
	11189 (TFS:14446)	Selecting twice the same Label target in the Mapper would have the background CODESOFT become visible.
	10928 (TFS:14441)	The Manager would hang when opening CODESOFTs’ Printer settings from the Labeling plug-in window for any Eltron printer.
	9729 (TFS:14434)	Control variable values passed through the TCP/IP plug-in were not trimmed and leading/ending padding spaces would prevent the processing plug-in to find correct values (for label name, printer name, etc).
	9880 (TFS:14432)	CODESOFT user interface font was modified by SENTINELs’ after adding a printer through the Labeling plug-in window.
	20030 (TFS:12896) and 20565 (TFS:14498)	In the Miner, a zone B depending of another zone A location is now marked as “found” even if zone A has no data (as long as zone A start location can be evaluated). Truth table (newly changed rule highlighted): Start of A is... B searched ? ...not found NO **...found, no data (end location=start) YES** ...found, explicit empty (through pair of quotes) YES ...found, data YES
	19671 (TFS:12891)	Secondary SBS will now filter out from configuration file sent by the Primary SBS all parameters pertaining only to the Primary.
6.00		
		In the Miner, the search method ‘Cascading string’ has been secured for missing string cases.
5.10		
	17680	The SENTINEL User Manager (S-Admin.Exe) allowing to define users and rights for the WEBMANAGER site was missing from some installation configurations.

	16850	When the Microsoft system file MSSTDFMT.dll was missing from the system the Report plug-in would not display its settings window. The reference to the library has been removed from the Report plug-in. It is now able to run without MSSTDFMT.dll.
5.06		
	16304	In the Manager, after validating one sentinel's settings, clicking New Sentinel, then closing the window from the control box (X button), an Evaluation Mode message was displayed.
		Activation of the newly installed software protected SENTINEL is now possible from a remote console. The console must be started with the command that get the already open server session (not creating a new session). To do this, run: Mstsc /console, or *Mstsc /admin*(under Windows XP SP2 and later)
	16272	In the Mapper, when switching language with a map already open, some global settings like input file conversions were lost.
	16240	When SENTINEL is uninstalled and reinstalled to a different path, plug-ins are unavailable.
	16230	In the Web Manager, it is possible to set the same alias to more than one printer.
	16194	When starting the service from the tray icon and quitting right away, the executable sentinel.exe stays locked in memory. It cannot be restarted without terminating the task or closing the Windows session.
	16155	It is possible to input a negative value in the **Interval** field of the File Watch input plug-in.
	16150	It is possible to input only separators (;) in the **Filter** field of the File Watch input plug-in.
	15423, 15577, 15578, 15579	See new feature: Restart Print Engine.
	15250	Mapper freezes when opening an XML map without a work file.
	15253	SBS runs with two primary servers when a network issue happens.
	15254	Execution error N°5 with Mapper.

	15266	Mapper and field selection after modifying a parameter is lost.
	15380	Execution error N°11 with Mapper.
	15383	Execution error N°9 with Mapper.
		The control variable @FORMFEED is no longer supported in Sentinel 5. See new feature: @PAGE_BREAK.
		When using the TCP/IP plug-in as input and report with several clients connected to receive reports, the plug-in would enter an infinite loop and keep processing the same data over and over again.
5.05		
		CODESOFT Printing plug-in: Having two labels with the same name in two different folders would give unpredictable results if they also had different variables (one could be re-used instead of loading the other).
		The print offset was set to zero when no value was passed to control variables @OFFSETX and @OFFSETY (overriding offset saved in the label).
5.04		
		If the assistant is cancelled during a substructure definition, the zone containing the current substructure will be removed.
		An empty zone name is no longer allowed in the New Zone Assistant.
		In the New Map Assistant, the filename is checked. It cannot be empty, point to a folder instead of a file, contain invalid characters, or be located in an unreachable/read only folder.
		Under some rare occasions, while creating a new sentinel, the **Print Image** option introduced in version 5.03 would be set by default and then image files would generate during prints.

		In some case, a new incoming job would not be detected. It was processed only when another job would trigger the job detection mechanism.
		In some case, the plug-in was using 100% of the CPU time while waiting for new jobs. It was resuming normal wait state after a new job was processed.
5.03		
		Some memory leak has been detected on the 5.02 version that could lead to the instability of the label printing system in the long term.

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Known Limitations / Remarks

- The SENTINEL must be restarted if Label Archive was reconfigured
- STRICT XPATH: During its execution SENTINEL now uses Microsoft's built-in XML system (also known as MSXML) for reading the file and interpreting the XPath. This system imposes a more strict XPath syntax so some maps may work fine while edited in the Mapper but report errors later during analysis of real input. These errors shown in sentinel will mention the actual error message given by MSXML (actual message varies but it might refer to invalid tokens). For example, the previous system allowed the shortcut syntax .. followed by a condition in square brackets like: ..[@printer] , meanning "select parent node value if it has an attribute named "printer". The new system requires a fully qualified "XPath axe" in front of a condtional part, as in : parent::node[@printer] . To verify your XPath syntax against the actual XPath convention please check online sites like W3School (http://www.w3schools.com/xpath). There are also numerous online tools (search for "online XPath checker").
- Several instances of the manager can run at the same time (to allow monitoring of several sentinels / visual comparison of settings). Tip: since each manager has a small impact on overall performance, it is better to close any unused manager, or even better close the user session when possible.
- Software Key Protection does not support Proxy with authentication. A license that requires internet connection (Online/Platinum) will not be compatible in such case.
- SDP printers can be added from the Sentinel interface as normal, however they can only be removed from the Codesoft interface (by launching the Label Printing Module).
- After this product is installed, it is not recommended to install a previous version. The installation of two different versions of the same product can lead to instability and incorrect behavior

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Compatibility with other TEKLYNX Software

SENTINEL 2018.00 is compatible and fully tested to work with the following TEKLYNX software packages:

- CODESOFT 2018.00

- LABEL ARCHIVE 2018.00

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