

Foreseer Release Notes



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Operating Requirements

Hardware Requirements

To run Foreseer, you'll need a server class machine with

- A minimum of two quad-core processors
- 16 GB of RAM
 - 32 GB of RAM is recommended when running Foreseer with the Foreseer Cloud Agent, or Foreseer Reporting Services.
- 100 GB of free drive space

Supported Operating Systems

Windows Desktop Operating Systems	Message Manager	Outpost	Cloud Agent
Windows 10 Professional, x64	✓	✓	
Windows 10 Enterprise, x64	✓	✓	

Windows Operating Systems	Server / Message Manager	Cloud Agent
Windows Server 2012 R2 Std	✓	
Windows Server 2012 R2 Datacenter	✓	
Windows Server 2016	✓	
Windows Server 2019	✓	✓

Supported Database Platforms

- SQL Server 2012 Express w/ Advanced Services, Standard, Enterprise, Enterprise Core, SP2
- SQL Server 2014 Express w/ Advanced Services, Standard, Enterprise
- SQL Server 2016 Express w/ Advanced Services, Standard, Enterprise
- SQL Server 2017 Express w/ Advanced Services, Standard, Enterprise
- SQL Server 2019 Express w/ Advanced Services, Standard, Enterprise

Supported Browsers

Applications	Edge	Chrome	Safari	iPad
WebConfig	97.0.1072.55	97.0.4692.71	14.0	Not Supported

Applications	Edge	Chrome	Safari	iPad
			(15610.1.28.1.9, 15610)	
WebAdmin	97.0.1072.55	97.0.4692.71	14.0 (15610.1.28.1.9, 15610)	Not Supported
WebViews	97.0.1072.55	97.0.4692.71	14.0 (15610.1.28.1.9, 15610)	V12.3.1

 Internet Explorer is no longer supported with Foreseer.

Features

The features include with this release of Foreseer are:

- Internationalization Support for the Foreseer web components
- Ability to write ASCII strings allowing a driver-defined (installed with a .vi file) Text channel to be used as a Text Control Point.

Internationalization Support

This version of the Foreseer application is capable of translating all the user interface components, controls, and reports based on the user's language of choice based on user preference. The application components impacted by this translation effort include WebViews, WebAdmin, WebConfig.

The user will be able to set the system language based on the available languages that are installed on their system and will be able to change the application language on demand. Additionally, the user will have the capability to personalize their translations to meet their needs and provide more customization in their native language.

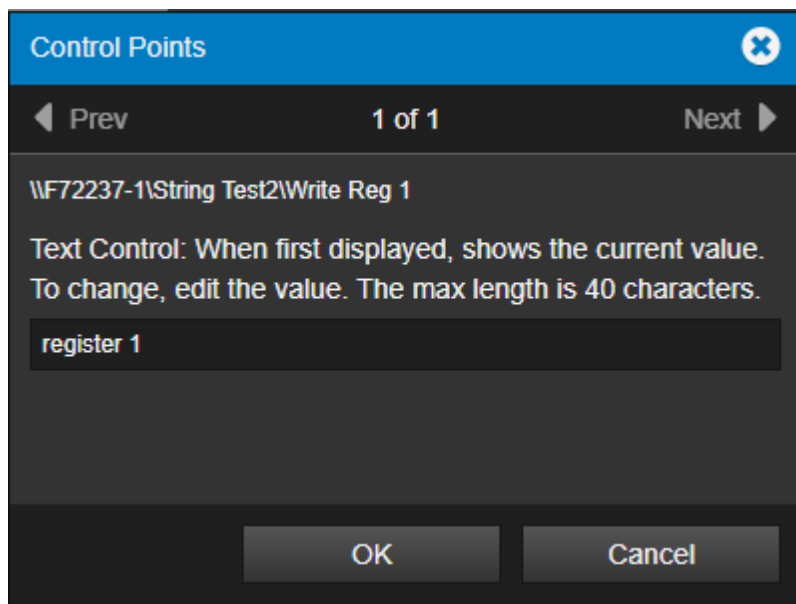
New features were added in support of the Foreseer Internationalization effort to add additional language packs as well as manage User Defined translation for the Foreseer environment.

Write ASCII Strings

Support for Text Control Points was added in the 7.5 Release. This allows a driver-defined Text channel (installed with a .vi file) to be used as a Text Control Point. A Text Control Point works similar to a regular Control Point. The main difference between regular and Text Control Points is that regular Control Points are user-defined Analog or user-defined Digital channels, using one of the Control Point equations, while Text Control Points are Text channels that are installed with a .vi file for the Modbus3 driver.

To create a Text Control Point after the channel has been installed with an appropriate .vi file, add the Text channel to a WebViews page and add a checkbox to the channel and save the page. To write a new Text value to a Text Control Point, select the checkbox for the channel on a WebViews page, and then from the Objects menu (at the top of the page), select Control. This will display a modal dialog with an edit control that shows the current channel value. To write a new value, edit the text in the edit control and select OK. All printable ASCII characters are allowed, but be careful to understand how the text values will be used to select which special characters you enter. For example, while quotes (double and single) are allowed, some applications may have issues with them. Be sure you understand how the channel values will be used.

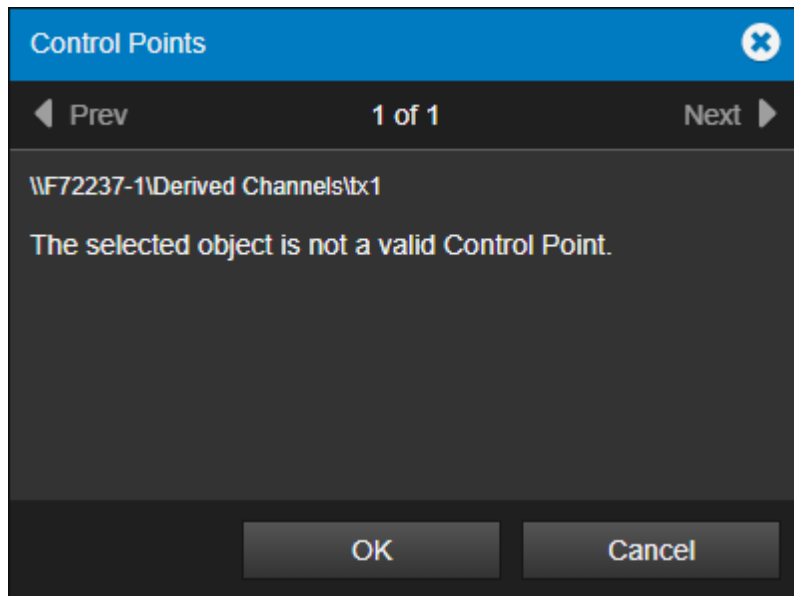
If multiple Control Points are selected, you can use the “Prev” and “Next” buttons to move between the selected Control Points. The full channel name is always shown at the top of the modal dialog, so you can tell which channel you are changing if you have multiple Control Points selected.



When the server receives the request to write a new value, it will log a message to the server log (LogFile.txt) and write an Audit Log record showing the old value and the new value. The new value will be written to the selected channel, and verified by the driver after the write. To verify that the new value was written correctly, the driver will read the value of the register(s) that were written and verify that the value read matches the value written. If the value read does not match the value written, the driver will log an error

message to the driver log (DriverLogFile.txt).

For a Text channel to be a valid Text Control Point, it must be a driver defined Text channel (not a user-defined channel). It must have a Read/Write status of eReadWriteAssign, and it must be using the 7-Modbus3.dll with version 7.5.0.2 or newer. If all of the requirements are not met, the following dialog will appear when the channel is selected as a Text Control Point:



Text Control Points must be installed with a .vi file. You cannot add the channel after the device is installed using "Add Channel". To add a writable Text channel to a .vi file, the device must support writable Text channels, and meet the following requirements:

- Must use a supported Modbus3 driver (Version 7.5.0.2 or newer).
- Must be driver defined Text points: Type=TEXT with POINT=x (where x is not -1).
- Must be write on assignment: RW=READWRITEASSIGN
- Must be a Holding Register: RegType="H" with character DataType="C"
- The max string length supported is from NumRegs="xx" where there are 2 characters per register, so NumRegs="20" would be 40 characters.

The following is an example of the syntax for a writable Text channel in a .vi file:

```
POINT=2
  Name="Write Reg 2" Type=TEXT
  Desc="For Text Control Points"
  RW=READWRITEASSIGN
  Register="21"
  RegType="H"
  DataType="C"
  Bit="0"
  NumReg="20"
ENDPOINT
```

The Point number and Register number (2 and 21 in the above example) will be specific to the device you are installing (as well as the NumRegs value). The RW value must be READWRITEASSIGN, and the RegType must be H (Holding Register), and the DataType must be C (Character Data). The channel type must also be TEXT (Type=TEXT). The NumReg value will specify the maximum string length for the channel. There are 2 characters per register, so for the example above, the value 20 would be a maximum string length of 40. Please note that only specific Modbus devices will support writable Text channels.

When Channel Properties are displayed for writable Text channels, the Value field will not be present. The Value field is used to assign a user-defined Text channel a new value. The only way to assign a new value to a writable Modbus Text channel is to use the Text Control Point feature in a WebViews page. Remote Text channels from Outpost or Foreseer can be valid Text Control Points and be written the same way as local Text channels. All of the same rules apply for remote channels, they must be driver-defined Text channels installed on the remote with a .vi file. Just add them to a WebViews page the same way you would add a local channel.

If the device with a writable Text channel is offline when a new value is written from a Text Control Point, the value will not be written until the device comes online. If the server is restarted before the device comes online, the new value will not be written and would have to be written again. Although writing to a device that is offline is allowed, best practices would be to only write to devices that are online. Also, be aware that it may take a few seconds before the new channel value is shown after you write it. The amount of time will depend on the scan time of the driver and how many Modbus channels are in the device. Remote channels may take a few seconds longer for the new value to appear.

Issues Resolved

Defect	Description
FOR-5089	The first of the pre-canned / pre-installed Animated Images is missing the 0 and the N element.
FOR-6242	Foreseer 7.3.330.0 DB Error after Deleting devices, End Server Config mode- CheckTheMap: errors found checking column position between HR and MR databases
FOR-8341	Vulnerability scan assessment
FOR-8771	Reverse ASCII Order' Setting No Affect on Char byte Order
FOR-8816	Modbus Devices with Writable Channels Go Offline
FOR-8289	Cleartext hard-coded credentials disclosed
FOR-8294	XSS in graph custom title
FOR-8296	Session IDs in log files
FOR-8703	Verify Potential JSON injection through API

Known Issues

Defect	Description
FOR-8838	WebAdmin: Text Control Point : Arrow and text are not well aligned
FOR-8831	Channel Picker: Column headers alignment issue
FOR-8709	Foreseer Log does not have "End Session completed Successfully" on Windows Restart or Windows Shutdown. Next Session Check Database
FOR-8601	WebAdmin check box error
FOR-8599	Match Template Devices window don't expand
FOR-8494	Outpost 7.4.500 Application Error ucrtbase.dll at "CClientServer::RequestUpdates sending eClearedAlarm"
FOR-7275	WebAdmin : Line&Rectangle control doesn't show its Un-linked color property and shows Value mapped Line property unexpected
FOR-8928	Channel properties for remote/Outpost Text channels that are driver defined, still show the Channel Value control (in WebViews/WebConfig)

Third Party License

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This product includes software developed by the Apache for use in the Apache HTTP Server. (Version 2.4.52)

(https://httpd.apache.org/ABOUT_APACHE.html)

Boost

This product includes software developed by the Boost project. (Version 1.76)

(<https://www.boost.org/users/license.html>)

(https://www.boost.org/LICENSE_1_0.txt)

Bzip2

This product includes software developed by the bzip2 project.

(<http://sourceware.org/bzip2/>)

LZMA

This product includes software developed by the 7-Zip project.

(<https://www.7-zip.org/sdk.html>)

OpenSSL

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (Version 1.1.1m)

(<https://www.openssl.org/>)

Python

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(<https://www.python.org/about/>)

Zlib

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IPWorksSFTP

This product includes software developed by the IPWorksSFTP. (Version 20.0.7876.0)
(<https://www.nsoftware.com/>)

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