


GE Healthcare


Brivo MR355 to Optima MR360 System Upgrade




OPERATING DOCUMENTATION


5410710-1EN
Revision 1.0

 **WARNING**



STRONG MAGNETIC FIELD

 **NO PACEMAKERS**
NO METALLIC IMPLANTS
NO NEUROSTIMULATORS

 **Persons with pacemakers, neurostimulators, or metallic implants must not enter this area.**

Serious injury may result.

5116163

Important Information

LANGUAGE

- ПРЕДУПРЕЖДЕНИЕ (BG)** Това упътване за работа е налично само на английски език.
- 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)** 本维修手册仅提供英文版本。
- 如果客户的维修服务人员需要非英文版本，则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服务人员、操作人员或患者造成电击、机械伤害或其他形式的伤害。
- 警告 (ZH-HK)** 本服務手冊僅提供英文版本。
- 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)** 本維修手冊僅有英文版。
- 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)** Ovaj servisni priručnik dostupan je na engleskom jeziku.
- 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)**

Tento provozní návod existuje pouze v anglickém jazyce.

- 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)**

Denne servicemanual findes kun på engelsk.

- 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)**

Deze onderhoudshandleiding is enkel in het Engels verkrijgbaar.

- 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)**

This service manual is available in English only.

- 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)**

See teenindusjuhend on saadaval ainult inglise keeles.

- 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)**
- Tämä huolto-ohje on saatavilla vain englanniksi.
- 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)**
- Ce manuel d'installation et de maintenance est disponible uniquement en anglais.
- 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.
- WARNUNG (DE)**
- Diese Serviceanleitung existiert nur in englischer Sprache.
- 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 Kundendienst-technikers, des Bedieners oder des Patienten durch Stromschläge, mechanische oder sonstige Gefahren kommen.
- ΠΡΟΕΙΔΟΠΟΙΗΣΗ (EL)**
- Το παρόν εγχειρίδιο σέρβις διατίθεται μόνο στα αγγλικά.
- 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.
- FIGYELMEZTETÉS (HU)**
- Ezen karbantartási kézikönyv kizárólag angol nyelven érhető el.
- Ha a vevő szolgáltatója angoltól eltérő nyelvre tart igényt, akkor a vevő felelőssége a fordítás elkészíttetése.
 - 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.

**AÐVÖRUN
(IS)**

Þessi þjónustuhandbók er aðeins fánleg á ensku.

- Ef að þjónustuveitandi viðskiptamanns þarfnast annas tungumáls en ensku, er það skylda viðskiptamanns að skaffa tungumálaþjónustu.
- Reynið ekki að afgreiða tækið nema að þessi þjónustuhandbók hefur verið skoðuð og skilin.
- Brot á sinna þessari aðvörðun getur leitt til meiðsla á þjónustuveitanda, stjórnanda eða sjúklings frá raflosti, vélrænu eða öðrum áhættum.

**AVVERTENZA
(IT)**

Il presente manuale di manutenzione è disponibile soltanto in lingua inglese.

- 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.

**警告
(JA)**

このサービスマニュアルには英語版しかありません。

- 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。

**경고
(KO)**

본 서비스 매뉴얼은 영어로만 이용하실 수 있습니다.

- 고객의 서비스 제공자가 영어 이외의 언어를 요구할 경우, 번역 서비스를 제공하는 것은 고객의 책임입니다.
- 본 서비스 매뉴얼을 참조하여 숙지하지 않은 이상 해당 장비를 수리하려고 시도하지 마십시오.
- 본 경고 사항에 유의하지 않으면 전기 쇼크, 기계적 위험, 또는 기타 위험으로 인해 서비스 제공자, 사용자 또는 환자에게 부상을 입힐 수 있습니다.

**BRĪDINĀJUMS
(LV)**

Šī apkopes rokasgrāmata ir pieejama tikai angļu valodā.

- 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.

**ĮSPĖJIMAS
(LT)**

Šis eksploataavimo vadovas yra tik anglų kalba.

- 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 eksploataavimo vadovo.
- Jei nepaisysite šio įspėjimo, galimi paslaugų tiekėjo, operatoriaus ar paciento sužalojimai dėl elektros šoko, mechaninių ar kitų pavojų.

**ADVARSEL
(NO)**

Denne servicehåndboken finnes bare på engelsk.

- 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.

**OSTRZEŻENIE
(PL)**

Niniejszy podręcznik serwisowy dostępny jest jedynie w języku angielskim.

- 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.

**ATENÇÃO
(PT-BR)**

Este manual de assistência técnica encontra-se disponível unicamente em inglês.

- 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.

**ATENÇÃO
(PT-PT)**

Este manual de assistência técnica só se encontra disponível em inglês.

- Se qualquer outro serviço de assistência técnica solicitar este manual noutra idioma, 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.

**ATENȚIE
(RO)**

Acest manual de service este disponibil doar în limba engleză.

- 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.

**ОСТОРОЖНО!
(RU)**

Данное руководство по техническому обслуживанию представлено только на английском языке.

- 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.

**UPOZORENJE
(SR)**

Ovo servisno uputstvo je dostupno samo na engleskom jeziku.

- 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.
- Zanemarivanje ovog upozorenja može dovesti do povređivanja serviser, rukovaoca ili pacijenta usled strujnog udara ili mehaničkih i drugih opasnosti.

**UPOZORNENIE
(SK)**

Tento návod na obsluhu je k dispozícii len v angličtine.

- Ak zákazník 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.

**ATENCION
(ES)**

Este manual de servicio sólo existe en inglés.

- 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)**

Den här servicehandboken finns bara tillgänglig på engelska.

- 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)**

Ta servisni priročnik je na voljo samo v angleškem jeziku.

- 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)**

Bu servis kılavuzunun sadece ingilizcesi mevcuttur.

- 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.

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Revision History

Rev	Date	Description
1	09/20/2011	Initial Release

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Chapter 1 Getting Started

1 Getting Started

1.1 Overview

This document describes the installation information of upgrade from Brivo MR355 system to Optima MR360 system (Fixed Table Configuration). It include the following key steps.

1. Pre-system check, perform SPT, EPT Test.

NOTE: If SPT or EPT don't pass, perform trouble-shooting before starting the upgrade.

2. Perform save info, to save as protocol, calibration data and so on.



NOTICE

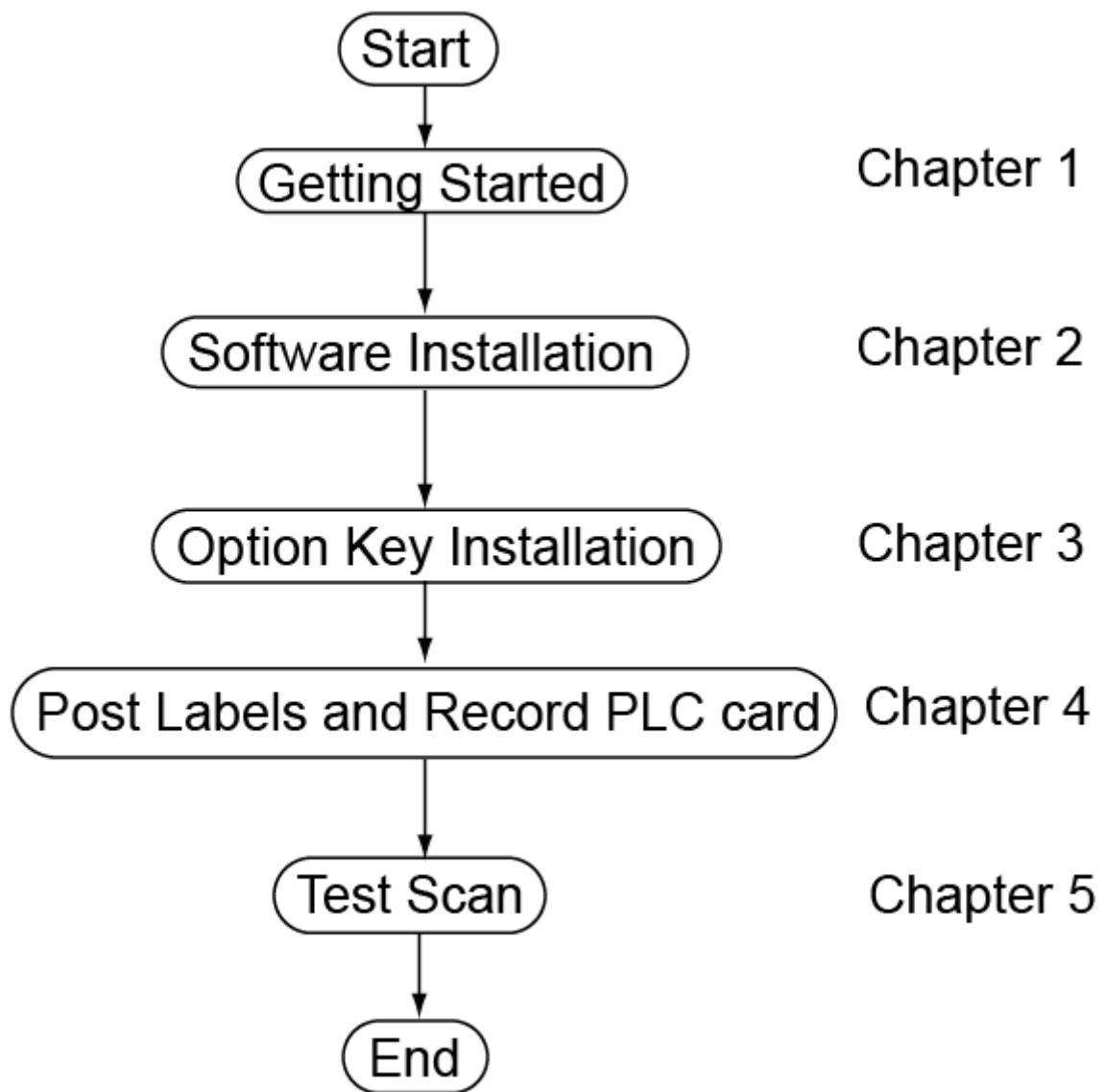
The saveinfo will not keep the information on printer, PAC/HIS/RIS configuration. Please record manually PAC, HIS/RIS configuration.

3. Install software, restore info.
4. Delete current Brivo MR355 option key.
5. Install Optima MR360 Option Key.
6. Paste Labeling.
7. Test scan. Perform SPT Test



NOTICE

Before Option Key Installation, please remove Brivo MR355 Option Keys.



1.2 Supplied Materials

1.2.1 Upgrade Kit Supplied

- Optima MR360 Class A Service Methods CDROM 5341911-2EN Qty 1
- Optima MR360 Mechanical Installation 5364440-1EN Qty 1
- Upgrade Label for SV Bri to Opt 5412077 Qty 1

1.2.2 FE need prepare items

- Common Part:DVD-R(For save info) 5168656 Qty 2



NOTICE

Please use the latest version of softwares at the site for this upgrade.
Software list:

Linux OS software DVD

SV OpenSuse OS DVD

MR Application DVD

Restricted Service CD

1.3 Man Power Requirement

One Field engineer, 3 hour plus travel

1.4 Optima MR360 Option Key

Option Catalog	Options Activated	Customer Protocol
M3335KL	CADstream	CADStream
M3335KW	cosmic3d	COSMIC
M3033MW	rtca	iDRIVE Pro Plus
M3090KK	fiesta3d	3D FIESTA
M3033NL	fiesta2d,fiesta2dfs	2D Fatsat FIESTA
M3333WG	probep	Probe-P single voxel PRESS
M3333WJ	probe99	Probe-2D CSI
M3033NH	propt2,propdwi	Propeller
M3340AJ	N/A	Inhance (Includes 3D Velocity, 3D Inflow IR and 2D Inflow)
M3033LZ	ftmra	FT-MRA
M3033MH	tricks	TRICKS
M3033MB	fiestac	FIESTA-C
M3090LR	tensor	DTI
M3033NK	tracto	FiberTRAK on console
M7000CK	quickstep	QuickStep
M3340AG	swan3d	SWAN
M3335KJ	lavaxv	LAVA-XV
M3340AA	cubet2,FLAIR3D	CUBE
M3340AC	ideal	IDEAL
M3335KY	t2map	Cartigram (T2 Mapping)
M3033ND	breast2	VIBRANT
M3335KK	breastsvq	BREASE
M3033MF	fiesta3dfs	3D Fatsat FIESTA Coronary (mandatory for Inhance)
M3033ME	navigator	3D Navigator for Coronary

M3033MY	tagging	Cardiac Tagging
M3090KR	delenhmt	2D Delayed Enhancement
M3033MD	delenhmt3d	3D Delayed Enhancement
M3340AE	mfgre2d	StarMap Acquisition
M3033PJ	pps	PERFORMED PROC STEP EXCITE
M50002DT	CADstream	CAD STREAM SW KEY
M50002DJ	iprotect	SERVICE IP DISABLE KEY
M50002DS	optima360	CONFIG SW FOR OPTIMA MR360
N/A	Respirator Triggering	Respiratory Triggering

1.5 Pre-system check procedure

1. Perform EPT and SPT Test. See next section.
2. Perform [Save info](#).
3. System Power must be turned OFF. Refer to System Cabinet PDU Main Breaker LOTO Procedure .

2 SPT Full Test Mode Procedure

2.1 Personnel Requirements

Personnel Requirements	Preliminary Reqs	Procedure	Finalization
1	Not Applicable	2 hours	Not Applicable

2.2 Preliminary Requirements

2.2.1 Tools and Test Equipment

2.2.2 Required Conditions

Condition	Reference	Effectivity
Cancel out of any previous exams. Click on [End Exam].	-	-
Remove any patient positioning devices before placing the nesting plate or other phantoms on the table. In particular, remove patient restraints or other devices that attach to the tracks along the edges of the cradle.	-	-

2.3 Procedure

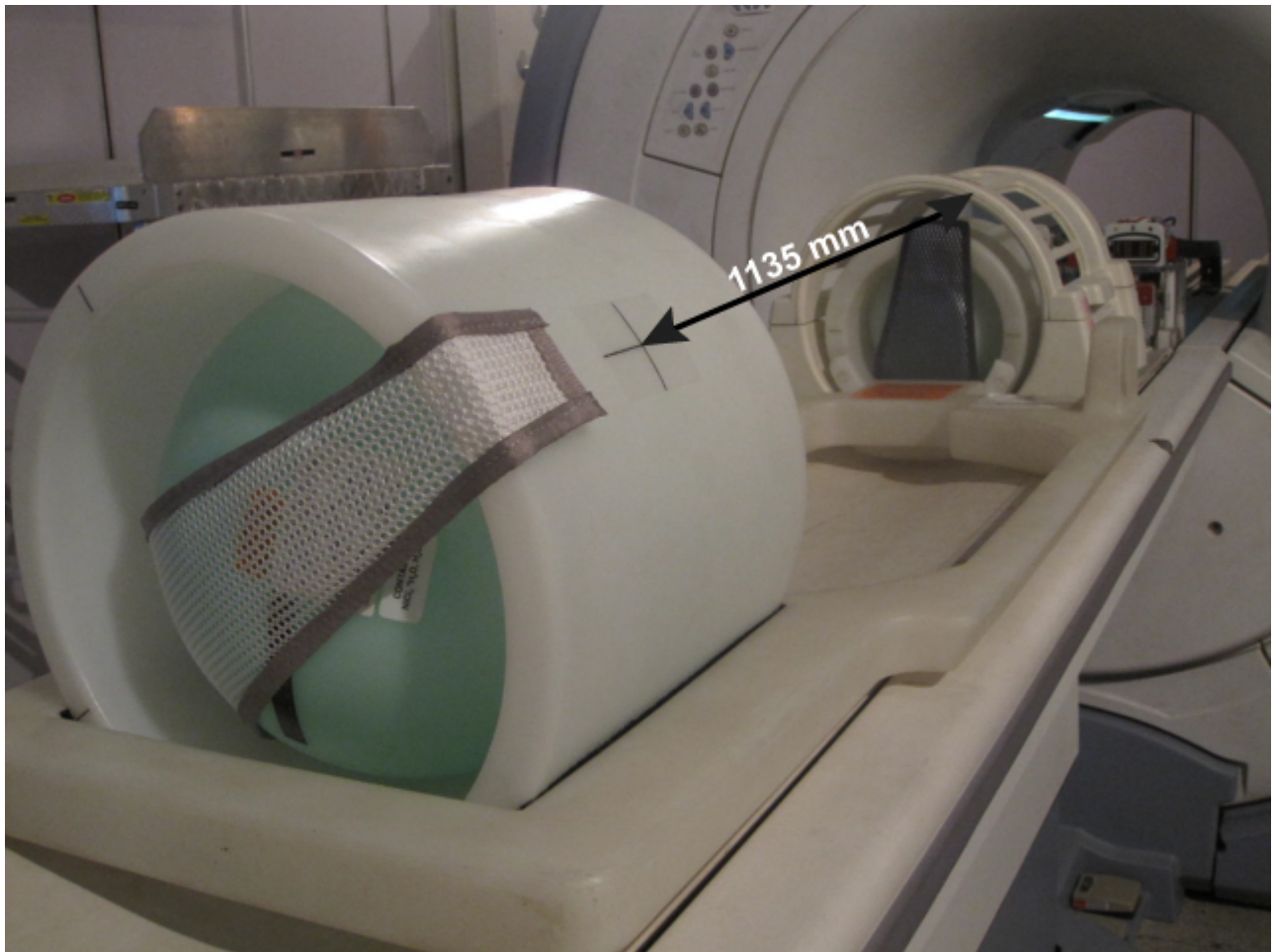
2.3.1 Phantom Setup

1. Place the split head coil on the patient table.
2. Place the phantom in the head coil. See [Illustration 1-1](#).
3. Place the nesting plate on the patient table so that it butts flush against the head coil positioner.
4. Place the short loader with the body sphere inside on the nesting plate. The label on the top of the short loader indicates the correct orientation. See [Illustration 1-2](#).

Illustration 1-1: Phantoms in Head Coil



Illustration 1-2: Phantoms Lined Up On Nesting Plate



5. Landmark on the axial line of the Head TLT phantom in the head coil.
6. Press [Advance to Scan].

2.3.2 Invoking SPT Full Test Mode

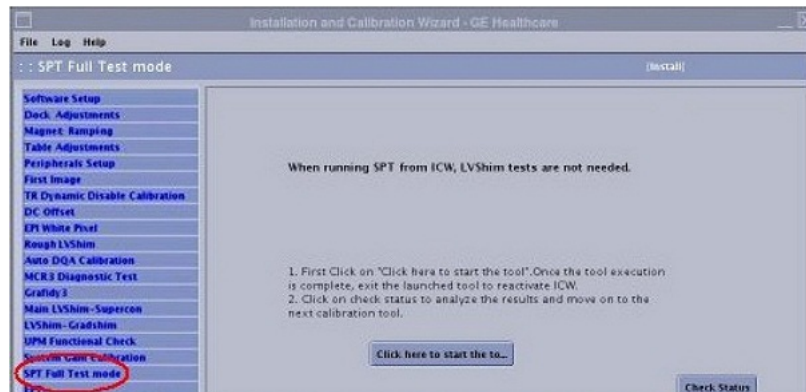


NOTICE

Test functionality and system functionality may be adversely affected if the previous exam is not terminated. Click on [End Exam] to terminate any previous exam. It is not necessary to click on [New Pt] as SPT automatically enters the scan protocol when it is invoked via the MR Tools menu.

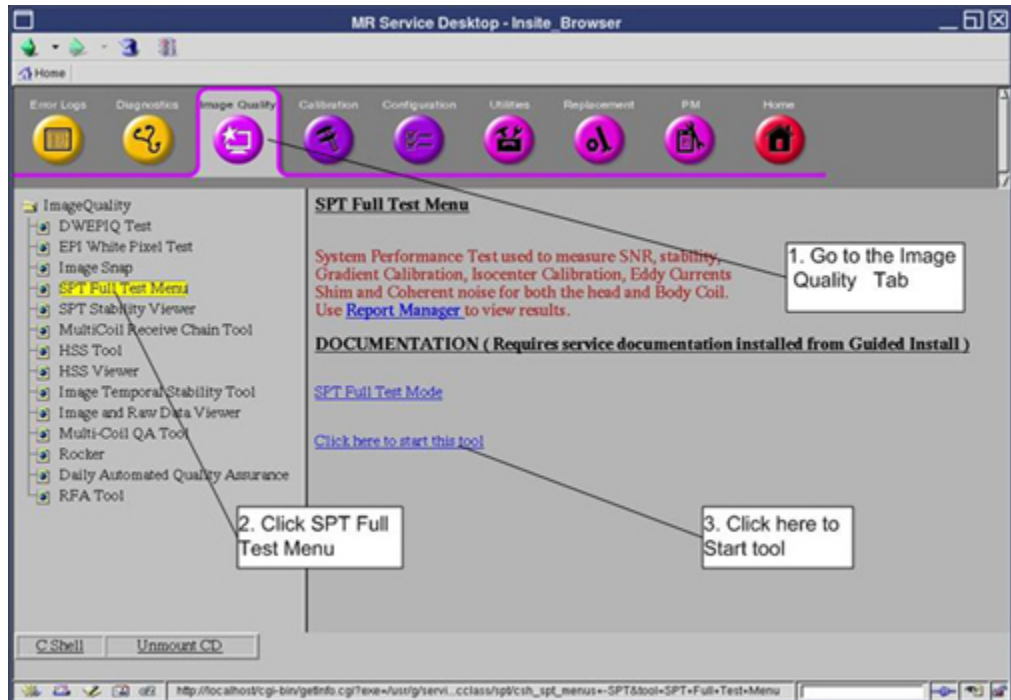
1. Start the SPT Tool.
 - If SPT will be started from ICW, select [Calibration Wizard] from the calibration menu and select [Click here to start this tool]. Once the Calibration Wizard starts, select [SPT Full Test Mode] from the menu, review and okay the pre & post-dependencies, and select [Click here to start this tool] to start the procedure.

Illustration 1-3: SPT start from ICW



- If SPT is started from Service Browser / Image Quality, select [Image Quality] and [SPT Full Test Mode], and select [Click here to start this tool] to start the procedure.

Illustration 1-4: Starting the SPT Test Tool



2. A SPT Test menu appears in a window on the desktop. Select appropriate test and start SPT. (see [Illustration 1-5](#)).
 - a. If SPT Full Mode is invoked from Installation and Calibration Wizard (ICW), set the [Select All Tests] option to [Yes]. Then, select a reason for the test and click [Start SPT] to begin.
 - i. To select all SPT tests, click [Yes] next to all tests fields.

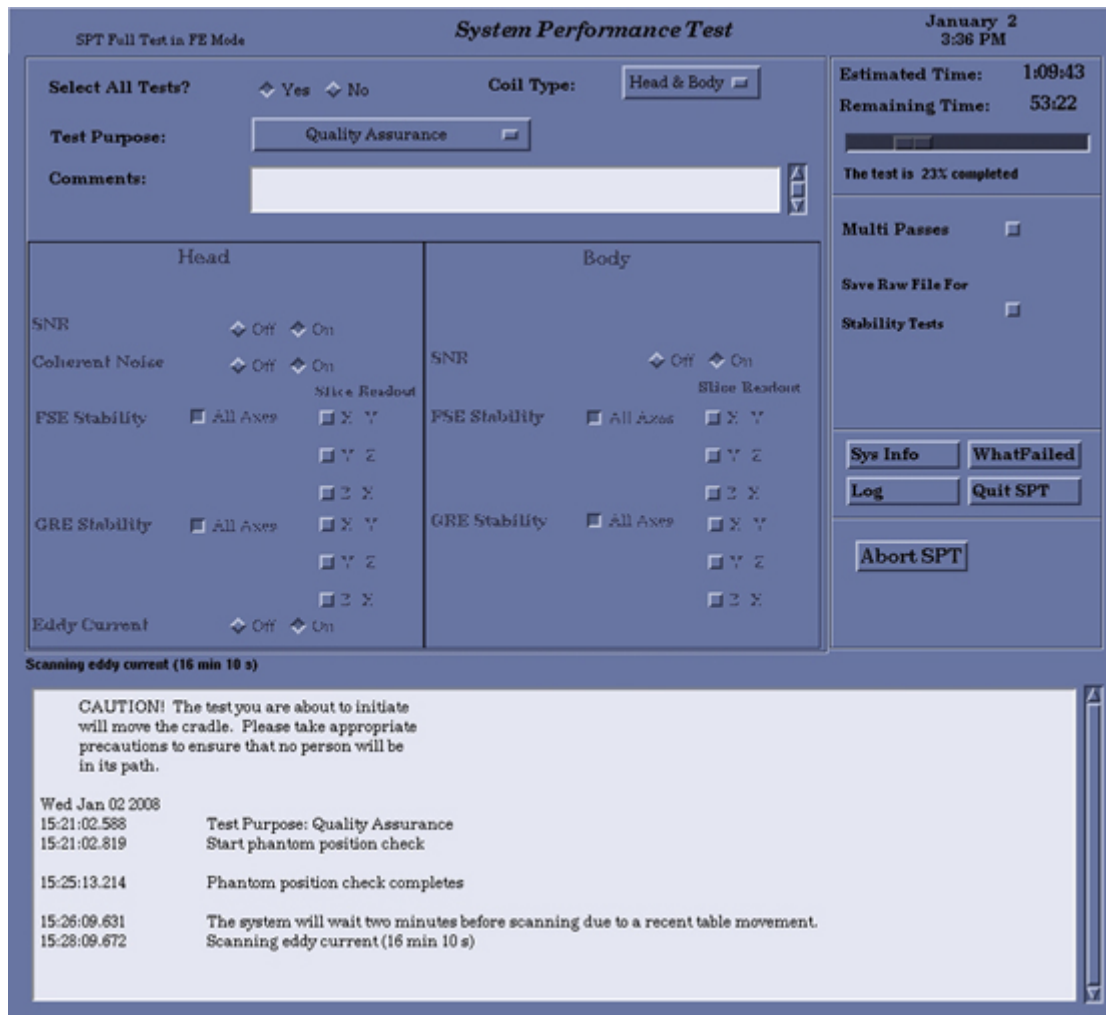
- ii. To select a reason for the test, choose an option from the Test Purpose drop-down list. If desired, enter text in the Comments field.
 - iii. Click [Start SPT] to begin.
 - b. For troubleshooting, select individual tests as desired. Click [No] for set the [Select All Tests] option. Then, select a reason for the test. and click [Start SPT] to begin.
 - i. To select a reason for the test, click the button to the right of Test Purpose. Select a reason from the list. If desired, enter text in the Comments field.
 - ii. Click the [On] button to select the test that you want to run.
 - iii. To select Multiple Passes of the test(s), select the [Multi Passes] button, then enter the desired number of passes in the box that appears to the right.
 - iv. Click [Start SPT] to begin.

You may be prompted to make additional selections as the test begins.

Status messages will appear in the text box below the menu as the tests are run. Use the scroll bar on the right side of the box to move up or down through the messages.
 - v. If desired, click the WhatFailed button. An example of WhatFailed output can be found in Troubleshooting.

NOTE: This screen will be displayed until you quit SPT, so if you're in a troubleshooting mode, all you need to do is press the [Start SPT] button to go again.

Illustration 1-5: Field Engineer Test Selection - Full Test Example



3. To exit SPT, click the [Quit SPT] button.
4. To view SPT results, select the *Utilities* tab on the Service Browser, then select [Report Manager].
5. Enter the report manager password (mrgo1) and press [Enter].

2.4 Finalization

1. Do a TPS Reset after completing SPT to put the system back into a know state.
2. If for any reason a SPT scan is aborted, Shutdown and Reboot the system.

3 Echo Planar Test (EPT)

3.1 Personnel Requirements

Personnel Requirements	Preliminary Reqs	Procedure	Finalization
1	Not Applicable	2 hours	Not Applicable

3.2 Preliminary Requirements

3.2.1 Tools and Test Equipment

3.2.2 Safety



WARNING

POISON HAZARD

**1.5T PHANTOMS CONTAINS NICKEL, A SUSPECT CARCINOGEN
 DISPOSE OF AS A HAZARDOUS WASTE ACCORDING TO STATE AND
 FEDERAL REGULATIONS**

3.3 Procedure

3.3.1 Startup

EPT combines the functionality of the current B₀ Dither Calibration, Group Delay Calibration and B₀ Image Test into a single tool with a simple user interface. The output is suitable for remote support access, trending, and automatic checking of results against acceptance limits. In addition, EPT automatically updates the EPI calibration files when authorized by the user.

1. Click on [New Pt], and enter the following:

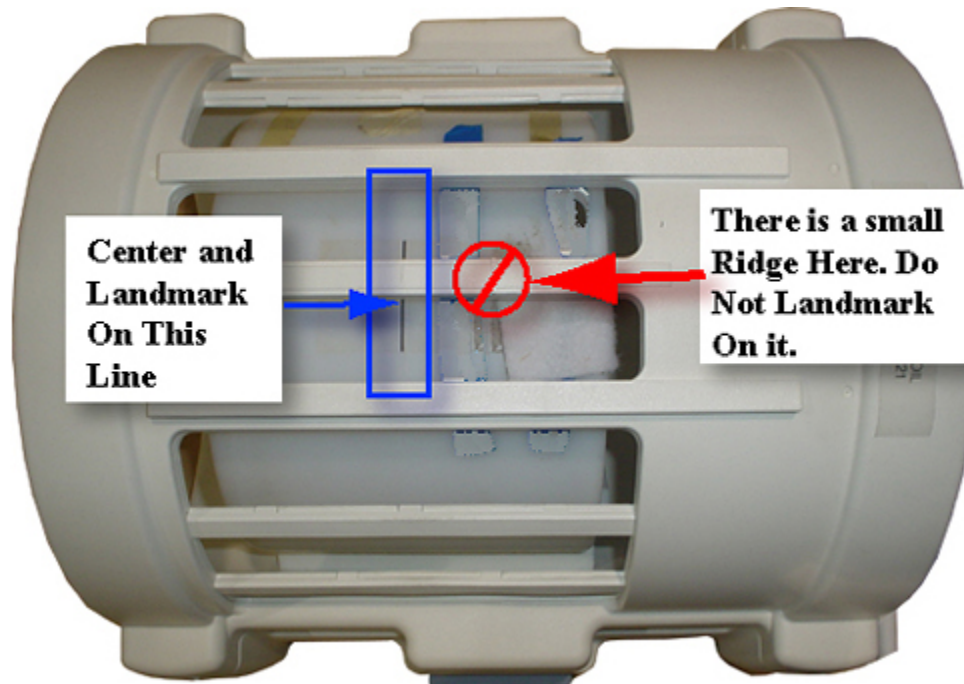
ID: **geservice**

2. Place an EPI foam phantom holder and a 100-mm sphere phantom and phantom loader in the head coil, as shown in . Landmark on the center of the sphere, but do not advance to scan yet.

Illustration 1-6: EPI Phantom Positioning

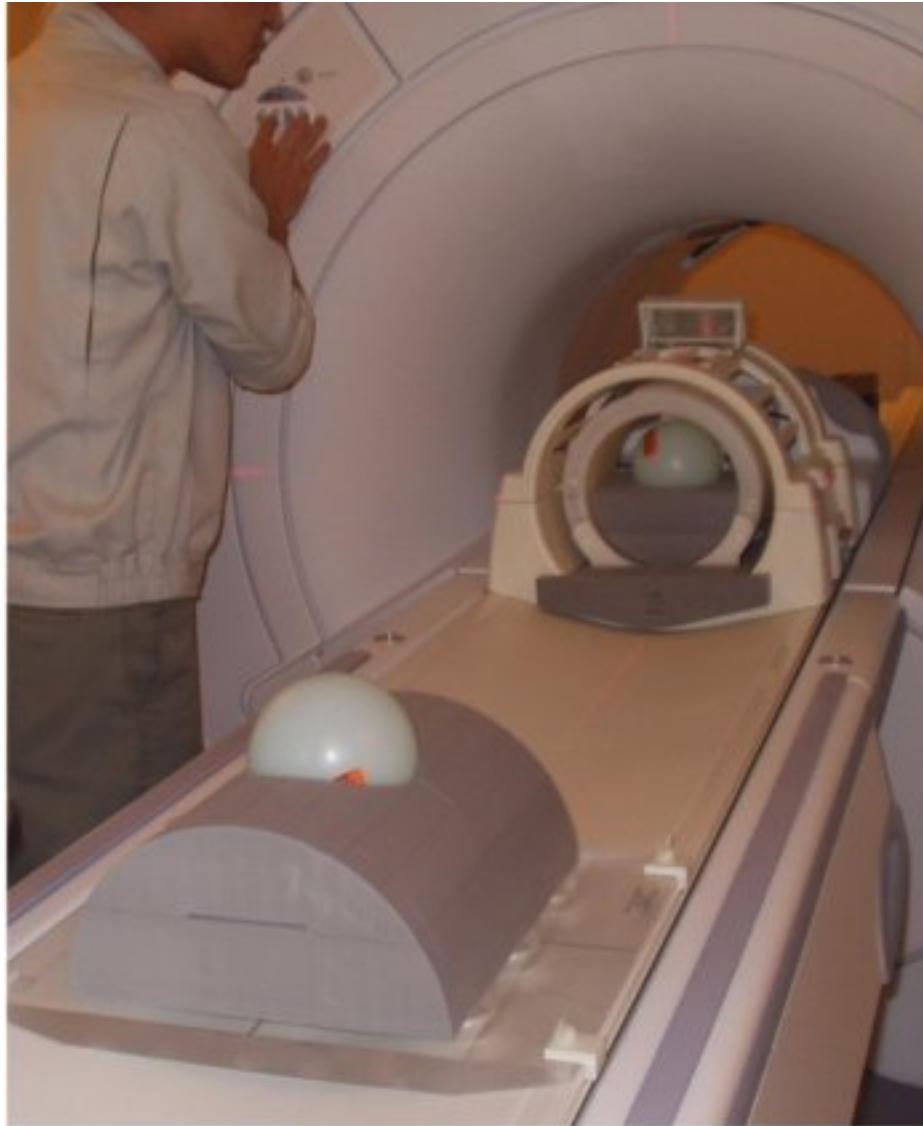


Illustration 1-7: Landmark Marker



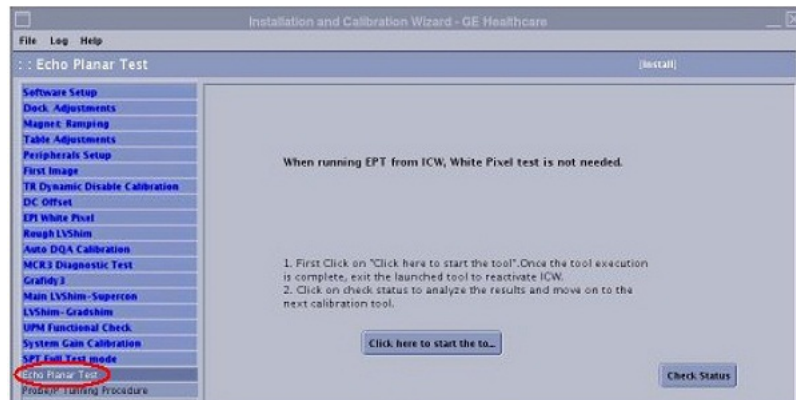
3. Place an EPI foam phantom holder and a second 100-mm sphere on the Grafidy base plate, as shown in . Move the table into the bore to 1100 mm from landmark. Slide the Grafidy base plate so the center of the 100-mm sphere is at the axial alignment light, and then press the **MOVE TO SCAN** button.

Illustration 1-8: Landmark Second Phantom



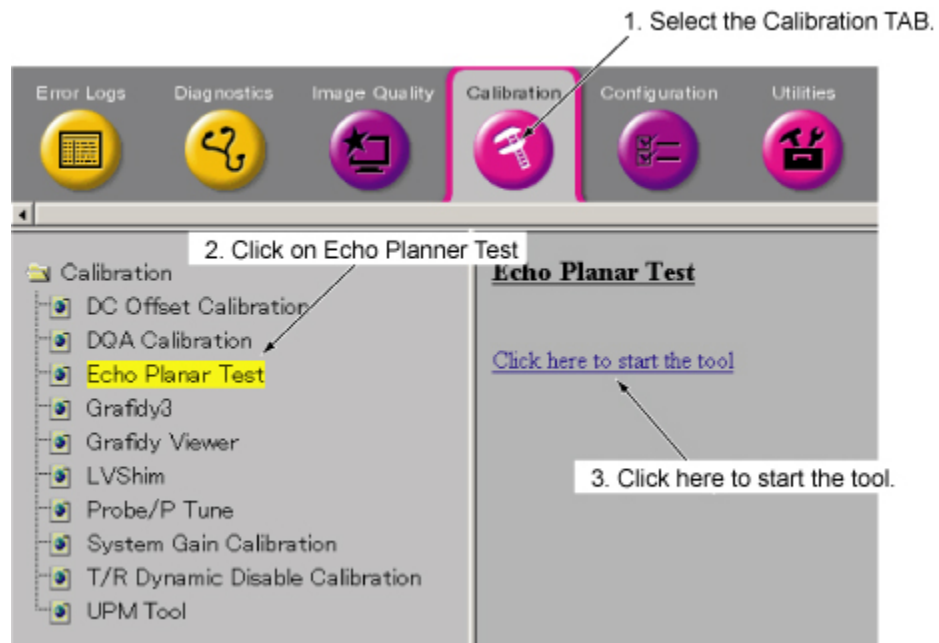
4. Start the Echo Planar Test Calibration Tool.
 - Starting restricted service tools available to GE Field Service:
 1. Ensure that a service key is installed.
 2. Select [Calibration Wizard] from the calibration menu and select [Click here to start this tool] to launch the wizard.
 3. Select [Echo Planner Test] from the menu and review and verify the prerequisites are met.
 4. Select [Click here to start this tool] to start the procedure.

Illustration 1-9: Starting EPT from ICW



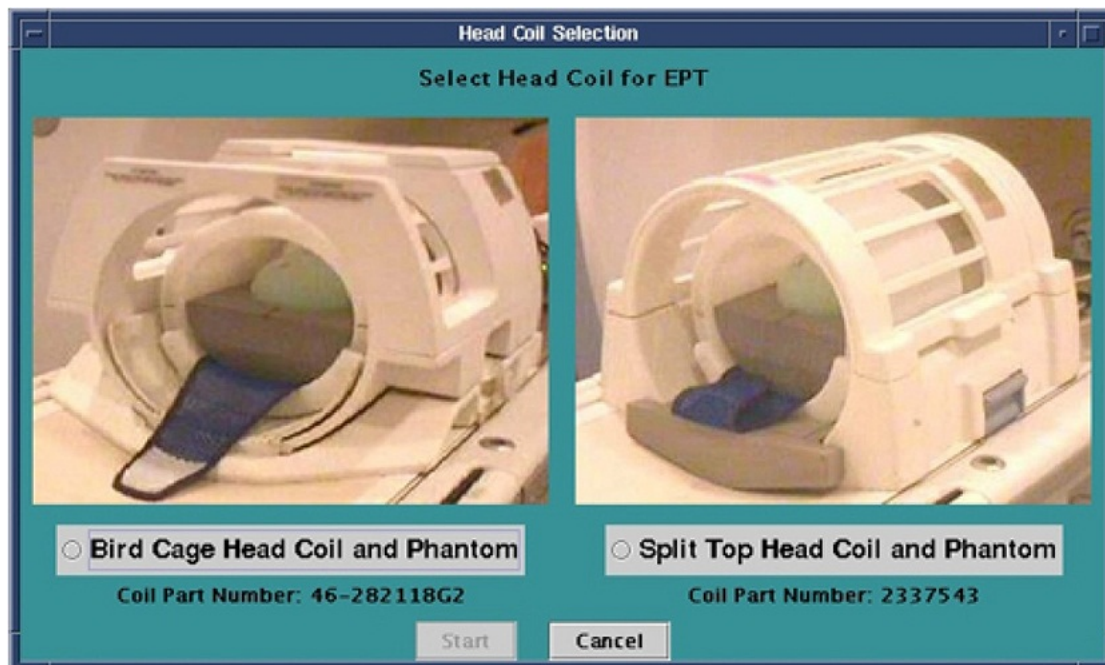
- Starting non-proprietary service tools:
 1. From the Common Service Desktop, select [Calibration] .
 2. Select [Echo Planner Test] from the calibration menu, and select [Click here to start this tool] to start the procedure.

Illustration 1-10: Starting EPT



5. Select the Head Coil being used, .

Illustration 1-11: Select Head Coil Being Used



6. Click the [Start] button.
7. The Echo Planar Test Window will appear, as shown in .

Illustration 1-12: Echo Planar Test Window



NOTE: The “Select All Tests” default option is No.

8. There are four option buttons on the screen that must be chosen before starting EPT:
 - a. Selecting the [Multi Passes] button and entering an integer in the text box can perform more than one pass of the tests.
 - b. One or more of the selected tests can automatically update the config files with new calibration data if the new data is within specs. Select [Config Update] before starting EPT.
 - c. The TNS can be disabled or enabled during the EPI white pixel test for troubleshooting purposes by clicking the [TNS Enable] button. EPT will post a message if the TNS is not connected. Run EPT with the TNS set the same as during normal operation.
 - d. The baseline Noise Check should be enabled during the EPI white pixel test. This check is done by comparing the mean and standard deviation to set limits. If they are outside of the limits, the white pixel test will be aborted. This will prevent false results if the receive chain is disconnected or not functioning properly.

9. Select a Test Purpose from the pull-down menu.
10. Two lines of comments can be entered, if desired. If no comments are entered, the text "NO COMMENT" will be entered into the results file.

**CAUTION****Equipment Movement!**

The test you are about to initiate will move the cradle.

Please take appropriate precautions to ensure that no one will be in its path.

11. Select [Start EPT]. Running all the tests takes about one hour and will thoroughly test the EPI performance of your system. This is the recommended mode for baseline, PM, and initial problem-finding. The single test mode is meant to be used while troubleshooting. If possible, run the full set of tests at the end of your troubleshooting to verify system performance. While EPT is running, each test will be displayed in the message window indicating the amount of time the test requires to run.

NOTE: Actual run time of the test may not coincide with the countdown clock displayed on the interface.

12. EPT will create many images. If applicable, a window will pop up to inform you that there is not enough space available.
13. When the tests are complete, one of four messages shown below will appear:
 - a. <Your tests completed successfully>, or
 - b. <A minor system problem has been detected. This problem is NOT expected to affect image quality>, or
 - c. <A serious system problem has been detected. This problem IS expected to impact image quality>, or
 - d. <EPT was unable to determine PASS/FAIL status of the tests.>

14. Select [Quit EPT] and confirm

3.3.2 Test Termination Procedure

1. If [Quit EPT] is selected, a confirmation window appears.
2. If the EPT process is not shut down in an orderly manner, the service protocol directions may need to be reset. This can be done by opening a C-shell and typing the following:

```
<cd /usr/g/service/cclass/ept><Enter>
```

```
<resetept><Enter>
```

3.3.3 EPT Report

- To view the EPT data and plots, refer to the report manager tool procedure by opening Common Service Desktop. Then select [Utilities], then [Report Manager Tool]. See and for file naming convention.

Illustration 1-13: Data File Naming Convention

YEAR	MONTH	DAY		HOUR		MINUTES, SECONDS
0 = 1990	1 = JAN.	1 = 01	H = 17	0 = 00:00	D = 13:00	0 to 59
1 = 1991	2 = FEB.	2 = 02	I = 18	1 = 01:00	E = 14:00	
2 = 1992	3 = MAR.	3 = 03	J = 19	2 = 02:00	F = 15:00	
3 = 1993	4 = APR.	4 = 04	K = 20	3 = 03:00	G = 16:00	
4 = 1994	5 = MAY	5 = 05	L = 21	4 = 04:00	H = 17:00	
5 = 1995	6 = JUN.	6 = 06	M = 22	5 = 05:00	I = 18:00	
6 = 1996	7 = JUL.	7 = 07	N = 23	6 = 06:00	J = 19:00	
7 = 1997	8 = AUG.	8 = 08	O = 24	7 = 07:00	K = 20:00	
8 = 1998	9 = SEP.	9 = 09	P = 25	8 = 08:00	L = 21:00	
9 = 1999	A = OCT.	A = 10	Q = 26	9 = 09:00	M = 22:00	
A = 2000	B = NOV.	B = 11	R = 27	A = 10:00	N = 23:00	
B = 2001	C = DEC.	C = 12	S = 28	B = 11:00	O = 24:00	
:		D = 13	T = 29	C = 12:00		
Z = 2026		E = 14	U = 30			
		F = 15	V = 31			
		G = 16				

Illustration 1-14: EPT Report File Identification Explanation



3.4 Finalization

- Reset the TPS to bring the system back into a known mode.
- Do a test scan to ensure the scanner is working properly before customer turn over.

4 SAVE INFO.

4.1 Personnel Requirements

Personnel Requirements	Preliminary Reqs	Procedure	Finalization
1	0 min	15 mins	0 min

4.2 Procedure

1. Insert CD or DVD Media.
2. Select '**Configuration/Guided Install/FE Mode**' from Common Service Desktop. Then, click '**Click here to start the tool**'.

Illustration 1-15:



3. Enter '**operator**' as password.
4. Select **Save/Restore** from menu and click [**Save Information & Save GI**].

Illustration 1-16: Save/Restore



5. Remove the media from the Drive.
6. Perform Verifying Save Restore Media.

4.3 Finalization

No finalization steps.

Chapter 2 Software Installation

1 Loading Host System Software

1.1 Personnel Requirements

Personnel Requirements	Preliminary Reqs	Procedure	Finalization
1	Not Applicable	1.5 hourhours	Not Applicable

1.2 Overview

This document provides instructions for setting up host system software. It includes:

- [Section 1.4.1](#)
- [Section 1.4.2](#)
- [Section 1.4.3](#)

NOTE: The following Part number is only for M3 Software.

5363521 SV SW OS CTT 5.3.10

5363516 SV M3 MrpApp DVD

5168656 Common Part:DVD-R

5160800-2 DVD-R 8x speed Media

5402184 SV SW M3 service pack 02

NOTE: The following Part number is for IB1 Software.

5363521 SV SW OS CTT 5.3.10

5363516-2 SV IB1 MrpApp DVD SW

5168656 Common Part:DVD-R

5406541 Linus OS cselx1.1

NOTE: The following Part number is for IB2 Software.

5363521 SV SW OS CTT 5.3.10

5363516-3 SV IB2 MrpApp DVD SW

5168656 Common Part:DVD-R

5406541 Linus OS cselx1.1

1.3 Preliminary Requirements

1.3.1 Tools and Test Equipment

Item	Qty	Effectivity	Part#	Manufacturer
Service Methods CD	1	-	-	-

1.3.2 Consumables

Item	Qty	Effectivity	Part#	Manufacturer
Linux OS Software DVD	1	-	5363521	-
SV OpenSuse OS DVD (used for ICN OS software load only)	1	-	5406541	-
MR Applications DVD	1	-	5363516-3	-
Restricted Service CD	1	-	5363517-3	-
DVD-R Media for Save Info	2	-	5168656	-

1.3.3 Required Conditions

Condition	Reference	Effectivity
Perform a Chapter 1, SaveInfo of all system settings before beginning the software installation.	-	-
When conducting a software reinstallation, write down all the IIP configuration data to speed up the InSite process. (It is not saved as part of the SaveInfo procedure.) The data can be accessed from the Common Service Desktop→ Configuration→ Guided Install→ FE Mode→ Service SW→ InSite→ Config InSite IIP. Click on each IIP <i>Configuration</i> tab, and record the data. This data can be manually entered after the software application load.	-	-
When conducting a software reinstallation, it is necessary to write down all the 'Worklist Favorite' and 'Protocol Favorite'. This data can be manually entered after the software application load. Ask customer to do so or FE can do it by referring to How to record/ restore protocol and worklist favorite.	-	-

1.4 Procedure

1.4.1 Loading Host Operating System Software



NOTICE

The software load can be corrupted if the following conditions are not met:

- Check SavelInfo script executed.
- System Monitor turned On.

1. Insert the Linux OS Software DVD into the DVD-ROM drive of the host computer.
2. Reboot the host computer.
3. At the boot prompt, type **GEHCMR**

The OS software load takes about 13 minutes.

Illustration 2-1: boot prompt

```

GEHC/CTT Linux, Production Release 5.3.10
- To install the standard GEHC distribution, type: (1)GEHC(0,Z) <ENTER>.
  Prepend the "I" for international setup
  Add the "0" for no graphics head, or "2" for dual head.

  For example, a US install of a CT dual-head HP uses "GEHC2",
  a French install of the same configuration uses "I6EHC2", and a
  headless install uses "GEHC0".

- Alternatively: aw44 <ENTER> for the AW44 install, or
  aw45 <ENTER> for the AW45 install, or
  CTDARC <ENTER> for the CT DARC install, or
  magic <ENTER> for the XRAY Magic install, or
  GEHCMR <ENTER> or MRGRN <ENTER>
  for the MR Excite or Global Recon Mode install.

NOTE: This is a 64-bit Operating system.

- To enter rescue mode, type: linux rescue <ENTER>.
- Use the function keys listed below for more information.

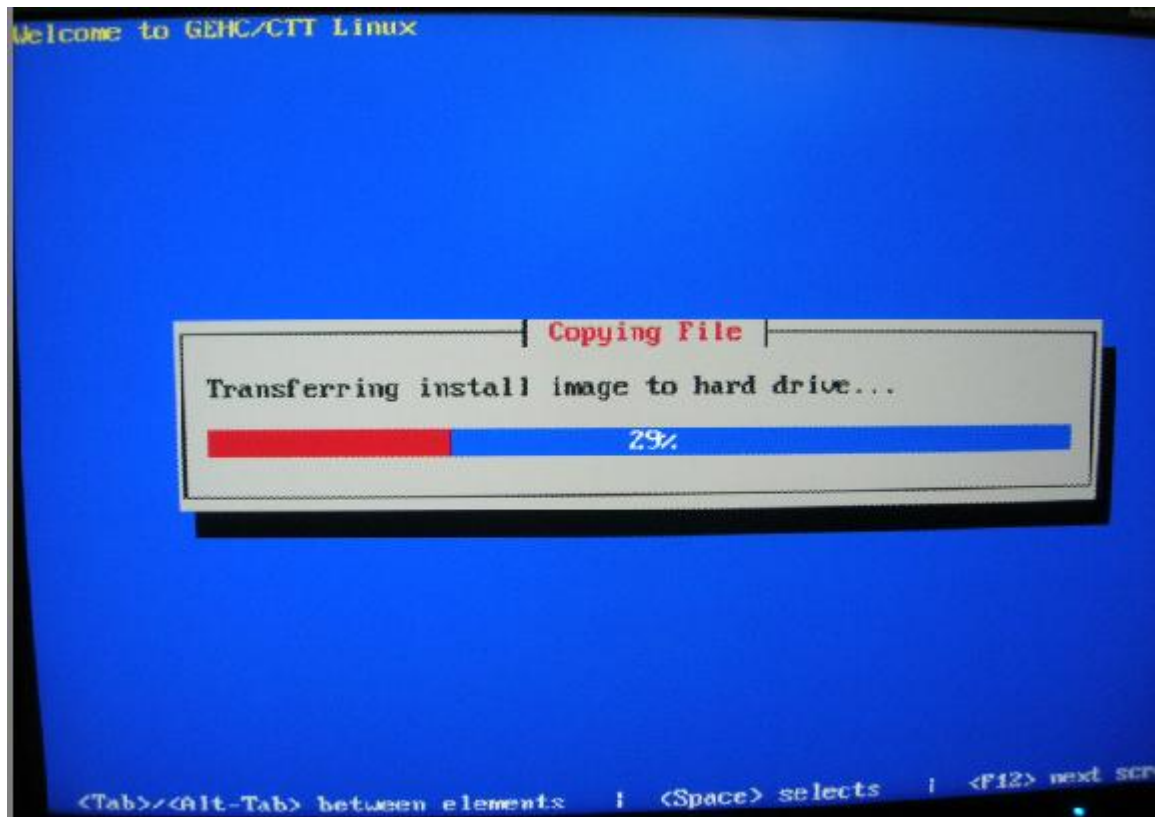
[F1-Main] [F5-Rescue]
boot: GEHCMR_

```

NOTE: As the install begins, it queries all physical drives in the system and builds/partitions all available devices. If the disk is not what the system expected, a warning indicating a bad disk may display. Software will fix during the install. Click [Ignore] to proceed with the install.

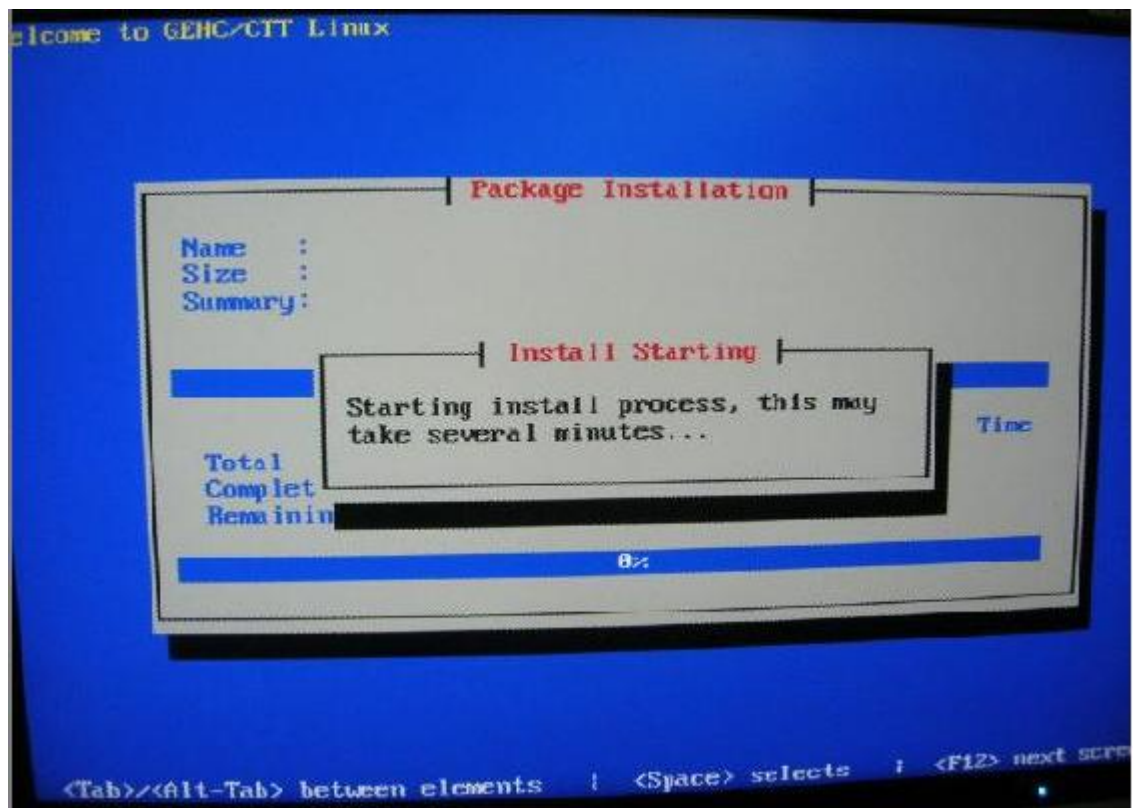
After about 90 seconds, a progress message displays, indicating that the install image is being transferred. (See [Illustration 2-2](#).)

Illustration 2-2: Transferring Install Image to Hard Drive



Two minutes later, an additional message displays indicating that the install process has begun. (See [Illustration 2-3.](#))

Illustration 2-3: Starting Install Process



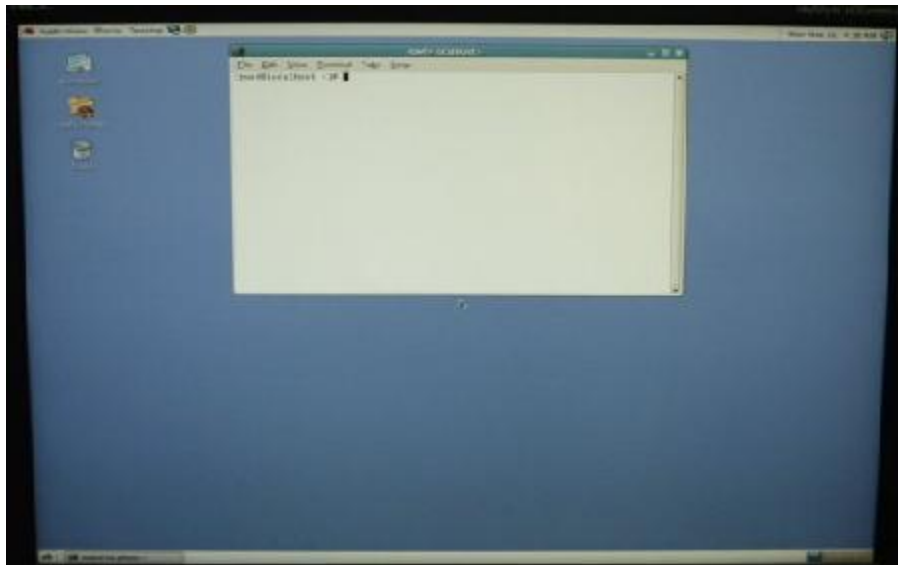
4. Once the installation is complete, the OS disk will be ejected automatically, ensure the disk is removed from the drive. **Do not insert the Applications DVD at this time!**
5. When the OS software is loaded, a *Complete and Reboot* screen (shown in [Illustration 2-4](#)) displays indicating that the system needs to be rebooted. Press <Enter> to reboot the PC.

Illustration 2-4: Complete and Reboot



6. When a terminal window displays after a couple of minutes, the OS software load is complete. Continue to the next section.

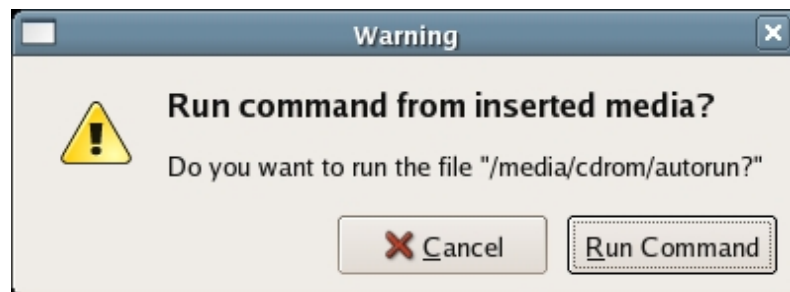
Illustration 2-5: Terminal Window



1.4.2 Loading MR Applications Software

1. Insert the MR Applications DVD into the DVD drive of the Host computer.
2. When the *Warning* window (shown in [Illustration 2-6](#)) displays, click [Run Command] to confirm the run.

Illustration 2-6: Confirmation Window



The system begins partitioning the hard drives. A progress window displays. (See [Illustration 2-7](#).)

Illustration 2-7: HDD Probe Complete

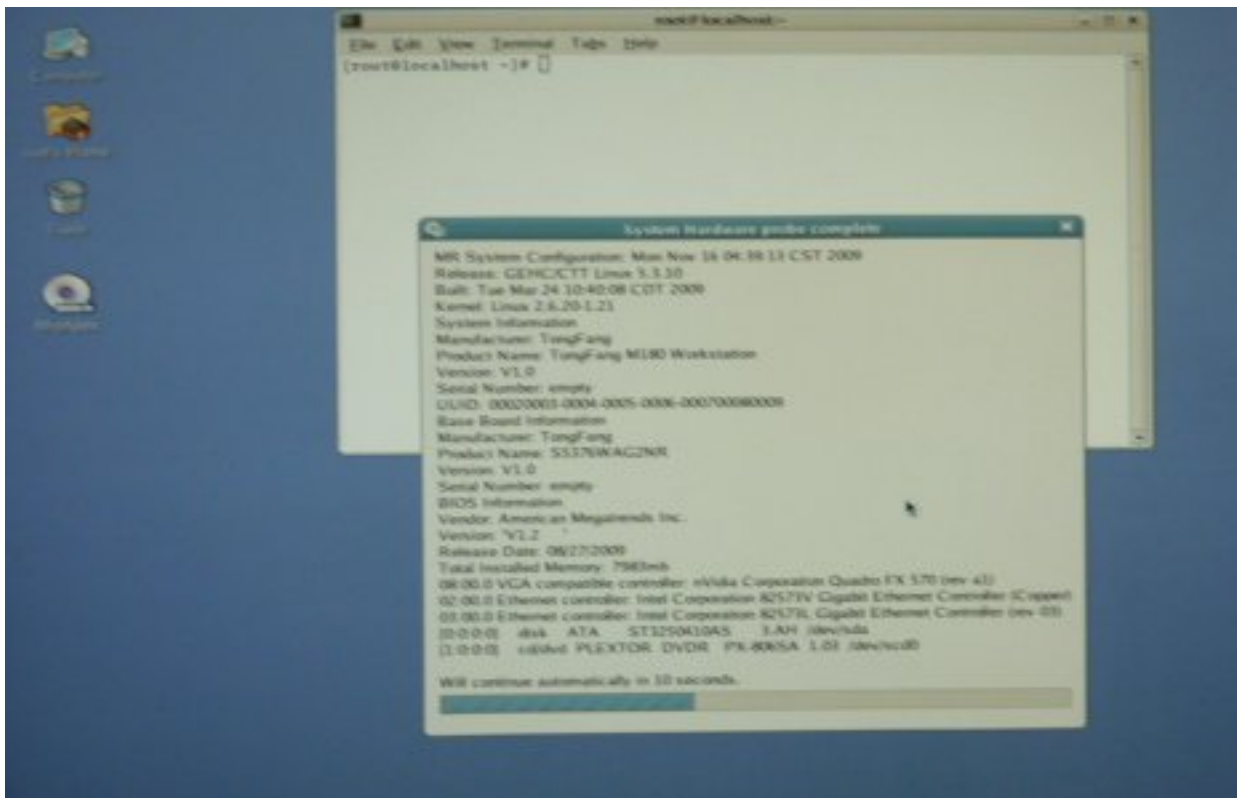


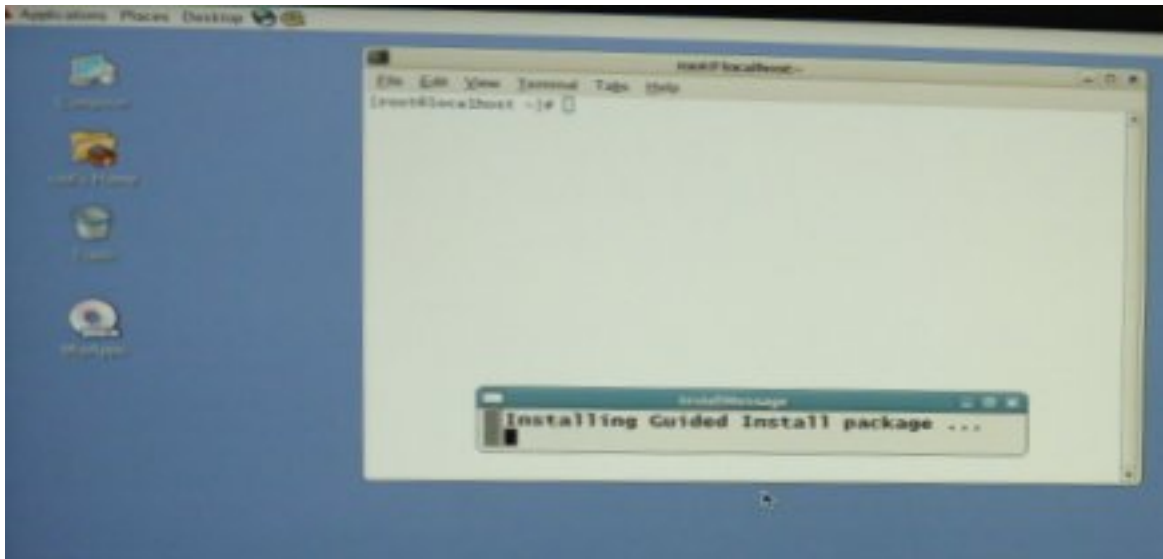
Illustration 2-8: Disk Partitioning Screen



The system reboots automatically when the partitioning is complete. **Do not interact with the system.**

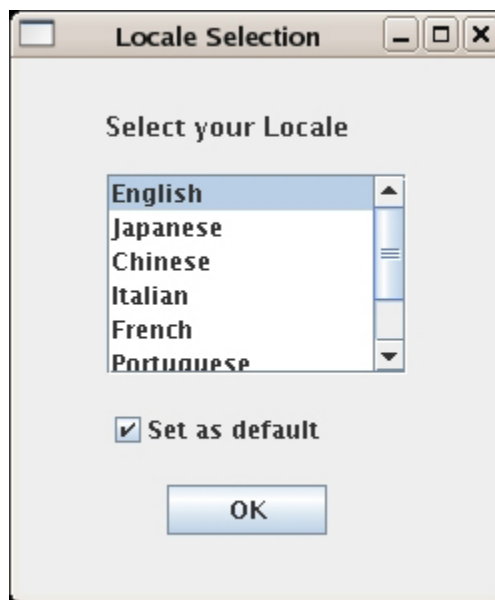
3. The following screen is shown while system is installing Guided Install Package.

Illustration 2-9: installing Guided Install Package.



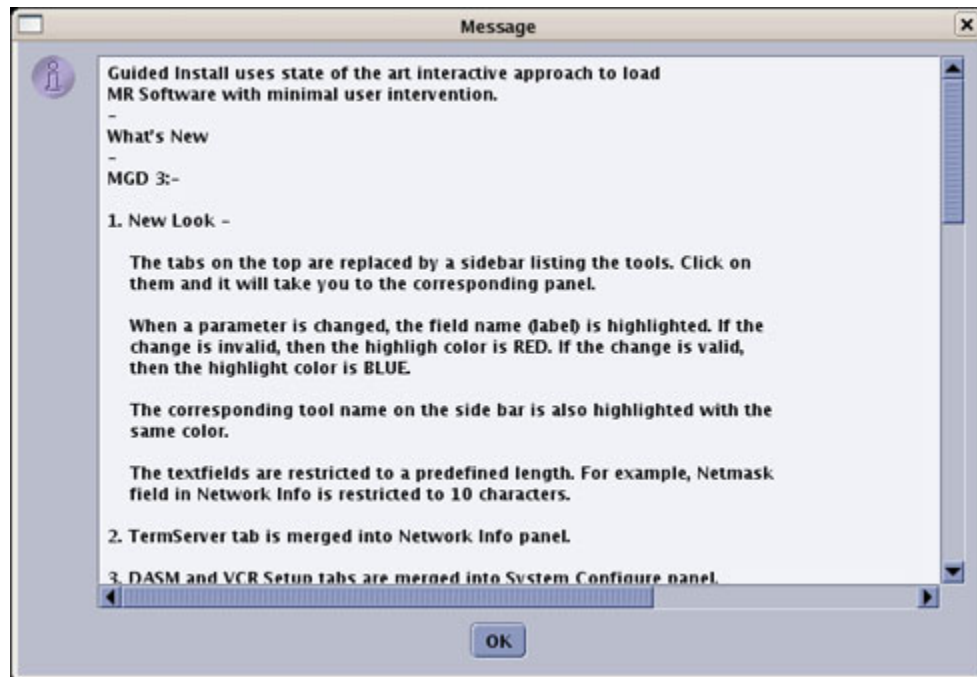
4. When the *Locale Selection* window (shown in [Illustration 2-10](#)) displays, select the proper locale and language, then click [OK].

Illustration 2-10: Select Location



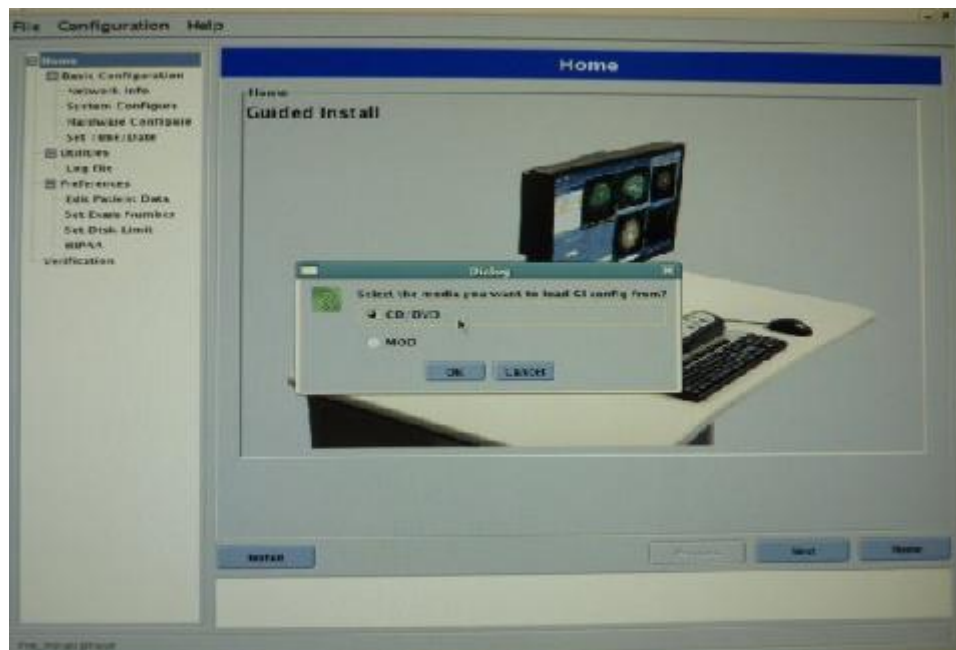
5. The *Guided Install* screen will display. When the *Message* screen (shown in [Illustration 2-11](#)) displays indicating the improvements made from the previous software version, click [OK] to continue.

Illustration 2-11: Guided Install Upgrade Screen



- 6. A message box concerning the Guided Install Configuration Media will display. (See [Illustration 2-12.](#))

Illustration 2-12: Install Configuration Media Window



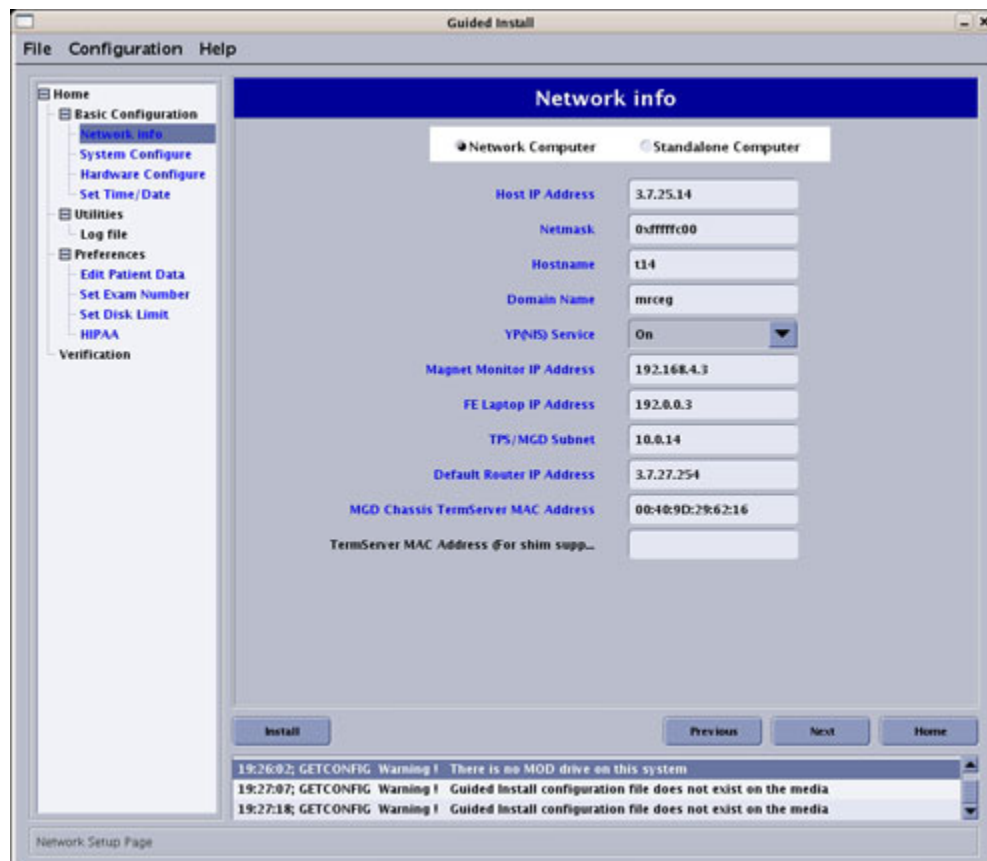


NOTICE

The last installed GUI configuration can only be installed if it was previously saved using [Save GI Configuration] in Guided Install.

7. Remove Application DVD and insert the Save Info DVD. Verify that the correct values are restored by checking each tab in the next step. Click [OK] to reinstall the last GUI installation configuration values.
 - The SaveInfo files are not restored at this point in the software load, but will be restored later.
 - If the GUI configuration was not saved, or the load is being performed for the first time, click [Cancel] to continue manually with the installation.
8. Select *Basic Configuration* tab shown in [Illustration 2-13](#). Verify that all values under this tab are configured properly, including *Time/Date*.
 - If failures are noted, click on the failure, then click [Go to Tab].
 - If any parameter does not match the expected criteria, the values in the left column will be red. If everything is acceptable, all values remain black. A changed value is indicated in blue.

Illustration 2-13: Guided Install - Configuration Screen



9. If the Guided Install configuration was successfully restored from the DVD, it is not necessary to change any of the parameters.
 - a. Check the parameters on the *Verification* tab, and confirm there are no failures. If there are failures, make the necessary changes.
 - b. Make sure all required configuration tabs are filled out (not in any specific order) before continuing. The *Verification* tab lists any formatting errors as well as current settings.



NOTICE

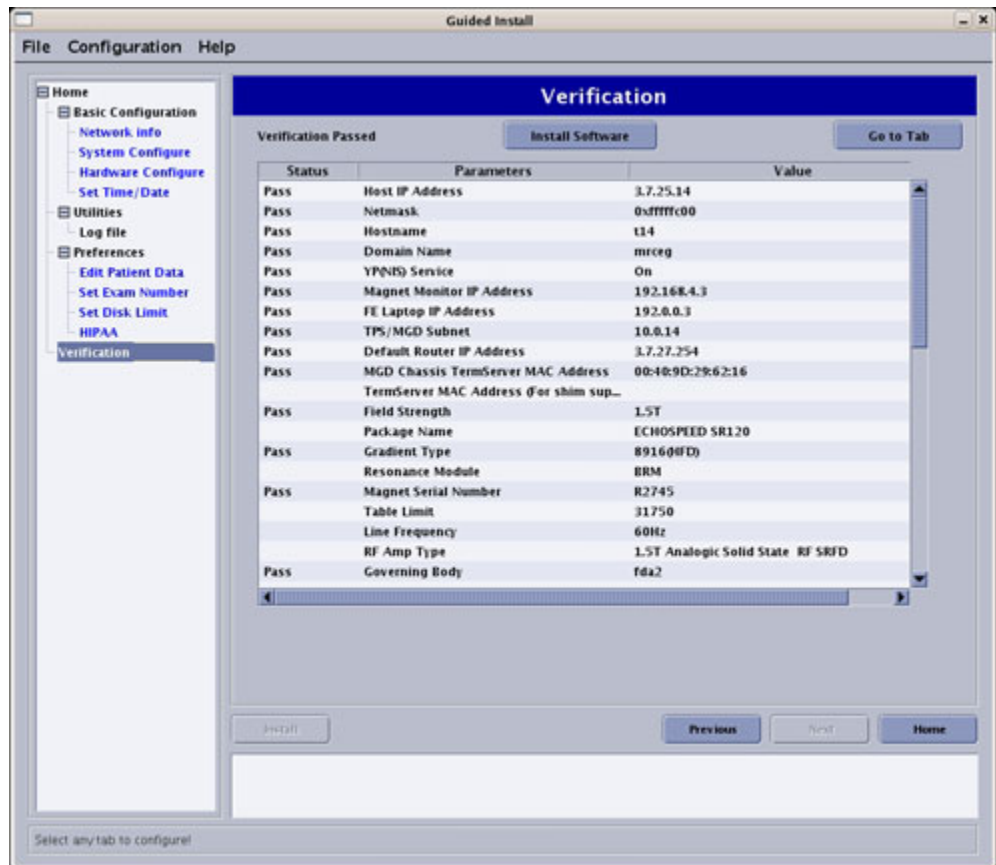
If loading software for the first time on a Host PC, the initial boot up will fail. Manually enter the Term Server information on the Network Info screen shown in [Illustration 2-13](#).

Example format: 20:2D:90:22:44. Use colons between two digits; letters are case sensitive.

10. Proceed to the *Verification* tab shown in [Illustration 2-14](#).
 - a. Look for any items with a `Fail` status. Go to the tab with the error and correct it.
 - b. Click [Install] to open the *Verification* tab again.

NOTE: Failed entries are due to missing or incorrectly formatted entries. The [Install Software] button is inactive if there are failures.

Illustration 2-14: Guided Install - Verification



11. If all entries pass verification at this point, click [Install Software] to begin the MR Applications load. If the time and time zone are correct, click [Confirm] to proceed. (See [Illustration 2-15](#).)

Illustration 2-15: Confirming Local Time



12. A message box will display concerning that if the MR Application DVD is in the DVD driver. (See [Illustration 2-16](#))

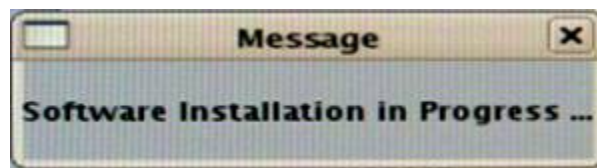
Remove SaveInfo DVD-R and Insert MR Application DVD click [OK] to proceed.

Illustration 2-16: Confirming MR Application CD



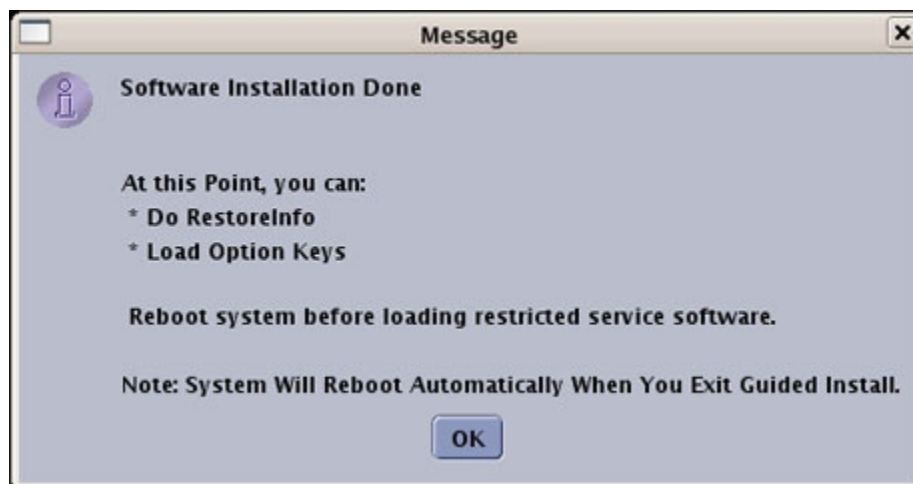
- NOTE:** If the Application Software Installation does not move to the next stage as [Step 13](#), click [Install Software] button again described in [Step 10](#).
13. A Software Installation in Progress message will display. The MR Applications load will take 10-15 minutes, depending on the host PC. (see [Illustration 2-17](#))

Illustration 2-17: Software Installation Message



14. Once the MR Applications load is complete, a confirmation message (shown in [Illustration 2-18](#)) displays. Click [OK] to close the window.

Illustration 2-18: Guided Install - Software Installation Completed



15. The GUI returns to the *Guided Install* window. Under the *Utilities* tab in the left navigation, select *Save/Restore* to open the *Save/Restore* screen shown in [Illustration 2-19](#).
- If the DVD with the saved configurations is not available, go to each tab in the Install GUI and complete all system information manually. A [Help] button that provides information on the required data and its format is available on each tab.

Illustration 2-19: Save/Restore Screen



- b. If the DVD with saved configurations is available, click [Restore Information], and select the proper media from the dialog box. (See [Illustration 2-12](#).)
- c. When the *Restore Info Dialog* box (shown in [Illustration 2-20](#)) displays, click [Restore all files automatically], then click [Continue].

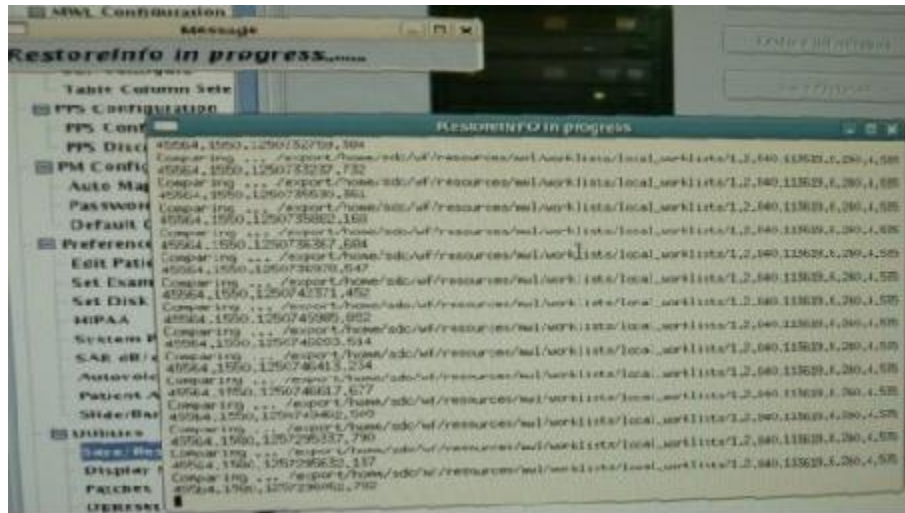
Illustration 2-20: Restore Option Window



NOTE: If restoration fails, the DVD automatically ejects the media. Exit the Guided Install and allow the system to reboot. When the system restarts, return to the Guided Install and attempt to Restore Info again.

16. A *RestoreInfo in Progress* window scrolls filenames as they are restored.

Illustration 2-21: RestoreInfo in Progress



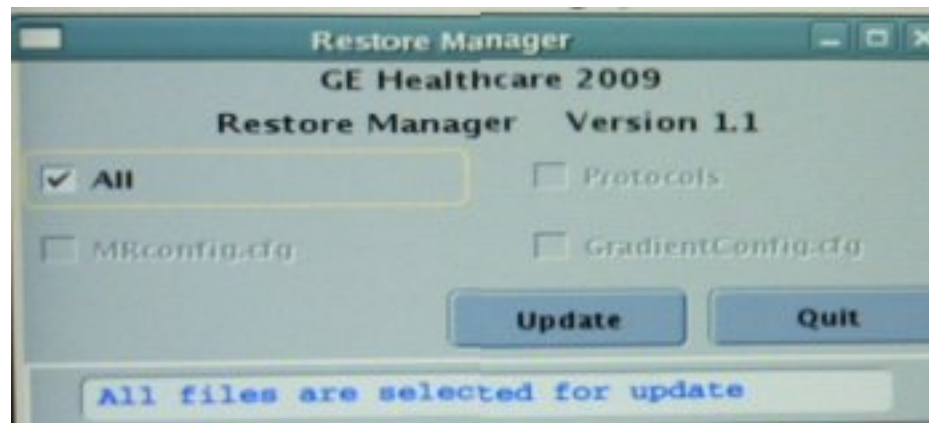
- When the restoration is completed, an *Update Utility* message (shown in [Illustration 2-22](#)) displays.

Illustration 2-22: Guided Install - Update Utility Message



- Click [OK] to open the *Restore Manager* dialog window shown in [Illustration 2-23](#).

Illustration 2-23: Guided Install - Restore Utility



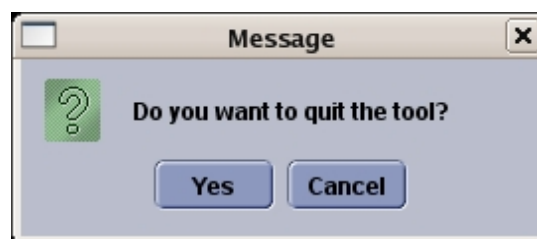
17. Select `All` to restore all items, and click [Update].
18. When the update is finished, the message 'Update is complete.' is displayed at the message area. Click [Quit].

Illustration 2-24: Guided Install - Restore Utility



19. Click [Yes] when the *Quit Tool* message (shown in [Illustration 2-25](#)) displays.

Illustration 2-25: Quitting Restore Manager



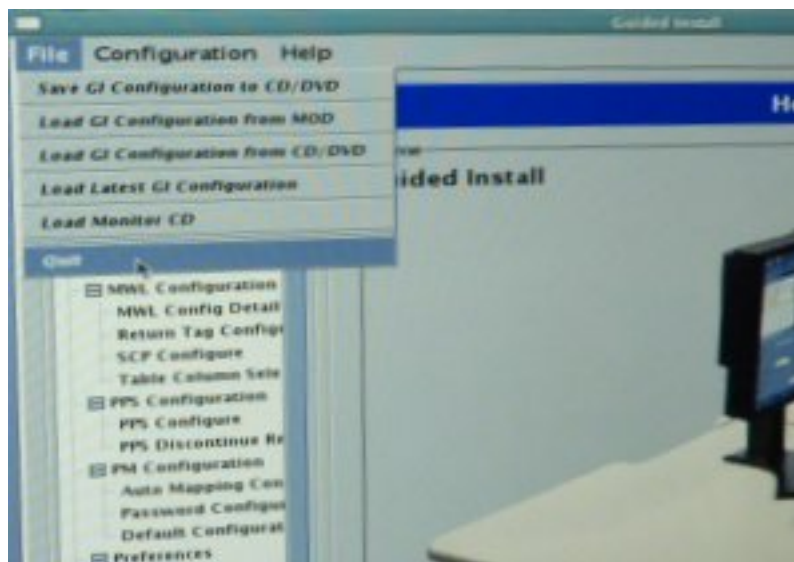
- The message shown in [Illustration 2-26](#)) confirms that a log file was created. Click [OK] to finish.
- The MR Applications software load is now complete.

Illustration 2-26: Log File



20. Quit the Guided Install by selecting 'File' -> 'Quit'

Illustration 2-27: Quit the Guided Install



21. Reboot the system, by selecting [Desktop] on the left corner of the monitor, then [Logout], then [Restart the computer], and then [OK]. (See [Illustration 2-28](#) and [Illustration 2-29](#))

Illustration 2-28: Log out

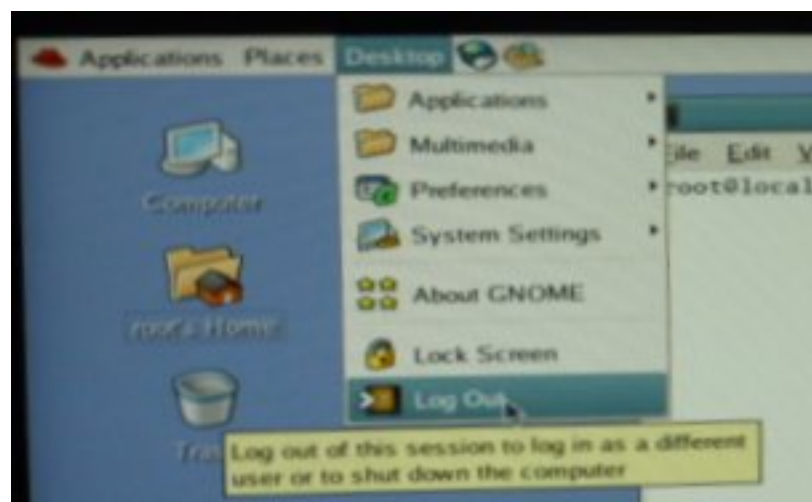
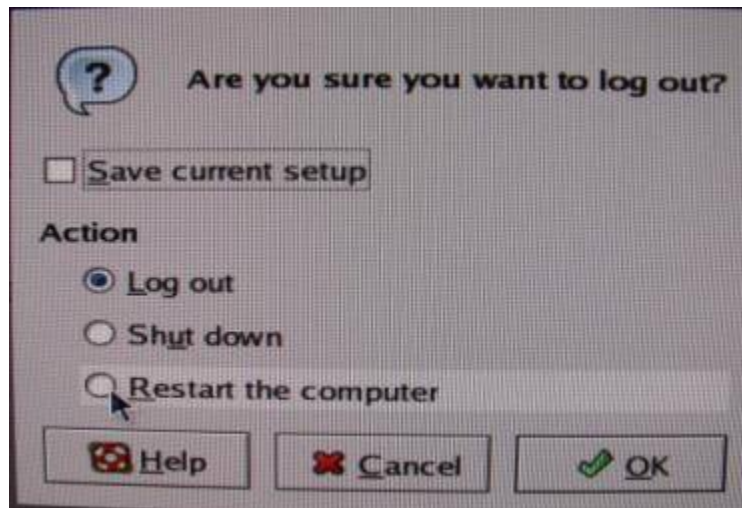
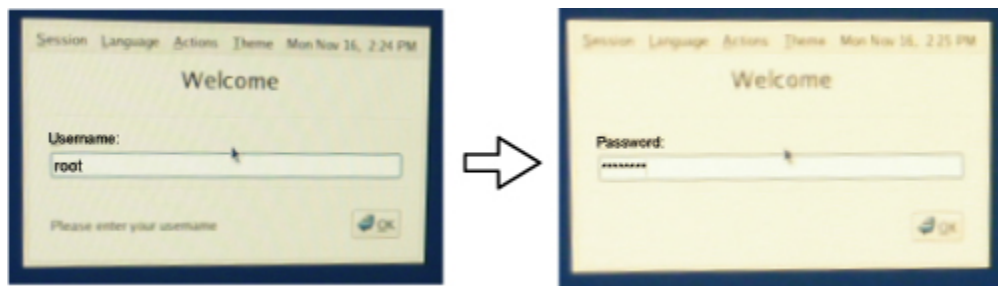


Illustration 2-29: Restart the computer



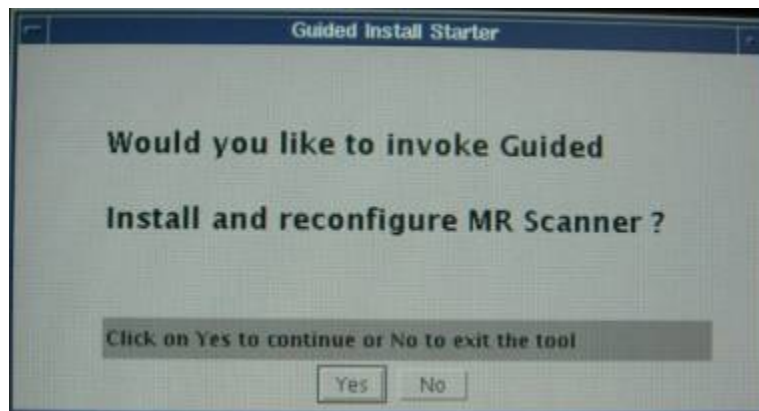
22. Log in to the system as [root] (password is [operator])

Illustration 2-30: Log in



23. The Guided Install Starter will pop up. Click [Yes] to start Guided Install. (See [Illustration 2-31](#))

Illustration 2-31: Guided Install Starter



24. Manually eject the DVD driver and remove the MR Applications DVD.

25. Proceed to [Section 1.4.3](#).

1.4.3 Loading and Configuring VRE Software

1. From the Guided Install interface left navigation menu, select VRE Configuration.
 - a. When the *VRE Configuration* screen (shown in [Illustration 2-32](#)) displays, verify VRE Blades are properly installed and all hardware connections are in place, including Ethernet connections.

Illustration 2-32: VRE Configuration Screen



- b. Click [Configure VRE Blades] shown in [Illustration 2-32](#).
2. When the Information window (shown in [Illustration 2-33](#)) displays, click [Continue] to confirm that the VRE Gigabit Switch Ethernet and Host Ethernet connections ([Illustration 2-34](#) or [Illustration 2-35](#)) are complete and correct.

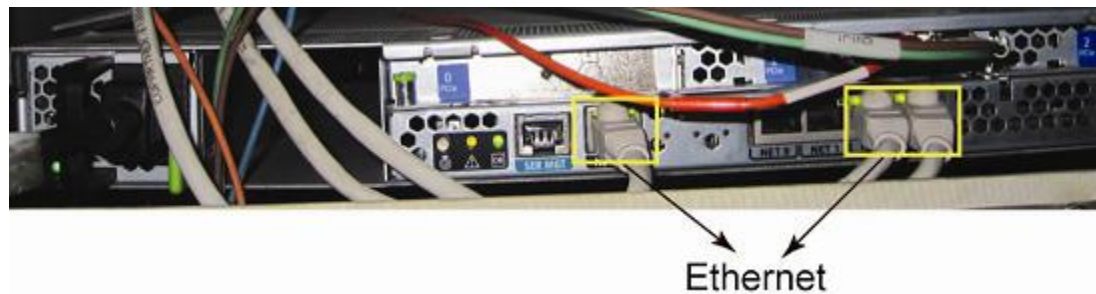
Illustration 2-33: Confirm VRE Installation



Illustration 2-34: VRE Gigabit Switch and Host Ethernet Connections (ICN 4100)

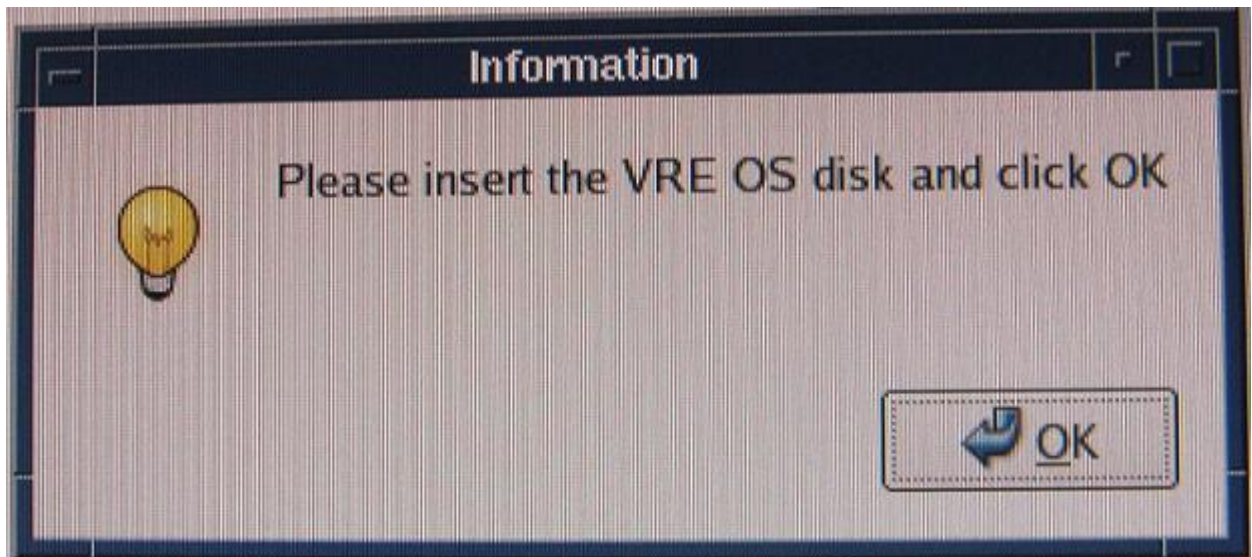


Illustration 2-35: VRE Gigabit Switch and Host Ethernet Connections (ICN 4170)



3. After M4 software, a pop-up message will prompt the user to insert the SV OpenSuse OS DVD for copying the ICN OS contents onto the hard drive. Insert the SV OpenSuse OS DVD into the DVD-ROM drive of the host computer and click [OK]. VRE configuration progress details will display while ICN OS contents are being copied. For M3 software, skip this step and perform next step.

Illustration 2-36: Insert DVD OS Disk Pop-Up



4. The system needs to be configured for 1 ICN. This procedure will take between 25-30 minutes.
 - A VRE Configuration Progress Details window shown in [Illustration 2-37](#) will display.
 - When VRE configuration is complete, a configuration Success message is displayed. Click [OK] to continue.

Illustration 2-37: VRE Configuration Progress Details

```
VRE configuration progress details
Starting VRE Installation and Configuration at: Thu Aug 27 22:48:25 CST 2009
VERBOSE reporting activated. Printing debug information.
Entering pre-detect phase:
MGD subnet is 10.0.1.0 / 255.255.255.0

Entering ICN detection phase:
Detect via NMAP

ICN discovery phase completed, detected following ICNs:
10.0.1.250 [ 00:21:28:10:1E:3F ]
Identified system type SunOEM for IPADDR 10.0.1.250

Entering ICN BMC validity check phase:
vrevalidtest: Checking ICN BMC validity...
We matched a valid ICN BMC configuration !

Entering pre_install phase:
Entering install phase:

Inserted logfile marker for NFS mount

Issuing IPMI chassis OFF command to device @ 10.0.1.250: Successful
Issuing IPMI chassis ON command to device @ 10.0.1.250: Successful
Setting ICN 10.0.1.250 to pxeboot: Successful

Waiting 360 seconds (max) for 1 NFS mount requests.
.....
10.0.1.253 [ 00:14:4f:ea:76:82 ]
Mount requests received in 110 seconds.

Inserted logfile marker for ICN OS load/reboot

Waiting 1200 (max) seconds for ICN OS load/reboot.
.....
10.0.1.253 [ 00:14:4f:ea:76:82 ]
10.0.1.252 [ 00:14:4f:ea:76:83 ]

DHCP IP/MAC list:
10.0.1.253 00:14:4f:ea:76:82
10.0.1.252 00:14:4f:ea:76:83

Waiting 30 seconds to allow ICNs to finish booting.
```

5. When the Information window confirms that the configuration is complete, click [OK].

1.4.4 Other software Installation

1. Insert the Service Software CD and click the [Service SW/InSite].

NOTE: This Instruction shows the procedure of Restricted Service Software Installation. For Advanced Service CD-ROM, install the software according to the Guidance of software installation. Do not forget to reboot the system after Service Software Installation.

NOTE: Restricted Service Software is only available for GE use; Advanced Service Software is only available to sites with a valid Advanced Service Package Limited License. GEHC Restricted Service Software should also configure InSite Interactive at this time (see [Illustration 2-39](#)). Follow the instructions given in windows as presented. For a more complete discussion on configuring the InSite package, see InSite/IIP (Service Methods/Software/InSite/IIP).

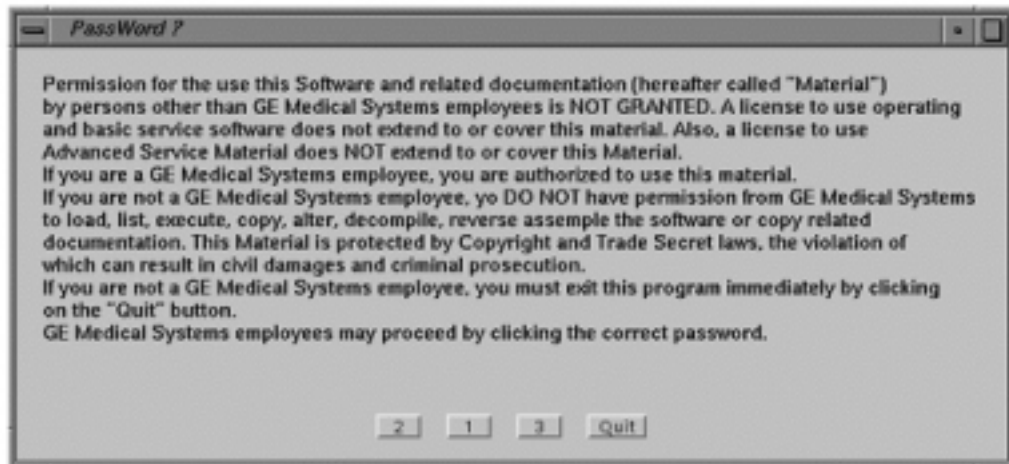
2. Select the [Load Restricted Software] or [Load Advanced Software] according to the type of CD-ROM.

Illustration 2-38: load restricted software



3. The system will respond with a window as shown in [Illustration 2-39](#). Read the proprietary statement and continue by sequentially clicking the “1,2,3” buttons and then click [OK].

Illustration 2-39: Proprietary Password Screen



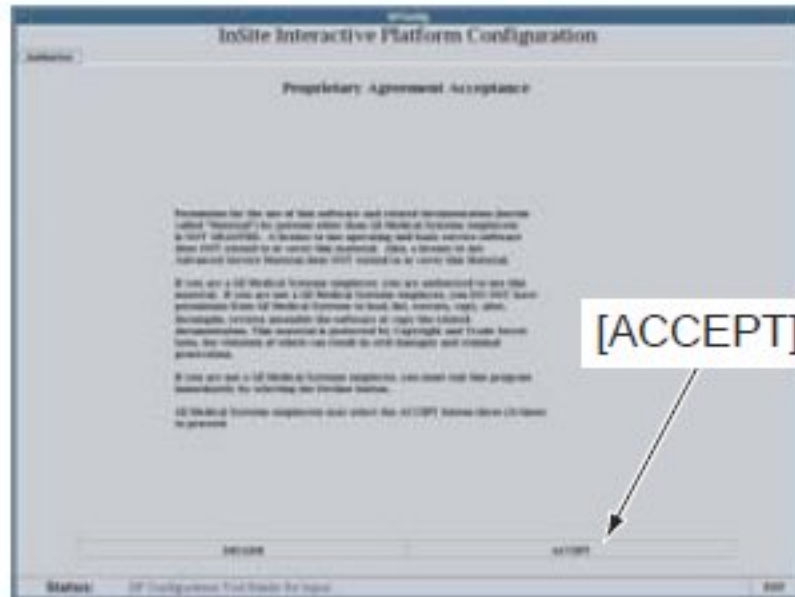
4. Click [OK] for the following message.

Illustration 2-40: Message for Advanced Software



5. Click [Accept] three times.

Illustration 2-41: [Accept] three times





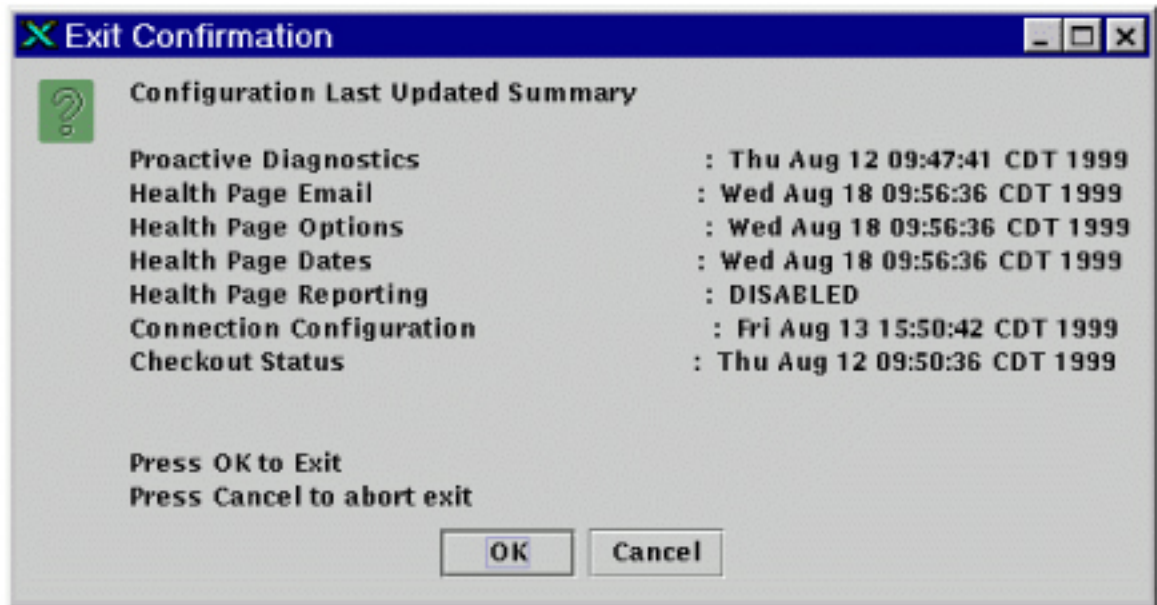
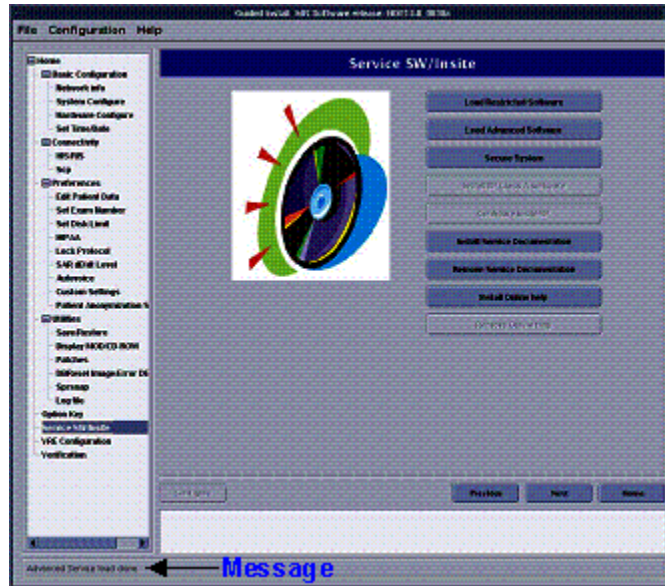
6.  Once IIP setup is done, click . An update summary is provided. See [Illustration 2-42](#). A valid date/time should be displayed for each function that you successfully configured. If any function shows “NO FILE”, that function was not properly configured.
7. Click [OK] to exit IIP Configuration Tool.

Illustration 2-42: Exit Confirmation Requester



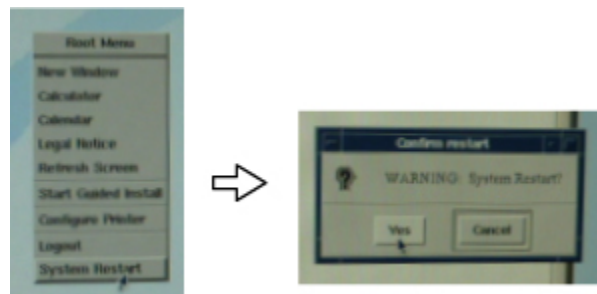
- Wait for the message “Restricted Service load done” in the Install GUI status bar (at the bottom of window).

Illustration 2-43: Message



- Remove Service Software CD from the system.
- Restart Linux PC by **right-clicking** on desktop, and then selecting [**system restart**]. Click [**Yes**] for the question ‘System Restart?’.

Illustration 2-44: Reboot the computer.



- You will need to enter the following login ID and password twice for system boot.

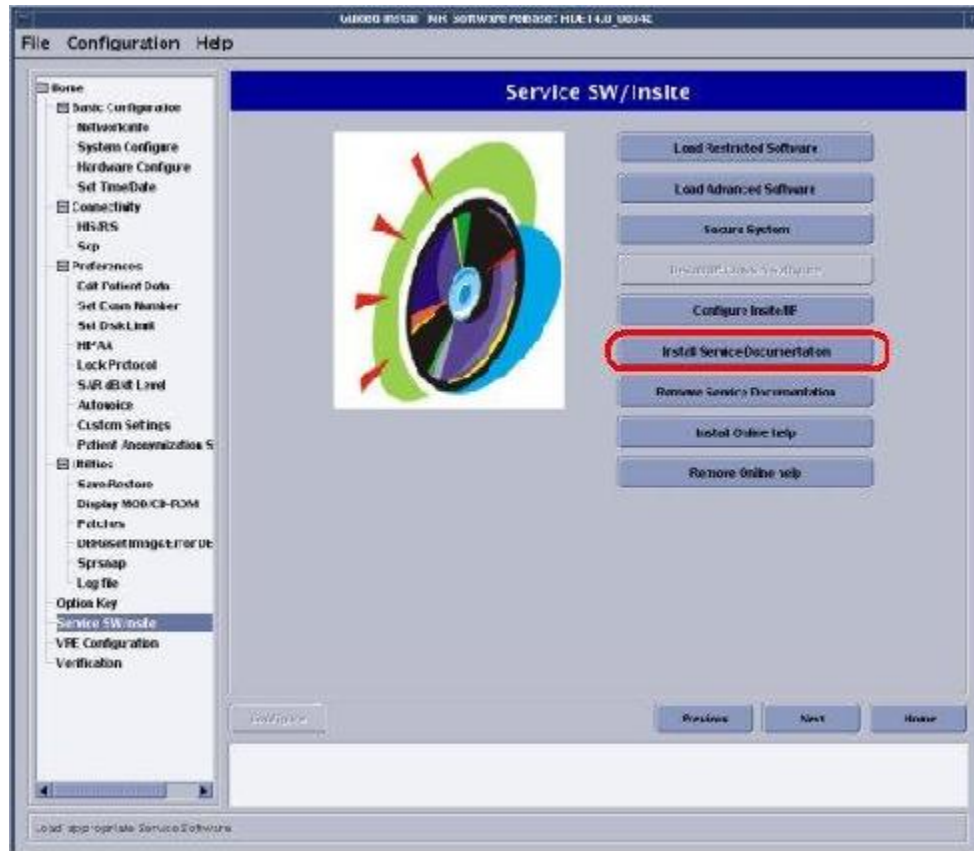
login ID: **signa**

Password: **adw2.0**

- Insert the Service Methods CD into the CD-ROM drive in the PC. Click on [Install Service Documentation]. See [Illustration 2-45](#).

NOTE: The Service Methods CD can be loaded onto the software platform. The load will take approximately 12 minutes to complete.

Illustration 2-45: Loading Service Documents To The Scanner



13. Select [Full CD].

Illustration 2-46: Message



14. Remove the Service Methods CD after installation is done.

15. Insert the Online Help DVD into the CD/DVD ROM drive in the PC. Click on [Install Online Help] Button.

Illustration 2-47: Loading Online Help



16. Click OK.

Illustration 2-48: message



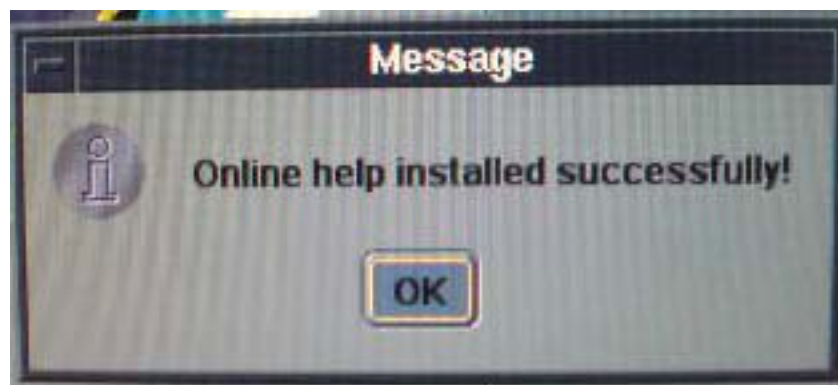
17. Select the language of Online Help and click [OK].

Illustration 2-49: Language Selection



18. Verify that the following message comes up. Then, click [OK].

Illustration 2-50: MESSAGE



19. After the installation of the Online help, remove the Online help DVD from PC.

20. If necessary, install option software.

NOTE: For installing the software using the e-licensing , refer to [Chapter 3, Signa Software Option Install with eLicense](#)

1.4.5 SaveInfo Procedure

1. Perform [Chapter 1, Save Info](#).
2. If verify info is not done yet, perform Verifying Save Restore Media.

1.5 Finalization

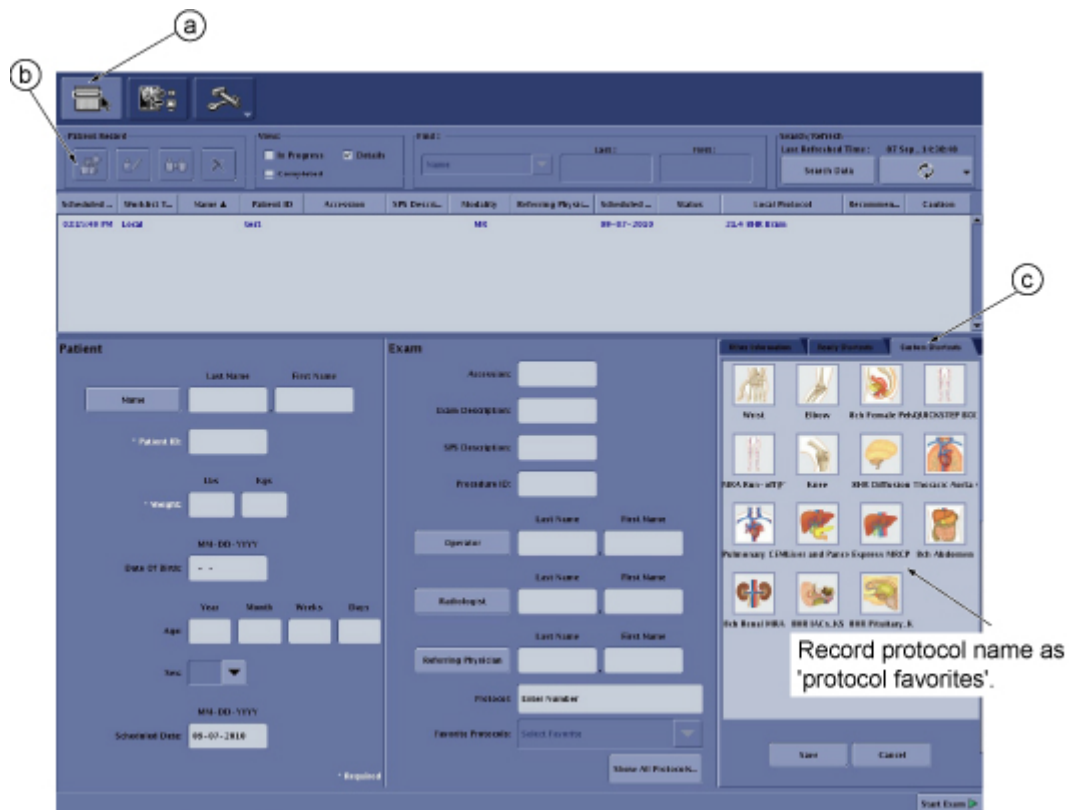
1. Restore IIP configuration data which was write down before Software installation.
2. Restore protocol and worklist favorite which was write down before Software installation. Refer to [How to record/restore protocol and worklist favorite](#).

2 How to record/restore protocol and work list favorite

2.1 How to record protocol and work list favorite

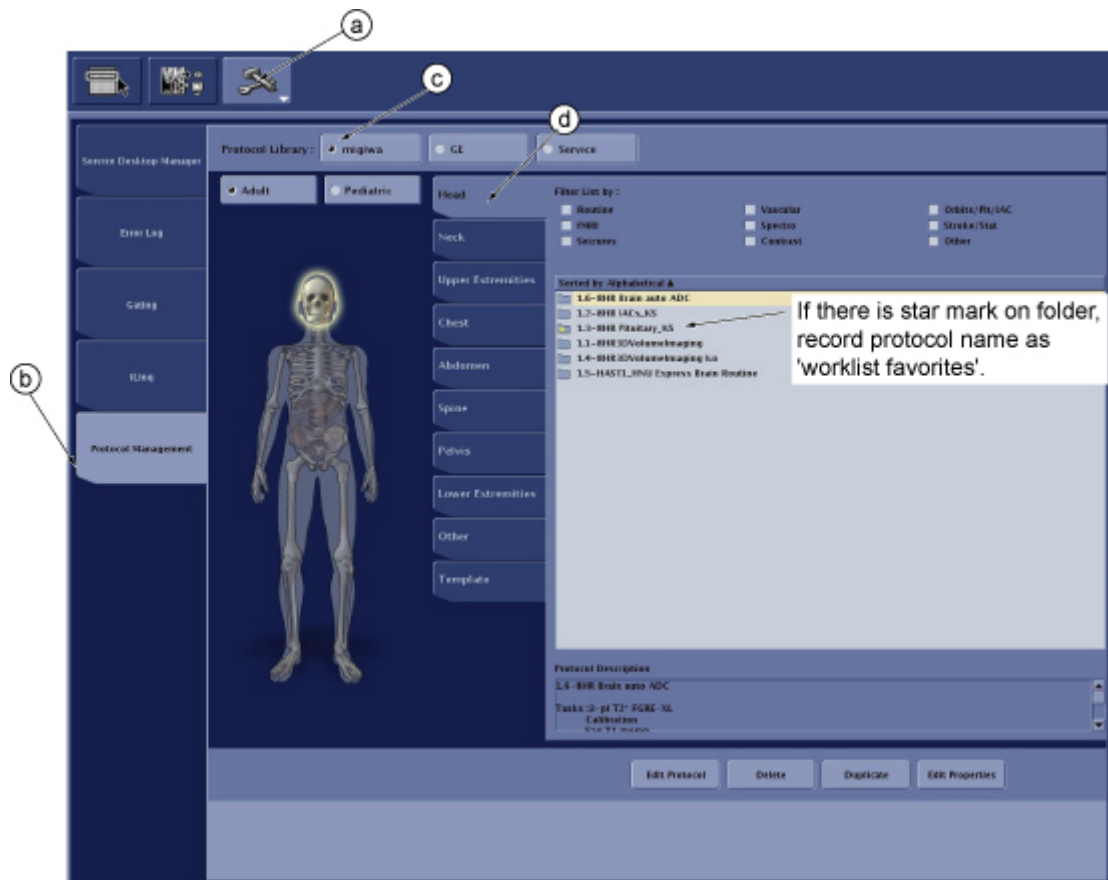
1. Record protocol favorite according to the following procedure.
 - a. Click Workflow manager Icon.
 - b. Click the New icon
 - c. Click Custom Protocols.
 - d. Record the protocol names listed as 'protocol favorites'.

Illustration 2-51: Record protocol favorite



2. Record work list favorite according to the following procedure.
 - a. Click Tool Icon.
 - b. Click Protocol Management.
 - c. Click Custom protocol library.
 - d. Select Tab from the top. This will be continued until the end of Tab.
 - e. Check the star mark on the folder icon. If star mark is found, record the protocol name. Go back to step d.

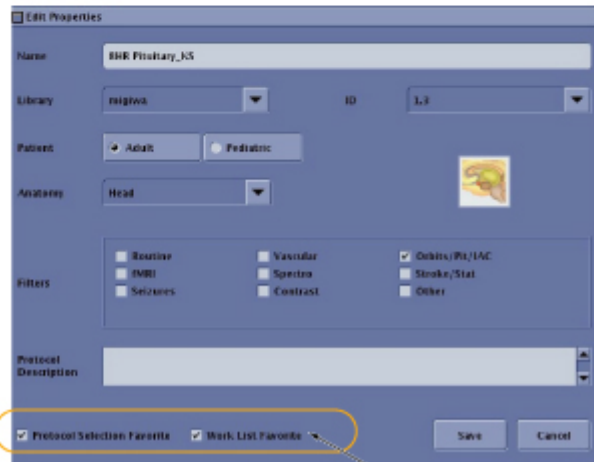
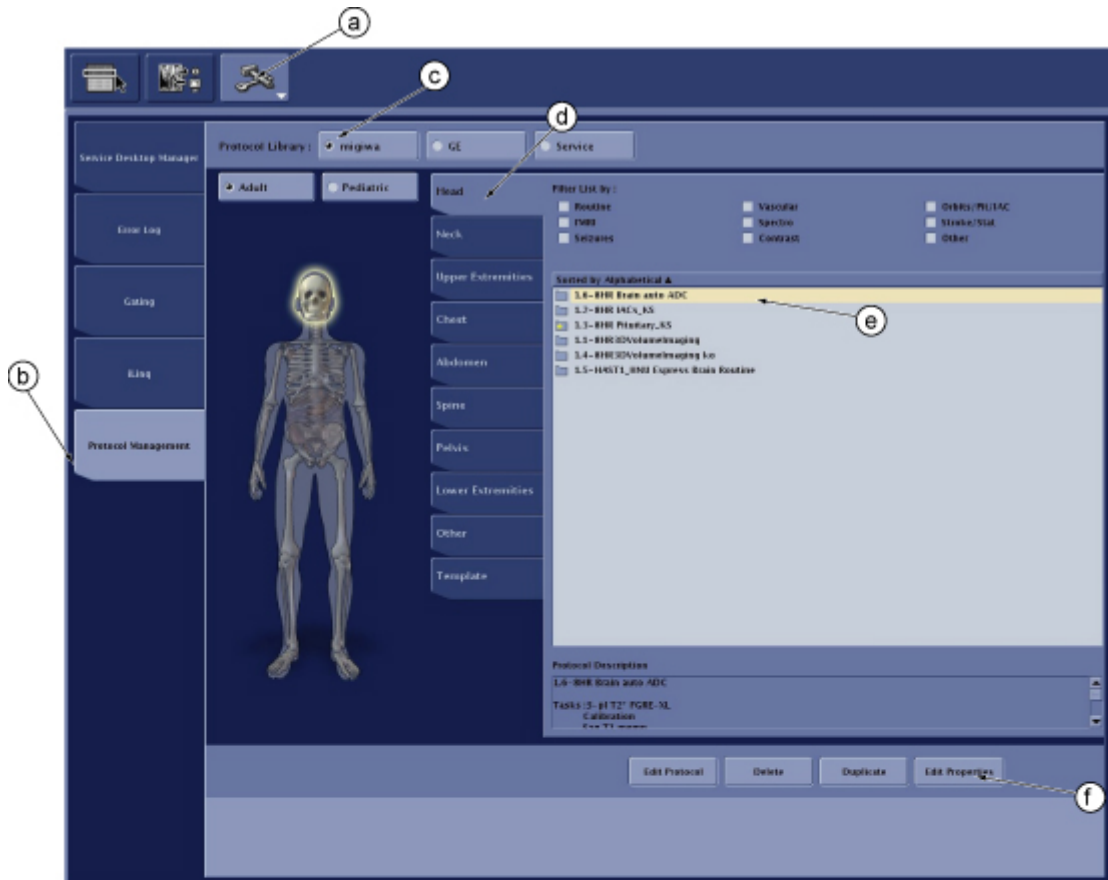
Illustration 2-52: Record work list favorite



2.2 How to restore protocol and work list favorite

1. Restore protocol and work list favorite according to the following procedure.
 - a. Click Tool Icon.
 - b. Click Protocol Management.
 - c. Click Custom protocol library.
 - d. Select Tab from the top. This will be continued until the end of Tab.
 - e. Select protocol which is listed as protocol favorites or work list favorites. This will be continued until the end of list in each tab.
 - f. Click on [Edit Properties].
 - g. Check 'Protocol selection favorite' or 'Work list favorite' according to the recorded list.
 - h. Go back to step e.
 - i. Go back to step d.

Illustration 2-53: Restore protocol and work list favorite



Check 'Protocol Selection Favorite' or 'Work List Favorite' according to the recorded list.

2. Reboot and login as sdc, Scan one exam to check if APP runs normally.

Chapter 3 Option Key Installation

1 Signa Software Option Installation From eLicense

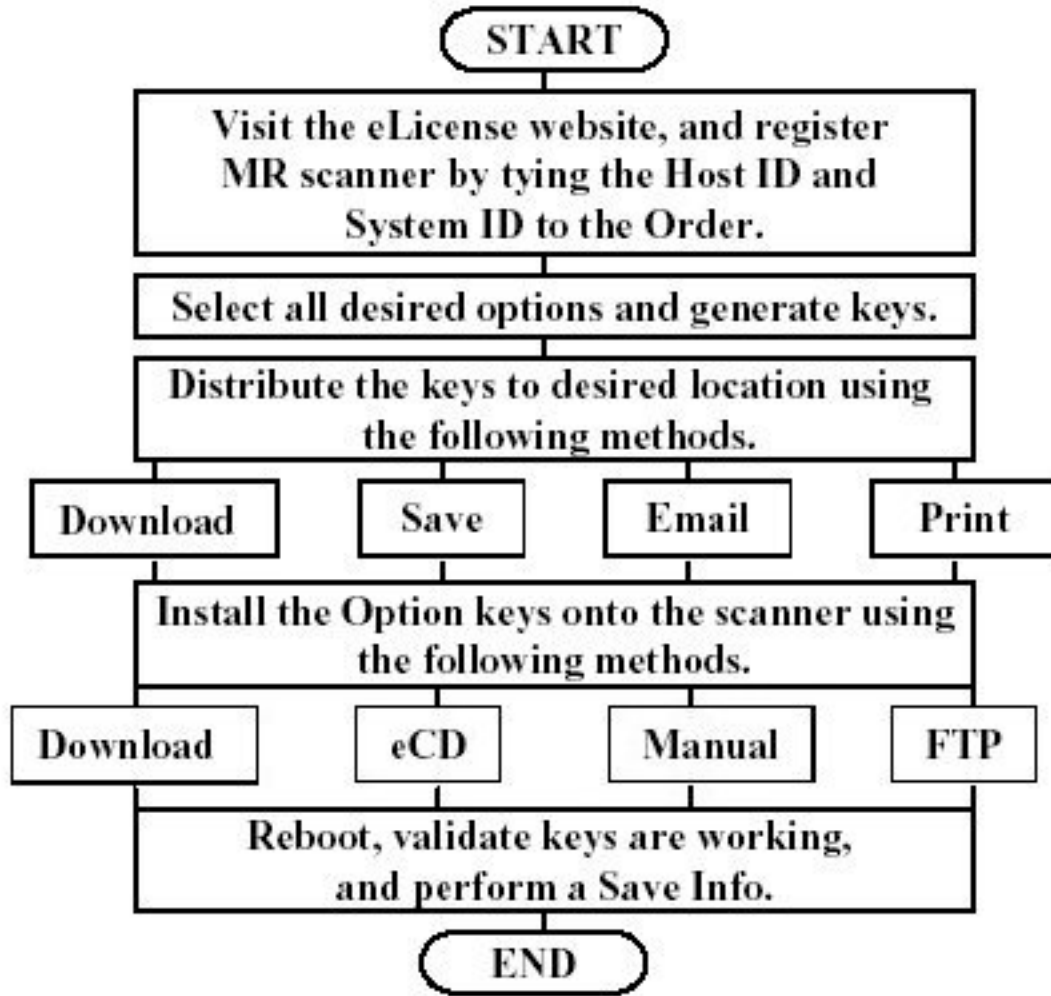
1.1 Personnel Requirements

Personnel Requirements	Preliminary Reqs	Procedure	Finalization
1	Not Applicable	30 mins	Not Applicable

1.2 Overview

This procedure describes how to generate and install software options using eLicense. eLicense allows the field to generate license keys for MR scanners, and removes the need to send out physical media for all options on the order. The first step in creating these option keys is to visit the eLicense website, and register the scanner. In order to access the eLicense website, the user must have a computer with connectivity, as well as a single sign-on account. The eLicense website can be accessed outside of the GE intranet, at <http://elicense.gehealthcare.com/elicense/>. The MR system must be tied to the global order number (GON), through the host id and system id of the scanner. Once this site information has been entered, the keys can be generated, and distributed by email, downloading, saving to an eCD, or printing. This file can then be installed on the system, through inSite download eCD, or manual entry. Illustration 1-1 shows the eLicense process flow. For additional information on how to generate and obtain these keys from the eLicense server, please refer to the “**eLicense User Guide**” under the **HELP** tab of the eLicense website.

Illustration 3-1: PROCESS FLOW OF OPTION KEY GENERATION



1.3 Preliminary Requirements

1.3.1 Safety



NOTICE

Please remove the following Brivo option keys before install Option keys.
 Table 3-1: Brivo option keys list

Option Catalog	Options Activated	Customer Protocol
M50002DM	brivoM	CONFIG SW FOR BRIVO Basic
M50002DN	brivoK	CONFIG SW FOR BRIVO KNEE
M50002DP	brivoS	CONFIG SW FOR BRIVO SHLDR
M50002DR	brivoP	CONFIG SW FOR BRIVO PREM

1.4 Procedure

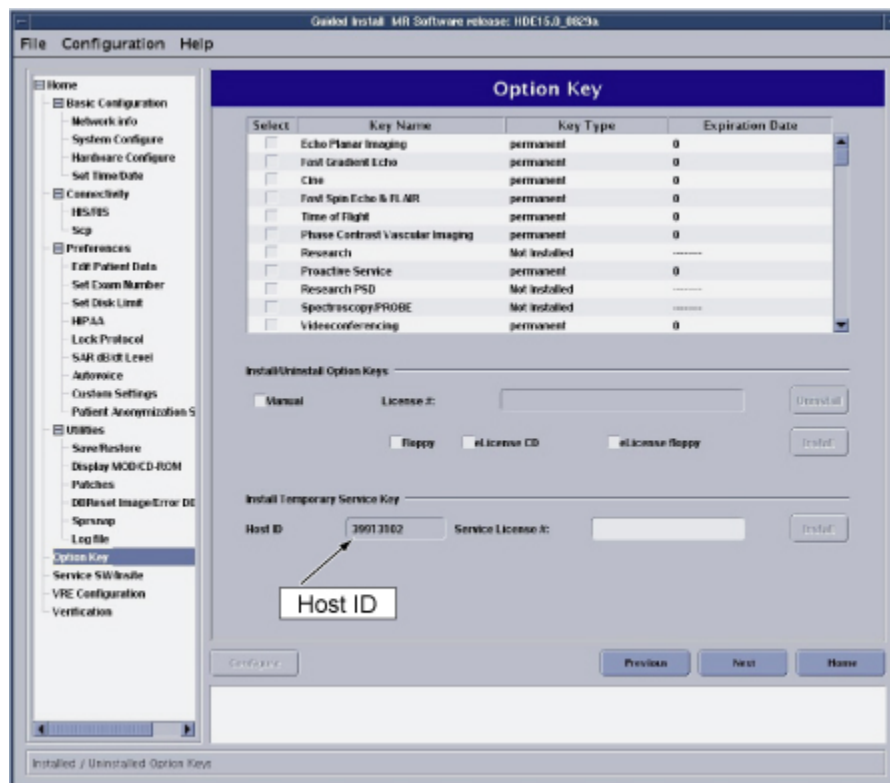
1.4.1 Create Licenses

This feature is used to create option keys for a new or existing system based on an order. To create new licenses, the user must have the order number(s) that contain the options ordered, as well as the host id and system id of the system. The host id is the MAC address of the network card.

1.4.1.1 Obtaining the System's Host ID

1. Select the [Service Tools Desktop].
2. Select [Guided Install] from the Service Desktop Manager and press [Start...] to open Guided Install.
3. A command window will open with "Type Root Password" displayed. Type the system's root password and then press the [Enter] key. "operator" is the Signa default root password. If, for your site, the customer has changed the root password, you will have to obtain the correct root password from the customer.
4. Once the Guided Install window opens, select the Option Keys tab. The host ID will be listed towards the bottom under the Install Temporary Service Key section. See [Illustration 3-2](#).

Illustration 3-2: GUIDED INSTALL WINDOW WITH HOST ID



- Another method of obtaining the host ID is to type “sysinfo” at a command prompt. The host ID will be returned.

NOTE: “hostid” is NOT the valid command to get your Host ID. This will cause an error when trying to generate keys, due to the incorrect host id. You MUST use the methods listed above to get a valid id.

1.4.1.2 Adding a System to an Order

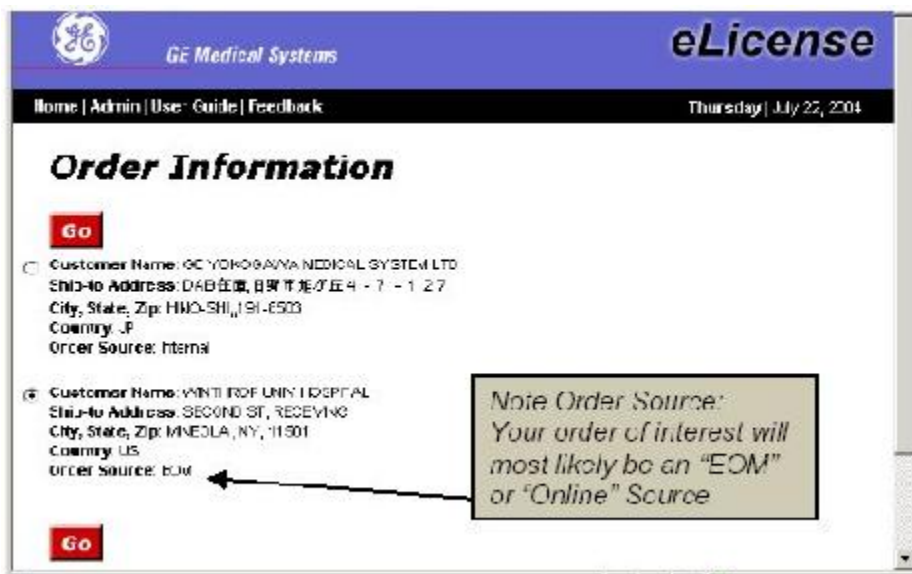
- Go to the eLicense website <http://elicense.gehealthcare.com/> and log on using your single sign-on username and password.
- From the eLicense home page, enter the order number into the **Order Number** box and select **[Go]**. See [Illustration 3-3](#). This will pull up the order associated with the number entered from the eOM system. The order number may be a new global order number, or an FDO number, depending on when the order was placed. This number will be listed on the packing slip included with the order.

Illustration 3-3: ELICENSE HOME PAGE

The screenshot shows the eLicense home page with two main sections: **Order Management** and **System Configuration**. In the **Order Management** section, there is a text input field labeled "Order Number" containing "2041000" and a red "Go" button next to it. Below this, there are examples of order numbers: "1234-567890" and "1234 567890". In the **System Configuration** section, there is a text input field for "Host ID" and a "Choose Modality" dropdown menu with a "Go" button. A callout box with a blue border and white background points to the "Order Number" field, containing the text: "Note format options: FDO Number or new Oracle order #".

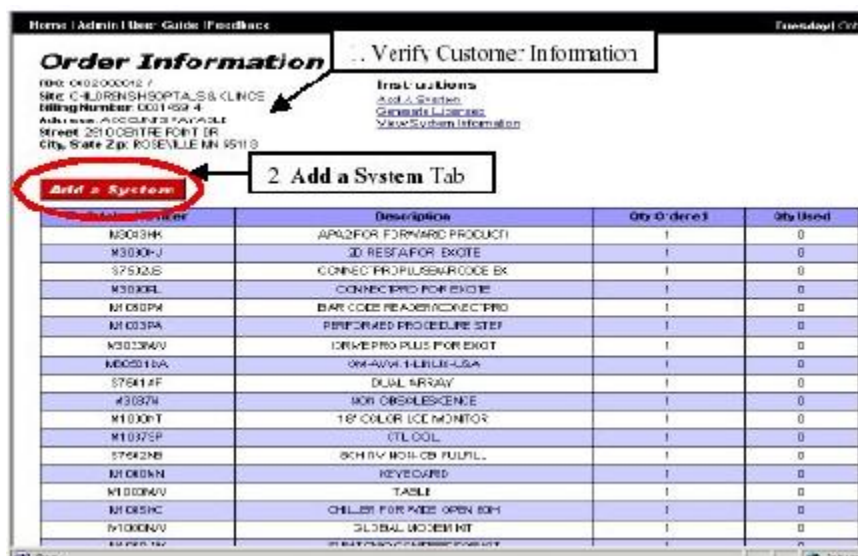
- It is possible that the order number is not unique to your customer. If this is the case, a screen will pop up listing all matching sites. [Illustration 3-4](#) shows this Site Selection screen. Select the radial button next to the desired system and select **[Go]**. This will pull up the order and take you to [Illustration 3-5](#). If the order number is unique, eLicense will automatically bring up the order and take you to the Order Information Screen.

Illustration 3-4: ELICENSE HOME PAGE



4. Verify that the Customer Information at the top left of the screen is the correct customer you are visiting.
5. Select the [Add a System] button to tie the order to a specific system. See Illustration 3-5.

Illustration 3-5: ORDER INFORMATION PAGE



6. Enter the Host ID obtained in Section 1.4.1.1, select Host ID, and select the MR modality. Then select [Go]. See Illustration 3-6.

Illustration 3-6: ENTER SYSTEM INFORMATION POPUP

Enter System Information

Host ID

- 7. Another popup will appear requesting additional information for this system. Select the "OptimaMR360" as **Model Type** of the system, and enter in the **System ID**. MR is currently leaving the **Serial Number** field blank. See [Illustration 3-7](#).

Illustration 3-7: ADD NEW SYSTEM POPUP

Add New System

Your search did not return any results. Enter the details for this system here, or close this window to perform a new search.

* Modality: MR
 * Model Type:
 Serial Number:
 * Host ID: 0384924
 System ID:
 USN:

- 8. The Order Information screen will reappear, with a new column for the added system. All items on the order that correspond to an option key for the selected Model Type will have a radial checkbox next to it. See [Illustration 3-8](#).

Illustration 3-8: GENERATING LICENSES FROM ORDER INFORMATION SCREEN

Order Information
 FIC: 000002572 /
 Site: CHILDRENS HOSPITAL SA CLINIC
 Billing Number: 000146214
 Address: 30 COLLETS DRIVE
 Street: 2110 CENTRE POINT DR
 City, State Zip: ROSEMILLIS MN 55113

Instructions
 Add A System
 Generate Licenses
 View System Information

3. Generate Licenses key

2. Check All button

1. Checkbox

Host: 0384924	Description	Qty Ordered	Qty Used
<input type="checkbox"/>	M0020K	1	0
<input type="checkbox"/>	M0020K1	1	0
<input type="checkbox"/>	S7502J5	1	0
<input type="checkbox"/>	M0020K2	1	0
<input type="checkbox"/>	M0020K3	1	0
<input type="checkbox"/>	M0020K4	1	0
<input type="checkbox"/>	M0020K5	1	0
<input type="checkbox"/>	M0020K6	1	0
<input type="checkbox"/>	M0020K7	1	0
<input type="checkbox"/>	M0020K8	1	0
<input type="checkbox"/>	M0020K9	1	0
<input type="checkbox"/>	M0020K10	1	0
<input type="checkbox"/>	M0020K11	1	0
<input type="checkbox"/>	M0020K12	1	0
<input type="checkbox"/>	M0020K13	1	0
<input type="checkbox"/>	M0020K14	1	0
<input type="checkbox"/>	M0020K15	1	0
<input type="checkbox"/>	M0020K16	1	0
<input type="checkbox"/>	M0020K17	1	0
<input type="checkbox"/>	M0020K18	1	0
<input type="checkbox"/>	M0020K19	1	0
<input type="checkbox"/>	M0020K20	1	0
<input type="checkbox"/>	M0020K21	1	0
<input type="checkbox"/>	M0020K22	1	0
<input type="checkbox"/>	M0020K23	1	0
<input type="checkbox"/>	M0020K24	1	0
<input type="checkbox"/>	M0020K25	1	0
<input type="checkbox"/>	M0020K26	1	0
<input type="checkbox"/>	M0020K27	1	0
<input type="checkbox"/>	M0020K28	1	0
<input type="checkbox"/>	M0020K29	1	0
<input type="checkbox"/>	M0020K30	1	0
<input type="checkbox"/>	M0020K31	1	0
<input type="checkbox"/>	M0020K32	1	0
<input type="checkbox"/>	M0020K33	1	0
<input type="checkbox"/>	M0020K34	1	0
<input type="checkbox"/>	M0020K35	1	0
<input type="checkbox"/>	M0020K36	1	0
<input type="checkbox"/>	M0020K37	1	0
<input type="checkbox"/>	M0020K38	1	0
<input type="checkbox"/>	M0020K39	1	0
<input type="checkbox"/>	M0020K40	1	0
<input type="checkbox"/>	M0020K41	1	0
<input type="checkbox"/>	M0020K42	1	0
<input type="checkbox"/>	M0020K43	1	0
<input type="checkbox"/>	M0020K44	1	0
<input type="checkbox"/>	M0020K45	1	0
<input type="checkbox"/>	M0020K46	1	0
<input type="checkbox"/>	M0020K47	1	0
<input type="checkbox"/>	M0020K48	1	0
<input type="checkbox"/>	M0020K49	1	0
<input type="checkbox"/>	M0020K50	1	0
<input type="checkbox"/>	M0020K51	1	0
<input type="checkbox"/>	M0020K52	1	0
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<input type="checkbox"/>	M0020K54	1	0
<input type="checkbox"/>	M0020K55	1	0
<input type="checkbox"/>	M0020K56	1	0
<input type="checkbox"/>	M0020K57	1	0
<input type="checkbox"/>	M0020K58	1	0
<input type="checkbox"/>	M0020K59	1	0
<input type="checkbox"/>	M0020K60	1	0
<input type="checkbox"/>	M0020K61	1	0
<input type="checkbox"/>	M0020K62	1	0
<input type="checkbox"/>	M0020K63	1	0
<input type="checkbox"/>	M0020K64	1	0
<input type="checkbox"/>	M0020K65	1	0
<input type="checkbox"/>	M0020K66	1	0
<input type="checkbox"/>	M0020K67	1	0
<input type="checkbox"/>	M0020K68	1	0
<input type="checkbox"/>	M0020K69	1	0
<input type="checkbox"/>	M0020K70	1	0
<input type="checkbox"/>	M0020K71	1	0
<input type="checkbox"/>	M0020K72	1	0
<input type="checkbox"/>	M0020K73	1	0
<input type="checkbox"/>	M0020K74	1	0
<input type="checkbox"/>	M0020K75	1	0
<input type="checkbox"/>	M0020K76	1	0
<input type="checkbox"/>	M0020K77	1	0
<input type="checkbox"/>	M0020K78	1	0
<input type="checkbox"/>	M0020K79	1	0
<input type="checkbox"/>	M0020K80	1	0
<input type="checkbox"/>	M0020K81	1	0
<input type="checkbox"/>	M0020K82	1	0
<input type="checkbox"/>	M0020K83	1	0
<input type="checkbox"/>	M0020K84	1	0
<input type="checkbox"/>	M0020K85	1	0
<input type="checkbox"/>	M0020K86	1	0
<input type="checkbox"/>	M0020K87	1	0
<input type="checkbox"/>	M0020K88	1	0
<input type="checkbox"/>	M0020K89	1	0
<input type="checkbox"/>	M0020K90	1	0
<input type="checkbox"/>	M0020K91	1	0
<input type="checkbox"/>	M0020K92	1	0
<input type="checkbox"/>	M0020K93	1	0
<input type="checkbox"/>	M0020K94	1	0
<input type="checkbox"/>	M0020K95	1	0
<input type="checkbox"/>	M0020K96	1	0
<input type="checkbox"/>	M0020K97	1	0
<input type="checkbox"/>	M0020K98	1	0
<input type="checkbox"/>	M0020K99	1	0
<input type="checkbox"/>	M0020K100	1	0

9. Select all options that must be generated for the system, or select [Check All] if there is only one system on the order, and all options will be placed on it.
10. Select the [Generate Licenses] Button.
11. Read through the selected options, customer information, and system information. If all is correct, select [Confirm Selection]. See [Illustration 3-9](#).

Illustration 3-9: CONFIRM KEY GENERATION SCREEN

Order Information

Site: CHILDRENS HOSPITALS & CLINICS
 FID: 0002002612
 Order Date: 2003-09-30
 Billing Number: 000146214
 Address: ACCOUNTS PAYABLE
 Street: 2910 CENTRE POINT DR
 City, State Zip: ROSEVILLE MN 55113

PRODUCT	ASSIGNED CATALOG ITEMS	
	Catalog No.	Description
Host : 0384824 System : 023456NR Modality : MR Model Type : Excbt11	M3080PL	CONNECTPRO FOR EXCTE

Buttons: Confirm Selection(s) Back

Callout: Confirm Selection key

12. The license information will be displayed on the Order Information screen. All options that have been generated will have a key displayed next to it in the system column. By placing the mouse over the key symbol, the option string can be seen. See [Illustration 3-10](#).

Illustration 3-10: CONFIRM KEY GENERATION SCREEN

Order Information

FID: 0002002612
 Site: CHILDRENS HOSPITALS & CLINICS
 Billing Number: 000146214
 Address: ACCOUNTS PAYABLE
 Street: 2910 CENTRE POINT DR
 City, State Zip: ROSEVILLE MN 55113

Instructions: Call Us, Generate Licenses, View System Information

Buttons: Add a System, Generate Licenses

Host : 0384824 System : 023456NR Modality : MR Model Type : Excbt11	Catalog Number	Description	Qty Ordered	Qty Used
<input type="checkbox"/> Check All	M30330C	APAZ FOR FORWARD PRODUCT		
	M3030KJ	2D MESTA FOR EXCTE		
	S7500JS	CONNECTPRO PLUS BAR CODE EK	1	0
	M3080PL	CONNECTPRO FOR EXCTE	1	1
isrs permanent 0 1c7ba993ct366470d0809		BAR CODE READER/CONNECTPRO	1	0
		PERFORMED PROCEDURE STEP	1	0
	M3030MV	DRIVE PRO PLUS FOR EXCT	1	0
	M3030CA	CM-APAZ-L-PLUS-USA	1	0
	S7501A*	DUAL ARRAY	1	0
	M3087H	NON OBSOLESCENCE	1	0

Callouts: Option Generated Key, Quantity available & used

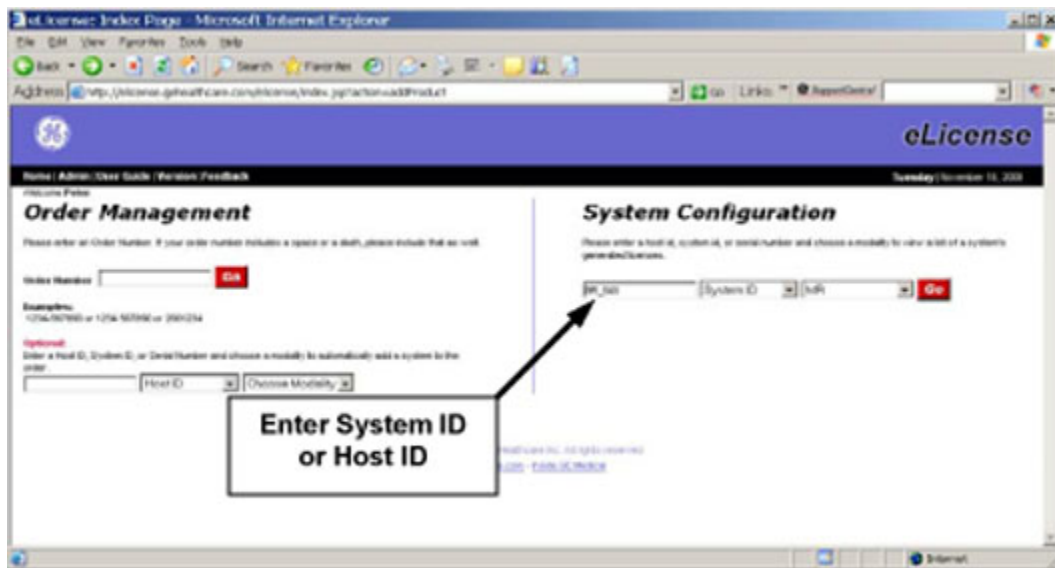
1.4.1.3 Adding a System to an Order (For Upgrades)

1. Go to the eLicense website <http://elicense.gehealthcare.com> and log on using your single sign-on username and password.

- From the eLicense homepage, enter the System ID, select **System ID** from the drop-down menu and **MR** for the modality as shown below. Next, select [Go]. (If the System ID is not associated with keys in eLicense, select [Host ID] from the pull-down and enter the Host ID of the original computer. To determine the Host ID of the system, open a C-shell and type `sysinfo`. Also, the original order number can be used if known, but not the new order number.)

NOTE: It is important to locate all of the option keys prior to creating new keys on upgrades. Older system types like Signa LX do NOT have option keys in eLicense.

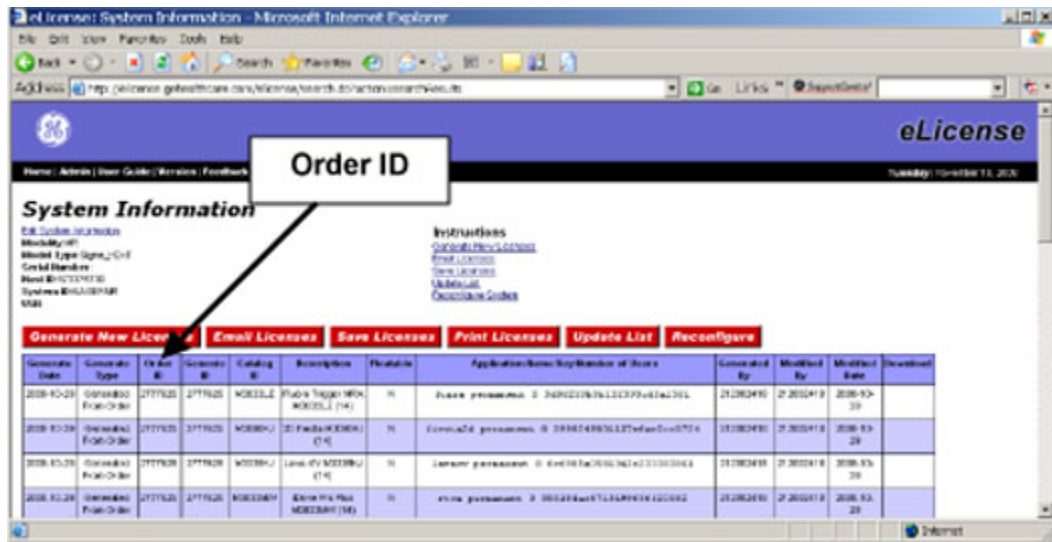
Illustration 3-11: Order Management/System Configuration Screen



- When the screen shown below opens, record the Order Number(s) that display.

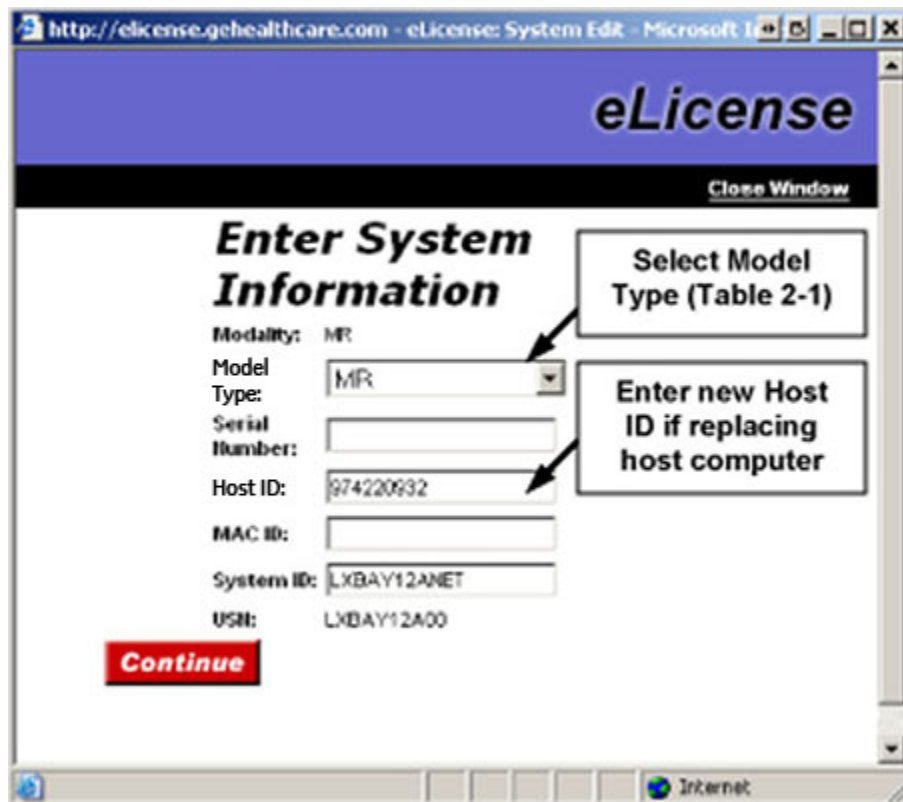
NOTE: The `Order ID` column contains all of the order numbers of any key created for the system. It is good practice to record these numbers prior to doing the upgrade.

Illustration 3-12: Record Order Number(s)



4. Select Edit System Information.
5. Select the Model Type for the system from the drop-down menu.

Illustration 3-13: Enter System Information



NOTE: If the Host computer is being replaced, delete the Host ID in the *Edit System Information* GUI, and enter the new one. Do NOT transfer the NIC card to the new computer. All previous option keys are automatically regenerated with the Host ID.

6. Select [Continue] on the GUI.
7. Select [Generate Licenses] on the *eLicense* GUI.

NOTE: Never select the [Reconfigure] button. It can erase all option keys if selected.

8. Enter the New/Upgrade Order Number recorded in step 3 (above).

There should be additional Options noted as shown below.

Illustration 3-14: Additional Options

	Option Code	Description			
<input type="checkbox"/>	M03394C	1.5T 8CH BODY (HD-PLUG)	N	1	0
<input type="checkbox"/>	B03369J	FRS-EX-HEP 8 CH HW/UX	N	1	1
<input type="checkbox"/>	B03397C	1.5T 8CH CLIND PLUS/COIL	N	1	0
<input type="checkbox"/>	M0340AA	CLDC	N	1	0
<input type="checkbox"/>	M0340AC	IDEAL FOR VS 8	N	1	0
<input type="checkbox"/>	M0340AF	15.0 SOFTWARE W/IDEAL/CLDC	N	1	0
	FR MR /URC SERVICE	FR MR /URC SERVICE	N	1	0
	SP02TZ	MR ACCESSORIES KIT	N	1	0
	SP030AZ	HEX DESKTOP COLLECTOR	N	1	0

9. Click on the new options, and select [Generate Licenses].

1.4.1.4 View existing licenses for a system

A list of licenses previously generated for a system can be retrieved by searching from the eLicense homepage.

1. Go to the eLicense website <http://elicense.gehealthcare.com/elicense/> and log on using your single sign-on username and password.
2. From the eLicense home page, enter the System ID or Host ID and modality, in the **System Configuration** portion of the web page, and select [Go]. This will bring up the **System Information** page, which lists all the options that have been generated for that system. Other information shown is Generate Date, Order ID, License information, and the SSO of the user who generated the option keys.

Illustration 3-15: System Information Screen

System Information

[Edit System Information](#)
 Modality: MR
 Model Type: Excite11
 Serial Number:
 Host ID: 0304924
 System ID: 023456MR
 USN:

Instructions
[Generate New Licenses](#)
[Email Licenses](#)
[Save Licenses](#)
[Update List](#)
[Reconfigure System](#)

Generate New Licenses **Email Licenses** **Save Licenses** **Print Licenses** **Update List** **Reconfigure**

Generate Date	Generate Type	OCP	CSS Order ID	Genesis ID	Catalog ID	Description	License Text	Generated By	Download
2003-10-07	Generated From Order	0002	002612		M3090PL	ConnecPro (Excite 11.0)	hisris permanent 0 1c7ba4953c13e6d470d00309	212012346	

- An alternative method for retrieving a list of existing licenses is to enter the Global Order Number in the **Order Management** section and click [Go]. (As long as keys were created, the System ID or Host ID that it is tied to can be found. On the *Order Assignment* screen shown below, locate the proper System ID, and select [Details].)

Illustration 3-16: Order Assignment Details Screen

Order Assignment

Order: 271266
 Order ID: 1271001
 Site: COP REGIONAL HOSPITAL
 Address: COP REGIONAL HOSPITAL
 Street: 32218 WIRTH ST
 City/State/Cp: CORONADO, CA, 92014
 Country: US

Instructions
[Edit System](#)
[Email Licenses](#)
[View System Information](#)

Add a System **Generate Licenses**

Model	System	Serial Number	Modality	Model Type	Catalog Number	Description	Available	Qty Ordered	Qty Used
Model: M3090PL	System: 271266	Serial Number:			27119842	LOGIC APPL/ONLINE NEWS & CAP MPTS	Y	1	0

Locate System ID and select DETAILS

1.4.2 Distributing Licenses

- There are currently four methods of distributing license keys once they have been generated at the eLicense server; email, save, print, or download via inSite. The distribution methods are accessible on the **System Information** page of eLicense. This page can either be accessed by following [Section 1.4.1.4](#) of this document, or, by selecting the **[Detail]** button from the **Order Information** screen. See [Illustration 3-17](#).

Illustration 3-17: System Information Screen

System Information

[Edit System Information](#)
 Modality: MR
 Model Type: Excite11
 Serial Number:
 Host ID: 0304924
 System ID: 023456MR
 USN:

Instructions
[Generate New Licenses](#)
[Email Licenses](#)
[Save Licenses](#)
[Update List](#)
[Reconfigure System](#)

Generate New Licenses **Email Licenses** **Save Licenses** **Print Licenses** **Update List** **Reconfigure**

Generate Date	Generate Type	OCP	CSS Order ID	Genesis ID	Catalog ID	Description	License Text	Generated By	Download
2003-10-07	Generated From Order	0002	002612		M3090PL	ConnecPro (Excite 11.0)	hisris permanent 0 1c7ba4953c13e6d470d00309	212012346	

1.4.2.1 Email Licenses

The license file can be e-mailed to any e-mail address. Then, save this file to a floppy disk or CD, print it, or send it via FTP to the target system following the steps in Section 4.

1. From the **System Information** screen, select **[Email Licenses]**.
2. The **Email License Keys** popup will appear, as shown in [Illustration 3-18](#).

Illustration 3-18: Email License Keys Pop-Up

Email License Keys Close Window

Continue

Email recipients will receive an email copy of the Product Licenses when you select the "Email Licenses" option on the "System Information" page. To select email recipients, use the following procedure:

1. Type in all or part of your person's name (or mail list name) in the search boxes below and click "Search"
2. Look for the email address in the list of search results. If it doesn't appear, check the spelling or try the first couple of letters of their first and last name (or mail list name).
3. Click on the link that corresponds to the email address you wish to add.

Email Recipients	
Eadie.Emuh@med.ge.com	Delete

Address: **Add** - OR - First: Last: Name: **Search**

2. Email Address Add **1. GE Email Search** **3. Continue key**

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3. Additional e-mail can be added to this message.

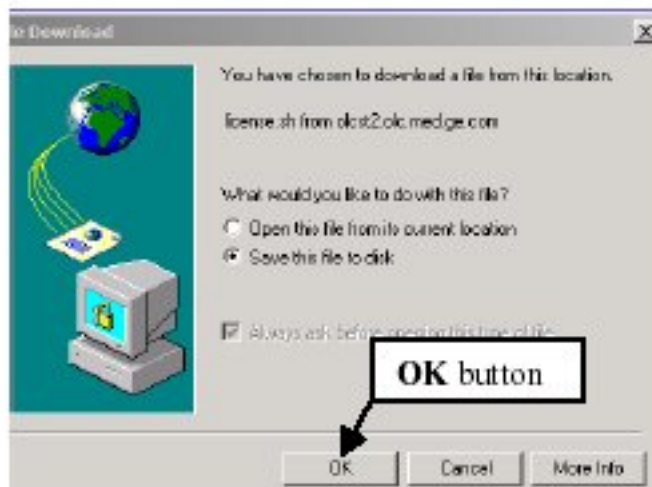
- a. If the recipient is a GE employee, enter their first and last name, and then click [Search]. Select the name you want from the list.
 - b. If the e-mail address is an external address, type it in the **Address** field, and click [Add].
4. To remove unwanted addresses, click [Delete].
 5. When all recipients are added, click [Continue].
 6. A verification window displays. Click [Close Window] in the upper right corner.

1.4.2.2 Saving Licenses to a Disk

You can save the license file to a floppy disk for installation via Guided Install on the scanner. The file can also be saved to the hard drive, and later transferred to a disk, printed, or sent via FTP to the scanner.

1. From the *System Information* screen, click [Save Licenses].
2. On the *File Download* screen, select [Save this file to disk] and click [OK]. (Shown below.)

Illustration 3-19: File Download Screen



3. At the **Save As** screen will appear, allowing you to select the destination of the license file. See [Illustration 3-20](#).
 - a. If saving to a disk, insert a disk into the computer's drive and select the drive from the menu.
4. The filename must be `license.sh`. The software looks for this exact name.

NOTE: Windows will try to change the filename to `license.txt`. You must ensure that the file name is `license.sh` or installation will fail on the system.
5. In the **Save as Type** field, select [All Files].

6. Click [Save] when finished.

Illustration 3-20: Save As Menu



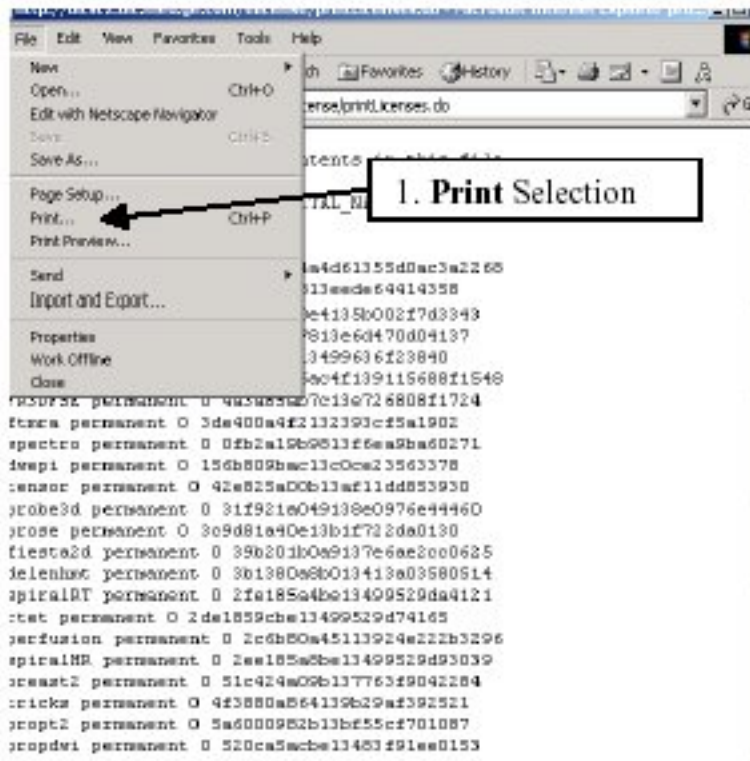
7. After the file is saved, a *Download Complete* window displays. Click [Close].

1.4.2.3 Printing Licenses

The license key file can also be printed. You can then use the document as a reference when manually entering the option keys into the *Guided Install* screen.

1. From the *System Information* screen, click [Print Licenses].
2. From the *Generated Licenses* screen, select [Print] from the **File** menu to print the screen. (Shown below.)

Illustration 3-21: Printable Screen



1.4.2.4 Download Licenses

One method of installing option keys is a direct download to a site with connectivity that has completed an InSite checkout. The download is processed from the eLicense website, NOT from the scanner itself.

NOTE: The preferred method of installing option keys is to burn to a CD-ROM. (See [Section 1.4.1.4.](#)) A download may not install all option keys because dependent keys are not on the system.

1. After generating the option keys for the system, go to the **System Information** screen of the eLicense website by selecting **[Details]** next to the host id.
2. Click **[DOWNLOAD]** link in the right hand column of the option you would like to activate. See [Illustration 3-22](#). If there is no link, no modem or broadband connectivity has been previously established. Please try one of the other installation options.

Illustration 3-22: ELICENSE SYSTEM INFORMATION SCREEN

System Information

GE Medical Systems eLicense

Name / Admin / ToolBook Monday, 11/15/2011

Set System Information
 Model Type: MR360
 Serial Number: MR360A1
 System ID: 17023670
 System ID: 17023670
 OEP: 17023670

Instructions
 Generate New Licenses
 Email Licenses
 Update List
 Reconfigure System

Generate New Licenses | Email Licenses | Update List | Reconfigure

Details	Generate Date	Generate Type	OEP	OEP Serial ID	Generate ID	Catalog ID	Description	License Key	Generated By	Download
<input type="checkbox"/>	2012-05-10	Manually Generated					SONA Plus 2000 482920 permanent 1 156950a0a1309a11061594 4924 permanent 0 3e411900841307121e2e7081 11a2194 permanent 0 169431a25d3329340-303945	20120510	Download	
<input type="checkbox"/>	2012-05-10	Manually Generated					BrivoPro 304196 permanent 1 241709613912070a821148 482920 permanent 0 244a013e4011500a27a116	20120510	Download	
<input type="checkbox"/>	2012-05-10	Manually Generated					Smart Prep 2000 4924 permanent 0 27810-4a20213304212a20478 482920 permanent 0 44104401061901140823192	20120510	Download	
<input type="checkbox"/>	2012-05-10	Manually Generated					Probe 2000 4924 permanent 1 241a001113a001100117 4924 permanent 0 0d1a194061130a01100111	20120510	Download	
<input type="checkbox"/>	2012-05-10	Manually Generated					Probe 2000 Upgrade 4924 permanent 1 184a001113a001100117	20120510	Download	

1) Select Download Link of desired key

3. Wait for the request to be processed. A status page will provide information on the downloading process.
4. Repeat steps 2-3 for all options that must be activated on the scanner.

1.4.3 Modifying System Information

You may need to change system information within eLicense due to a hardware failure, replacement of the network card, system upgrade, or human error. System information can be modified on eLicense's *System Information*. Follow Section 1.4.1.4 to access the *System Information* page, or click the [Details] button on the *Order Information* screen.

1. On the *System Information* screen, click [Edit System Information]. (Shown below.)

Illustration 3-23: Edit System Information Button



2. A pop-up window displays to allow modification of the system information. (Shown below.)

NOTE: All changes to system information and host ID are tracked based on your single sign-on ID. Any suspicious usage of this feature will be rigorously checked to verify the modification was due to a valid problem.

Illustration 3-24: Edit System Information Screen



NOTE: For Upgrades: Change the Model Type, and if necessary, update the Host ID. If the Host Id has been changed, before and after clicking [Continue] verify that the **Application Name Key** number on the *System Information* page actually changed. Depending on how many keys are regenerated, it may take up to a minute before the page refreshes and you see new numbers. If the numbers do not update, you probably did not enter the **Host ID** correctly; go to [Section 1.4.1.4](#) and re-enter the information again.

1.4.4 OPTION INSTALLATION

There are four methods available to install eLicense option keys onto the system. The details of each method are given in the following sections.



NOTICE

WHEN INSTALLING OPTIONS ON A SYSTEM MAKE SURE THE OPTION MATCHES THE UPGRADE BEING PERFORMED. ALL OTHER CONFLICTING OPTION KEYS SHOULD BE REMOVED. FAILURE TO REMOVE THEM CAN RESULT IN A DE-RATED SYSTEM CONFIGURATION. EXAMPLE 1: SYSTEM OPTIONS FOR HISPEED AND ECHOSPEED ARE BOTH INSTALLED. THE RESULT IS THE SYSTEM WILL PERFORM AS A HISPEED NOT AN ECHOSPEED. TO RESOLVE – THE HISPEED OPTION MUST BE REMOVED TO ALLOW THE SYSTEM TO CONFIGURE AS AN ECHOSPEED. EXAMPLE 2: SYSTEM OPTIONS FOR 8-CHANNEL AND 16-CHANNELS ARE BOTH INSTALLED. THE 8 CHANNEL OPTION MUST BE REMOVED TO ALLOW THE SYSTEM TO CONFIGURE AS A 16-CHANNEL.

1.

1.4.4.1 eLicense CD-ROM

Once the option key file is downloaded from the eLicense site to the hard drive of a computer, it can be burned onto a CD. The MR system requires that the disc be ISO-compliant. This format type cannot be burned with Windows XP's built-in disc burning. To burn an ISO-compliant disc, you must use a program such as Sonic RecordNow, which burns ISO-compliant discs by default.

NOTE: To obtain a licensed copy of Sonic go to Software Store and download the Sonic Record Now 7.exe file or call GE Healthcare's Help Desk.

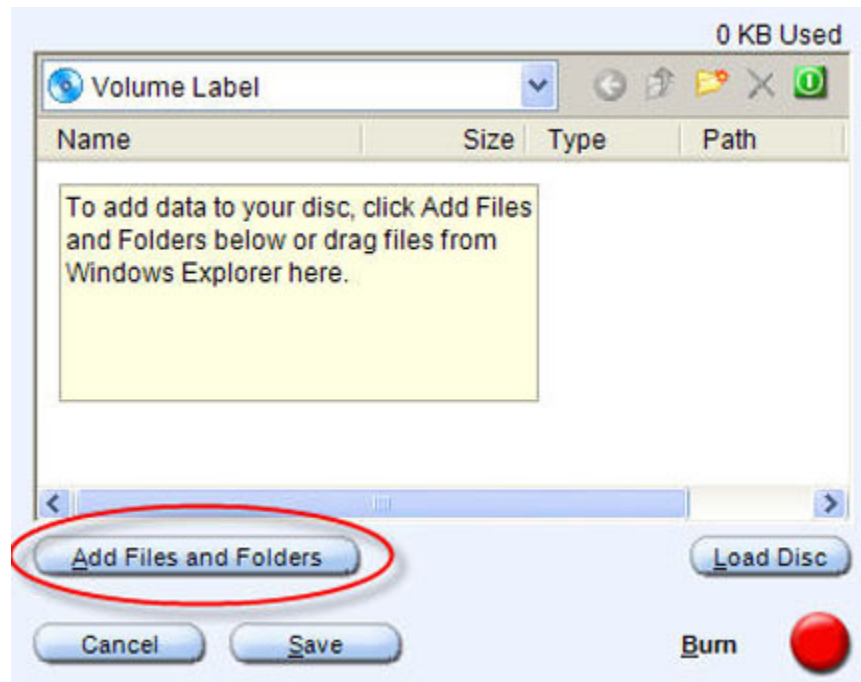
1. Start Sonic RecordNow.
2. From Sonic's homepage, select the Data Projects tab, and then click [Data Disc]. (Shown below.)

Illustration 3-25: Creating A Data Disc



3. Click [Add Files and Folders] (shown below), and then browse your PC to add the license.sh to the Data Disc list.

Illustration 3-26: Adding Files

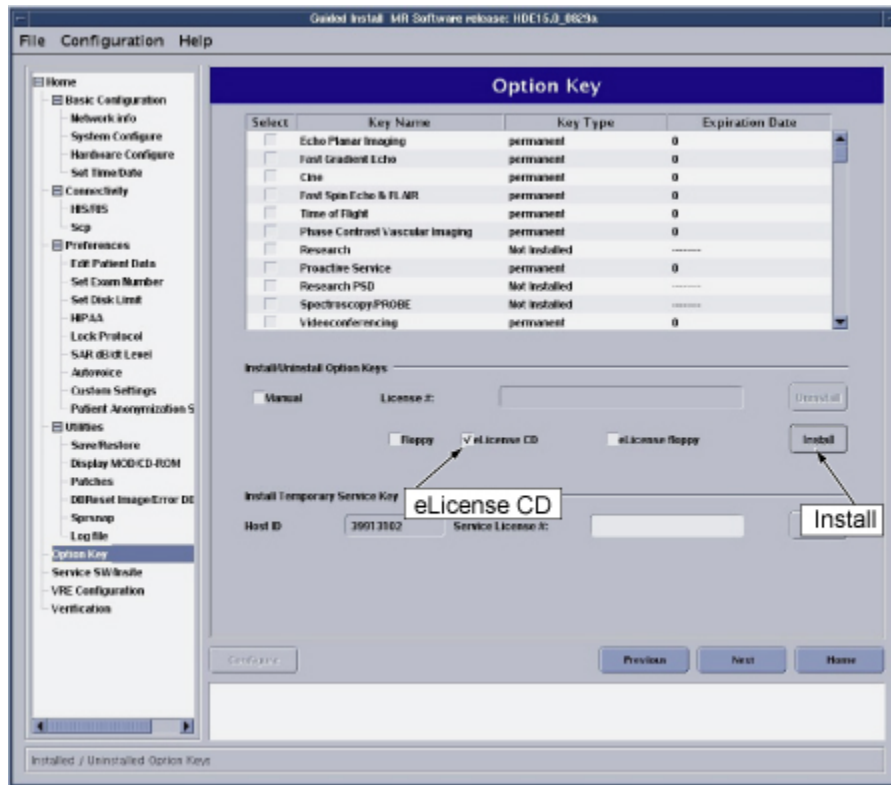


4. Put a blank CD in the computer's CD-ROM drive and click [Burn].

NOTE: After creating this CD-ROM, follow these instructions to load the keys onto the system.

5. Insert the CD-ROM into the host computer CD drive.
6. Select the **[Service Tools Desktop]**.
7. Select **[Guided Install]** from the Service Desktop Manager and press **[Start...]** to open Guided Install.
8. A command window will open with "Type Root Password" displayed. Type the system's root password and then press the **[Enter]** key. "operator" is the Signa default root password. If, for your site, the customer has changed the root password, you will have to obtain the correct root password from the customer.
9. Once the Guided Install window opens, select the **Option Keys** tab. See [Illustration 3-27](#).
10. Select the **eLicense CD** check box on the Install Option Key portion of the window, and then select **[Install]**.

Illustration 3-27: Guided Install Window



NOTE: Because of the Optima software dependency, some of Optima specific Option Keys won't be installed and the following popup will appear.

Illustration 3-28: Popup because of Optima software dependency



In case you encountered this screen, please repeat . It will be resolved by entering the option key twice.

- When the keys are finished loading, a popup will appear listing all the options that were installed.

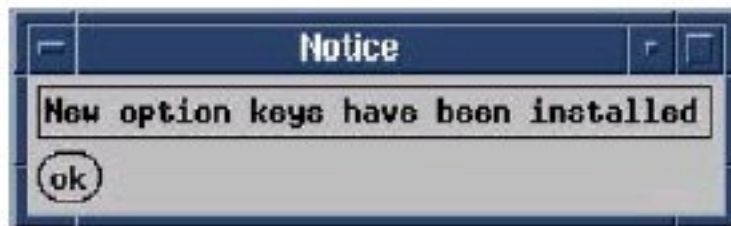
12. Verify the option list in the Guided Install GUI is updated with the options just loaded.
13. Select **File -> Quit** from the main menu bar to exit the Guided Install tool.
14. Reboot the computer, and verify all options are still available.
15. Complete a **Save Info** to retain all newly installed options on an Info DVD.

1.4.4.2 Option Key Auto Download

If the auto download procedure is performed as described in [Section 1.4.2.4](#), the keys will be sitting on the scanner waiting for a reboot.

1. Reboot the MR scanner after all option keys have been downloaded from the eLicense server.
2. Verify that a popup message appears saying **"New option keys have been installed"** after the **"Please do not interact with the system until this message disappears..."** window disappears. See [Illustration 3-29](#) for an example of this popup.

Illustration 3-29: Boot Up Pop-Up Message After Installing New Options



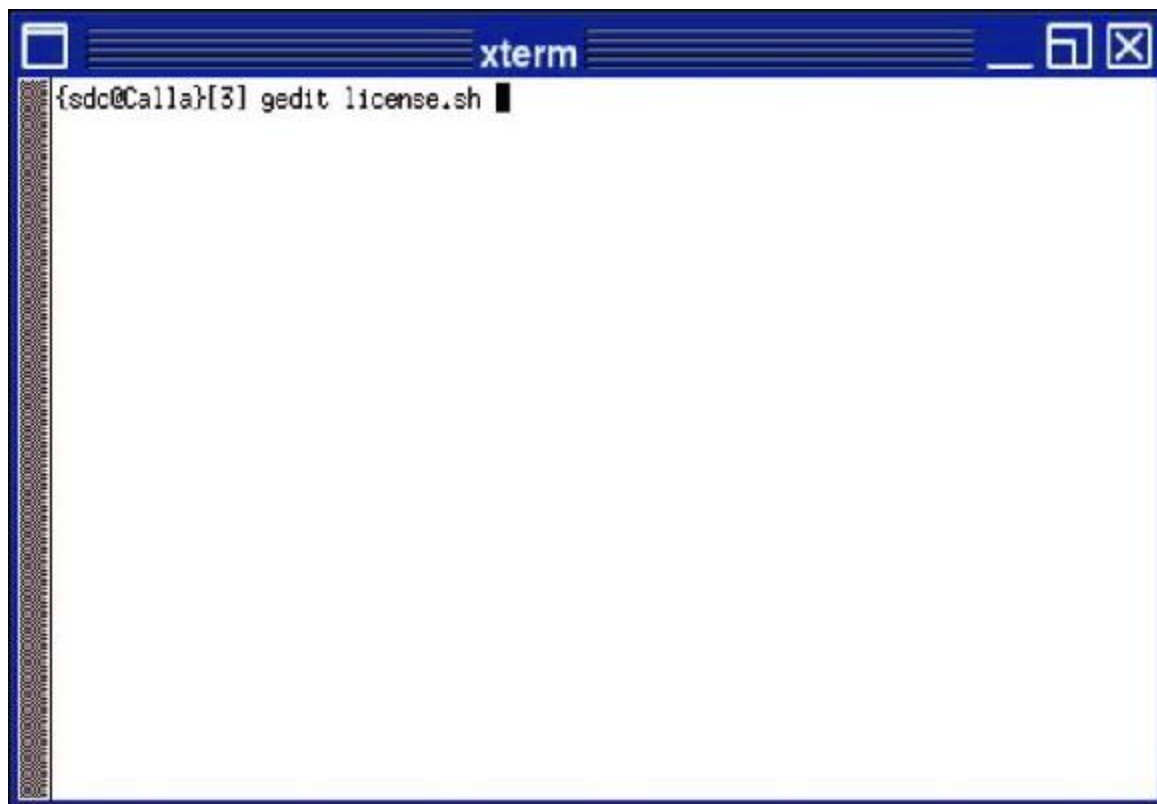
3. Open Guided Install, and verify the downloaded option keys have been installed as permanent keys on the **Option Keys** tab.
4. Complete a **Save Info** to retain all newly installed options on an Info MOD.

1.4.4.3 FTP Option keys to scanner

If an inSite checkout has not been completed on the scanner, but the system is connected to the hospital network, the option keys can be FTP'ed to the scanner. The option key file must be saved to the computer hard drive before continuing.

1. Obtain the scanner IP address and connect to the system.
2. FTP the option key file from the desktop to the scanner.
3. Move the file to the temp directory by typing **"mv license.sh /usr/tmp"**.
4. Modify license.sh
 - a. Open command window and type **"gedit license.sh"** and press **[Enter]** key, see [Illustration 3-30](#).

Illustration 3-30: Command Window



- b. Find out optima360 permanent key in this file, select the line, and click **[Cut]** button. The blank line will be remained. Please press **[Backspace]** key to remove this blank line.

Illustration 3-31: Find out and cut optima360 key

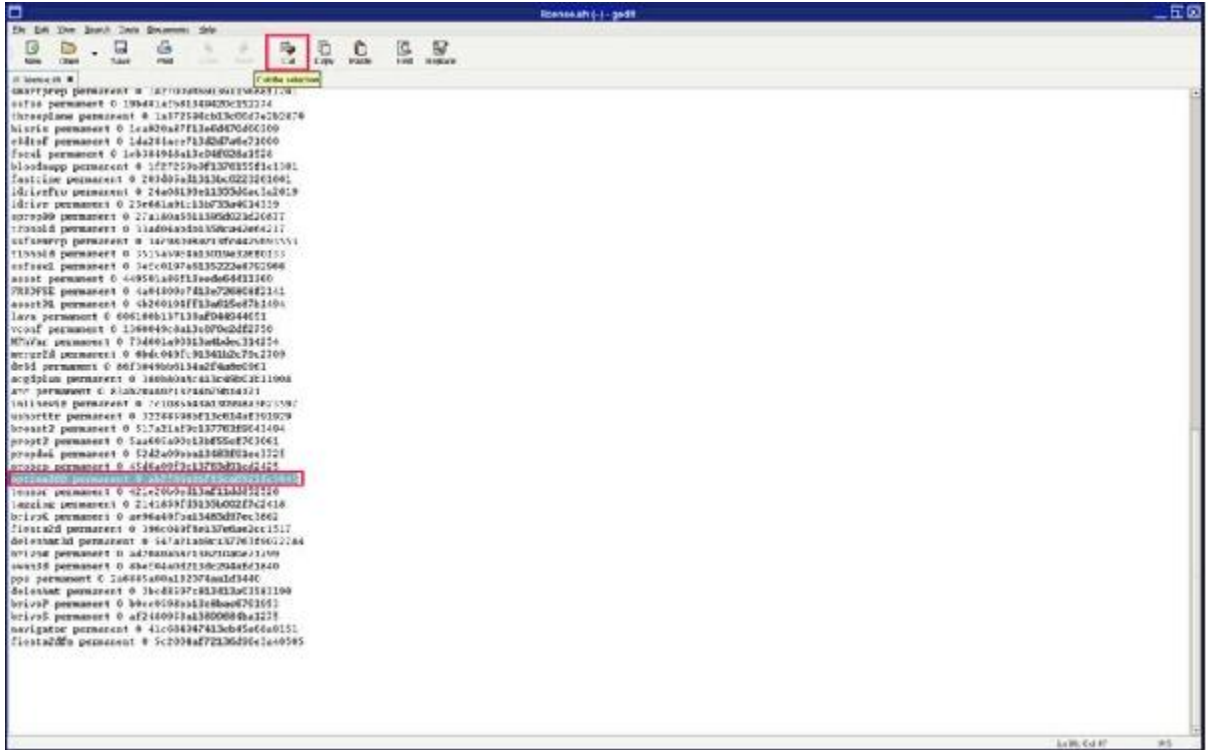
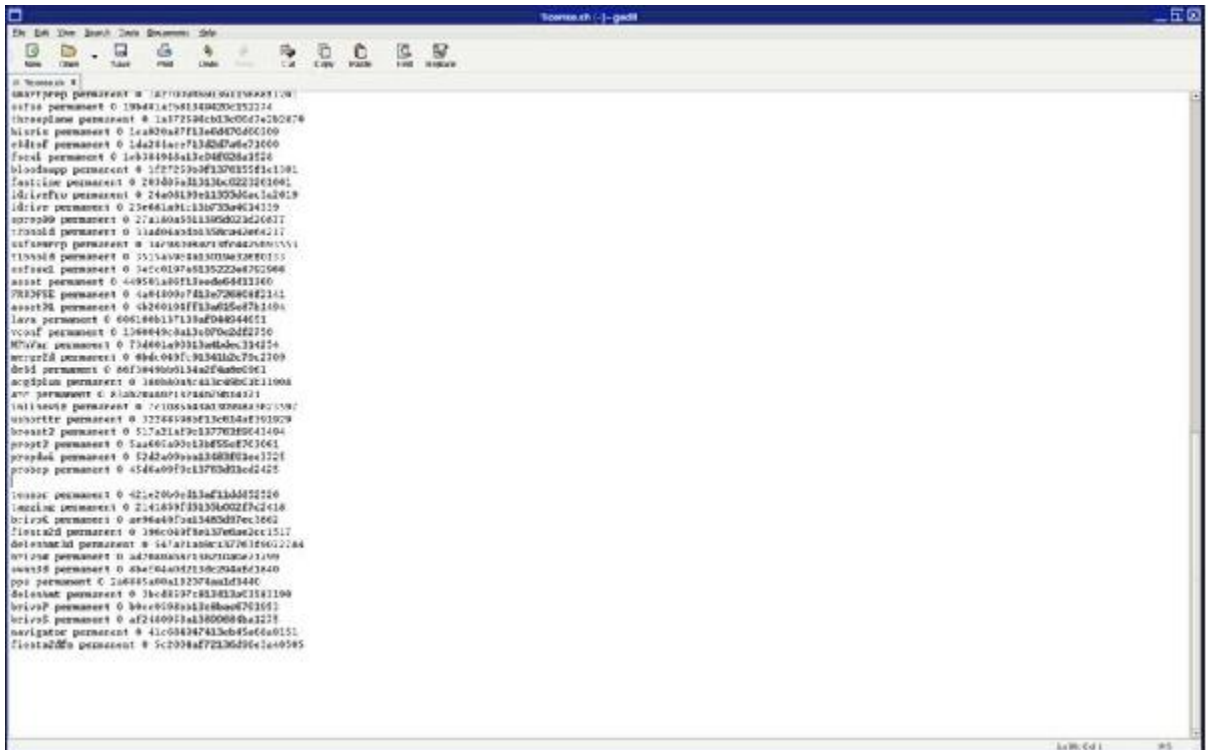


Illustration 3-32: After cut optima360 key



- c. Move the cursor to the top line of option key and click [Paste] button.

Illustration 3-33: Paste optima360 key

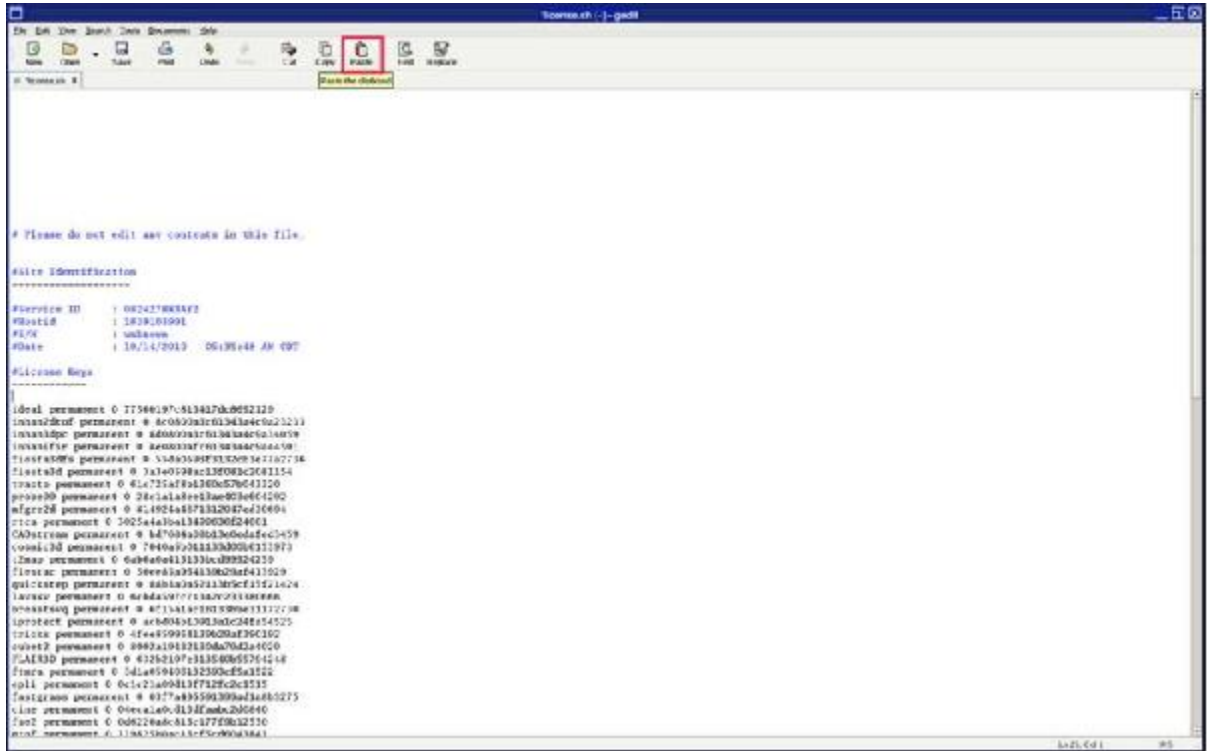
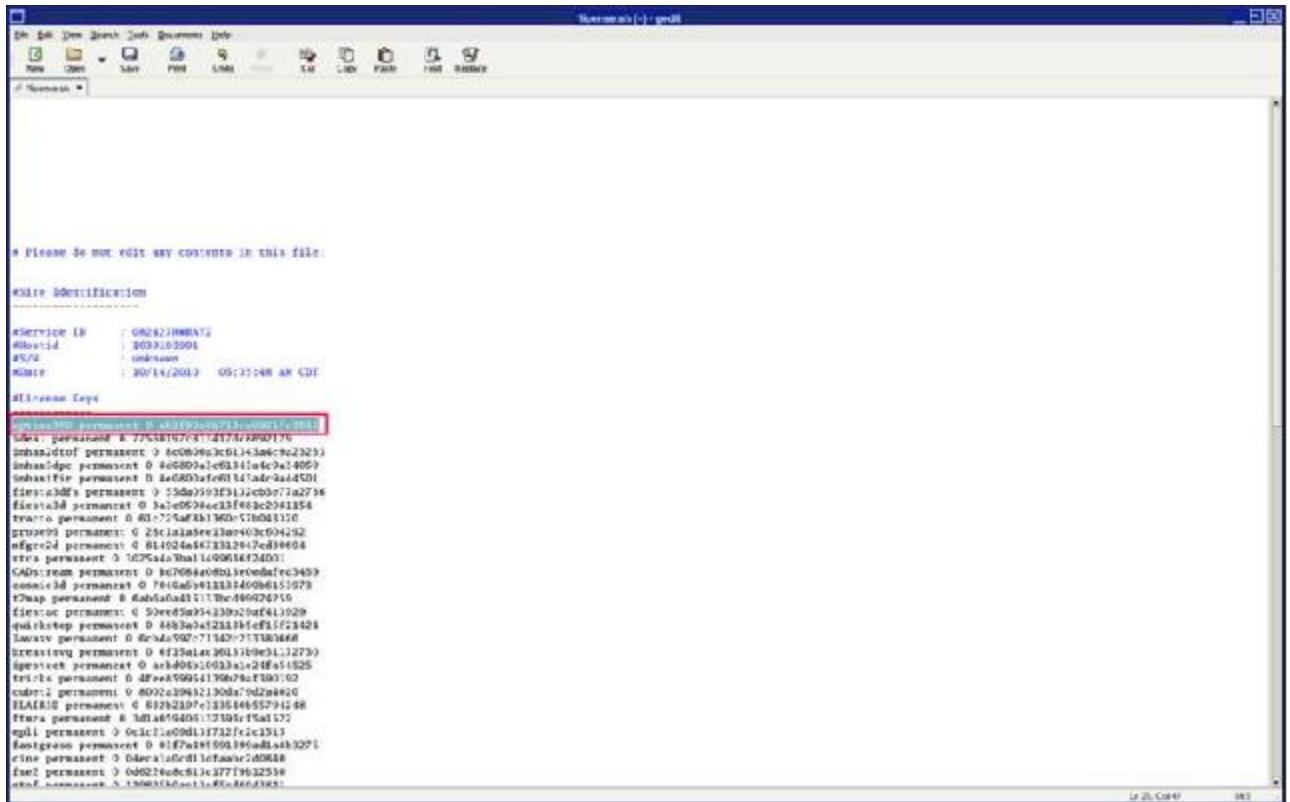
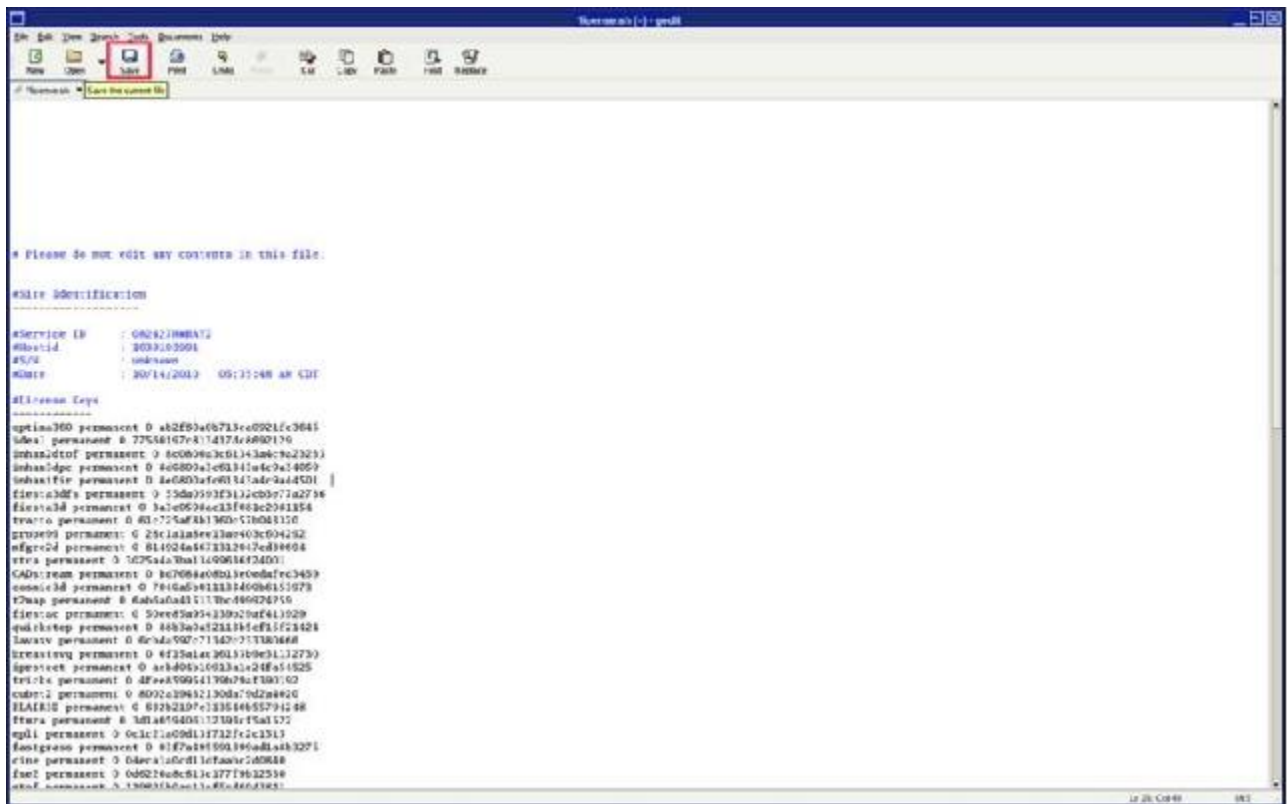


Illustration 3-34: optima360 key



d. Click **[Save]** button to save the current file.

Illustration 3-35: Save file



5. Rename the file by typing “mv license.sh flexkeys_install”.
6. Reboot the system.
7. Verify that a popup message appears saying “New option keys have been installed” after the “Do not interact with this system...” message disappears.
8. Open Guided Install, and verify the option keys have been installed as permanent keys on the **Option Keys** tab.
9. Complete a Save Info to retain all newly installed options on an Info MOD.

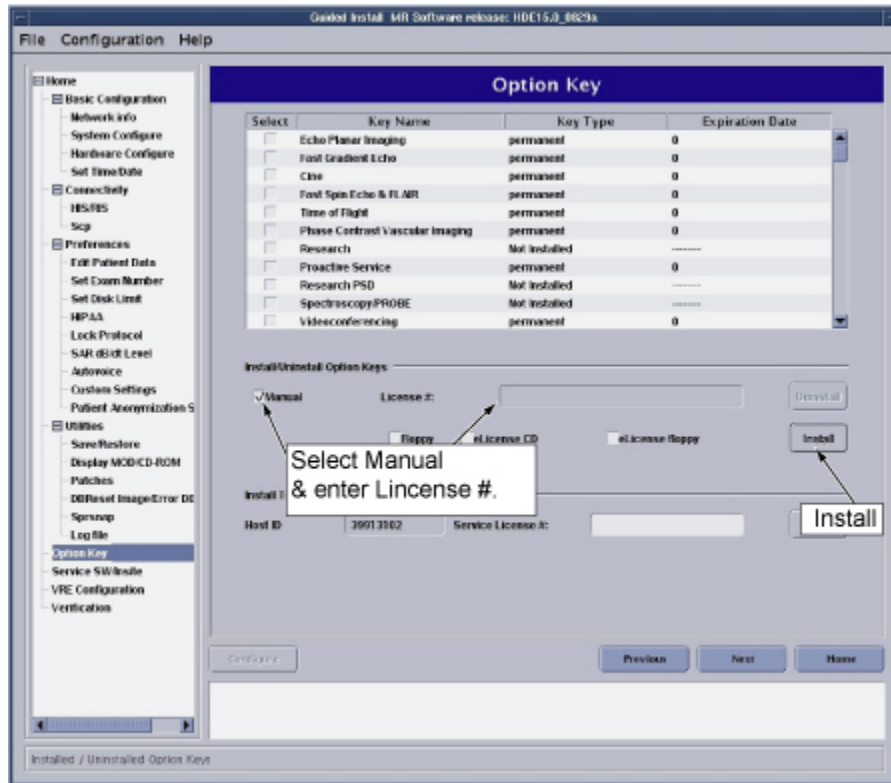
1.4.4.4 Manual Option Key Entry

If all other methods of option key installation are unavailable, the keys can be entered manually. A print out of the keys must be obtained to transcribe the strings from.

1. Select the **[Service Tools Desktop]**.
2. Select **[Install...]** from the Service Desktop Manager to open Guided Install.
3. A command window will open with “Type Root Password” displayed. Type the system’s root password and then press the **[Enter]** key. “operator” is the Signa default root password. If, for your site, the customer has changed the root password, you will have to obtain the correct root password from the customer.

4. After the Guided Install window opens, select the **Option Keys** tab. See [Illustration 3-36](#).
5. Select the **Manual** check box on the Install Option Key portion of the window, enter the 24-character license key string into the text box, and select **[Install]**. Please be aware that this field is case sensitive.

Illustration 3-36: GUIDED INSTALL WINDOW



NOTE: For Optima MR360, optima360 key must be installed first. Input optima360 license key string into the text box before all other key's installation.

6. Verify the option list in the Guided Install GUI is updated with the option just loaded.
7. Repeat steps 5-6 for all the option keys being installed.
8. Select **File -> Quit** from the main menu bar to exit the Guided Install tool.
9. Reboot the computer, and verify all options are still available.
10. Complete a **Save Info** to retain all newly installed options on an Info MOD.

1.4.5 GLOSSARY

- **Bloodsupp** - Blood Suppression
- **Cine** - Images usually of moving anatomy scanned and arrange for playback rapidly in movie format.

- **ConnectPro (HIS/RIS)** - Provides DICOM modality work list connectivity to hospital or radiology information system.
- **DW EPI** - Diffusion Weighted Echo Planer Imaging
- **eOM** – electronic Order Management, the Oracle order management system.
- **Fast cine** - Fast gated multi-phase images of the heart that show the heart as it contracts and expands during cardiac cycle in a movie format.
- **FTP** - Short for File Transfer Protocol, the protocol used to exchange files between computer systems.
- **IVI** - Interactive Vascular Imaging.
- **iDRIVE Pro** - Interactive imaging uses a fast GRE pulse sequence and a new user interface to acquire continuous 2D images at a high frame rate and provide on-image navigation. Not available on systems with a single i860 AP.
- **MS/MA** - Multi-Slice/Multi-Angle Oblique
- **Sgdperf** - SGD enhancements, which increase, slew rates and duty cycles for higher resolution thin slice imaging.
- **SmartPrep** - Automated triggering for contrast enhanced MRA
- **SmartPrep2000** - Provides SmartPrep automated table motion
- **SPECIAL** - Spectral / Spatial Fat Suppression. Chemical saturation using an inversion pulse (180° pulse). This key will always suppress just fat and cannot be changed to suppress water.
- **SSFSE** - Single Shot Fast Spin Echo
- **Tagging** - The placement of "tags" in an MR image is used to assess myocardial wall functions visually.

1.5 Finalization

1. Reboot system, type "reboot" in command window.

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Chapter 4 Post Labels and Record PLC card

1 Post Labels and Record PLC card

1.1 Personnel Requirements

Personnel Requirements	Preliminary Reqs	Procedure	Finalization
1	Not Applicable	10 mins	Not Applicable

1.2 Procedure

1. Post upgrade label for Brivo to Optima beside the system rating plate on the top System Cabinet.

Illustration 4-1: Post upgrade label



2. Record PLC card in GIB.

1.3 Finalization

No finalization steps.

Chapter 5 Test Scan

1 Test Scan

Perform SPT Full Test, please see Chapter 1, Section 3 SPT Full Test Mode Procedure.



NOTICE

If the customer purchases new coils, please perform coil check by following the service method. The list shows coils which are available on only Optima MR360, not Brivo 355.

Table 5-1: Coil List only for Optima MR360 System

Mcat #	Description
M3335MC	1.5T 8CH BODY (HD PLUG)
M3335ST	1.5T 4CH TORSO ARRAY
M3335LJ	1.5T HD 8ch Wrist by Invivo
M3335M	1.5T 8CHNVArray-Invivo
M3335BN	1.5T 8CH High Res Brain Array by Invivo
M3087JG	1.5T HD 8Ch VIBRANT Breast Array by GE
M3340CD	1.5T HD Foot Ankle Array by Invivo
M3087JF	1.5T 8-ch TR Knee coil
M3340CE	1.5T HD 8ch Shoulder Array by NeoCoil

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