

bNexia is a driver designed to consolidate query and command interactions with the Nexia API and distribute individual HVAC zone updates to connected bTstats. Projects require only one bNexia driver per "Location" as defined by Nexia. This driver runs as a background process and has no interface exposed to a user (aside from the Admin Server) - the standard thermostat interface is provided by one or more paired BNet Solutions bTstat drivers.

BNETXIA V7 UPGRADE NOTE

Version 7 addresses the majority of driver support requests by providing a streamlined setup and bTstat pairing process. Unfortunately, while implementing the new process, I was not able to maintain full backwards compatibility. As a result, there is NOT an unattended upgrade path to v7. Specifically, when bNexia is upgraded to v7, all previously paired bTstat instances will require re-pairing using the new Thermostat Device Selector property. Nexia setup, including Mobile IDs and Activation Codes, are retained during the upgrade and will continue to properly function. See the Upgrade to v7 section for upgrade instructions.

SETUP

First step is to setup your Thermostat(s) on Nexia's site. This step is likely already complete but confirm they are named appropriately (and uniquely), their schedules are set and of course that they are online and connected.

Next, install one bTstat driver (not this driver) for each HVAC zone - bTstat driver and documentation are available on the BNet Solutions website.

bNexia Setup:

- 1) Within your Control4 project, install a single instance of the bNexia driver
- 2) On the navigation banner on Nexia's website (www.mynexia.com), go to 'Mobile' and click 'Add Mobile Device'. You will need 1 new Device per location (Most will only have a single location). What you name it doesn't matter, mine is call bNexia. Choose 'WiFi' as your mobile connection. Leave all the Thermostats selected under 'Devices this mobile device can control'. Click Save
- 3) Click 'Get Activation Code' on your newly created Mobile Device. There is an issue with Activation Codes that begin with a 0 (zero). If your code starts with a zero, go back and request another. Nexia Activation codes are valid for a single use only - if you repeat the setup, you will require another Activation Code.
- 4) Within your Control4 project, enter step 3's Activation Code into the Activation Code property
- 5) Confirm Mobile ID and API Key properties are populated
- 6) Set Location Name property - if there is only one location associated with your Mobile Device, bNexia will select that location for you
- 7) Select the associated bTstat instances via the Thermostats property device selector. In most cases, all bTstat instances should be selected
- 8) Set Poll Interval. Unit is in minutes - mine is set to 1
- 9) bNexia setup is complete however each bTstat instance must now claim an HVAC zone - reference bTstat documentation for details

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UPGRADE TO V7

After upgrading to bNexia v7, all associated bTstat instances must be relinked using the Thermostat device selector property. Do not delete any bNexia or bTstat instances. Relinking only takes 90 seconds in my 10-zone production project - much quicker than starting over!

- 1) In bNexia's properties, select the associated bTstat instances via the Thermostat device selector property
- 2) For each bTstat instance, (a) run the "Release Zone" action and (b) reselect the zone in the Zone Name property. Within your project, you can filter by Device Type "thermostatV2" to quickly locate all bTstat instances

PROPERTIES

DRIVER SETUP

Upgrade Mode	BNet Solutions drivers can automatically update themselves. Options are "Automatic", "Minor Only" and "Upgrade Now". See "Upgrade Mode" section below
Admin Server Enabled	Enables / Disables the driver's Admin Server. See "Admin Server" section below
Admin Port	Listening port assigned to Admin Server
Admin Token	Token required to access the driver's Admin Server

LICENSE SETUP

License Key	Key used to permanently enable driver functionality
License Status	Display current state of driver's license
Driver Version	Installed driver version
MAC Address	Unique network interface identifier for the Controller

NEXIA SETUP

Connected bTstats	List of bTstats communicating with bNexia
Activation Code	Code received from Nexia used to validate bNexia as a Nexia mobile device
Mobile ID	Nexia assigned ID for bNexia
API Key	Nexia assigned key for bNexia
Location Name	List of available location associated with Nexia account
Poll Interval	Interval, in minutes, to retrieve the current state of Nexia thermostats. Zero (0) disables polling

THERMOSTAT SETUP

Thermostats	Device Selector property used to associate bTstat driver instances with this bNexia driver
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DEBUG SETTINGS

Debug Mode	Sets where the driver outputs debug information. See "Troubleshooting" section below for more information
Debug Level	Sets how much debug detail the driver outputs

ADMIN SERVER

BNet Solutions drivers' have a built-in webserver that looks and behaves like the Properties, Actions and Lua Output tabs for the driver in Composer. The Admin Server's default port for the bNexia driver is 40100 and is configurable in the driver's properties. Using a web browser, navigate to [http://\[controller ip\]:40100](http://[controller ip]:40100) where "controller ip" is the IP Address of your Control4

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Director (EA5, EA3, EA1, etc). For example, <http://192.168.1.100:40100>. The Admin Server is protected by a challenge page that requires a token to continue. By default, the token is "bNexiaAdmin". Once authenticated, the token is stored in a cookie (technically hashed, then stored) so you won't need to log in every time. The token is configurable via the driver's property page. The Admin Server is enabled by default but can be disabled entirely via the driver's property page.

KNOWN ISSUES AND LIMITATIONS

- There is an issue with Activation Codes from Nexia that begin with a 0 (zero). If you are issued a code that begins with a zero, go back and get another (the underlying JSON library trims leading zeros)
- The Thermostat device selector property specifically searches for devices installed from "bTstat.cz". If bTstat instances are installed but not reflected in the Thermostats property, confirm the driver installation source is exactly "bTstat.c4z".
- This driver must be installed from a file named "bNexia.c4z" otherwise bLicense (the driver used to purchase activation keys) will not recognize it as a BNet Solutions driver.
- After the driver is updated via "Update Now", dynamically populated drop-down boxes may appear blank. Refresh the project (File/Refresh) or simply change focus away from then back to this driver to repopulate. This seems to be a Composer issue.

UPGRADE MODE

BNet Solutions drivers can automatically update themselves. New driver functionality or capability is typically packaged as an incremental "Major" version (v3, v4 etc). "Minor" versions (v2.3, v2.4) are typically maintenance releases that update underlying libraries, address a specific issue or usability concern.

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| Automatic | When "Automatic" is selected, the driver will upgrade/update itself when a new version is available. "Automatic" Upgrade Mode is strongly suggested. |
| Minor Only | Restricts the driver from upgrading between major versions but allows updates between minor versions. |
| Update Now | Checks for and upgrades to any newer Major or Minor version. |

TROUBLESHOOTING

All BNet Solutions products have an additional 'Submit' Debug Mode. With this mode selected, the driver creates a unique log file to capture the Lua output based on the selected Debug Level (usually set to "5 - Debug"). Once 'Submit' Debug Mode is deselected, either manually or when the Debug Timer expires, the Submit Debug Log is uploaded to the BNet Solutions Server for analysis.

The server notifies me when Submit files are uploaded but if you have not purchased a license, I have no way to reach out to you for troubleshooting so please email me your contact information.

TRIAL AND PURCHASE

All BNet Solutions drivers are fully functional for a 7-day Trial Period. To continue usage after the Trial Period, you will need to purchase a license. To do so, install the bLicense driver from <https://bnet4solutions.com> and follow the documented purchase steps. There are no refunds so please review the documentation for any limitations or known issues and determine acceptance during the Trial Period.

LEGAL

By using this driver, you are indicating that you have read and agree with the Policies and Terms

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that govern its usage as published [here](#).

MY CONTACT INFORMATION

You can reach me at blucas@bnet4solutions.com for comments or questions.

CHANGE LOG

- v1 - 1/20 Beta Release
- v2 - 5/19 Initial Release
 - Consolidated all Nexia interactions into bNexia - bTstat now only proxies commands and updates via bNexia making bTstats cloud service agnostic
 - Added functionality to support new bTstat features including Auto system mode, Fan Circulation, Nexia Presets (None, Home, Away and Sleep) and Extras
- v3 - 6/19 Fixed issue when thermostat scheduling is disabled resulting in Hold Mode settings omitted from Nexia query
- v4 - 7/19 Resolved lost activation status after unclean director shutdown
- v5 - 8/19 Updated architecture modules
- v6 - 11/19 Added auto-update functionality
- v7 - 6/20 Streamlined setup and zone claim/release process