

How to install an Edge redundant system (second controller) on existing, already configured system

(K&B)

- from 1.3.3 to 1.6.4
- from 1.1.5 to 1.6.4

Before the update begins, it is assumed that:

- There is controller A with expansion boxes already working on the installation and that control is connected to the Automation Edge network. It will be the default active controller.
- There is another controller B, that has to be added to the system and will be the default stand-by controller.
- Safety communication bus has been connected and is properly wired from all expansions boxes to Safety controller - controller B - as per Edge Comm & Power wiring diagram.
- Controller B is OFF
- A router is installed and connected to Controller A & B
- Ethernet cable is disconnected from controller B

Instructions:

1. Update software on controller A
2. Perform module detection from Control A
 - a. Go on Module detection Page to make sure FW update of modules is completed and all modules are seen on the automation Edge network
 - b. Make sure the automation bus LED is green on all expansion boxes.
3. Go to controller B
4. Unplug communication terminal Safety from Controller B-
5. Disconnect Ethernet from controller B
6. Turn Controller B On
7. Update Software on controller B
8. Connect safety network back into Controller B
 - a. Make sure the safety bus LED is green on all expansion boxes.
9. Plug back Ethernet cable in controller B
10. Wait 2 minutes for the configuration to be pushed to the other system and perform a controller switch over to validate the redundancy system.
11. Validate that system can be reached on gsiedge.com

How add an Edge redundant system and new rooms to an existing single controller system- (Smilpkr)

- from 1.3.3 to 1.6
- from 1.1.5 to 1.6

Before the update begins, it is assumed that:

- There is controller A and expansion boxes already working on the installation and that controller is connected to the Automation network (Communication line). It will be the default active controller.
- Controller A already controls some rooms with animals (minimal downtime required).
- There is another controller, controller B, the default stand-by controller, that also has expansion boxes that have to be added to the system. This controller and these expansion boxes correspond to the new rooms that are going to be added to the system.
- Automation communication bus has been connected and is properly wired from new expansions boxes to controller A.
- Safety communication bus has been connected and is properly wired from existing system's expansions boxes to controller B as per Edge wiring diagram.
- Ethernet cable is disconnected from controller B
- Controller B is OFF and its safety communication connector has been unplugged.

Instructions:

1. Make sure license for new rooms have been pushed on controller A
2. Make software update on controller A
3. Perform module discovery from controller A.
 - a. All expansion boxes should be detected
 - b. Their safety link LED should turn green.
4. Complete site configuration on controller A
 - a. Create 1 new room
 - b. Configure equipment- assign I/O, calibrate inlets.
 - c. Setup all room parameters including ventilation grid, probe assignment, alarms, ...
 - d. Validate that all probes and loads works using the man/auto and On/Off switch
 - e. Duplicate new room for each other room to add.
 - f. Assign I/Os in each new room
 - g. Calibrate inlets in each new room
 - h. Validate that all probes and loads works in each new room using the man/auto and On/Off switch.
5. Controller B at ON
6. Update software on controller B
7. Check all expansion boxes connection to safety link – safety LED link should be green.

8. Connect the Ethernet cable to the Controller B
9. Validate that controller see each other using the redundancy icon on the main screen and the router/switch/hub network lights or configuration page.
10. Controller A is the active controller.
11. Wait 2 minutes for the configuration to be pushed to the other system and perform a controller switch over to validate the redundancy system.
12. Validate that system can be reached on gsiedge.com

How add an Edge redundant system on an existing system with individual EDGE control (R&D Lhmn)

Before the update begins, it is assumed that:

- There are 2 independent systems consisting of one controller and expansion boxes already working on the installation. Controller A for system A and controller B for System B; each controller is connected to the Automation Edge network.
 - Both controllers are active in some rooms with animals.
 - It is decided that controller A be the default Active controller tied to Automation network and control B would be the default back-up controller tied to Safety network.
 - Automation communication bus is properly wired from system expansions boxes to controller A as per Edge wiring diagram.
 - Safety communication bus is properly wired from existing system's expansions boxes to controller B as per Edge wiring diagram.
 - Ethernet cable is disconnected from all controllers.
1. Perform a Software update on controller A
 2. Perform a Software update on controller B
 3. Add/Transfer licences from controller B to controller A
 4. Disconnect Ethernet cable from controller B
 5. Disconnect automation network from controller B
 6. Connect System B expansion Boxes automation network to Control A automation network
 7. Disconnect safety network from controller A
 8. Perform module detection from controller A to detect expansion boxes on the automation network.
Modules firmware should be updated at this time
All expansion Automation LED should be green.
 9. Connect System A expansion Boxes Safety network to Control B safety network.
 10. Check all expansion boxes connection to safety link;
All expansion boxes safety link LED should turn green.
 11. Create new room on controller A.
 12. Configure and setup new room on controller A by either duplicating an existing room or starting from scratch.
 - a. Configure equipment- assign I/O, calibrate inlets.
 - b. Setup all room parameters including ventilation grid, probe assignment, alarms, ...
 - c. Validate that all probes and loads works using the man/auto and On/Off switch
 13. Connect the Ethernet cable to controllers B
 14. Controller B receives new site configuration.
 15. Controller A is the active controller.

16. Wait 2 minutes for the configuration to be pushed to the other system and perform a controller switch over to validate the redundancy system.
17. Validate that system can be reached on gsiedge.com