POL00337656

Computacenter

Post Office Ltd

Post Office Branch Counter Refresh

24 September 2018, V0-21

HNGA Release and Compliance Baselines



Document classification: Unrestricted

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1 Introduction

1.1 Document Purpose

This document aims to describe how to deploy a new version of the Horizon Next Generation Application (HNGA) into the Post Office Branch Counter estate using SCCM Compliance Baselines.

The document will describe the end to end process from configuring Applications, Configuration Baselines and Installation Task Sequences, all of which are used in the Post Office environment to ensure that the Horizon Next Generation Application (HNGA) remains compliant for use in Post Office branches.

It also describes the steps required to fully test the deployment of the HNGA application and also how to deploy it into the production environment.

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2 Horizon Next Generation Application Introduction

The Horizon Next Generation Application (HNGA) is the application used by Postmasters in every Post Office branch when serving customers. Although the Postmaster only ever sees one GUI (Graphical User Interface), HNGA is not a single application, it is actually made up of a suite of individual applications. Those applications are currently as follows: -

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12.

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Note that it is possible that the number of applications that make up HNGA may increase or decrease over time. Always refer to the HNGA Release bundle document (as supplied by the CC packaging team) for an up to date list of the component applications and the versions that make up each specific release.

Fujitsu develop the HNGA application for the Post Office and whenever Fujitsu release a new version, one or more of the above components may change to a newer version. SCCM Configuration Baselines are configured and used to ensure that HNGA is kept at the correct version on every branch counter. Each release of HNGA has its own Configuration Baseline which contains a single Configuration Item. The Configuration Item contains a check against 12 registry settings, one for each specific version of each of the individual applications that make up HNGA.

The following section on Configuration Baselines explains how they have been designed to keep counters HNGA compliant and at the required version.

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3 How SCCM Configuration Baselines are Used to Manage HNGA

3.1 Configuration Baselines Introduction

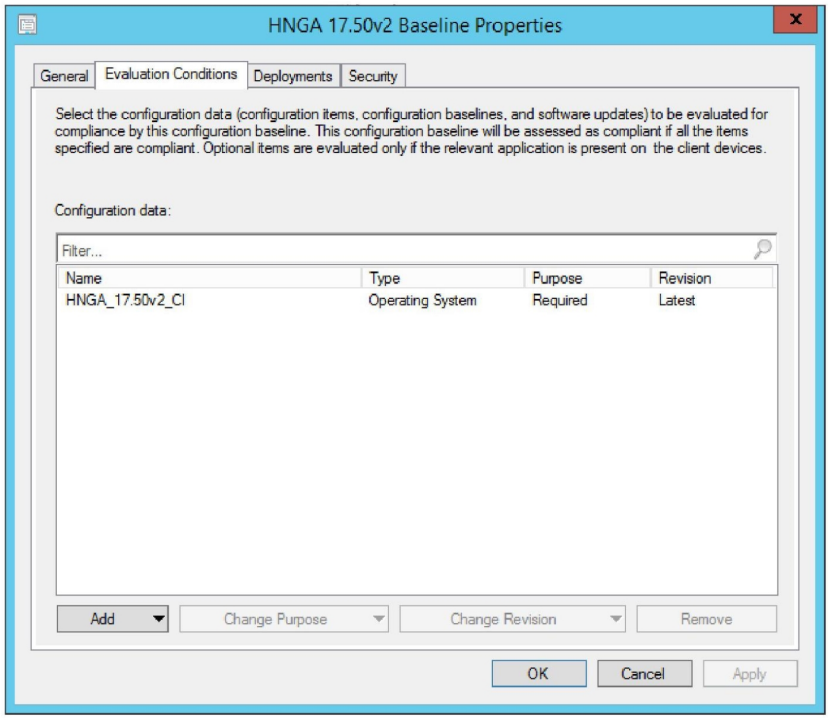
SCCM Configuration Baselines are used to check whether or not a device is compliant to a predetermined set of Configuration Items. For example, you can check if a specific software application is installed, if a particular registry setting is correctly applied, or even if a particular file is located on a device.

3.2 The Use of Configuration Baselines on Branch Counters

For Post Office there is a customer requirement that a branch counter is always kept compliant for a specific version of HNGA. The counter must not be allowed to run unless it is compliant to the correct version of HNGA.

Each release of HNGA must have its own Configuration Baseline configured in SCCM which is then deployed to a base device collection. This allows easy targeting of the Baseline by using Include Collection rules to target the baseline at collections of devices. Each baseline is made up of a single Configuration Item that contains 12 registry checks, one for each of the component applications that make up the HNGA suite.

In the example below, one Configuration Items make up the HNGA 17.50v2 baseline. If this baseline is deployed to a branch counter, the Configuration Item will be tested and the counter will only be classed as compliant if the Configuration Item return a compliant value.



The most important point to make about Configuration Baselines is that **every Post Office Branch Counter can only have one Configuration Baseline targeted at it**. Also, the only baseline that can be deployed to the counter must be for a version of HNGA (although this will change from Build version 28 onwards). This means that no other baselines (other than Force Compliance which is discussed later in this chapter) such as the BitLocker Protection compliance baseline should be targeted at a Post Office branch counter. This is required because of the way that the scripts that are running to check the HNGA compliance are configured.

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A counter can only be compliant to one HNGA baseline. IRRELEVANT

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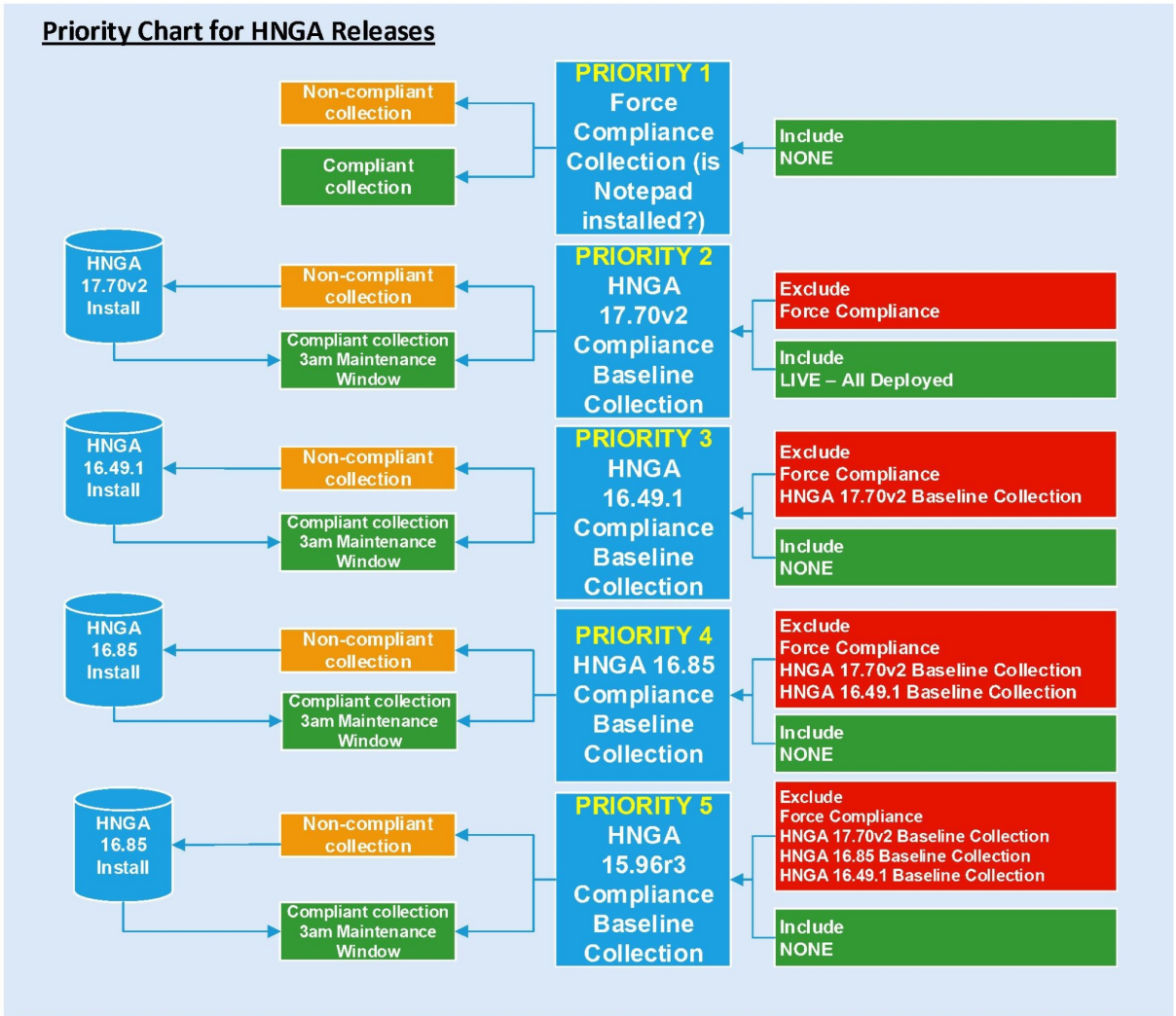
A priority list of baselines has been created, with the Force Compliance baseline having the highest priority, the most recently released version having the next highest priority, and so on.

Compliance to one baseline is achieved by deploying a HNGA baseline to a dedicated SCCM Compliance Baseline collection for each version of HNGA and then using Include and Exclude collection rules to control membership of the collection. A baseline collection can have any number of devices as members, but it must also be excluded from ALL previous HNGA Configuration Baseline base collections. This will prevent a device from appearing in more than one baseline collection.

The following diagram is a summary of how the baseline collections are configured. Note the following points:

- The Force Compliance collection has been excluded from all lower priority baselines
- Each Baseline collection has been added with an Exclude Collection rule to all earlier release HNGA baseline base collections
- The Non-compliant collections have a Task Sequence deployment that installs the correct HNGA version for the baseline
- The Compliant collections set a 3am-7am Maintenance window



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In terms of what is actually deployed in the above diagram:

- The Force Compliance Baseline is the Priority 1 baseline, so any counter added to the Force Compliance collection will automatically be excluded from all the lower priority HNGA baselines. This will force the counter to evaluate just the Force Compliance baseline
- The HNGA 17.70v2 Compliance Baseline collection has "LIVE – all Deployed" as an Include so will include any personalised counters except those in the Excluded collections (i.e. Force Compliance)
- The Baselines for HNGA 15.96r3, 16.49.1 and 16.85 have no inclusions and are therefore not in use.

The net result of this combination is that all live counters will receive HNGA 17.70v2, except any counters that are added to the Force Compliance collection.

The key to success is getting the correct combination of Includes and Excludes configured so that devices receive only one baseline which they can then become compliant to.

3.3 The Force Compliance Baseline and its use on Branch Counters

On occasion Fujitsu require access to a branch counter that they can use to test changes to the HNGA suite of applications. For example, Fujitsu may want to test a new version of one of the applications that make up a HNGA release.

Due to the way in which the counters operate they must be compliant to a configuration baseline. If a counter is non-compliant the screen will be greyed out and the operator will not be able to interact with the counter. However, if the counter is targeted at a specific version of HNGA, it will always try to remain compliant to the specific applications that make up that version of HNGA. Within 2 hours of making any changes to a counter, it would become non-compliant and then reinstall any changed applications.

To prevent this from happening a configuration baseline has been setup and deployed to the collection "Force Compliance Baseline"

Force Compliance 5 items

Search

Icon	Name	Member Count	Members Visible on Site
	Force Compliance Baseline	5	5
	Force Compliance_Force Compliance Baseline_Compliant	5	5
	Force Compliance_Force Compliance Baseline_Error	0	0
	Force Compliance_Force Compliance Baseline_Noncompliant	0	0
	Force Compliance_Force Compliance Baseline_Unknown	0	0

When you add a counter to this collection using direct membership, an Include Collection rule or a Query Rule it is removed from all existing baselines for versions of HNGA and becomes compliant to a baseline named "Force Compliance". IRRELEVANT

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Once compliant, the counter can then be used to test new applications.

When the counter is removed from the collection it will re-evaluate its compliance against its original version of HNGA and if required, reinstall HNGA to become compliant again.

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4 BuildStage Compliance and its Impact on Branch Counters

The following section will introduce BuildStage compliance, explain why it is required and how it has been implemented.

4.1 Build Introduction

The Branch Counter build has gone through a number of iterations and at the time of writing this document, the current build used in Hatfield is "Build 27C" with "Build 28" very close to completion. Both of these builds are configured identically in terms of how HNGA is delivered during the build and how compliance is controlled, details of which are in the following sections.

4.2 Why is Build Stage compliance required?

Every counter that is built in Hatfield has to be compliant to the correct version of HNGA for a build to be classed as successfully completed (this is a customer requirement). During the build, a version of HNGA is installed, and then at the end of the build, BuildStage compliance AD groups and Collection memberships are used to set the HNGA baseline version that the counter needs to be Compliant to. At the end of the Task Sequence stage of the build a set of PowerShell scripts will execute which will test the counters compliance to the designated HNGA baseline. If the counter is Non-Compliant, it will go through the standard process to become Compliant, and when the counter is confirmed as Compliant the build will complete successfully.

Originally, BuildStage compliance was only used to enforce a baseline during the build, with the counter being a member of the required BuildStage AD group (and therefore the BuildStage collection). Then, when the counter was being personalised at a branch, it would automatically be removed from the BuildStage AD collection and it would either receive the same HNGA baseline via its membership to a live collection, or it would receive a new baseline for a different HNGA version if the deployed live HNGA version is different, i.e. the branch has not been upgraded.

From Build 27B onwards however, counters being built in Hatfield have had the latest live version of HNGA installed and are also added to a "HNGA XX.XX Stock Prep" Collection which is included to the baseline collection for the same HNGA version that was installed during the build task sequence.

The impact of using this method is that:

- The amount of time for a build to complete in Hatfield is kept to a minimum as the counter will test its compliance against the same version that has been installed
- When deployed to a branch, counters built with an earlier version of HNGA will upgrade at the start of personalisation. This can potentially add 90 minutes to the personalisation process
- When deployed to a branch, counters built with a new version of HNGA will keep this version and no extra time is required during personalisation. This prevents the counter from going into a long compliance loop during personalisation while a different version is installed.
- Counters in the Stock Prep collection are not automatically removed from the collection so they should be removed before deploying a new HNGA version

4.3 Build 27C/28 Hatfield Stock Prep collections and BuildStage AD groups

As counters are built in Hatfield they are added to the following:

- An SCCM stock prep collection named "Hatfield HNGA 17.73 Stock Prep" (CollectionID=P0100774)
- An SCCM BuildStage collection based on hardware type and build type (test or live)

There are currently 8 Active Directory groups that populate BuildStage compliance SCCM collections, they are:

AD Buildstage Group	SCCM Buildstage Collection
gBuild_Cielo_LIVE_ComplianceGroup	BuildStage_Compliance_LIVE_PL_Cielo

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AD Buildstage Group	SCCM Buildstage Collection
gBuild_Cielo_TEST_ComplianceGroup	BuildStage_Compliance_TEST_PT_Cielo
gBuild_M79_LIVE_ComplianceGroup	BuildStage_Compliance_LIVE_PL_M79
gBuild_M79_TEST_ComplianceGroup	BuildStage_Compliance_TEST_PT_M79
gBuild_PX35_LIVE_ComplianceGroup	BuildStage_Compliance_LIVE_PL_PX35
gBuild_PX35_TEST_ComplianceGroup	BuildStage_Compliance_TEST_PT_PX35
gBuild_VM_LIVE_ComplianceGroup	BuildStage_Compliance_LIVE_PL_VM
gBuild_VM_TEST_ComplianceGroup	BuildStage_Compliance_TEST_PT_VM

The SCCM BuildStage collections and Stock Prep collections are then linked to the required HNGA baseline collection using Include rules to apply a baseline to the counter near the end of the initial build in Hatfield.

After the initial build task sequence has been completed the counter goes into a Compliance at Build stage where its HNGA compliance baseline is evaluated until the device is compliant.

Note that the "LIVE – All Deployed collection" which contains all the deployed and personalised counters, is excluded from each of the BuildStage collections using an Exclude rule. This helps to prevent a scenario where the counter could have 2 Compliance baselines applied to it that are for different versions of HNGA. This might happen if the version of HNGA applied at BuildStage if different to the version of HNGA applied to the live counter.

Appendix C – Adding a new hardware model or Stock Prep Collection contains details on what actions are required when a new hardware model needs to be introduced into the Post Office environment. Including how to configure BuildStage compliance for the new hardware.

The following diagram shows the path a counter being built in Hatfield takes to receive its BuildStage compliance.

Note that this diagram is correct at the time of writing and may have been superseded.

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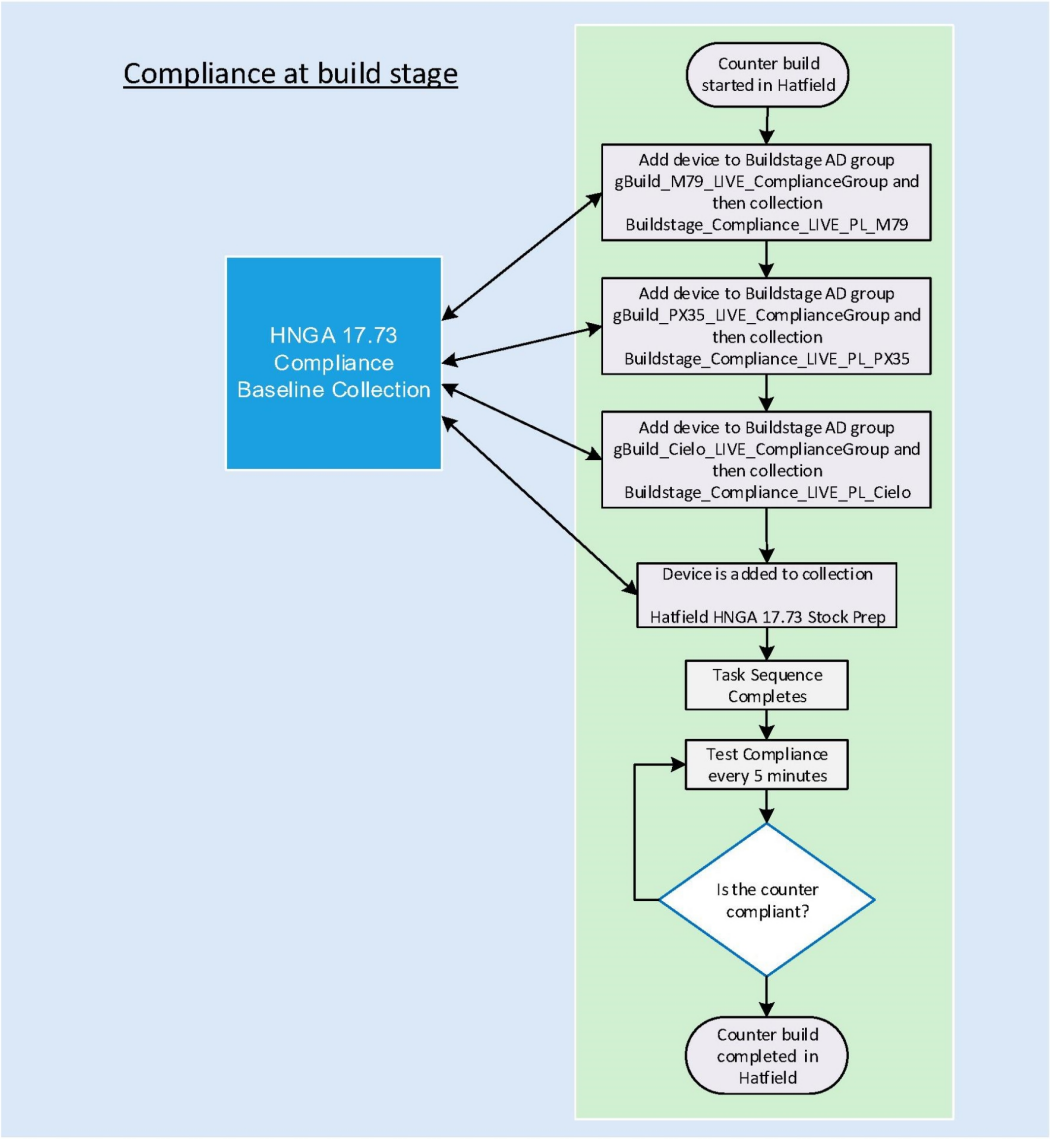
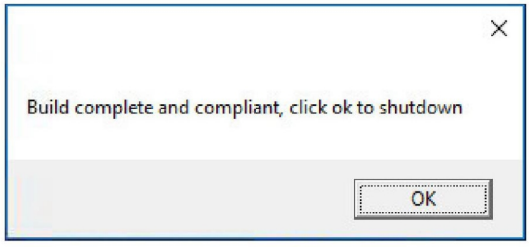


Once the counter is compliant a final message is displayed confirming that the build is complete and the counter can be shut down.



Once shutdown, the Hatfield build process is completed and the counter can be shipped to a branch for deployment and personalisation.

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4.4 Moving forward with BuildStage compliance

Inevitably, after the release of this document, a new version of HNGA is going to need to be released. When a new version of HNGA is going to be released (after HNGA 17.73) there will be a number of options that will have different impacts on build timings and personalisation timings. A decision will need to be made as to which of the options will be followed based on the potential impact each of the options will have.

The following table summarises the options available for BuildStage compliance, and the impact of these options moving forward when the next version of HNGA is released.

Option	Impact
Option 1 • Make no changes to the build in Hatfield • Do not include Stock Prep collection in new HNGA Baseline Collection	**Build Impact** • **No increase in time** to build a counter in Hatfield. Counters would continue to be built with HNGA 17.73 **Personalisation Impact** • **No additional time** required for a counter to personalise • Counter remains at HNGA 17.73 until removed from Stock Prep collection **HNGA Rollout Impact** • ELS team would need to remove any personalised counters after deployment so that they could upgrade HNGA version to newer version • Unsustainable in the long run as the verison of HNGA being built could be a long way out of date **Comments** Although this is technically possible, POL would probably not agree to this approach as they would not want a counter to potentially trade with HNGA 17.73 installed if it is not the latest live version.

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Option	Impact
Option 2 • Make no changes to the build in Hatfield • Include Stock Prep collection in new HNGA Baseline Collection	**Build Impact** • **Potential 90 minute increase** in time to build a counter in Hatfield as the counter has to upgrade version **Personalisation Impact** • **No additional time** required for a counter to personalise • Counters built with the new HNGA version remains at the new HNGA version until removed from Stock Prep collection • Counters already built and in stock with an earlier version of HNGA installed will upgrade at the start of personalisation causing a **potential 90 minute delay** **HNGA Rollout Impact** • Before the rollout of HNGA XX.XX+1 the ELS team would need to remove any personalised counters after deployment **Comments** Although this would increase the build time in Hatfield, when the main rollout has finished, the volumes should be quite low. Part of the change to rollout a new version of HNGA would be to remove the existing personalised counters from the Stock Prep collection, before the rollout starts. This is required to allow you to switch the Stock Prep collection to the new version when the rollout starts.

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Option	Impact
Option 3 • Modify the build Task Sequence so that the new version of HNGA is installed in Hatfield • Create and include Stock Prep collection in new HNGA Baseline Collection	**Build Impact** • **No increase in time** to build a counter in Hatfield **Personalisation Impact** • **No additional time** required for a counter built with the new version of HNGA to personalise • Counter remains at new HNGA XX.XX until removed from Stock Prep collection • Counters already built and in stock with an earlier version of HNGA installed will upgrade at the start of personalisation causing a **potential 90 minute delay** **HNGA Rollout Impact** • Before the rollout of HNGA XX.XX+1 the ELS team would need to remove any personalised counters after deployment **Comments** The additional time required to personalise a counter would only affect any stock remaining at the earlier version of HNGA. A way to mitigate this would be to rebuild all the existing stock with the new build so that it already has the new HNGA version installed. Part of the change to rollout a new version of HNGA would be to remove the existing personalised counters from the Stock Prep collection, before the rollout starts. This is required to allow you to switch the Stock Prep collection to the new version when the rollout starts.

4.5 Counter Personalisation Process and Compliance

Counters are shipped out of Hatfield compliant to a release of HNGA as specified by the BuildStage compliance baseline that has been applied during the build.

From Build 27B onwards when a counter is being deployed in a branch, although it will be removed from its BuildStage AD group (and BuildStage collection) it will remain in its Stock Prep collection. This will keep the counter at the version of HNGA that it was built with unless the Stock Prep collection has been included in a different HNGA baseline. At the start of a HNGA rollout into Production, the Stock Prep collection should be included in the baseline collection for the new HNGA version on the first night. That will ensure that any counters deployed from that point will receive the new live HNGA version.

At the start of the personalisation process the counters compliance is tested to confirm that it is still compliant to a version of HNGA. If the BuildStage compliance version has changed while the counter was in stock it will first upgrade the version of HNGA before continuing. Once it is confirmed as compliant, it is removed from its BuildStage AD group. The counter remains in the Stock Prep collection though so keeps its current HNGA version.

The counter is then renamed during personalisation and it then re-evaluates into a new LIVE collection with a specific HNGA baseline deployment based on its new name (all live counter hostnames begin with H and should have a HNGA baseline deployed to them). The counter is then evaluated again to confirm that it is compliant to the correct version of HNGA and once compliant is live and available for use at the branch. Note that if the counter is evaluated as Non-compliant it will go through the process of becoming compliant again before it can be used or completes personalisation.

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The following diagram shows the path that a counter that is being personalised takes to maintain its compliance to a HNGA baseline.

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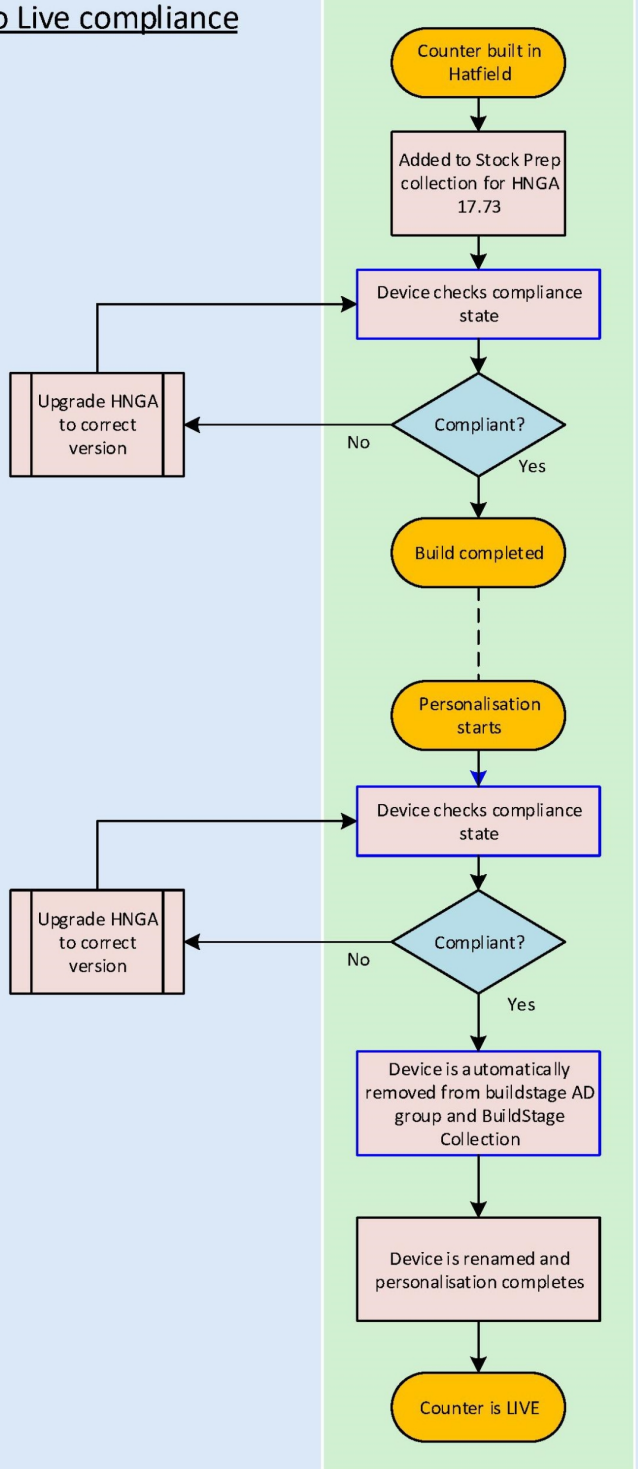
Switching from Buildstage to Live compliance



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When a counter is live and in use at a branch its compliance to the HNGA baseline is tested every 30 minutes. If a counter ever becomes Non-compliant (which should theoretically only ever occur during an upgrade or downgrade of the HNGA version) the required HNGA installation task sequence will execute that will reinstall any missing HNGA component applications and the counter should then be re-evaluated as compliant.

The following sections describe how to configure SCCM for a new HNGA deployment and how to complete the rollout for test devices including SV&I, LST and Model Office. A section is also included that will describe how a previous HNGA rollout was completed in Production. This will help to guide any future production rollouts.

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5 Setting up a Baseline for a HNGA Release

For any new release of HNGA, the individual components that make up the release will first need to be setup. These include:

- HNGA Component Applications
- HNGA Install Task Sequence
- HNGA Pre-Cache Task Sequence
- Configuration Item
- Configuration Baseline
- Baseline collection and sub-collections
- HNGA Task Sequence deployment
- Maintenance Windows

Once these items are ready, you can test the baseline with test virtual machines first, to confirm that the correct applications are installed. Then you can test the HNGA release in SV&I, LST and Model Office by using Include and Exclude collection rules or SCCM collection direct memberships. Once all of the testing is completed, a rollout schedule can be agreed with Post Office to determine in what order counters will be upgraded.

Using this schedule, collections can be setup (assuming they are not already) and using Include and Exclude rules you can target the new HNGA version at batches of counters. Once all the counters are upgraded, the rollout batch collections can be replaced with the LIVE – All Deployed collection to end the rollout.

The compliance of a counter is tested at various stages of the build and deployment process, and once a counter is Live and in Production it is also tested for compliance every 30 minutes. Appendix D – Counter Compliance Lifecycle shows the path that a counter takes to become or remain compliant during the BuildStage in Hatfield through to it becoming a live counter in a branch.

With each new release of HNGA the GIO Application Packaging team will first be notified by Fujitsu which of the HNGA component applications have changed. Fujitsu will then supply the packaging team with the new MSI installer files that make up any new packages. The packaging team then repackage the Fujitsu supplied MSI files to Computacenter standards and create a new application in SCCM for each of the changed HNGA component applications.

Once the new applications have been made available by the packaging team the following tasks will need to be completed to prepare the applications and environment for testing the new version of HNGA on branch counters.

- Create new versions of each of the new HNGA component applications and distribute them to all distribution points
- Create a HNGA Install task sequence capable of installing the required HNGA component applications in the correct order
- Create a Configuration Item with 12 registry tests, one for each of the 12 component applications
- Create a Configuration Baseline made up of the Configuration Item that has been created
- Create a new SCCM device collection that the Configuration Baseline can be deployed to and exclude all previous compliance baselines from the new collection.

Note that it is recommended that only the previous 2 live baseline are maintained for rollback purposes, and that older baselines should be decommissioned. This activity is an operational SCCM task that should be completed under change control once the HNGA rollout has been completed. An example change

5.1 HNGA Deployment Summary Flowchart

The flowchart below describes the end-to-end process required to deploy a new version of HNGA into the Post Office Branch environment.

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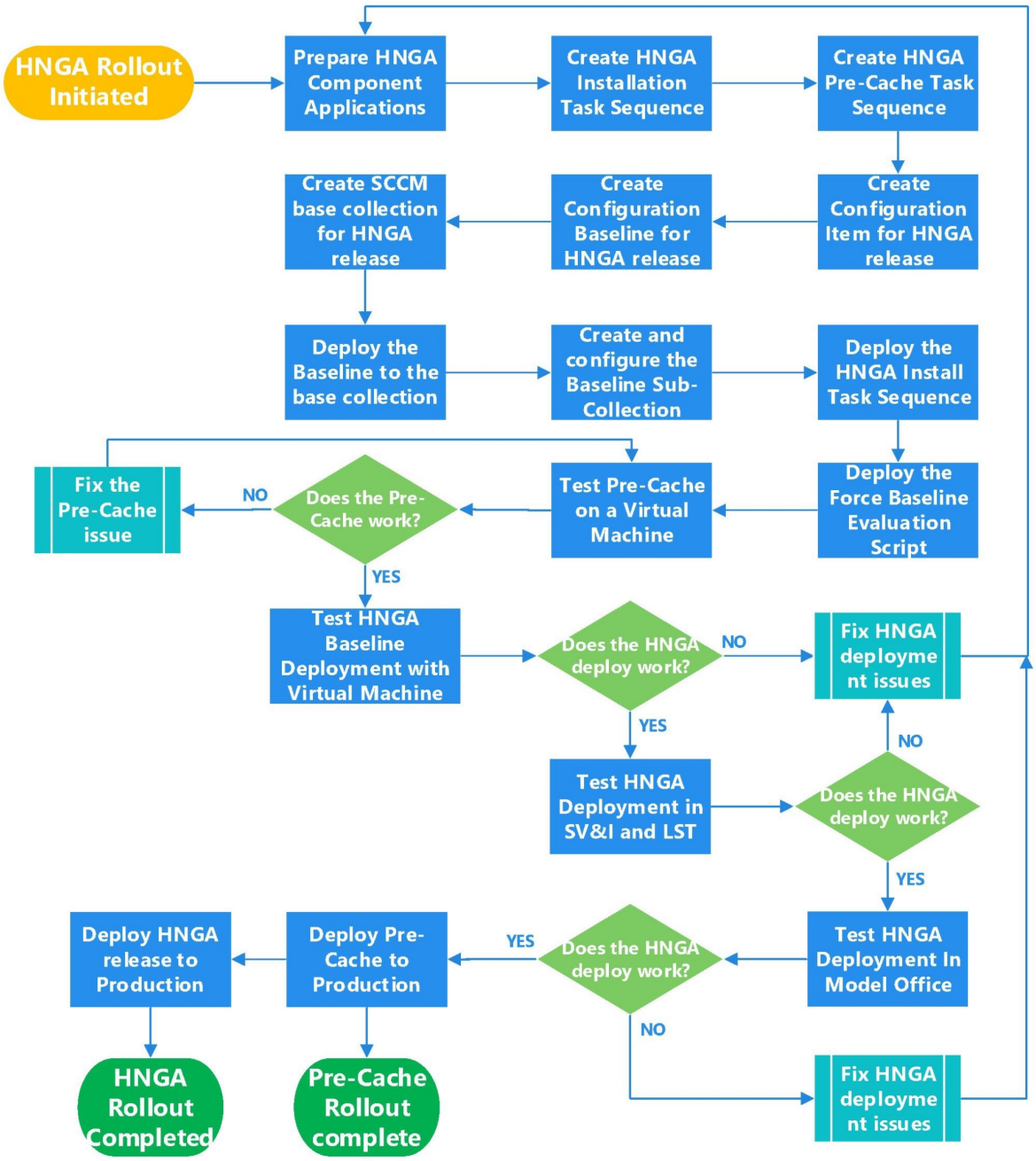
Procedure to deploy an update to the HNGA application to Branch Counters



Note that testing in SV&I and Model Office involves 2 stages.

- Deployment of the new HNGA version to an existing counter in SV&I and MO
- Personalisation of a counter pre-built with the new version of HNGA (Buildstage testing)

Complete each of the following sections to setup the applications, then prepare a Configuration Baseline.

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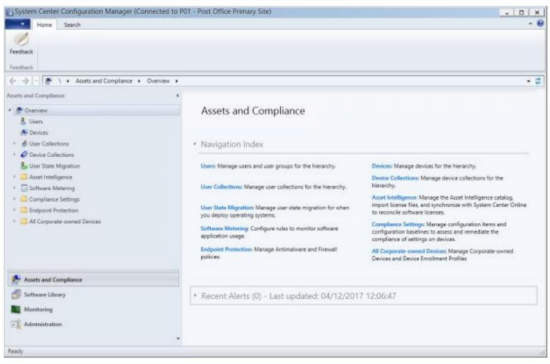
5.2 Applications

The most important initial information that is required when starting to prepare a new HNGA release is the HNGA Release Bundle documentation. The HNGA Release bundle documents the component application versions that make up a new HNGA release. From version to version any of the component applications may change and the HNGA release bundle document will show what makes up the HNGA release.

The packaging team will be the initial recipients of the HNGA release bundle document. They will take receipt of any updated applications, repackage them and then create test versions of the new application in SCCM so that they can complete any UAT testing with them.

The new applications created by the packaging team then need to be copied and prepared in SCCM.

The following procedure can be used to recreate each of the changed HNGA components for deployment use. In the following example the release bundle 15 will be used (see Appendix A for all current HNGA release bundles). Despite the version numbering bundle 15 is version HNGA 17.73 and is an upgrade from bundle 14 which is HNGA 17.70v2.

Step	Screen
On receipt of the new HNGA release bundle note, identify the applications and the versions that make up the new bundle. Note the applications in the bundle that have changed. This is important as only the changed applications need to be recreated in SCCM as the other applications in the bundle will already exist. In this example we are adding HNGA version 17.73 (Bundle 15) which is an upgrade from HNGA 17.70v2 (Bundle 14). In this release, 2 applications changed. • CBA, which has changed from CBA_118 in bundle 14 to CBA_131 in bundle 15. • JRE, which has changed from JRE_18 in bundle 14 to JRE_20 in bundle 15 Note that this document will be updated and managed by the CC packaging team and will also from now on include each of the 12 application Product Codes. The product code will be required when creating the Configuration Item for the baseline.	IRRELEVANT
Login to the Primary Site server IRRELEVANT and open the SCCM Console	

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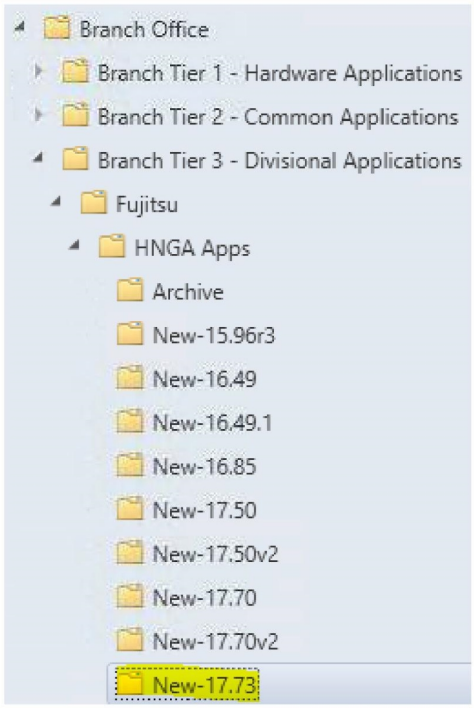
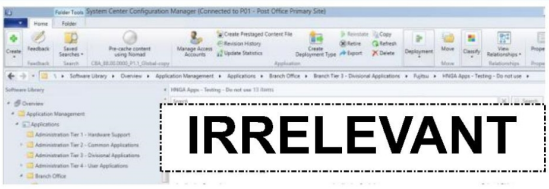
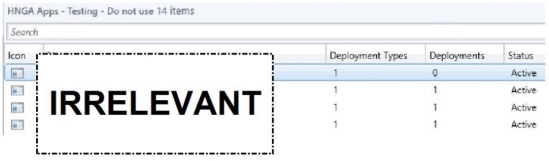
Step	Screen
Browse the Software Library and create a new sub-folder in the following location named as the new HNGA version. **Application Management → Applications → Branch Office → Branch Tier 3 – Divisional Application → Fujitsu → HNGA Apps** The name of the new folder will be: **New-XX.XX** Where XX.XX is the HNGA version number	
Browse and locate any new applications in Applications. New applications that form part of a HNGA release will be added by the packaging team to the following folder: **Application Management → Applications → Branch Office → Branch Tier 3 – Divisional Application → Fujitsu → HNGA Apps – Testing – Do not use** Order by Date Created to locate the newly added applications.	
Right-Click each of the new applications (check the version is correct as per the new bundle) and select Copy. A new copy of the applications will be created with the suffix "**-copy**" Only do this for the changed applications. All other applications will already be present in SCCM.	

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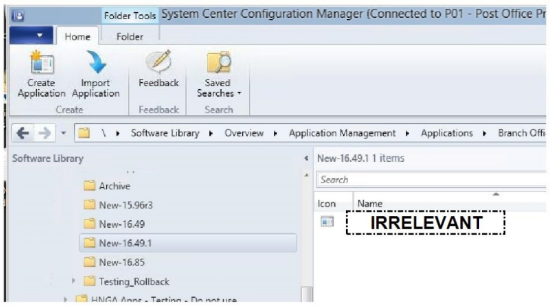
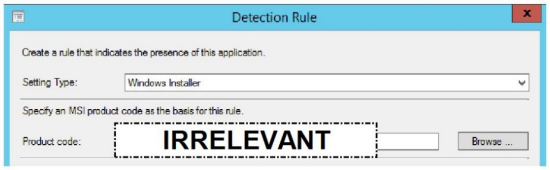
Step	Screen
Right-Click each of the new applications and move them to the folder created for the new version of HNGA: - **Application Management → Applications → Branch Office → Branch Tier 3 – Divisional Application → Fujitsu → HNGA Apps → New-XX.XX** Then rename the new applications removing the "**-Copy-Copy**" suffix. The applications should be present in the folder with just the release name.	
Distribute each new application to all SCCM distribution points.	
For each application go to the Deployment Type → Detection Method and make a note of the MSI Product Code. Note that the MSI Product Code will be used for the Configuration Item that is used to detect that the application is installed. Hopefully the MSI Product Code will already have been provided in the HNGA release document, but if not make a note of it.	
If the MSI Product Code has not been included in the HNGA release document, then add the product code to the HNGA Bundle document so that you have a permanent record of it. Note that the Product Codes should be supplied in all future releases of the document but you can obtain the code using the above method.	

5.3 HNGA Installation and Pre-Cache Task Sequence preparation

When the new applications have been prepared in SCCM the next stage is to prepare a Task Sequence in SCCM that will be used to install the complete set of HNGA component applications that make up the HNGA release in the correct order. This task sequence will be used by a branch counter when it is Non-Compliant for the version

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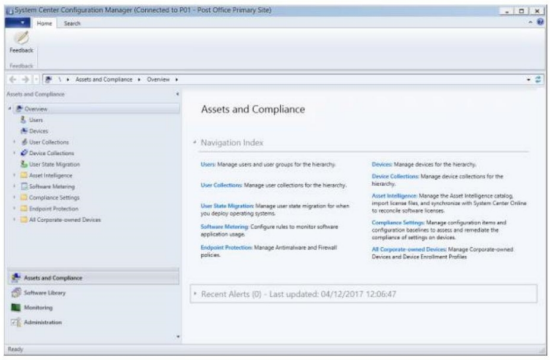
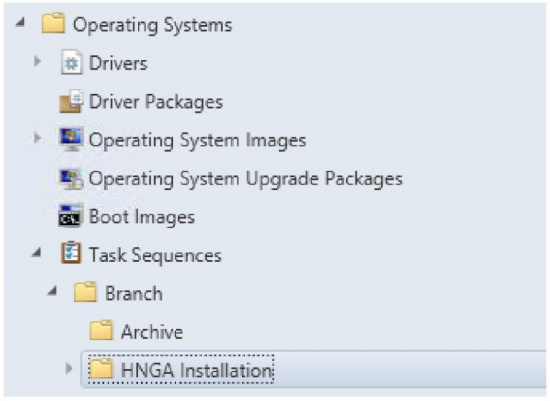
of HNGA that is targeted at it, to re-install the HNGA applications as required. Once the task sequence has been executed, on its next evaluation the counter should become compliant to the new HNGA version.

Also, a task sequence will be created that can be used to pre-cache the content required for the HNGA installation in advance of the installation. This is critical as it will help to reduce the risk that a counter will remain non-compliant for any longer than is required.

5.3.1 HNGA Installation Task Sequence Creation

Use the following procedure to create the required HNGA Install Task Sequence for the new version of HNGA.

Steps	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console	
Browse the Software Library in the following location **Operating Systems → Task Sequences → Branch → HNGA Installation**	

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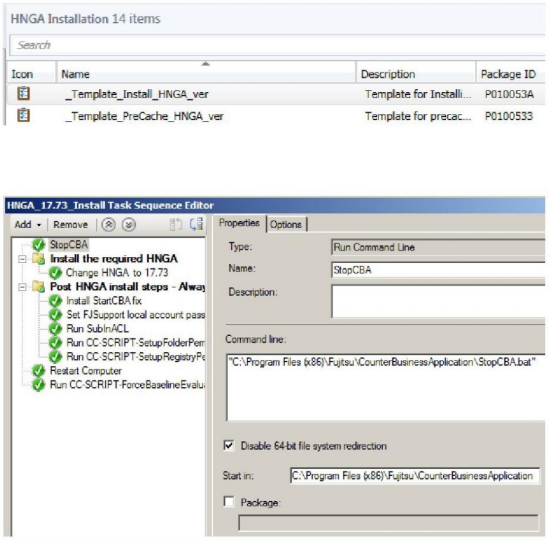
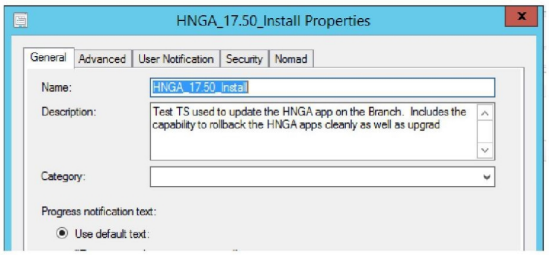
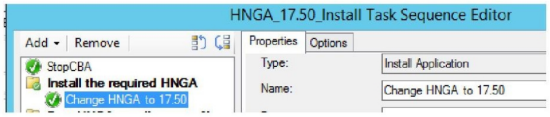
Steps	Screen
Make a copy of the template installation Task Sequence **_Template_Install_HNGA_ver** The Task Sequences have been especially designed to support rolling back to a specific version of HNGA if required. HNGA Installation Task Sequences include an extra group of steps in addition to the HNGA component application installations step that MUST be included in all future HNGA installation Task Sequences until further notice. The extra required steps are included in the group: **Post HNGA install steps – Always Include**	
Edit the properties of the new Task Sequence as follows: Rename the Task Sequence using the following naming convention: **HNGA_XX.XX_Install** Where XX.XX is the version number of the new HNGA release	
Edit the step "**Change HNGA to XX.XX**" to match the version number of the new HNGA release	

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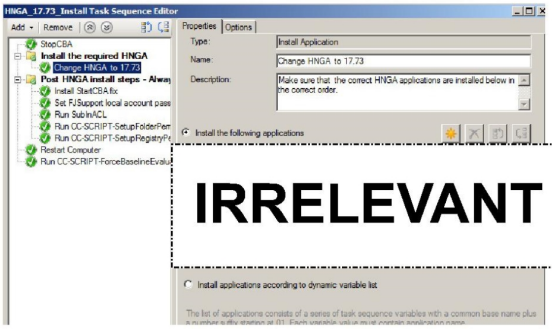
Steps	Screen
Referring to the HNGA release bundle, you need to edit the applications listed in the "**Change HNGA to XX.XX**" step so that the match the applications listed in the new bundle document. You will need to remove and replace any application that has been superseded in the bundle. Also, make sure that the applications **<u>are listed in order</u>**, as they need to be installed in the correct order. The correct order that the applications should be installed in is: **IRRELEVANT**	 **IRRELEVANT**
Once you have made the required changes to the Task Sequence click **OK** to save it.	

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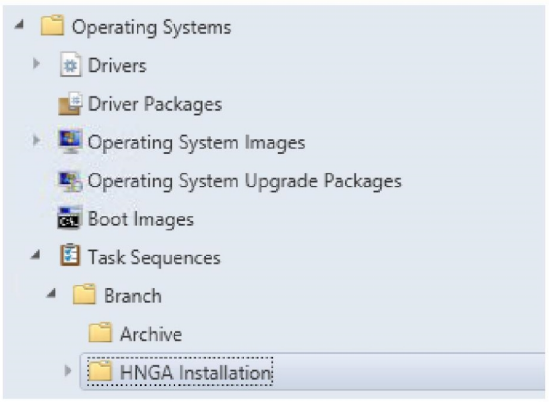
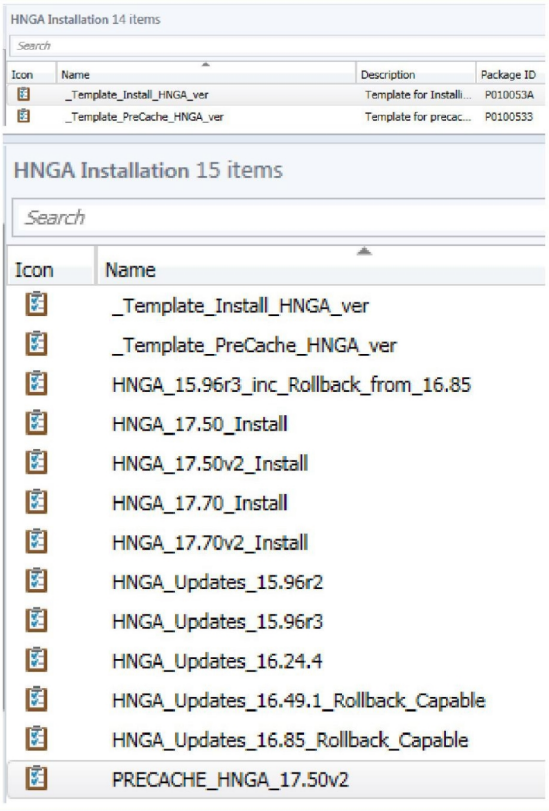
5.3.2 HNGA Pre-Cache Task Sequence Creation

Once the HNGA Installation Task Sequence has been created you can create a second Task Sequence that will be used to Pre-Cache the required HNGA content on counters in advance of installation. Use the following procedure to create the required HNGA Pre-Cache Task Sequence for the new version of HNGA.

HNGA Pre-Cache Task Sequence Creation Steps	
Browse the Software Library in the following location **Operating Systems → Task Sequences → Branch → HNGA Installation**	
Make a copy of the template Pre-Cache Task Sequence **_Template_PreCache_HNGA_ver** And rename the new Task Sequence **PRECACHE_HNGA_XX.XX_Install** Where XX.XX is the version number of the new HNGA release	

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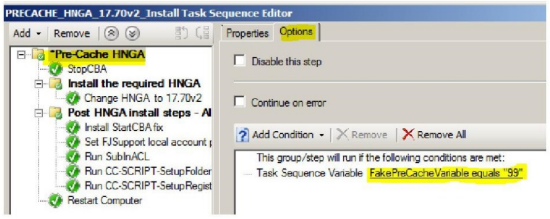
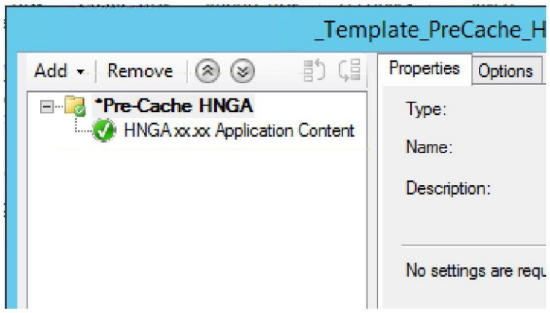
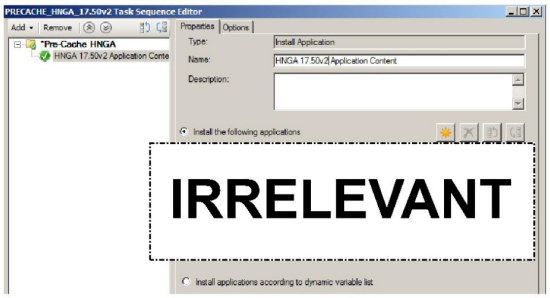
Edit the Task Sequence and locate the "**Pre-Cache HNGA"** step Select the Options tab and confirm that a condition is set so that the step will only run if a task sequence variable "**FakePreCacheVariable**" is set to **99**. Since the variable will never be set, the group of steps underneath the "PRECACHE ONLY" folder will never actually run. This however, does not prevent the content from downloading to the client.	
Rename the step "**HNGA XX.XX Application Content**" to match the required HNGA version.	
Now you need to edit the applications listed in the "**HNGA xx.xx Application Content**" step so that the match the applications listed in the new bundle document. You will need to remove and replace any application that has been superseded in the bundle. Make sure that the correct version of each of the applications that make up the HNGA suite is listed correctly in the "Install the following applications" step. IRRELEVANT **To save time you can copy and paste this step from the newly created HNGA XX.XX Install task sequence if required as it will be identical.**	

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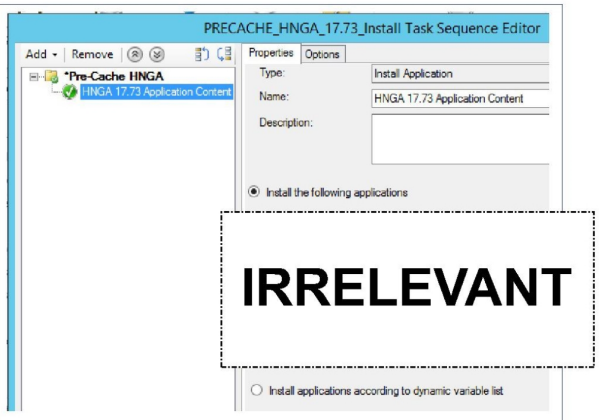
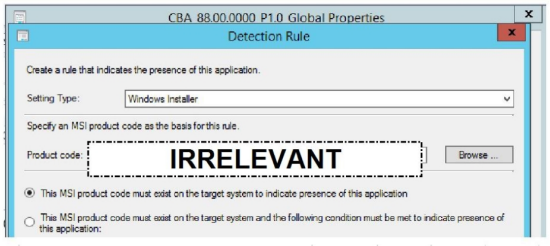
Once you have made the required changes to the Pre-Cache Task Sequence click ok to save it. The applications should exactly match those listed in the bundle document. The Pre-Cache task sequence can now be deployed to batches of counters (under change control) so that the content will be distributed to the counters while testing is proceeding. The content will then be ready and available for when the deployment commences. For instructions on how to deploy the Pre-Cache task sequence go to **Appendix G - Pre-Caching HNGA Content on counters**,	

5.4 Creation of the Configuration Item

Configurations Items are used in SCCM to form the basis of Configuration Baselines. They are used to check a condition on a target device and to indicate if the device is Compliant or Non-compliant to that condition. For instance they can be used to check a Registry setting or in the case of Post Office, whether or not one of the HNGA component applications is installed.

For each HNGA release a single Configuration Item will be created. Each new application (x12) added to SCCM that is part of a HNGA release needs to have an associated setting within the Configuration Item configured to check if the MSI is installed. Then, once the Configuration Item has been created, it can be used to form a Configuration Baseline for the HNGA release version which can then be deployed to counters.

The following procedure should be used to create a Configuration Item for each new HNGA release.

Step	Screen
For each new application that has been created for the HNGA release you will require the MSI Product code. The codes are located in the application detection rules for each of the applications or will be provided in the HNGA Release Bundle Document.	 IRRELEVANT

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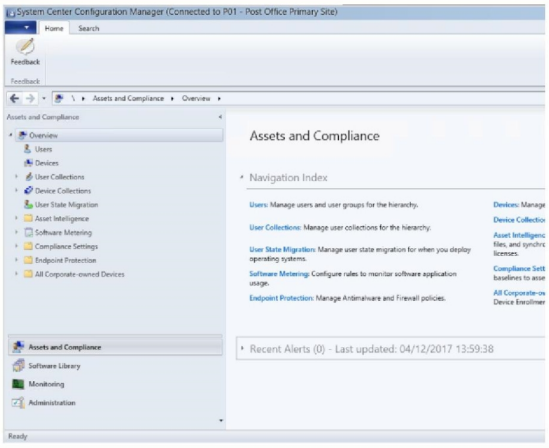
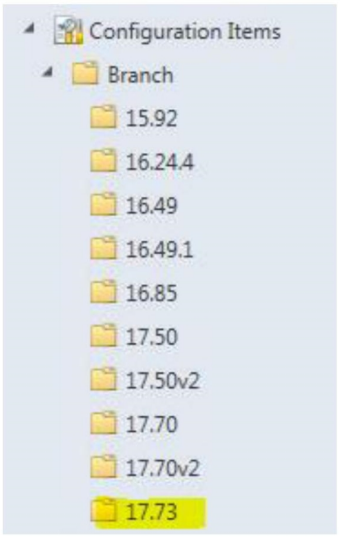
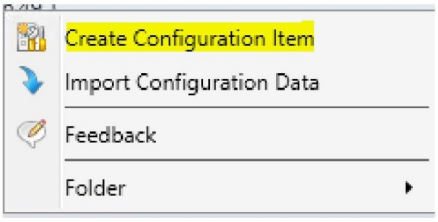
Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. **Browse to Assets and Compliance**	
Expand **Compliance Settings → Configuration Items → Branch.** Create a new folder for the HNGA version that you are creating a Configuration Item for. Use the new HNGA version number for the name of the folder	
Right-Click the new folder and select **Create Configuration Item**.	

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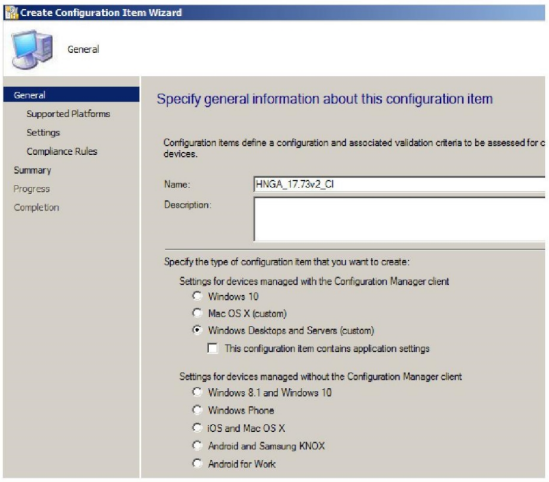
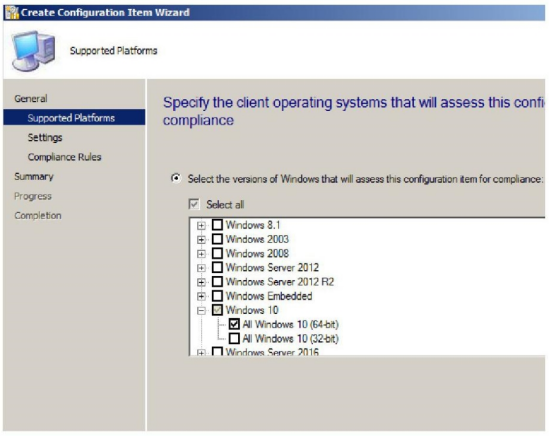
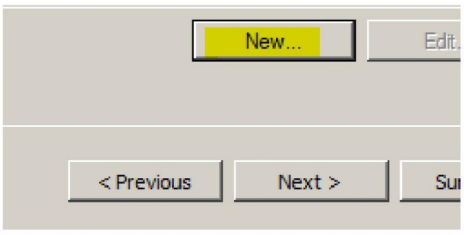
Step	Screen
Create a new Configuration Item with the following settings. On the "**Specify general information about this configuration item**" page, specify the name of the Configuration Item as "**HNGA_XX.XX_CI**" For example, for HNGA 17.73 the Configuration Item is named "HNGA_17.73_CI" Select the "**Windows Desktops and Servers (custom)**" radio box and leave the "**This configuration item contains application settings**" box blank and click on **Next**	
On the "**Supported Platforms**" page, select only **All Windows 10 (64-bit)** And click on **Next**	
For each of the 12 required HNGA component application you need to repeat the following procedure	
On the **Settings** page click on **New**	

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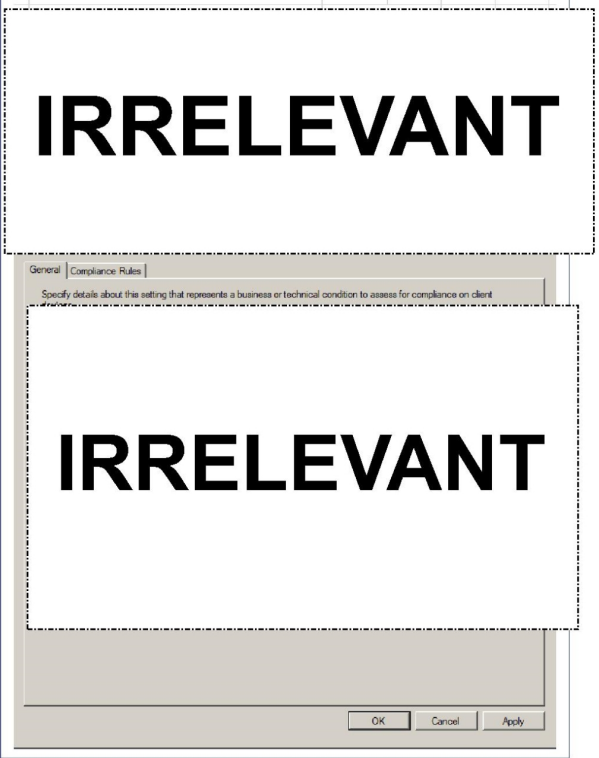
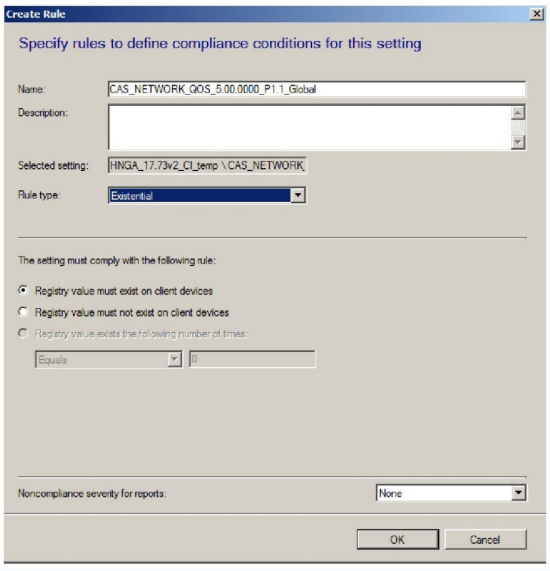
Step	Screen
In the **Name** field, specify the application name as per the HNGA Release Bundle document In the **Setting Type** field, confirm that it is set to **Registry Value** In the **Data Type** field, confirm that it is set to **String** In the **Key Name** field, configure the value as: **SOFTWARE\WOW6432Node\Microsoft\Windows\CurrentVersion\Uninstall\{Product Code}** The Product Code should be the Product Code for the application as specified in the release document, or alternatively obtained from the applications Deployment Type – Detection Method. The Value Name field should be set to **DisplayVersion** Then click on **Compliance Rules**	
In the **Name** field, specify the application name as per the HNGA Release Bundle document In the Rule Type field, set the value to **Existential** And click on **OK**	

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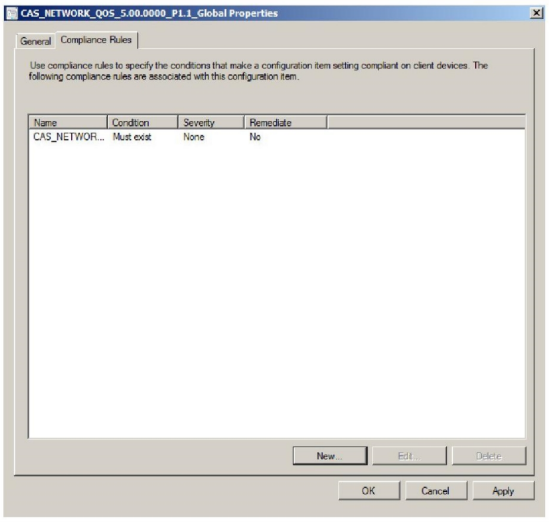
Step	Screen
Click on **New** again and repeat the process for all 12 application in the HNGA bundle	
Once all of the applications in the bundle have been added, click on **OK**	

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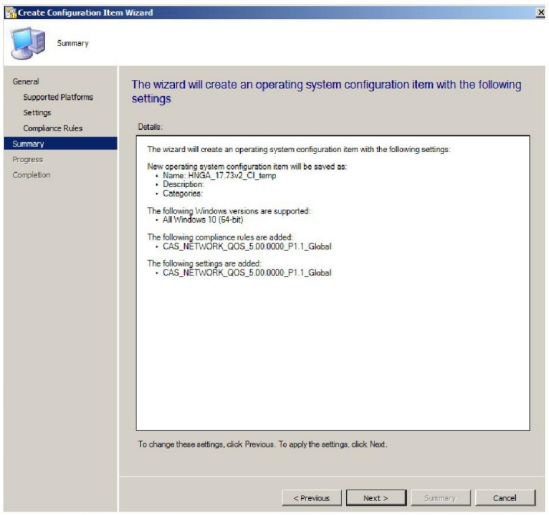
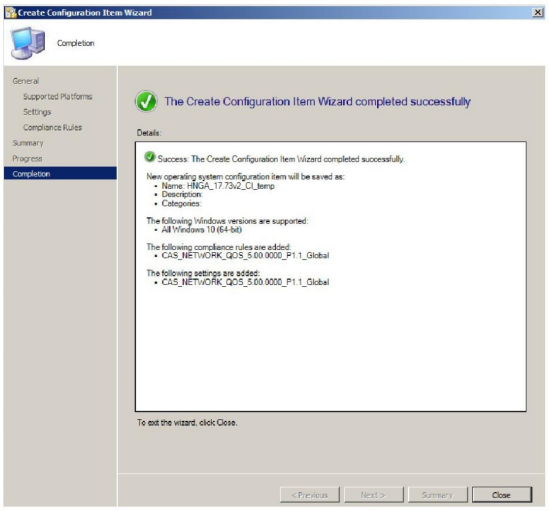
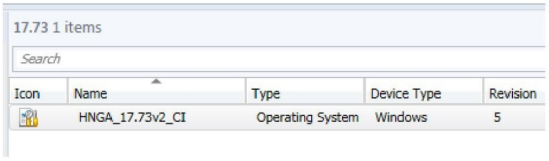
Step	Screen
Once the Configuration Item is configured with the correct 12 settings, complete the Wizard	 
When you have completed the creation of the Configuration Item make sure the settings are correct and that it is located in the new Configuration Item folder for the HNGA version.	
Note that an alternative to creating the Configuration Item completely from scratch would be to copy the Configuration Item for the previous HNGA release and then modify it accordingly by removing settings for the applications that are no longer in the HNGA release and to add new settings for any new or replaced applications.	

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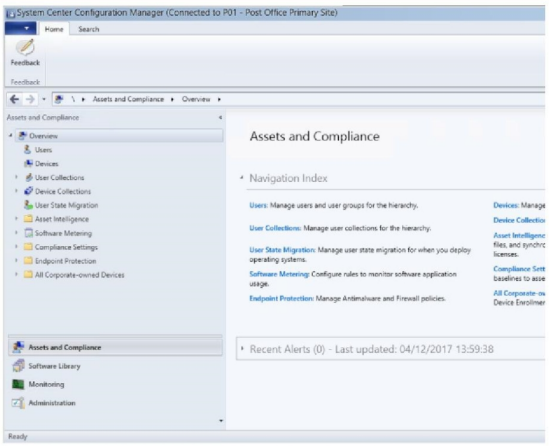
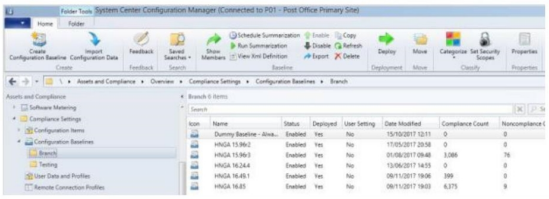
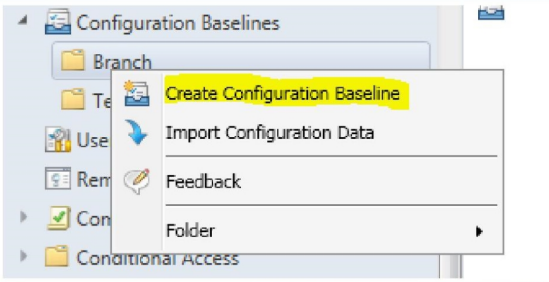
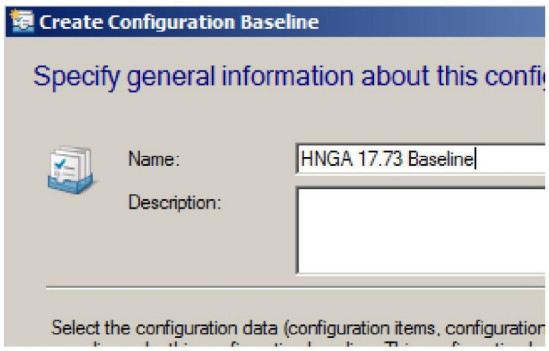
5.5 Configuration Baselines

Configuration Baselines are created by grouping together a collection of Configuration Items. For Post Office a Configuration Baseline must be configured with the Configuration Item created for the HNGA release that contains a setting for each of the component applications that make up the specific version of HNGA. Once created, a Configuration Baseline is deployed to an SCCM collection and evaluated by the collection members. To be classed as Compliant a device that evaluates a HNGA Configuration Baseline must be compliant to the Configuration Item in the baseline.

The following procedure should be used to create a Configuration Baseline for a new release of HNGA.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. **Browse to Assets and Compliance**	
Select **Compliance Settings → Configuration Baselines → Branch**	
Right-Click the Branch folder and create a new Configuration Baseline. When prompted to give the new baseline a name, use the following naming convention: - **HNGA XX.XX Baseline** Where XX.XX is the new HNGA version for release.	 

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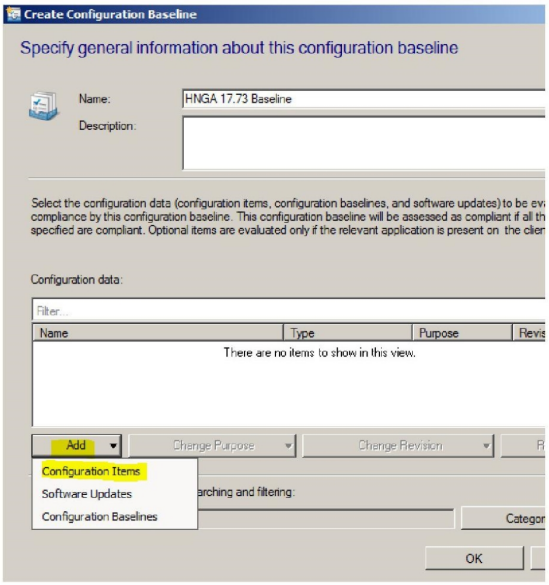
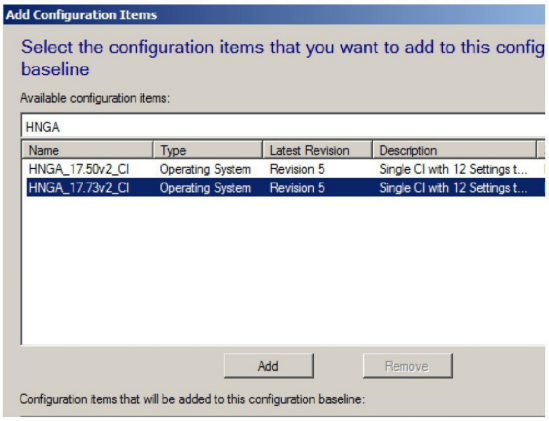
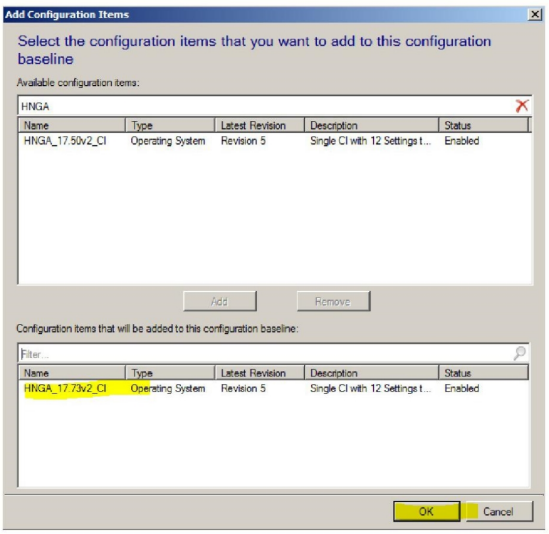
Step	Screen
Click on **Add** and then select **Configuration Items**	
Search for the correct Configuration Item by name: **HNGA_XX.XX_CI** Where XX.XX is the new version of HNGA. Select the correct CI and click on **Add**	
Confirm that the correct CI has been selected and click on **OK**	

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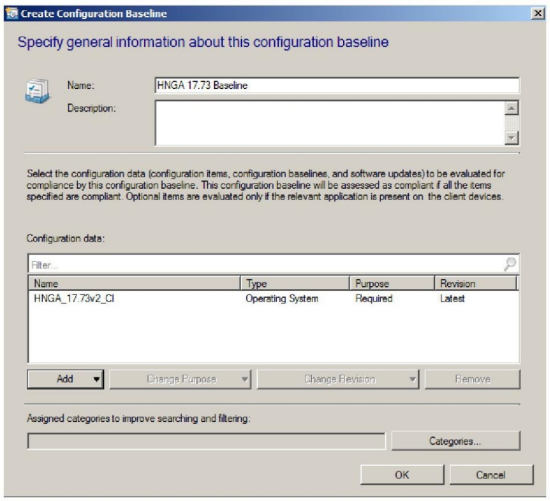
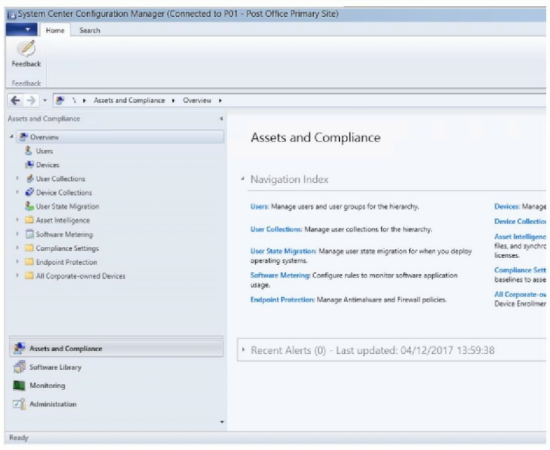
Step	Screen
Confirm that the baseline has the correct name (as required), and that the correct Configuration Item is selected and then click on **OK**	

5.6 Create the SCCM base device collection for the HNGA release

Now that the Configuration Baseline has been prepared, the next thing that is required is a base Device Dollection in SCCM for the Configuration Baseline to be deployed to.

The following procedure can be used to create the base device collection for the new baseline.

Step	Screen
Login to the Primary Site server PVSCMPOL001 and open the SCCM Console. Browse to **Assets and Compliance**	

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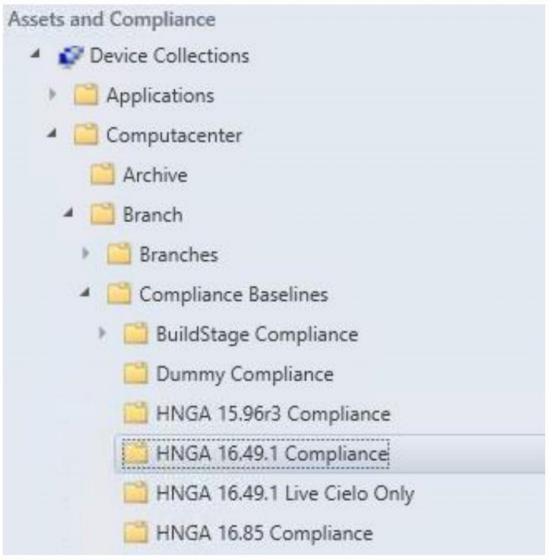
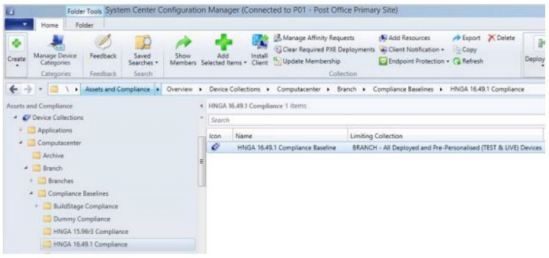
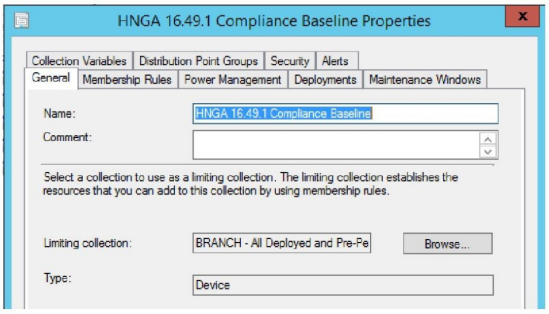
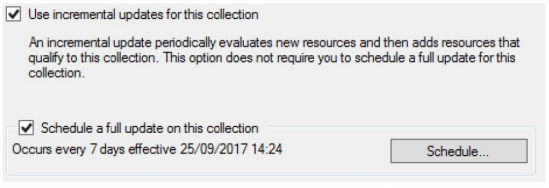
Step	Screen
Expand **Device Collections → Computacenter →Branch → Compliance Baselines** Create a new folder for the HNGA version that you are creating base collection for. Use the naming convention: **HNGA XX.XX Compliance** - where XX.XX is the version number of the new HNGA release	
Right-Click the new folder and create a new Device Collection using the naming convention: **HNGA XX.XX Compliance** Baseline – where XX.XX is the version number of the new HNGA release	
Configure the collection so that under **General** the limiting collection is set to: **BRANCH - All Deployed and Pre-Personalised (TEST & LIVE) Devices**	
Configure the collection so that under **Membership Rules**, the box "**Use incremental updates for this collection**" is ticked.	

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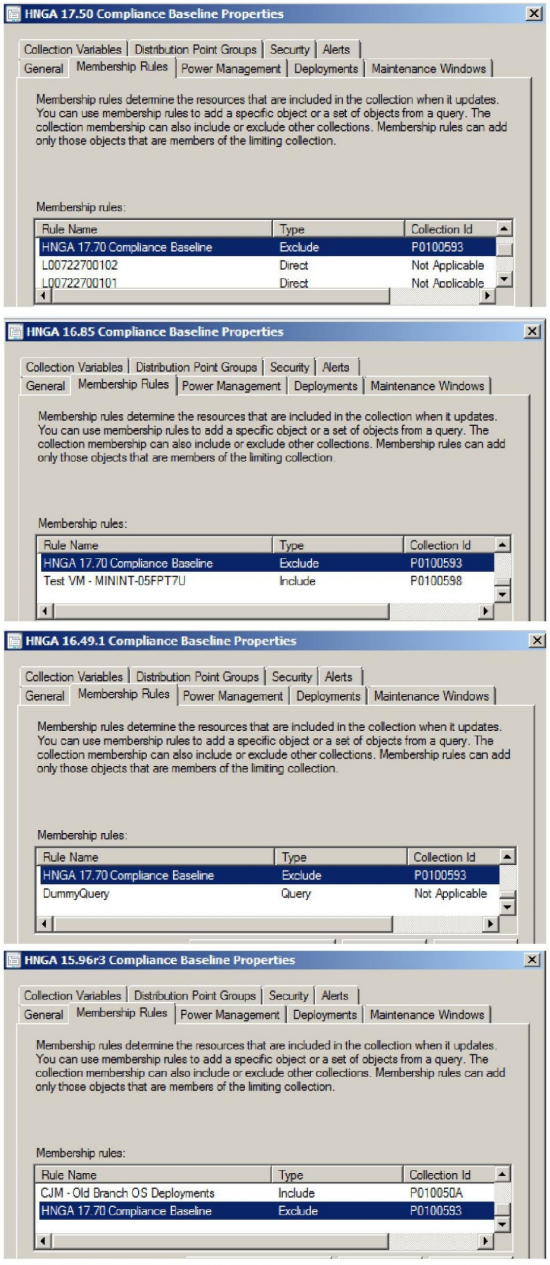
Step	Screen
Add the new collection to all of the previous HNGA xx.xx Compliance Baseline base collections using an Exclude Collection rule. **However, do not add the new collection to the Force Compliance baseline.** This will help to prevent accidental targeting of 2 baselines at a counter, ensuring that a counter can only be a member of 1 baseline collection. Remember that it is recommended that only the previous 2 live baseline collections are maintained for rollback purposes, and that older baselines should be decommissioned. Otherwise, to complete this step you may need to create an Exclude Rule for many previous baseline collections.	

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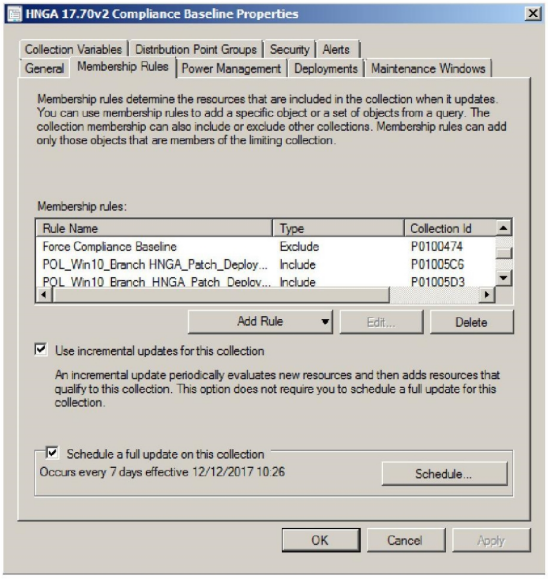
Step	Screen
Add the “Force Compliance Baseline” collection using an Exclude Collection rule to the new “**HNGA XX.XX Compliance**” collection. This will make sure that if you need to target a counter at the “Force Compliance Baseline” collection (used by Fujitsu for testing purposes) it will only have 1 baseline that will not try to force a version of HNGA. Note: remember that the Force Compliance baseline has the highest priority.	

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6 Configuration Baseline Deployment and Final Configuration

Now that all of the individual components are in place it is possible to deploy the Configuration Baseline and complete the final configuration.

To do this you need to complete the following in SCCM:

- Deploy the new Configuration Baseline to the SCCM Base Collection for the baseline
- Create the required Device Sub-Collections that indicate whether or not a counter is Compliant, Noncompliant, Unknown or reporting Error
- Create a 4 hour Maintenance Window on the Compliant sub-collection
- Deploy the HNGA Install Task Sequence for the new HNGA release to the Noncompliant sub-collection
- Deploy the package “CC-SCRIPT-ForceBaselineEvaluation” to the Unknown sub-collection

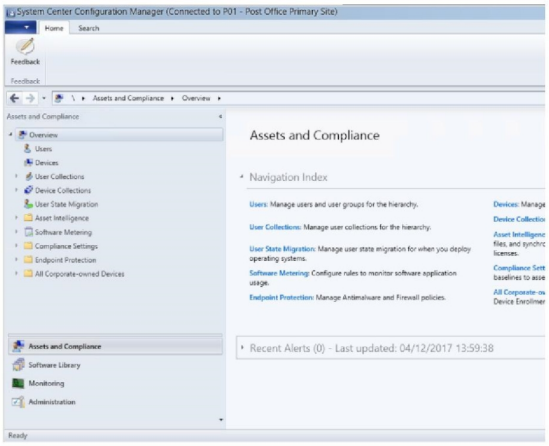
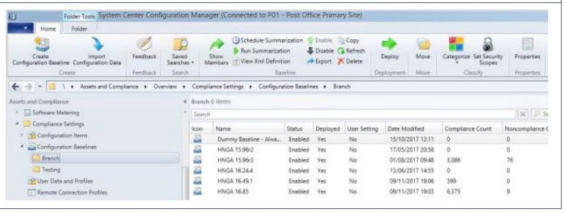
Once these items are in place it will be possible to test that a device can be upgraded successfully to the new HNGA version. Initially this will be tested using a Virtual Machine in the datacentre before moving into SV&I so that a personalised counter can be tested.

Use the following steps to configure the Configuration Baseline deployment.

6.1 Deploy the Baseline to the SCCM Base Collection

The first thing to do is to deploy the baseline to the SCCM base collection and create the baseline sub-collections.

Use the following steps to deploy the Configuration Baseline to the base collection.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance**	
Select **Compliance Settings → Configuration Baselines → Branch**	

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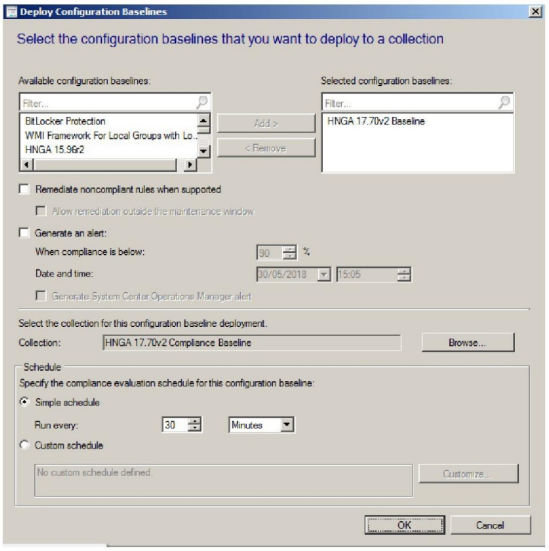
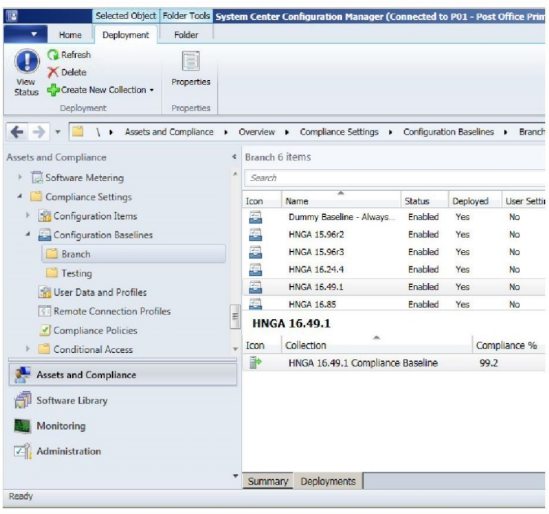
Step	Screen
Right-Click the new Configuration Baseline and select **Deploy**. Select the SCCM Base Collection that was created for the new version of HNGA. Change the schedule to **every 30 minutes** and then click on **OK**	

6.2 Create the Baseline sub-collections

Now that the Configuration Baseline has been deployed to the base collection, you need to create the 4 sub-collections that report what compliance state the device is in for the deployed baseline, whether it is Compliant, Non-compliant, Error or Unknown.

Use the following steps to create the baseline Sub-Collections.

Step	Screen
With the new Configuration Baseline still highlighted, click on the **Deployments** tab at the bottom of the SCCM Console. You will notice that the Configuration Baseline deployment to the SCCM Base Collection is listed.	

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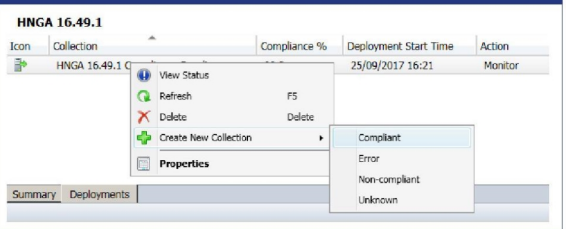
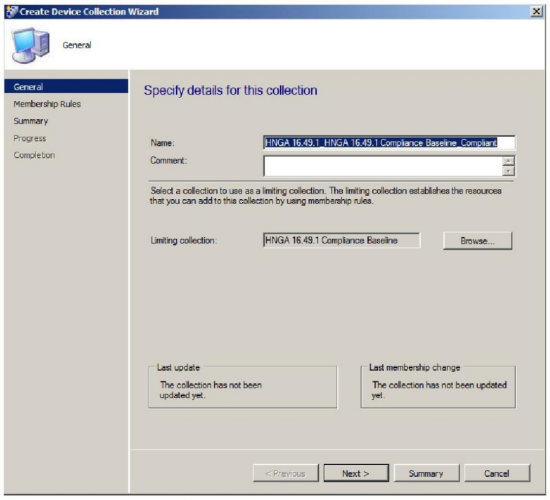
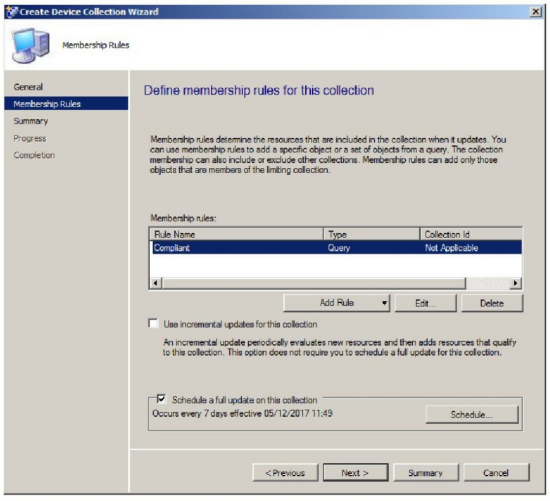
Step	Screen
Right-Click the Baseline deployment and click on "**Create New Collection**". Click on **Compliant**.	
You will notice that the name of the collection is automatically populated using the name of the SCCM Base Collection and the name of the Configuration Baseline. Also, the limiting collection will be set to the SCCM Base collection. Click on **Next**	
Leave the Incremental box **unticked**. Set the collection to perform a Full Update every **1 hour** then click on **Next**.	

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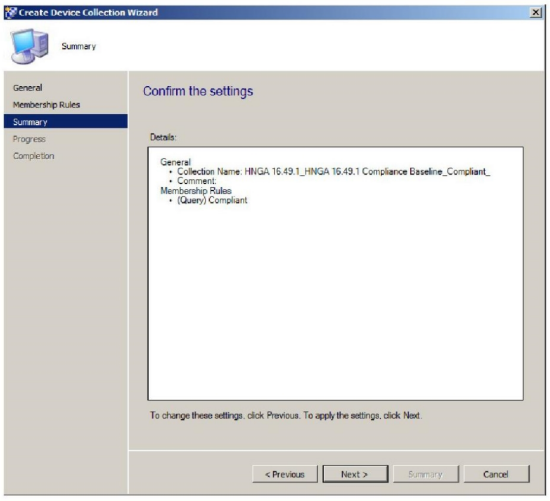
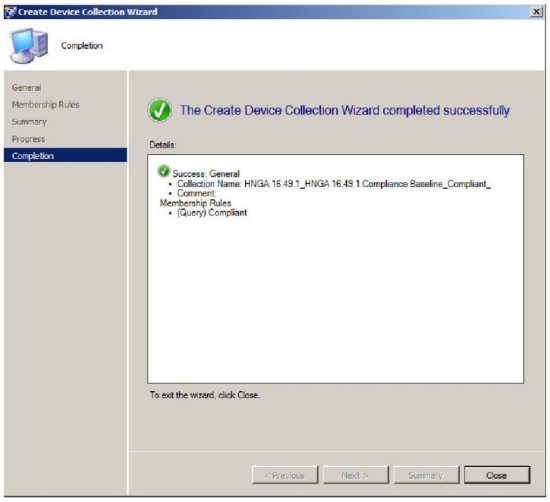
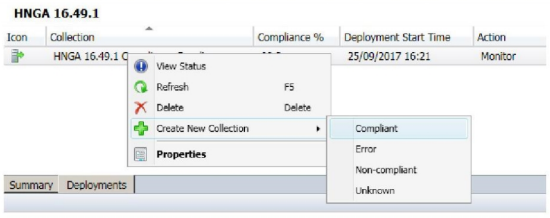
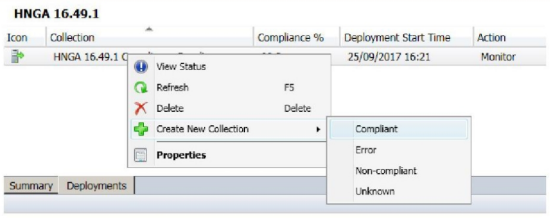
Step	Screen
Click on **Next** again	
Then click on **Close** to finish the collection creation wizard.	
Repeat the process to create the **Error** sub-collection for the Baseline deployment. Set the collection to perform a Full Update every **4 hours**	
Repeat the process to create the Non-compliant sub-collection for the Baseline deployment. Set the collection to perform a Full Update every **5 Minutes**	

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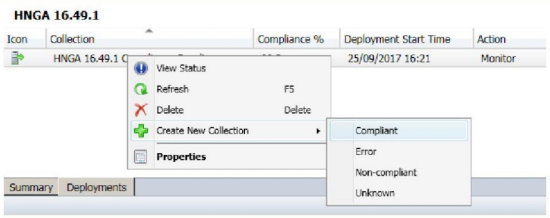
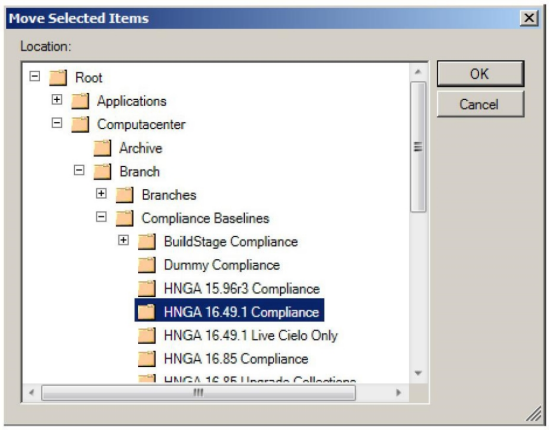
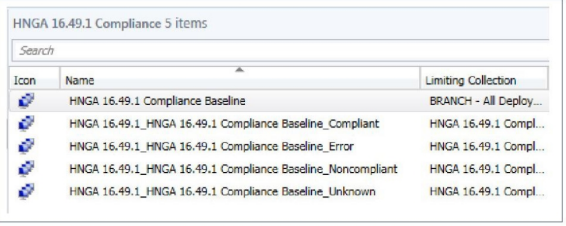
Step	Screen
Repeat the process to create the Unknown sub-collection for the Baseline deployment. Set the collection to perform a Full Update every **4 hours**	
Once created, the 4 new sub-collections will be located in the root Device Collections folder. Locate and highlight all 4 Sub-Collections and move them to the same folder as the SCCM Base Collection for the new HNGA release version.	
You should now have 5 collections in the baseline folder. The main baseline collection which has the HNGA baseline deployed to it and the 4 sub-collections (Compliant, Error, Noncompliant and Unknown).	

6.3 Configure the Maintenance Window for the Compliant Sub-Collection

With the 4 sub-collections created and located in the correct folder you now need to configure the Compliant sub-collection to have the correct maintenance window:

- Counters in the Compliant sub-collection should have a 4-hour maintenance windows applied to them, opening at 3am and closing at 7am

A personalised counter that is Compliant will have a 4 hour maintenance window configured so that changes (such as software updates) can only be installed while the maintenance window is open. When a counter becomes Non-compliant (e.g. when a different version of HNGA is targeted at it) the deployment of the Task Sequence that will install the new version of HNGA will be configured to bypass the maintenance window. This will allow the counter to become compliant again as quickly as possible.

Use the following steps to configure the correct maintenance window for the Compliant sub-collection.

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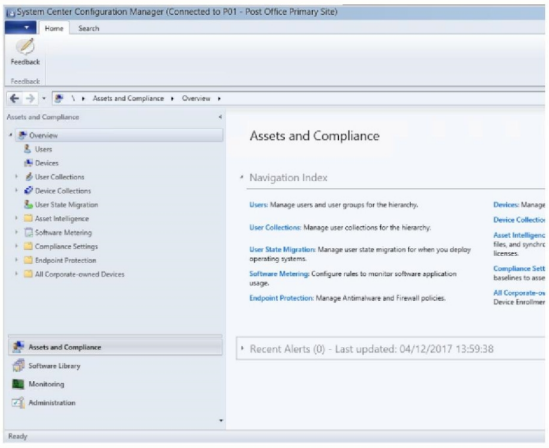
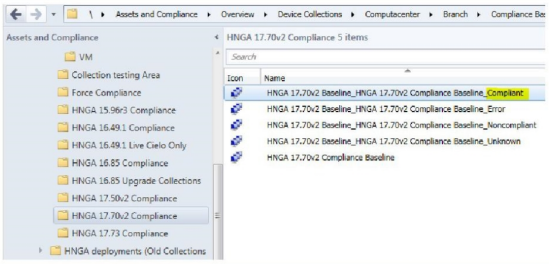
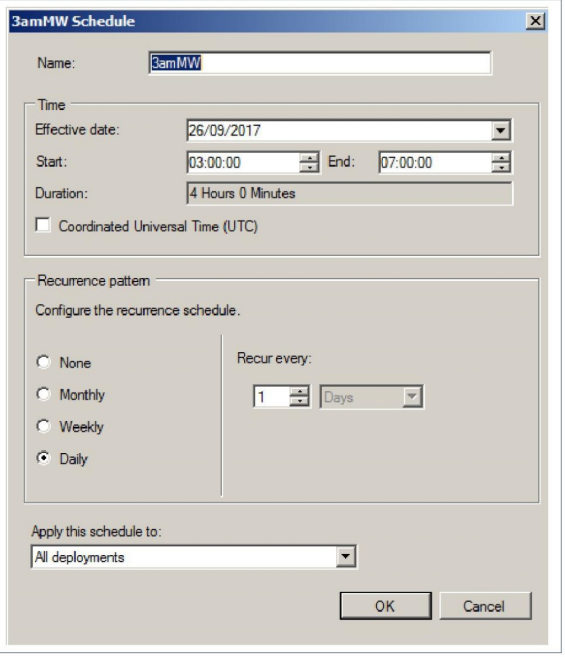
Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance**	
Browse to the following Device Collection folder: **Device Collections → Computacenter → Branch → Compliance Baselines → HNGA XX.XX Compliance** Where XX.XX is the version of HNGA being deployed	
Locate the Device Collections created for the new HNGA release and edit the properties of the **Compliant** sub-collection. Select the **Maintenance Windows** tab and create a new maintenance window with the following properties. Name: **3amMW** Start: **03:00:00** End: **07:00:00** Recurrence pattern: **Daily** Recur every: **1 days** Apply this schedule to: **All deployments** When completed click on **OK** to complete.	

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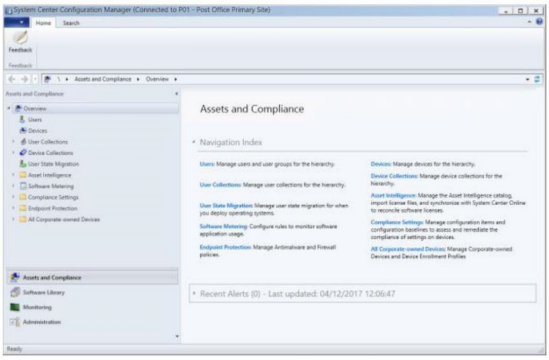
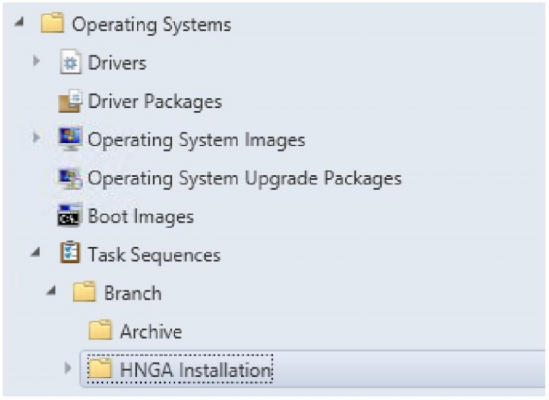
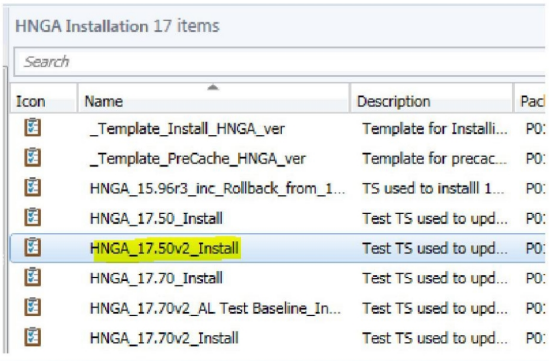
6.4 Deploy the HNGA Install Task Sequence

The next stage is to deploy the HNGA Install Task Sequence for the new HNGA release to the Non-compliant sub-collection so that when a counter becomes Non-compliant it will execute the HNGA installation task sequence and install the required HNGA component applications (in the correct order). Then when the counter re-evaluates its compliance it will become compliant again.

Use the following steps to deploy the task sequence.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console	
Browse the Software Library in the following location **Operating Systems → Task Sequences → Branch → HNGA Installation**	
Locate the task sequence that was created to install the new HNGA release. The name of the task sequence will be: **HNGA_XX.XX_Install** – where XX.XX is the HNGA version number	

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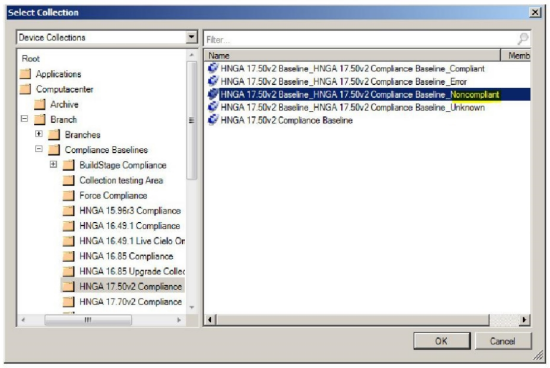
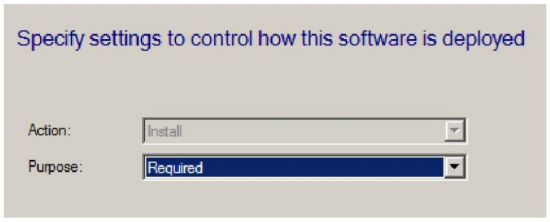
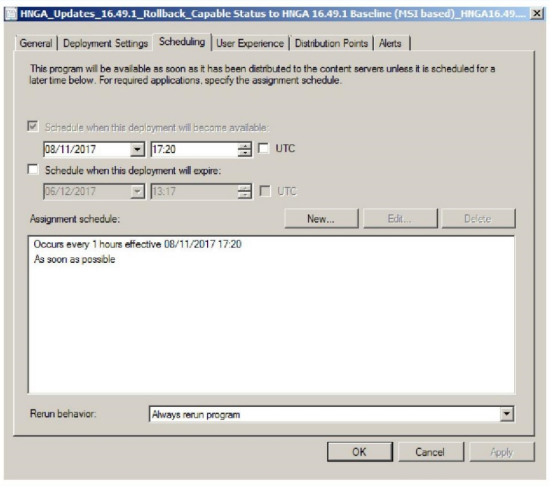
Step	Screen
Deploy the task sequence to the **Non-Compliant** sub-collection for the new HNGA baseline deployment. Configure the deployment as shown in the following steps:	
Action: **Install** Purpose: **Required**	
Assignment Schedule: **(2 assignments)** **As soon as possible** **Occurs every 1 hour** Rerun behavior: **Always rerun program** Note that Always rerun is required just in case you ever need to rollback to this version of HNGA from a later version.	

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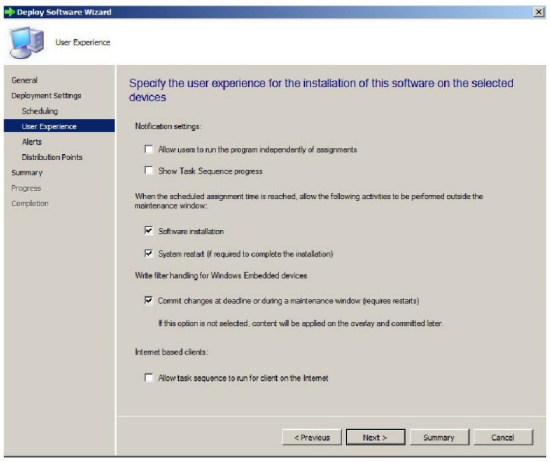
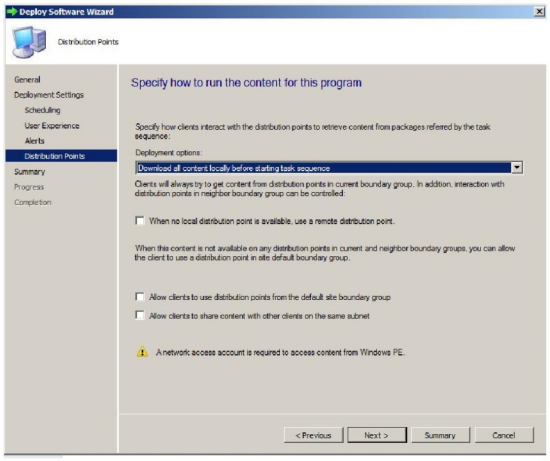
Step	Screen
Allow user to run the program independently of assignments: **Unticked** Show Task Sequence progress: **Unticked** Software installation: **Ticked** System restart: **Ticked** Commit changes at deadline or during a maintenance window (requires restart): **Ticked** Allow task sequence to run for the client on the Internet: **Unticked** Note: these settings allow the deployment to occur outside of the configured maintenance window. This is required to allow the counter to become compliant as quickly as possible.	
In **Deployment Options** select **Download all content locally before starting task sequence** Click on **Next** Then finish the wizard.	

6.5 Deploy the Force Baseline Evaluation Script to the Unknown sub-collection

Once the HNGA Install task sequence has been deployed to the Non-Compliant sub-collection, the next step is to deploy a package named "**CC-SCRIPT-ForceBaselineEvaluation**" to the Unknown sub-collection. When a counter is first switched to a new HNGA baseline it populates the Unknown sub-collection. Deploying this package to the Unknown sub-collection helps the counter to force an evaluation of the baseline more quickly than if it was left to do it without intervention. This helps to reduce the time that a counter will take to upgrade the version of HNGA.

Use the following procedure to deploy the package to the Unknown sub-collection:

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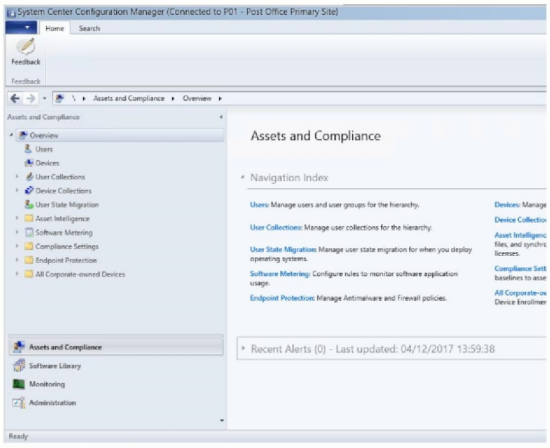
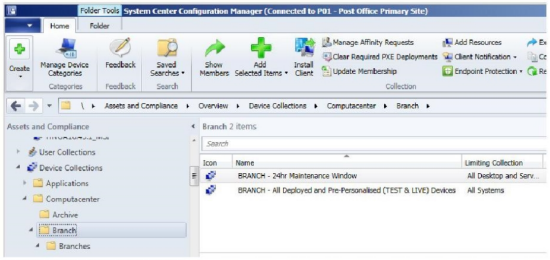
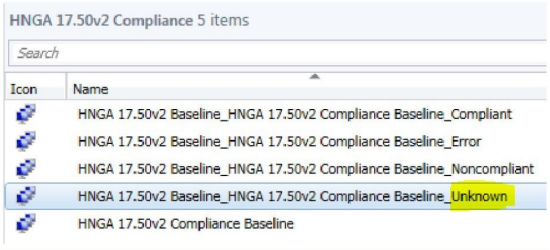
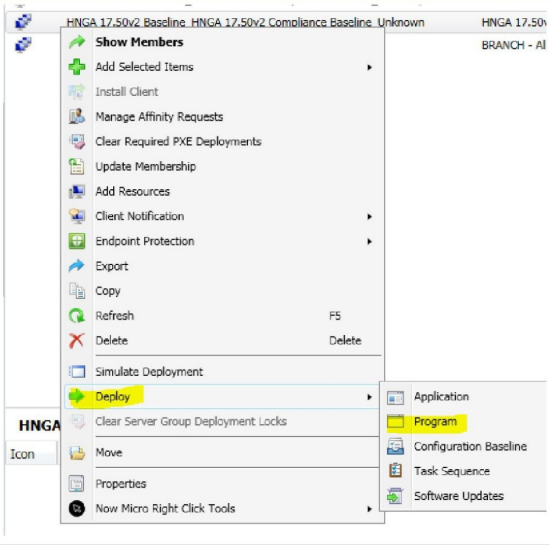
Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance**	
Browse to the following Device Collection folder: **Device Collections → Computacenter → Branch → Compliance Baselines → HNGA XX.XX Compliance** Where XX.XX is the version of HNGA being deployed	
Locate the **Unknown** sub-collection	
Right-Click the Unknown sub-collection Select **Deploy → Program**	

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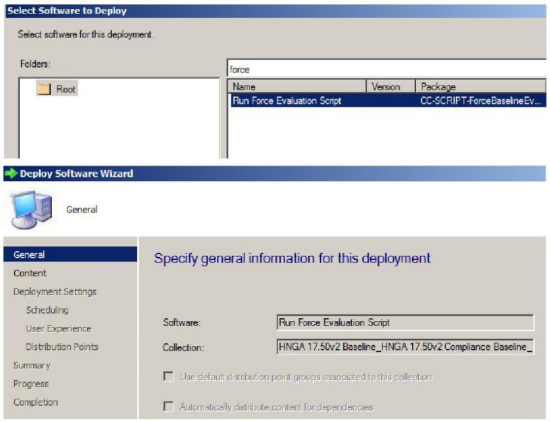
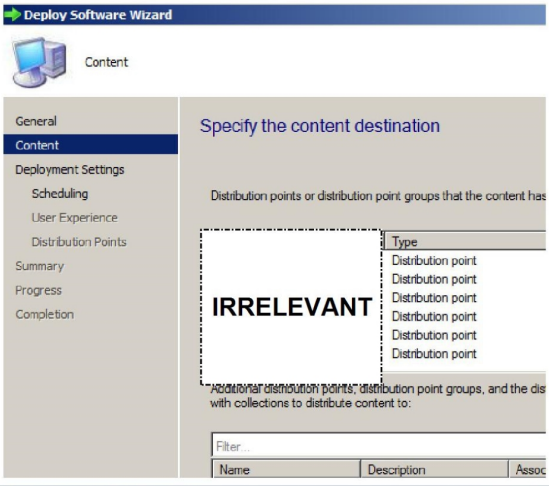
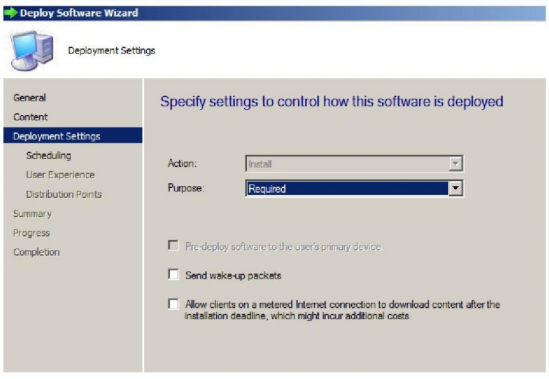
Step	Screen
On the "**Specify general information for this deployment"** page, click on **Browse**, then select the software "**Run Force Evaluation Script**" and click on **OK**. Confirm that the "Run Force Evaluation Script" software is selected and that the Unknown sub-collection is selected then click on **Next**	
On the "**Specify the content destination**" page, confirm that all 6 distribution points are selected and then click on **Next**	
On the "**Specify settings to control how this software is deployed**" page, configure the following settings and then click on **Next** Purpose: **Required** Send wake-up packets: **Not selected** Allow clients on a metered Internet connection to download content after the installation deadline: **Not selected**	

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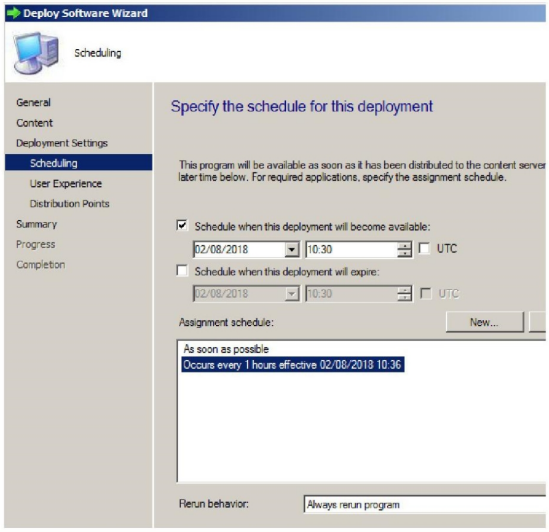
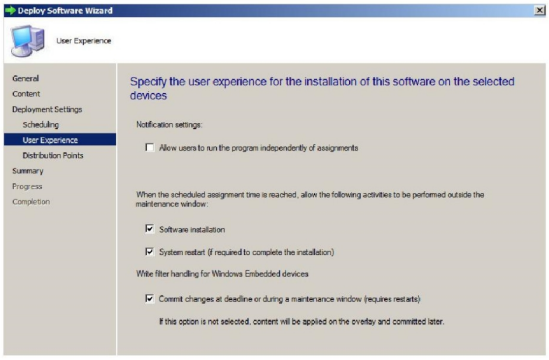
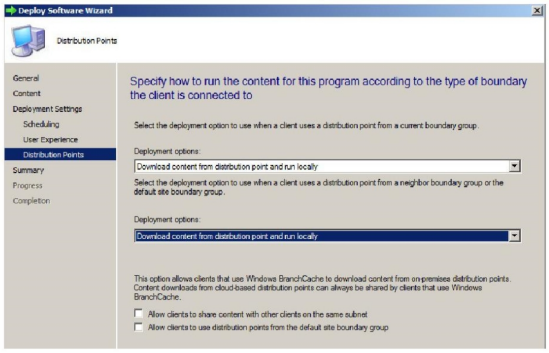
Step	Screen
On the "**Specify the schedule for this deployment**" page, configure the following settings and then click on **Next** Schedule when this deployment will become available: **Selected** Schedule when this deployment will expire: **Not selected** Assignment Schedule: (2 assignments) **As soon as possible** **Occurs every 1 hours effective "*current time and date*"** Rerun behavior: **Always rerun program**	
On the "**Specify the user experience for the installation of this software on the selected devices**" page, configure the following settings and click on **Next** Allow users to run the program independently of assignments: **Not selected** Software installation: **Selected** System restart (if required to complete the installation): **Selected** Commit changes at deadline or during a maintenance window (requires restart): **Selected**	
On the "**Specify how to run the content for this program…**" page, configure the following settings and click on **Next** Set both Deployment Options to: **Download content from distribution point and run locally** Allow clients to share content with other clients on the same subnet: **Not selected** Allow clients to use distribution points from the default site boundary group: **Not selected**	

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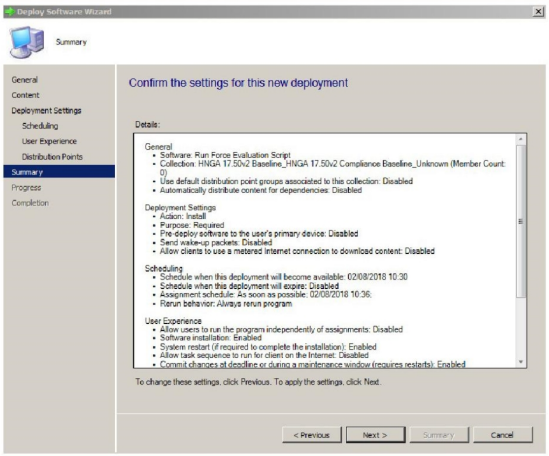
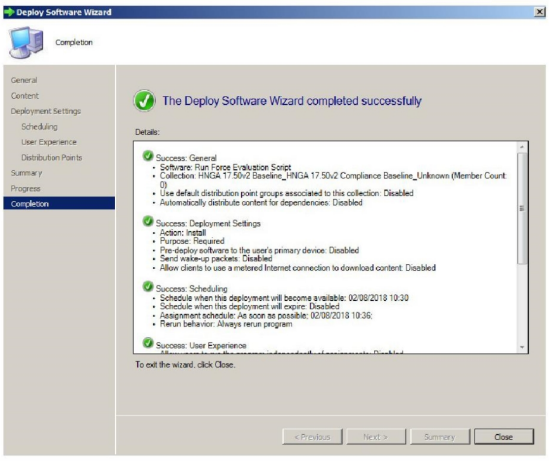
Step	Screen
On the "**Confirm the settings for this new deployment**" page, confirm that the settings are correct and click on **Next**	
On the "**The Deploy Software Wizard completed successfully**" page, click on **Close**	

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7 Initial Virtual Machine Testing of the HNGA Release

With everything now in place it is possible to complete a number of tests of the SCCM baseline deployment using virtual machines in VMWare.

These tests will prove the following:

- A virtual machine targeted at the new Baseline deployment becomes compliant to the new HNGA release
- Once compliant, the test virtual machine has the correct HNGA software components installed
- Once the upgrade has been completed successfully test rolling back to the original version of HNGA on the test virtual machine
- With BuildStage configured correctly, prove that a virtual machine can be built successfully and be Compliant to the new HNGA release

Once these initial tests have been completed you can then move on and complete the "Route to Live" testing by completing BuildStage testing and then testing in SV&I, LST and then Model Office, before moving rolling out the baseline into Production.

In summary, initial testing the new HNGA baseline deployment on a test Virtual Machine is broken down into 2 sections:

Section 1
- Identify a test Virtual Machine that is Compliant to an existing HNGA baseline.
- Add the test virtual machine to the new base collection for the new HNGA version (the collection where the baseline is deployed) using a Direct Membership rule
- Restart the virtual machine and make sure it becomes compliant to the new version of HNGA
- Execute a PowerShell command to capture a list of installed applications and confirm that the list matches the bundle of applications in the new HNGA release
- Remove the Include collection rule that was added for the test collection so that the test device reverts to its original HNGA baseline and make sure it become compliant again
- Execute a PowerShell command again to capture a list of installed applications and confirm that the list matches the bundle of applications in the original HNGA release

Section 2
- Setup BuildStage so that test VMs build with the new HNGA version
- Complete a test build of a virtual machine and confirm that on completion it is Compliant to the new HNGA version
- Execute a PowerShell command to capture a list of installed applications and confirm that the list matches the bundle of applications in the new HNGA release

7.1 Initial testing of the baseline deployment to a Virtual Machine

Use the following steps to complete a test deployment of the new HNGA version on a test Virtual Machine.

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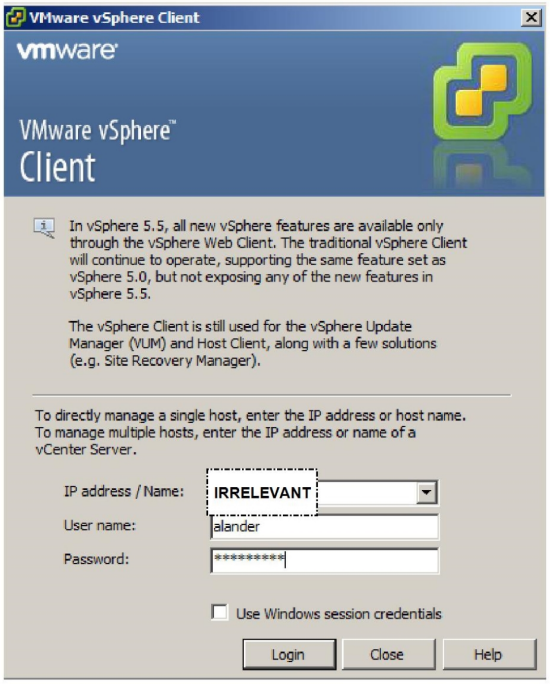
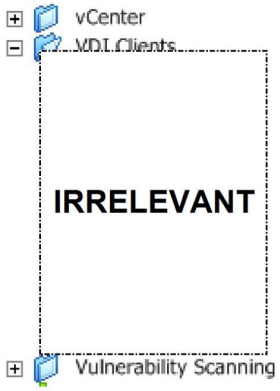
Step	Screen
In the Citrix Workspace, run the vSphere Client Set the IP address / Name as: **IRRELEVANT** Then enter your credentials and click on **Login**	
When the vSphere console opens browse to: **Romford → VDI Clients** Then open the console of one of the virtual machines that is configured as a branch counter. Note that at the time of writing the virtual machines configured as branch counters are **IRRELEVANT** However, any of the 12 virtual machines could be configured as a branch counter so you may need to search for one. If no VMs are available or in a usable state you may need to rebuild one in preparation for the testing.	

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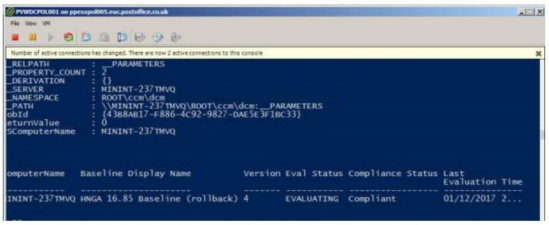
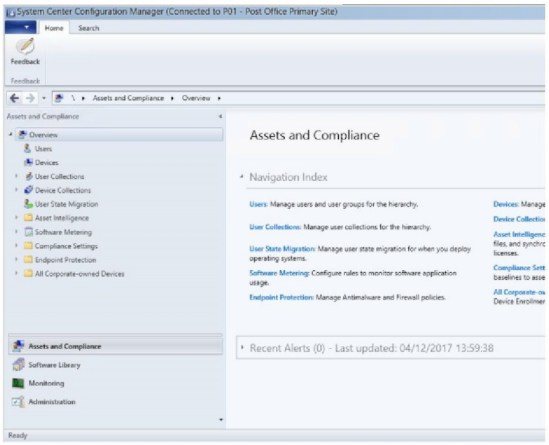
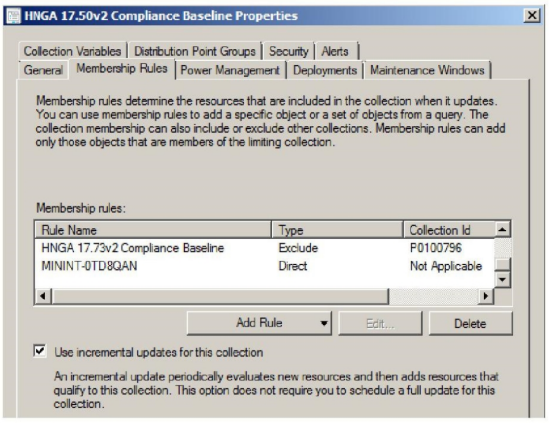
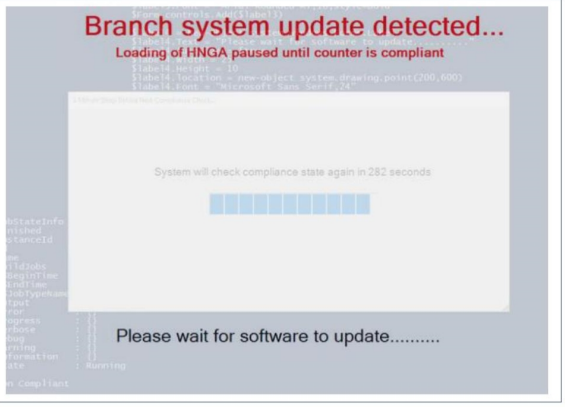
Step	Screen
Restart the virtual machine and then make a note the hostname of the virtual machine and the baseline that it is compliant to. When the virtual machine starts up the CDU scripts will execute and you should be able to confirm both the hostname and compliance state.	
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance**	
Edit the membership of the baseline collection for the new HNGA release. Create a Direct Membership rule and include the test virtual machine. This will target the new HNGA baseline at the test virtual machine. Remember that you can check the properties of the VM to confirm that the correct baseline is now deployed to it.	
Restart the test VM and confirm that it tries to evaluate the new baseline. It should initially become Non-Compliant and display a message stating "**Branch system update detected…**"	

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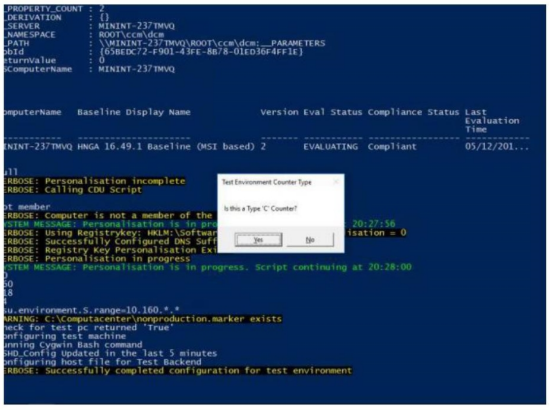
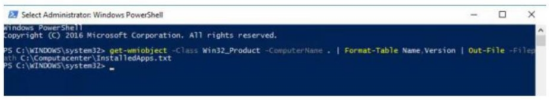
Step	Screen
After a while the device should become Compliant again but to the new HNGA version.	
Once the device has reported as Compliant you need to confirm that the correct HNGA component applications are installed. To do this open an Administrative PowerShell window and run the following command: **Get-WmiObject -Class Win32_Product -Computername . | Format-Table Name, Version | Out-File –FilePath C:\Computacenter\InstalledApps.txt**	

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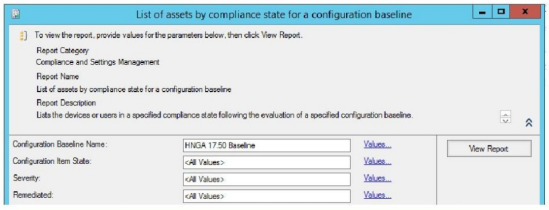
Step	Screen
Open the **InstalledApps.txt** file and confirm that the correct HNGA component applications that make up the new HNGA version are all installed (refer to the HNGA release bundle document to confirm). Note that other applications that are part of the standard build such as Eracent or the SCCM client will also be listed. You just need to confirm that the applications that make up the HNGA version are listed and that they are the correct versions. It is also worth confirming that only one version of each of the Fujitsu specific applications in the bundle are installed. Make sure that only one version of the following applications are installed and they are the correct versions: **IRRELEVANT**	 **IRRELEVANT**
Next, run the SCCM report "List of assets by compliance state for a configuration baseline", select the new HNGA release version baseline and confirm that the test VM counter is reported as Compliant	
If you are happy that the device has successfully upgraded to the new HNGA version and the correct applications are installed, you need to roll the device back to its previous HNGA version.	

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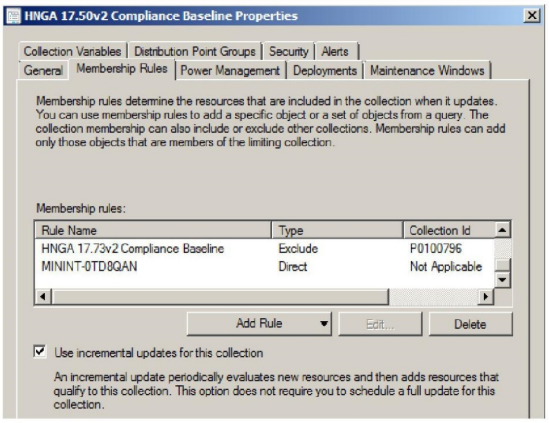
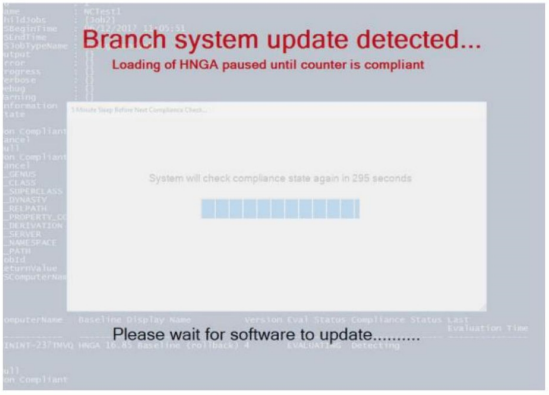
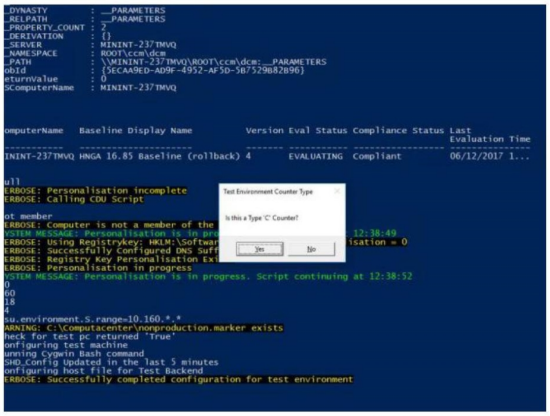
Step	Screen
Remove the Direct Membership rule that you created for the virtual machine from the new HNGA baseline collection.	
Reboot the virtual machine. It will attempt to re-evaluate its previously deployed HNGA version and will initially become Non-Compliant again.	
Confirm that the virtual machine becomes compliant again, this time to the original HNGA version that was installed.	

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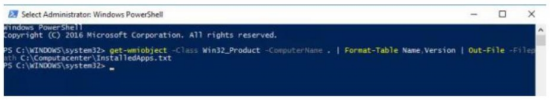
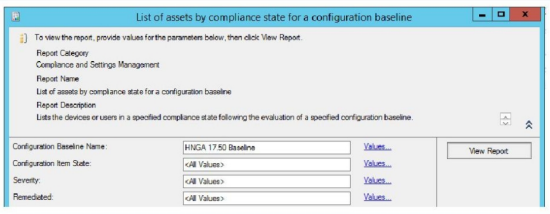
Step	Screen
Once the device has reported as Compliant you need to confirm that the correct HNGA component applications are installed. To do this open an Administrative PowerShell window and run the following command: **Get-WmiObject -Class Win32_Product -Computername . | Format-Table Name, Version | Out-File –FilePath C:\Computacenter\InstalledAppsRollback.txt**	
Open the **InstalledAppsRollback.txt** file and confirm that the correct HNGA component applications that make up the original HNGA version bundle are all installed. Note that other applications such as Eracent or the SCCM client will also be listed. You just need to confirm that the applications that make up the HNGA version are listed and that they are the correct versions. Again, it is also worth confirming that only one version of each of the Fujitsu specific applications in the bundle are installed. Make sure that only one version of the following applications are installed and they are the correct versions: **IRRELEVANT**	 **IRRELEVANT**
Run the SCCM report “List of assets by compliance state for a configuration baseline”, select the original HNGA version baseline and confirm that the test VM counter is reported as Compliant	

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7.2 Initial BuildStage testing of the baseline deployment to a Virtual Machine

Once you have tested that it is possible to deploy a new HNGA release to an existing virtual machine, you need to test that a Virtual Machine can be built and become Compliant with the new version HNGA installed.

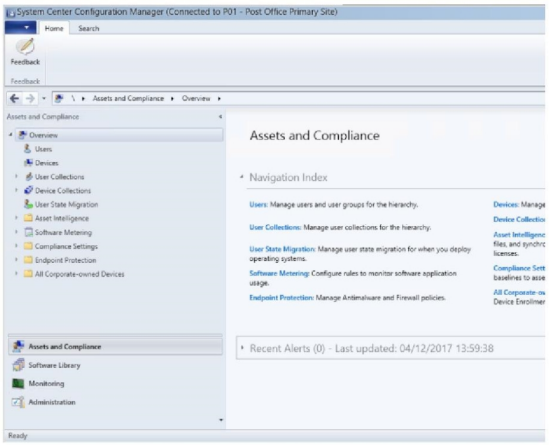
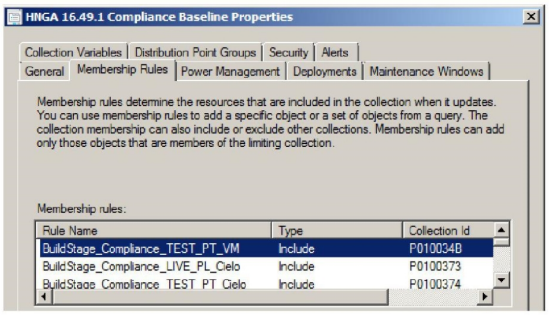
To do this you will need to do the following:

- Add the TEST BuildStage collections for all hardware types (including virtual machines) to the SCCM base collection for the new HNGA release
- Identify and rebuild a test virtual machine
- When the build has completed, confirm compliance to the new HNGA release

Use the following steps to prepare BuildStage to allow a virtual machine to build and become Compliant with the new version of HNGA installed

7.2.1 Buildstage preparation for all TEST builds

Use the following steps to configure BuildStage for TEST counters for the new HNGA release.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance**	
Browse to **Device Collections → Computacenter → Branch → Compliance Baselines** Locate and remove the following BuildStage TEST collections from any of the SCCM baseline collections: **BuildStage_Compliance_TEST_PT_VM** **BuildStage_Compliance_TEST_PT_M79** **BuildStage_Compliance_TEST_PT_Cielo** **BuildStage_Compliance_TEST_PT_BoxPX35** When located delete the Include Collection Rules for these collections from the SCCM baseline collections.	

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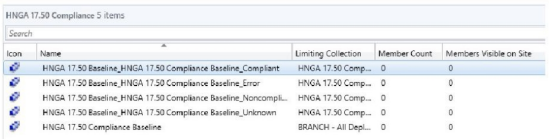
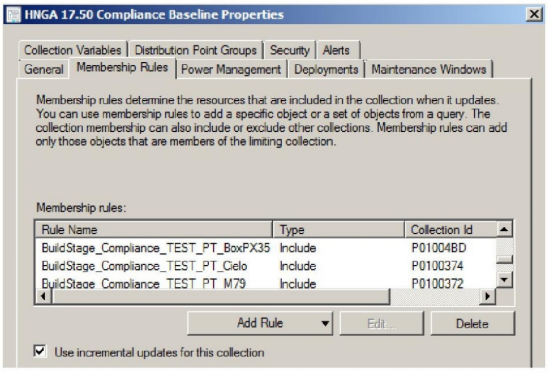
Step	Screen
Browse to **Device Collections → Computacenter → Branch → Compliance Baselines → the folder for the new HNGA release.** In this example we are using the HNGA 17.50 Compliance folder.	
Edit the membership of the SCCM base collection for the new HNGA release. Create 4 new Include Collection Rules and add the following test BuildStage collections to the SCCM base collection for the new HNGA release. **BuildStage_Compliance_TEST_PT_VM** **BuildStage_Compliance_TEST_PT_M79** **BuildStage_Compliance_TEST_PT_Cielo** **BuildStage_Compliance_TEST_PT_BoxPX35** Note that the BuildStage collections are located in the following folder: Device Collections → Computacenter → Branch → Compliance Baselines → BuildStage Compliance	
At this point all new TEST builds will be added to the SCCM Base collection for the new HNGA release. Note that a TEST build is one where the TEST build type is selected at the start of the task sequence rather than LIVE. When the builds have completed they will check their compliance to the new HNGA version.	

7.2.2 Test build of a Virtual Machine Compliant to the new version of HNGA

Now that BuildStage has been prepared for TEST builds, you need to complete a test build of a Virtual Machine to confirm that once built the counter is Compliant to the new version of HNGA and that it has the correct HNGA component applications installed.

Use the following procedure to complete a test build of a Virtual Machine.

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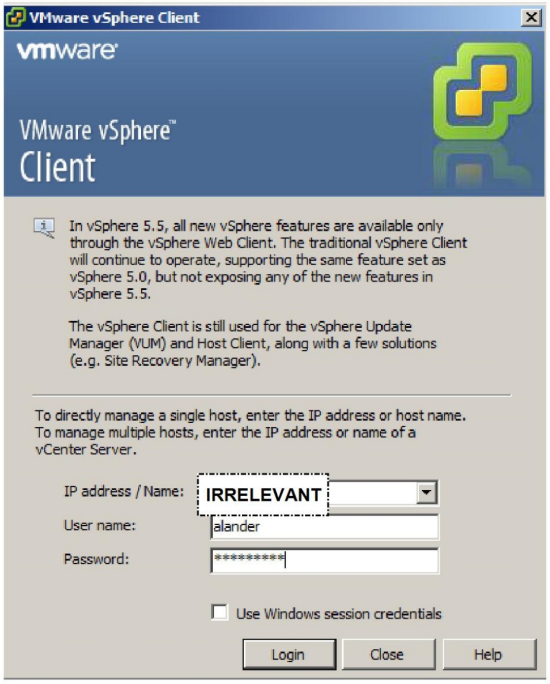
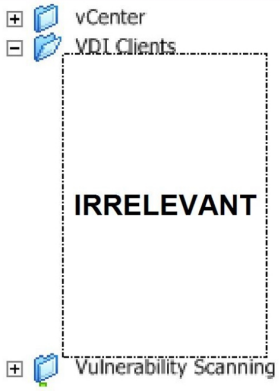
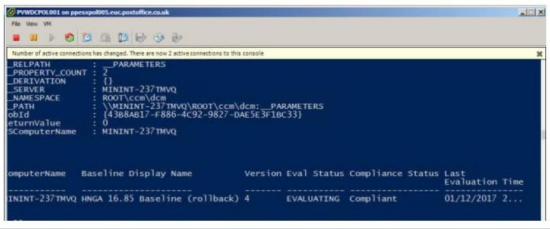
Step	Screen
In the Citrix Workspace, run the vSphere Client Set the IP address / Name as **IRRELEVANT** Then enter your credentials and click on Login	
When the vSphere console opens browse to: **Romford → VDI Clients** Then open the console of one of the virtual machines that is configured as a branch counter. Note that at the time of writing the virtual machines configured as branch counters are **IRRELEVANT** Any of the 12 virtual machines could have been built as a branch counter so you may need to search to locate the VM that is required.	
When you have identified a VM for rebuild, note the hostname of the virtual machine.	

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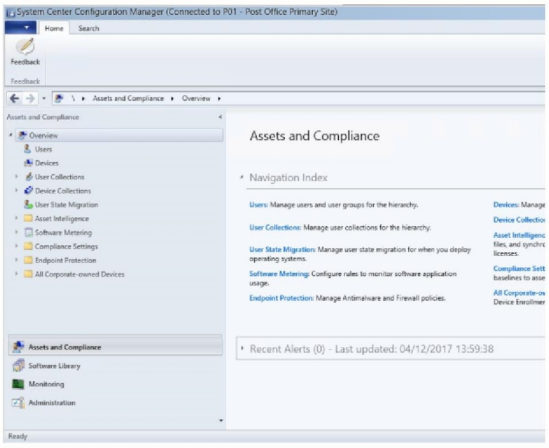
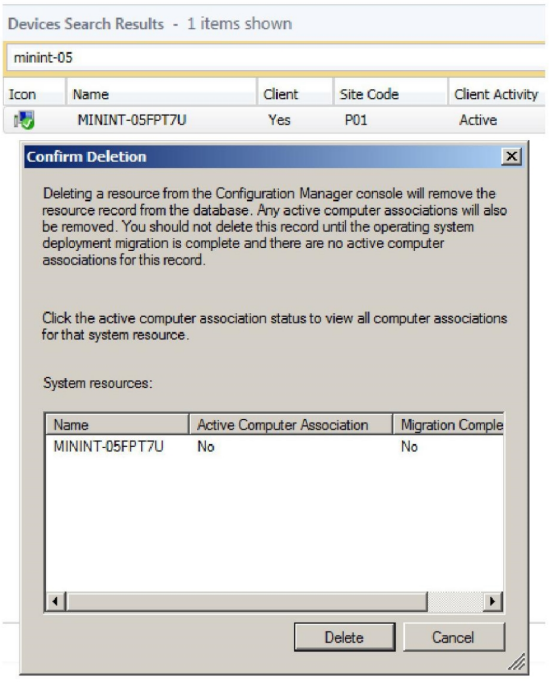
Step	Screen
In the SCCM Console browse to **Assets and Compliance** and select **Devices**	
Search Devices and locate the SCCM device object for the virtual machine. Right-Click the SCCM object for the VM and delete it.	

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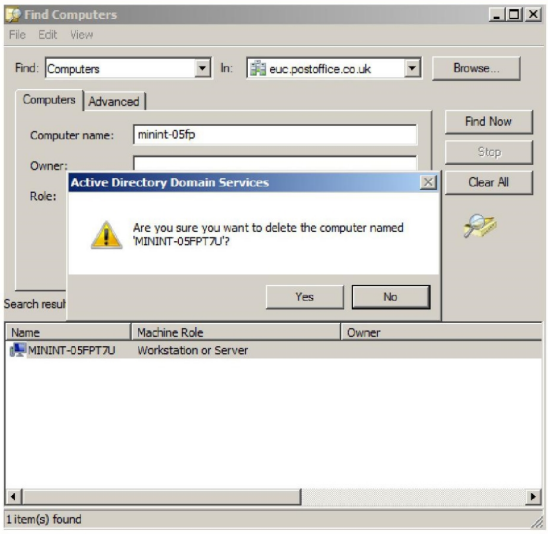
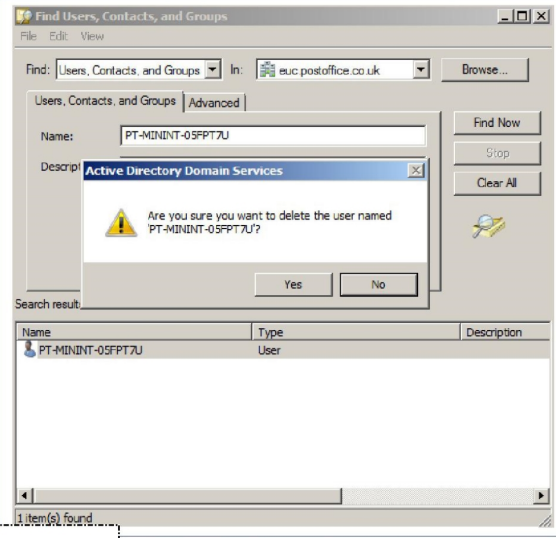
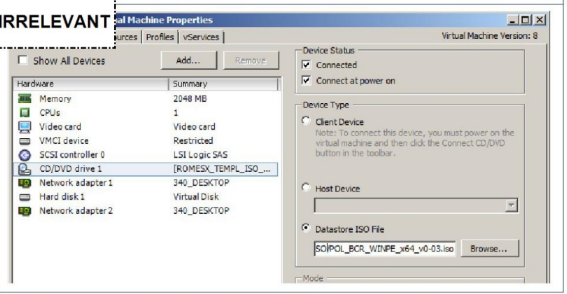
Step	Screen
Open **Active Directory Users and Computers**, find the AD computer object for the virtual machine and delete it.	
Locate the associated AD user object and delete it. Note that the user object will have the same name as the computer object but will be prefixed with either PL- or PT- depending on if it was a TEST or LIVE build.	
In the vSphere console confirm that the VM has the CD\DVD drive connected to the ISO **POL_BCR_WINPE_x64_v0-03.iso** (or higher)	IRRELEVANT 

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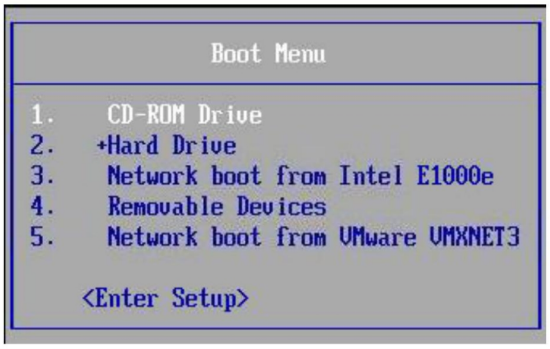
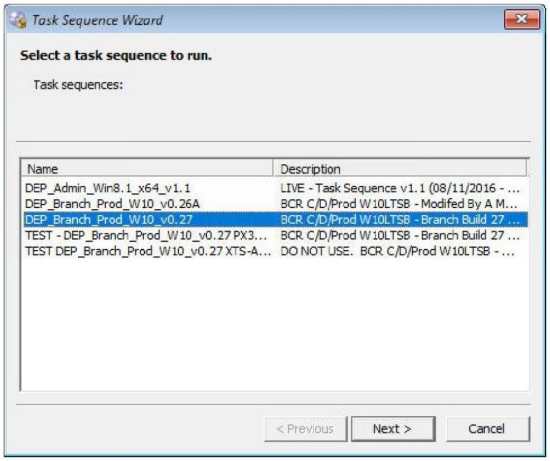
Step	Screen
Reboot the VM and boot from the CD-ROM Drive so that it boots into the WinPE boot image	
On the "**Welcome to the Task Sequence Wizard**" page, click on **Next**	
On the "**Select a task sequence to run**" page, select the current live Branch Counter Task Sequence. If you don't know which is the live one, check with GIO Build Management. Note that the minimum version number for the live Branch Counter Task Sequence will be v0.27	

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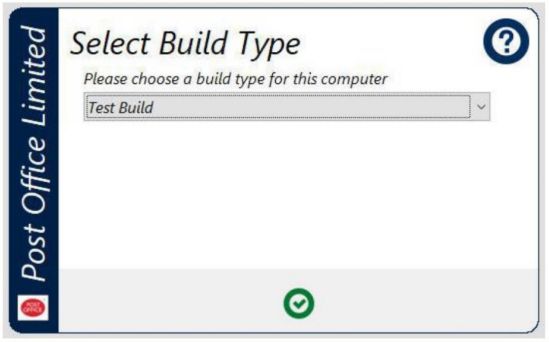
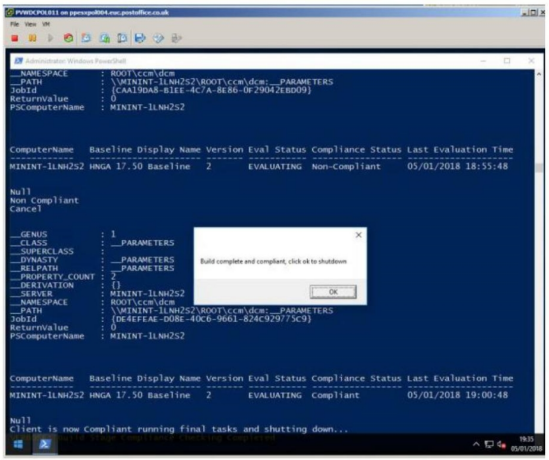
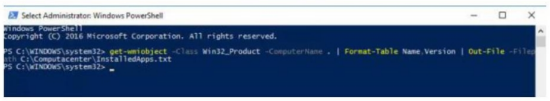
Step	Screen
When prompted to select the Build Type, select **Test Build** and click on the green tick to confirm. The build will now proceed, based on a VM, Test build.	
Once the build has completed and the counter has had its Compliance checked for the new HNGA release you will see a popup on the screens saying **Build complete and compliant, click ok to shutdown**	
Confirm that the correct HNGA component applications are installed. To do this open an Administrative PowerShell window and run the following command: **Get-WmiObject -Class Win32_Product -Computername . | Format-Table Name, Version | Out-File –FilePath C:\Computacenter\InstalledApps.txt**	

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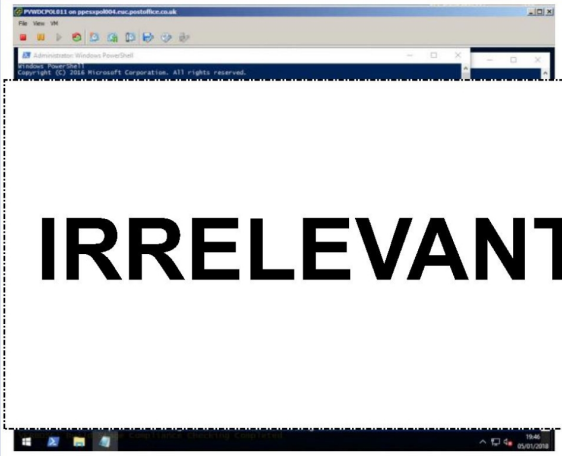
Step	Screen
Open the **InstalledApps.txt** file and confirm that the correct HNGA component applications that make up the HNGA version bundle are all installed. Note that other applications such as Eracent or the SCCM client will also be listed. You just need to confirm that the applications that make up the HNGA version are listed and that they are the correct versions. It is also worth confirming that only one version of each of the Fujitsu specific applications in the bundle are installed. Make sure that only one version of the following applications are installed and they are the correct versions: IRRELEVANT	 IRRELEVANT
Once you have confirmed that the device has the correct HNGA applications installed then the VM BuildStage testing is complete.	
Next you will need to repeat the above build test procedure for each of the 3 physical hardware models used in branches by completing test builds in Hatfield. **Currently the 3 hardware models use in branch are:** **Lenovo M79** **Cielo PHU** **Box PX35** **You will need to engage with a resource in Hatfield who can build a couple of each of the hardware models for you in Hatfield.** **These counters need to be shipped to Winnersh and will be used to test that a pre-personalised counter with the new HNGA version installed can be Personalised.**	

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8 "Route to Live" Testing for the new HNGA Release

When the initial virtual machine testing has been completed and you have confirmed that a test VM can become compliant to the new version of HNGA (with the correct applications being installed), you can start to follow the "Route to Live" testing process.

"Route to Live" is a term used to describe the testing that needs to be successfully completed to allow a major upgrade to be deployed to Post Office Branch Counters.

For a new HNGA release the "Route to Live" process requires that the following tests are completed successfully:

- Successful deployment of the new HNGA release to a set of current personalised SV&I counters
- Successful deployment of the new HNGA release to a set of current personalised LST counters
- Successful completion of physical LIVE counter builds in Hatfield that include the new HNGA release installed. These will be deployed and personalised in Model Office.
- Successful deployment of a pre-personalised TEST counter with the new HNGA release installed into SV&I and completion of the personalisation process.
- Successful deployment of the new HNGA release to a set of current personalised Model Office counters.
- Successful deployment of a pre-personalised LIVE counter with the new HNGA release installed into Model Office and completion of the personalisation process.

On successful completion of these tests you will be ready to:

- Deploy the new HNGA release onto production branch counters
- Configure BuildStage for LIVE counters
- Build new pre-personalised counters in Hatfield with the new HNGA release installed, ready for deployment into a Branch

Use the procedures in the following sections to assist with the completion of the "Route to Live" testing.

8.1 Deployment of the new HNGA release to personalised SV&I and LST counters

With the initial Virtual Machine HNGA deployment and BuildStage testing completed, deployment of the new HNGA release to a personalised test counter in SV&I and LST is required next. The objective of the SV&I/LST testing is to prove that the new version of HNGA can be deployed to a set of physical devices of all hardware types that have been personalised and are in use, to confirm that the HNGA application functions correctly and then to prove that the same devices can be rolled back successfully to the previous HNGA version. SV&I and LST testing should be completed prior to deployment in Model Office or Production.

The Post Office SV&I environment is currently based at the Atos office in Winnersh, although it may also be available in Hatfield soon. It consists of a number of simulated Post Office Branches using live network equipment and physical hardware. The Post Office LST environment is located in a Fujitsu testing facility in Bracknell. The counters based in SV&I and LST are personalised and are used to test all deployments, including new HNGA releases.

The SV&I and LST device collections in SCCM are currently located in the following folder:

Device Collections → Branch → Branches → SV&I and LST

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SV&I and LST 43 items

Search

Icon	Name	Limiting Collection	Member Count
	LST - All Deployed	BRANCH - All Deploy...	3
	SV&I - All Deployed	SV&I - All Deployed...	28
	SV&I - All Deployed - Cielo Tablet	SV&I - All Deployed	4
	SV&I - All Deployed - Lenovo M79	SV&I - All Deployed	11
	SV&I - All Deployed - PX35 (AIO)	SV&I - All Deployed	13
	SV&I - All Deployed & Pre-Personalised	BRANCH - All Deploy...	82
	SV&I - All Deployed Build 22, Build 23 & Build 26	SV&I - All Deployed	2
	SV&I - All Deployed Build 27	SV&I - All Deployed	23
	SV&I - All Deployed Build 28	SV&I - All Deployed	3
	SV&I - All Pre-Personalised	SV&I - All Deployed...	54
	SV&I - Always Compliant Counters	All Post Office Branc...	10
	SV&I - Banbury (900041)	SV&I - All Deployed...	1
	SV&I - Banbury (900041) Counter 1	SV&I - All Deployed...	1
	SV&I - Barmouth (167641)	SV&I - All Deployed...	1
	SV&I - Barmouth (167641) Counter 1	SV&I - All Deployed...	1
	SV&I - Garrabost (112869)	SV&I - All Deployed...	5
	SV&I - Garrabost (112869) Counter 1	SV&I - All Deployed...	2
	SV&I - Garrabost (112869) Counter 2	SV&I - All Deployed...	3
	SV&I - Glasgow (054832)	SV&I - All Deployed...	9

8.1.1 SV&I Counter Types

In SV&I there are 2 types of counters, Type C and Type D. Type C counters are not as locked down as Type D counters so that they can be used to access logs etc. when testing deployments. Type D counters in SV&I are configured with the same lockdown policies as production counters which means there configuration is more closely aligned with production counters.

When testing a HNGA release in SV&I, you should always test on Type D counters!

8.1.2 Testing a HNGA release in SV&I and LST

Testing in SV&I needs to be as flexible as possible. There are collections configured that include all SV&I counters, and collections for specific simulated branches, including Banbury, Garrabost, Glasgow, Nantwich and Putney. However, on any particular date it is possible that these simulated branches have either too many or no counters available for testing. You may need to prepare the SV&I or LST counters in advance of any HNGA release testing to make sure that you have counters available for testing.

For Build 27 or later devices, SV&I counters once personalised will by default fall out of any automatic BuildStage compliance collections. Therefore to test a HNGA release in SV&I it is a case of adding personalised counters to a collection (using direct memberships) that targets a specific HNGA baseline.

In SV&I there should be a device collection created for each HNGA release that can then be added to the required HNGA base collection using an Include rule. This allows you to easily select whichever devices (based on availability) that you require to add to the SV&I test baseline and confirm they becomes complaint.

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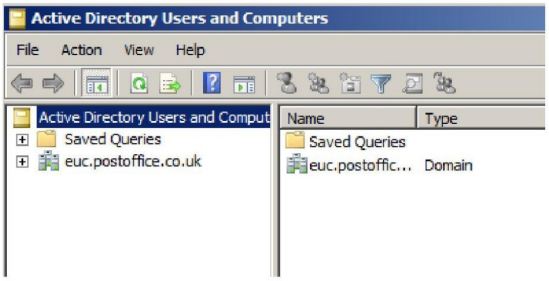
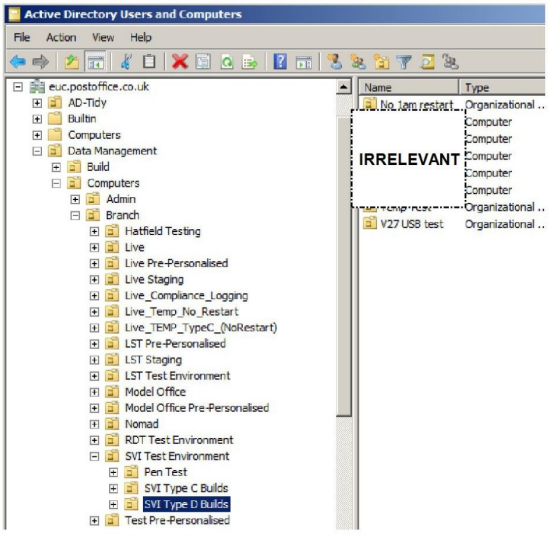
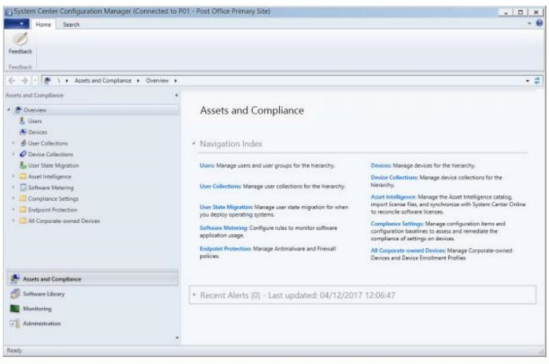
The following steps describe how to create the SV&I test collection for the HNGA release and then test that a device can be successfully upgraded and rolled back. Note that you will need an onsite resource in the SV&I location with the physical counters who can execute any tests required to confirm compliance.

Step	Screen
Login to the Primary Site server IRRELEVANT and open **Active Directory Users and Computers**	
Browse to the OU **Data Management\Computers\Branch\SVI Test Environment\SVI Type D Builds** Locate a personalized SV&I counter (computer name begins with S) You will need to seek agreement from the Atos staff in Winnersh that the counter(s) chosen for the upgrade can be used	
Open the SCCM Console	

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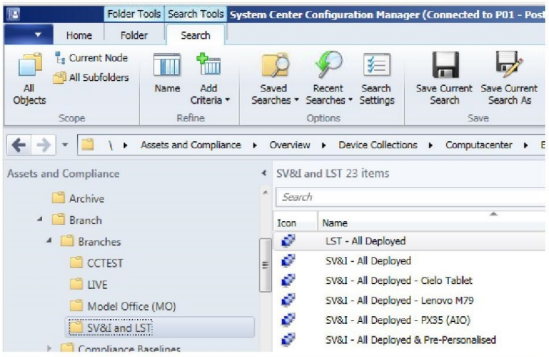
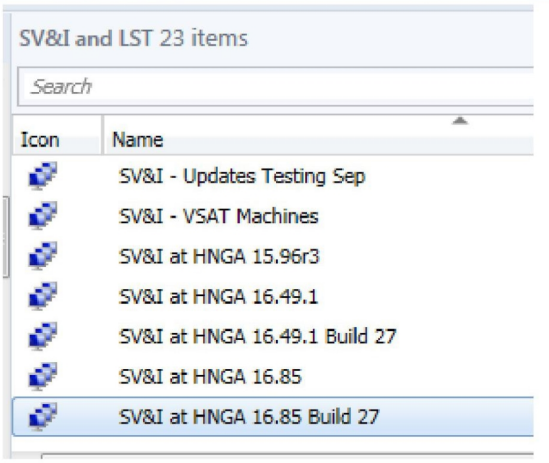
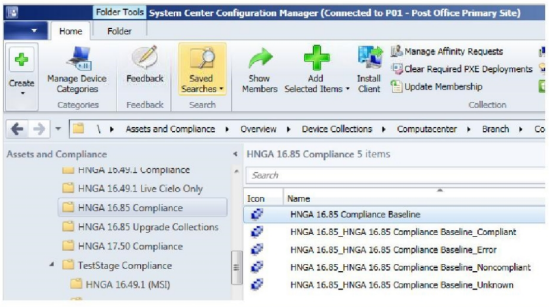
Step	Screen
Select Assets and Compliance and browse to the folder **Device Collections → Branch → Branches → SV&I and LST**	
If required, create a new Device Collection named **SV&I at HNGA XX.XX** Where XX.XX is the new HNGA version being tested Make sure that the collection "**SV&I - All Deployed & Pre-Personalised**" is configured as the limiting collection.	
Browse to the folder where the base and sub-collections are located for the new HNGA release	

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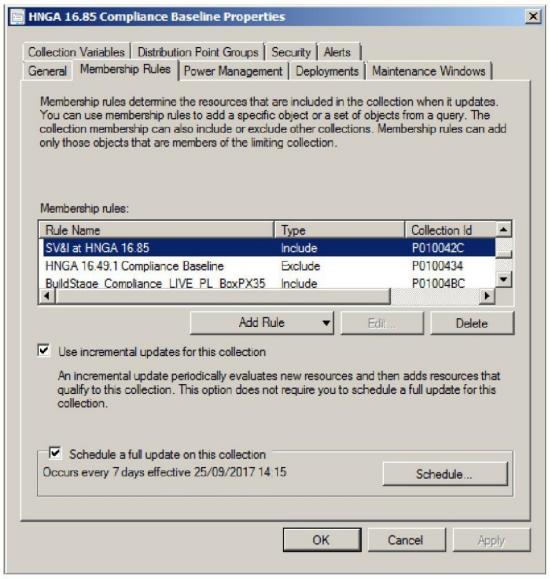
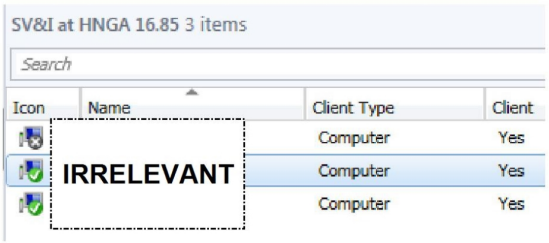
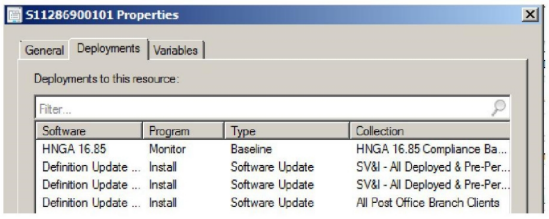
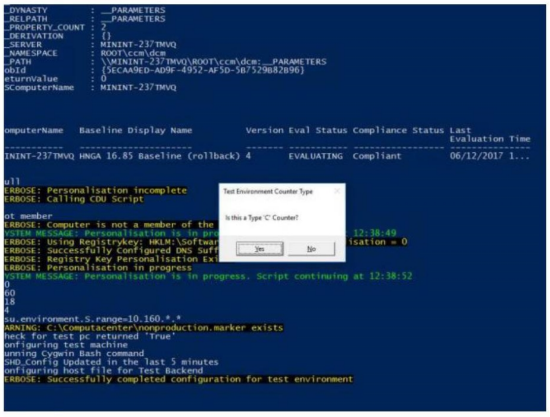
Step	Screen
Right-Click the baseline collection and select properties Select the **Membership Rules** tab Add the new "**SV&I at HNGA XX.XX**" collection with an Include rule.	
At this point you need to add the SV&I Type D counters that will be used for testing the new HNGA release. The ideal approach will be to locate an SV&I Type D counter that is already compliant to the existing HNGA version through its membership of the previous "SV&I at HNGA XX.XX" collection.	
Add the target device to the new "**SV&I at HNGA XX.XX**" collection using a Direct Membership rule. When you have added the device to the new "SV&I at HNGA XX.XX" collection, view the properties of the target device and confirm that it only has one baseline deployment, and that the deployment is for the new version of HNGA.	
Over the course of the next few hours the target device should execute the upgrade to the new HNGA version and become compliant again.	

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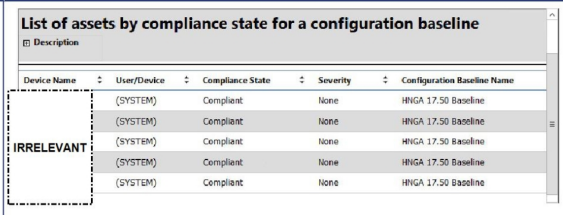
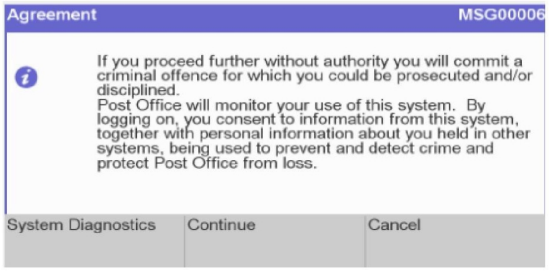
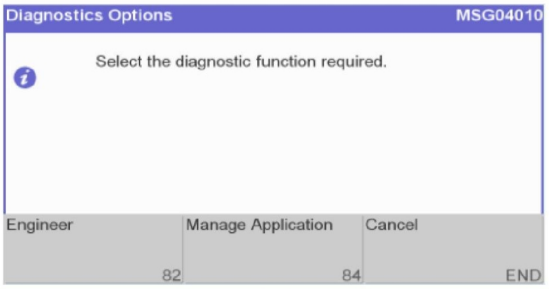
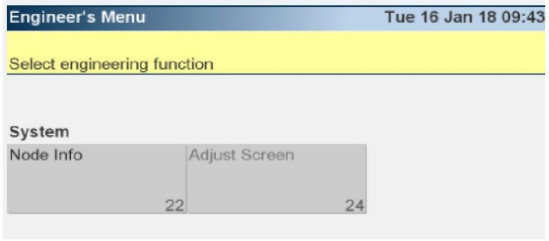
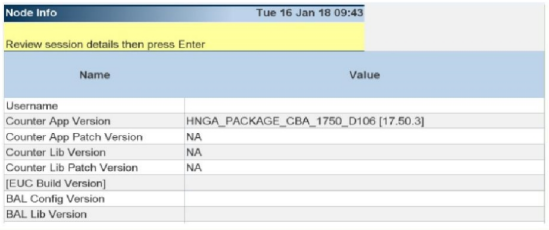
Step	Screen
To confirm that the counter has reported to SCCM that it is compliant run the report “List of assets by compliance state for a configuration baseline”. Confirm that all of the SV&I or LST devices targeted at the new HNGA XX.XX baseline are reporting as Compliant.	
The following tests can only be completed onsite. **You will either require one of the Atos staff in Winnersh to agree to perform the tests or request that a BAU engineer attend and perform the tests.**	
The onsite resource in the SV&I location needs to check that the correct HNGA version is running using the on-screen menu system. From the default screen press Enter or Touch the Screen Choose **System Diagnostics (82)** from the Agreement Dialog.	
Choose **Engineer (82)** from the Diagnostic Options Dialog.	
Choose **Node Info (22)** from the Engineer’s Menu screen.	
The version of HNGA that is running will be displayed next to Counter App Version	

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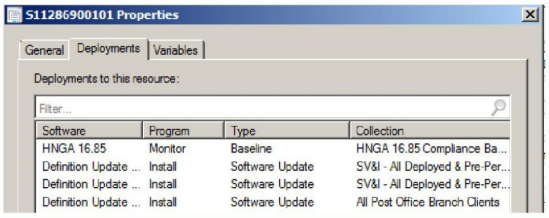
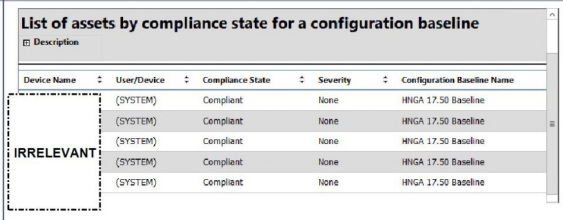
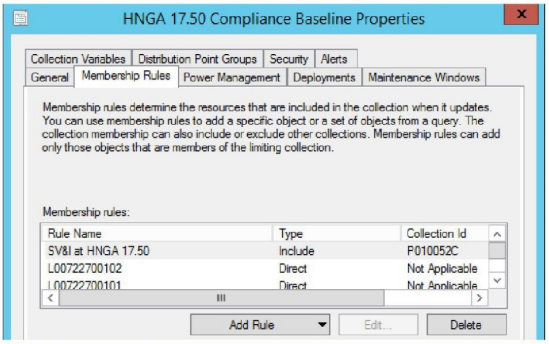
Step	Screen
If you are happy that the device has successfully upgraded to the new HNGA version you need to roll the device back to its previous HNGA version.	
To do this, first you need to remove the device from the new "**SV&I at HNGA XX.XX**" collection	
Over the course of the next few hours the target device should execute the rollback to the original HNGA version and become compliant again.	
To confirm that the counter has reported to SCCM that it is compliant to the original version, run the report "List of assets by compliance state for a configuration baseline". Confirm that all of the SV&I or LST devices targeted at the original HNGA xx.xx baseline are reporting as Compliant.	
Again, the onsite resource needs to check that the correct HNGA version is running using the on-screen menu system	
If you are happy that the device has successfully rolled back to the original HNGA version and that the HNGA application is running correctly then the testing is complete.	
Note that the SV&I testing should ideally be repeated on each of the 3 physical hardware types. **Lenovo M79** **Cielo PHU** **Box PX35**	
For testing LST devices you will need to add the required LST counters directly to the "**HNGA XX.XX Compliance Baseline**" collection. Note that LST testing is designed to allow Fujitsu to test that the HNGA application is functioning correctly, so they will need to be engaged to complete any LST testing once the new HNGA release has been successfully deployed.	

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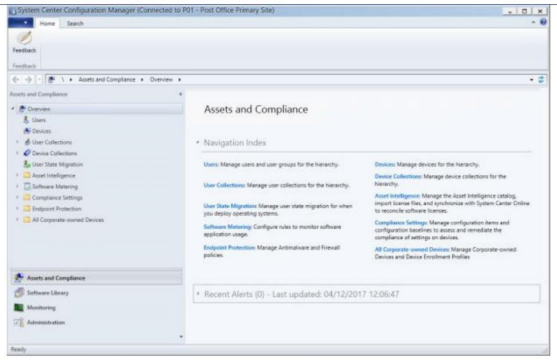
8.2 Testing Personalisation in SV&I

When you have successfully deployed the new HNGA version to counters in SV&I and LST the next test is to personalise the freshly built counters with the new HNGA version installed in the SV&I environment. This is required as it will prove that you can build replacement counters in Hatfield and they can be deployed and personalised onsite in a branch. If this test is not successfully completed in SV&I prior to deployment of the new HNGA version it represents a risk that the deployment (or replacement) of counters is not possible when a pre-personalised counter has the new version of HNGA installed.

The Post Office SV&I environment is currently based at the Atos office in Winnersh, although it may also be available in Hatfield at some point in the future. It consists of a number of simulated Post Office Branches using live network equipment and physical hardware. The counters based in SV&I are personalised and are used to test all deployments, including new HNGA releases.

The process for completing this test is as follows:

- Ship the TEST counters previously built in Hatfield to the SV&I site in Winnersh
- Co-ordinate with the Atos staff in Winnersh that a counter in SV&I can be replaced
- Arrange for an engineer to replace the counter with one of the freshly shipped pre-personalised TEST counters that has the new HNGA release installed
- When the engineer is onsite the following procedure must be followed

Step	Screen
First you need to identify the hostname of the pre-personalised counter that you will be deploying into SV&I Note that this will be the serial number of the device prefixed by PT- Get the onsite engineer who is going to replace the counter to get you the Hostname or Serial Number	
Open the SCCM Console	

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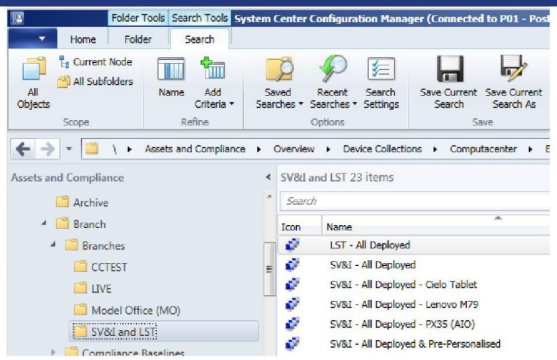
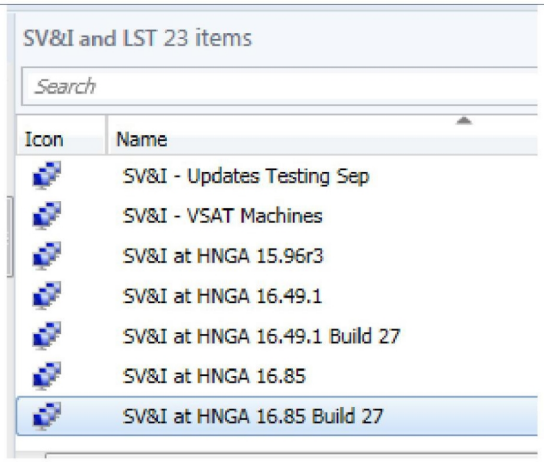
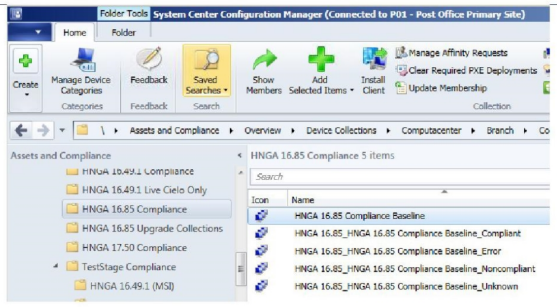
Step	Screen
Select Assets and Compliance and browse to the folder **Device Collections → Branch → Branches → SV&I and LST**	
Create a new Device Collection named **SV&I at HNGA XX.XX** Where XX.XX is the new HNGA version being tested Make sure that the collection “SV&I - All Deployed & Pre-Personalised” is configured as the limiting collection.	
Browse to the folder where the base and sub-collections are located for the new HNGA release	

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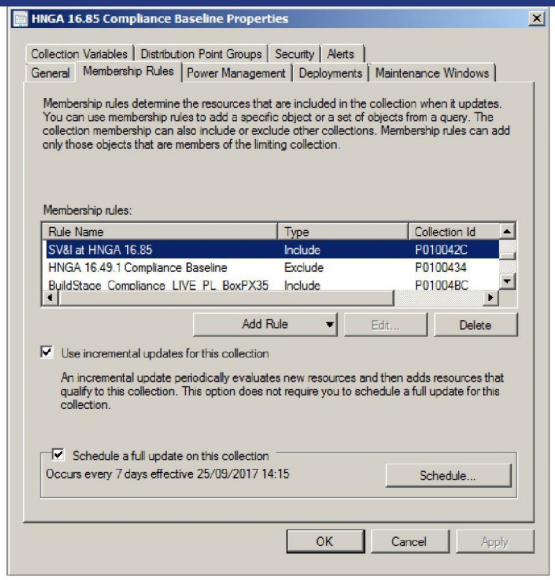
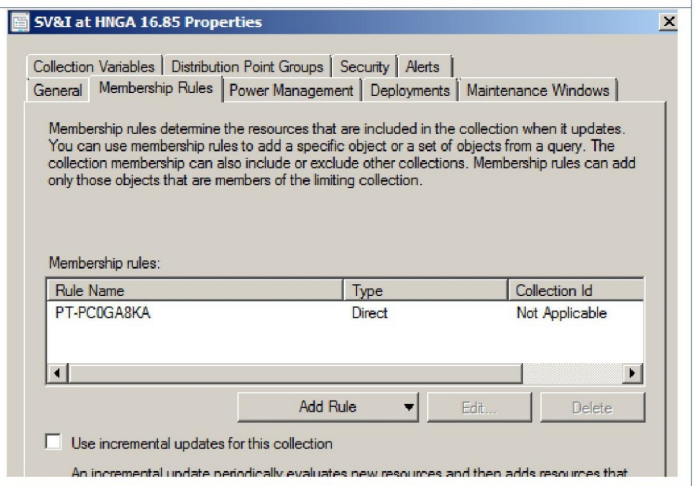
Step	Screen
Right-Click the baseline collection and select properties Select the Membership Rules tab Add the new "**SV&I at HNGA XX.XX**" collection with an Include rule. This will ensure that any counter that you add to the collection will receive the new HNGA baseline	
Edit the membership of the "**SV&I at HNGA XX.XX**" collection. Add Direct Membership rule for the pre-personalised counter that is going to be personalised in SV&I	

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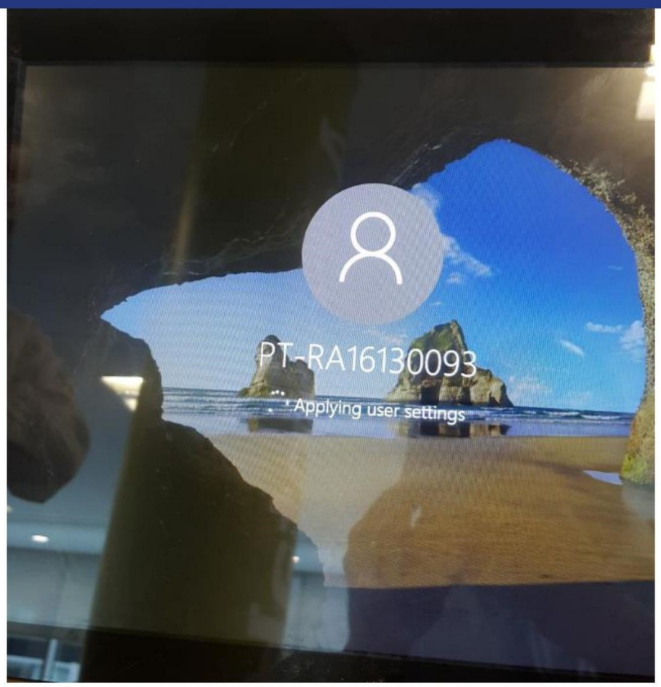
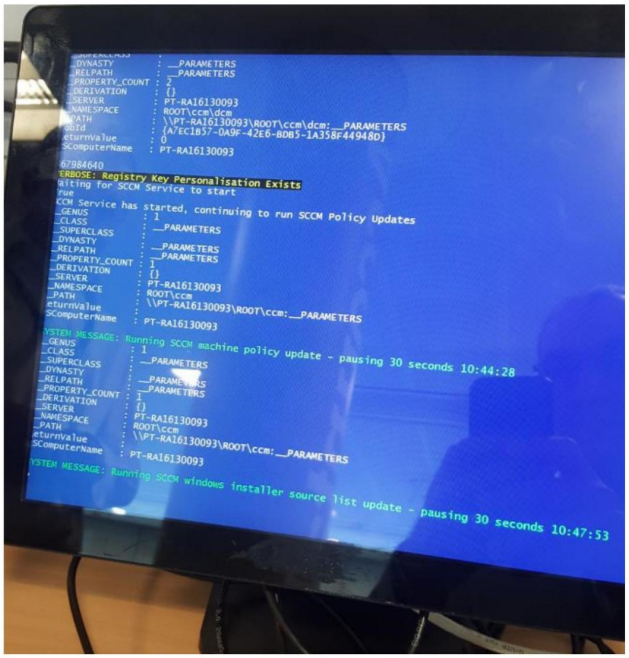
Step	Screen
Connect up and start the counter Confirm that it starts up and logs in with the correct username (*PT-SerialNumber*) Note that the engineer should be able to confirm this and they should take photos as evidence of success.	
The engineer should confirm that the Counter Deployment Utility scripts start executing	

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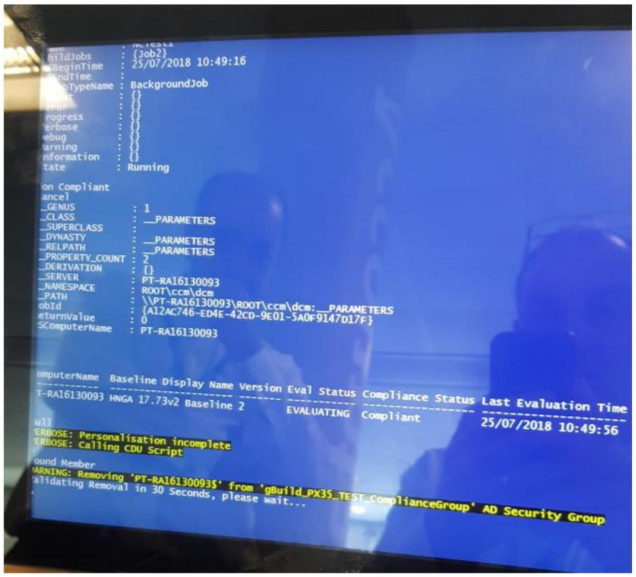
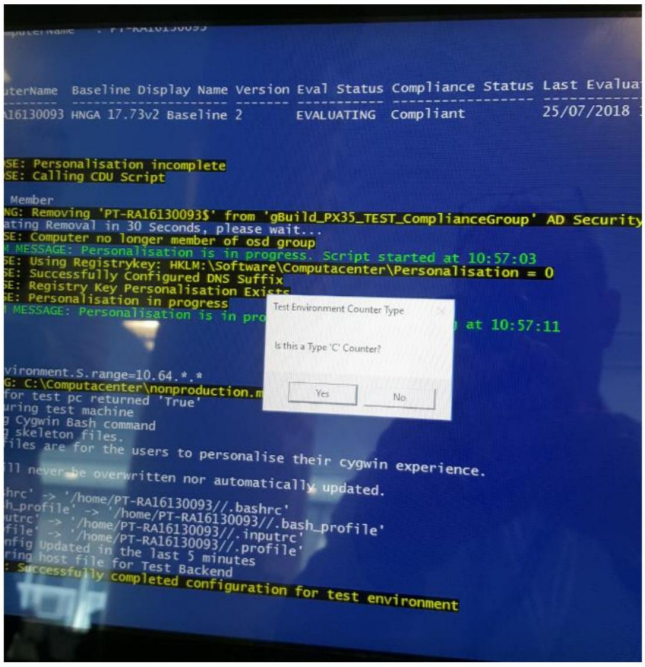
Step	Screen
The engineer should confirm that the Counter is compliant to the new HNGA baseline that it was built with at the start of the personalisation process	
The engineer should confirm that after the counter is confirmed as compliant, that the CDU scripts continue At the prompt "**Is this a Type C Counter?**" click on **No**	

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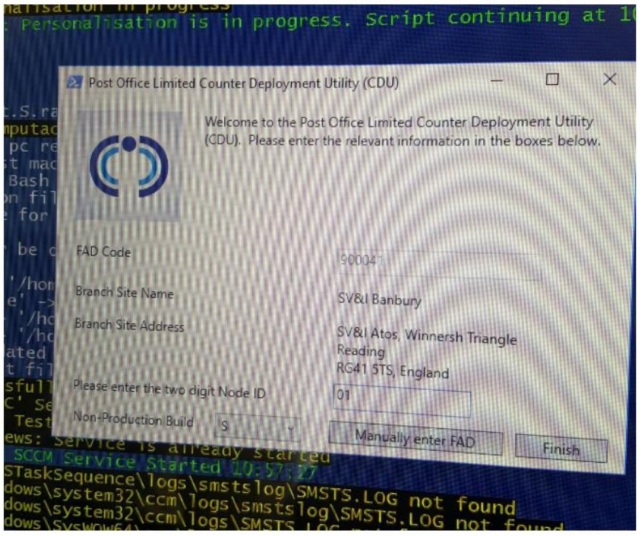
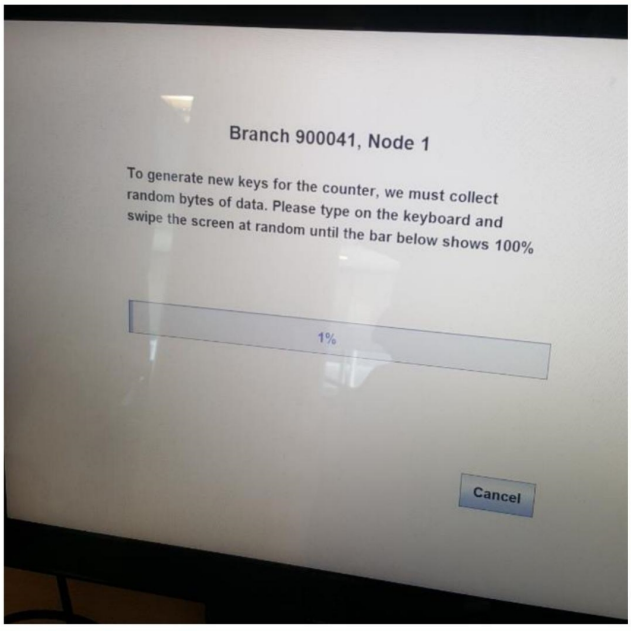
Step	Screen
The engineer should confirm that the correct FAD code is automatically detected based on the counter position you have connected it to. Note that the counter in this example is being personalised on SV&I Banbury Counter 01 You will need to enter the counter position as required and click on **Finish**	
The engineer should confirm that after the FAD code is specified, the Key generation starts	

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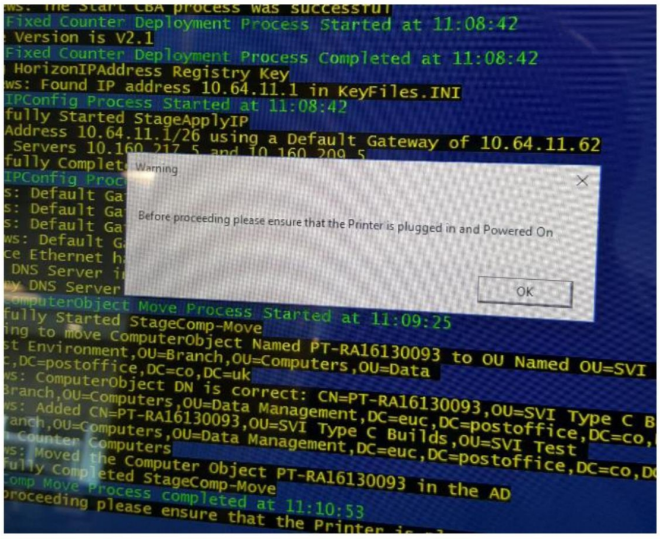
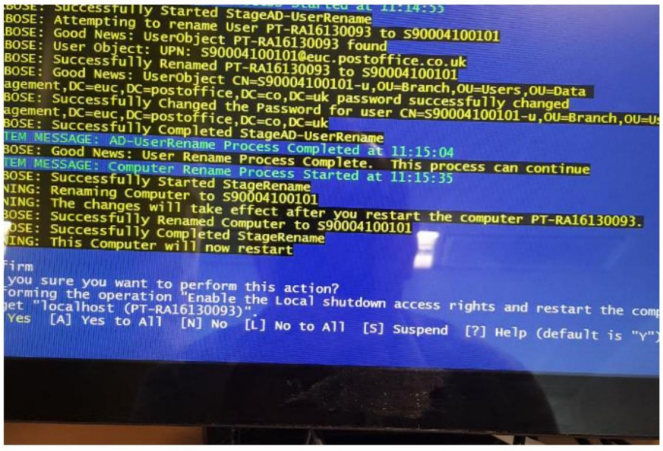
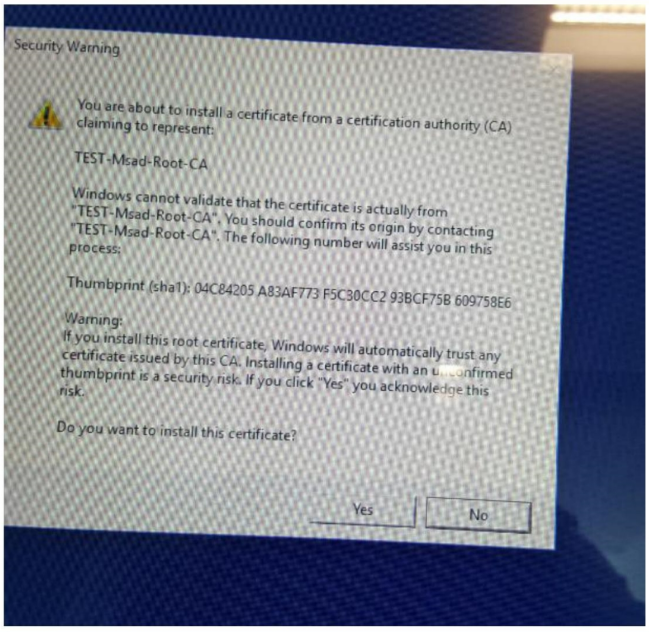
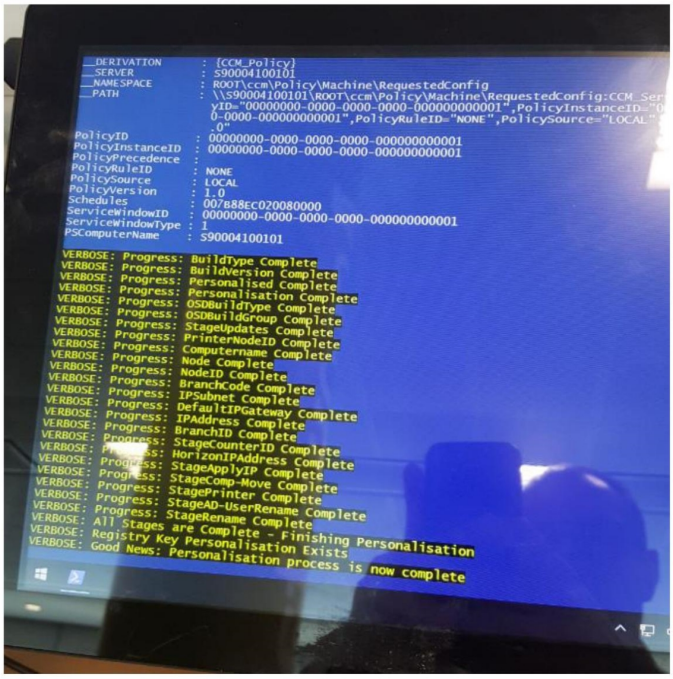
Step	Screen
The engineer should confirm that the Printer test completes successfully. Click on **OK** when the print test is completed	
The engineer should confirm that the Final restart is initiated	

POL00337656

Step	Screen
The engineer should confirm that the certificates are installed You will need to click on **Yes** to install the certificates (**click yes twice**)	
The engineer should confirm that the Personalisation of the counter completes	

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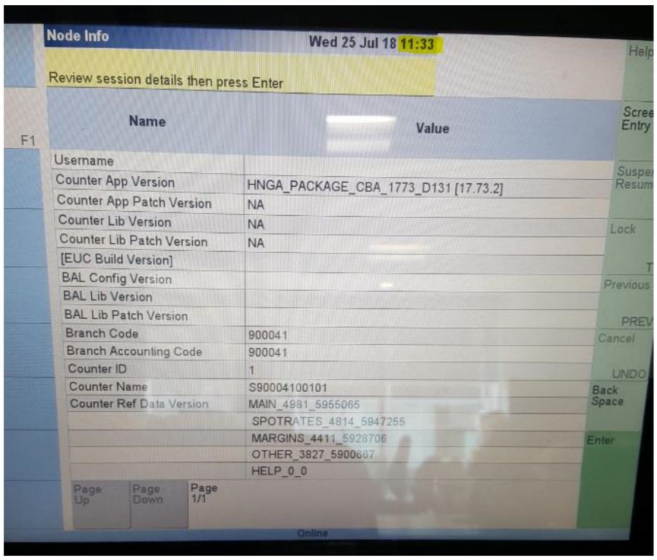
Step	Screen
The engineer should confirm that the Counter Business Application starts	
The engineer should confirm that the correct version of HNGA is running. Confirm that the new HNGA version is running.	

8.3 Deployment of the new HNGA release to Model Office

Once testing in SV&I and LST is complete and successful, the next stage is to complete the testing in Model Office. The Post Office Model Office consists of two branches which are physically located in the Post Office headquarters in Finsbury Dials. The Model Office counters are effectively in use so before any testing is performed you will need to book a time slot when you want to perform the testing and raise the required change requests to notify the change management team what changes and tests you are planning to perform.

There are a number of pre-configured SCCM device collections that have been created for Model Office. You can create your own if required but the ones created should cover most scenarios.

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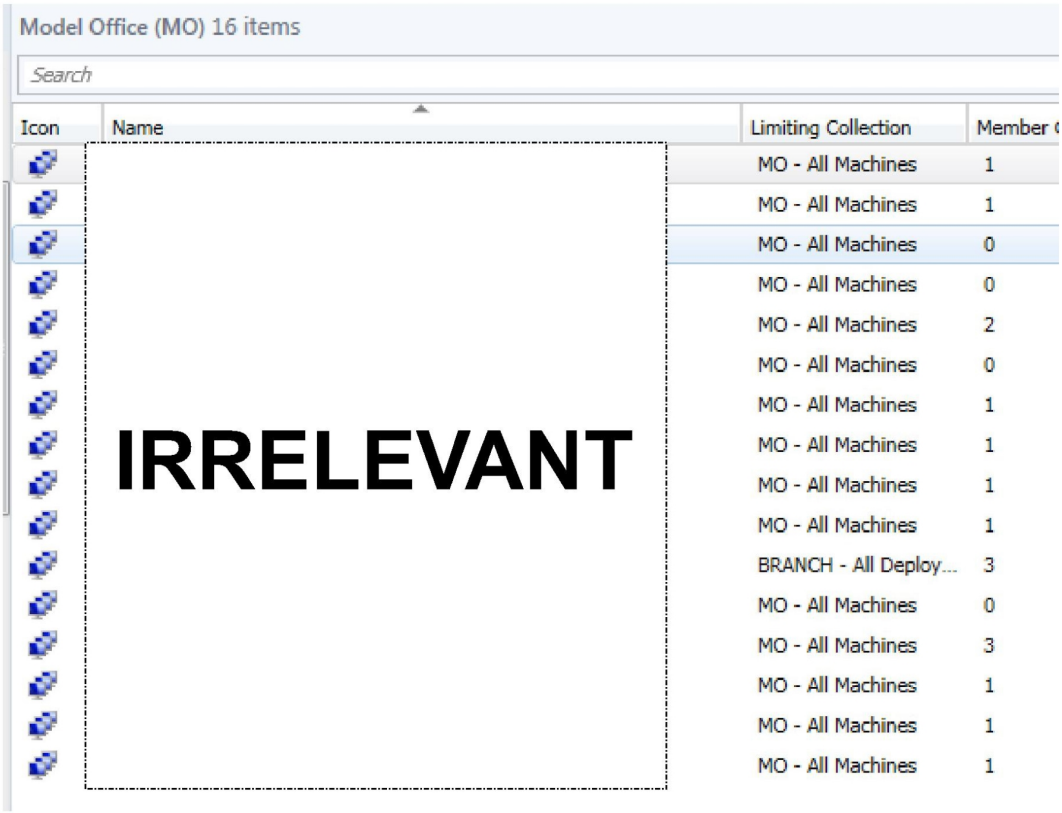
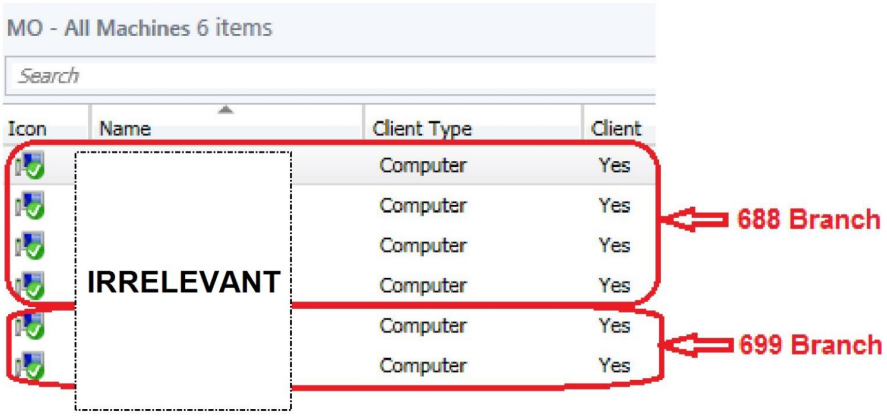


The two branches that make up the Model Office are referenced as 688 branch and 699 branch. Counters personalised in each branch of Model Office will have hostnames that start with the naming convention H688 or H699.



Again, the objective of Model Office testing is to prove that the new version of HNGA can be deployed to a set of live physical devices of all hardware types that are on the Post Office Production network, then to confirm that the new HNGA version is functioning correctly and then confirm that the same devices can be rolled back successfully to the previous HNGA version.

To test a new HNGA release in Model Office you are required to use the standard methodology described in the earlier sections of using Include collection rules to set the required HNGA baseline version. Note that as well the option of upgrading all of the counters at each branch, you may also choose to upgrade just specific hardware types such as the Cielo Tablet devices the Lenovo M79 devices.

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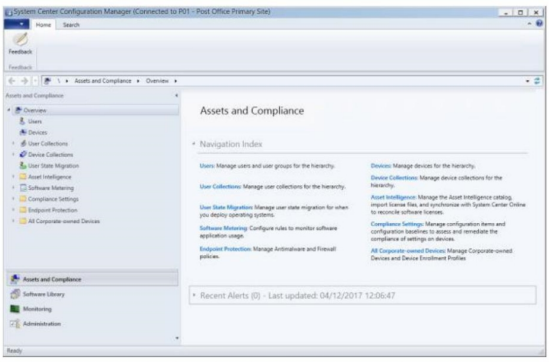
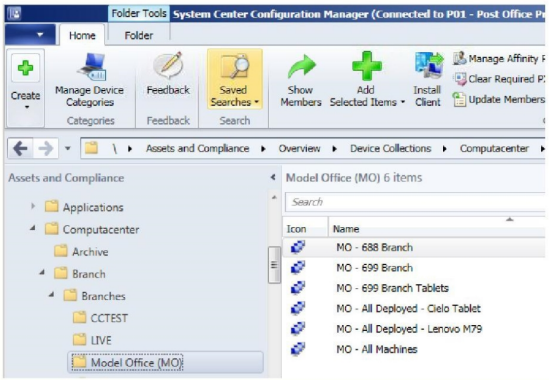
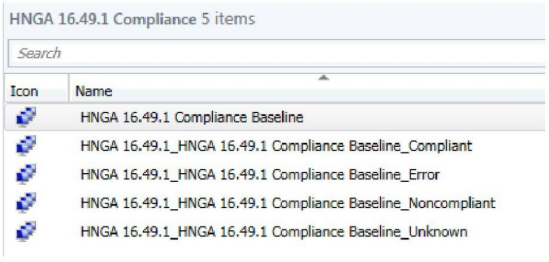
The following steps show an example test deployment to Model Office. You can modify this approach depending on the specific counters being upgraded.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console	
Select Assets and Compliance and browse to the folder Device Collections → Branch → Branches → Model Office (MO)	
Identify which Model Office counters are to be upgraded to the new HNGA release. For the following example the "MO – 688 Branch" collection will be used.	
Locate the new baseline collection for the new HNGA release that the "MO – 688 Branch" collection needs to be added to. Edit the properties of the collection and edit the Membership Rules.	

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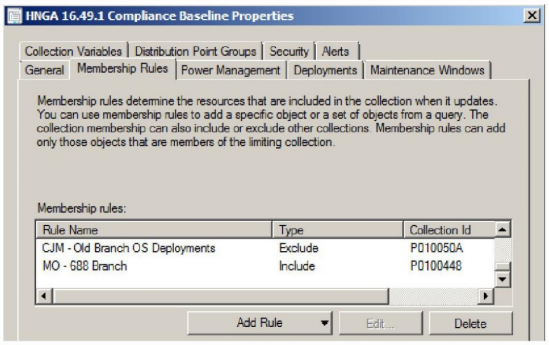
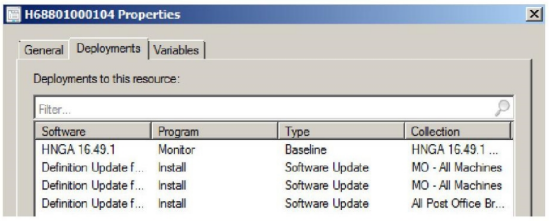
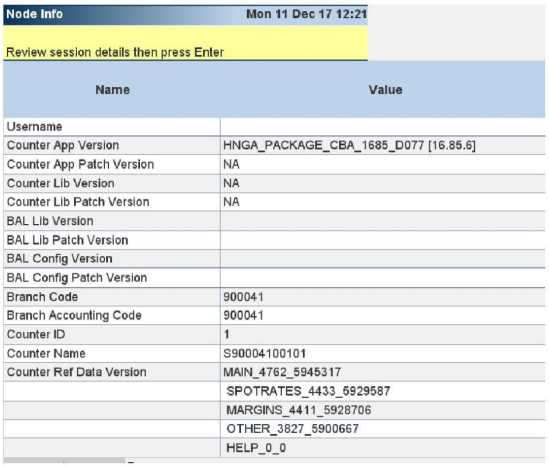
Step	Screen
Add the "MO – 688 Branch" collection to the new baseline collection using an Include Collection rule. The counters in the "MO – 688 Branch" collection should now be subject to the baseline for just the new HNGA release.	
Right-click the "MO – 688 Branch" collection and select show members. View the properties of one of the counters to confirm that the device only has one Configuration Baseline deployed to it and that it is for the new HNGA release.	
Over the course of the next few hours the target counter(s) should execute the upgrade to the new HNGA version and become compliant again.	
When the counter is confirmed in SCCM as Compliant, an onsite resource needs to check that the correct HNGA version is running using the on-screen menu system. From the default screen press Enter or Touch the Screen Choose **System Diagnostics (82)** from the Agreement Dialog. Choose **Engineer (82)** from the Diagnostic Options Dialog. Choose **Node Info (22)** from the Engineer's Menu screen. Typically, the onsite resource (Post Office = Phil Jeary) will also execute a series of regression tests to confirm that HNGA functionality is working correctly.	
When you are happy that the Model Office devices that were targeted with the new HNGA version have successfully upgraded you can begin the rollback process.	

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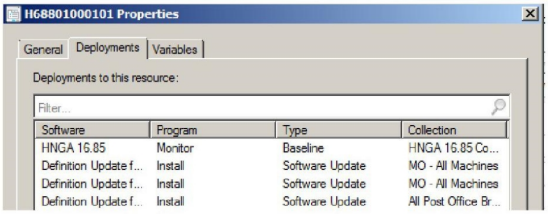
Step	Screen
Locate the new baseline collection for the new HNGA release that the "MO – 688 Branch" collection was added to. Edit the properties of the collection and edit the Membership Rules. Remove the include rule for the "MO – 688 Branch" collection	
Right-click the "MO – 688 Branch" collection and select show members. View the properties of one of the counters to confirm that the device only has one Configuration Baseline deployed to it and that it is for the original HNGA release.	
Over the course of the next few hours the target device should execute the rollback to the original HNGA version and become compliant again.	
Again, an onsite resource needs to check that the correct HNGA version is running using the on-screen menu system	
If you are happy that the device has successfully rolled back to the original HNGA version and that the HNGA application is running correctly then the testing is complete.	

8.4 BuildStage LIVE builds in Hatfield

Once you have successfully completed the deployment of the new HNGA version to a counter in Model Office, the next test stage is to build some physical counters with the LIVE build in Hatfield and to personalise the counter(s) in Model Office. Successful completion of this test will prove that newly built counters with the new HNGA version installed can be personalised. This will mean that pre-personalised counters with the new HNGA version can be deployed to any Post Office branches.

Completion of this stage is broken into two parts:

- Part 1 – Preparation of BuildStage for LIVE counter builds
- Part 2 – Build a number of LIVE pre-personalised counters in Hatfield Compliant to the new HNGA version

8.4.1 Part 1 - Preparation of BuildStage for LIVE pre-personalised counters

Use the following steps to configure BuildStage for LIVE counters for the new HNGA release.

Note that once this process has been followed, all future LIVE builds will complete with the new HNGA version.

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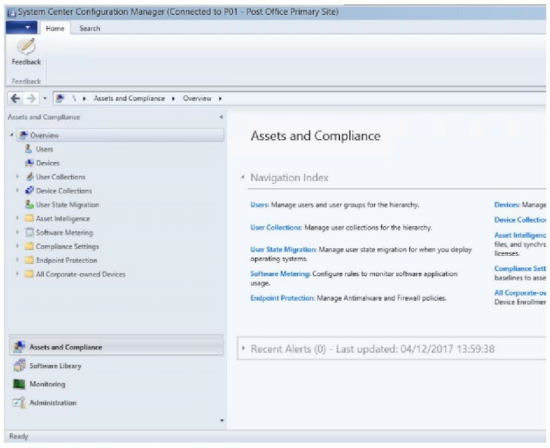
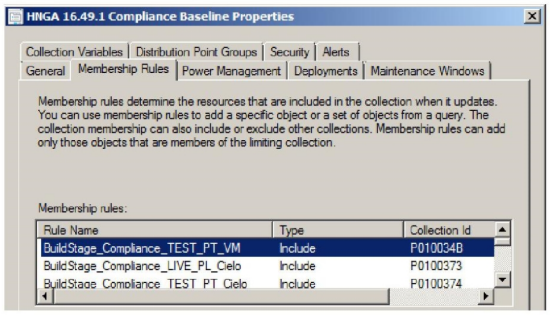
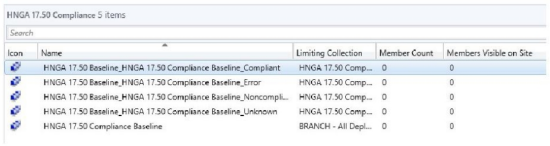
Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance**	
Browse to **Device Collections → Computacenter → Branch → Compliance Baselines** Locate and remove the following Buildstage LIVE collections from any of the SCCM baseline collections: **BuildStage_Compliance_LIVE_PT_VM** **BuildStage_Compliance_LIVE_PT_M79** **BuildStage_Compliance_LIVE_PT_Cielo** **BuildStage_Compliance_LIVE_PT_BoxPX35** When located delete the Include Collection Rules for these collections from the SCCM baseline collections.	
Browse to **Device Collections → Computacenter → Branch → Compliance Baselines → the folder for the new HNGA release.** In this example we are using the HNGA 17.50 Compliance folder.	

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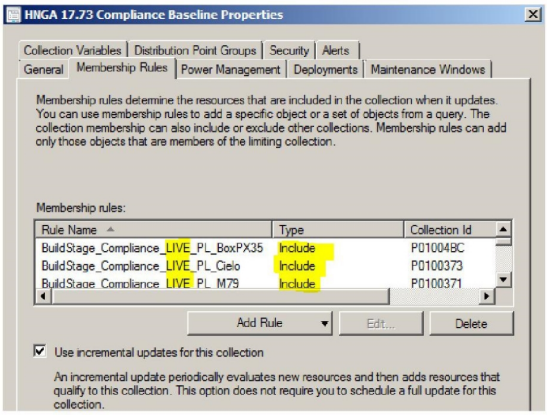
Step	Screen
Edit the membership of the SCCM base collection for the new HNGA release. Create 4 new Include Collection Rules and add the following LIVE Buildstage collections to the SCCM base collection for the new HNGA release. **BuildStage_Compliance_LIVE_PT_VM** **BuildStage_Compliance_LIVE_PT_M79** **BuildStage_Compliance_LIVE_PT_Cielo** **BuildStage_Compliance_LIVE_PT_BoxPX35** Note that the BuildStage collections are located in the following folder: Device Collections → Computacenter → Branch → Compliance Baselines → BuildStage Compliance	
At this point all new LIVE builds will be added to the SCCM Base collection for the new HNGA release. Note that a LIVE build is one where the LIVE build type is selected at the start of the task sequence rather than TEST. When the builds have completed they will check their compliance to the new HNGA version.	

8.4.2 Part 2 – Complete LIVE builds in Hatfield that are Compliant to the new HNGA version

Now that BuildStage has been prepared for LIVE builds, you need to engage a resource in Hatfield to build a number of counters (using each of the 3 hardware types) and confirm that the counter builds complete as Compliant to the new version of HNGA.

Have the resource in Hatfield use the following procedure to build some LIVE counters ready for deployment in Model Office:

Step	Screen
Reboot the device PXE boot so that it boots into the WinPE boot image	

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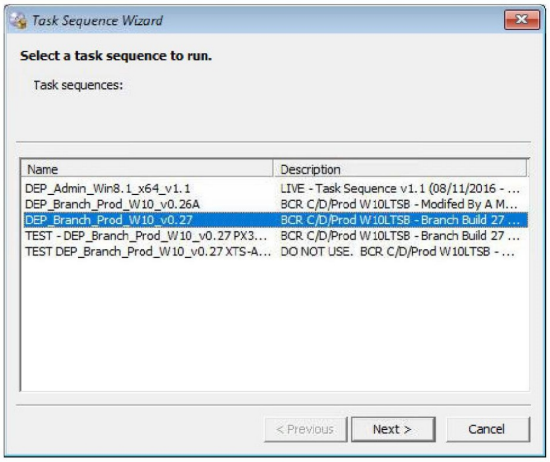
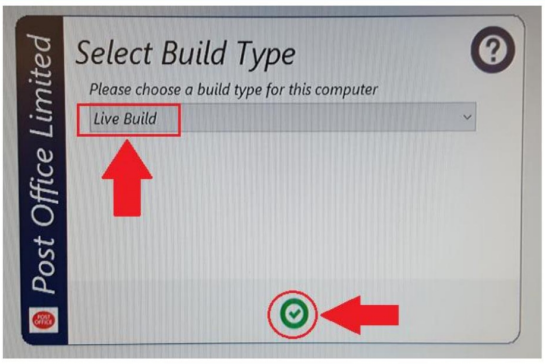
Step	Screen
On the "**Welcome to the Task Sequence Wizard**" page, click on **Next**	
On the "**Select a task sequence to run**" page, select the current live Branch Counter Task Sequence. If you don't know which is the live one, check with GIO Build Management. Note that the minimum version number for the live Branch Counter Task Sequence will be v0.27	
When prompted to select the Build Type, select **Live Build** and click on the green tick to confirm. The build will now proceed, based on Live build.	

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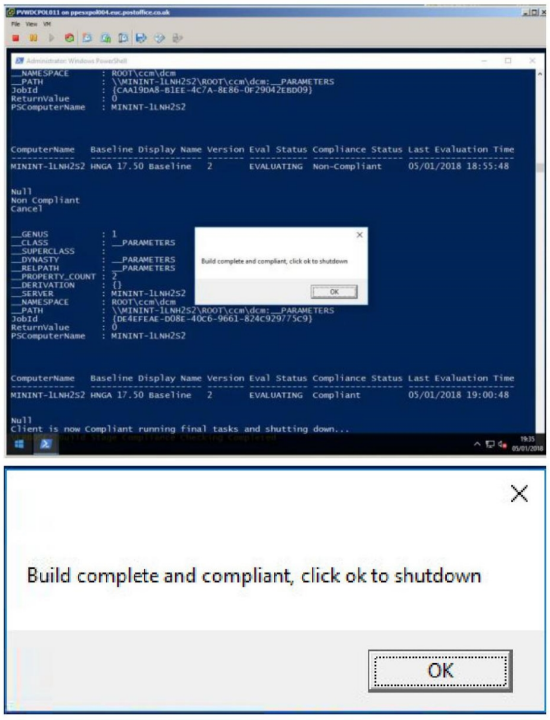
Step	Screen
Once the build has completed and the counter has had its Compliance checked for the new HNGA release you will see a popup on the screens saying **Build complete and compliant, click ok to shutdown** At this message the counters can be shut down as they are ready for deployment.	

8.5 Testing Personalisation in Model Office

After you have successfully built a number of LIVE counters that are Compliant to the new version of HNGA the next test is to personalise one of the counters in Model Office. This is done to ensure that a counter that has the new version of HNGA installed can be successfully personalised in a branch. If a live production counter fails at some point it will need to be replaced and this test ensures that replacing a production counter is possible.

In the previous test you will have built a number of counters with BuildStage configured to make sure that the counters have the new version of HNGA installed. You need to ship one or more of these counters to the Model Office in the Post Office Finsbury Dials Head Office in London. Once received a BAU engineer should be engaged to replace one of the counters that are currently installed with one of the newly built counters that are Compliant to the new version of HNGA.

Use the following procedure to replace a counter in Model Office and personalise the replacement.

Step	Screen
First you need to identify the hostname of the personalised counter that you will be replacing in Model Office If required, get the onsite engineer who is going to replace the counter to get you the Hostname	

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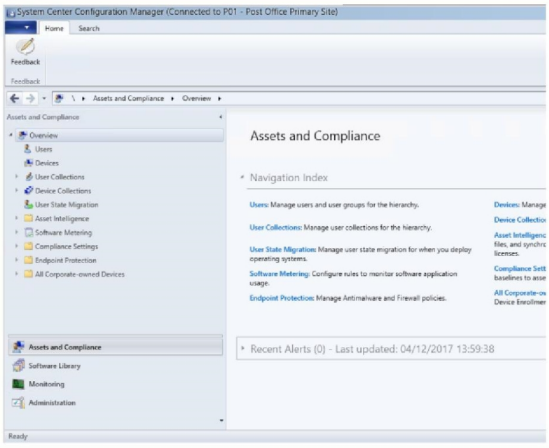
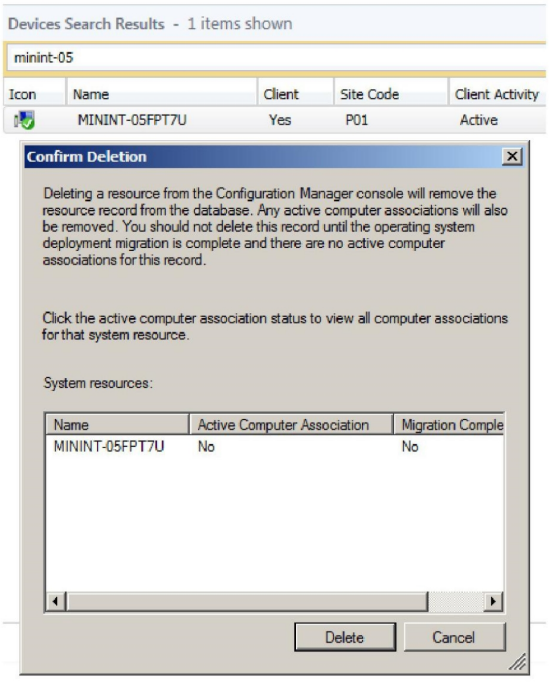
Step	Screen
In the SCCM Console browse to **Assets and Compliance** and select **Devices**	
Search Devices and locate the SCCM device object for the Model Office counter. Right-Click the SCCM object for the counter and delete it.	

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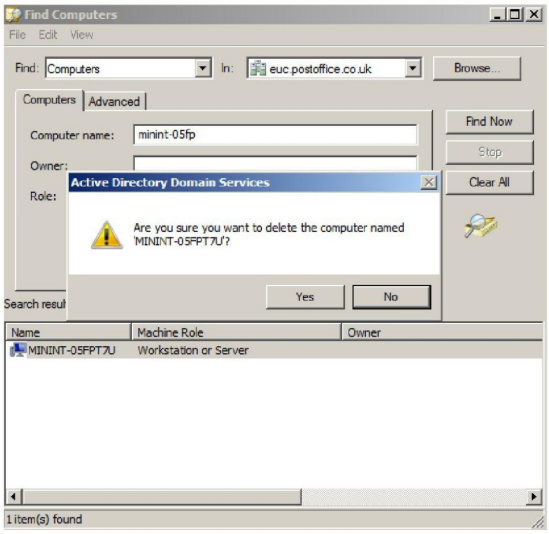
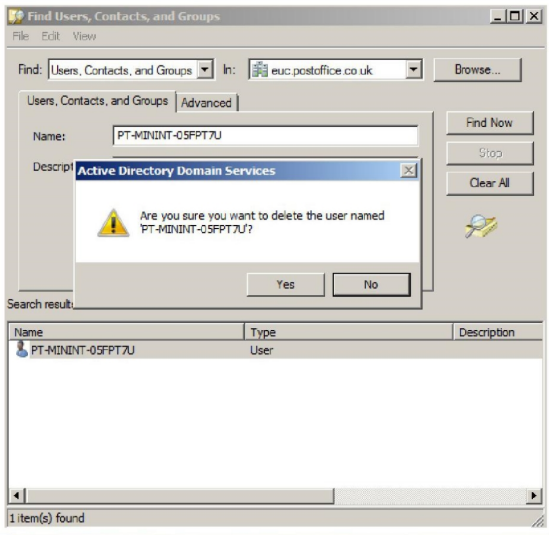
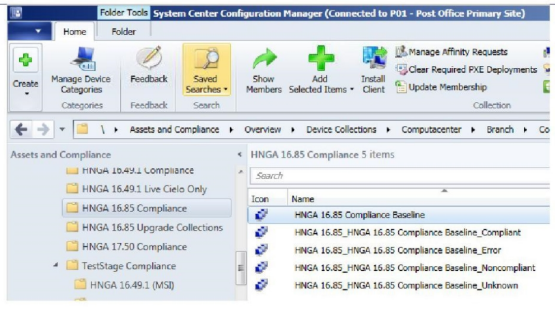
Step	Screen
Open **Active Directory Users and Computers**, find the AD computer object for the counter and delete it.	
Locate the associated AD user object and delete it. Note that the user object will have the same name as the computer object but will be prefixed with PL as it was a LIVE build.	
Browse to the folder where the base and sub-collections are located for the new HNGA release	

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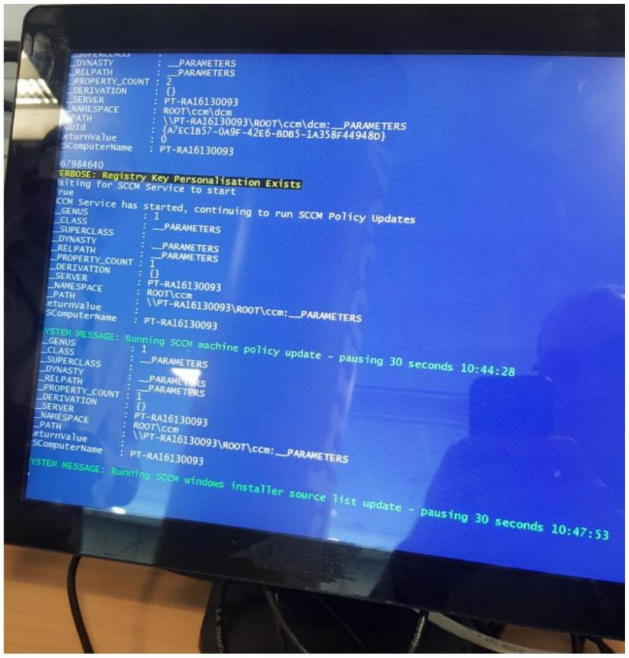
Step	Screen
Edit the membership of the "HNGA XX.XX Compliance Baseline" collection Create an Include Collection Rule to add the collection that includes the Model Office Counter being replaced.	
Connect up and start the counter Confirm that it starts up and logs in with the correct username (*PL-SerialNumber*) Note that the engineer should be able to confirm this and they should take photos as evidence of success.	
The engineer should confirm that the Counter Deployment Utility scripts start executing	

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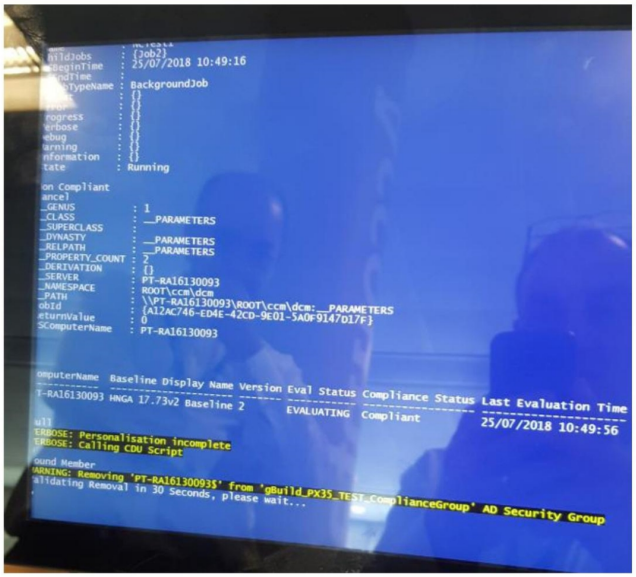
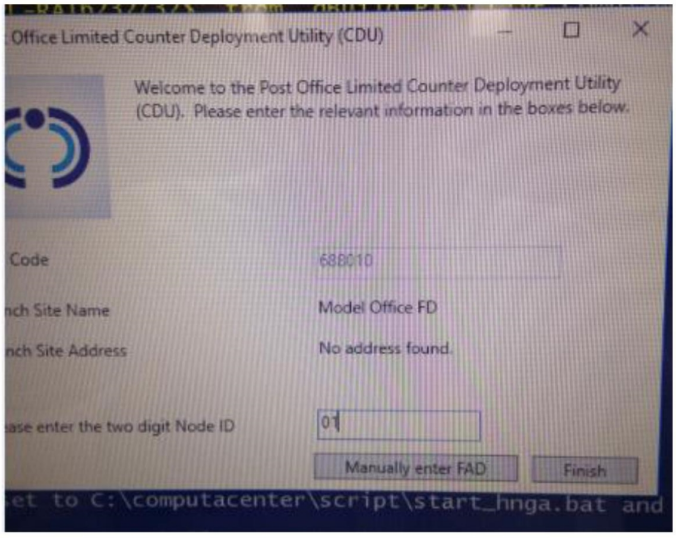
Step	Screen
The engineer should confirm that the Counter is compliant to the new HNGA baseline that it was built with at the start of the personalisation process	
The engineer should confirm that the correct FAD code is automatically detected based on the counter position you have connected it to. Note that the counter in this example is being personalised on Model Office Branch FAD688010 counter 01 You will need to enter the counter position as required and click on **Finish**	

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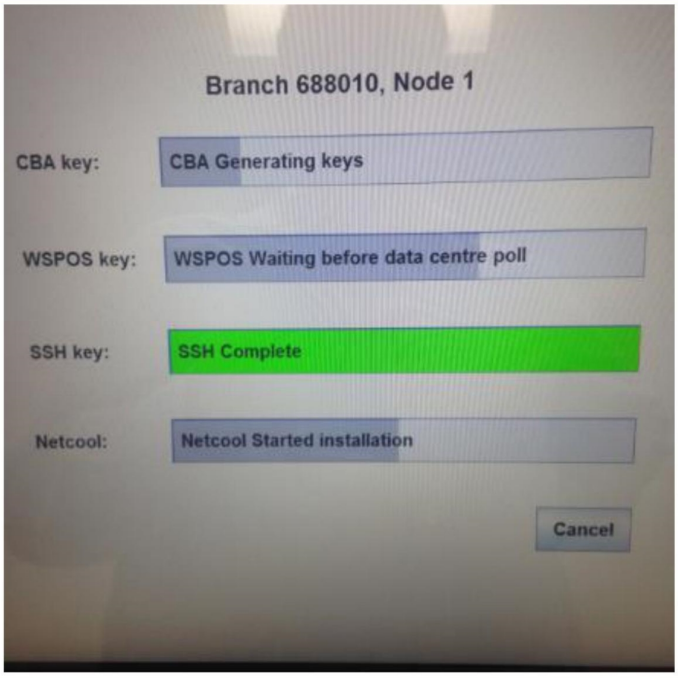
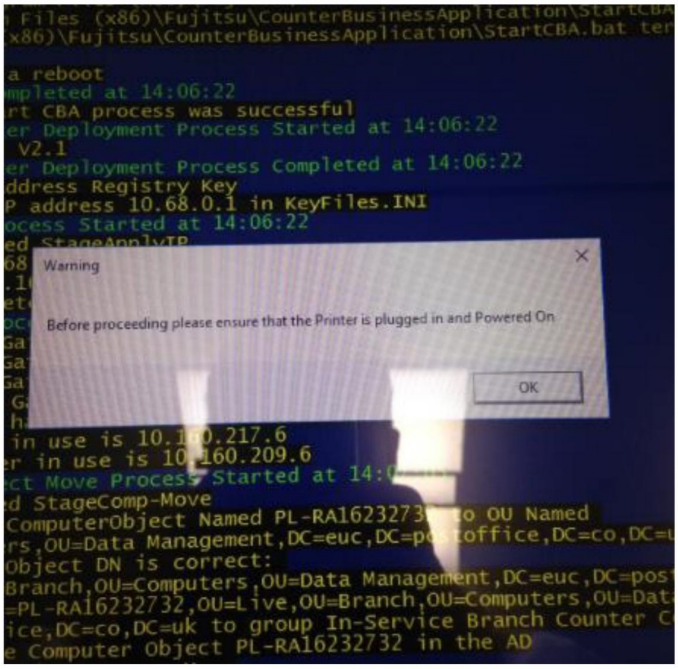
Step	Screen
The engineer should confirm that after the FAD code is specified, the Key generation starts	
The engineer should confirm that the Printer test completes successfully. Click on **OK** when the print test is completed	

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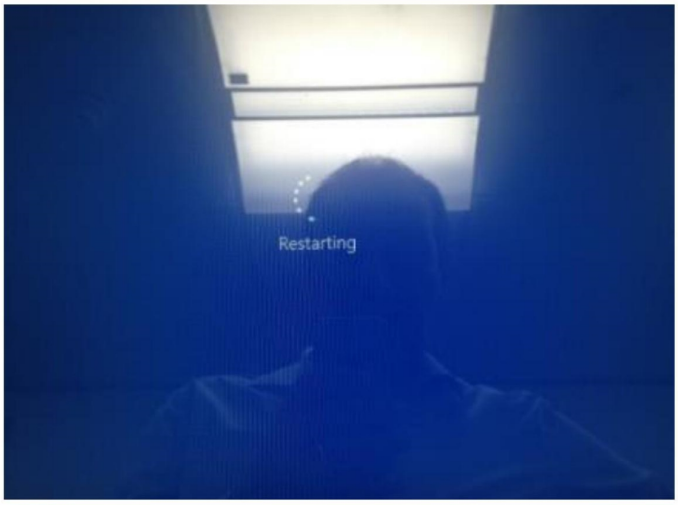
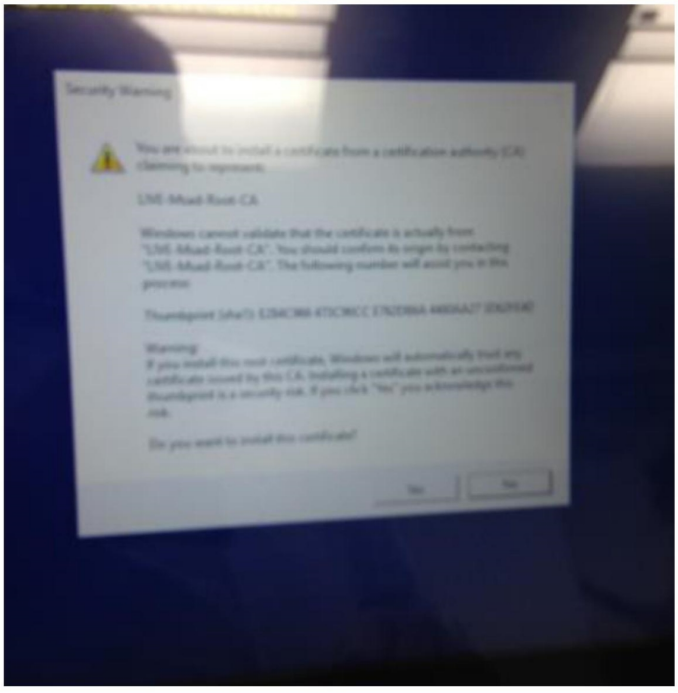
Step	Screen
The engineer should confirm that the Final restart is initiated	
The engineer should confirm that the certificates are installed Note that the certificate is a LIVE one. You will need to click on **Yes** to install the certificates (**click yes twice**)	
The engineer should confirm that the Personalisation of the counter completes	

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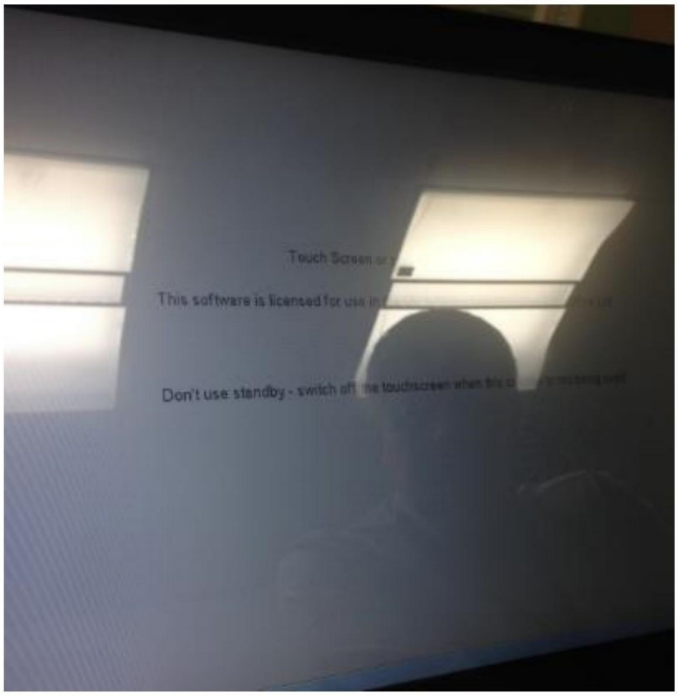
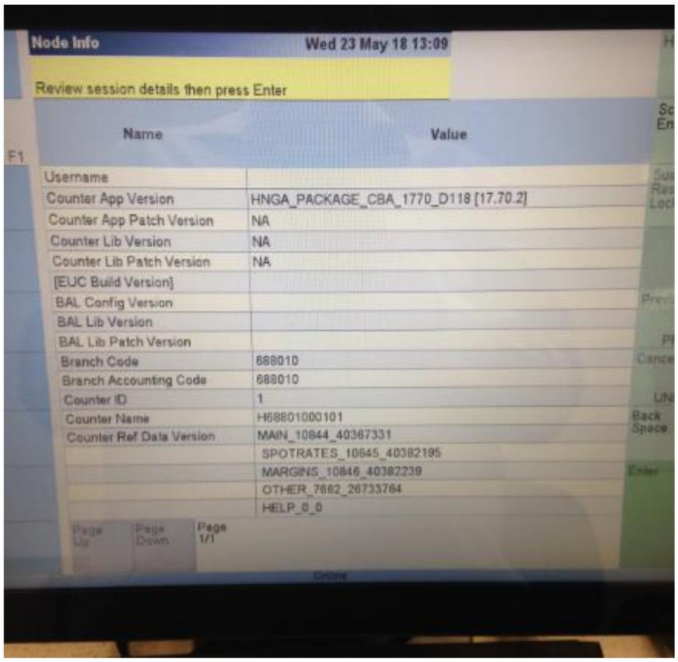
Step	Screen
The engineer should confirm that the Counter Business Application starts	
The engineer should confirm that the correct version of HNGA is running. Confirm that the new HNGA version is running.	

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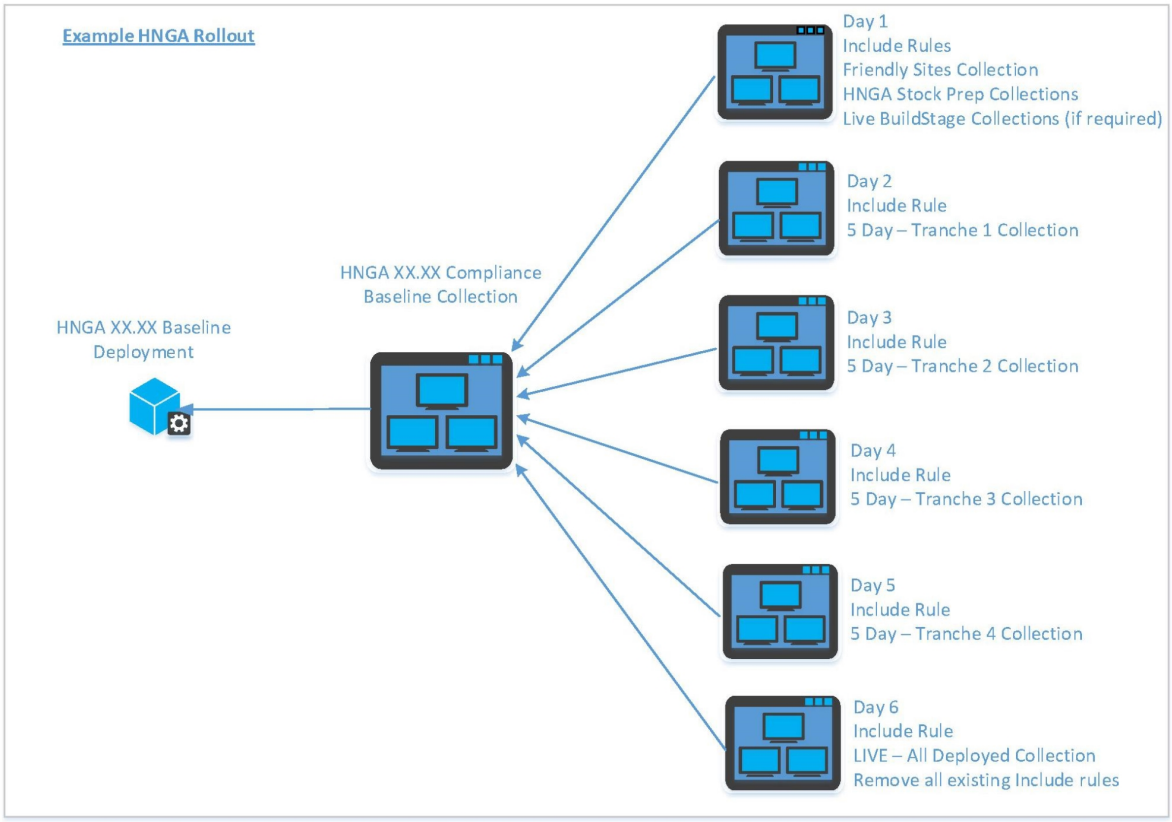
9 Releasing the New HNGA version into Production

Once all of the testing has been completed successfully, the new version of HNGA is ready for release into Production. As with SV&I and Model Office testing the objective is to ensure that each device in Production only has one Configuration Baseline deployed to it at any given time, and that the correct HNGA version is installed and functions correctly.

When the full Post Office Branch Counter deployment has been completed there will be over 25,000 counters in Production. For each HNGA release rollout the Post Office may have different requirements about which counters should be deployed to in which order. They may request a specific "friendly site" or set of pilot sites that need to be rolled out first, followed by batches of counters or even a "big bang" approach where all counters are deployed to in one go.

To accommodate this you may need to create device collections that can be used to include batches of counters to the deployment. The diagram below is an example of how a HNGA rollout may look in the real world.



This example can be described as follows:

- Day 1 - A collection containing a batch of friendly sites selected by POL is added to the HNGA release baseline collection. Also the HNGA Stock Prep collection(s) and Live BuildStage collections are included if required
- Day 2 – the 5-day Tranche 1 collection is added to the HNGA release baseline collection
- Day 3 – the 5-day Tranche 2 collection is added to the HNGA release baseline collection
- Day 4 – the 5-day Tranche 3 collection is added to the HNGA release baseline collection
- Day 5 – the 5-day Tranche 4 collection is added to the HNGA release baseline collection

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- Day 6 – the "LIVE – All Deployed" collection is added to the HNGA release baseline collection. The Include collections used on the previous 4 days are removed from the HNGA release baseline collection

Note that after the deployment has completed but before the start of a new HNGA rollout, any Live counters that are still in the Stock Prep collections should be removed.

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10 Glossary of Terms

Term	Abbreviation	Definition
Acceptance into service	AIS	Acceptance into service
Active Directory	AD	Active Directory
Branch Counter Refresh	BCR	The name of the project to develop an updated build for Post Office branch counters
Counter Business Application	CBA	The application used by Postmasters to deliver Post Office services in a branch
Counter Deployment Utility	CDU	The scripts used to personalise and prepare a new branch counter for use in a branch
Global Infrastructure Operations	GIO	Global Infrastructure Operations
Graphical User Interface	GUI	Graphical User Interface
Horizon Next Generation Application	HNGA	A suite of component applications that together make up the application used by Postmasters
Microsoft Installer	MSI	Microsoft Installer
Model Office	MO	2 simulated Post Office branches that are located in the Post Office headquarters in London (Finsbury Dials)
Post Office Limited	POL	Post Office Limited
System Center Configuration Manager	SCCM	System Center Configuration Manager
Service Verification and Integration	SV&I	Service Verification and Integration
Task Sequence	TS	Task Sequence
User Acceptance Testing	UAT	Testing of the capability in SCCM to successfully deploy an application.
Virtual Desktop Infrastructure	VDI	Virtual Desktop Infrastructure
Virtual Machine	VM	Virtual Machine

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Appendix A Current HNGA Versions

The attached document contains a list of HNGA releases, including the version numbers for each of the components that make up the HNGA release (up to HNGA 17.73).

HNGA Version list
Post Office Limited HNGA Updates.xlsx

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Appendix B Production Rollout CRQ Templates

The attached documents contain change request templates that can be used for the roll out of a version of HNGA into Production. The templates cover all of the required changes that will be needed to release HNGA, from the initial Pre-Cache of the HNGA content, deployment to SV&I, LST, MO and Production and also the decommissioning of a redundant version of HNGA as well.

Production Change Request documentation	
POL - Branch Counters - Win10 MONTH YEAR - Content Deployment_Prod - PRECACHE TEMPLATE	POL - HNGA version XX.XX - Content Dep POL Change Imp Plan - HNGA version
POL - HNGA XX.XX deployment to branch counters - SV&I	POL - HNGA XX.XX deployment to bran POL Change Imp Plan - HNGA XX.XX d
POL - HNGA XX.XX deployment to branch counters - LST	POL - HNGA XX.XX deployment to bran POL Change Imp Plan - HNGA XX.XX d
POL - HNGA XX.XX deployment to branch counters - Model Office	POL - HNGA XX.XX deployment to bran POL Change Imp Plan - HNGA XX.XX d
POL - HNGA XX.XX deployment to branch counters - Friendly Sites	POL - HNGA XX.XX deployment to bran POL Change Imp Plan - HNGA XX.XX d
POL - HNGA XX.XX deployment to Production branch counters	POL - HNGA XX.XX deployment to Prod POL Change Imp Plan - HNGA XX.XX d
POL - Decommission redundant SCCM baseline for HNGA XX.XX	POL - Decommission redu POL Change Imp Plan - Decommissior

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Appendix C Adding a New Hardware Model and/or Stock Prep Collection

Periodically, the Task Sequence used to build a new counter in Hatfield will need to be updated. There may be a requirement to add a new hardware model to the build process for deployment as a Post Office Branch Counter or you may need to modify the build and change the version of HNGA being delivered, you may need to create a new Stock Prep Collection as well.

The sections below discuss the processes required to add a new hardware model to the build task sequence and also how to modify the build to update the version of HNGA being delivered in the build.

These activity should be completed by the GIO Build Management team under their normal operating procedures. Details below are provided for reference only.

The following steps describe the changes that were made to incorporate the latest hardware model added to the Post Office Branch Counter environment, which was the Box PX35 All-In-One device.

10.1 Adding a new Hardware Model to the build

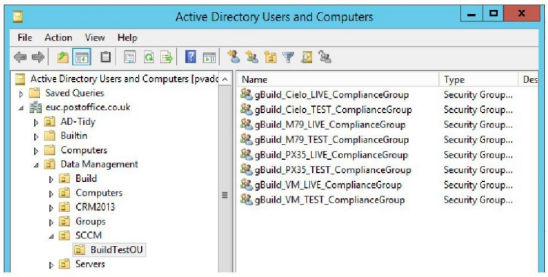
At some point during the lifecycle of the Post Office Project it may be necessary to add a new hardware model to the build process in Hatfield.

For adding a new Hardware Model the steps are:

- Creation of two new BuildStage Active Directory groups, one for Live and one for Test devices
- Creation of two new SCCM BuildStage collections, one for Live and one for Test devices (the collection memberships are based on the two new AD groups)
- The current SCCM build Task Sequence needs to be updated to include the extra steps for the new hardware model. This will include hardware drivers and extra steps to configure BuildStage compliance for the new hardware model.

Use the following steps to add a new hardware model to the current build task sequence:

10.1.1 AD Group and SCCM Collection creation

Step	Screen
Login to the Primary Site server PVSCMPOL001 and open Active Directory Users and Computers. Browse to the following Organizational Unit **EUC:\Data Management → SCCM → BuildTestOU**	

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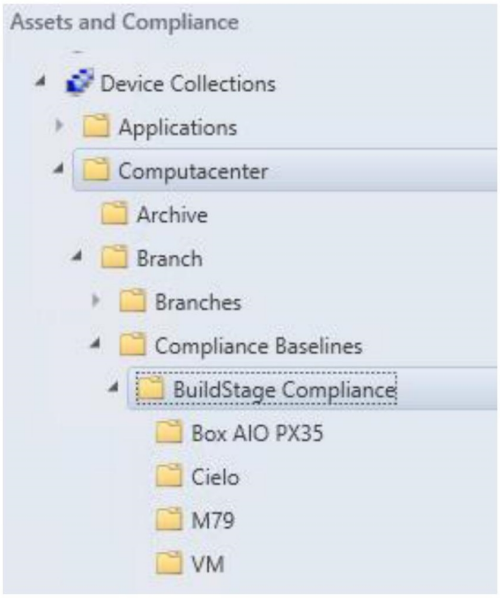
Step	Screen
Create 2 new security groups named **gBuild_*HWModel*_LIVE_ComplianceGroup** **gBuild_*HWModel*_TEST_ComplianceGroup** In this example for the Box PX35 device the groups created were **gBuild_PX35_LIVE_ComplianceGroup** **gBuild_PX35_TEST_ComplianceGroup** Note that you may need to submit a Change Request or BAU request to have the groups created.	gBuild_PX35_LIVE_ComplianceGroup Security Group... gBuild_PX35_TEST_ComplianceGroup Security Group...
Open the SCCM Console and select Assets and Compliance. Browse to the following folder: **Device Collections → Computacenter → Branch → Compliance Baselines → BuildStage Compliance** Create a new folder named after the new hardware model. In this example the folder "**Box AIO PX35**" was created.	

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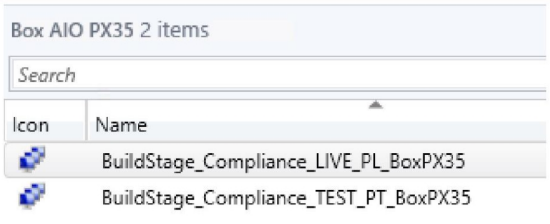
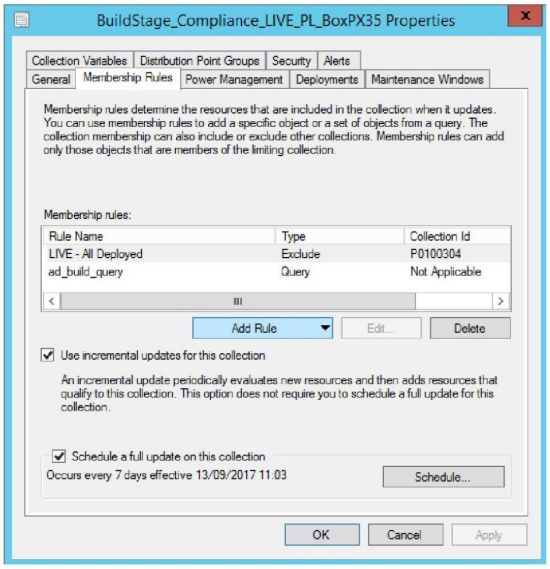
Step	Screen
Browse to the following folder: **Device Collections → Computacenter → Branch → Compliance Baselines → BuildStage Compliance → *HWModel*** Create 2 new Device Collections, one for LIVE, one for TEST. **BuildStage_Compliance_LIVE_PL_*HWModel*** **BuildStage_Compliance_TEST_PT_*HWModel*** In this example the collections created were: **BuildStage_Compliance_LIVE_PL_BoxPX35** **BuildStage_Compliance_TEST_PT_BoxPX35**	
Edit the properties of the Buildstage LIVE collection. Make sure that the "Use incremental updates for this collection" box is ticked. Create an Exclude Collections rule and exclude the collection "**LIVE – All Deployed**" **Note that "LIVE – All Deployed" must be excluded otherwise during a HNGA rollout there is an increased risk that counters could have 2 different HNGA baselines which is not allowed.**	

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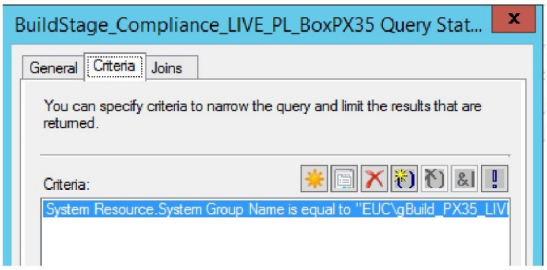
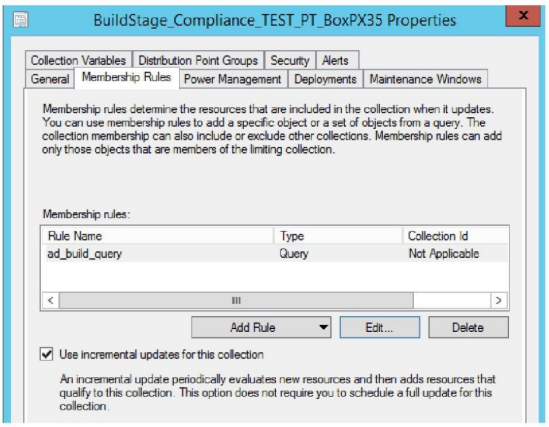
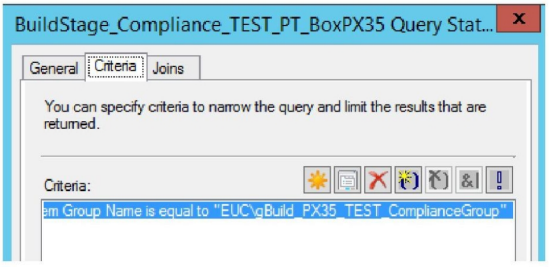
Step	Screen
Create a new Query Rule for the LIVE collection named "**AD_Build_Query**". Use the following query **select SMS_R_SYSTEM.ResourceID,SMS_R_SYSTEM.ResourceType,SMS_R_SYSTEM.Name,SMS_R_SYSTEM.SMSUniqueIdentifier,SMS_R_SYSTEM.ResourceDomainORWorkgroup,SMS_R_SYSTEM.Client from SMS_R_System where SMS_R_System.SystemGroupName = "EUC\\gBuild_*HWModel*_LIVE_ComplianceGroup"** Note that the LIVE BuildStage AD group is referenced and that EUC\\ (2 backslashes) prefix the group name in the query code.	
Edit the properties of the BuildstageTEST collection. Make sure that the "Use incremental updates for this collection" box is ticked.	
Create a new Query Rule for the TEST collection. Use the following query **select SMS_R_SYSTEM.ResourceID,SMS_R_SYSTEM.ResourceType,SMS_R_SYSTEM.Name,SMS_R_SYSTEM.SMSUniqueIdentifier,SMS_R_SYSTEM.ResourceDomainORWorkgroup,SMS_R_SYSTEM.Client from SMS_R_System where SMS_R_System.SystemGroupName = "EUC\\gBuild_*HWModel*_TEST_ComplianceGroup"** Note that the TEST BuildStage AD group is referenced and that EUC\\ (2 backslashes) prefix the group name in the query code.	

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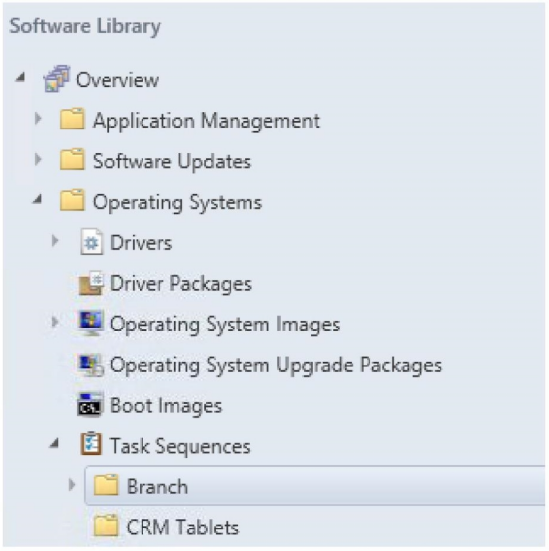
10.1.2 Build Task Sequence Modification

As well as the AD Security Group and SCCM Device Collection creation, the SCCM Task Sequence that is used to build devices needs to be modified as well to add the extra hardware specific steps required for BuildStage compliance.

The following Task Sequence steps only relate to what is required for BuildStage compliance. Build Management will handle the addition of any steps relating to the new Hardware Model (e.g. device drivers). The BuildStage compliance steps are shown below:

Step	Screen
Login to the Primary Site server PVSCMPOL001 and open the SCCM Console. Select Software Library and browse to the following folder: **Operating Systems → Task Sequences → Branch**	
Edit the current live Task Sequence used to build branch counters. In reality Build Management will copy the existing task sequence and create a new one with an incremented version number.	

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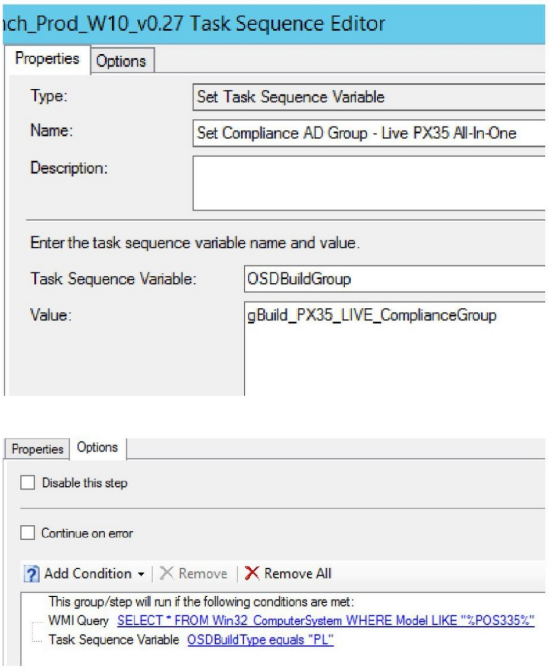
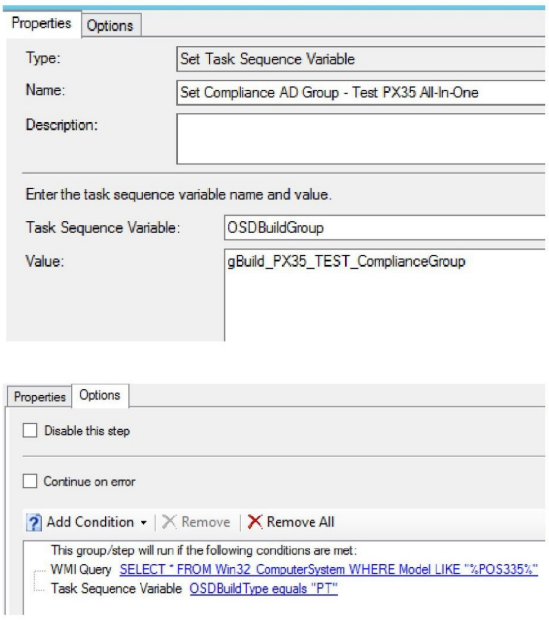
Step	Screen
In the group "**ComplianceAtBuildCheck**" add a new Task Sequence Variable step named "**Set Compliance AD Group – Live *HWModel***" with the following settings: Task Sequence Variable: **OSDBuildGroup** Value: **gBuild_*HWModel*_LIVE_ComplianceGroup** In the Options add the following conditions: 1. A WMI Query that can identify the hardware type: For example for the Box PX35 model the WMI query is **SELECT * FROM Win32_ComputerSystem WHERE Model LIKE "%POS335%"** 2. The Task Sequence Variable "**OSDBuildType**" equals **PL** Note: Build Management will be able to advise on the correct WMI query when required	
In the group "**ComplianceAtBuildCheck**" add a new Task Sequence Variable step named "**Set Compliance AD Group – Test *HWModel***" with the following settings: Task Sequence Variable: **OSDBuildGroup** Value: **gBuild_*HWModel*_TEST_ComplianceGroup** In the Options add the following conditions: 1. A WMI Query that can identify the hardware type: For example for the Box PX35 model the WMI query is **SELECT * FROM Win32_ComputerSystem WHERE Model LIKE "%POS335%"** 2. The Task Sequence Variable "**OSDBuildType**" equals **PT**	
Identify the current HNGA version that is in production and that is required to be installed on the new hardware model. At the time of writing this document the Box PX35 devices use HNGA 16.85	

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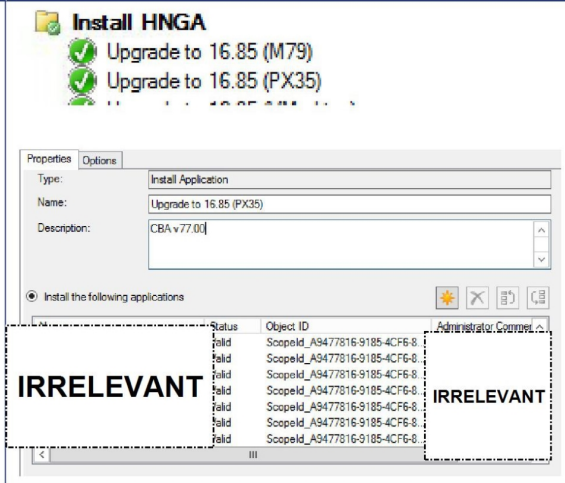
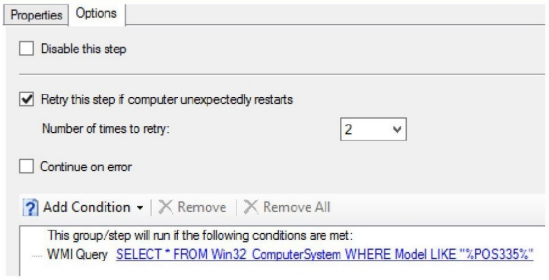
Step	Screen
In the group “Install HNGA” copy the step **Upgrade to XX.XX (M79)** and rename the new step **Upgrade to XX.XX (*HWModel*)** Where XX.XX is the current HNGA version Note that this step is used to install the required HNGA applications.	
Note that the next step is only required if there is a specific requirement to deliver a different version of HNGA to a specific hardware model. Previously during the early rollout of the counters there was a requirement to deliver HNGA 16.49.1 to Cielo PHU counters and HNGA 16.85 to M79 and Box PX35 counters. This is not currently a requirement.	
(Optional Step if required) In the Options of the step “**Upgrade to XX.XX (*HWModel*)**” add the following condition: 1. A WMI Query that can identify the hardware type: For example for the Box PX35 model the WMI query is **SELECT * FROM Win32_ComputerSystem WHERE Model LIKE “%POS335%”** Also tick the box “Retry this step if computer unexpectedly restarts” and set the “Number of times to retry” to 2.	

10.1.3 BuildStage testing of the new hardware model

Once you have prepared the AD groups and configured the Task Sequence for the new hardware model, you next need to test that the device can be built. To do this you will need to do the following:

- Add the test BuildStage collection for the new hardware model to the SCCM base collection for the current HNGA release
- Build a counter using the new hardware model as a TEST build
- When the builds have completed, confirm compliance to the HNGA release

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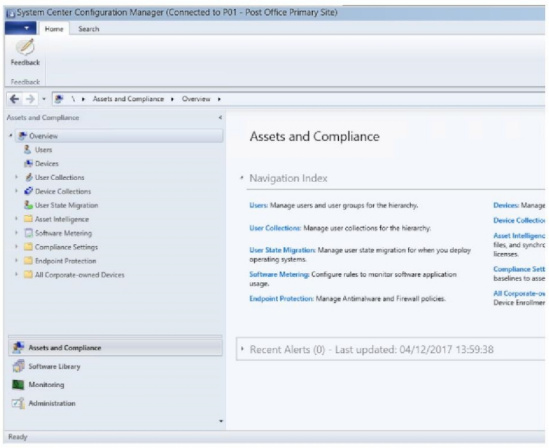
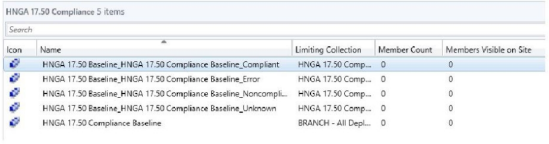
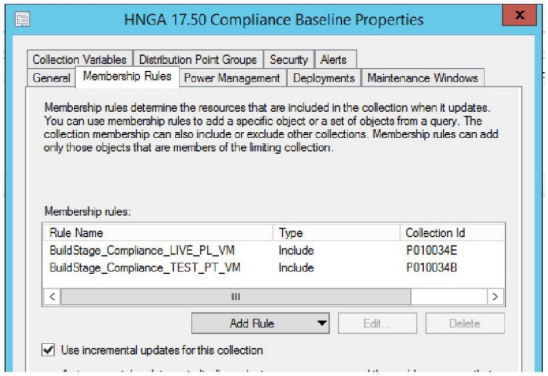
Use the following steps to complete the BuildStage testing of the new hardware model:

Step	Screen
Login to the Primary Site server PVSCMPOL001 and open the SCCM Console. Browse to Assets and Compliance and select devices	
Browse to **Device Collections → Computacenter → Branch → Compliance Baselines → the folder for the current HNGA release.** In this example we are using the HNGA 17.50 Compliance folder.	
Edit the membership of the SCCM base collection for the new HNGA release. Create a new Include Collection Rule and add the test BuildStage collection to the base collection. **BuildStage_Compliance_TEST_PT_*NewModel*** The BuildStage collections are located in the following folder: **Device Collections → Computacenter → Branch → Compliance Baselines → BuildStage Compliance → *NewModel*** At this point all new Test builds of the new hardware will be added to the SCCM Base collection for the current HNGA release. When the builds have completed they will check compliance against the current HNGA version.	

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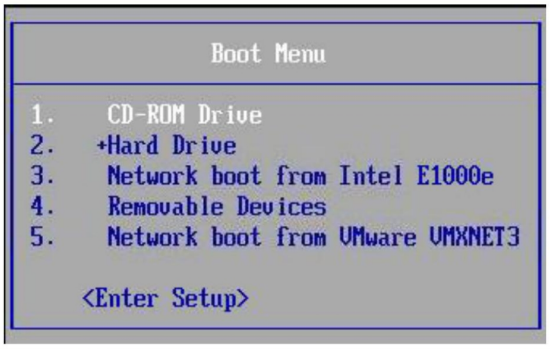
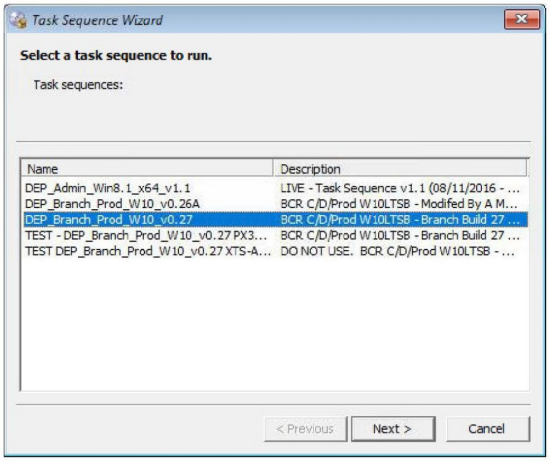
Step	Screen
Connect up and PXE boot the new hardware.	
At the "Welcome to the Task Sequence Wizard" page, click on Next	
At the "Select a task sequence to run" page, select the current live Branch Counter Task Sequence. If you don't know which is the live one, check with GIO Build Management. Note that the minimum version number for the live Branch Counter Task Sequence will be v0.27	

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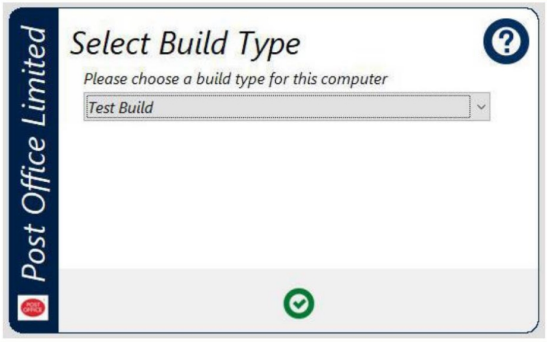
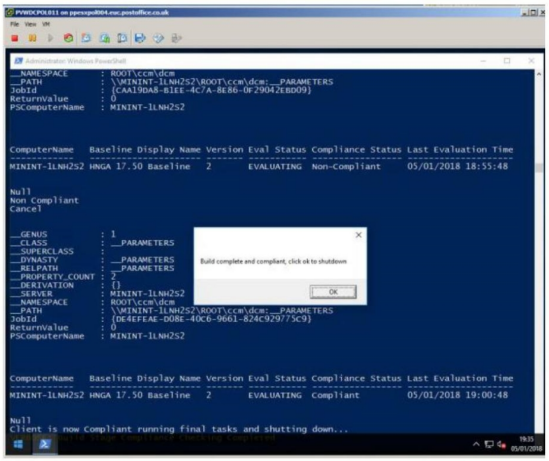
Step	Screen
When prompted to select the Build Type, select Test Build and click on the green tick. The build will now proceed, based on a test build.	
Once the build has completed and the counter has had its compliance checked for the current HNGA release you will see a popup on the screens saying Build complete and compliant, click ok to shutdown This completes the buildstage testing of the new hardware model	

10.2 Build update to change version of HNGA and Stock Prep Collection

In section 4.4 – Moving Forward with BuildStage Compliance, a number of options were discussed for how to deal with a change in the live version of HNGA and how that would affect the build timings in Hatfield and Personalisation timings in a branch. Option 3 was to update the Build task sequence to make sure that the new live version of HNGA is installed on the counter during the build task sequence and the build is completed with the counter Compliant to the new version of HNGA.

For changing the version of HNGA being delivered in the build and adding a new Stock Prep collection the steps are:

- Creation of a new Stock Prep collection and include the new Stock Prep collection to the base collection for the new version of HNGA
- Update the version of HNGA delivered in the build Task Sequence
- Update the current SCCM build Task Sequence to add counters to the new collection

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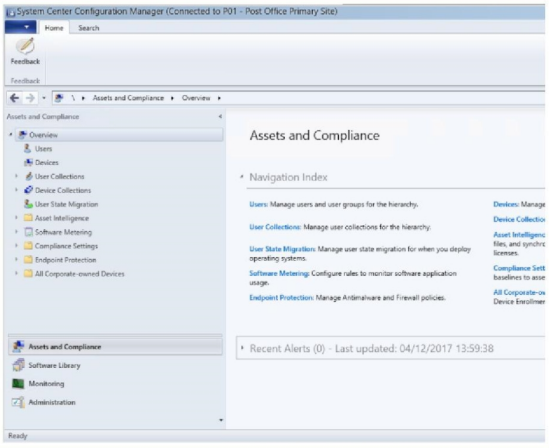
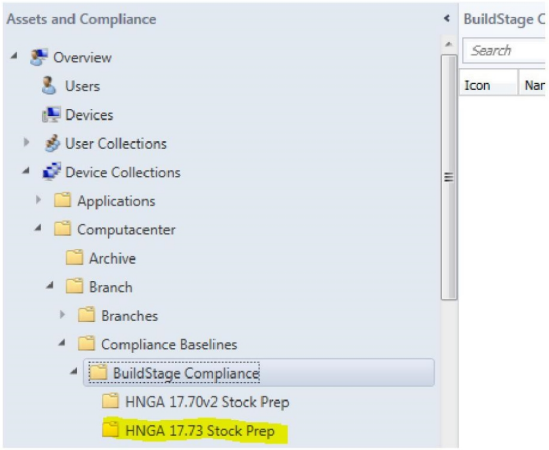
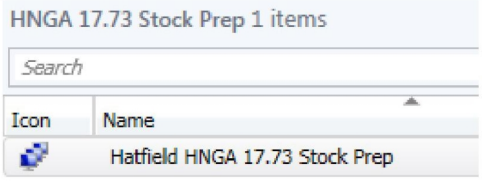
Use the following steps to update the build task sequence:

Note that for the following example, the modifications used to deliver HNGA 17.73 will be used.

10.2.1 Create the new Stock Prep device collection

The first step is to create a new Stock Prep Device Collection

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to **Assets and Compliance** and select devices	
Browse to **Device Collections → Computacenter → Branch → Compliance Baselines → BuildStage Compliance** Create a new folder named **HNGA XX.XX Stock Prep** where XX.XX is the new version of HNGA	
Select the new folder, right-click and create a new Device Collection named **Hatfield HNGA XX.XX Stock Prep** Where XX.XX is the new version of HNGA	

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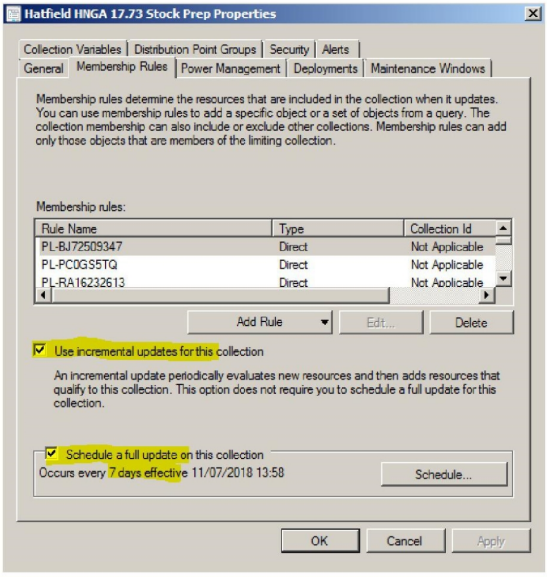
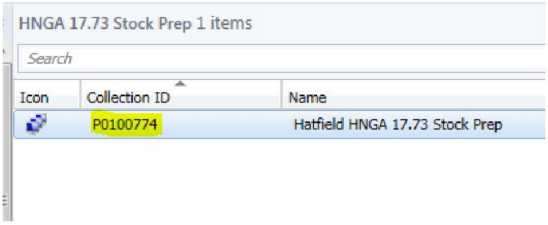
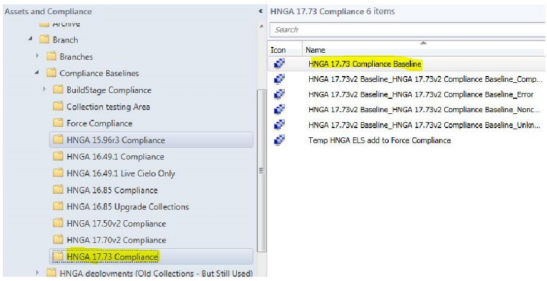
Step	Screen
When creating the collection make sure that the **Incremental Updates** box is **ticked** Also, set the collection to complete a **Full Update** every **7 days**	
Add the Collection ID column and make a note of the Collection ID of the new collection	
Locate the base collection for the new version of HNGA. In this example the base collection is located at **Device Collections → Computacenter → Branch → Compliance Baselines → HNGA 17.73 Compliance** And is named **HNGA 17.73 Compliance Baseline**	

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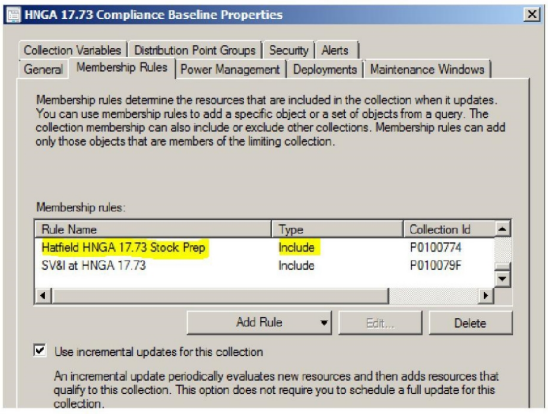
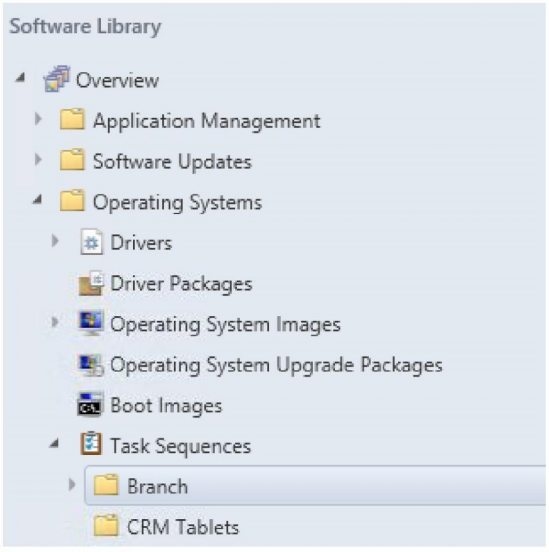
Step	Screen
Edit the membership of the HNGA XX.XX Compliance Baseline collection and create an **Include Collection rule** to include the new "**Hatfield HNGA XX.XX Stock Prep**" collection	

10.2.2 Update the version of HNGA delivered in the build Task Sequence

The next step is to update the version of HNGA that is delivered in the task sequence.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Select Software Library and browse to the following folder: **Operating Systems → Task Sequences → Branch**	
Edit the current live Task Sequence used to build branch counters. In reality Build Management will copy the existing task sequence and create and deploy a new one with an incremented version number. When the Task Sequence opens locate the group "Install HNGA"	

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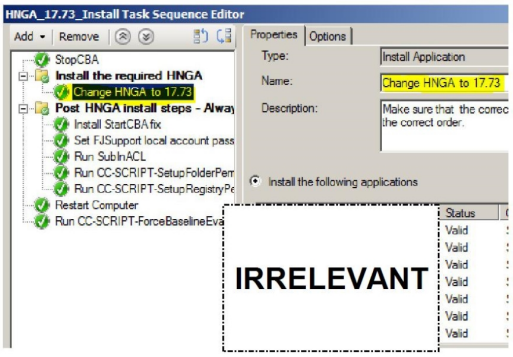
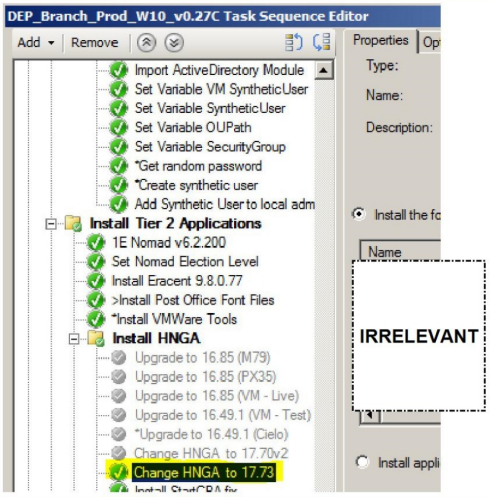
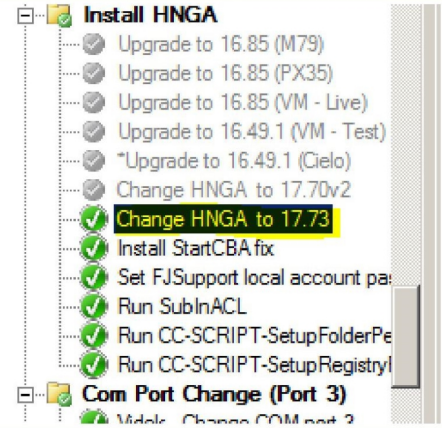
Step	Screen
Select Software Library and browse to the following folder: **Operating Systems → Task Sequences → Branch → HNGA Installation** Identify the new HNGA version that required to be installed during the build Task Sequence Then locate the task sequence that was created to install the new HNGA version when a counter in Non-Compliant (this was created in **Section 5.3.1**). Edit the task sequence and copy the step "**Change HNGA to XX.XX**"	
Paste the "**Change HNGA to XX.XX**" step in the group "**Install HNGA**" in the build Task Sequence.	
Disable or remove the step that installed the previous version of HNGA so that the new step is the only "**Change HNGA to XX.XX**" enabled. Also, make sure that the "**Change HNGA to XX.XX**" step is **above** the step "**Install StartCBA fix**"	
Save the Task Sequence	

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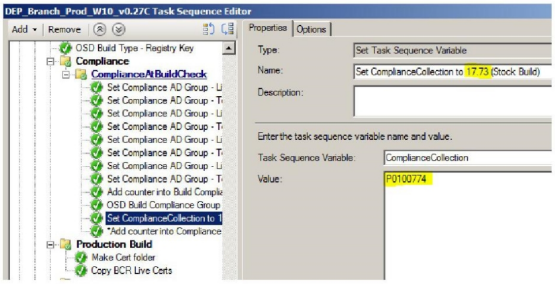
10.2.3 Update the current SCCM build Task Sequence to add counters to the new collection

Step	Screen
Browse to **Operating Systems → Task Sequences → Branch** Edit the Task Sequence that has been edited to deliver the new version of HNGA	
Locate the **ComplianceAtBuildCheck** group and then edit the step "**Set ComplianceCollection…"** Edit the name to **Set ComplianceCollection to XX.XX (Stock Build)** – where XX.XX is the new version of HNGA Edit the Value to the **CollectionID** for the new Stock Prep collection as located previously When you have edited these 2 settings, save the Task Sequence.	

Once the build task sequence has been updated, Build Management will take it through their normal process to release as the live task sequence.

Remember that it will require Build Management or a Professional Services Project to be engaged to deliver an updated build Task Sequence.

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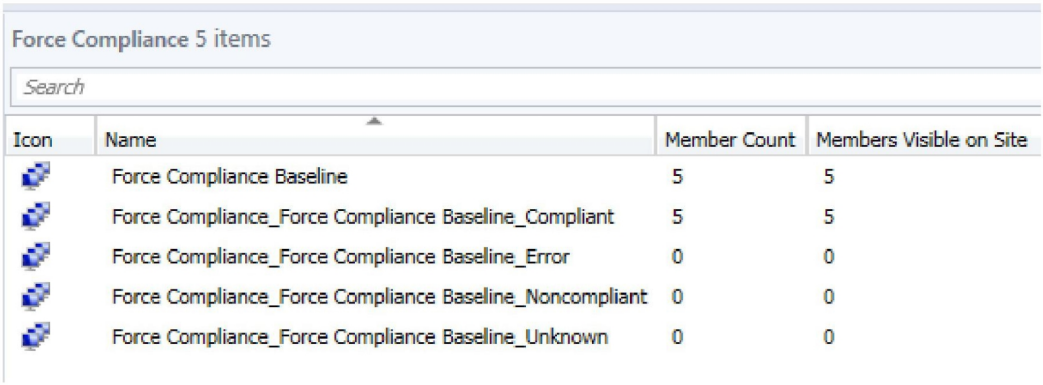
Appendix D Force Compliance Baseline

On occasion Fujitsu require access to a branch counter that they can use to test changes to the HNGA suite of applications. For example, Fujitsu may want to test a new version of one of the applications that make up a HNGA release.

Due to the way in which the counters operate they must be compliant to a configuration baseline. If a counter is non-compliant the screen will be greyed out and the operator will not be able to interact with the counter. However, if the counter is targeted at a specific version of HNGA, it will always try to remain compliant to the specific applications that make up that version of HNGA. Within 2 hours of making any changes to a counter, it would become non-compliant and then reinstall any changed applications.

To prevent this from happening a configuration baseline has been setup and deployed to the collection "Force Compliance Baseline"


Force Compliance 5 items

Search

Icon	Name	Member Count	Members Visible on Site
	Force Compliance Baseline	5	5
	Force Compliance_Force Compliance Baseline_Compliant	5	5
	Force Compliance_Force Compliance Baseline_Error	0	0
	Force Compliance_Force Compliance Baseline_Noncompliant	0	0
	Force Compliance_Force Compliance Baseline_Unknown	0	0

When you add a counter to this collection using direct membership, an Include Collection rule or a Query Rule it is removed from all existing baselines for versions of HNGA and becomes compliant to a baseline named "Force Compliance". IRRELEVANT

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Once compliant, the counter can then be used to test new applications.

When the counter is removed from the collection it will re-evaluate its compliance against its original version of HNGA and if required, reinstall HNGA to become compliant again.

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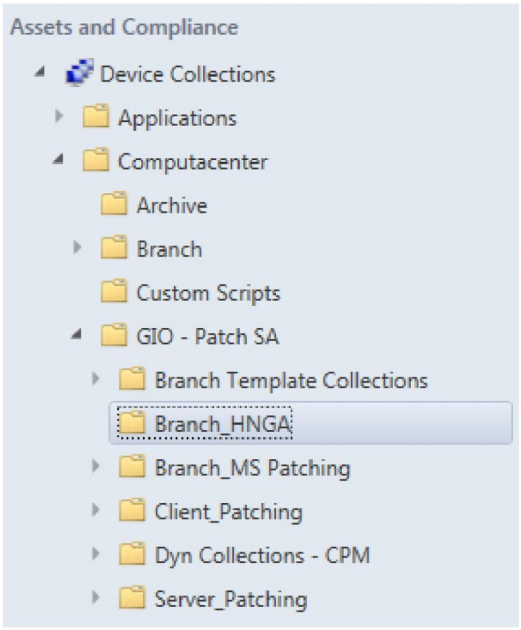
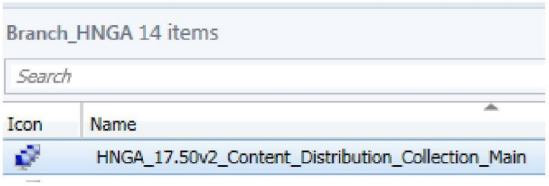
Appendix E Pre-Caching HNGA Content on Counters

With each release of a HNGA version the best approach will be to get the content out to counters well in advance of actual installation. This is because if the content has already been downloaded it will reduce the amount of time that a counter will remain Non-compliant after triggering the HNGA upgrade, as it will not have to wait for content to download before installation.

The procedure to pre-cache the content will be to create a collection for the pre-cache deployment, deploy the HNGA Pre-Cache Task Sequence for the release to the collection and then to add batches of counters to the collection over a number of days. This should be completed under the required change control and monitored accordingly to ensure that the content is successfully downloaded to the counters.

Use the following procedure (with the change control in place) to pre-cache the HNGA content to the counters.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to Assets → Device Collections → Computacenter → GIO – Patch SA → Branch_HNGA	
Create a new Device collection named: **HNGA_XX.XX_Content_Distribution_Collection_Main** Where XX.XX is the version of HNGA that is to be pre-cached.	

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Deploy the HNGA Pre-Cache Task Sequence to the new collection with the following settings:

Deployment Settings:

Action: **Install**

Purpose: **Required**

Scheduling:

Assignment Schedule**: As soon as possible, Occur every 1 day at 03:00**

Rerun Behavior: **Rerun if failed previous attempt**

User Experience:

Allow users to run the program independently of assignments: **Not ticked**

Show Task Sequence progress: **Not ticked**

Software installation: **Not ticked**

System restart (if required to complete the installation): **Not ticked**

Commit changes at deadline or during a maintenance window: **Ticked**

Allow task sequence to run for client on the internet: **Not ticked**

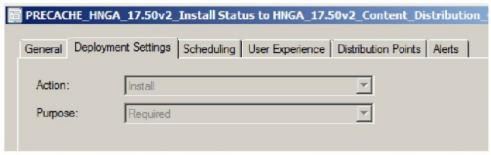
Distribution Points:

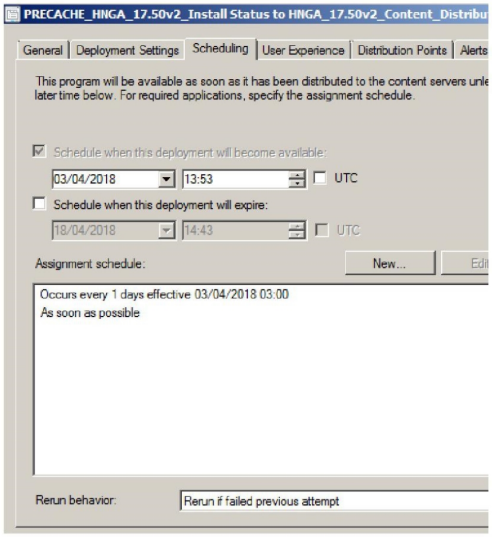
Deployment options: **Download all content locally before starting task sequence**

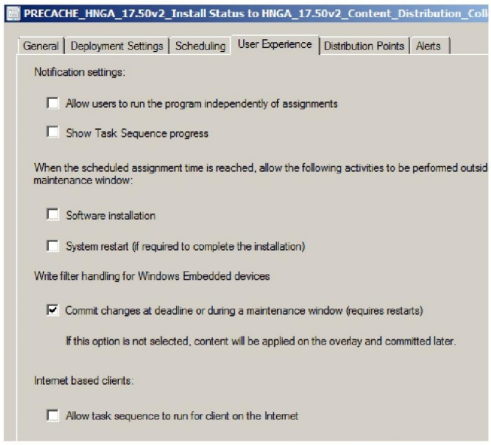
When no local distribution point is available, use a remote distribution point: **Not ticked**

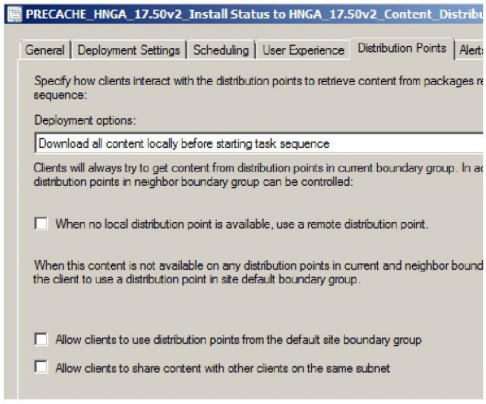
Allow client to use distribution points from the default site boundary group: **Not ticked**

Allow clients to share content with other clients on the same subnet: **Not ticked**









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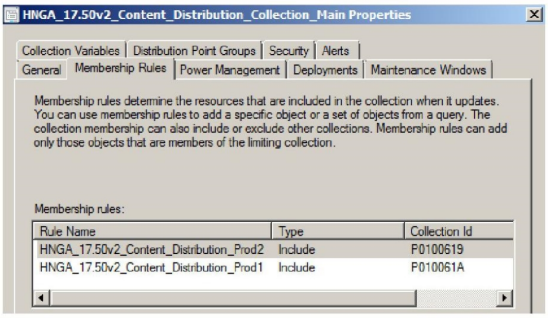
Step	Screen
Once the deployment has been setup, collections of counters can be added to the deployment collection as per your requirements using Include Collection Rules. Note that an approved change will be required to allow you to add counters to the deployment collection.	

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Appendix F Decommissioning an obsolete Configuration Baseline

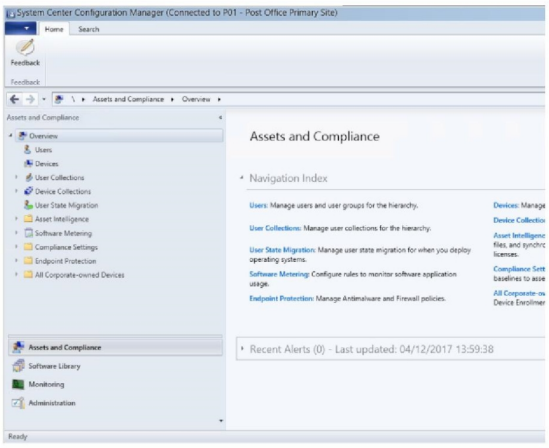
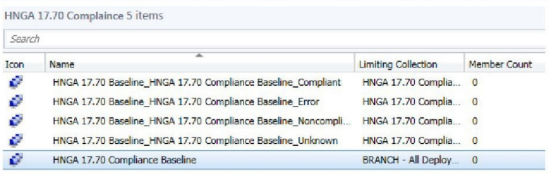
After the release of a new version of HNGA you may need to decommission an old HNGA compliance baseline so that it can no longer be deployed to a branch counter. This will typically be required under the following circumstances:

- The version of HNGA is more than 2 versions behind the current production version, is no longer targeted at any counters and is no longer required for deployment.
- The version of HNGA is a pre-release version that has been tested in SV&I, LST or Model Office but has failed testing or an issue has been discovered during testing. The potential rollout of this version of HNGA has therefore been cancelled.

The procedure for decommissioning a release of HNGA is quite straight-forward and involves the following steps:

- Removal of the Configuration Baseline deployment
- Removal of the HNGA Install Task Sequence deployment
- Removal of the Baseline Device Collections
- Archival of the configuration baseline

Use the following procedure to decommission an obsolete Configuration Baseline.

Step	Screen
Login to the Primary Site server **IRRELEVANT** and open the SCCM Console. Browse to Assets and Compliance and select devices	
Browse to the Device Collection folder that contains the baseline that is being decommissioned and confirm that the baseline is not targeted at any counters by confirming that the member count is 0. You may also need to edit the membership of the HNGA XX.XX Compliance Baseline collection and remove any Include or Exclude rules.	

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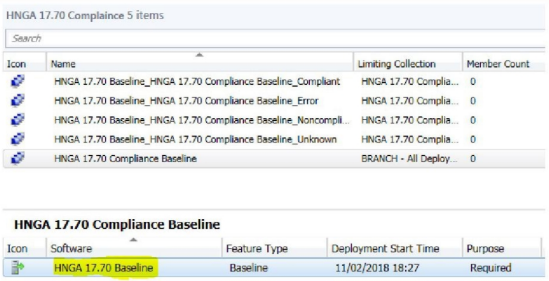
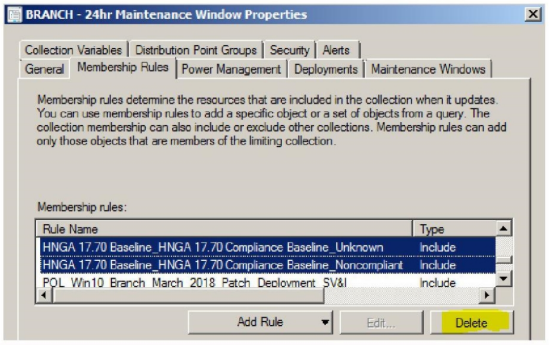
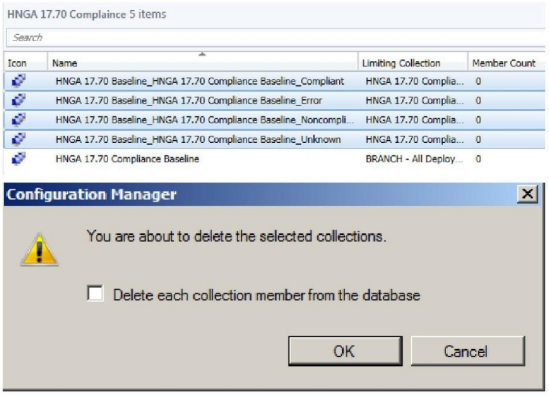
Step	Screen
Select the HNGA base collection and delete the baseline deployment “HNGA XX.XX Baseline”	
Select the Noncompliant sub-collection and delete the HNGA Task Sequence deployment “HNGA_XX.XX_Install”	
Browse to the folder Assets and Compliance → Overview → Device Collections →Computacenter → Branch Edit the membership of the collection “BRANCH – 24hr Maintenance Window” and delete the Noncompliant and Unknown Include collection rules from the HNGA release that is being decommissioned.	
Browse back to the Device Collection folder that contains the baseline that is being decommissioned then highlight and delete the 4 baseline sub-collections.	

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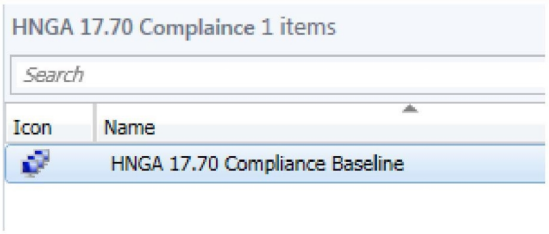
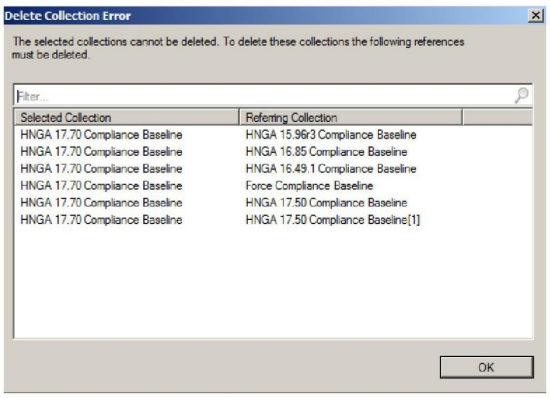
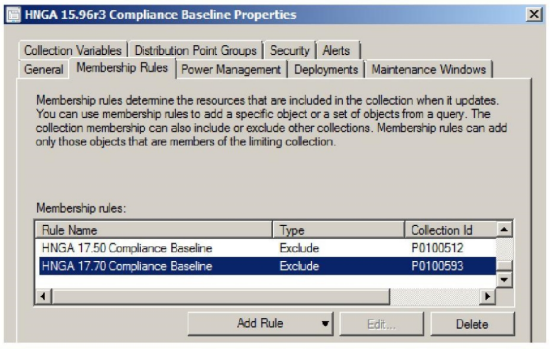
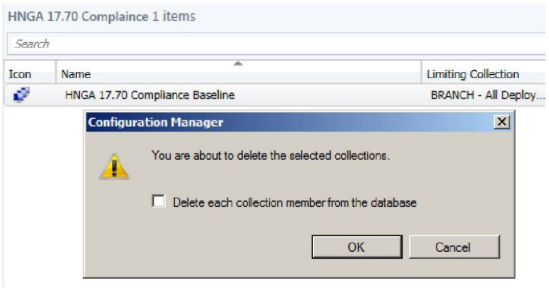
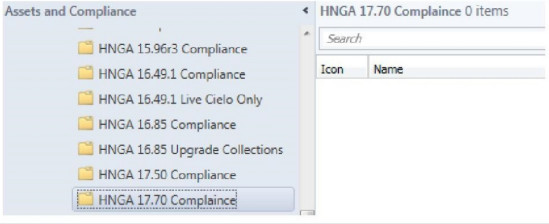
Step	Screen
Highlight the main “HNGA XX.XX Compliance Baseline” Collection and attempt to delete it.	
You will be prompted that the collection cannot be deleted due to the following references. This is caused by the collection being included (with an Exclude Rule) in all of the base collections for the previous HNGA releases in SCCM.	
Make a note of the list of collection references and remove each of them from the referenced collections.	
When you have removed the collection from the referenced collections you can delete the “HNGA XX.XX Compliance Baseline” collection	
Now that all of the collections relating to the baseline have been deleted, delete the “HNGA XX.XX Compliance” folder.	

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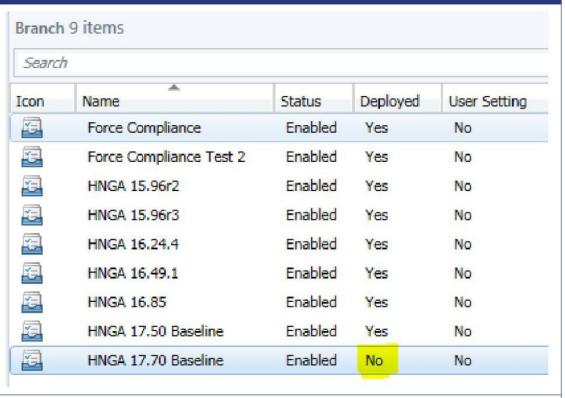
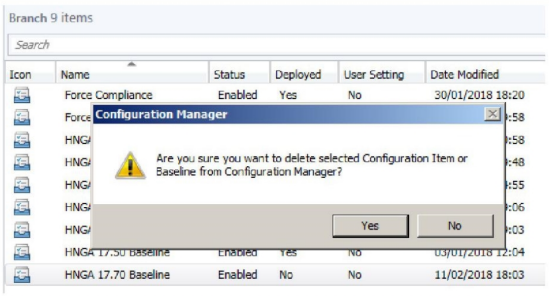
Step	Screen
Browse to Assets and Compliance → Overview → Compliance Settings → Configuration Baselines →Branch Confirm that the baseline that is being decommissioned ("HNGA XX.XX Baseline") is no longer deployed.	
Delete the baseline. **Note – make sure that you only delete the decommissioned baseline, not the production one!**	
Although the Baseline and Device Collections have now been removed, DO NOT remove the related Configuration Items as they may need to be reused with other HNGA releases.	

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Document Information

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V0-11	20180313	Mike Cowing	Added more production rollout details and fixed production rollout example. Added an appendix on decommissioning a HNGA baseline.	Anthony Lander
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V0-14	20180430	Mike Cowing	Added correct configuration of Force Compliance when adding a new HNGA baseline.	Anthony Lander
V0-15	20180530	Mike Cowing	Added recent SCCM configuration changes to HNGA baseline and collection configuration	Anthony Lander
V0-16	20180711	Mike Cowing	Added template changes for HNGA release and also minor grammar updates	Anthony Lander
V0-17	20180801	Mike Cowing	Added updated CI configuration and other minor updates	Anthony Lander
V0-21	20180924	Mike Cowing	Revamped testing sections and adding updated information on BuildStage compliance and Stock Prep collections	Anthony Lander