Gallagher Controller 6000

Upgrading Factory Controllers to Latest Software

Technical Information Paper

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Document History

Edition	Date	Author	Comment
1.0	5/05/2021	Vishnu	General Release

1 Background

This document contains information to help you understand the steps involved in upgrading a Controller 6000 from factory version (v7.10 or later) to latest supported versions (v8.20 or later)

2 Compatibility

- Gallagher Command Centre vEL8.20 (or later release).
- Gallagher Controller 6000 vCR8.20 (or later release).

3 Upgrading factory Controller to latest software using Default IP

When configuring Controller 6000 using initial default IP web config, basic information is cached which includes Controller IP, Server IP, subnet mask, and gateway.

When Dip Switch 2 and 3 is turned OFF this information is retained which helps the Controller to communicate to the server when controller is connected to the server network.

Note: If Dip Switch 2 and 3 are NOT turned OFF, the controller address will need to be configured multiple times during the upgrade as it drops its IP config upon restart.

For more information on getting the Controller online using initial default IP, please watch Top Tip video:

Getting a Controller Online using webpage addressing.

This is the common way to address the Controller 6000 where BootP is disabled or does not work (i.e., where controller and server are on different subnets).

Additionally, the following process flow explains the steps that are required to upgrade the factory Controller to latest released version using the Default IP method.

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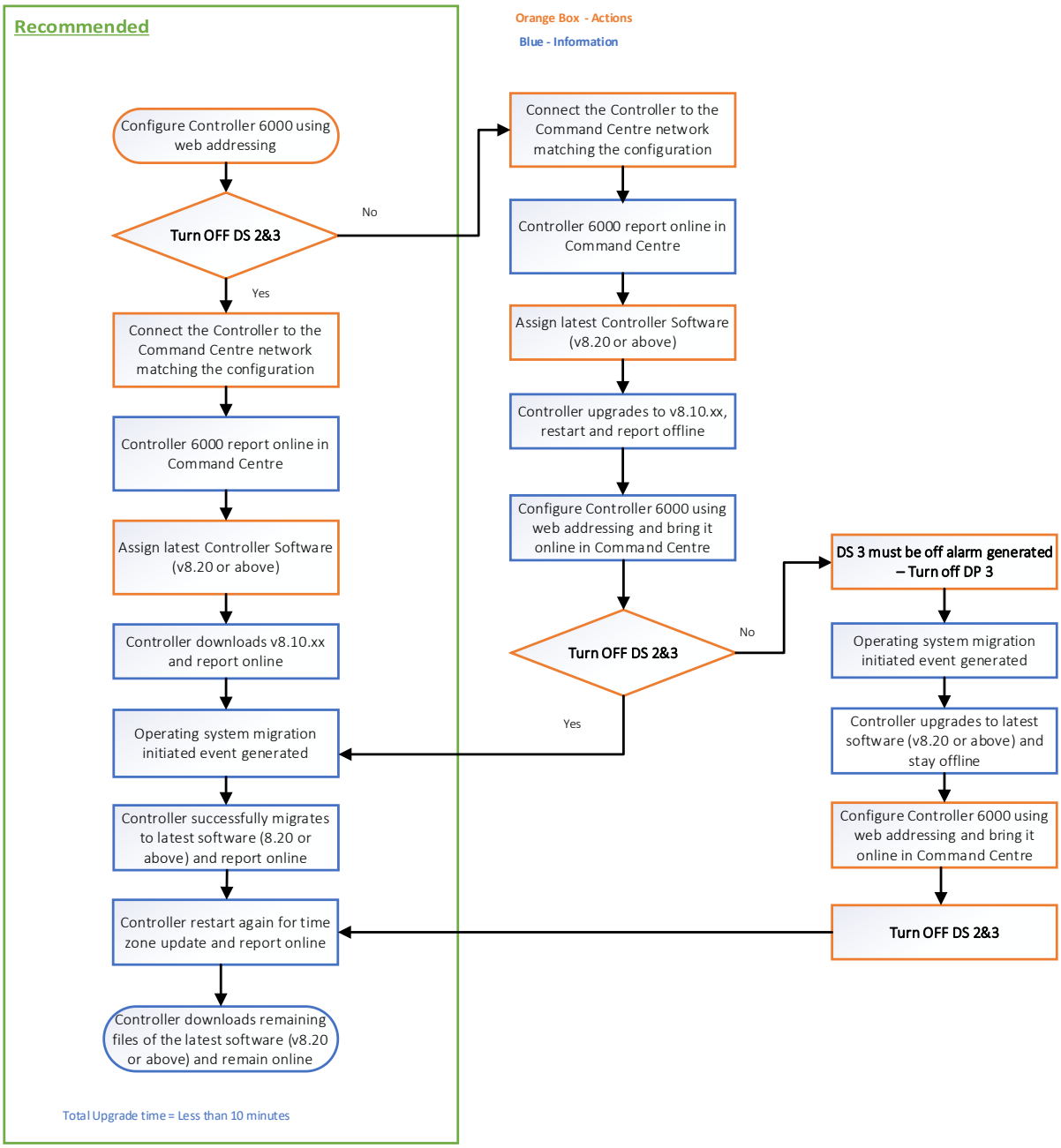

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4 Upgrading factory Controller to latest software using BootP

When Controllers are brought online using BootP, they get issued a temporary IP to communicate to the Command Centre Server but does not cache information and server cannot send down config changes due to major changes breaking compatibility in v8.40. This creates the need to keep the Dip Switch 2 ON until the Controller has been upgraded to match the Command Centre version.

BootP can only be used where the Controller and Command Centre are both on same subnet.

Note: When Dip Switch 2 is ON, the Controller will drop its config which includes pinned certificate so when Controller connects to server after the restart, the certificate will not match the server. This causes the Controller to remain offline and generate 'Authentication of [Controller] failed – invalid certificate' alarm in Command Centre. Therefore a 'Revalidate certificate' override is required to bring the Controller online after the Controller restart with DP 2 ON.

The following process flow has been created to explain the steps involved to get a factory Controller upgraded to the latest release version using BootP.

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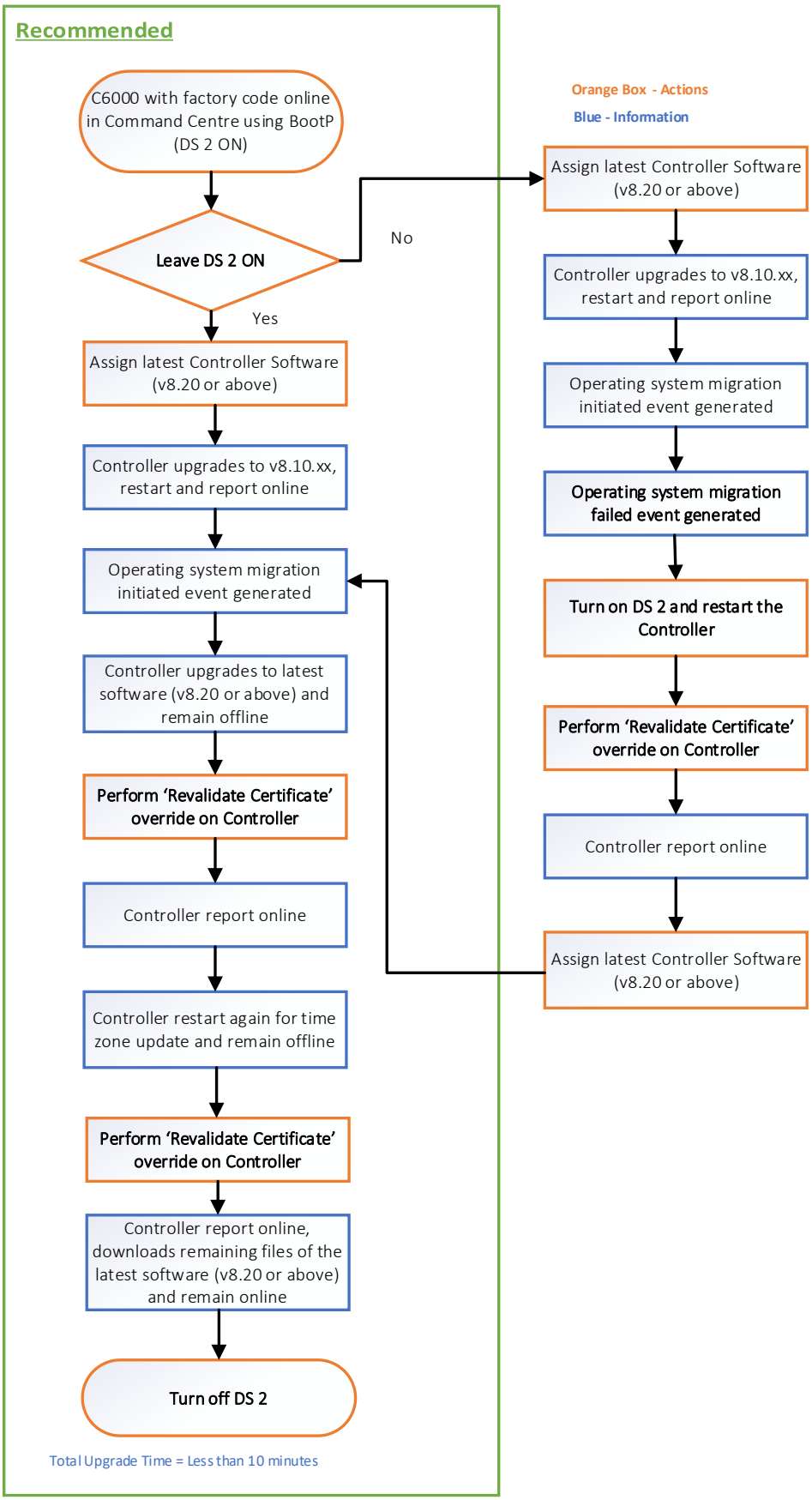

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5 Upgrading factory Controllers to latest software using DHCP

When Controllers are brought online using DHCP, they get issued a temporary IP to communicate to the Command Centre Server but do not cache information and server cannot send down config changes due to major changes breaking compatibility in v8.40. This creates the need to keep Dip Switch 2 ON until the Controller has been upgraded to match the Command Centre version.

Note: Controller 6000 with WinCE OS (v8.10 or older) requires Dip Switch 2 and 3 ON for DHCP but Controllers with Linux OS (v8.20 or later) only require Dip Switch 2 for DHCP. Therefore, Dip Switch 3 must be turned OFF when "`Dip Switch 3 must be OFF`" alarm generated after Controller 6000 is upgraded to v8.10. If you do not turn OFF DP 3, Controller cannot be upgraded beyond v8.10.

The following process flow has been created to explain the steps involved to get a factory Controller upgraded to latest release version using DHCP.

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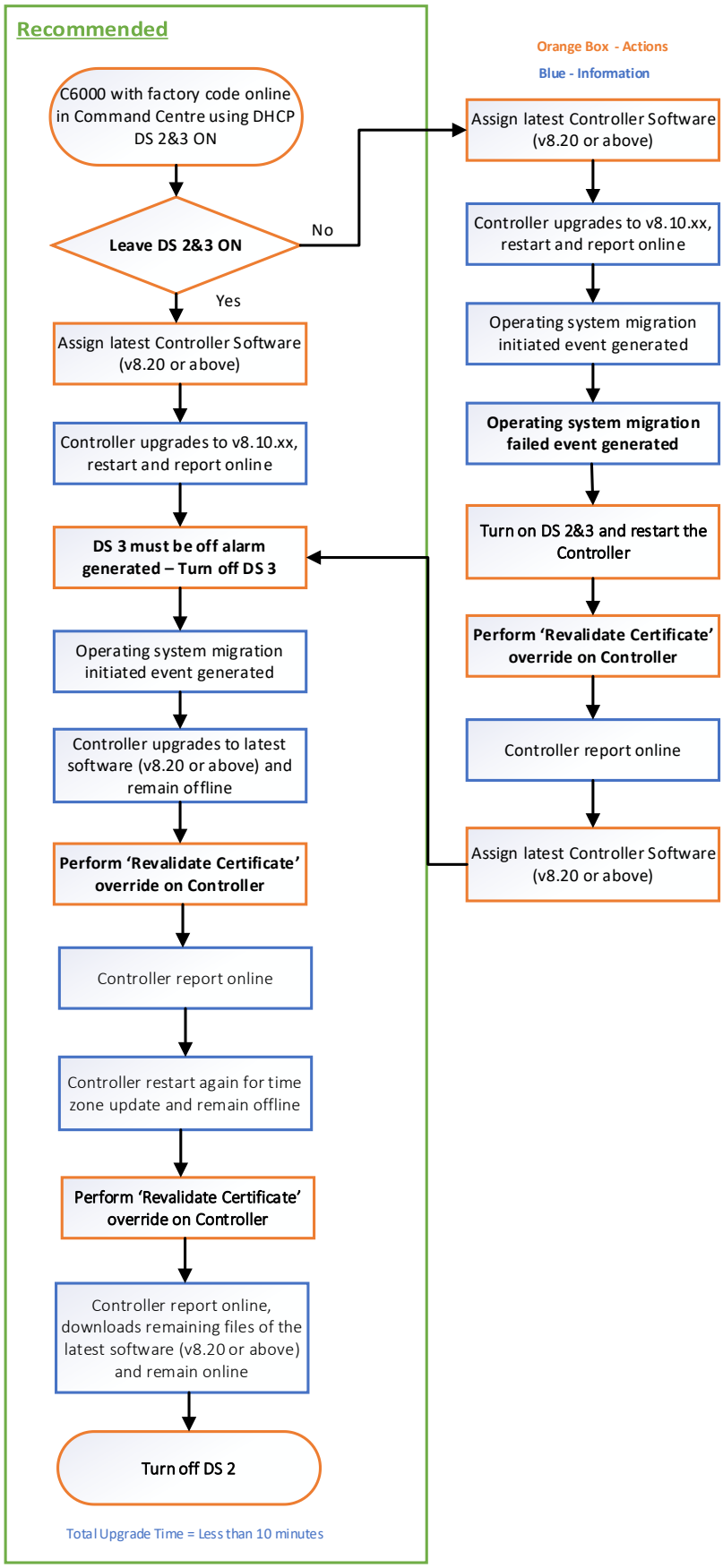

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6 Frequently Asked Questions

1. **Why does the Controller upgrade to v8.10 before migrating to Linux OS?**

   Factory Controllers go through a two-step migration process. First, they get upgraded to v8.10 Controller software where they download necessary files for Linux migration.

2. **Why do I have to revalidate the certificate after a Controller restarts following the use of Dip Switch 2?**

   When Dip Switch 2 is ON, the Controller will drop its config which includes pinned certificate so when Controller connects to server after the restart, the certificate will not match the server, causing the Controller to remain offline and generate '`Authentication of [Controller] failed – invalid certificate`' alarm in Command Centre. Therefore a '`Revalidate certificate`' override is required to bring the Controller online after the Controller is restart with Dip Switch 2 ON.

3. **Why do Controller's restart after a time zone change?**

   Time Zone changes to not dynamically update in all Linux OS driver modules, thereby requiring a Controller restart to take effect across the entire system.

4. **Why do Controllers not come from the factory pre-loaded with the Linux OS or more recent Controller software?**

   Controllers shipped out of the factory need to work on sites running earlier version of Command Centre as they expand. When the Controller 6000 Linux OS was first released (v8.20), most sites were still on Command Centre versions that would not support Linux OS. Therefore, WinCE OS has remained as the default OS for the Controllers shipped out of the factory.

   Gallagher is now reviewing the options for moving the factory default OS to Linux, given more sites now support the Linux OS out of the box. This review includes options for reliably downgrading the Controller OS for those sites running older version of Command Centre which do not support the Linux OS.

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