CONTENTS

1 New Architecture....2
1.1 Basic Hardware Configurations....2
1.2 Controlled Release Installer....2
1.3 GMCE Workstation Diagram....4
1.4 TMCE Workstation Diagram....5
1.5 Workstation Software Components....6
1.6 Logging Services....9

1 NEW ARCHITECTURE

Print Console 4 is part of a new workstation and electronics architecture that supports two types of CTP electronics and the new TH3 thermal imaging head. This section describes the new architecture in enough detail to show how Print Console fits in. The highlights of this new architecture are:

- Support for two types of electronics:
  - **GMCE** (Gigabit Machine Control Electronics).
  - **TMCE** (Turbo Machine Control Electronics).
- A **Gigabit Ethernet** connection for GMCE configurations. This simplifies the connection to the workstation for both control and image data. Note that it is required to deliver image data quickly enough for the TH3 head.
- A new version of **Print Console**.
- New workstation components which provide a **standard interface** to CTP devices for:
  - A common control interface via **DCAPI** (Device Control API).
  - A common image data path – via **PSRM** (Post Screening Raster Manipulation).

  These components provide a common interface for control and image data to different device configurations for Print Console and Service Tools.

1.1 Basic Hardware Configurations

The following table summarizes the basic hardware configurations supported by this new architecture.

Configuration (Electronics)	Heads Supported	Connection / Purpose	Support Hardware
TMCE Legacy	TH2 TH1	Control of the CTP	Serial card and cables
		Diagnostic Commands	
		Deliver Image Data	SCSI card and cable or TSP card and cable (when supported)
GMCE	TH3 TH2	Control of the CTP	Gigabit Ethernet card and cable
		Diagnostic Commands	
		Deliver Image Data	

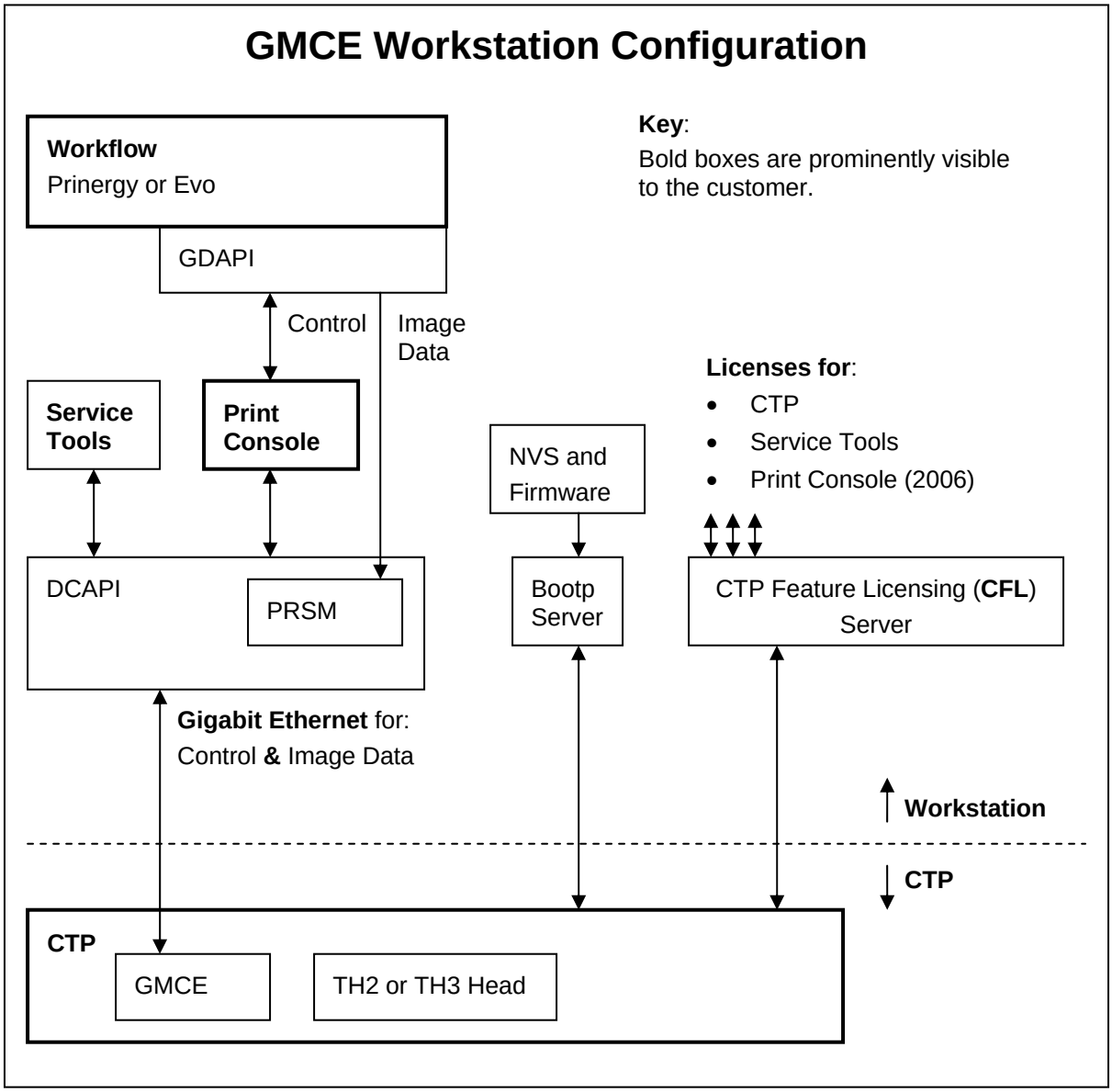
1.2 Controlled Release Installer

Note that a Controlled Release Installer has been created to install all of the components of the New Architecture. The Controlled Release installer:

- Copies all components onto the workstation – in case anything needs to be re-installed.
- Allows you to select the configuration for the Controlled Release; for example:
    - GMCE for TH2
    - GMCE for TH3
    - TMCE for TH2
    - GMCE – no head
    - TMCE – no head
- Calls the installers for all of the components that form the Controlled Release.

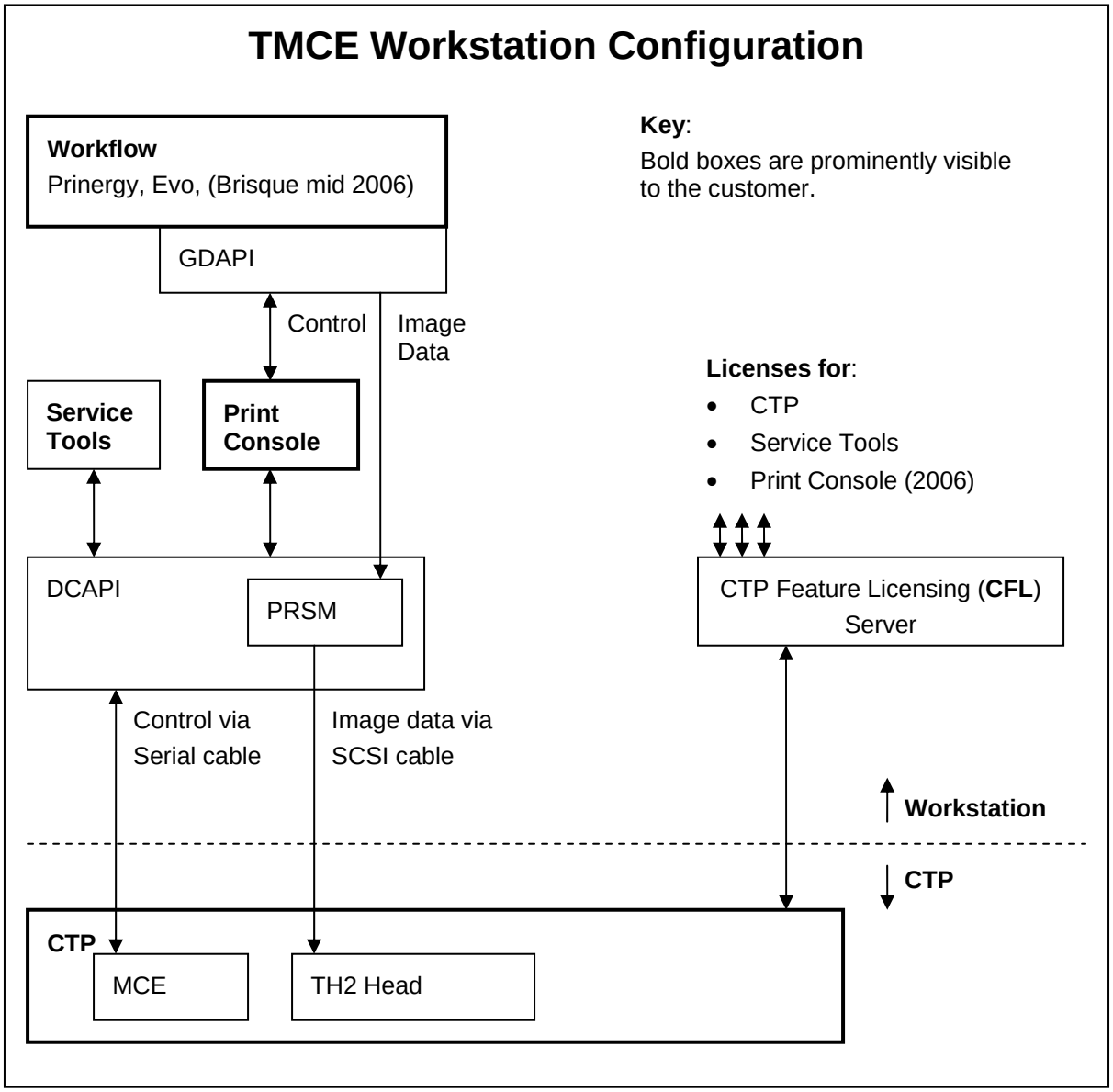
1.3 GMCE Workstation Diagram

The following diagram shows a **GMCE** workstation configuration – each of the components is described in the 'Workstation Software Components' section below.



1.4 TMCE Workstation Diagram

The following diagram shows a **TMCE** workstation configuration – each of the components is described in the 'Workstation Software Components' section below.



1.5 Workstation Software Components

This section provides a brief description of the workstation software components – their basic purpose, how they are installed, how they are started, and where they log information.

Note that all components, except workflow, are installed by the Controlled Release Installer shipped with the CR.

1.5.1 GDAPI

GDAPI	Generic Device Application Programming Interface
Purpose	Provide a common interface to Trendsetters for all workflows
Installed by	The Print Console installer
Started by	Workflow
Logs to	Workflow log files and \Creo\PrintConsole4\log

1.5.2 CTP Feature Licensing (CFL)

Purpose	License CTP features. Licenses can be for customer features or service tools. Licenses can also be permanent, temporary, or emergency
Installed by	The Feature Licensing installer
Started by	Automatically by Windows as a service
Logs to	\Creo\FeatureLicensing\Logs

1.5.3 Print Console

Purpose	Provide CTP status, CTP suspend information, plate status, and CTP configuration.
Installed by	The Print Console installer
Started by	The Operator
Logs to	\Creo\PrintConsole4\Log

1.5.4 Log Message Culvert

Purpose	Log troubleshooting information for: Print Console, GDAPI, DCAPI, and PSRM
Installed by	The DCAPI installer
Started by	Automatically by Windows as a service
Logs to	\Creo\PrintConsole4\Log

1.5.5 Stat Event Culvert

Purpose	Log statistics for: Print Console and Firmware
Installed by	The DCAPI installer
Started by	Automatically by Windows as a service
Logs to	\Creo\PrintConsole4\EventLog **Until a problem with Service Wire is corrected** this will log to \PrintConsole\EventLog

1.5.6 DCAPI

DCAPI	Device Control Application Programming Interface
Purpose	Provide a common interface to the CTP for Print Console and service tools
Installed by	The DCAPI installer
Started by	Automatically by Windows as a service
Logs to	\Creo\PrintConsole4\Log

1.5.7 PSRM

PSRM	Post Screening Raster Manipulation
Purpose	Provide a common data path for Workflow and Service Tools to TMCE and GMCE systems, also adjust raster for final delivery to the device.
Installed by	The DCAPI installer
Started by	Automatically by Windows as a service
Logs to	\Creo\PrintConsole4\Log

1.5.1 NVS

NVS	Non Volatile Storage
Purpose	Firmware configuration and GC settings. **Note for GMCE configurations that NVS resides on the workstation and is loaded on each CTP startup**
Installed by	The Firmware installer
Started by	Loaded from the workstation to the CTP in the first seconds of each CTP startup
Logs to	N/A

1.5.2 CTP Firmware

Purpose	Control the CTP. **Note for GMCE configurations that Firmware resides on the workstation and is loaded on each CTP startup.** Updating Firmware consists of copying the Firmware executable to a workstation directory
Installed by	The Firmware installer
Started by	Loaded from the workstation to the CTP in the first seconds of each CTP startup
Logs to	\ServiceShell\Logs

1.5.3 BootP

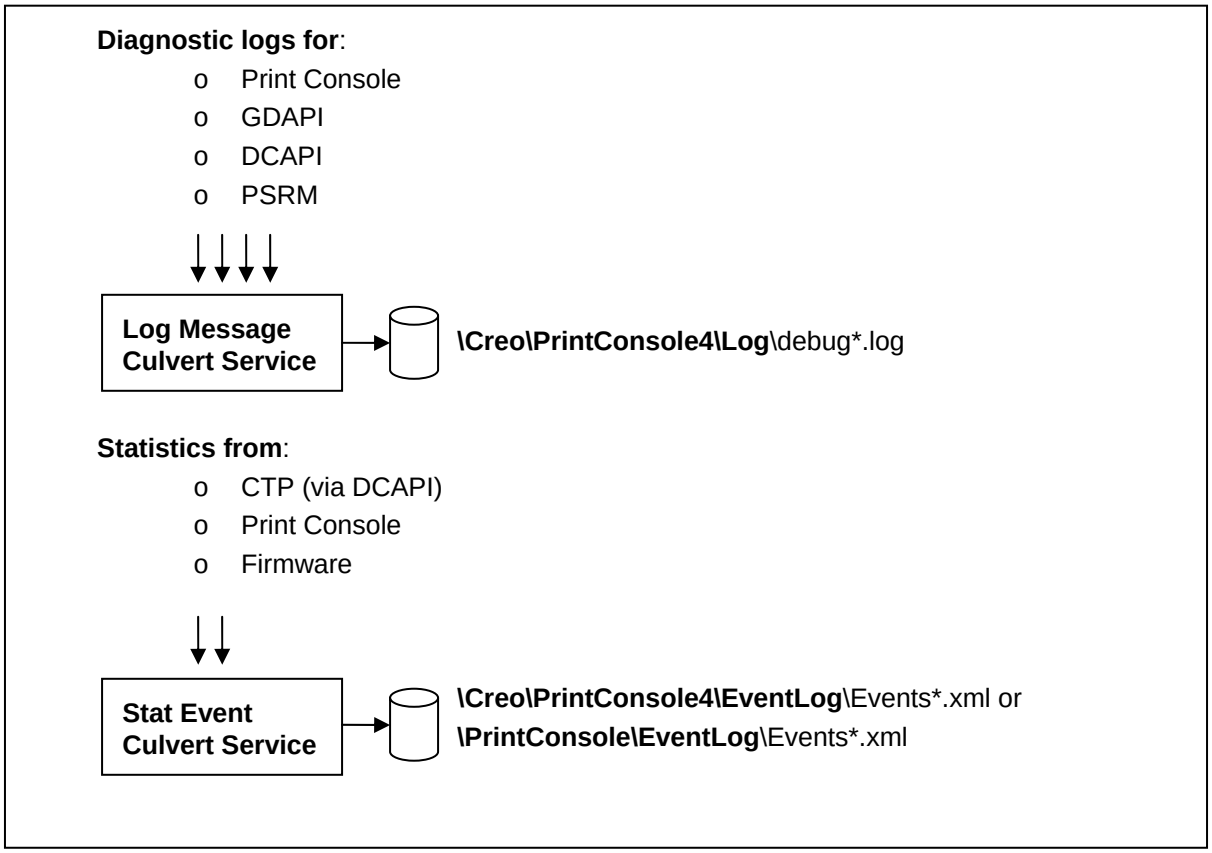
Purpose	This is a 'GMCE only' component. BootP server is a Windows service on the workstation that provides IP addresses to the GMCE and TH3 on startup: GMCE = 192.168.100.193, TH3 = 192.168.100.145 Synchronizes GMCE firmware and parameters to a back-up on the workstation by automatically: • Downloading the workstation copy of product firmware to the GMCE board on startup • Uploading NVS parameters to the workstation regularly (every 5 s) and downloading them at startup as a substitute for battery-backed RAM Configuration of BootP is from CreoBootp.ini file driven by Service Host Configuration Wizard. **DO NOT** edit manually as you may lose device and head diagnostic access.
Installed by	The Firmware installer
Started by	Automatically by Windows as a service

1.6 Logging Services

There are two logging services. The following diagram shows:

- The '**Log Message Culvert**'
  This service logs debug information for Print Console, GDAPI, DCAPI, and PSRM.
- The '**Stat Event Culvert**'.
  This service logs statistics for the CTP and Print Console. These are used by Product development to track error rates and to troubleshoot devices.

These logging services are installed by DCAPI and run in the background as Windows Services.



The diagram also shows which clients use these services and where these services create log files.

Note that the logs for the CTP are written to the 'Logs' directory where Service Shell is installed.

1.6.1 Log Message Culvert

This service logs debug information for Print Console, GDAPI, DCAPI, and PSRM.

The registry settings for the Log Message Culvert are located in KEY_LOCAL_MACHINE\SOFTWARE\Creo\LogManager. Here are the items to control the number and size of log files created.

- MaxLogFileBackups

  This determines the number of log files kept on the hard drive. If this number is ‘n’, then the creation of file ‘n+1’will result in the deletion of the oldest log file.

  This will be changed in a future release to MaxDaysLogFileBackups so that logging verbosity levels will not impact the number of days of log files available – as they do with this current approach.

- MaxLogFileSize

  This numerical value determines the number of lines of text in each log file. When a file reaches this number of lines, then a new file is created.

1.6.2 Statistics Event Culvert

This service logs statistics for the CTP and Print Console. These are used by Product development to track error rates and to troubleshoot devices.

The registry settings for the Stat Event Culvert are located in HKEY_LOCAL_MACHINE\SOFTWARE\Creo\StatisticEventManager