

Regional Network Interface (RNI)TM

VERSION 4.16.1

Revision history

Rev No.	Date	Description
Rev 01	June 26, 2025	General Availability (GA) release for RNI 4.16.1.

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Sensus USA
639 Davis Drive
Morrisville, NC 27650

1-800-638-3748
<https://www.xylem.com/en-us/brands/sensus/>

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Supported web browsers

RNI 4.16.1 supports the following browsers:

- Google® Chrome™
- Microsoft® Edge
- Mozilla® Firefox®

RNI 4.16.1 version support

Each RNI software release receives:

- Engineering support for two (2) years after release, during which patches and updates may be issued. This period ends at the End of Development date.
- Technical support for four (4) years after release, ending at the End of Support date, after which the version is considered obsolete.

For RNI 4.16.1:

- **End of Development:** June 2027
- **End of Support:** June 2029

Network Command Suite (NCS) compatibility

RNI 4.16.1 is compatible with NCS 2.0 and later.

Upgrade notes

This section discusses items of note when upgrading to RNI 4.16.1.

Upgrade of operating system (OS)

In RNI 4.14, the RNI was upgraded to use Red Hat Enterprise Linux 8 (RHEL8). Upgrading the OS to RHEL8 requires additional RAM (memory) on Combo for Small and Medium RNI installations. Please refer to the *RNI 4.16 Installation Guide* for sizing recommendations.

OpenVPN support

In RNI 4.14, OpenVPN was removed due to the OS upgrade to RHEL8. In RNI 4.15, OpenVPN was restored as it was prior to the RNI 4.14 release.

To re-enable OpenVPN on an RNI 4.16 system that uses RHEL8, please refer to the *RNI 4.16 Installation Guide*.

Enhanced security and infrastructure updates

Sensus continues to invest in strengthening software security and modernizing infrastructure to ensure robust, scalable, and secure solutions for its users.

Database and operating system (OS) support

RNI 4.16.1 introduces support for Microsoft Windows 2022 and SQL Server 2022. Supported combinations include:

- Windows SQL Server 2019/Windows 2019
- Windows SQL Server 2022/Windows 2022

Note: Support for Microsoft SQL Server 2016 is deprecated in this release.

SQL Server database access

The following Microsoft SQL Server components were upgraded:

- MSSQLTOOLS: Upgraded to mssql-tools18
- MSODBCSQL: Upgraded to msodbcsql18

Note: Database queries using MSODBCSQL must be updated to include a new parameter. Please refer to the *RNI 4.16 Installation Guide* for details.

Upgrade of Oracle Java Database Connectivity (OJDBC) driver

OJDBC was upgraded to OJDBC10.

New containerization platform

In RNI 4.16.1, Podman replaces Docker Community Edition (CE) as the containerization platform for running RNI services. Podman offers several advantages including native support in Red Hat Enterprise Linux (RHEL) 8 and enhanced security features.

Note: Due to this change, Local LDAP in RNI 4.16.1 uses Port 1389 instead of Port 389.

Spring framework upgrade

As part of our commitment to leverage up-to-date third-party frameworks and libraries, RNI 4.16.1 was upgraded to use Spring Framework version 6. This update ensures that RNI remains secure, maintainable, and aligned with current enterprise development standards.

Upcoming FNV2 firmware signing certificate update

Sensus will soon begin updating the FNV2 firmware signing certificates in newly manufactured meters. To prepare for this transition, RNI version 4.16.1 was proactively updated to include the new FNV2 firmware signing certificate.

To ensure a smooth transition, RNI 4.16.1 supports both the current and new FNV2 firmware signing certificates. Firmware downloads continue to function with either certificate, and a firmware download job

may contain meters with either certificate. RNI 4.16.1 will **not** automatically rotate the FNV2 firmware signing certificate on an endpoint.

New features and enhancements

RNI 4.16.1 delivers new features, enhancements, and bug fixes aimed at improving usability, performance, and reliability. The following sections describe the new features and enhancements introduced in this release.

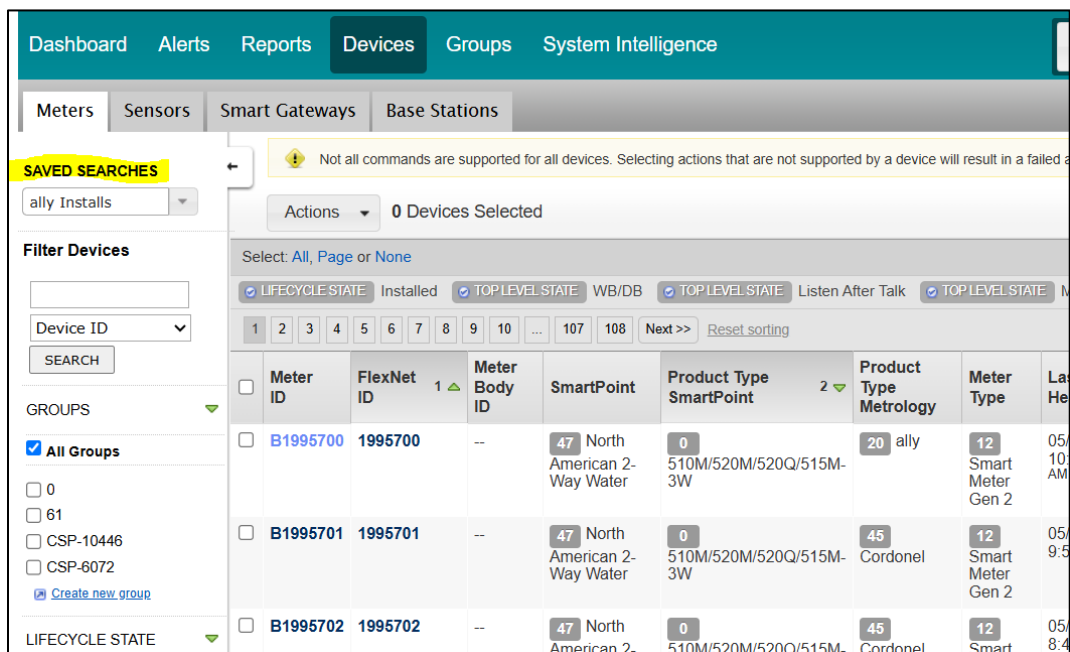
Common features

The following new and updated features apply to Water, Gas, and Electric.

Enhancements to Saved Searches

RNI 4.16.1 provides enhancements to Saved Searches:

- You can now edit a Saved Search. You can choose to overwrite an existing Saved Search or save it as a new search, which offers flexibility in managing filter configurations.
- The Device List now supports filtering through Saved Searches as shown in the following image:



- After creating and saving a filter, you can select the saved filter directly within the Device List view from the Saved Searches drop-down menu. This streamlines access to frequently used filters.
- Only the Saved Searches relevant to the current view display, ensuring a clean and context-aware filtering experience.

Device List enhanced column sorting

You can sort the Device List by multiple criteria, enabling more efficient navigation and management of device data. All pages in the Device List enable you to sort the data by a maximum of five columns (device attributes) as shown in the following image. This enhancement offers greater flexibility and control when organizing and analyzing device information.

Select: All, Page or None

☒ LIFECYCLE STATE Installed ☒ TOP LEVEL STATE WB/DB ☒ TOP LEVEL STATE Listen After Talk ☒ TOP LEVEL STATE Middle Of Minute [Reset Filters](#)

1 2 3 4 5 6 7 8 9 10 ... 107 108 Next >> [Reset sorting](#)

<input type="checkbox"/>	Meter ID	FlexNet ID 1 ▲	Meter Body ID	SmartPoint 2 ▼	Product Type SmartPoint 3 ▲	Product Type Metrology 4 ▼	Meter Type 5 ▲	Last Heard	Top Level State	Modulation
<input type="checkbox"/>	B1995700	1995700	--	47 North American 2-Way Water	0 510M/520M/520Q/515M-3W	20 ally	12 Smart Meter Gen 2	05/06/2025 12:00:15 PM	Middle of Minute	Normal Power - 7FSK
<input type="checkbox"/>	B1995701	1995701	--	47 North American 2-Way Water	0 510M/520M/520Q/515M-3W	45 Cordone1	12 Smart Meter Gen 2	05/06/2025 1:35:32 PM	Listen After Talk	Normal Power - 7FSK
<input type="checkbox"/>	B1995702	1995702	--	47 North American 2-Way Water	0 510M/520M/520Q/515M-3W	45 Cordone1	12 Smart Meter Gen 2	05/05/2025 8:40:56 AM	Listen After Talk	Normal Power - 7FSK
<input type="checkbox"/>	B1995703	1995703	--	47 North American 2-Way Water	0 510M/520M/520Q/515M-3W	20 ally	12 Smart Meter Gen 2	05/06/2025 1:37:03 PM	Middle of Minute	Normal Power - 7FSK
<input type="checkbox"/>	B1995704	1995704	--	47 North	0 510M/520M/520Q/515M-3W	45 Cordone1	12 Smart	05/06/2025 1:05:47 PM	Listen After	Normal Power

Tracking MultiSpeak-initiated commands (service connect/disconnect and valve actuations)

Many utilities leverage MultiSpeak integration through RNI to send FlexNet commands to their meter populations. Version 4.16.1 introduces expanded support for logging and displaying the status of these commands within Device Manager. Device Manager provides visibility for remote connect/disconnect and valve commands issued via MultiSpeak. These improvements provide greater transparency and traceability for utility operations.

RNI 4.16.1 logs and displays the following MultiSpeak-initiated commands:

- **Electric meters**
 - Remote Connect
 - Remote Disconnect
- **Gas meters**
 - Valve Close
- **Water meters**
 - Valve Open
 - Valve Close
 - Reduced Flow

These supported commands are visible in Event History as shown in the following image.

Note: Asynchronous operations initiated via a field tool or the meter itself are not tracked in the Device Manager Event History.

Today

Scheduled Events

Event History

Filter Events

ID

SEARCH

View

05/06/2025

Back

10

DAYS

ACTION NAME

Select an Option

ACTION TYPE

USERS

SOURCE

☒ All Sources

☐ Device Manager

☐ Flexnet Network Perfo...

☒ MultiSpeak

☐ Pressure Profile

☐ RNI Not Associated Wi...

☐ SentryPoint App

VIEW

05/06/2025

BACK

10

Reset Filters

Reset sorting

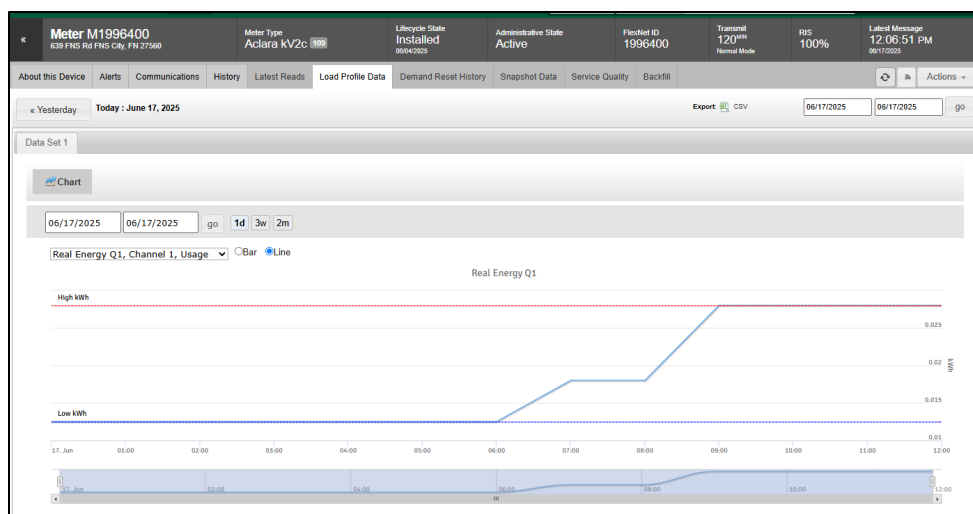
Action	Event	Action Type	Source	Devices		Requested By	Request Sent
				TOTAL	FAILED		
05/05/2025 : Yesterday							
Disconnect	On demand for device M1996903	Service Switch	MultiSpeak	1	0	GatewayUser	2:59 PM
Connect	On demand for device M1996903	Service Switch	MultiSpeak	1	0	GatewayUser	2:59 PM
Local Time	On demand for 200 devices	Provisioning	Device Manager	200	0	Guestadmin	2:55 PM
Remove Device(s)	MT-109 Group for 5 devices	Group	Device Manager	5	0	Guestadmin	2:54 PM
Get Firmware Version	On demand for 90 devices	Provisioning	Device Manager	90	0	Guestadmin	2:52 PM
Add device	MT-109 Group for 10 devices	Group	Device Manager	10	0	Guestadmin	2:51 PM
Create	MT-109 Group	Group	Device Manager	-	-	Guestadmin	2:51 PM
Get On The Glass Read	On demand for device M1999102	Get Data From Device	Device Manager	1	0	Guestadmin	2:50 PM
Setup	On demand for 100 devices	Provisioning	Device Manager	100	0	Guestadmin	2:49 PM
Connect	On demand for device M1995006	Service Switch	MultiSpeak	1	0	GatewayUser	1:08 PM
Disconnect	On demand for 2 devices	Service Switch	MultiSpeak	2	0	GatewayUser	1:08 PM
Disconnect	On demand for device M1995000	Service Switch	MultiSpeak	1	0	GatewayUser	1:02 PM

Key features:

- **Command Display** – MultiSpeak-issued connect/disconnect and valve commands display alongside other commands on the Event History page.
- **Status Updates** – The status of each command is updated as it is sent and as devices respond, allowing users to monitor progress.
- **Command Source Filtering** – Filtering allows users to view commands initiated by source, making it easy to isolate those initiated via MultiSpeak.
- **Retry Restrictions** – For security and consistency, Device Manager does not provide the ability to retry a command that was initiated via MultiSpeak.

Improvements to charts

In RNI 4.16.1, charts were enhanced to improve initial load time. There is a noticeable improvement in performance when opening charts, particularly in scenarios involving multiple channels. The following image shows an example of a Load Profile chart that benefits from this improvement.



Support for custom fields in Device Details (gas and water)

RNI 4.16.1 supports the Custom Fields section in the **About This Device** tab for gas and water devices, providing consistency with existing support for electric devices. Please note that a Sensus integration is required to populate the database with data to display in these fields.

The visibility of the Custom Fields section is controlled through two new configuration options (located in System Administration>Configuration>Interfaces>Device Manager). For Electric devices, the Custom Fields section remains visible by default. For Gas and Water devices, the Custom Fields section is not visible until enabled through configuration.

The following image shows Device Details for a gas device after the display of the Custom Fields section is enabled.

Device Information		Radio Configuration		Location	
Product:	900GM	Top Level State:	Listen After Talk	Address:	
Device ID:	M1995600	Transmit Mode:	Normal Mode	Service Point ID:	NIXIQ-2013
FlexNet ID:	1995600	Meter Sample Rate:	15 Minutes	Latitude:	28.38909°
FlexNet Version:	FlexNet V1	Transmit Rate:	1 Day	Longitude:	-81.59308°
Service Point ID:	NIXIQ-2013	Transmit Modulation:	Normal Power - TFSK	Time Zone:	America/New_York/EDT
IP Address:	--	History Resolution:	Full		
Provisioned State:	Basic Setup Complete	Enhanced History Compression:	Disabled		
Installed Date:	06/04/2025	Dials:	7		
Firmware Information				Custom Fields	
Meter Firmware:	--			Cycle:	--
Last Meter FW Update:	--			Interval:	False
Radio Firmware:	R2.1.44			Interval Date:	--
				Project Area:	--
				Rate Code:	--

Water service features

Refer to **Common features** on page 7 for details.

Gas service features

Refer to **Common features** on page 7 for details.

Electric service features

Aclara I-210+c (DT105)

RNI 4.16.1 enhances support for Aclara I-210+c (DT105) by supporting the upcoming firmware maintenance release for this meter. RNI was validated against DT105 FW version 3.6.2.2. Please refer to the PIN announcing the FW maintenance release for more information.

RNI 4.16.1 expands support for read sources including Load Profile, End Reads, and Snapshot Sources [45,46,47,48,49,50,54,55]. Please note, these sources display in Device Manager without generated labels and align with the labels used for DT109.

RNI 4.16.1 also expands support for alarms to include Sag/Swell, Voltage Event, Meter Outage Counter, and third-party Magnetic Tamper.

Contact your Sensus representative for more details on how to take advantage of this functionality.

Aclara kV2c (DT109)

RNI 4.16.1 enhances support for Aclara kV2c (DT109) by supporting the upcoming firmware maintenance release for this meter. RNI 4.16.1 was validated with DT109 FW version 4.1.2.2. Please refer to the PIN announcing the FW maintenance release for more information.

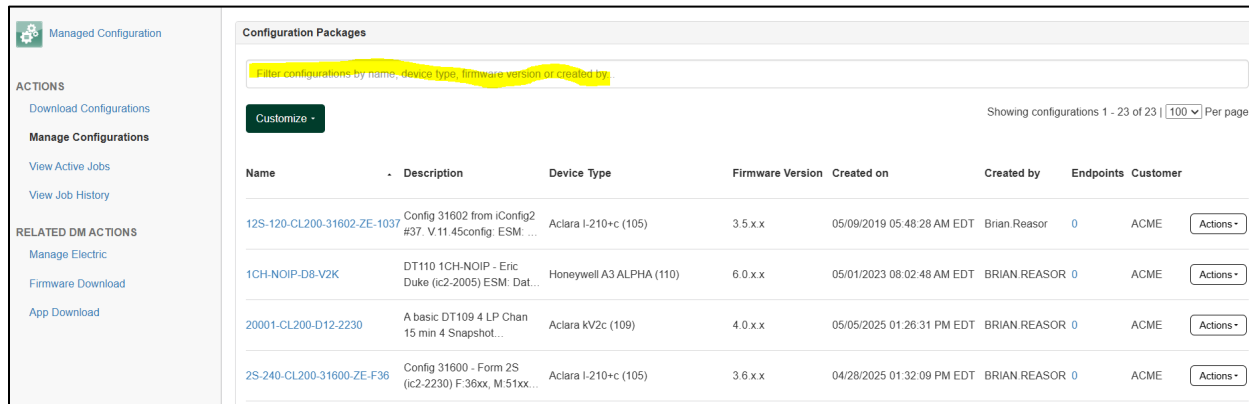
RNI 4.16.1 expands support for read sources to include sources 256-307. Please note that mapping for sources 256-283 in the CMEP output is defined in RNI 4.16. If you previously implemented an MDM integration from CMEP output for these sources, you may notice changes in the output.

RNI 4.16.1 also expands support for alarms to include Sag/Swell, Voltage Event, Meter Outage Counter, and third-party Magnetic Tamper.

Contact your Sensus representative for more details on how to take advantage of this functionality.

Managed Configuration usability improvements

The Managed Configurations page was redesigned to improve usability and provide additional functionality. See the following image to view the new user interface.



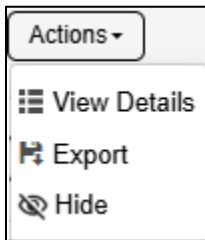
The screenshot displays the 'Managed Configuration' page. On the left is a sidebar with navigation links: 'Managed Configuration' (active), 'Download Configurations', 'Manage Configurations', 'View Active Jobs', 'View Job History', 'RELATED DM ACTIONS', 'Manage Electric', 'Firmware Download', and 'App Download'. The main content area is titled 'Configuration Packages' and features a search bar with the placeholder text 'Filter configurations by name, device type, firmware version or created by'. Below the search bar is a 'Customize' button. A table lists the configurations, with columns for Name, Description, Device Type, Firmware Version, Created on, Created by, Endpoints, Customer, and an Actions menu. The table shows four configuration packages.

Name	Description	Device Type	Firmware Version	Created on	Created by	Endpoints	Customer	Actions
12S-120-CL200-31602-ZE-1037	Config 31602 from iConfig2 #37. V.11.45config ESM: ...	Aclara I-210+c (105)	3.5.x.x	05/09/2019 05:48:28 AM EDT	Brian Reasor	0	ACME	Actions
1CH-NOIP-D8-V2K	DT110 1CH-NOIP - Eric Duke (ic2-2005) ESM: Dat...	Honeywell A3 ALPHA (110)	6.0.x.x	05/01/2023 08:02:48 AM EDT	BRIAN REASOR	0	ACME	Actions
20001-CL200-D12-2230	A basic DT109 4 LP Chan 15 min 4 Snapshot...	Aclara kV2c (109)	4.0.x.x	05/05/2025 01:26:31 PM EDT	BRIAN REASOR	0	ACME	Actions
2S-240-CL200-31600-ZE-F36	Config 31600 - Form 2S (ic2-2230) F:36xx, M:51xx...	Aclara I-210+c (105)	3.6.x.x	04/28/2025 01:32:09 PM EDT	BRIAN REASOR	0	ACME	Actions

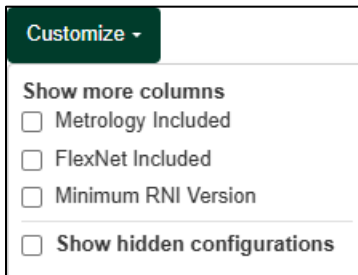
Key updates include:

- **Redesigned interface** – A refreshed layout for a more intuitive user experience.
- **Tabular display** – Configuration packages display in a table format.

- **Search** – You can search for configuration packages using the following fields:
 - Configuration package name
 - Device type
 - Firmware version
 - Creator
- **Sorting** – You can sort configuration packages by name for easier navigation.
- **Package visibility** – You can hide configuration packages from the Managed Configurations table. This feature allows you to hide a package so it does not display in the list of packages. This is particularly useful when a package is no longer intended for distribution but is still applied to one or more meters. Hidden packages remain in the system but are excluded from the default display, helping users maintain a cleaner and more focused workspace. You can access this function from the Actions menu as shown in the following image.



- **Visibility controls** – You can customize the display by adding the optional table columns shown in the following image:

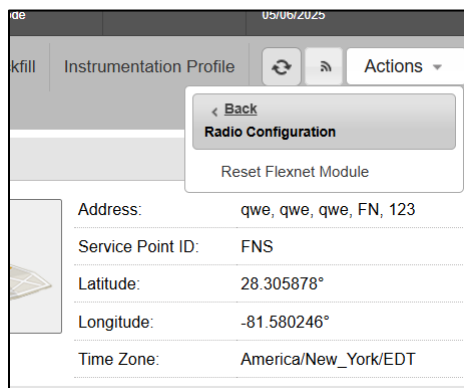


Reset the FlexNet Module (Device Details)

You can now reset the FlexNet Module for the following meter types:

- Stratus (DT83) – See the following note.
- Stratus IQ (DT96)
- Stratus IQ+ (DT121)
- Aclara i-210+c (DT105)
- Aclara kV2c (DT109)
- Honeywell A3 Alpha (DT110)

After you select a meter, you can access the Reset Flexnet Module command from the Device Details Actions menu as illustrated in the following image.



The **Reset FlexNet Module** action sends a FlexNet command 27 to reset the FlexNet module on the meter. This feature includes the following capabilities:

- **Tracking** – FlexNet command 27 executions are logged in event history, consistent with other command actions.
- **Permissions** – This action is visible only to users with the ROLE_AUTH_INIT_PING permission.

Note: Because the Stratus (DT83) meter firmware does not send an acknowledgment to the RNI when it receives a FlexNet module reset command, the Device Manager reports that the command failed, even when it succeeds.

Preload ESM and Self Read/TOU metadata for Stratus IQ+

Sensus is working to streamline the deployment of new Stratus IQ+ electric meters to improve billing readiness. The goal is to *Plug In and Walk Away*.

In the current deployment process an ESM electric meter sends metadata to the RNI to describe the content of the reads it provides. In some cases, it can take a long time for the RNI to receive this metadata, particularly for poorly heard and FNV1 meters (metadata is provided in multiple packets).

To address this, Sensus is implementing a two-pronged approach:

1. Manufacturing Process Update

Manufacturing for Stratus IQ+ meters must be updated to collect ESM and Self Read/TOU metadata that can be particularly difficult for the RNI to receive over the air.

Status: A revised manufacturing process to capture this metadata for newly produced Stratus IQ+ meters is expected to be in place later this year.

2. RNI Enhancement

The RNI must be capable of importing and preloading ESM and Self Read/TOU metadata for newly produced Stratus IQ meters.

Status: RNI 4.16.1 introduces support for import of this metadata for newly manufactured Stratus IQ+ meters.

Once both components are in place, RNI 4.16.1 can preload ESM and Self Read/TOU reads for new Stratus IQ+ meter deployments without retrieving metadata over the air. This reduces delays and improves billing readiness.

Important: This enhancement applies only to **new installations** of newly manufactured Stratus IQ+ meters with managed configurations, provided that metadata was successfully collected during manufacturing.

For more information on how to take advantage of this functionality, please contact your Sensus representative.

Supported upgrades

The following upgrade paths were tested for deployment with the Microsoft® SQL database:

- RNI 4.10.2 to RNI 4.16.1 using upgrade plus tools
- RNI 4.11.1 to RNI 4.16.1 using upgrade plus tools
- RNI 4.12.1 to RNI 4.16.1 using upgrade plus tools
- RNI 4.13.1 to RNI 4.16.1 using upgrade plus tools
- RNI 4.14.1 to RNI 4.16.1 In Place upgrade
- RNI 4.15.1 to RNI 4.16.1 In Place upgrade

The following upgrade path was tested for deployment with the Oracle database:

- RNI 4.15.1 to RNI 4.16.1 In Place upgrade

Database changes

This release includes updates to the RNI database to remove unused tables, views, and stored procedures for better performance and maintainability.

The following tables were removed:

- TblIntervalMaster
- TblIntervalDetail
- tblCITierData_3
- tblLPCollectorAttempts

Associated views and stored procedures were removed or refactored, as appropriate.

Removed APIs

To improve maintainability and enhance security, many unused APIs were identified and marked as deprecated in RNI 4.15.1. These APIs were removed in RNI 4.16.1 and include the following:

MeterInfoService

/meterinfo

/meterinfo/jobid

/meterinfo/jobid/cancel

About service

/aboutCableTest

/validate

/jobId

/jobid/cancel

FWDL

/fwdl/jobid/flash

Integration updates

This section describes changes in the RNI 4.16.1 release related to integrating the system with third-party utility applications using standard interfaces.

MultiSpeak changes

RNI 4.16.1 contains no MultiSpeak changes.

CMEP changes

Alarm Report updates

Alarm report record version was updated to **20250501**.

The RNI 4.16.1 release includes the following new alarm. No alarms were modified.

Description	Service Type	Severity	Data Set	Bit Position
Meter Outage Counter	Electric	Minor	R4	59

Network infrastructure testing

For this release, the RNI team performed compatibility testing with the following Base Station firmware releases. While this list does not represent the full suite of compatible solutions, it provides visibility into Sensus interoperability testing. Please note that these firmware versions are not required for the installation of RNI 4.16.1.

Base Station Type	Operating System Versions Tested	
	Unified	Legacy
M400	3.2.0, 2.9.3	120229r6.3.8
M410	3.2.0	

Base Station Type	Operating System Versions Tested	
	Unified	Legacy
M420	3.2.0	
S100	3.2.0, 2.9.3	101030r21-update.lynx 101030r21-update.tomcat
R100NA	3.2.0, 2.9.3	
R100E	2.9.1	
S1600E	3.2.0	

****Legacy Note:** *Extremely limited test coverage is completed on Legacy, and some functionality could be missing or not fully operational. Sensus recommends customers update to the Unified Operating System.*

RNI resolved issues

The following issues were resolved in RNI 4.16.1.

Number	Sensus Care #	Problem Description	Description of Solution
5683	1096375	Aclara kV2c (DT109) - Add support for sources 262-283 (firmware version 4.1.1.9).	Sources have been defined and populated in RNI outputs.
6375		If an Oracle RNI has a meter configured with multiple datasets that have the same source IDs and channel number combinations, and have a missing interval tracked in the Load Profile Interval Report (LPIR) ESM report, the Backfill report fails with error "unable to get a stable set of rows in the source tables."	Remove the corresponding radio endpoint ID (also referred to as repID or FlexNet ID) from report_tracking for the Backfill Report.
8703	1061936	The CMEP Snapshot report for ESM takes a long time to complete.	Modified the CMEP Snapshot report supporting procedure (CmepSnapshots_reporttable) to improve performance.
8733	1061465	An event queue bottleneck may occur when large numbers of messages are received (e.g., 30k records) resulting in processing delays.	Active MQ memory was increased to process more events faster.
8758	995834	RNI Upgrade Process results in Failed Login for Active Directory deployment because customized keycloak's users.filter field gets overwritten/reverted when default realm is provisioned during upgradePlus.	Modify the realm files with the customized users.filter. Then reset realm and re-provision it if it does not match the keycloak database after upgradePlus.
8780	1064398	Meters that are configured on Non-Tier rate codes have kWh received included in the ItronCMEPMeterReadingReport.	Database logic was enhanced to filter reads down to the defined rate code entries and exclude non-Tiered rates when kWh received is configured.
8784	1037509	Load Profile chart intermittently fails to load.	Data retrieval for charts was modified to retrieve data only for the selected channel.
8813	1067316	Missing records from tblfirstonair_1 and tbllastonair_1 records due to deadlocks.	Modified dependent procedure post_firststandlatonair to resolve deadlock issues.
8856	1064053	When one user (User A) generates a CSV in Device Manager that is large enough to get pushed to 'System Intelligence > Event History' and then another user (User B) clicks the 'Download CSV' link from Event History the original 'Generate CSV' event will show 'Requested By' = User B with an event time from when User A generated the CSV.	The 'Generate CSV' event correctly displays the user that created that event.
8865	1062680	Performance of CMEP Time Of Use Report dropped after RNI upgrade.	Database logic was enhanced to resolve processing bottlenecks.
8876	1067312	MultiSpeak Get Event History Data response is always empty.	Fixed a bug in the myBatis mapping file where a column name was missing.

Number	Sensus Care #	Problem Description	Description of Solution
9320	105755	The search field in the Configuration tab might not display in certain cases.	Provided a fix in the UI to handle unexpected cases and not block the display of the search field.
9345	1074710	Table backster_del_history not getting purged of old data.	Updated dependent procedure to handle backster_del_history table purge based on retention days.
9567	1077830	The application fails to refresh the user list after user creation.	The issue was addressed by adding retry to the user list refresh and updating the LDAP connection pool TestOnBorrow property to true.
9761	1074814	Reassigning meters from one Customer ID to another should not disable database foreign keys.	Database logic modified to no longer adjust database structures when moving meters and sensors from one Customer ID to another. This is now wrapped inside of a single transaction.
9840	1085130	RNI is unable to successfully conduct over the air firmware download to a Stratus IQ+ meter due to larger size of firmware image.	RNI was updated to handle larger firmware images.
9931	1082833	Purge of aged non-partitioned data fails intermittently (MSSQL).	Database performance was examined and other areas of high contention regarding reads were alleviated which allows the partitioning to get the exclusive access needed.
10218	1089208	CMEP: ItronCMEPReport not reporting DT96 and DT121 when configured with seasonality rate codes.	CMEP logic was updated when rate codes required is set to true for DT96 and DT121. These meters are configured with seasonality and only reads that match some of the rate code will be presented.
10243	1089208	DM: DT96 and DT121 when configured with seasonality rate codes are not reporting accurately when rate code toggle set to true	Device Manager was updated when rate code toggle is set to true for DT96 and DT121. These meters are configured with seasonality and only reads that match some of the rate code will be presented.
10273	1089617	DM: DT109 incorrect rescaling of power factor (PF) values for a specific meter source ID (222).	Source metadata was adjusted to scale correctly.
10283	01089092	Increasing the number of crypto threads in ncprogs beyond eight results in REDIS exceptions and errors.	Increased the size of the REDIS thread pool in ncprogs to allow it to scale linearly with the number of crypto threads.
10294	1089501	User with insufficient privileges can retrieve and set Power Quality settings on a device.	User now needs the "Modify DB attributes of a device" and "Modify radio configuration Over-The-Air" permissions to see the GET/SET buttons.
10442	1093966	From the Device List page, a user can send a command to disconnect the service switch even if the meter is set to "Do Not Disconnect."	If a user sends a disconnect command to a meter that is set to "Do Not Disconnect," it is marked as failed.

Number	Sensus Care #	Problem Description	Description of Solution
10555	1097097	Unified Base Station code v3.2 introduces a change in uplink message handling that requires an explicit acknowledgement from the RNI. Malformed messages are not acknowledged by the RNI causing Unified Base Station version v3.2 to repeatedly resend the message.	The RNI was updated to explicitly acknowledge Base Station messages containing malformed payloads.
10641	1107407	New meters will soon ship with a new FNV2 firmware signing certificate. RNI should allow meters to have either the old or the new certificate.	Exclude FNV2 firmware Signing certificate from the certificate sync processing to allow either certificate to be left on the meter.
10699	01096812	Certain ActiveMQ Queues have forever lingering messages causing RNI backups and service interruptions.	Fix is added to set TTL (with ExplicitQOS flag Enabled) for JMSClient so that the lingering messages are deleted after TTL is reached/expired. The TTL, for affected modules, is configurable through properties files.

RNI known issues

The following user-reported issues will be assessed for a future RNI release.

Number	Summary	Impact/Workaround
8267	When a Sonix IQ valve is opened/closed using FieldLogic, the RNI fails to display the related valve information in Device Details.	Valve Change Time, Volume Reading, Temperature Reading, Pressure Reading, and Valve Actuations information are missing for Sonix IQ valve changes initiated via FieldLogic.
10783	User with "CATHODIC_ADMIN" role without the "SERVICE_SYSTEM_ADMIN" role cannot access the Sentry Users tab in the System Administration application.	User needs the "SERVICE_SYSTEM_ADMIN" and "CATHODIC_ADMIN" roles to see the SentryPoint Users tab in the System Administration application.
10814	For MultiSpeak History Logging, when a large number of meters is submitted in a single batch, some meters may display an incorrect status of "Processing" and status does not update to reflect success/failure.	Limit the batch size for a MultiSpeak command (that is supported by Device Manager logging) to 100 meters or less.
10819	HHF export of instrumentation profile data includes other data set IDs when the IP data is requested for a specific data set ID that includes the same start and stop times.	HHF export on individual data set IDs can include information for other data set IDs.

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- 2) A leading global water technology company.

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Sensus
639 Davis Drive
Morrisville, NC 27560

Tel +1 800.638.3748
xylem.com/sensus

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