

What is claimed is:

1. A method for obtaining device data using an edge controller from one or more local devices at a local facility and providing a representation of at least some of the device data to a remote server, the method comprising:

receiving configuration information at the edge controller;

executing one or more virtual containers and/or virtual machines at the edge controller;

configuring one or more of the virtual containers and/or virtual machines using the received configuration information;

obtaining device data from one or more of the local devices under the control of one or more of the configured virtual containers and/or virtual machines;

generating the representation of at least some of the device data under the control of one or more of the configured virtual containers and/or virtual machines by:

filtering at least some of the obtained device data;

normalizing at least some of the obtained device data; and/or

translating at least some of the obtained device data into a common language and/or common format that is compatible with and expected by the remote server; and

sending the generated representation of at least some of the device data to the remote server.

2. The method of claim 1, wherein generating the representation of at least some of the device data under the control of one or more of the configured virtual containers and/or virtual machines comprises filtering at least some of the obtained device data to only include filtered device data in the generated representation of at least some of the device data.

3. The method of claim 1, wherein generating the representation of at least some of the device data under the control of one or more of the configured virtual containers and/or virtual machines comprises normalizing at least some of the obtained device data to include normalized device data in the generated representation of at least some of the device data.

4. The method of claim 1, wherein generating the representation of at least some of the device data under the control of one or more of the configured virtual containers and/or virtual machines comprises translating at least some of the obtained device data into a common language and/or common format that is compatible with and expected by the remote server, and including at least some of the device data in the common language and/or common format in the generated representation of at least some of the device data.

5. The method of claim 1, further comprising:
the edge controller at least selectively providing closed loop control over a function of one or more of the local devices.

6. The method of claim 1, further comprising:
the edge controller receiving and executing control commands provided by the remote server for controlling one or more of the local devices.

7. The method of claim 1, wherein the device data obtained from the one or more of the local devices comprises a plurality of data items each having a data item format, and wherein the received configuration information defines which of the plurality of data items are used in constructing the representation of at least some of the device data that is sent to the remote server.

8. The method of claim 1, wherein the received configuration information defines a data format for the generated representation of at least some of the device data that is sent to the remote server.

9. The method of claim 1, wherein generating the representation of at least some of the device data under the control of one or more of the configured virtual containers and/or virtual machines comprises performing one or more local data analytics on at least some of the device data, wherein the received configuration information defines at least one of the one or more local data analytics.

10. The method of claim 1 further comprising:

using a cellular connectivity feature of the edge controller to initially establish a cellular connection between the edge controller and the remote server; and
receiving the configuration information at the edge controller across the cellular connection between the edge controller and the remote server.

11. The method of claim 10, further comprising:
establishing a non-cellular connection to the remote server via a local gateway; and
sending the generated representation of at least some of the device data to the remote server across the non-cellular connection to the remote server.

12. The method of claim 1, further comprising:
the remote server, responsive to receiving the generated representation of at least some of the device data, determining one or more set point values for one or more of the local devices and sending one or more control commands to the edge controller that includes the one or more set point values.

13. An edge controller for obtaining device data from one or more local devices at a local facility and providing a representation of at least some of the device data to a remote server, the edge controller comprising:

a network communication port for communicating with the remote server through a gateway at the local facility;

a cellular communication port for communicating with the remote server through a cellular communication network;

a device communication port for communicating with one or more of the local devices at the local facility;

a controller operatively coupled to the network communication port, the cellular communication port and the device communication port, the controller is configured to:

receive configuration information over the cellular communication port; and

install the received configuration information on the edge controller, wherein the installed configuration information configures the controller of the edge controller to obtain the device data from

the one or more local devices and to send a representation of at least some of the device data to the remote server.

14. The edge controller of claim 13, wherein the configuration information, once installed, configures the controller to establish communication with the remote server via the network communication port.

15. The edge controller of claim 13, wherein the configuration information defines at least in part the representation of at least some of the device data that is sent to the remote server.