ECA Brochure 2025

GSF Computer System

GSF®

is the Malaysian MSC status computer engineer company in Puchong, Selangor D.E, we designs, supply and support computerized surveillance backends, visual data, IoT, artificial intelligent (Ai) applications and professional services.

⬇ [Download Company Profile & Track Records >](#)

Eco-System

To handle current complex Ai/IoT integrated systems. A strong foundation is required in order we can properly served our customer.
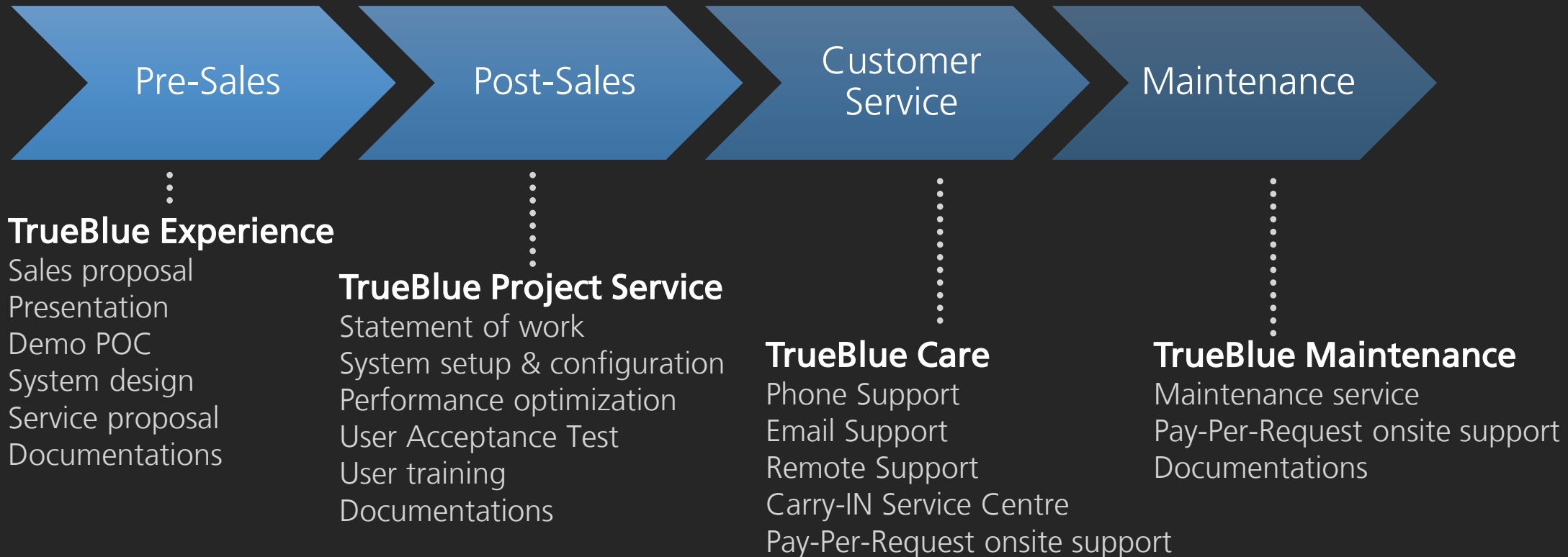
ECA computer platform and Smart Logic software foundation is properly laid in GSF techLAB for decade, many engineering time and effort has been put into study and research for both hardware and software performance.

if you are a Customer, then you deserve TrueBlue® Support from our dedicated support engineers who are committed to deliver the best for you. Don't consider this as a service, but rather an investment for enhanced peace of mind and the satisfaction of a job well done.

ECA
hardware

Smart Logic
software
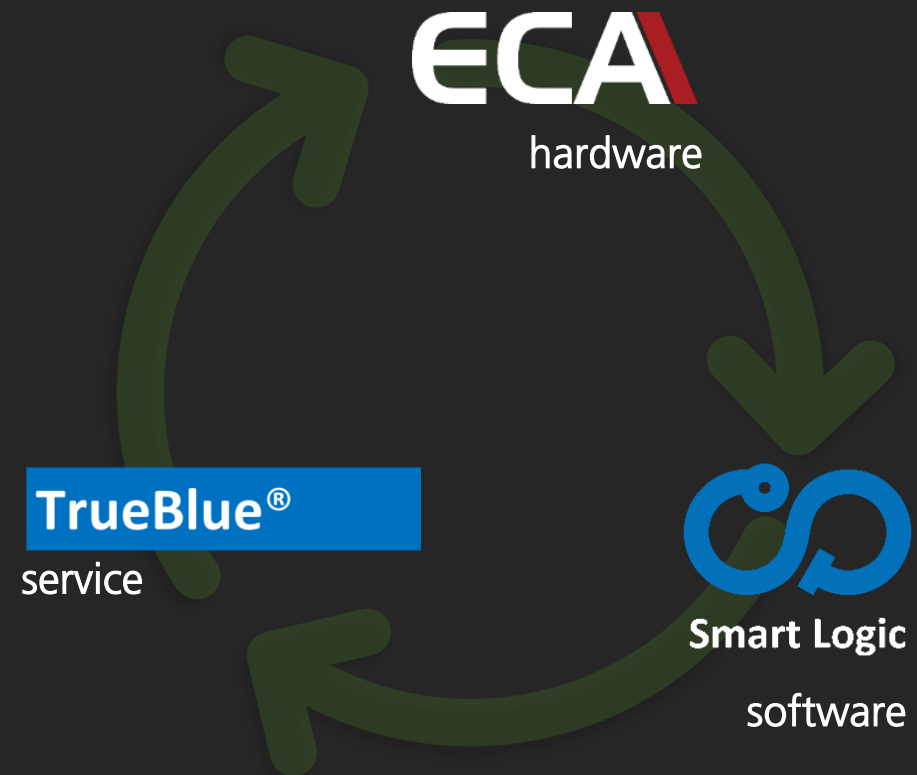
TrueBlue®
service

Customer Quality Assurance

TrueBlue®
support

TrueBlue services start from sales proposal stage, to ensure system quality design. We delivered what we designed in optimized performance setup during post-sales stage and continue our care with professional customer service. TrueBlue Maintenance continue customer investment for a long runs.

Pre-Sales → Post-Sales → Customer Service → Maintenance

TrueBlue Experience

Sales proposal
Presentation
Demo POC
System design
Service proposal
Documentations

TrueBlue Project Service

Statement of work
System setup & configuration
Performance optimization
User Acceptance Test
User training
Documentations

TrueBlue Care

Phone Support
Email Support
Remote Support
Carry-IN Service Centre
Pay-Per-Request onsite support

TrueBlue Maintenance

Maintenance service
Pay-Per-Request onsite support
Documentations

ECA\ engineered computer appliance ®

ECA is an advanced system platform that runs, monitors and recovers by itself. It automatically takes care of typical failures and unintended human errors, while it constantly works to ensure optimum system efficiency. You can now enjoy absolute peace of mind from a system that is designed to continuously operate, always.

Specifically Built for Surveillance

ECA4 was designed specific for 24/7 surveillance usage

macula

milestone

n^x
NetworkOptix

VIVOTEK
A Delta Group Company

x64bit Architecture ecaOS-6

ecaOS-6 is much efficient, reliable and performance that ever. Redesigned from ground zero, effectively support to latest Intel® multi threading processor and Microsoft® Windows 10 Enterprise. Two times faster than 32bit. Four times more workload capacity (system memory).

HEARTBEAT   SECURITY KEY   ECA engineered computer appliance

Superb CCTV Workloads

ECA is capable to handles up to 200 channels of camera recordings in a single system or 162 channels of live CCTV monitoring as client workstation.

GSF Intel Case Study PDF here

Centralized System Dashboard

Effective and Efficient in Operation

Single login, multiple managed, make management of large-scale surveillance much more effective, and easier to maintain. For example, you required to change a user account password, you only changed once at central server, and it will automatically be synced to all servers. Thus, saving on human capital cost and expenses.

Central server hold all:

- User accounts
- User permission
- All resources like cameras
- Settings
- Configurations
- Security Policy
- Licenses
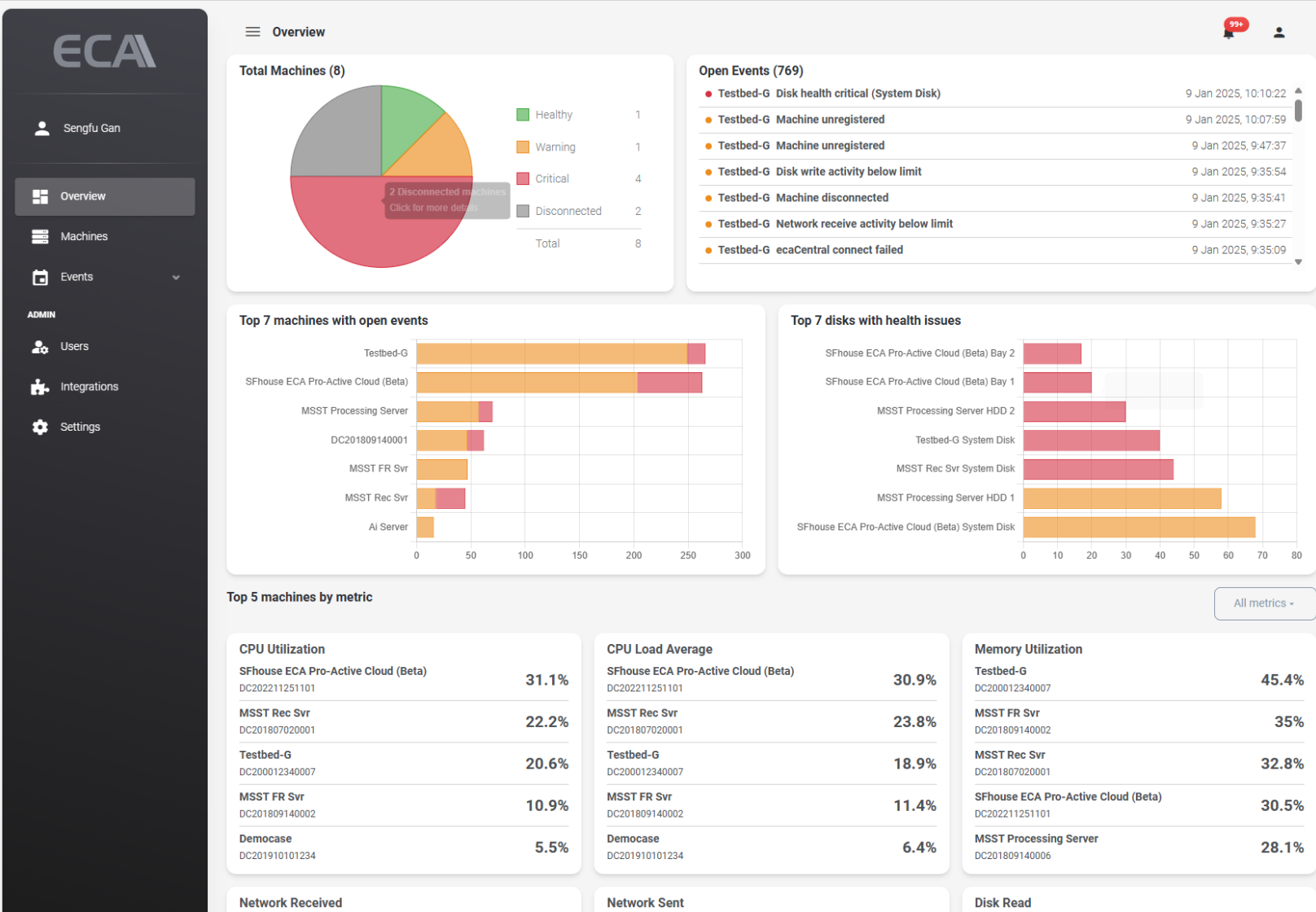
System Dashboard

The Web-based system dashboard offered you an convenient way to remotely access your system information. You can oversee:

- Machine uptime
- Application or Service monitoring
- Processor, memory, disk and network activity
- System temperature, fan speed and voltage
- Disk Health
- Disk Guard
- Session Shield
- Machine time
- System Logs
- Activating remote desktop control and support
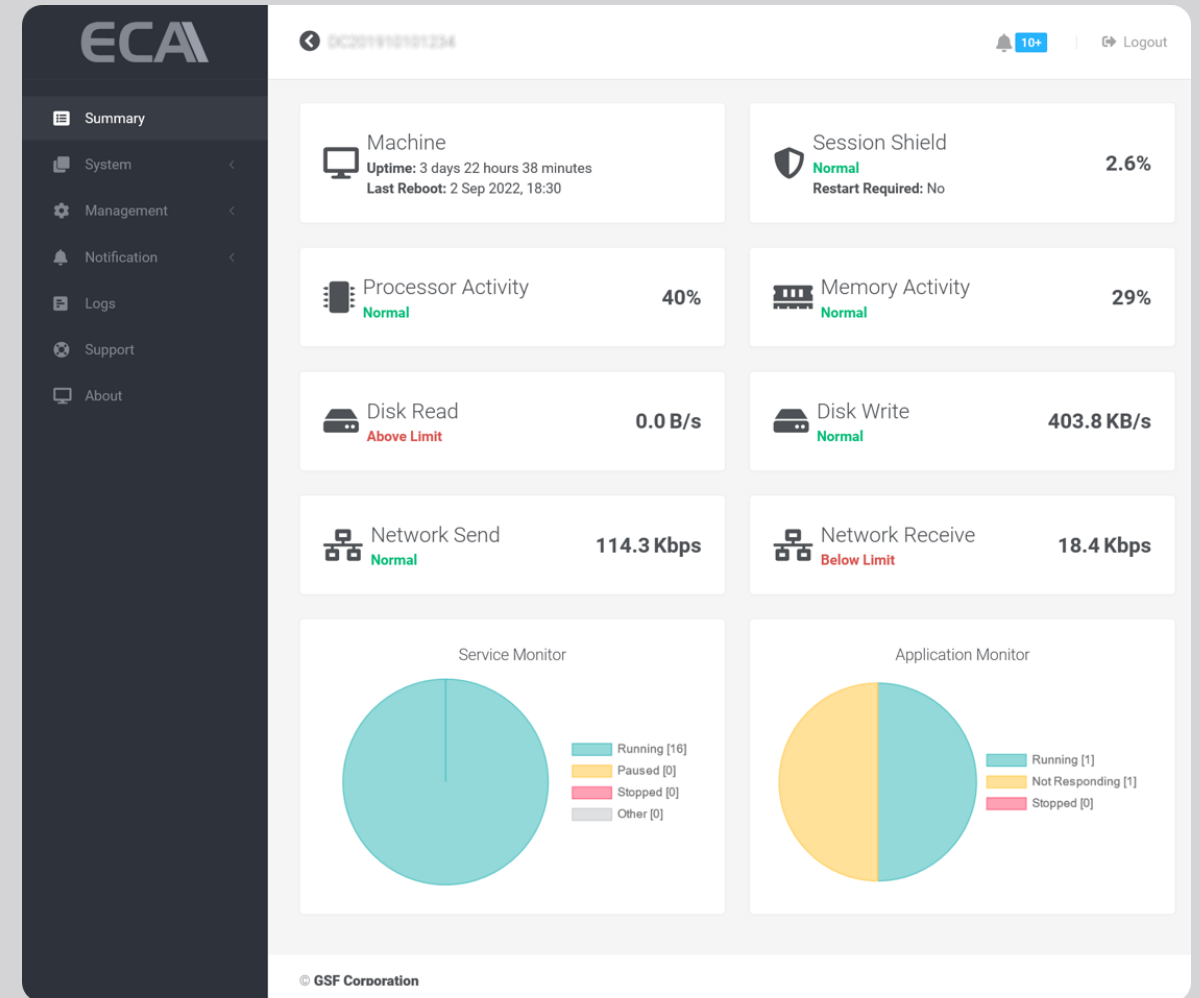
System Report

Auto generate PDF system report and email out daily.

In the report you will get overall system status for:

1. System monitoring temperature, voltage and fan speed
2. Activities for processor, memory, disk and network.
3. Software application and services running status
4. Disks status
5. Surveillance Recordings monitoring status
6. Devices uptime monitoring status
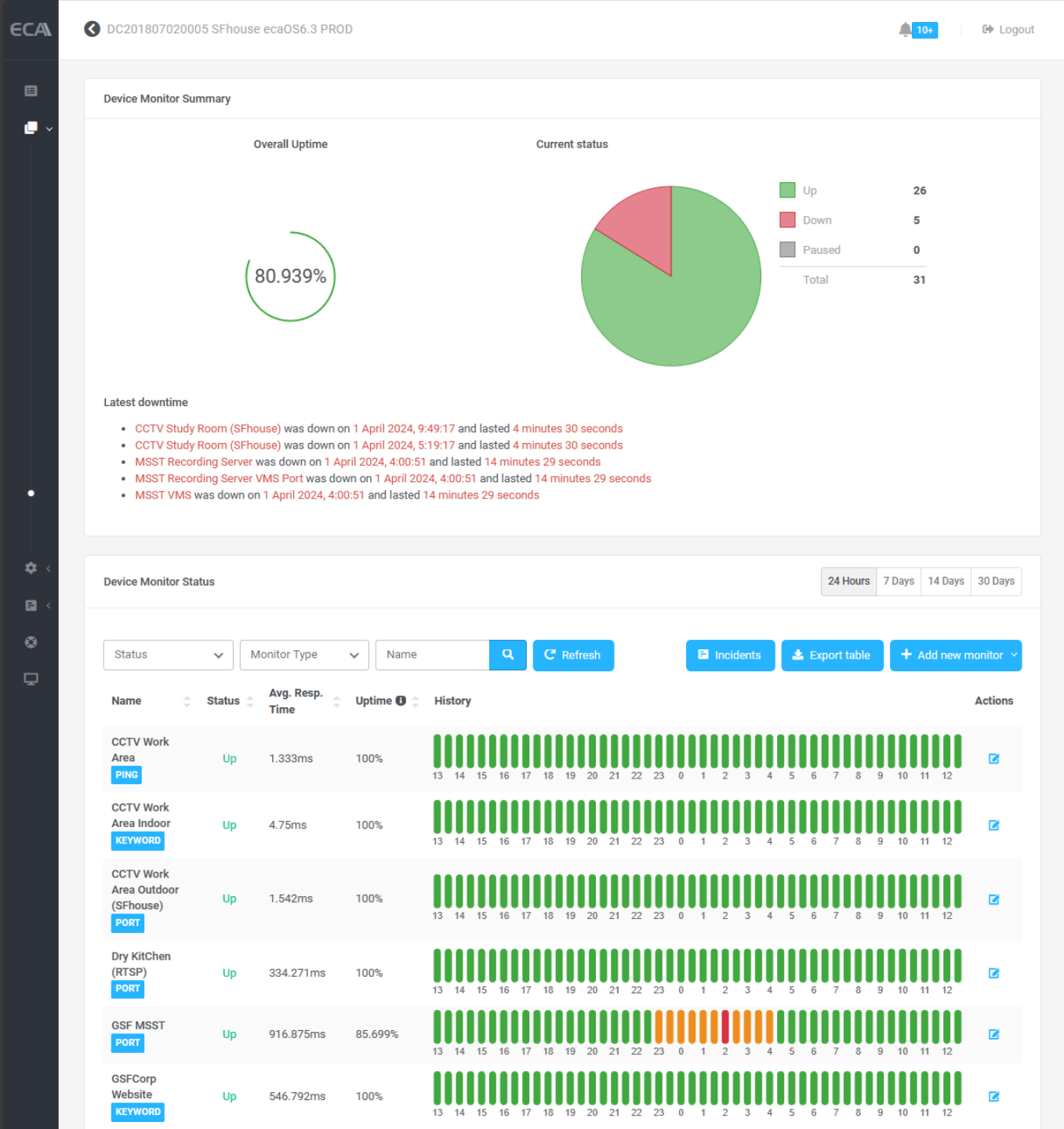
Devices Monitor

On-prem devices uptime
This feature offer you insight about each individual devices like cameras, servers, access controller, video stream port, api-socket, web, and etc status

Monitor type: HTTP, Keyword, Ping and Port.

Interval from 1 minutes to 24 hours.
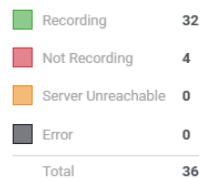
History record of 24hr, 7days, 14days and 30days

CSV data export and PDF report

GSF

Recording Monitor Summary

Total Recording (Last 24 hours)

87.09%

31 days 8 hours 27 minutes / 36 cameras

Current status

🟩	Recording	32
🟥	Not Recording	4
🟧	Server Unreachable	0
⬛	Error	0
	Total	36

Latest 5 no recording incidents

- No recording for Dry Kitchen (SFhouse) on 1 April 2024, 11:11:58 and lasted 56 seconds
- No recording for Dry Kitchen (SFhouse) on 1 April 2024, 11:11:42 and lasted 12 seconds
- No recording for Dry Kitchen (SFhouse) on 1 April 2024, 11:10:59 and lasted 39 seconds
- No recording for Wet Kitchen (SFhouse) on 1 April 2024, 11:10:51 and lasted 6 seconds
- No recording for Wet Kitchen (SFhouse) on 1 April 2024, 11:10:28 and lasted 5 seconds

Recording Monitor Status
(Last checked 1 April 2024, 11:13)

🖳 Manage Servers

Server ▾   Status ▾   Camera Name 🔍

🔄 Update   📄 Incidents   ⬇ Export table   ➕ Add monitors ▾

Name	Status	Recording ⓘ	Recording History (24 Hours)
Work Area Outdoor (SFhouse) **SFHOUSE LOC...**	Recording	1d 100%	
Work Area Indoor (SFhouse) **SFHOUSE LOC...**	Recording	1d 100%	
Work Area (SFhouse) **SFHOUSE LOC...**	Recording	1d 100%	
Wet Kitchen (SFhouse) **SFHOUSE LOC...**	Recording	22hr 42min 94.62%	
TrueBlue Hall **MSST REC SVR**	Recording	23hr 59min 99.932%	
Transmittal Area **MSST REC SVR**	Recording	23hr 58min 99.888%	

Recordings Monitor

Know each camera's recordings

This feature offer you insight about each individual cameras recording status, you will get:

1. 24hours recordings status and recording %
2. Easily know if the cameras has no recordings and when no recordings.
3. Details recording statistics and timestamp for individual recording status.
4. Notifications and Alerts
5. Report in PDF

** macula VMS required

Operations Effectiveness

Backed by TrueBlue Support, service and support from the people who know your system best.

TrueBlue Care Premium

Trouble-free premium support with 3 years next-business-day onsite labor and parts replacement for ECA. *Malaysia Only

Phone, Emil & Remote Support

All GSF products come with international phone and remote support, for help on settings or using the ECA.
 * Working hour only. Mon-Fri. 9am-6pm (GMT+8)

Pro-Active Service

With central ECA connected, all ECA can be linked with TrueBlue Pro-Active Service, which we will contact you when you machine require any service or fault.

Designed for Surveillance Storage

Redundant Storage System

All ECA4 featured with redundant storage system (RSS*) as default. RSS is a technology in ecaOS-6 that protect your data from drive failures. Supports massive storage up to 450* terabytes in a single system and capable to store 180 days of CCTV evidence.

## DiskGuard with Activity, Health and Disk Serial No. Tracking

ECA records all the disk serial no. in each Bay, in case someone takes away your evidence and replace it with a new disk. DiskGuard constantly monitors all disk activity, if the recording (write) is lesser than the threshold, it will inform you about the suspecting CCTV no recordings, as well as disk health monitoring and alerts.

Tested for Real VMS Workloads

Up to 1200# Mbps bandwidth validated for consistency performance. This is tested at GSF's own TechLAB™. By simulating constant bit rate of 200CH video stream, continuous recording into 120TB of RSS Storage Pool (15unit of 8TB Seagate Skyhawk AI). #Tuned by TrueBlue

Seagate® Validated with Very Excellent Performance

ECA4 has been validated at Seagate Singapore Design Centre – The Shugart technical lab for further performance test on vibration and resonance. We simulated the ambient of 55 °C condition with 15unit of HDD installed. Download Seagate ECA Test Report here
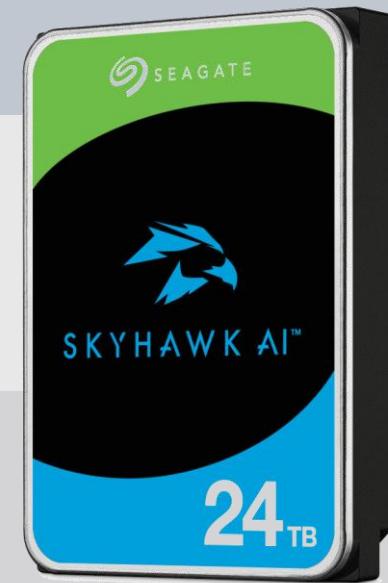
*max 30TB per HDD support

Guardian . ecaOS

App Monitor
You can add any applications into App monitor and let Guardian act as a watchdog, to supervise if your app is not responding, or if the app has been accidently closed, it will restart the app automatically.

Shield
This is protecting the OS, the system is operating under system memory (RAM) without committing any writes into the OS disk. The system will discard all changes whenever the system is rebooted.

Triple Layer Operating System
ecaOS is built in 3 layers, the Factory layer is OS optimized level or platform ready level without users settings or configurations. The Deploy Layer is OS with all settings and configurations done accordingly to job requirements, or so called 'Golden Layer' after system integrator done all the configurations for handover to user. User layer is the operating OS for user usage with Shield feature. In the event when the user layer was corrupted, you can command Soft Reset to the ECA for a system recovery by loading the Deploy layer. This only takes about 10 minutes, and the process can be done without any technical person.

System Monitoring
Guardian will actively monitor activities for CPU, Memory, Network, and Disk drives in the ECA. In the abnormal event triggered, Guardian will send alert to notify users or communicate with Heartbeat for self recovery.

User (shield)

Deploy

Factory

Soft Reset

Hard Reset
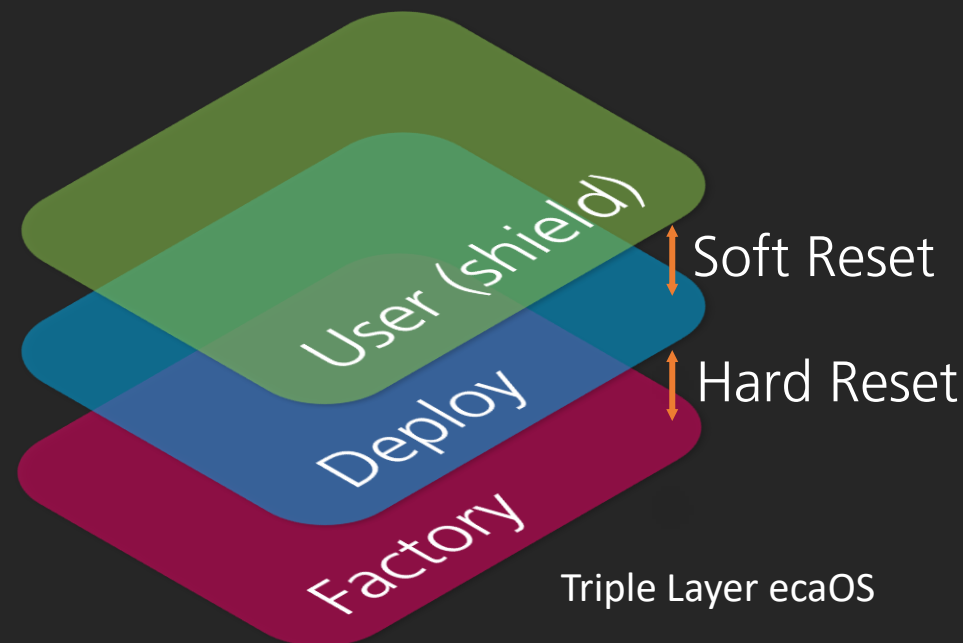
Triple Layer ecaOS

Patented Recovery Process

Heartbeat 2. Microprocessor

When authenticated order received from Security Key, Heartbeat will perform its own self system recovery to repair the ecaOS. Its also store triple layer ecaOS in its own onboard storage.
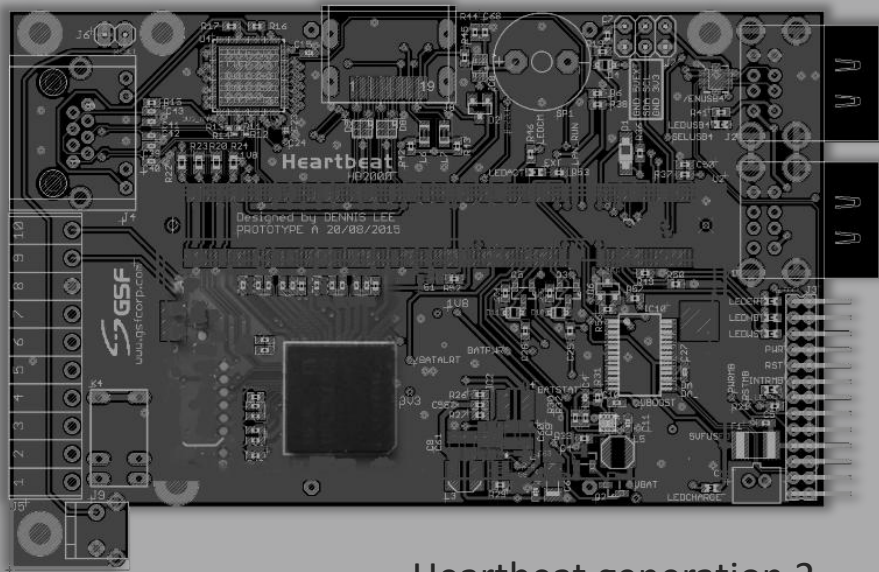
Heartbeat generation 2

Authorized Shutdown

ECA was designed for 24x7 Surveillance applications, it is not supposed to shutdown, or forced to shutdown. The machine will boot up again, no matter what way you are trying. No Key No Shutdown.

Security Key

Security Key is uniquely paired to machine specific authenticator token

KEEP THIS IN A SAFE PLACE

Virtual Security Key for your ECA

Protected Operation

System Recovery

Protected from Vandalism

Application Accidentally Closed or Hang

ECA can monitor any application in windows, if there is no response or accidentally closed, Guardian will automatically respawn.
https://youtu.be/UHmgYpFWwy4

Misplaced Settings

This is a protected operation environment, we understood that in many cases, customer misplaced the settings, like example deleted
the cameras, and they ask for support. By simply reboot the system, we can back to Origin. ECA Shield feature
run in "system memory only" even virus attack, by rebooting the system it will refresh the ecaOS and software.

https://youtu.be/ATeoZRXqITI

System Freeze

Auto Recover from system hang. This is hardware based microprocessor to reboot the system if OS no longer
alive. This is useful for example during holiday, when the factory is close and everyone is on holiday, the system will recovered within minutes if there is a breakdown like system hang or blue screen of dead happened. The worst case will be customer losing a few minutes of recording, instead of waiting till the worker resume, and manually reboot the computer (few days lost recordings).

https://youtu.be/M_En70wFHV4

System Crashed

Even in total OS crashed, you can recover the system without need of any technical person. This process called "Soft Reset" and "Hard Reset".
By simply plug in the Security Key with a few click, or command it via Wilson Cloud with your virtual security key.

https://youtu.be/eEQsULyO6eM

Force Shutdown

The most easier way to vandalize the CCTV system is by simply just shut it down, thus no more recordings will be made. ECA build with "Shutdown Authorization" You only can shutdown the system with our own "Security Key" no matter how you try by pressing the power button to force shutdown the PC or sending the command line to shutdown, it will auto boot-up again in all these unauthorized shutdown.

https://youtu.be/peZWMAhF1Eg

Power Cut

In the most common case ~ 'Sabotage'. You do not need Hacker, but just simply 'Trip the power' to the machine. We learnt this from actual case scenario from our customer in logistic, we understood many case happened to internal accomplice, they can power cut the AC supply before they goes home, and after 8 hours of UPS depleted, the system no longer running. Bad things are to happen then.....with ECA, this scenario will hardly work because ECA will send out machine failed signal like example battery powered siren. This made possible because of our 'Heartbeat' with internal battery.

https://youtu.be/iiBtdhbdO3U

ECA

	VW46	**MX48**	**DX48**	**EX48**	**FX48**
	An enterprise class video workstation manages multi-display system with high performance. More detail: VW46 datasheet	A processing server designed for running 24x7 video and data processing continuously. More detail: MX48 datasheet	The advantage of affordable and performance for small to medium-sized enterprise (SME) at starting point. More detail: DX48 datasheet	Configurable according your needs and features network redundancy help to prevent missing video feeds. Highly recommended for medium to large scale facilities. More detail: EX48 datasheet	The most cost efficiency system for long term data archiving server solution with built-in redundancy. An optional redundant power supply ensure server continuous operate without interruption. Ideal for professional level and high security level facilities. More detail: FX48 datasheet
Mount	Tower / Rack	4U Rack	4U Rack	4U Rack	4U Rack
ecaOS	ecaOS6.3 (Remote System Dashboard) Windows 10 Enterprise LTSC	ecaOS6.3 (Remote System Dashboard). Windows 10 Enterprise LTSC / Windows Server 2012	ecaOS6.3 (Remote System Dashboard). Windows 10 Enterprise LTSC / Windows Server 2012	ecaOS6.3 (Remote System Dashboard). Windows 10 Enterprise LTSC / Windows Server 2012	ecaOS6.3 (Remote System Dashboard) Windows 10 Enterprise LTSC / Windows Server 2012
Heartbeat	N/A	Generation 2	Generation 2	Generation 2	Generation 2
Security Key	Virtual	Physical and Virtual	Physical and Virtual	Physical and Virtual	Physical and Virtual
Storage	Hot-swap : 0 Bay Internal : 2* HDDs	Hot-swap : 0 Bay Internal : 2 SDDs	Hot-swap : 5 Bays Internal : 0 HDDs	Hot-swap : 10 Bays Internal : 0 HDD	Hot-swap : 15 Bays Internal : 0 HDD
RSS System	Yes	Yes	Yes	Yes	Yes
Recommended Usage	Workstation	Processing Server	Recording Server	Recording Server	Recording Server

Experience Start from Pre-Sales

At GSF, we emphasize a good trouble-free system design must start from proposing stage. That is why our TrueBlue experience engineer involve since day 1 of meeting customer needs.
We work hand in hand with customer and partner system integrator

TrueBlue®
experience

Best in Class Customer Service

ECA comes with 3yrs Next business day onsite TrueBlue Care warranty package, and macula with 2 years free software update. Phone, email and remote support comes in default for all GSF products.

TrueBlue®
care

System Maintenance (TBM)

Maintenance plan to ensure your system up running.
- Yearly, quarterly or half yearly maintenance plan
- Optional comprehensive part & labor onsite
- Paired with TrueBlue onsite, phone, email and remote support

TrueBlue®
maintenance

Project Outsource Service (TPS)

System based engineering service outsource by project basis. Cover backends system, cameras, network and other 3rd party system. Job scope inclusive:
- System diagram
- System technical information in digital format
- Onsite software configurations and setup
- System performance and optimization
- One session User operation training
- 7 days grace period system performance monitoring
- One month service satisfaction guarantee

System Testing & Commissioning (TNC)

A support plan designed for the System Back End Testing and Commissioning at a Fix-Cost.
- Onsite Back End software configuration and setup
- Back End System performance and optimization
- One session system operation training
- 7 days grace period system performance monitoring
- One month service satisfaction guarantee

Professional Service (TBP)

Pay-per-request basis professional support.
- Complex Technical Troubleshooting
- Project based Documentation Service
- Objective based User Training Service

Pay-per-Request Onsite (TBO)

Pay-per-request basis onsite support.
- Objective and incident based

TrueBlue®
services

TrueBlue®
support

Carry-IN Service Center

Operating hour: Mon-Fri : 9am-6pm
Unit 21 , Level 3A, IOI Boulevard, Jalan Kenari 6,
Bandar Puchong Jaya,47170 Puchong,
Selangor D.E. Malaysia.
Google map: https://goo.gl/maps/k1gep
Phone: +603 8090 8277
Email: trueblue@gsfcorp.com

GSF ®

The most valued computer engineering company

www.gsfcorp.com

GSF Solutions Sdn Bhd

Unit F21, Level 3A, IOI Boulevard, Jalan Kenari 6,
Puchong, Slenagor D.E., Malaysia.

Save the earth. Go paperless