

SGOS

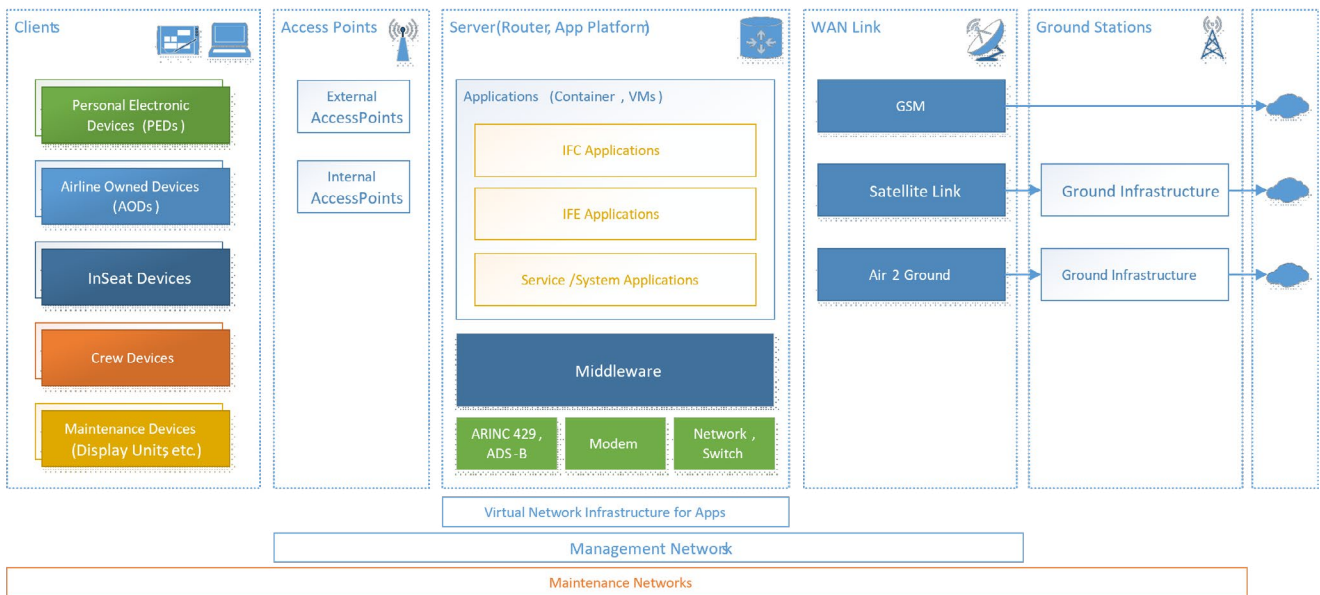
SecureGUARD Operating System



SGOS

- SGOS is a complete Avionics OS consisting of a middleware solution designed to make porting applications, seamless, quick and easy
- Same application/configuration are supported on all Kontron Avionics hardware (Hardware Agnostic)
- Supports virtual machines and container-based application for maximum flexibility
- Flexible and highly scalable for all application needs
- Utilizing IOT Edge Cloud Connectors, SGOS can be extended with ACE Fleet Connect to provide a full fleet management solution

- SGOS has been engineered with scalability in mind, offering configurable modules that enable creation of complex Networking and support for various hardware deployment.



Product Overview

SGOS offers extensive flexibility empowering users with the capability to seamlessly integrate, maintain, operate, and monitor any user-defined applications essential for supporting your avionics business model

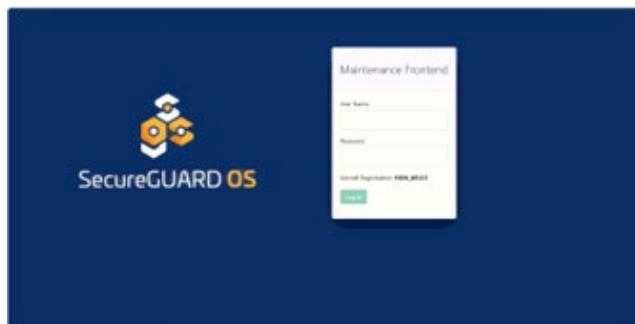
- Easy integration of your application either via Docker Container or Virtual Machine
- Supports Compute, Networking (Cellular, WiFi, Wired, Satcom, A2G) and Storage via a highly sophisticated & configurable Resource Manager
- Easy access to low level hardware via the service bus contained within the highly configurable and scalable middleware solution
- Supports decoding and translation of ARINC and ADSB data
- Designed to guarantee data integrity for all hosted applications in case of sudden power loss
- Broad range of system applications to support many different usage scenarios
 - Typical scenarios are Session Management for IFC, SNMP for Monitoring of Satcom Modems, Firewall for Security, DHCPDNS for Connected Client devices and many more.
- Supports stand alone, partially connected and connected installations
- Provisioning to support large fleet installations that require multiple different aircraft configurations
- Highly configurable maintenance frontend interface
- Configurable Logging functionality via the log bus
- REST Interface to view states of labels and to ease debugging
- Can be used together with ACE Fleet Connect for Remote Management and Updates

Example REST API Client Interface with tree and table view

Folder	Property	Value	System Class
Data-1	Capacity	750137 Mbytes (861 GB)	SystemDiskInfo
	Firmware	DOMJ0517	SystemDiskInfo
	ProductName	"Micron_5106_MTFDDA3607BY"	SystemDiskInfo
	SecurityEnabled	false	SystemDiskInfo
	SecurityLocked	false	SystemDiskInfo
	SerialNumber	"1724177360C"	SystemDiskInfo
	SMARTStatus	"PASSED"	SystemDiskInfo
Data-2	Capacity	750137 Mbytes (861 GB)	SystemDiskInfo
	Firmware	DOMJ0317	SystemDiskInfo
	ProductName	"Micron_5106_MTFDDA3607BY"	SystemDiskInfo
	SecurityEnabled	false	SystemDiskInfo
	SecurityLocked	false	SystemDiskInfo
	SerialNumber	"1736185AE8BA"	SystemDiskInfo
	SMARTStatus	"PASSED"	SystemDiskInfo

ID	Label	Mountpoint	Name	Path	SpaceFree	SpaceTotal	SpaceUsed	Type
bd_pers	"	"internal"	"bd_pers"	"internal/resources/management/bd_pers"	"12740352"	"134152192"	"126848"	"ext3"
bdp0	"	"internal/resources/management/ports/bd_pers"	"bdp0"	"bdp0"	"25671"	"27404"	"187"	"ext3"
bd1	"BOOT"	"boot"	"bd1"	"bd1"	"581178"	"80340"	"20184"	"ext"
bd2	"KERNEL"	"boot"	"bd2"	"bd2"	"243084"	"80340"	"23964"	"ext"
bd3	"EFI"	"boot"	"bd3"	"bd3"	"160024"	"11688"	"3664"	"ext"
bd4	"	"boot"	"bd4"	"bd4"	"8096"	"8096"	"0"	"ext"
bd5	"LVM"	"lvm"	"bd5"	"bd5"	"2341436"	"2348896"	"7420"	"LVM2_member"
bd6	"Swap"	"	"bd6"	"bd6"	"160"	"160"	"0"	"swap"
bd7	"DYNICONT"	"internal/ports/dynicon"	"bd7"	"bd7"	"1108140"	"1177344"	"69204"	"ext"
bd8	"INTERNAL"	"internal"	"bd8"	"bd8"	"12740352"	"134152192"	"126848"	"ext"
bd9	"CONTENT"	"content"	"bd9"	"bd9"	"73247964"	"737523168"	"175204"	"ext"
bd1	"FLASH"	"flash"	"bd1"	"bd1"	"124832928"	"124982928"	"15000"	"ext"
bd1	"Content"	"content"	"bd1"	"bd1"	"8096"	"8096"	"0"	"ext"

Example Maintenance Frontend Screenshots



- ▶ Inflight Connectivity
 - A2G & Satellite connectivity
 - MODMAN Management
- ▶ Inflight Entertainment
 - Order Systems & e-commerce
 - Content Management
 - View & Book Excursions
 - View & Book Activities
 - Destination Guides & Reservations
 - Moving Map
 - Weather and News Feeds
 - Interactive & Non-Interactive
 - Games
 - Books
 - Magazines
 - Movies
 - LiveTV support
 - Customer Feedback



- ▶ Ground Station Support (Used with Ace Fleet Connect)

SGOS Base Offering

FEATURES	ACE FLIGHT SERVERS	ACE FLIGHT MODMANS	KPORTABLE
NETWORK SERVICES DHCP, DNS, TFTP, SNMP	✓	✓	✓
APP HOSTING PLATFORM (DOCKER AND KVM)	✓	✓	✓
APPLICATION LAYER FIREWALL (HTTP, HTTPS)	✓	✓	✓
SESSION MANAGEMENT	✓	✓	
MAINTENANCE FRONTEND (MULTITENANCY)	✓	✓	✓
MANAGEMENT API (ZEROMQ, REST, SNMP)	✓	✓	✓
POWER LOSS RESILIENT PERSISTENT STORAGE	✓	✓	✓
CELLULAR SERVICES	✓	✓	✓
ARINC429 AND ARINC664 DECODING	✓	✓	
ADSB DECODING AND TRANSLATION			✓
SAT MODEM SWITCHING		✓	
SAMPLE WHITE LABEL PORTAL	✓	✓	✓
TPM SUPPORT, ENCRYPTED STORAGES	✓	✓	
ACE FLEET CONNECT CAPABLE	✓	✓	✓
CENTRALIZED LOGGING	✓	✓	✓
FLIGHT STATE DETECTION USING A 9-DOF SENSOR AND ADSB			✓
LRU HEALTH MONITORING (CWAPS, MODMAN, ETC.)	✓	✓	
WAU SERVICES			✓
MCU UTILITIES			✓
SIB UTILITIES		✓	

Aside to the base offering, the following additional features are offered as extended feature sets depending on the targeted use case

- ▶ Forensic Logging (Keeping track of Sessions, Connected Clients and Storage of Historical Data for a duration of 100 Days)
- ▶ Intrusion Detection (IDS) and Intrusion Prevention (IPS)
- ▶ DPI (Deep Packet Inspection)

SGOS Extended Service Offering

- ▶ SGOS Software configuration support (Quarterly / Yearly SLA)
- ▶ SGOS Software Maintenance support (Yearly Contract minimum term)
- ▶ SGOS Software Customization Support (NRE Based)

Your Contact

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