

GE Healthcare

GOC6 and GOC6.5 Hardware Replacement Kit Installation Manual

OPERATING DOCUMENTATION



5769269-1EN

Rev 3

© 2017 General Electric Company.

All rights reserved.

LEGAL NOTES

TRADEMARKS

Adobe, the Adobe logo, Acrobat, the Acrobat logo, Exchange, and PostScript are trademarks of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions.

Microsoft is a registered trademark and Windows is a trademark of Microsoft Corporation.

All other products and their name brands are trademarks of their respective holders.

COPYRIGHTS

All Material Copyrighted (c) 2017 by the GE Company, All rights reserved.

This page intentionally left blank.

IMPORTANT PRECAUTIONS

LANGUAGE

ПРЕДУПРЕЖДЕНИЕ (BG)	<p>Това упътване за работа е налично само на английски език.</p> <ul style="list-style-type: none">• Ако доставчикът на услугата на клиента изиска друг език, задължение на клиента е да осигури превод.• Не използвайте оборудването, преди да сте се консултирали и разбрали упътването за работа.• Неспазването на това предупреждение може да доведе до нараняване на доставчика на услугата, оператора или пациента в резултат на токов удар, механична или друга опасност.
警告 (ZH-CN)	<p>本维修手册仅提供英文版本。</p> <ul style="list-style-type: none">• 如果维修服务提供商需要非英文版本，客户需自行提供翻译服务。• 未详细阅读和完全理解本维修手册之前，不得进行维修。• 忽略本警告可能对维修人员，操作员或患者造成触电、机械伤害或其他形式的伤害。
警告 (ZH-HK)	<p>本服務手冊僅提供英文版本。</p> <ul style="list-style-type: none">• 倘若客戶的服務供應商需要英文以外之服務手冊，客戶有責任提供翻譯服務。• 除非已參閱本服務手冊及明白其內容，否則切勿嘗試維修設備。• 不遵從本警告或會令服務供應商、網絡供應商或病人受到觸電、機械性或其他危險。
警告 (ZH-TW)	<p>本維修手冊僅有英文版。</p> <ul style="list-style-type: none">• 若客戶的維修廠商需要英文版以外的語言，應由客戶自行提供翻譯服務。• 請勿試圖維修本設備，除非您已查閱並瞭解本維修手冊。• 若未留意本警告，可能導致維修廠商、操作員或病患因觸電、機械或其他危險而受傷。
UPOZORENJE (HR)	<p>Ovaj servisni priručnik dostupan je na engleskom jeziku.</p> <ul style="list-style-type: none">• Ako davatelj usluge klijenta treba neki drugi jezik, klijent je dužan osigurati prijevod.• Ne pokušavajte servisirati opremu ako niste u potpunosti pročitali i razumjeli ovaj servisni priručnik.• Zanimarite li ovo upozorenje, može doći do ozljede davatelja usluge, operatera ili pacijenta uslijed strujnog udara, mehaničkih ili drugih rizika.
VÝSTRAHA (CS)	<p>Tento provozní návod existuje pouze v anglickém jazyce.</p> <ul style="list-style-type: none">• V případě, že externí služba zákazníkům potřebuje návod v jiném jazyce, je zajištění překladu do odpovídajícího jazyka úkolem zákazníka.• Nesnažte se o údržbu tohoto zařízení, aniž byste si přečetli tento provozní návod a pochopili jeho obsah.• V případě nedodržování této výstrahy může dojít k poranění pracovníka prodejního servisu, obslužného personálu nebo pacientů vlivem elektrického proudu, respektive vlivem mechanických či jiných rizik.

ADVARSEL (DA)	<p>Denne servicemanual findes kun på engelsk.</p> <ul style="list-style-type: none">• Hvis en kundes tekniker har brug for et andet sprog end engelsk, er det kundens ansvar at sørge for oversættelse.• Forsøg ikke at servicere udstyret uden at læse og forstå denne servicemanual.• Manglende overholdelse af denne advarsel kan medføre skade på grund af elektrisk stød, mekanisk eller anden fare for teknikeren, operatøren eller patienten.
WAARSCHUWING (NL)	<p>Deze onderhoudshandleiding is enkel in het Engels verkrijgbaar.</p> <ul style="list-style-type: none">• Als het onderhoudspersoneel een andere taal vereist, dan is de klant verantwoordelijk voor de vertaling ervan.• Probeer de apparatuur niet te onderhouden alvorens deze onderhoudshandleiding werd geraadpleegd en begrepen is.• Indien deze waarschuwing niet wordt opgevolgd, zou het onderhoudspersoneel, de operator of een patiënt gewond kunnen raken als gevolg van een elektrische schok, mechanische of andere gevaren.
WARNING (EN)	<p>This service manual is available in English only.</p> <ul style="list-style-type: none">• If a customer's service provider requires a language other than English, it is the customer's responsibility to provide translation services.• Do not attempt to service the equipment unless this service manual has been consulted and is understood.• Failure to heed this warning may result in injury to the service provider, operator or patient from electric shock, mechanical or other hazards.
HOIATUS (ET)	<p>See teenindusjuhend on saadaval ainult inglise keeles.</p> <ul style="list-style-type: none">• Kui klienditeeninduse osutaja nõuab juhendit inglise keelest erinevas keeles, vastutab klient tõlketeenuse osutamise eest.• Ärge üritage seadmeid teenindada enne eelnevalt käesoleva teenindusjuhendiga tutvumist ja sellest aru saamist.• Käesoleva hoiatuse eiramine võib põhjustada teenuseosutaja, operaatori või patsiendi vigastamist elektrilöögi, mehaanilise või muu ohu tagajärjel.
VAROITUS (FI)	<p>Tämä huolto-ohje on saatavilla vain englanniksi.</p> <ul style="list-style-type: none">• Jos asiakkaan huoltohenkilöstö vaatii muuta kuin englanninkielistä materiaalia, tarvittavan käännöksen hankkiminen on asiakkaan vastuulla.• Älä yritä korjata laitteistoa ennen kuin olet varmasti lukenut ja ymmärtänyt tämän huolto-ohjeen.• Mikäli tätä varoitusta ei noudateta, seurauksena voi olla huoltohenkilöstön, laitteiston käyttäjän tai potilaan vahingoittuminen sähköiskun, mekaanisen vian tai muun vaaratilanteen vuoksi.
ATTENTION (FR)	<p>Ce manuel d'installation et de maintenance est disponible uniquement en anglais.</p> <ul style="list-style-type: none">• Si le technicien d'un client a besoin de ce manuel dans une langue autre que l'anglais, il incombe au client de le faire traduire.• Ne pas tenter d'intervenir sur les équipements tant que ce manuel d'installation et de maintenance n'a pas été consulté et compris.• Le non-respect de cet avertissement peut entraîner chez le technicien, l'opérateur ou le patient des blessures dues à des dangers électriques, mécaniques ou autres.

<p>WARNUNG (DE)</p>	<p>Diese Serviceanleitung existiert nur in englischer Sprache.</p> <ul style="list-style-type: none"> • Falls ein fremder Kundendienst eine andere Sprache benötigt, ist es Aufgabe des Kunden für eine entsprechende Übersetzung zu sorgen. • Versuchen Sie nicht diese Anlage zu warten, ohne diese Serviceanleitung gelesen und verstanden zu haben. • Wird diese Warnung nicht beachtet, so kann es zu Verletzungen des Kundendiensttechnikers, des Bedieners oder des Patienten durch Stromschläge, mechanische oder sonstige Gefahren kommen.
<p>ΠΡΟΕΙΔΟΠΟΙΗΣΗ (EL)</p>	<p>Το παρόν εγχειρίδιο σέρβις διατίθεται μόνο στα αγγλικά.</p> <ul style="list-style-type: none"> • Εάν ο τεχνικός σέρβις ενός πελάτη απαιτεί το παρόν εγχειρίδιο σε γλώσσα εκτός των αγγλικών, αποτελεί ευθύνη του πελάτη να παρέχει τις υπηρεσίες μετάφρασης. • Μην επιχειρήσετε την εκτέλεση εργασιών σέρβις στον εξοπλισμό αν δεν έχετε συμβουλευτεί και κατανοήσει το παρόν εγχειρίδιο σέρβις. • Αν δεν προσέξετε την προειδοποίηση αυτή, ενδέχεται να προκληθεί τραυματισμός στον τεχνικό σέρβις, στο χειριστή ή στον ασθενή από ηλεκτροπληξία, μηχανικούς ή άλλους κινδύνους.
<p>FIGYELMEZTETÉS (HU)</p>	<p>Ezen karbantartási kézikönyv kizárólag angol nyelven érhető el.</p> <ul style="list-style-type: none"> • Ha a vevő szolgáltatója angoltól eltérő nyelvre tart igényt, akkor a vevő felelőssége a fordítás elkészítése. • Ne próbálja elkezdni használni a berendezést, amíg a karbantartási kézikönyvben leírtakat nem értelmezték. • Ezen figyelmeztetés figyelmen kívül hagyása a szolgáltató, működtető vagy a beteg áramütés, mechanikai vagy egyéb veszélyhelyzet miatti sérülését eredményezheti.
<p>AÐVÖRUN (IS)</p>	<p>Þessi þjónustuhandbók er aðeins fáanleg á ensku.</p> <ul style="list-style-type: none"> • Ef að þjónustuveitandi viðskiptamanns þarfnast annas tungumáls en ensku, er það skylda viðskiptamanns að skaffa tungumálþjónustu. • Reynið ekki að afgreiða tækið nema að þessi þjónustuhandbók hefur verið skoðuð og skilin. • Brot á sinna þessari aðvörun getur leitt til meiðsla á þjónustuveitanda, stjórnanda eða sjúklings frá raflosti, vélrænu eða öðrum áhættum.
<p>AVVERTENZA (IT)</p>	<p>Il presente manuale di manutenzione è disponibile soltanto in lingua inglese.</p> <ul style="list-style-type: none"> • Se un addetto alla manutenzione richiede il manuale in una lingua diversa, il cliente è tenuto a provvedere direttamente alla traduzione. • Procedere alla manutenzione dell'apparecchiatura solo dopo aver consultato il presente manuale ed averne compreso il contenuto. • Il mancato rispetto della presente avvertenza potrebbe causare lesioni all'addetto alla manutenzione, all'operatore o ai pazienti provocate da scosse elettriche, urti meccanici o altri rischi.
<p>警告 (JA)</p>	<p>このサービスマニュアルには英語版しかありません。</p> <ul style="list-style-type: none"> • サービスを担当される業者が英語以外の言語を要求される場合、翻訳作業はその業者の責任で行うものとさせていただきます。 • このサービスマニュアルを熟読し理解せずに、装置のサービスを行わないでください。 • この警告に従わない場合、サービスを担当される方、操作員あるいは患者さんが、感電や機械的又はその他の危険により負傷する可能性があります。

<p>(KO)</p>	<ul style="list-style-type: none"> 가 , , ,
<p>BRĪDINĀJUMS (LV)</p>	<p>Šī apkopes rokasgrāmata ir pieejama tikai angļu valodā.</p> <ul style="list-style-type: none"> Ja klienta apkopes sniedzējam nepieciešama informācija citā valodā, klienta pienākums ir nodrošināt tulkojumu. Neveiciet aprīkojuma apkopi bez apkopes rokasgrāmatas izlasīšanas un saprašanas. Šī brīdinājuma neievērošanas rezultātā var rasties elektriskās strāvas trieciena, mehānisku vai citu faktoru izraisītu traumu risks apkopes sniedzējam, operatoram vai pacientam.
<p>ĮSPĖJIMAS (LT)</p>	<p>Šis eksploatavimo vadovas yra tik anglų kalba.</p> <ul style="list-style-type: none"> Jei kliento paslaugų tiekėjas reikalauja vadovo kita kalba – ne anglų, suteikti vertimo paslaugas privalo klientas. Nemėginkite atlikti įrangos techninės priežiūros, jei neperskaitėte ar nesupratote šio eksploatavimo vadovo. Jei nepaisysite šio įspėjimo, galimi paslaugų tiekėjo, operatoriaus ar paciento sužalojimai dėl elektros šoko, mechaninių ar kitų pavojų.
<p>ADVARSEL (NO)</p>	<p>Denne servicehåndboken finnes bare på engelsk.</p> <ul style="list-style-type: none"> Hvis kundens serviceleverandør har bruk for et annet språk, er det kundens ansvar å sørge for oversettelse. Ikke forsøk å reparere utstyret uten at denne servicehåndboken er lest og forstått. Manglende hensyn til denne advarselen kan føre til at serviceleverandøren, operatøren eller pasienten skades på grunn av elektrisk støt, mekaniske eller andre farer.
<p>OSTRZEŻENIE (PL)</p>	<p>Niniejszy podręcznik serwisowy dostępny jest jedynie w języku angielskim.</p> <ul style="list-style-type: none"> Jeśli serwisant klienta wymaga języka innego niż angielski, zapewnienie usługi tłumaczenia jest obowiązkiem klienta. Nie próbować serwisować urządzenia bez zapoznania się z niniejszym podręcznikiem serwisowym i zrozumienia go. Niezastosowanie się do tego ostrzeżenia może doprowadzić do obrażeń serwisanta, operatora lub pacjenta w wyniku porażenia prądem elektrycznym, zagrożenia mechanicznego bądź innego.
<p>ATENÇÃO (PT-BR)</p>	<p>Este manual de assistência técnica encontra-se disponível unicamente em inglês.</p> <ul style="list-style-type: none"> Se outro serviço de assistência técnica solicitar a tradução deste manual, caberá ao cliente fornecer os serviços de tradução. Não tente reparar o equipamento sem ter consultado e compreendido este manual de assistência técnica. A não observância deste aviso pode ocasionar ferimentos no técnico, operador ou paciente decorrentes de choques elétricos, mecânicos ou outros.

<p>ATENÇÃO (PT-PT)</p>	<p>Este manual de assistência técnica só se encontra disponível em inglês.</p> <ul style="list-style-type: none"> • Se qualquer outro serviço de assistência técnica solicitar este manual noutra língua, é da responsabilidade do cliente fornecer os serviços de tradução. • Não tente reparar o equipamento sem ter consultado e compreendido este manual de assistência técnica. • O não cumprimento deste aviso pode colocar em perigo a segurança do técnico, do operador ou do paciente devido a choques eléctricos, mecânicos ou outros.
<p>ATENȚIE (RO)</p>	<p>Acest manual de service este disponibil doar în limba engleză.</p> <ul style="list-style-type: none"> • Dacă un furnizor de servicii pentru clienți necesită o altă limbă decât cea engleză, este de datoria clientului să furnizeze o traducere. • Nu încercați să reparați echipamentul decât ulterior consultării și înțelegerii acestui manual de service. • Ignorarea acestui avertisment ar putea duce la rănirea depanatorului, operatorului sau pacientului în urma pericolelor de electrocutare, mecanice sau de altă natură.
<p>ОСТОРОЖНО! (RU)</p>	<p>Данное руководство по техническому обслуживанию представлено только на английском языке.</p> <ul style="list-style-type: none"> • Если сервисному персоналу клиента необходимо руководство не на английском, а на каком-то другом языке, клиенту следует самостоятельно обеспечить перевод. • Перед техническим обслуживанием оборудования обязательно обратитесь к данному руководству и поймите изложенные в нем сведения. • Несоблюдение требований данного предупреждения может привести к тому, что специалист по техобслуживанию, оператор или пациент получит удар электрическим током, механическую травму или другое повреждение.
<p>UPOZORENJE (SR)</p>	<p>Ovo servisno uputstvo je dostupno samo na engleskom jeziku.</p> <ul style="list-style-type: none"> • Ako klijentov serviser zahteva neki drugi jezik, klijent je dužan da obezbedi prevodilačke usluge. • Ne pokušavajte da opravite uređaj ako niste pročitali i razumeli ovo servisno uputstvo. • Ne pokušavajte da opravite uređaj ako niste pročitali i razumeli ovo servisno uputstvo.
<p>UPOZORNENIE (SK)</p>	<p>Tento návod na obsluhu je k dispozícii len v angličtine.</p> <ul style="list-style-type: none"> • Ak zákazníkovi poskytovateľ služieb vyžaduje iný jazyk ako angličtinu, poskytnutie prekladateľských služieb je zodpovednosťou zákazníka. • Nepokúšajte sa o obsluhu zariadenia, kým si neprečítate návod na obsluhu a neporozumiete mu. • Zanedbanie tohto upozornenia môže spôsobiť zranenie poskytovateľa služieb, obsluhujúcej osoby alebo pacienta elektrickým prúdom, mechanické alebo iné ohrozenie.

ATENCIÓN (ES)	<p>Este manual de servicio sólo existe en inglés.</p> <ul style="list-style-type: none">• Si el encargado de mantenimiento de un cliente necesita un idioma que no sea el inglés, el cliente deberá encargarse de la traducción del manual.• No se deberá dar servicio técnico al equipo, sin haber consultado y comprendido este manual de servicio.• La no observancia del presente aviso puede dar lugar a que el proveedor de servicios, el operador o el paciente sufran lesiones provocadas por causas eléctricas, mecánicas o de otra naturaleza.
VARNING (SV)	<p>Den här servicehandboken finns bara tillgänglig på engelska.</p> <ul style="list-style-type: none">• Om en kunds servicetekniker har behov av ett annat språk än engelska, ansvarar kunden för att tillhandahålla översättningstjänster.• Försök inte utföra service på utrustningen om du inte har läst och förstår den här servicehandboken.• Om du inte tar hänsyn till den här varningen kan det resultera i skador på serviceteknikern, operatören eller patienten till följd av elektriska stötar, mekaniska faror eller andra faror.
OPOZORILO (SL)	<p>Ta servisni priročnik je na voljo samo v angleškem jeziku.</p> <ul style="list-style-type: none">• Če ponudnik storitve stranke potrebuje priročnik v drugem jeziku, mora stranka zagotoviti prevod.• Ne poskušajte servisirati opreme, če tega priročnika niste v celoti prebrali in razumeli.• Če tega opozorila ne upoštevate, se lahko zaradi električnega udara, mehanskih ali drugih nevarnosti poškoduje ponudnik storitev, operater ali bolnik.
DİKKAT (TR)	<p>Bu servis kılavuzunun sadece ingilizcesi mevcuttur.</p> <ul style="list-style-type: none">• Eğer müşteri teknisyeni bu kılavuzu ingilizce dışında bir başka lisandan talep ederse, bunu tercüme ettirmek müşteriye düşer.• Servis kılavuzunu okuyup anlamadan ekipmanlara müdahale etmeyiniz.• Bu uyarıya uyulmaması, elektrik, mekanik veya diğer tehlikelerden dolayı teknisyen, operatör veya hastanın yaralanmasına yol açabilir.

DAMAGE IN TRANSPORTATION

All packages should be closely examined at time of delivery. If damage is apparent, have notation "damage in shipment" written on all copies of the freight or express bill before delivery is accepted or "signed for" by a General Electric representative or a hospital receiving agent. Whether noted or concealed, damage MUST be reported to the carrier immediately upon discovery, or in any event, within 14 days after receipt, and the contents and containers held for inspection by the carrier. A transportation company will not pay a claim for damage if an inspection is not requested within this 14 day period.

To file a report:

- Call 1-800-548-3366 and use option 8.
- Fill out a report on <http://us44hdd21/sctq/InstallFulfill/InstalFulfillment.htm>
- Contact your local service coordinator for more information on this process.

Rev. Jan. 5, 2005

CERTIFIED ELECTRICAL CONTRACTOR STATEMENT

All electrical Installations that are preliminary to positioning of the equipment at the site prepared for the equipment shall be performed by licensed electrical contractors. In addition, electrical feeds into the Power Distribution Unit shall be performed by licensed electrical contractors. Other connections between pieces of electrical equipment, calibrations and testing shall be performed by qualified GE Medical personnel. The products involved (and the accompanying electrical installations) are highly sophisticated, and special engineering competence is required. In performing all electrical work on these products, GE will use its own specially trained field engineers. All of GE's electrical work on these products will comply with the requirements of the applicable electrical codes.

The purchaser of GE equipment shall only utilize qualified personnel (i.e., GE's field engineers, personnel of third-party service companies with equivalent training, or licensed electricians) to perform electrical servicing on the equipment.

IMPORTANT...X-RAY PROTECTION

X-ray equipment if not properly used may cause injury. Accordingly, the instructions herein contained should be thoroughly read and understood by everyone who will use the equipment before you attempt to place this equipment in operation. The General Electric Company, Medical Systems Group, will be glad to assist and cooperate in placing this equipment in use.

Although this apparatus incorporates a high degree of protection against x-radiation other than the useful beam, no practical design of equipment can provide complete protection. Nor can any practical design compel the operator to take adequate precautions to prevent the possibility of any persons carelessly exposing themselves or others to radiation.

It is important that anyone having anything to do with x-radiation be properly trained and fully acquainted with the recommendations of the National Council on Radiation Protection and Measurements as published in NCRP Reports available from NCRP Publications, 7910 Woodmont Avenue, Room 1016, Bethesda, Maryland 20814, and of the International Commission on Radiation Protection, and take adequate steps to protect against injury.

The equipment is sold with the understanding that the General Electric Company, Medical Systems Group, its agents, and representatives have no responsibility for injury or damage which may result from improper use of the equipment.

Various protective materials and devices are available. It is urged that such materials or devices be used.

LITHIUM BATTERY CAUTIONARY STATEMENTS

CAUTION



Risk of Explosion.

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION



Danger d'Explosion

Il y a danger d'explosion s'il y a un remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

OMISSIONS & ERRORS

Customers, please contact your GE Sales or Service representatives.

GE personnel, please use the Healthcare PQR Process to report all omissions, errors, and defects in this publication.

Revision History

Revision	Date	Reason for change
3	April 21, 2017	Updated replacement procedure
2	April 13, 2017	Updated replacement procedure
1	Feb. 2017	Initial Release

This page intentionally left blank.

List of Effected Pages

PAGES	REVISION	PAGES	REVISION	PAGES	REVISION
1 through 78	3				

This page intentionally left blank.

Table of Contents

Preface

Publication Conventions 19

Section 1.0

Safety & Hazard Information 19

1.1 Text and Character Representation..... 19
1.2 Graphical Representation 20

Section 2.0

Publication Conventions 21

2.1 General Paragraph and Character Styles..... 21
2.2 Page Layout..... 21
2.3 Computer Screen Output/Input Text Character Styles 22
2.4 Buttons, Switches and Keyboard Inputs (Hard & Soft Keys)..... 22

Chapter 1

Introduction..... 23

Section 1.0 Personnel Requirements 23

Section 2.0 Overview 23

Section 3.0

Preliminary Requirements 24

3.1 Tools and Test Equipment 24
3.2 Consumables 24
3.3 Replacement Parts 24
3.4 Safety..... 24
3.5 Required Conditions 25

Chapter 2

Replacement Procedure 27

Section 1.0

Procedure..... 27

1.1 Inventory Replacement Kits..... 27
1.2 Save Current System Configuration Information 29
 1.2.1 Identify Detector/DAS type 29
 1.2.2 Record the Installed Software Options and Other System Information 29
 1.2.3 Save System State on Existing Console 29
1.3 Uninstall Existing Hardware..... 30
 1.3.1 Image and Scan Database Resets on Host Computer..... 30
 1.3.2 Shutdown and Disconnect Power on Existing Operator Console 30
 1.3.3 Remove the Console Covers..... 31
 1.3.4 Disconnect Accessories/Options on Existing Operator Console 31
 1.3.5 Disconnect Peripherals on Existing Operator Console..... 31
 1.3.6 Disconnect Rear Bulkhead Cables on the existing Operator Console 31
 1.3.7 Remove Console Hardware..... 32

1.4	Install New Hardware	34
1.4.1	Connect Accessories	65
1.4.2	Connect Rear Bulkhead Cables	65
1.4.3	Connect Power and Grounds	65
1.5	Console Initialization	66
1.5.1	LFC Preparations	66
1.5.2	Load from Cold (LFC)	68
1.5.3	Generate eLicense Key for new Console	70
1.5.4	Install Option Software	70
1.5.5	Reconnect the Hospital Network Cable	71
1.5.6	Tube Install Certification	71
1.5.7	Flash Download	71
1.5.8	GSCB Configuration and Intercom Set Up	72
1.5.9	Install System Warning Labels	72
1.5.10	InSite Checkout	72
1.6	System Level Verification Test	73
1.7	Finalization	74

Chapter 3		
Appendix		75
Section 1.0		
System Information Sheet		75

Preface

Publication Conventions

Purpose: Standardize conventions for representing information in a uniform way of communicating information to a reader in a consistent manner. Conventions are used so that the reader can easily recognize the actions or decisions that must be made. There are a number of character and paragraph styles used in this publication to accomplish this task. Please become familiar with them before proceeding forward.

Section 1.0

Safety & Hazard Information

1.1 Text and Character Representation

Within this publication, different paragraph and character styles have been used to indicate potential hazards. Paragraph prefixes, such as hazard, caution, danger and warning, are used to identify important safety information. Text (Hazard) styles are applied to the paragraph contents that is applicable to each specific safety statement. Words describe the type of potential hazard that may be encountered and are placed immediately before the paragraph it modifies. Safety information will normally include:

- Type of potential Hazard
- Nature of potential injury
- Causative condition
- How to avoid or correct the causative condition

EXAMPLES OF HAZARD STATEMENTS USED

It's important that you read and understand hazard statements, and not just ignore them.



**DANGER
SEVERE
PERSONAL
INJURY**

DANGER IS USED WHEN A HAZARD EXISTS WHICH WILL CAUSE SEVERE PERSONAL INJURY OR DEATH IF INSTRUCTIONS ARE IGNORED. THEY CAN INCLUDE:


- **ELECTROCUTION**
- **CRUSHING**
- **RADIATION**




**WARNING
SERIOUS
PERSONAL
INJURY**

WARNING IS USED WHEN A HAZARD EXISTS WHICH COULD OR CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH IF INSTRUCTIONS ARE IGNORED. THEY CAN INCLUDE:

- **POTENTIAL FOR SHOCK**
- **EXPOSED WIRES**
- **FAILURE TO TAG AND LOCKOUT SYSTEM POWER COULD ALLOW FOR UN-COMMANDED MOTION.**


 **CAUTION**
Minor Personal Injury
Caution is used when a hazard exists which can or could cause minor injury to self or others if instructions are ignored. They include for example:










- Loss of critical patient data
- Crush or pinch points
- Sharp objects

 **NOTICE**
Property Damage Only
Notice is used when a hazard is present that can cause property damage but has absolutely no personal injury risk. They can include:

- Disk drive will be destroyed
- Internal mechanical damage, such as to the x-ray tube
- Coasting the rotor through resonance.

1.2 Graphical Representation

Important information will always be preceded by the exclamation point  contained within a triangle, as seen throughout the Preface chapter. In addition to text, several different graphical icons (symbols) may be used to make you aware of specific types of hazards that could possibly cause harm.

<p>ELECTRICAL</p>  <p>LASER</p>  <p>LASER LIGHT</p>	<p>HAZARDS MECHANICAL</p>  <p>HEAT</p> 	<p>RADIATION</p>  <p>PINCH</p> 
<p>AVOID STATIC ELECTRICITY</p> 	<p>PROCEDURAL TAG AND LOCK OUT</p> 	<p>WEAR EYE PROTECTION</p>  <p>EYE PROTECTION</p>

Section 2.0 Publication Conventions

2.1 General Paragraph and Character Styles

Prefixes are used to highlight important non-safety related information. Paragraph prefixes (such as purpose, example, comment or note) are used to identify important but non-safety related information. Text styles are also applied to text within each paragraph modified by the specific prefix.

EXAMPLES OF PREFIXES USED FOR GENERAL INFORMATION

Purpose: Introduces and provides meaning as to the information contained within the chapter, section or subsection, Such as used at the beginning this chapter for example.

Note: Conveys information that should be considered important to the reader.

Example: Used to make the reader aware that the paragraph(s) that follow are examples of information possibly stated previously.

Comment: Represents “additional” information that may or may not be relevant to your situation.

2.2 Page Layout

Publication Part Number & Revision Number

Publication Title

NOTE

Wear a grounded wrist strap when you handle a circuit board.

- Remove the four (4) tabs that retain the Intercom X Board cover to the circuit board.
- Remove the cover with the PWB from the assembly.
- Remove four (4) screws that fix the PWB to the device, and remove PWB.
- Install the new Intercom X Board.
- Reassemble Gerty.

3.2.5 Remote Intercom X Board Test Points:

- TP1: Noise Detector circuit output.
- TP2: Level Control amp output.
- TP3: Line Driver circuit input.
- TP4: Line Driver circuit output.
- TP5: Automatic Gain Control (AGC) for Level Control amp.
- TP6: Regulator circuit output.

The current section and its title are always shown in the footer of the left (even) page.

An exclamation point in a triangle is used to indicate important information to the user.

Paragraphs preceded by **Alphanumeric** characters (e.g. numbers) contain information that must be followed in a **specific order**.

The current chapter and its title are always shown in the footer of the right (odd) page.

Paragraphs preceded by a **symbol** (e.g. bullets) contain information that has **no specific order**.

Headers and footers in this publication are designed to allow you to quickly identify your location. The document's part number and revision number appears in every header on every page. Odd

numbered page footers indicate the current chapter, its title and current page number. Even page footers show the current section and its title, as well current page number.

2.3 Computer Screen Output/Input Text Character Styles

Within this publication, mono-spaced character styles (fonts) are used to indicate computer text that's either screen input and output. Mono spaced fonts, such as courier, are used to indicate text direction. When you type at your keyboard, you are generating computer input. Occasionally you will see the math operators "greater than" and "less than" symbols used to indicate the start and finish of variable output. When reading text generated by the computer, you are reading it as computer generated output. In addition to direction, characters are italicized (e.g. *italics*) to indicate information specific to your system or site.

Example:
Fixed Output

This paragraph's fonts represents computer generated screen "fixed" output. It's output is fixed from the sense that it does not vary from application to application. It's the most commonly used style used to indicate filenames, paths and text that does not change from system to system. The character style used is a fixed width such as courier.

Example:
Variable Output

This paragraph's font represents computer screen output that is "variable". Its used to represent output that varies from application to application or system to system. Variable output is sometimes found placed between greater than and lesser than operators for clarification. For example: <variable_ouput> or <3.45.120.3>. In both cases, the < and > operators are not part of the actual input.

Example:
Fixed Input

This paragraph's font represents fixed input. It's computer input that is typed-in via the keyboard. Typed input that does not vary from application to application or system to system. Fixed text the user is required to supply as input. For example: cd /usr/3p

Example:
Variable Input

This paragraph's font represents computer input that can vary from application to application or system to system. With variable text, the user is required to supply system dependent input or information. Variable input sometimes is placed between greater-than and less-than operators. For example: <variable_input>. In these cases, the (<>) operators would be dropped prior to input. For example: ypcat hosts | grep <3.45.120.3> would be typed into the computer as ypcat hosts | grep 3.45.120.3 without the greater-than and less-than operators.

2.4 Buttons, Switches and Keyboard Inputs (Hard & Soft Keys)

Different character styles are used to indicate actions requiring the reader to press either a hard or soft button, switch or key. Physical hardware, such as buttons and switches, are called hard keys because they are hard wired or mechanical in nature. A keyboard or on/off switch would be a hard key. Software or computer generated buttons are called soft keys because they are software generated. Software driven menu buttons are an example of such keys. Soft and hard keys are represented differently in this publication.

Example:
Hard Keys

A power switch **ON/OFF** or a keyboard key like **ENTER** is indicated by applying a character style that uses both over and under-lined bold text that is bold. This is a hard key.

Example:
Soft Keys

Whereas the computer MENU button that you would click with your mouse or touch with your hand uses over and under-lined regular text. This is a soft key.

END OF SECTION

Chapter 1

Introduction

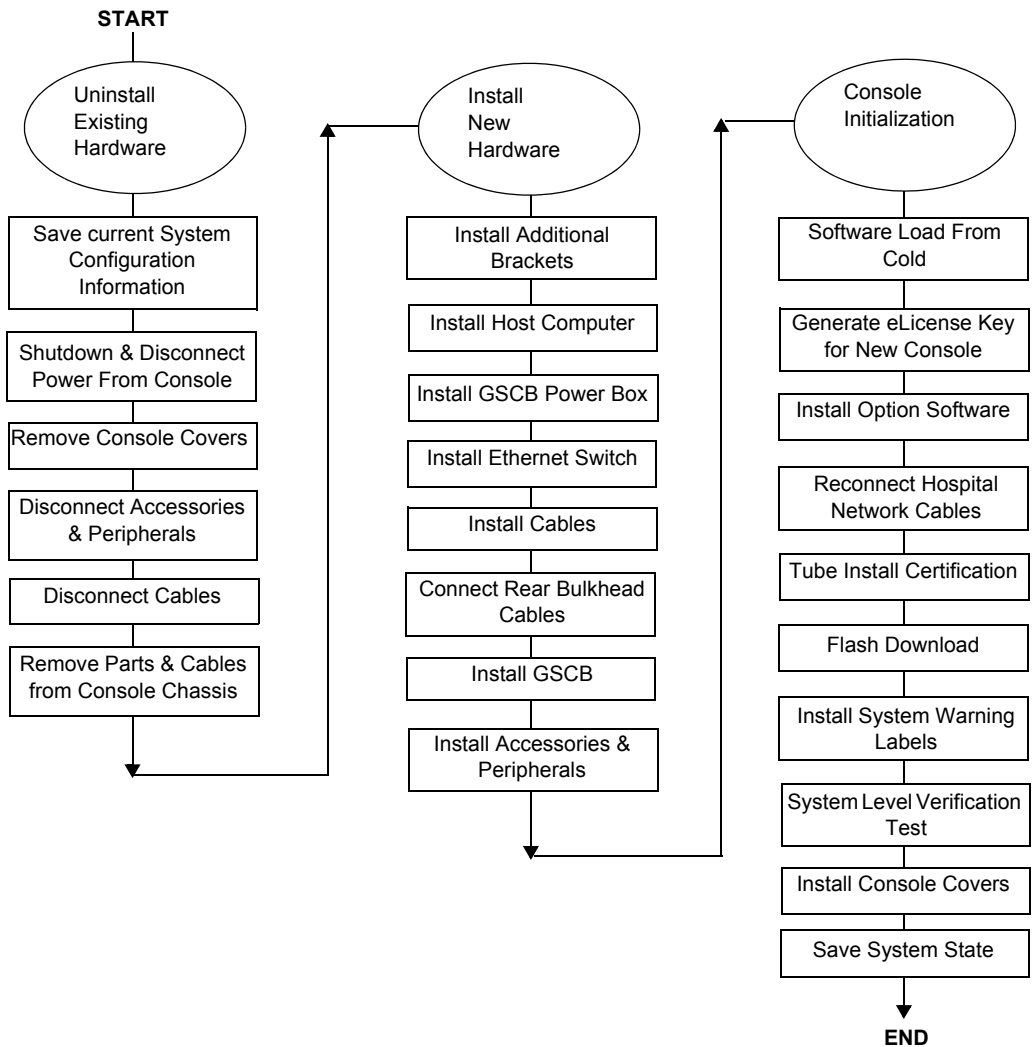
Section 1.0 Personnel Requirements

Required Persons	Preliminary Reqs	Procedure	Finalization
1	Timing Not Applicable	7 hours	1 hour

Section 2.0 Overview

This document describes and illustrates the steps necessary to install hardware replacement kit to LightSpeed VCT GOC6 and GOC6.5 console. Refer to the flowchart in below for the overall replacement process.

Figure 1-1 GOC6 and GOC6.5 Hardware Replacement Kit Installation Flowchart



Section 3.0 Preliminary Requirements

3.1 Tools and Test Equipment

Item	Qty.	Effectivity	Part No.	Manufacturer
Torque Wrench	1	-	-	-
Standard FE Tool Kit	1	-	-	-
Power Screw driver	1	-	-	-
Hex Bits for Power screw driver	-	-	-	-

3.2 Consumables

Item	Qty.	Effectivity	Part No.	Manufacturer
Tie-wraps	30	-	5394300-3	Included in the kit

3.3 Replacement Parts

Item	Qty.	Effectivity	Part No.	Manufacturer
Refer to Table on page 27	-	-	-	-

3.4 Safety



DANGER

ELECTROCUTION HAZARD
 HIGH VOLTAGE PRESENT.



USE PROPER LOCKOUT / TAGOUT PROCEDURES WHEN INSTRUCTED, WHILE PERFORMING THIS HARDWARE REPLACEMENT PROCEDURE.



WARNING

FINGER PINCH AND SHARP EDGES HAZARD

DUE TO TIGHT CLEARANCES OF RACK MOUNTED COMPUTERS AND SHARP EDGES OF CHASSIS COMPONENTS, FINGER AND HAND INJURIES CAN OCCUR.



WEAR HAND PROTECTION GLOVES AND PAY ATTENTION TO HAND AND FINGER LOCATIONS AT ALL TIMES.



NOTICE

TO PREVENT DAMAGE TO COMPONENTS WITHIN THE CONSOLE, OBSERVE THE FOLLOWING ESD PRECAUTIONS: WEAR A STATIC STRAP TO ENSURE THAT ANY ACCUMULATED ELECTROSTATIC CHARGE IS DISCHARGED FROM YOUR BODY TO GROUND. CREATE A COMMON GROUND FOR THE EQUIPMENT YOU ARE WORKING ON BY CONNECTING THE STATIC-FREE MAT, STATIC STRAP AND PERIPHERAL UNITS TO THAT PIECE OF EQUIPMENT.



FOR FURTHER INFORMATION REGARDING ESD PROTECTION, REFER TO THE SAFETY CHAPTER IN THIS PUBLICATION.



NOTICE

FOLLOW ALL REQUIRED SAFETY AND PPE PROCEDURES CUSTOMARY FOR YOUR ORGANIZATION WHEN WORKING ON THIS PRODUCT.



3.5 Required Conditions

Condition	Reference	Effectivity
This replacement applies only to LightSpeed VCT CT Systems with software version of 11HW12.5 (Quatra Dose Check) or 12HW14.6 (Epsilon). If system software version is different from them, upgrade the software at first.	-	-
Existing option software keys cannot be restored after the replacement. Generate new option key by eLicense web according to section 1.5.3 on page 70	-	-
Only trained service personnel should service the GE CT Scanner.	-	-

This page intentionally left blank.

Chapter 2

Replacement Procedure

Section 1.0 Procedure

- Note: Ensure that you have the following Class C & Class M CD with you before you start the upgrade.
- Class C (Advanced Service Software) for LightSpeed VCT 7.2 (13HW31.8): P/N 5456803-3
 - Class M (Restricted Service Software) for LightSpeed VCT 7.2 (13HW31.8): P/N 5458373-3

1.1 Inventory Replacement Kits

Before starting replacement and console disassembly, check contents of replacement Kit to make certain all supplied parts are present and have not been damaged in shipping. (Refer to Table below)

Item Type	Identifier	Description	Qty.
FRU Parts	6450000-20	Z820 Computer	1
	5368687	Global Scan Control Box- GSCB	1
	5139480-4	Console network switch (CNS)	1
	5266222-2	GSCB Power Box	1
	5335963-3	FDIP PWA	1
	5454484-2	NIO VCT 64 Port Label	1
Cables	5433897-3	GSCB Power Cable	1
	5433897	HP Host Computer Power Cable	1
	5366517	Ethernet Switch Hub Power Cable	1
	5433898	Keyboard USB cable	1
	5433898-2	Mouse USB cable	1
	5433898-3	Trackball USB cable	1
	5433898-4	Barcode Reader USB cable	1
	5433899-4	DVD-RW USB cable	1
	5433898-6	Service Key USB cable	1
	5433899-3	EXT HDD USB cable	1
	5366259	DVI-I to VGA Monitor cable	1
	5408703	DP to DVI Monitor cable	1
	5433901	Bulkhead J29 to ETH2 Ethernet Cable	1
	5433901-2	Bulkhead J30 to ETH3 Ethernet Cable	1
	5433901-3	Bulkhead J31 to ETH4 Ethernet Cable	1
5433901-5	Service Port to ETH5 Ethernet Cable	1	

Table 2-1 GOC6.6 upgrade kit with Z820 for VCT GOC6 and GOC6.5

Item Type	Identifier	Description	Qty.
	5433901-9	ETH1 to TGP Bulkhead J27 Ethernet Cable	1
	5433901-10	ETH2 to HSP Bulkhead J26 Ethernet Cable	1
	5433901-11	Host to ETH 1 Ethernet cable	1
	5366515-2	Fiber Optic Cable from Host Computer to J25 Bulkhead	1
	5481103	Right angle USB adapter	1
Mech HW	5433850	Computer top front bracket	1
	5433851	Computer bottom front bracket	1
	5433852	top brkt with GOC6.6 chassis	2
	5433853	Computer top rear bracket	1
	5433848	Host computer side bracket	1
	5435252	Z800 computer base on GOC6.6 chassis	1
	5454399	Z800 service platform. GOC6.6	1
	5433852-2	Top brackets – rear and front for GOC6.6 chassis	2
	5768818	Top bracket	1
	5768817	Bottom bracket	1
	5339921-2	Cable trough	2
	46-136246P14	2-WIDE WHT, ADH BACK, VELCRO LOOP	0.2'
	46-136246P21	2-WIDE WHITE VELCRO HOOKS	0.2'
	5394300-3	RoHS tyraps	30
	3002-M6C-33	Prevailing Torque Nut, M6-0.7	13
	3202-M4C-31	Prevailing Torque Nut, M4-0.7	4
	1000-M4C010-04	M4 x 10mm screw	15
	2203-M4-07	M4 lock washer	15
	2000-M4-02	M4 flat washer	19
	1000-M6C020-04	M6 x 10mm screw	8
	2203-M6-07	M6 lock washer	8
	2000-M6-02	M6 flat washer	8
	2262896-2	U0465AA flange socket	4
	5534404	Blocking plate	1
	1009-M3P5C6P5-29	3.6 x 6.5 tapping screw	2
TechPub and Software	5335821-21	VCT FREEdom Tech Pub Collector	1
	5961139-139	VCT FREEdom Software Collector with Rating Plate WSO	1
	5703007-102	VCT FREEdom Service Pack 1.0	1
	2360580-2	Volume Viewer	1
	5400104	Dynamic Z-axis Tracking Option	1
	5449727	Advanced Applications on OC Demo Images Package	1
Others	5771244	GSCB films kit without E-reset	1
	46-302200P3	Label	1
	5769269-1EN	Installation Manual	1

Table 2-1 GOC6.6 upgrade kit with Z820 for VCT GOC6 and GOC6.5

1.2 Save Current System Configuration Information

1.2.1 Identify Detector/DAS type

- Note: There are three types of VCT Detectors/DAS released, VDAS (Sherlock Detector), HDAS (HALO Detector), and HDAS_Saturn_64 (Saturn Detector). They are identified on the Common Service Desktop Home page "Data Acquisition System" type listed as VDAS, HDAS, or HDAS_SATURN.
- 1.) Before un-installing existing Console, identify which Detector/DAS type is present with system.
 - 2.) Look at the Common Service Desktop home page for the DAS type entry. If the DAS type = VDAS64 or HDAS64, then you have a Sherlock or HALO detector and system software will need to be reloaded after installing the new Console. The GOC6.6 VCT console comes loaded for the DAS type = HDAS_SATURN_64, which is the Saturn detector.
 - 3.) Record the DAS type in the System Information Sheet attached in [Chapter 3 - Appendix](#) of this Manual.

1.2.2 Record the Installed Software Options and Other System Information

- 1.) Record the installed software options and other system information such as ConnectPro and Exam Split in the System Information Sheet attached in [Chapter 3 - Appendix](#) of this manual.

1.2.3 Save System State on Existing Console

- 1.) Save a new System State in accordance with Software - GOC6.6 VCT > Software Installation > System State Save & Restore in the LightSpeed VCT Service manual supplied with this replacement.
- 2.) Verify Save System State was successfully completed by checking the system state log file: /usr/g/service/log/sysstate.log.

```
(ctuser@msec7x1)[9] pwd
/usr/g/service/log
(ctuser@msec7x1)[10] ls sysstate.log.*
sysstate.log.20170303_142956 sysstate.log.20170309_135251
sysstate.log.20170309_133043 sysstate.log.20170309_145910
sysstate.log.20170309_135138 sysstate.log.20170329_162447
sysstate.log.20170309_135242
(ctuser@msec7x1)[11] more sysstate.log.20170303_142956

=====
Operation started : Fri Mar 03 14:29:56 2017
=====

-----
Save/Restore System State : Started
PET Base Option Not Enabled ---> Enable this scanner as CT-only scanner
All CT categories are ON
NOAPP mode : No set up for interprocess communication.
Initializing USB ...
/USB already mounted
USB initialization completed with Success
Operation Restore started: 2017-03-03 14:29:57

Protocol Scan Files : START
```

Figure 2-1 System State Log

1.3 Uninstall Existing Hardware

1.3.1 Image and Scan Database Resets on Host Computer

To maintain data and patient privacy, it is necessary to erase all Personal Healthcare Information (PHI) from the system before it is uninstalled. Perform the following as the last step before shutting down the existing console.

- 1.) Reset (Erase) the Image Database on the system. Follow Host Computer Image Database Reset procedure found in the Software Chapter of the LightSpeed 7.X Service manual.
- 2.) Reset (Erase) the Scan Database on the system. Follow instructions found in the Align/Setup/Cal Chapter of the LightSpeed 7.X Service manual. Align/Setup/Cal > Console (GOCx) > System Configuration procedure.

On the System Tab of the System Configuration Utility, perform the following:

- * Remove the customer name, replace with [GEMS]
- * Remove the Service ID, replace with [GEMS]
- * Under Regenerate Database, select [YES]

On the Network Tab of the System Configuration Utility, perform the following:

- * Remove the site specific network information (ex: Names), replace with [GEMS]
- * Remove the site specific network information (ex: IP Addresses) in Network Settings and Advance Options.

Select [ACCEPT] button.

Note: The Reset (Erase) of the Image and Scan Databases will remove PHI information from the system but may not meet local regulations for data removal/deletion. If local regulations require specific data removal/deletion criteria, follow local procedures for PHI removal from system.

After completion of System Configuration (reconfig), reboot the system:

- * Select [OK] on the Autostart disabled popup message
- * Open a terminal window and type : **st**
- * When the system is booted into Applications mode, select [IMAGE WORKS]
- * Confirm that patient image data is not present.

1.3.2 Shutdown and Disconnect Power on Existing Operator Console

- 1.) Select one of the following methods to power off the Operator Console:
 - a.) If Applications are running, click on [Shut Down] and select [Shutdown].
 - b.) If Applications are down, open a Unix Shell using the Toolchest. Type:
`{ctuser@hostname} halt[ENTER]`

The Operator Console Monitor will display a System Halted message when it is acceptable to power off the Operator Console.

- 2.) Power OFF the Operator Console at the front panel switch.
- 3.) Remove the Console's incoming Twist-N-Lock Power Cable from rear of the Console.
- 4.) Perform Lockout / Tagout as described in Safety - Equipment Service - Lockout / Tagout / PPE in the LightSpeed VCT Service Manual.

1.3.3 Remove the Console Covers

- 1.) Move the console away from the wall to allow clear access around the console.
- 2.) Remove the console front and rear covers and set aside.

1.3.4 Disconnect Accessories/Options on Existing Operator Console

- 1.) Disconnect the Video Cables from the Host Computer, and Power Cables from the Console Outlet Box inside the Console. These cables will be returned with the Console.
- 2.) Disconnect and remove the Remote Monitor Video Amp/Splitter (if so equipped) from the Console. Make sure that all cable connections are labeled. Disconnect the Video Amp/Splitter power cable from the Console Outlet Box inside the Console. Keep these cables that were connected to the Video Amp/Splitter, as they will be needed for new VCT Console.

1.3.5 Disconnect Peripherals on Existing Operator Console

- 1.) Disconnect the Peripheral Tower from console.
- 2.) Disconnect and remove the SCIM Assembly from console.
- 3.) Disconnect the SCIM Cable from the under side of the SCIM Assembly.

1.3.6 Disconnect Rear Bulkhead Cables on the existing Operator Console

- 1.) Disconnect all cables connected to the Rear Bulkhead Panel on the existing Console. These include the Network, Fiber Optic Link, and Gantry DB25 Cables.
- 2.) Make sure that all cables are clearly labeled as to their function and source.

1.3.7 Remove Console Hardware

Note: The following hardware will be reused;

- Peripheral Media Tower
- Keyboard
- Mouse
- Monitor and Monitor Power Cable
- Video Splitter for In-Room Monitor (if present)

1.) Remove the following;

- The metal blanking plate, DIG, VERB, HSDA & CNS from the console.
- Z400 computer & the bracket on which the computer is mounted.
- All network & power cables inside the console, disconnect the network cables connected to rear bulkhead ports, J26, J27, J28, J29, J30 and J31
- Fiber patch cable connected between VDIP and J25
- ICOM box and all connected cables from the console.
- Remove the cable connected to J20.

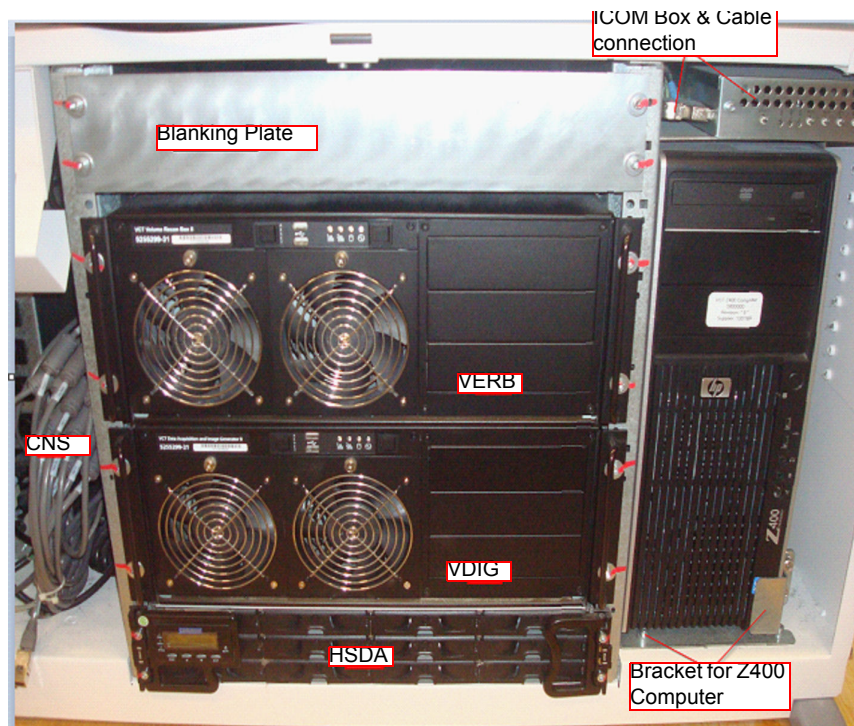


Figure 2-2 Remove Plates and Cables

- Note the location of the rear cable trough. Remove the cable trough, keep the old mounting hardware.



Figure 2-3 Remove Plates and Cables

- 2.) Remove side rails after removing DIG/VerB/HSDA. Keep the spring washers. This will be reused later.



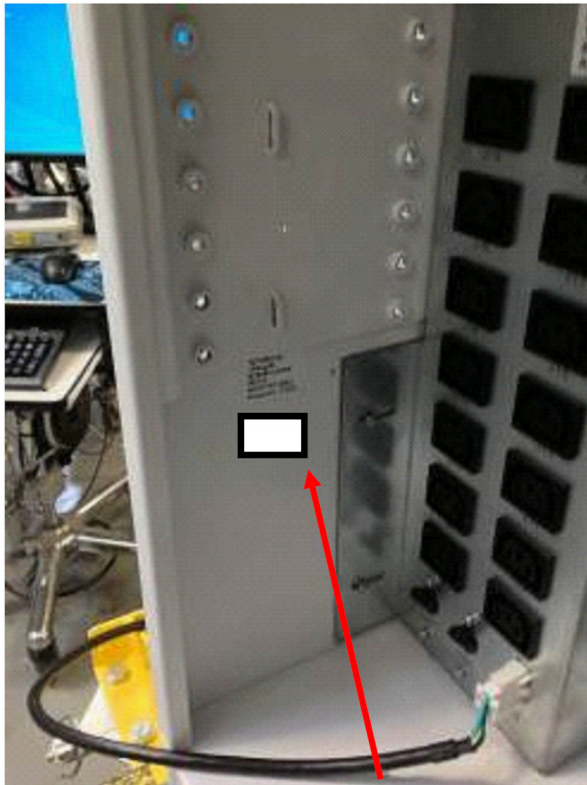
① Spring Washer

Figure 2-4 Spring Washer

- 3.) Return all uninstalled Hardware back via regular GPRS return process. Apply Red defective tag on the box.

1.4 Install New Hardware

- 1.) Apply the new Console replacement label in this location.



Apply new label here

Figure 2-5 New Label Location

- 2.) Check if the console chassis has M4 studs already built-in.
 - If the chassis has these studs built-in, go to step 4.)
 - If the chassis does not have studs built-in, proceed to the next step 3.)



Figure 2-6 M4 Studs already built-in (example)

- 3.) If the chassis does not have studs built-in, perform this step 3.)
 - a.) Discard 5433852 (Top BRKT with GOC6.6 chassis).
 - b.) Install bottom support bracket.

No.	Part No./Identifier	Descriptions	Qty.
1	5768817	Bottom bracket	1

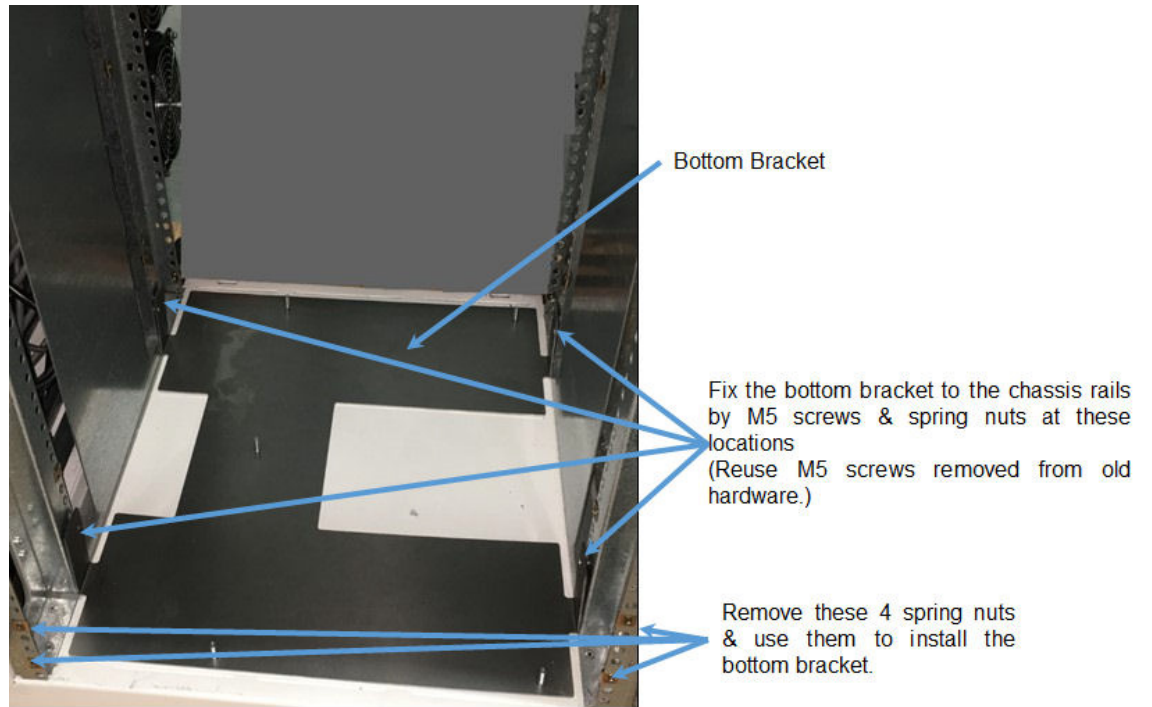


Figure 2-7 Bottom Support Bracket

c.) Install top support bracket.

No.	Part No./Identifier	Descriptions	Qty.
1	5768818	Top bracket	1

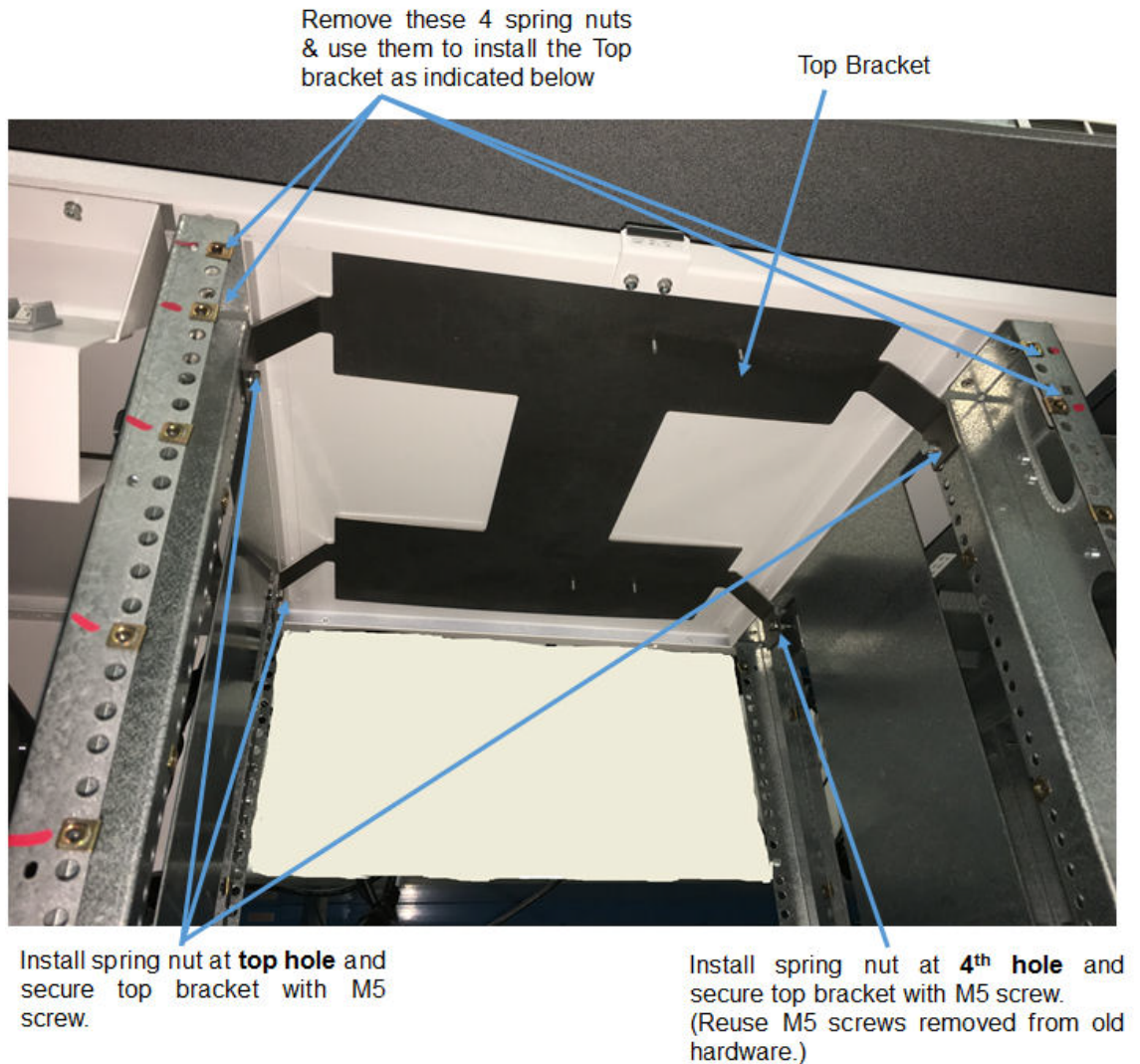


Figure 2-8 Top Support Bracket

- d.) Continue to install console HW brackets as shown below on top of the 2 brackets installed already.
- e.) Install computer base bracket and Host computer side bracket with L bracket protective backing facing right as shown (part of the GOC6.6 bracket kit) into the chassis.
- f.) Torque bracket to 7.9Nm. Leave the Host computer side bracket loose for now. Will tighten down when Host Computer is installed.

No.	Part No./Identifier	Descriptions	Qty.
1	5435252	Computer base bracket	1
2	3002-M6C-33	Hexagon Prevailing Torque Nut, M6-0.7	5
3	5433848	Host computer side bracket	1
4	1000-M4C010-04	M4 x 10mm screw	3
5	2203-M4-07	M4 lock washer	3
6	2000-M4-02	M4 flat washer	3

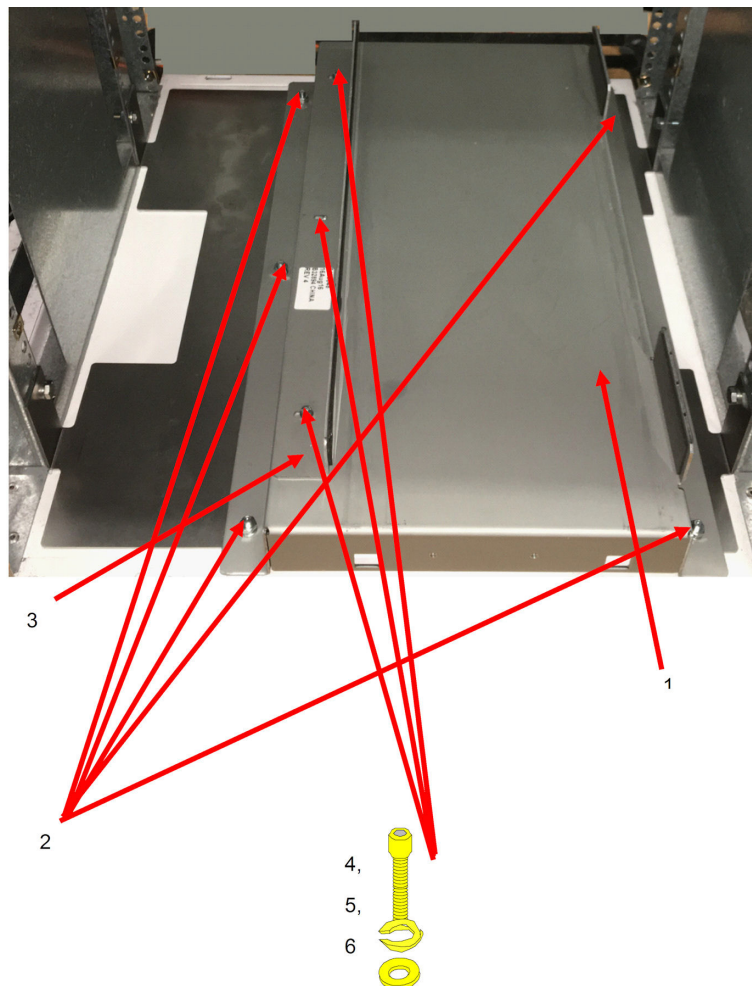


Figure 2-9 Install Computer Base Bracket and Host computer side bracket

- g.) Install upper front & rear brackets.
- h.) Torque bracket nuts to 2.3 Nm.

No.	Part No./Identifier	Descriptions	Qty.
1	5433852-2	Top brackets – rear and front for GOC6.6 chassis	2
2	3202-M4C-31	Hexagon Prevailing Torque Nut, M4-0.7	4

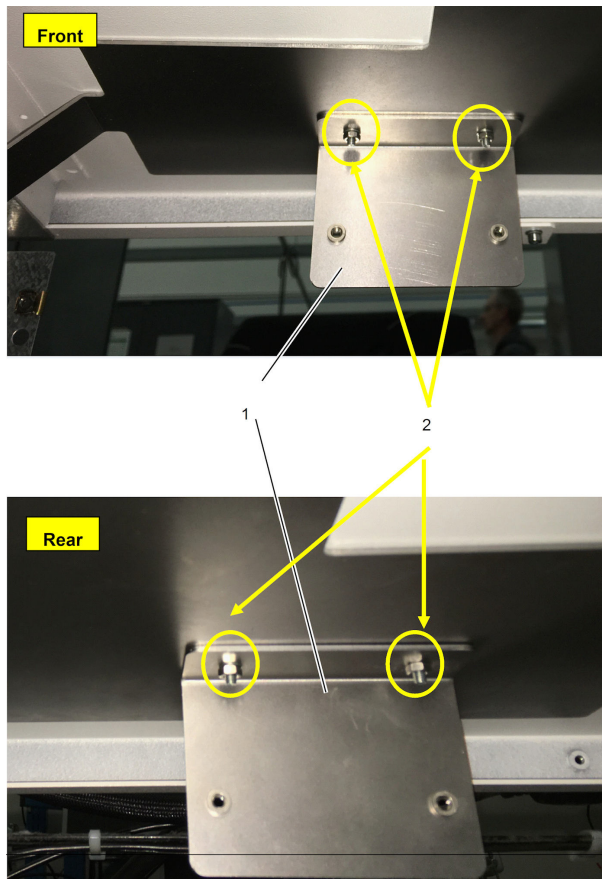


Figure 2-10 Install Upper Front and Rear Brackets

- i.) Go to Step 5.)

- 4.) If the chassis has these studs built-in, perform this step 4.)
- a.) Discard the following brackets
 - * 5768817 Bottom bracket
 - * 5768818 Top bracket
 - * 5433852-2 Top brackets – rear and front for GOC6.6 chassis
 - b.) Install computer base bracket and Host computer side bracket with L bracket protective backing facing right as shown into the chassis.
 - c.) Torque bracket to 7.9Nm. Leave the Host computer side bracket loose for now. Will tighten down when Host Computer is installed.

No.	Part No./Identifier	Descriptions	Qty.
1	5435252	Computer base bracket	1
2	2262896-2	UU0465AA Flange socket	5
3	5433848	Host computer side bracket	1
4	1000-M4C010-04	M4 x 10mm screw	3
5	2203-M4-07	M4 lock washer	3
6	2000-M4-02	M4 flat washer	3

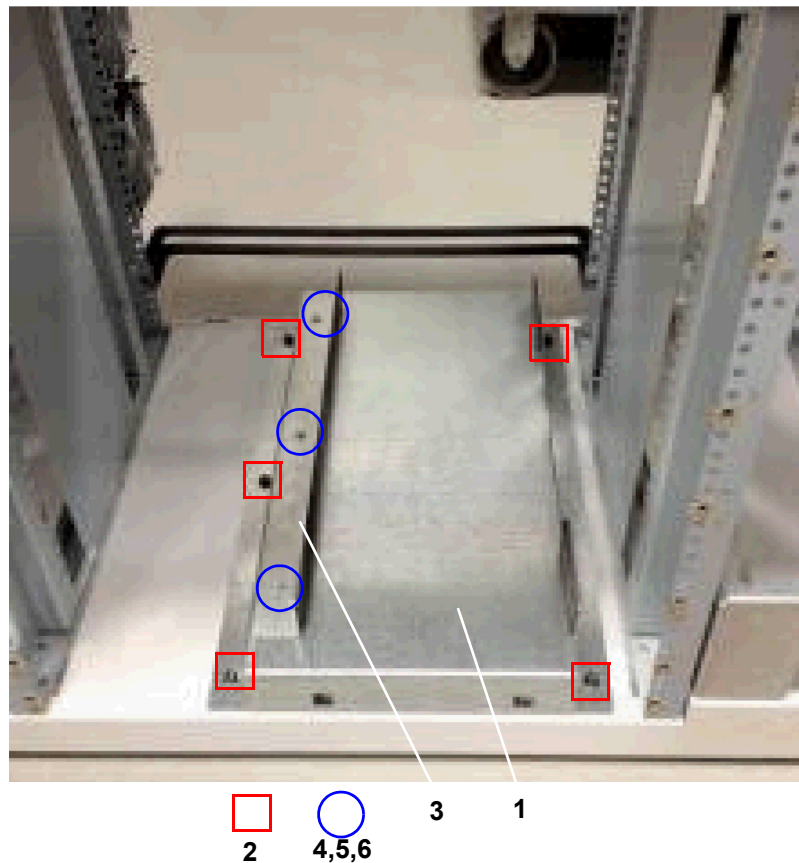


Figure 2-11 Install Computer Base Bracket and Host computer side bracket

- d.) Install upper front & rear brackets.
- e.) Torque bracket nuts to 2.3 Nm.

No.	Part No./Identifier	Descriptions	Qty.
1	5433852	Top brackets – rear and front for GOC6.6 chassis	2
2	3202-M4C-31	Hexagon Prevailing Torque Nut, M4-0.7	4

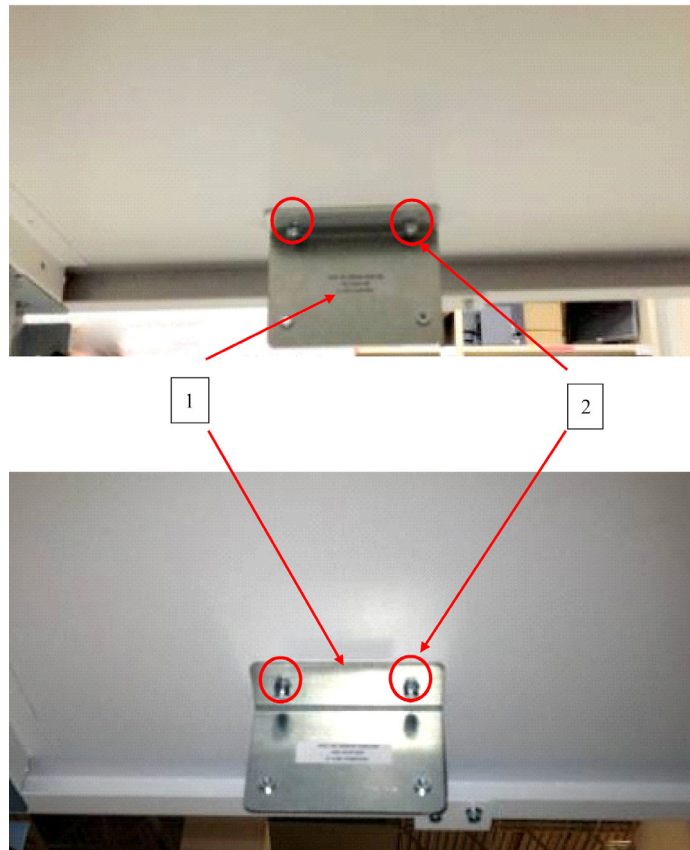


Figure 2-12 Install Upper Front and Rear Brackets

- f.) Go to Step 5.)

- 5.) Install Computer rear bracket to the rear upper bracket installed in step 3.) or 4.). (part of the GOC6.6 bracket kit).
- 6.) Hand tighten screws on bracket. Will torque later in process.

No.	Part No./Identifier	Descriptions	Qty.
1	5433853	Computer top rear bracket - for GOC6.6	1
2	1000-M4C010-04	M4 x 10mm screw	2
3	2203-M4-07	M4 lock washer	2
4	2000-M4-02	M4 flat washer	2

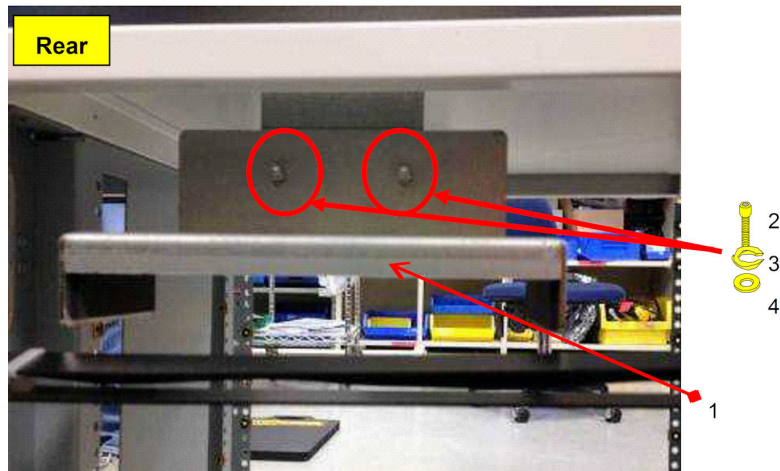


Figure 2-13 Install Computer top rear bracket

- 7.) Install FDIP card to host computer.
 - a.) Open the host computer side access panel.
 - b.) Remove the Expansion Card Support.



Figure 2-14 Z820 Airflow Guide and Expansion Card Support

- c.) Install the FDIP card.

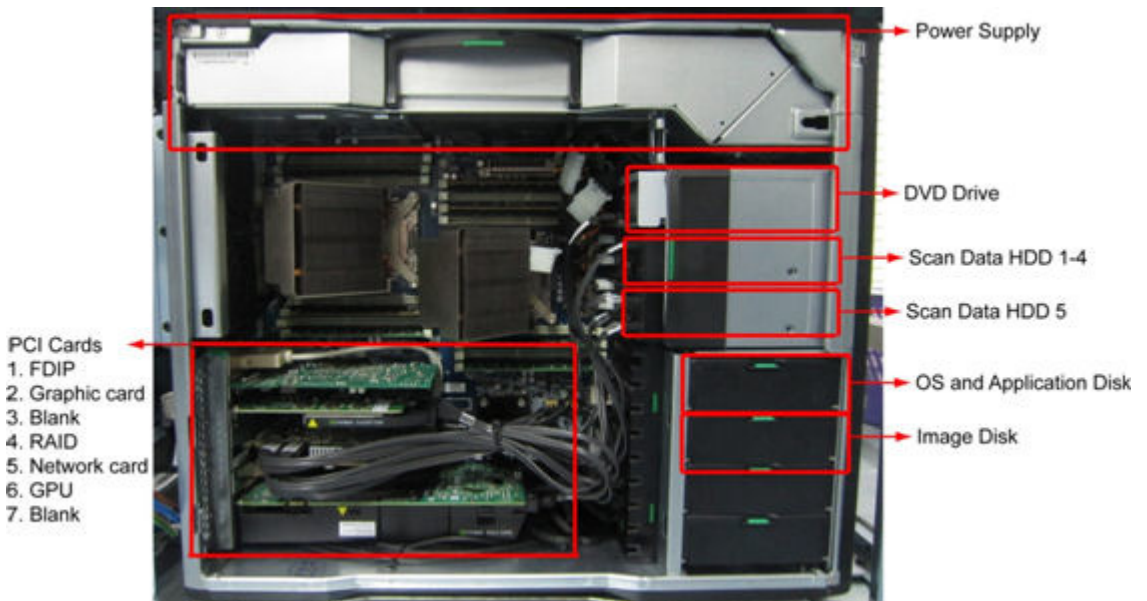


Figure 2-15 Z820 Computer Location

- d.) Install the Expansion Card Support and close the Side3 Access Panel.

No.	Part No./Identifier	Descriptions	Qty.
1	5335963-3	FDIP PWA	1

- 8.) Install Computer.
 - a.) Place the computer on a solid surface.
 - b.) Remove top black cover from top of HP computer by tapping it lightly. Using a soft mallet may help.
 - c.) Remove any plastic shipping film.

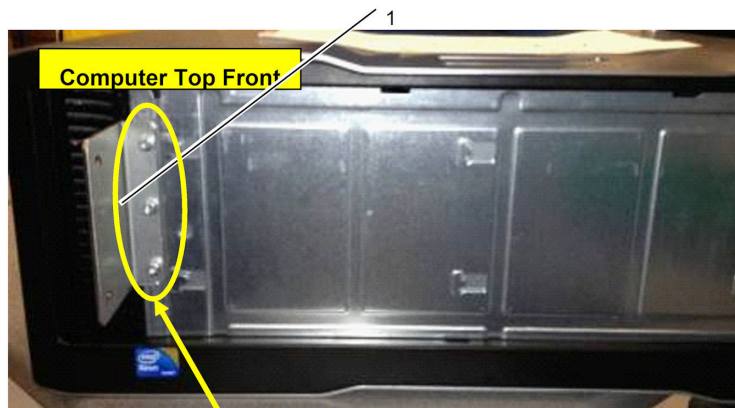


Figure 2-16 Install Computer

9.) Install Computer top front and bottom front brackets (part of the GOC6.6 bracket kit).

Note: Torque screws on brackets to 2.3 Nm.

No.	Part No./Identifier	Descriptions	Qty.
1	5433850	Computer top front bracket – for GOC6.6	1
2	1000-M4C010-04	M4 x 10mm screw	6
3	2203-M4-07	M4 lock washer	6
4	2000-M4-02	M4 flat washer	6
5	5433851	Computer bottom front bracket – for GOC6.6	1



Top and bottom views shown for assembly clarity, brackets are installed on vertical computer inside chassis.

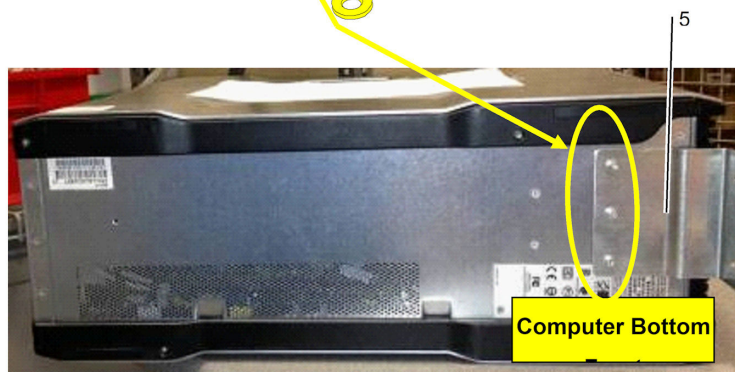


Figure 2-17 Install Computer top front and bottom front brackets - Part II

- b.) Install the service platform with tabs of bracket facing to the back side of Console chassis.
Torque flange socket screws on service platform bracket to 7.9Nm.

Note:

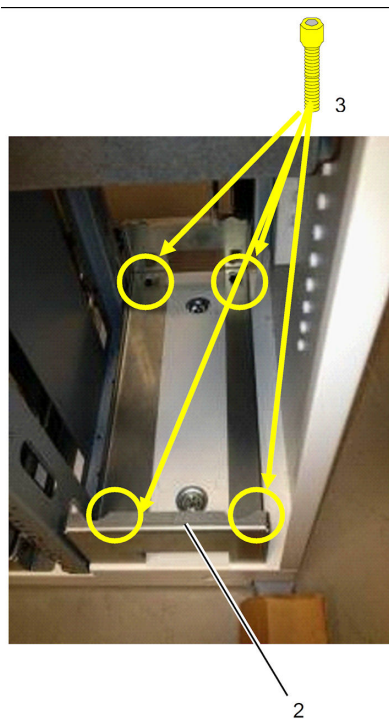
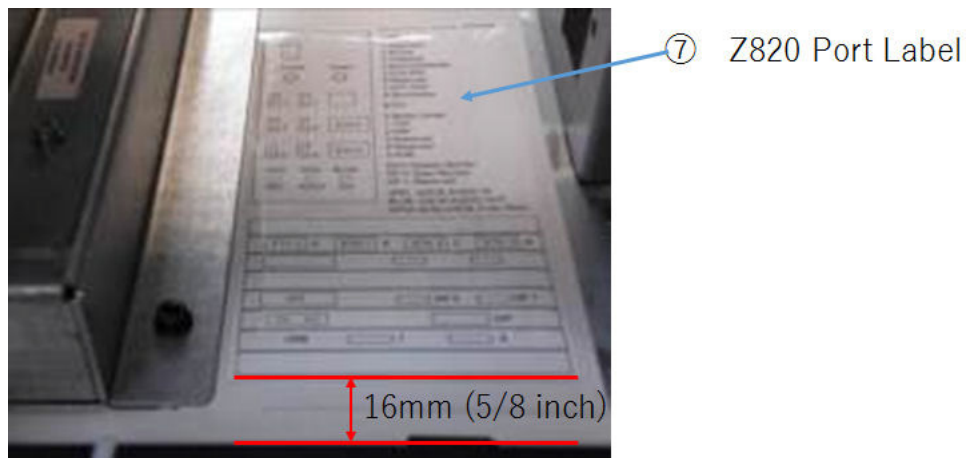


Figure 2-19 Install Service Platform

- c.) Install Z820 Port Label on the right side of the host computer 16 mm (5/8 inch) away from rear edge chassis (on the floor of chassis or on bottom bracket) looking from rear of console.



Port label on right side of host as seen from rear of console

Figure 2-20 Install Z820 Port Label

11.) Install GSCB Power Box.

No.	Part No./Identifier	Descriptions	Qty.
1	5266222-2	GSCB Power Box	1
2	5339921-2 Rev 3	Cable trough	2

a.) Install GSCB Console Power Box by sliding the unit in from the rear of the console and engage the tabs into the front of the console bracket. Secure power box with by hand tightening thumb screw.

Note: Torque thumb screw on bracket to Hand Tight.



Figure 2-21 Install GSCB Console Power Box

b.) Install new cable troughs in the same locations as the old ones using the old mounting hardware.



Figure 2-22 Install New Cable Trough

12.) Install Power Cables- back side.

- a.) Connect power cord cables into designated power outlet connections in the rear of the Console chassis.
- b.) Plug GSCB Power cable p/n 5433897-3 into GSCB unit. Then route the other end through top black bracket and up and over frame to the front side of console – power box connection.
- c.) Plug Host computer power cable p/n 5433897 into HP Host computer. Then route the other end through top black bracket and up and over frame to the front side of console – power box connection.

No.	Part No./Identifier	Descriptions	Qty.
1	5433897-3	GSCB Power Cable	1
2	5433897	HP Host Computer Power Cable	1

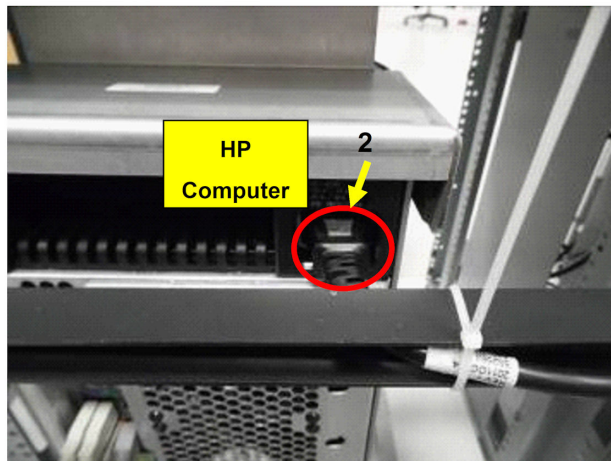
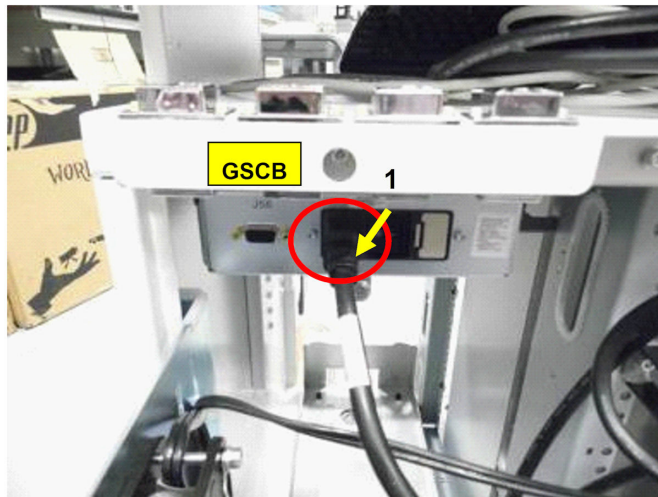


Figure 2-23 Power Cables- back side

13.) Install Power Cable to Front Side - Ethernet Switch.

No.	Part No./Identifier	Descriptions	Qty.
1	5139480-4	Console network switch (CNS)	1
4	5366517	Ethernet Switch Hub Power Cable (from Hub to J8 on AC power outlet box)	1

- a.) Remove front panel switch and let hang.
- b.) Connect the Ethernet Switch Hub power plug P/N 5366517 to the Ethernet switch (front side of console).
- c.) Connect all the power plugs from the back side of the console and Ethernet switch to J6, J8 and J9 on the power box (J7 Fans should already be connected).

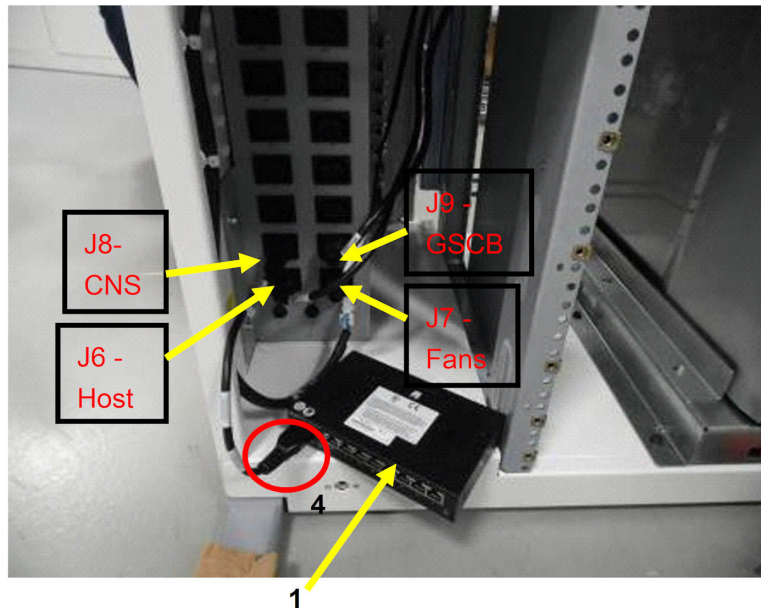


Figure 2-24 Connect Power Plugs

14.) Connect/Route Host USB cables between computer port number and bulk head as shown:

No.	Part No./Identifier	Descriptions	Qty.
1	5433898	Keyboard USB cable	1
2	5433898-2	Mouse USB cable	1
3	5433898-3	Trackball USB cable	1
4	5433898-4	Barcode Reader USB cable	1

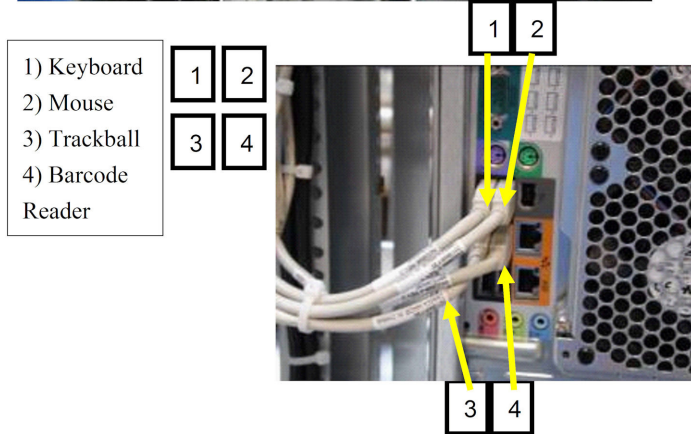
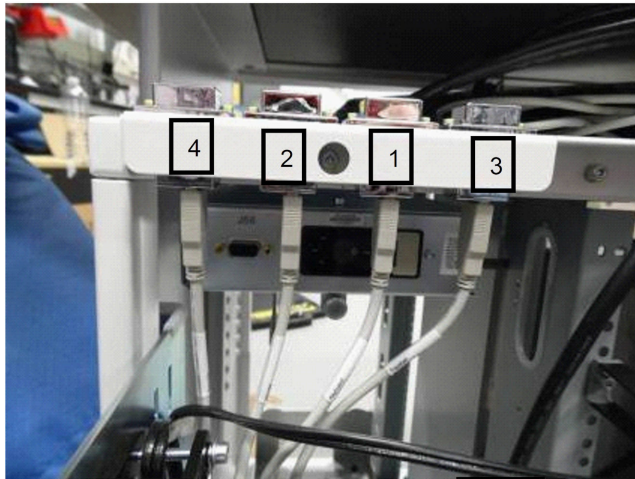


Figure 2-25 Connect USB Cables - External devices

- 15.) Connect/Route USB cables between computer port number and then route to DVD-RW/EXT HDD component plus Service Key connection (Front Panel) as shown:
- a.) Install item # 1 DVD-RW USB cable to USB port 8.
 - b.) Install item # 2, EXT HDD USB cable to USB port 7.
 - c.) Service Key USB cable item #3, attaches to item # 4, right angle USB adapter at front of computer.
 - d.) Install item # 4, right angle USB adapter, to the top front USB port 9 on the computer.

No.	Part No./Identifier	Descriptions	Qty.
1	5433899-4	DVD-RW USB cable	1
2	5433899-3	EXT HDD USB cable	1
3	5433898-6	Service Key USB cable	1
4	5481103	Right angle USB adapter	1

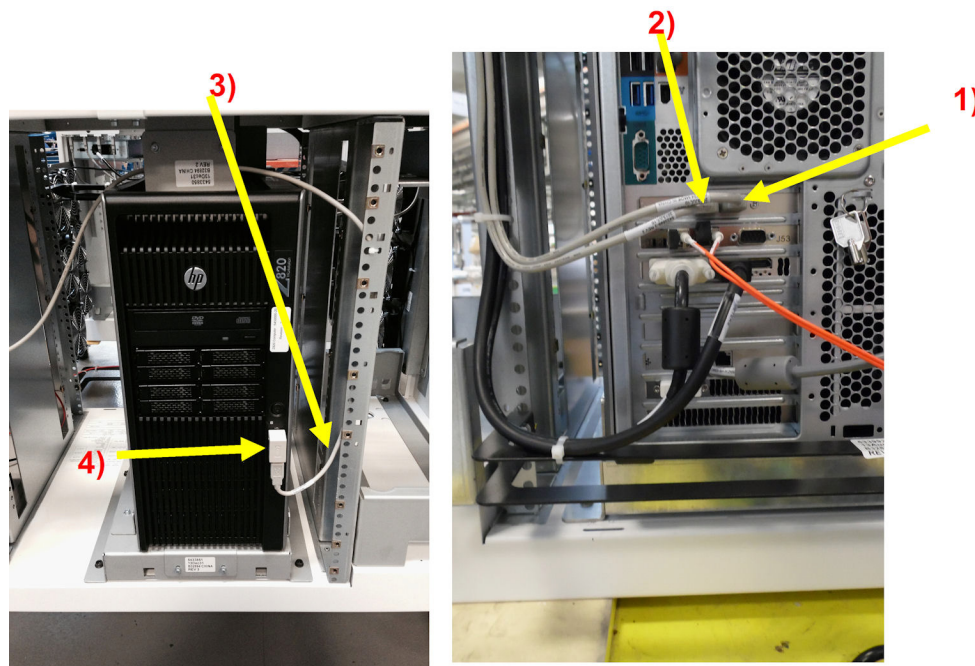


Figure 2-26 Connect USB Cables - DVD RW & EXT HDD & Service Key

16.) Connect the monitor cables and fiber optic cable as below.

- Connect / Route DVI-I to VGA cable to the right-hand Display Monitor.

Note:

If there is an In-Room Monitor present, reuse the Video Splitter present on the old console. Follow wiring instructions as shown in *direction 5323332-1EN Remote Monitor & Monitor-in-Room Boom Options Installation*.

- Connect / Route DP to DVI cable to the left-hand scan prescription monitor.
- Route Fiber Optic cable from DIP card connection on back of Host Computer through black cable though to front of console chassis (which will connect to J25 rear bulkhead connection later).

No.	Part No./Identifier	Descriptions	Qty.
1	5366259	DVI-I to VGA Monitor cable	1
2	5408703	DP to DVI Monitor cable	1
3	5366515-2	Fiber Optic Cable from Host Computer to J25 Bulkhead	1

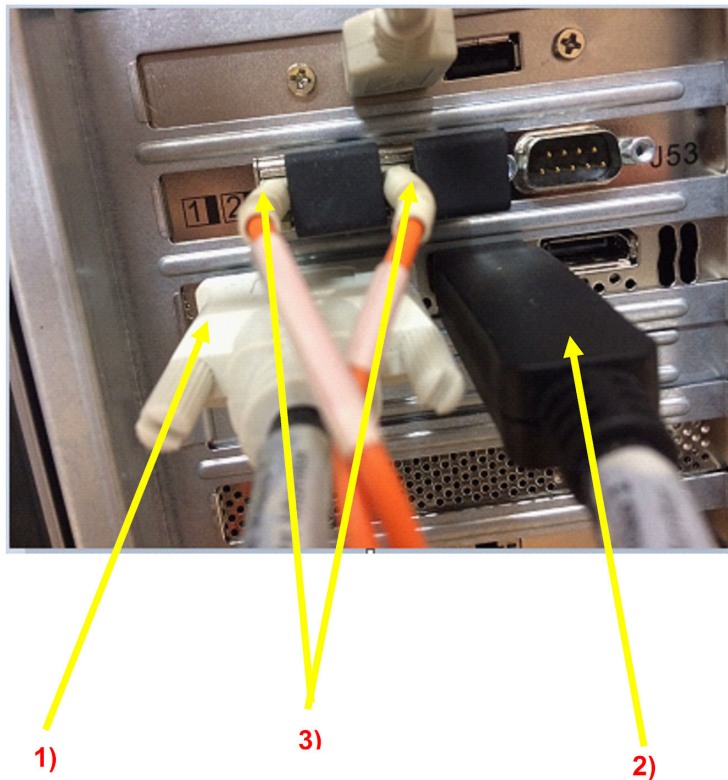


Figure 2-27 Connect DVI Monitor Cables and Fiber Optic Cable

17.) Connect/Route Host Ethernet Cables as shown:

- a.) Host ETH1 to TGP Bulkhead J27 P/N 5433901-9
- b.) Host ETH3 to port 1 on Network Switch P/N 5433901-11
- c.) Host ETH2 to HSP Bulkhead J26 P/N 5433901-10

No.	Part No./Identifier	Descriptions	Qty.
1	5433901-9	ETH1 to TGP Bulkhead J27 Ethernet cable	1
2	5433901-11	ETH3 to Port 1 on Network Switch	1
3	5433901-10	Host ETH2 to HSP Bulkhead J26	1

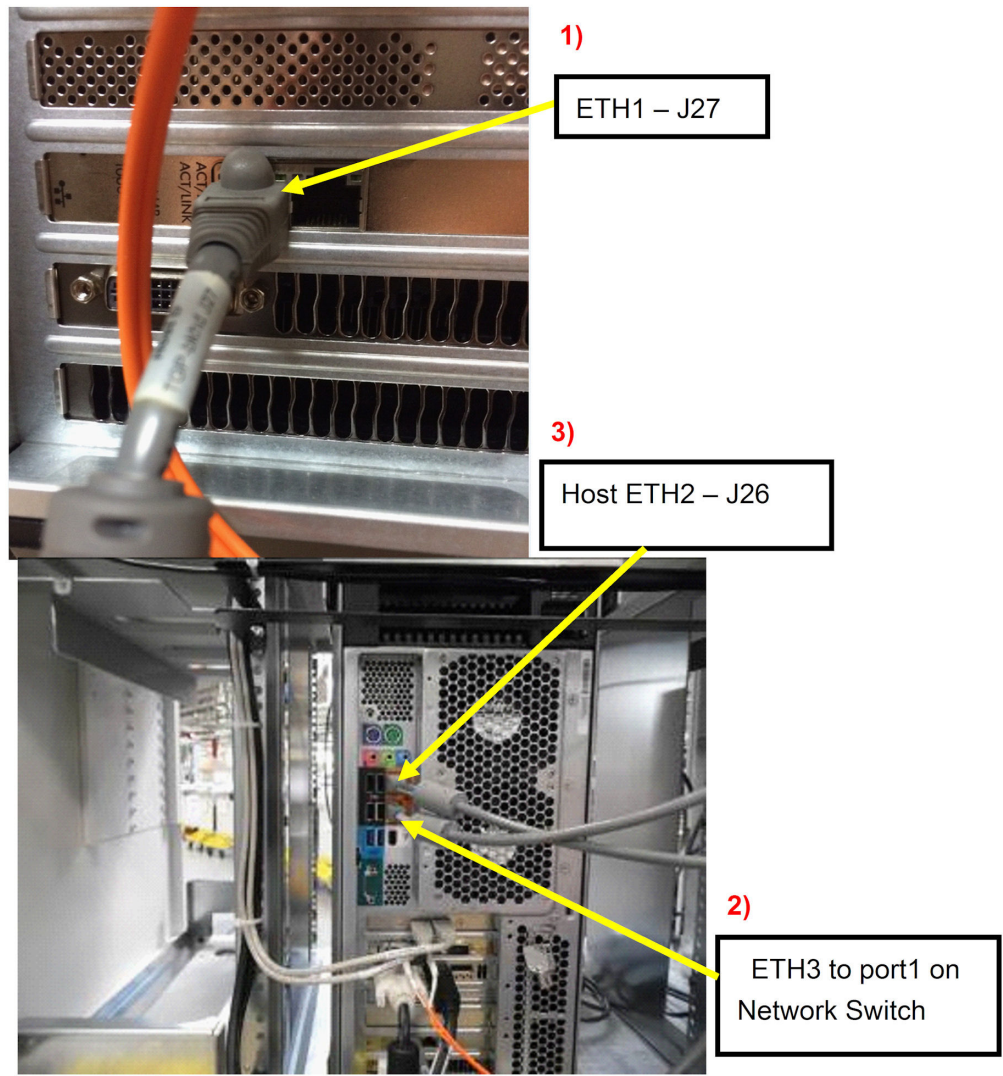


Figure 2-28 Connect Ethernet Cables to Host Computer

18.) Bundle up remaining cables in trough and tyrap.

Note: Please route the remaining part of Ethernet cables and any other cables through cable trough and tyrap cables to bracket as shown.

No.	Part No./Identifier	Descriptions	Qty.
1	5394300-3	RoHS tyraps	25

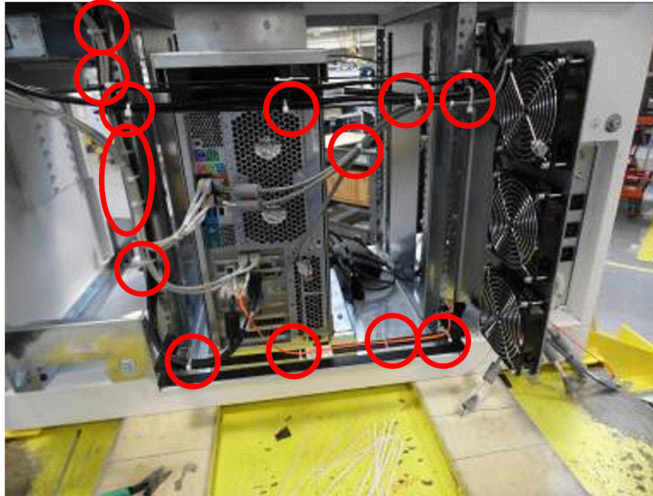


Figure 2-29 Bundle up remaining cables in trough and tyrap

19.) Remove screws and set aside console rear bulkhead panel.



Figure 2-30 Rear Bulkhead Removal

20.) Make connections to the inside of bulkhead plate as pictured:

- a.) Connect Ethernet J26 - J31 cables.
- b.) Connect fiber optic cable to J25.

Note: Route the other end of the Ethernet cables back through rear bulkhead to the front of the Console for connections to Ethernet Switch Hub.

- c.) Re-install rear bulkhead panel with provided hardware after all cables are connected.
 Torque using 2.3Nm.

Note: **No ethernet connection for J28 on VCT Freedom units only.**

No.	Part No./Identifier	Descriptions	Qty.
1	5433901-3	Bulkhead J31 to ETH4 Ethernet Cable	1
2	5433901-2	Bulkhead J30 to ETH3 Ethernet Cable	1
3	5433901	Bulkhead J29 to ETH2 Ethernet Cable	1
4	5433901-9	ETH1 to TGP Bulkhead J27 Ethernet Cable	1
5	5433901-10	ETH2 to HSP Bulkhead J26 Ethernet Cable	1
6	5366515-2	Fiber Optic from Host to J25 Bulkhead	1

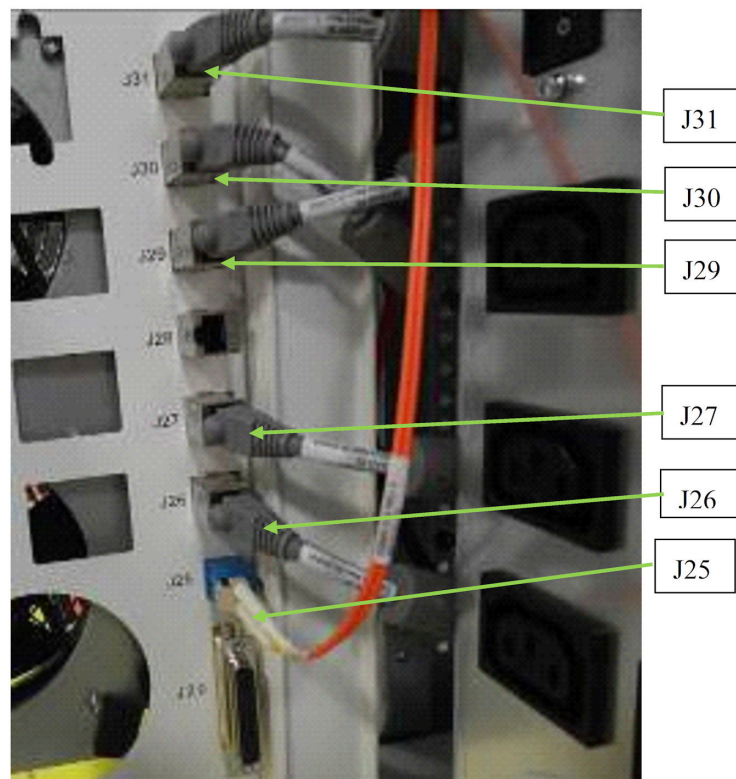


Figure 2-31 Rear Bulkhead Connections

21.) Attach blocking plate and rear bulkhead.

- a.) Remove J20 D-sub connector (and EMC Filter if installed)

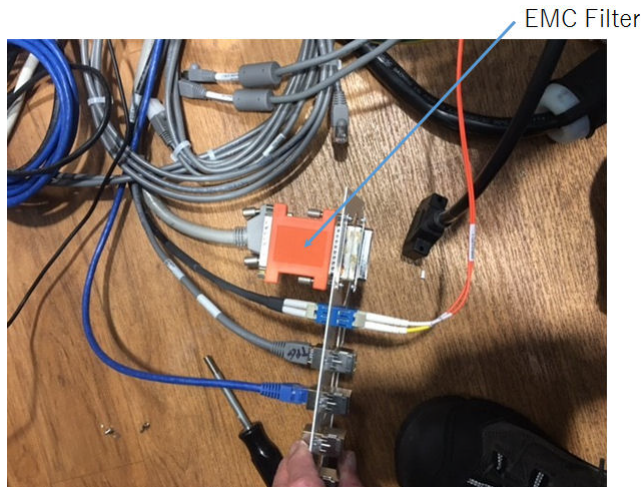


Figure 2-32 EMC Filter

- b.) Install blocking plate item #1 using item #2 screws.
- c.) Re-install rear bulkhead panel with provided hardware after all cables are connected.
 Torque using 2.3Nm.

No.	Part No./Identifier	Descriptions	Qty.
1	5534404	Blocking plate	1
2	1009-M3P5C6P5-29	3.6 x 6.5 tapping screw	2

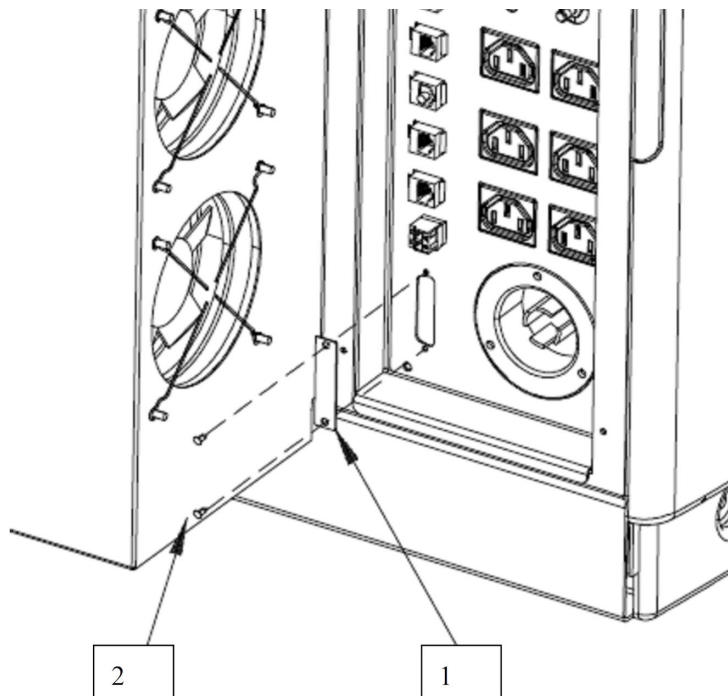


Figure 2-33 Rear Bulkhead Connections

22.) Bundle up remaining Ethernet cables and tyrap inside the front side of console.

Note: Please bundle up remaining Ethernet and other cables, dress cables as shown.

No.	Part No./Identifier	Descriptions	Qty.
1	5394300-3	RoHS tyraps	5

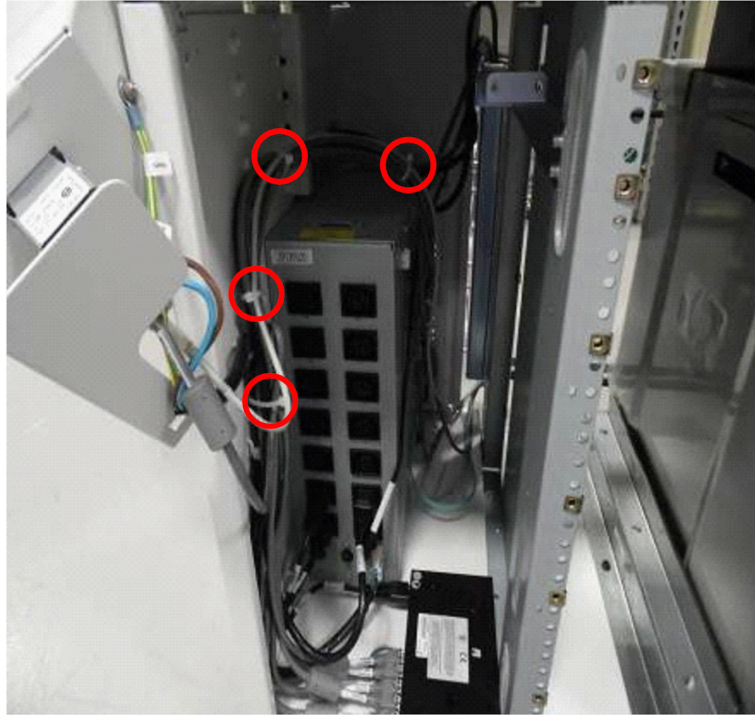


Figure 2-34 Bundle up remaining Ethernet cables

23.) Install the two Velcro strips onto the CNS and the console bottom frame.

Part No./Identifier	Descriptions	Qty.
46-136246P14	2-WIDE, WHT, ADH BACK, VELCRO LOOP x 25 YD	1
46-136246P21	2-WIDE x 25 YD WHITE VELCRO HOOKS	1

24.) Connect the loose ethernet cable ends to their respective slots on the CNS.

Part No./Identifier	Descriptions	Qty.
5433901-5	Service Port to ETH5 Ethernet Cable	5

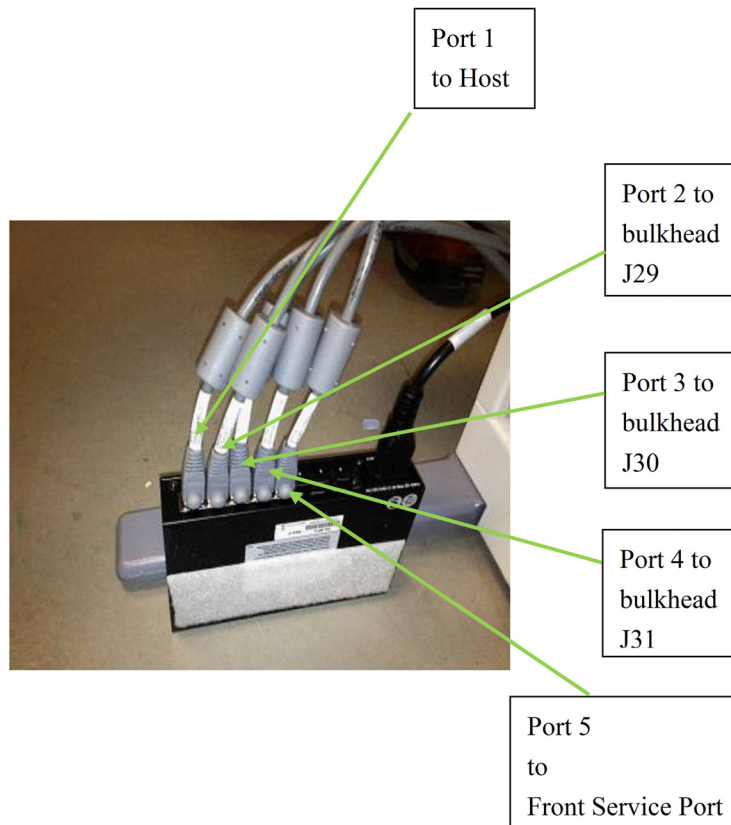


Figure 2-35 Cable up and Secure Console Network Switch (CNS)

- 25.) Slide in console network switch to install next to console power outlet assembly and secure to the inside of the Console bottom frame with velcro provided in the previous step.

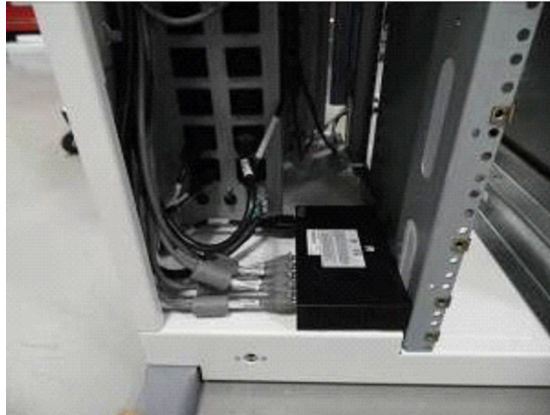


Figure 2-36 Console Network Switch

- 26.) Connect Ethernet cable labeled "Service" from CNS Port 5 to service panel as shown.
27.) Connect "Service Key" end of the USB cable to the left USB connector on the Service Power Panel as shown.

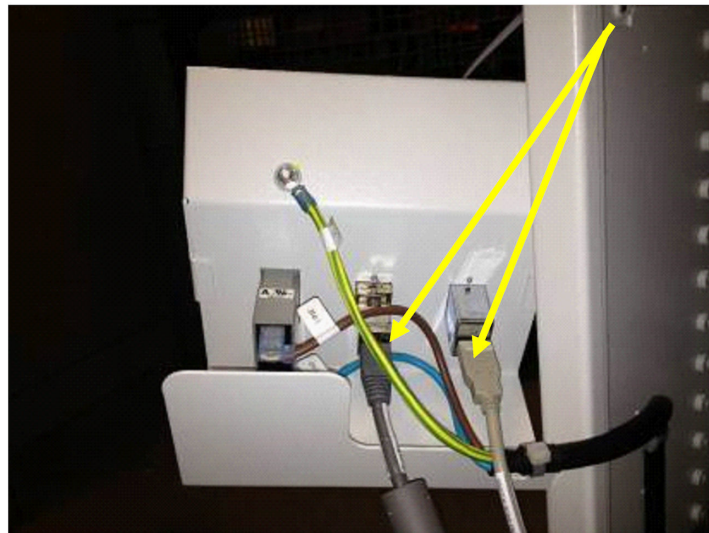


Figure 2-37 USB Cable and Ethernet Cable

- 28.) Install service panel:
Attach with two screws included, sliding as far into cabinet as slotted holes allow. Leave loose until front cover is going to be installed.



Figure 2-38 Service Panel

29.) Connect:

- a.) USB External HDD (slave) to Peripheral Tower External USB connection.
- b.) USB DVD-RW cable (slave) to Peripheral Tower connection.
- c.) Connect power cord to Peripheral Tower.

Note: If the site has Dual-bay Peripheral Media Tower, do not connect the USB cable to DVD-RAM Drive. DVD-RAM drive is not supported by new console.

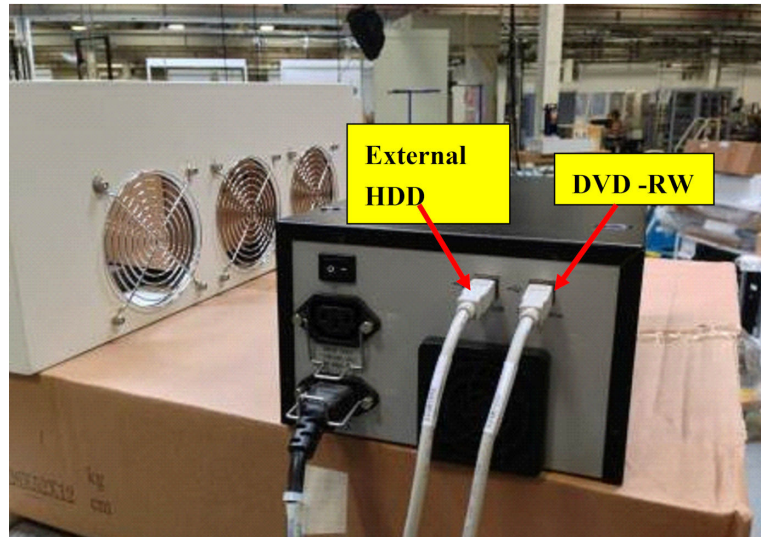


Figure 2-39 Peripheral Tower Connection

30.) Connect GSCB cables as per diagram.

- There are three kinds of overlays in the keyboard collector:
 - with Tilt
 - without tilt
 - without E-Reset

Select the without E-Reset with local language overlay film from the collector and attach it to GSCB.

Verify that none of the buttons get caught and stuck under the overlay.

- Connect the Keyboard to Console by passing the Keyboard USB Cable through the GSCB Assembly and plugging the Keyboard into the Upper Bulkhead Panel.

- Connect the Mouse to the Console by plugging the Mouse into the Upper Bulkhead Panel.

No.	Part No./Identifier	Descriptions	Qty.
1	5402332	GSCB	5

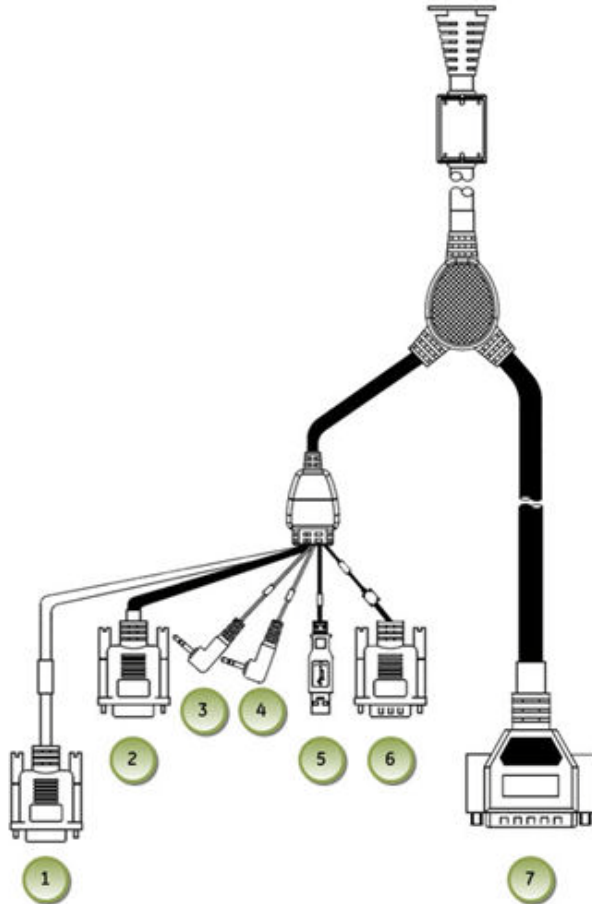


Figure 2-40 GSCB Connection

No.	Item	Descriptions
1	GSCB - Black DB-9 (Male) Connector	Power Box J56
2	GSCB - Gray DB-9 (Female) Connector	Host Computer Serial Port
3	GSCB - Green Audio Connector	Host Computer Audio Out (Green)
4	GSCB - Blue Audio Connector	Host Computer Audio In (Blue)
5	GSCB - USB Connector	NOT Used on GOC6.6 VCT Console
6	GSCB - Black DB-9 (Female) Connector	Host Computer DIP Serial Port
7	GSCB - Black DB-25 (Male) Connector	TGP Gantry Cable



Figure 2-41 J56 Connector on Power Box

31.) Connect the Mouse to the Console by plugging the Mouse into the Upper Bulkhead Panel.
 (Item B in [Figure 2-42](#))

Note: If the mouse has PS2 connector, connect it directly to PS2 (Green) connector on host computer.

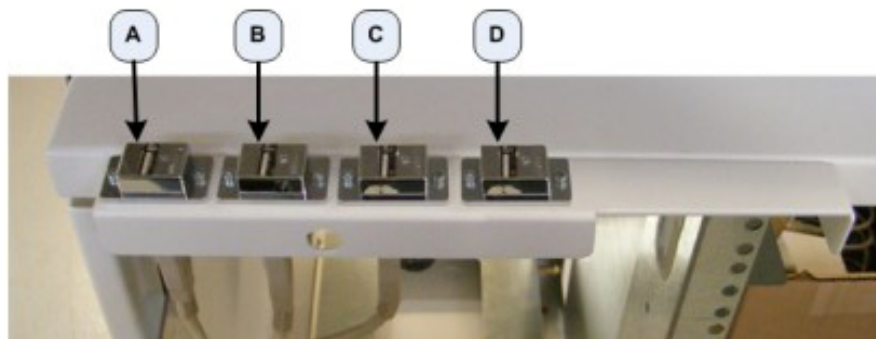


Figure 2-42 Upper Bulkhead Panel Connections

No.	Descriptions
A	Barcode Reader USB Port
B	Mouse USB Port
C	Keyboard USB Port
D	Trackball USB Port

32.) Connect the Keyboard to Console by passing the Keyboard USB Cable through the GSCB Assembly and plugging the Keyboard into the Upper Bulkhead Panel.

Note: If the keyboard has PS2 connector, connect it directly to PS2 (Purple) connector on host computer.



Figure 2-43 Keyboard Connection

33.) Select the **without E-Reset** with local language overlay film from the collector and attach it to GSCB.

34.) Connect the power and signal cables between monitors and console.

Part Number	Description	From	To
Reuse the existing cables	Power cable	Rear Bulkhead Panel (J2 and J3)	Monitor Power connector
5366259	DVI-I to VGA Monitor cable	Host PC Video Card (DP0)	Right Monitor: D-Sub connector
5408703	DP to DVI Monitor cable	Host PC Video Card (DVI)	Left Monitor: DVI-D connector

1.4.1 Connect Accessories

- 1.) Place and connect the Video Amp/Splitter (if so equipped). Connect the Video Amp/Splitter power cable to the Console Outlet Box **J19** inside the Console.

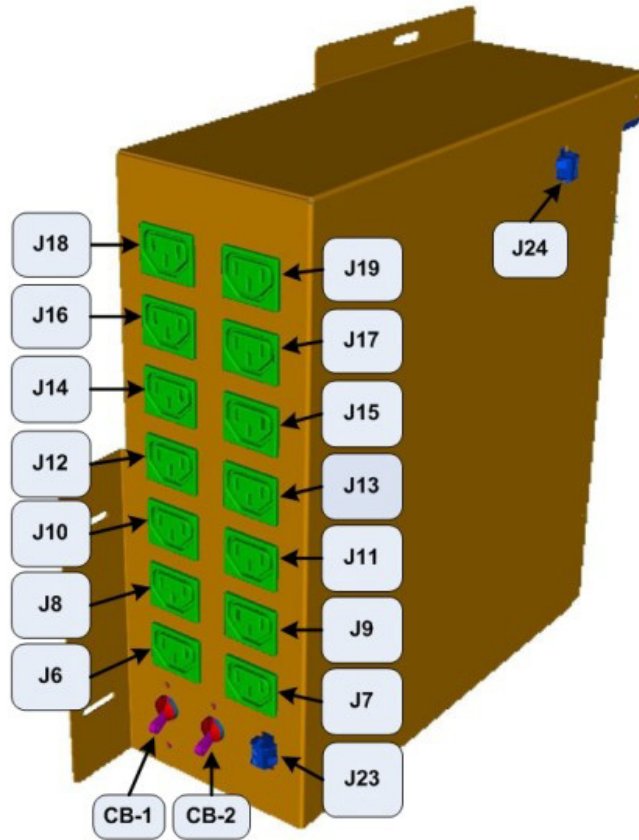


Figure 2-44 Power Distribution Box

- 2.) Connect the Video cable coming from the Host Computer Right Display and Right Display Monitor Video cable to the Video Amp/Splitter.

1.4.2 Connect Rear Bulkhead Cables

- 1.) Reconnect the Gantry and Network Interface Cables removed earlier from the old Operator Console.



NOTICE IT IS IMPORTANT THAT NETWORK INTERFACES BE CORRECTLY PLUGGED INTO THEIR RESPECTIVE PORT LOCATIONS.

1.4.3 Connect Power and Grounds

- 1.) Connect the Scan Room Patient Reference Ground cable to the rear of the Console.
- 2.) Connect the Twist-N-lock Power Cable on the Console.
- 3.) Remove Lockout/Tagout.
Refer to Safety - Equipment Service - Lockout / Tagout - PPE in the LightSpeed VCT Service Manual supplied with the replacement, and perform the Lockout/Tagout process in reverse.
- 4.) Power On the console and confirm that all computer connections are receiving power.

Note: At this time the console may not properly initialize to full system functionality.

1.5 Console Initialization

Read this section in its entirety before executing this part of the procedure! In almost every case a Load From Cold will be required to complete the Console replacement.

1.5.1 LFC Preparations

Make note of the following LFC process clarifications.

- 1.) Refer to DAS type as record in Section 1.2.1 "Identify Dectector/DAS type. LFC is required on any of DAS / Detector configuration system.
- 2.) When loading INFO file during application Software load, the following pop-up will appear. Click OK to proceed.

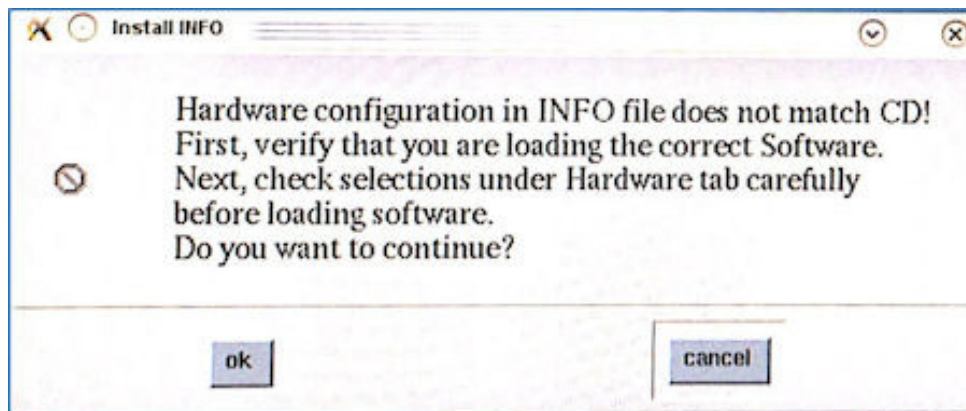


Figure 2-45 Pop-up Window - Install INFO

Select the appropriate hardware configuration in the hardware setting screen.

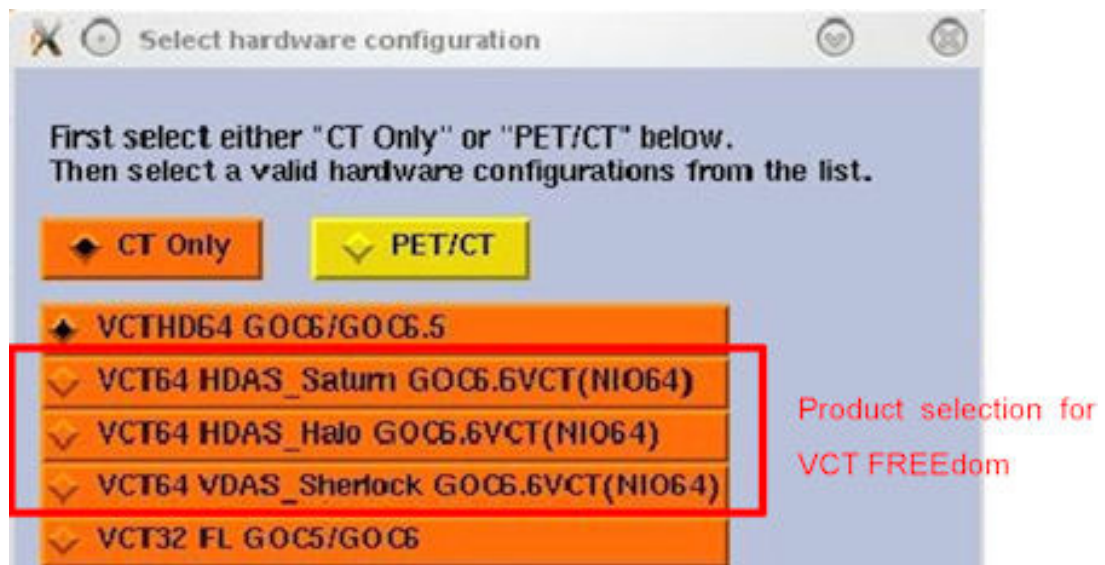


Figure 2-46 Hardware Setting Screen

- 3.) During the LFC process when executing the LFC Menu, skip the Install Options step. Options will be manually installed after LFC.
- 4.) Option install failure message will appear when Restore System State is completed because the existing option keys are not compatible with new host computer. Make sure no other errors are contained in the sysstate.log.

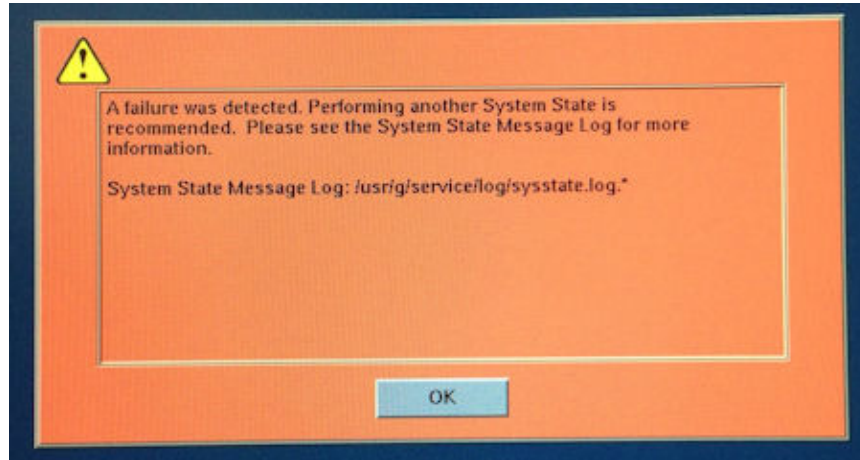


Figure 2-47 Error Message

Note: Ignore the "The file doesn't exist." Message in the log. This is not a failure.

1.5.2 Load from Cold (LFC)

- Note: Ensure that you have the following Class C & Class M CD with you before you start the upgrade.
- Class C (Advanced Service Software) for LightSpeed VCT 7.2 (13HW31.8): P/N 5456803-3
 - Class M (Restricted Service Software) for LightSpeed VCT 7.2 (13HW31.8): P/N 5458373-3
- 1.) Perform Load from Cold.
Refer to Software GOC6.6 VCT > Software Installation Procedures > (13HW31.x) GOC6 Series Load From Cold procedure in the LightSpeed VCT Service manual supplied with the replacement.
 - 2.) After completing the Restore SysState in LFC Menu, quit the LFC Menu.
 - 3.) If remote archive was previously used. Set the Default Storage Commit Host in the Network Configuration menu. This setting is not restored from system state media.

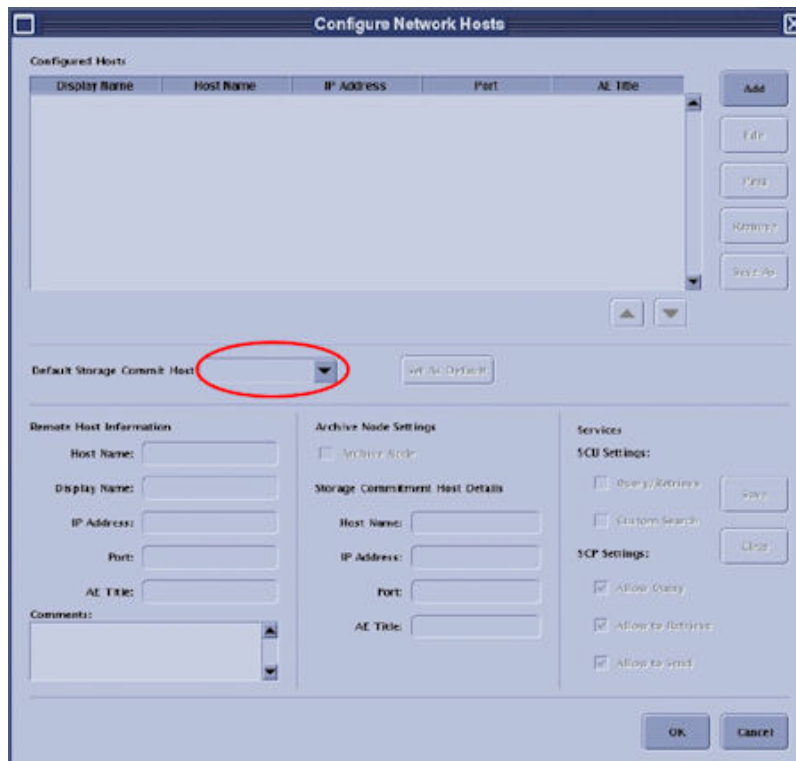


Figure 2-48 Window - Configure Network Hosts

- 4.) If SmartStep and/or SmartView option will be installed on this system, perform the following procedure to prevent multiple "No Printer Installed" pop-up messages.
 - a.) If any DICOM camera or Postscript printer will be connected to this system, no action is required. Proceed to next step.
 - b.) If DICOM camera or Postscript printer is not planned to be connected to this system, configure a dummy camera settings in Common Service Desktop → Configuration → Install Camera.
Select Other DICOM Protocol Camera in Camera selection screen (Figure 2-49) and enter dummy information as shown in Figure 2-50.

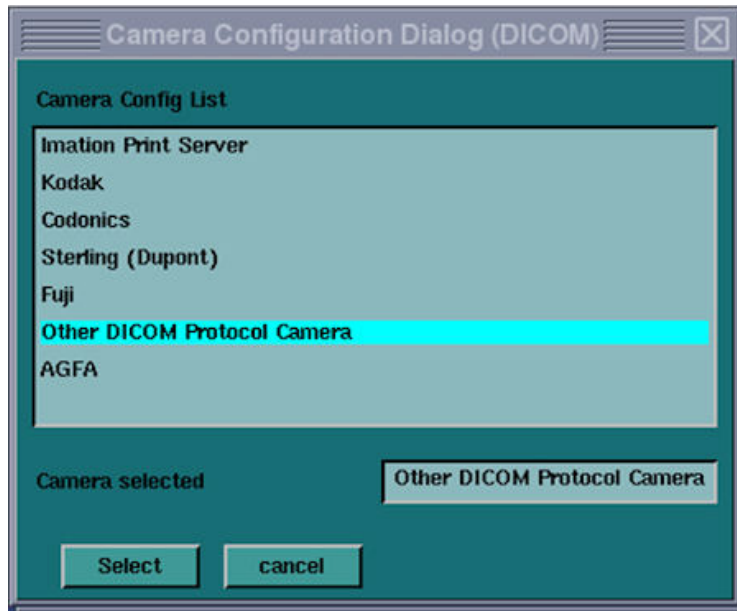


Figure 2-49 Camera selection screen

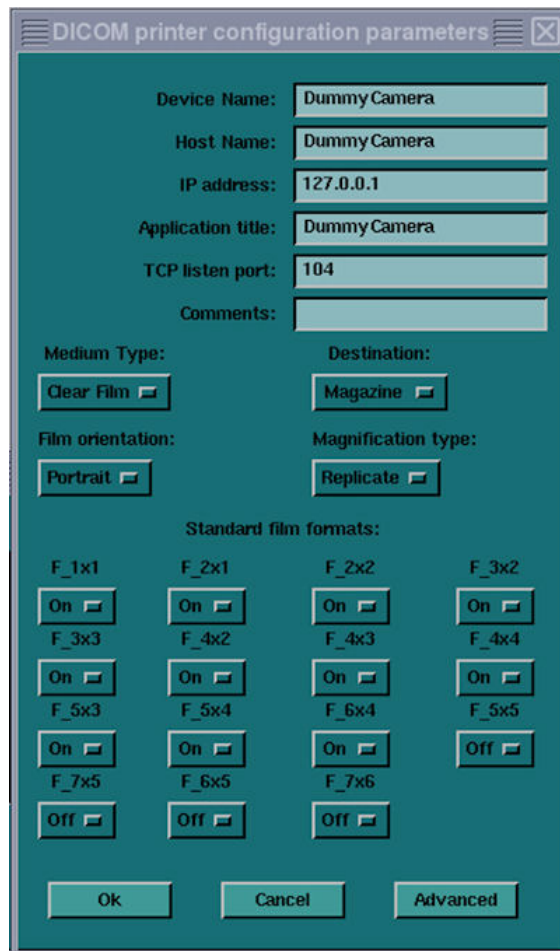


Figure 2-50 DICOM Camera Dummy Information

1.5.3 Generate eLicense Key for new Console

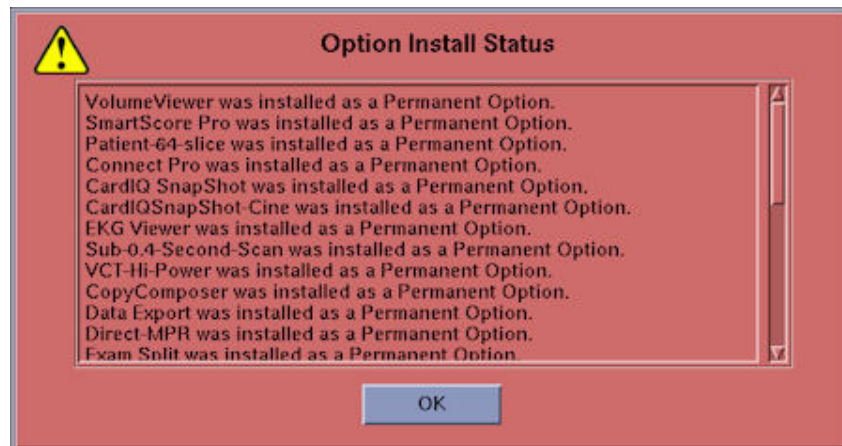
Contact OLC engineer and request the regeneration of the option key for the new console.

1.5.4 Install Option Software

- 1.) Install Volume Viewer SW & Dynamic Z axis tracking SW from DVD supplied in the upgrade kit. Install the license key for this SW using the license DVD media supplied in the kit.
- 2.) Install the eLicense option keys which were generated at Generate eLicense Key for new console (Section 1.5.3).

Note: Preferred method of installing new license keys is via USB.
In case eLicense are downloaded from OLC, verify all required licenses are downloaded & installed on the console prior to Apps training.
Refer to CT E-LICENSE TRAINING (COURSE ID: GEHC- TECH-AMOL-CT6002) in GE Learning for more details.

- a.) Copy the "license.dat" file which was generated by eLicense web tool to an USB memory mounted on your laptop PC.
 - b.) Insert the USB memory to the service USB port on the console front.
 - c.) Open a Unix shell and type mountUSB
 - d.) Type cp /USB/license.dat /usr/g/service/flex
 - e.) Type unmountUSB and remove the USB memory from the service USB port.
- 3.) Reboot the system.
 - Option key installation will be automatically started after OS is started up.
 - Some options will ask you to confirm the settings. Check or enter the appropriate parameters.
 - When all eLicense keys are installed, the following pop-up message will appear.



- 4.) After application start up, check that all options are installed by Verify Options in Common Service Desktop - Configuration tab.

Note: Some option key installation may fail due to dependency to other options. If failed, repeat the Step 1 through Step 3 again.

Note: The following options are not compatible between original and new console. The eLicense tool will generate both original and new license key. Installation of the original key will be rejected by CT system.

Effectivity	Part No.	Manufacturer
CardIQ Plus CardIQPro	CardIQPlus CardIQPro	CardIQ_Xpress_Reveal
Advanced Vessel Analysis	AdvVesselAnalysis	AVA_Xpress
AutoBone	AutoBone	AutoBone_Xpress
CTC Pro on OC	CTColonoPro	CT_Colono_Pro3D_EC
CTPerfusion4	CTPerfusion4	CT_Perfusion_4D_MultiOrgan
CTPerfusion4Neuro	CTPerfusion4Neuro	CT_Perfusion_4D_Neuro

Table 2-2 Updated Option Key

Catalog ID	Description	Floatable	Application Name/Key/Number of Users
B7870JC	B7870JC Advanced Vessel Analysis	N	AdvVesselAnalysis permanent 0 00b96c49f5811000000001700 AVA_Xpress permanent 0 0273269d5f511000000000658

Table 2-3 Example of eLicense Key

- 5.) Install additional option keys (DVD) supplied with this replacement kit according to Install Software Options in LightSpeed 7.X Service Methods.

1.5.5 Reconnect the Hospital Network Cable

- 1.) Reconnect the Hospital Network cable at the rear of the Operator Console (J26) that was disconnected at the beginning of the LFC.

1.5.6 Tube Install Certification

- 1.) Perform the Tube Install Certification procedure.
- 2.) When completed, continue with Flash Download.

1.5.7 Flash Download

- 1.) Perform the Flash Download Utility found on the Common Service Desktop - Utilities Tab, select [Flash Download].

Note: The Flash Download takes 5 - 30 minutes, depending on which subsystems need firmware updating.

- 2.) When the Flash Download Window opens, Select [Update].
- 3.) Once the Hardware Flash Downloads successfully, select [Dismiss].
- 4.) Close the Common Service Desktop.
- 5.) Select Shutdown icon on the Desktop and restart the system.

1.5.8 GSCB Configuration and Intercom Set Up

- 1.) Configure the GSCB following the GSCB Configuration and Intercom Setup procedure found in the LightSpeed 7.X Service Manual.

Refer to Align/Setup/Cal > Console (GOC6.6) > GSCB Configuration and Intercom Setup procedure.

- 2.) Setup and adjust the Intercom speaker and microphone volumes following the GSCB Configuration and Intercom Setup procedure.

Refer to Align/Setup/Cal > Console (GOC6.6) > GSCB Configuration and Intercom Setup procedure.

1.5.9 Install System Warning Labels



NOTICE Important: Do not cover English labels already on the system.



- 1.) All labels are installed in English and present on Console. Add the labels listed below for the appropriate language for the country in which this system is installed. Additionally, apply any other warning labels if present, on equipment where appropriate.

Table 2-4 System Warning Labels

Subsystem	Component	Label(s)
Console	GSCB	Language overlay label
		X-ray warning indicator
	Keyboard	Function key overlay label
		Keyboard ERGO Warning (GOC6 Series Only)

1.5.10 InSite Checkout

- 1.) If the InSite (and iLinq) was previously used, perform the InSite checkout here.

Note: New model type (_SUSE_IIP4) is required for the checkout.

1.6 System Level Verification Test

- 1.) Check the GSCB warning labels.
 - a.) Check the X-ray warning indicator is attached to the GSCB.
 - b.) Check the X-ray warning statement is in the appropriate language.



Figure 2-51 X-Ray Warning Label

- 2.) System Ground Check

Note: Complete the following items. Refer to the LightSpeed 7.X Installation Manual for the detailed procedure.

- a.) Table/Gantry raceway to Console ground wire resistance should be less than 1.0 ohm.
- b.) System Ground Chassis Leakage test was performed and the results indicate a passing condition.
- c.) Patient Touch Leakage test was performed and the results indicate a passing condition.

- 3.) User Interface Language

Confirm that appropriate or Requested language is installed.

Note: The UI is expected to be using the language appropriate for the country in which this system is installed, according to Direction 5221102-1EN. If an authorized site representative chooses another UI language, record the following information.

- Radiology Manager (or equivalent)
- Date of discussion
- Language selected

- 4.) Check Operator Controls / Indicators

- Check the GSCB X-ray On indicator illuminates during a scan.
- Check the GSCB stop scan controls terminates a scan when pressed.

- 5.) Functional System Tests

Refer to Functional Checks - System Scanning Tests in the LightSpeed VCT Service Manual supplied with the replacement and perform the tests to confirm proper operation.

1.7 Finalization

- 1.) Reinstall the Console Front and Rear Covers.

Note: Refer to Replacement > Console > GOC6.6 VCT > Console Cover Removal and Installation in the LightSpeed VCT Service Manual for more details.

- 2.) Save a new System State in accordance with Software GOC6.6 VCT > Software Installation procedures > System State Save Restore in the LightSpeed VCT Service manual supplied with the replacement.
- 3.) Return the removed console parts according to standard parts return process.

Chapter 3

Appendix

Section 1.0

System Information Sheet

DAS Type	Check
VDAS64	
HDAS64	
HDAS SATURN 64	

Installed Software Option Key	Check	Note
3000 Image Series		
AutoFilter-and-Transfer		
AutomA		
Connect Pro		
CopyComposer		
Data Export		
Direct-MPR		
NeuroFilter		
Patient-64-slice		
Smart Prep		
Smart Speed		
Exam Split		
VolumeViewer		
ASiR		
CardIQ Snapshot		
CardIQ Snapshot-Cine (SSP)		
EKG Viewer		
SmartScore Pro		
Sub-0.4-Second-Scan		
NoiseReductionFilter		
VCT-85kW-Power		
VCT-Hi(100kW)-Power		
AutoBone		To be replaced with "AutoBone_Xpress"
AdvVesselAnalysis		To be replaced with "AVA_Xpress"
AWE connection		
AxialShuttle		
CardEP		
CardIQPlus		To be replaced with "CardIQ_Xpress_Reveal"

CTColonoPro		To be replaced with "CT_Colono_Pro3D_EC"
CTPerfusion4		To be replaced with "CT_Perfusion_4D_MultiOrgan"
CTPerfusion4_Neuro		To be replaced with "CT_Perfusion_4D_Neuro"
DentaScan		
Enhanced Rotor Management-DS		
Enhanced Xtreme Injector		
HelicalShuttle		
Real Time CT Fluoro		
SmartStep		
Xtream Injector (Class I)		

ConnectPro	Current Setting	Note
HIS Server IP Address		
HIS Server AE Title		
HIS Server AE Port #		
CT Server AE Title		
HIS Server IP Address		
HIS Server AE Title		
HIS Server AE Port #		
CT Server AE Title		

Exam Split	Current Setting	Note (How to check the setting)
Exam Split Type (VES / HES)		1. Open Unix shell and and log on as root. 2. Type: ls -l ~ctuser/ves/.hesMode 3. If there is .hesMode file, it's HES mode. If not, It's VES mode.

Xtream injector / Enhanced Xtream injector	Current Setting	Note (How to check the setting)
Injector:Pressure unit (kPa / "kg/cm2" / PSI)		CSD -> Configuration -> Injector: Pressure Limit Unit

Remote Archive Device	Current Setting	Note (How to check the setting)
Selected archive device		Image Works -> Archive -> Selected Archive Device

AWE Connection	Current Setting	Note (How to check the setting)
AW Server IP Address		CSD -> Configuration -> Configure AW Server Client
Login User Name		
Login Password (this is masked by *)		

Smart score Pro	Current Setting	Note (How to check the setting)
Cardiac monitor (None / IVY 7800 / IVY 3150 / IVY 3100 / INVIVO MILLENNIA)		CSD -> Configuration -> Install Gating Monitor

© 2017, General Electric Company. All Rights Reserved.

www.gehealthcare.com



Imagination at work