Big Picture

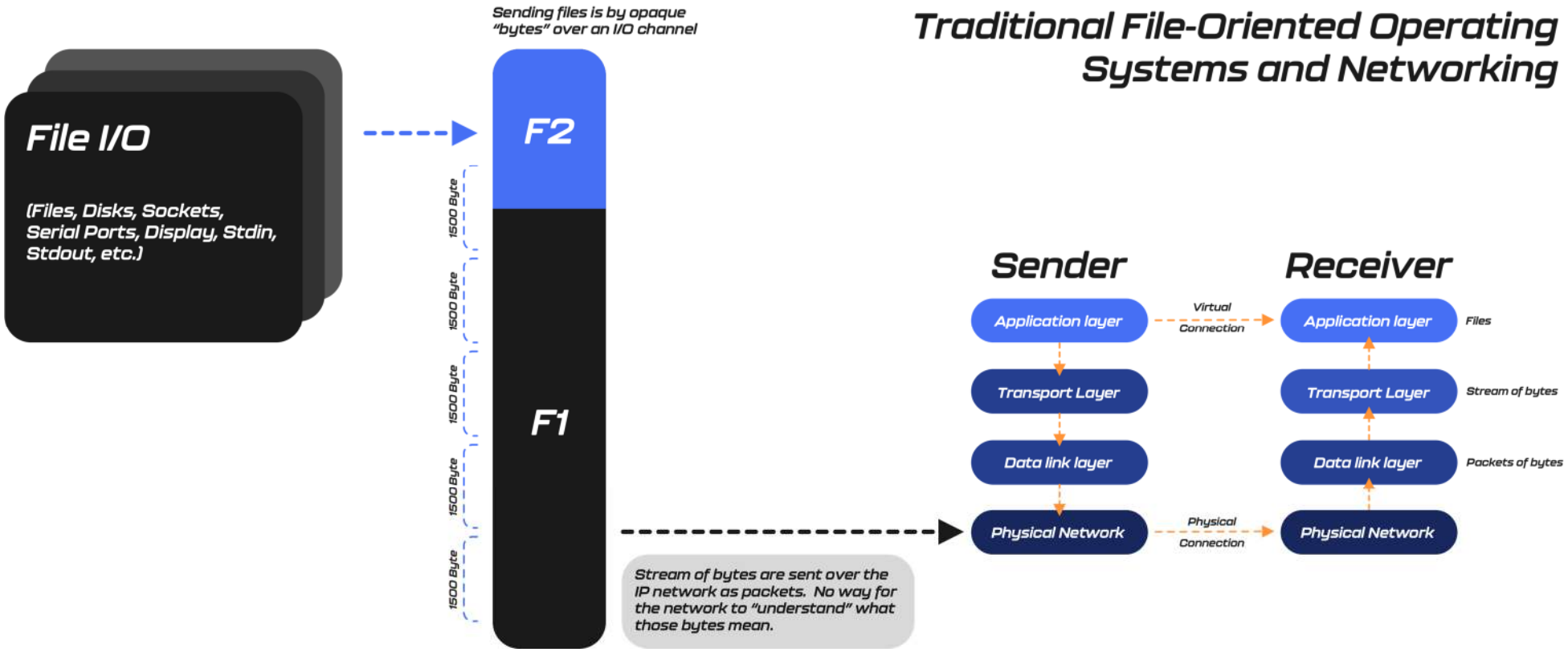
- Content Oriented Networking
- Full Content Traceability
- Content Sentinel

Content Oriented Networking

Moving opaque bytes
vs
Moving content over private networks to specific people (Cohorts)

	IP Network Traditional File-Oriented Network	WhiteStar Network Content Oriented Network
Addressing	Source IP Address Destination Address	Endpoint ID, Federation ID, Conversation ID, Message ID, Root Chunk ID
Architecture	Underlay Network	Overlay Network
Size of Packet	~1500 bytes	500K bytes

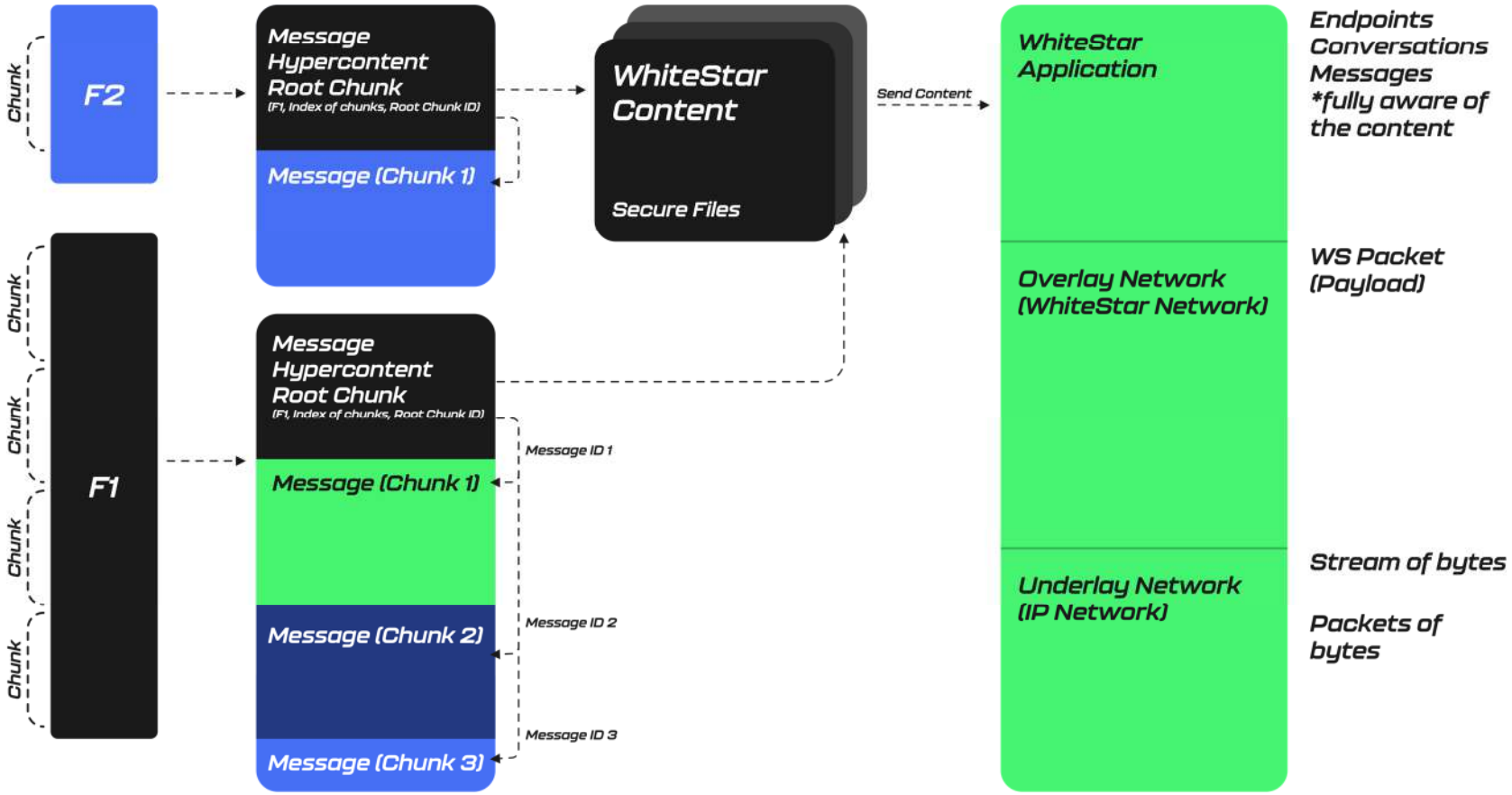
Traditional File-Oriented Operating Systems and Networking



WhiteStar OS

How do we handle content?

As hyper linked hyper content in chunks
where each chunk is a message object



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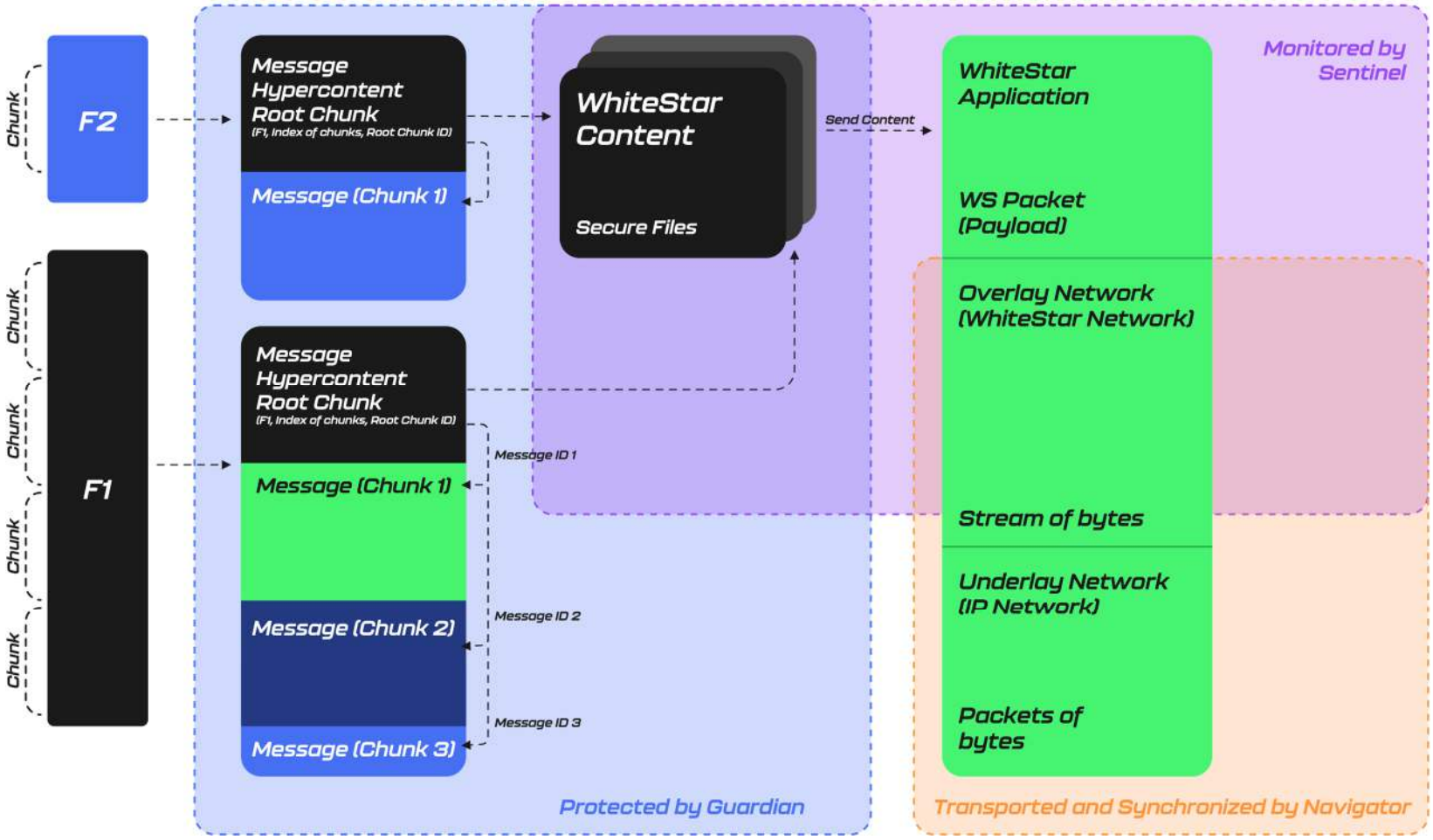
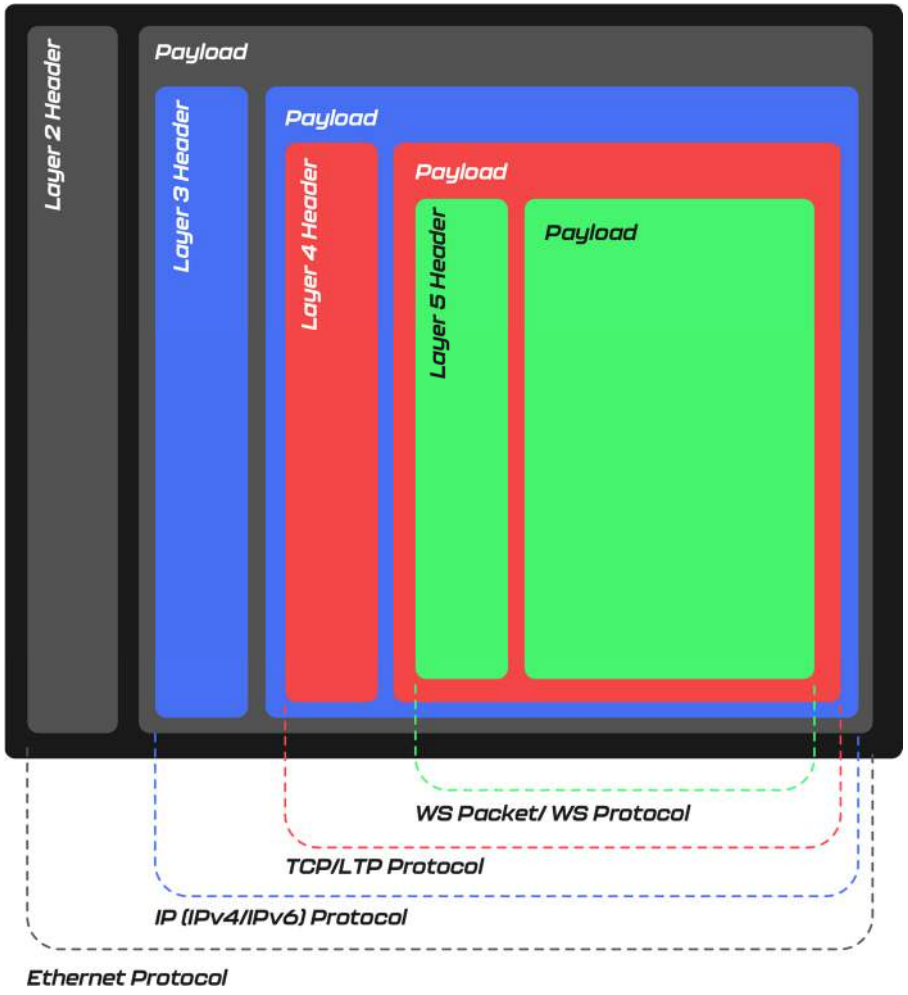
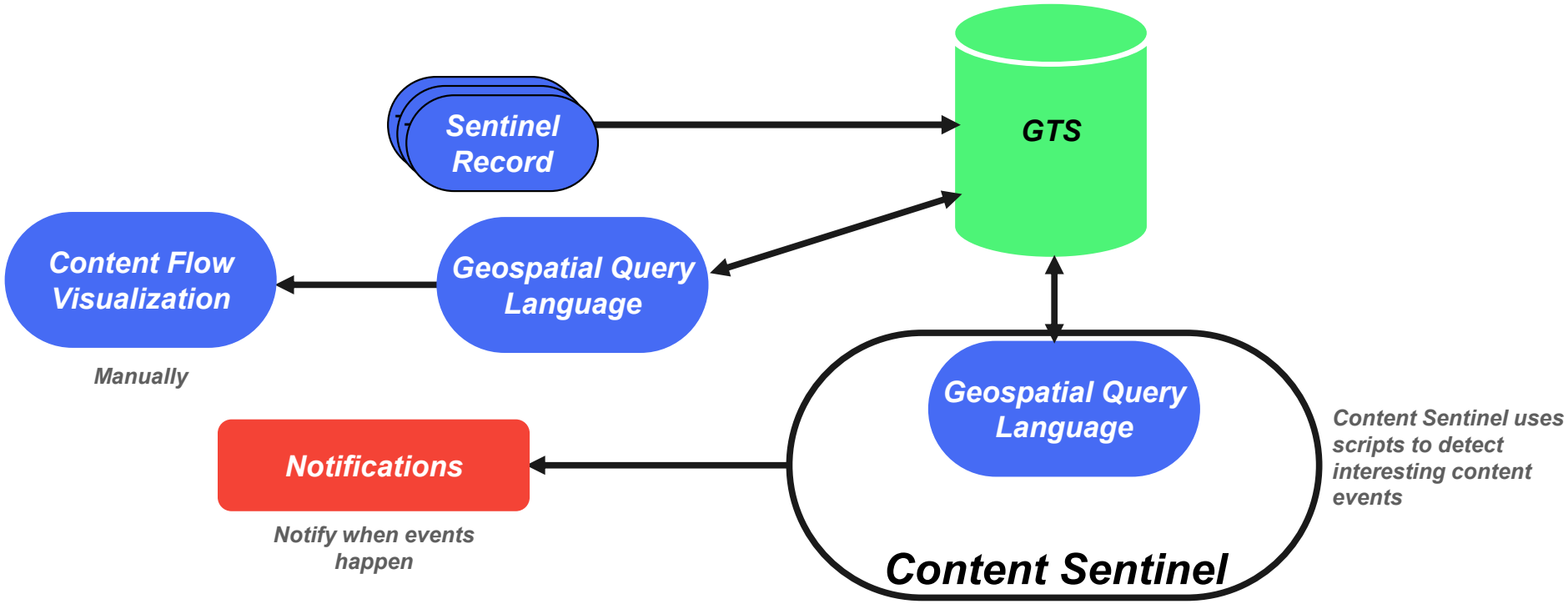




*Hashing Algorithm: PBKDF2WithHmacSHA256

Packet Trace Geospatial TSDB
(Time Series Data Base)



Accessed through Enterprise management portal

WhiteStar OS
Recorded as WhiteStar Packets Traverse the network

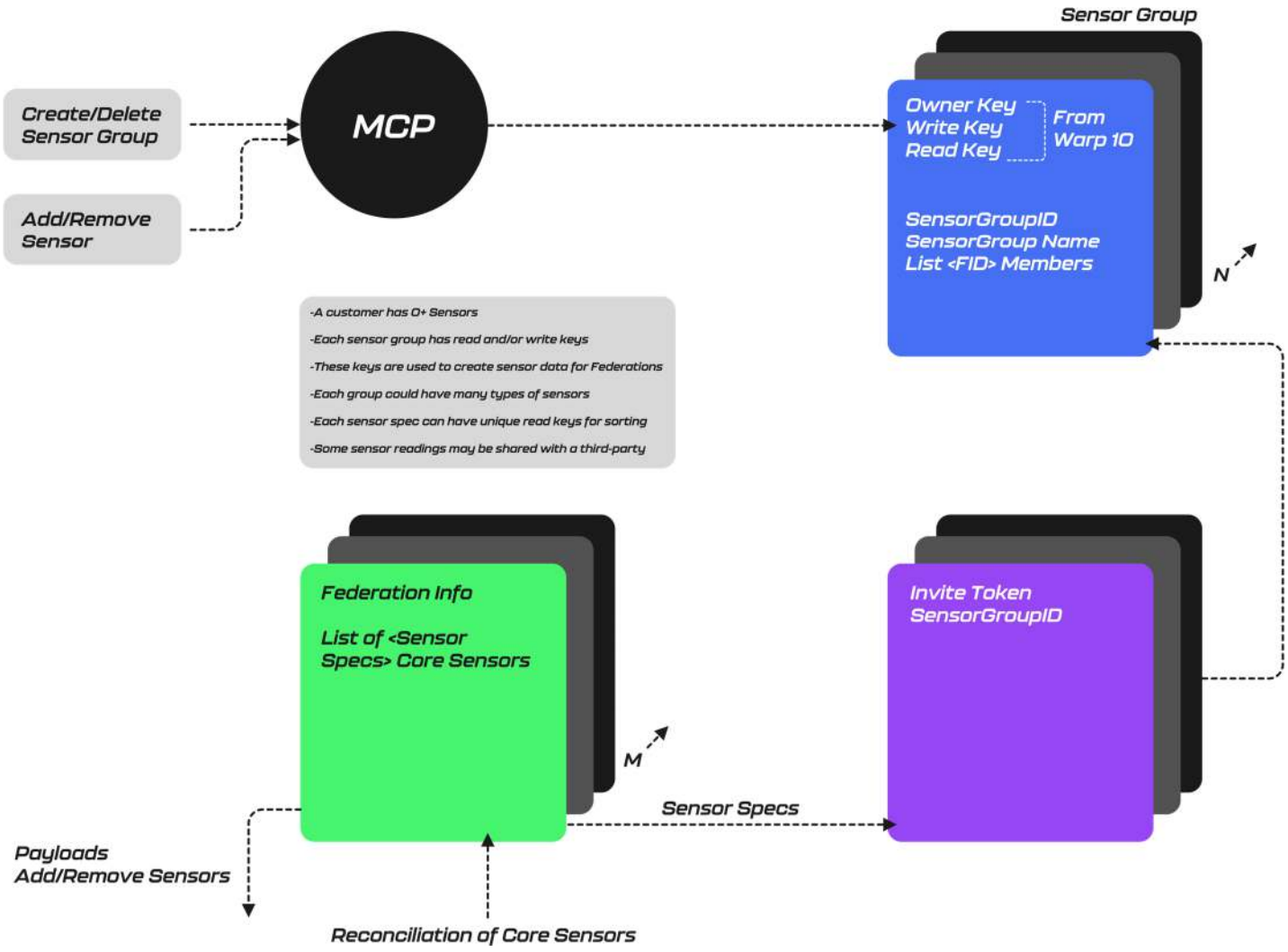
Sentinel Content Sensor	*Content Tracking Sensor Recording*
io.whiteStar.content.created	When content created: Time, Location, ContentTrackingUUID, Source FederationID, FileName, FileType, FileSize, ContentRating, SourceEndpointID, TotalChunks -> value is 0
io.whiteStar.content.L3Relay *io.whiteStar.content.L5Relay*	When a content root chunk is relayed: SourceEndpointID, SourceFederationID, DestinationEndpointID, DestinationFederationID, ReplicatorEndpointID, ContentTrackingUUID -> value is 0
Io.whiteStar.content.origin	When content is sent: Time, Location, ContentTrackingUUID, Source FederationID, FileName, FileType, FileSize, ContentRating, SourceEndpointID, TotalChunks -> value is 0
io.whiteStar.content.destination	When content is received: Time, Location, ContentTrackingUUID, Source FederationID, FileName, FileType, FileSize, ContentRating, SourceEndpointID, TotalChunks, TransferTarget -> value is 0
io.whiteStar.content.changed	When content changed: Time, Location, ContentTrackingUUID, Source FederationID, FileName, FileType, FileSize, ContentRating, SourceEndpointID, TotalChunks -> value is 0
io.whiteStar.content.deleted	When content deleted: Time, Location, ContentTrackingUUID, Source FederationID, FileName, FileType, FileSize, ContentRating, SourceEndpointID, TotalChunks -> value is 0

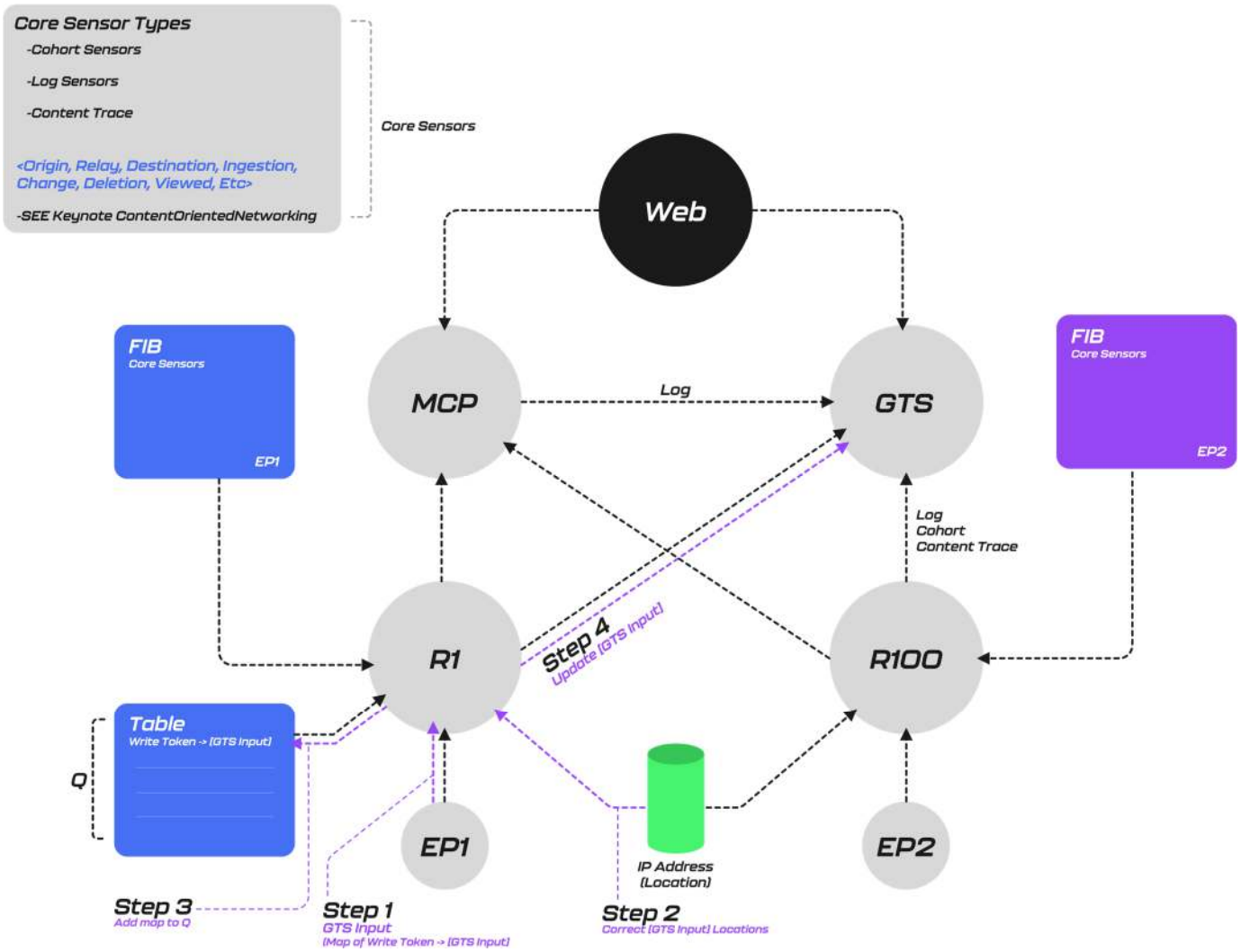
WhiteStar OS
Recorded when log records are created

Sentinel Content Sensor	*Content Tracking Sensor Recording*
Io.whiteStar.log	When log record is created: SourceEndpointID, SourceFederationID, DeviceType, SourceApplication, Thrown, LoggerName -> value is log message

Recorded when cohorts connect/disconnect

Sentinel Content Sensor	*Content Tracking Sensor Recording*
Io.whiteStar.cohort	When cohort connects: SourceEndpointID, SourceFederationID, DestinationEndpointID, DestinationFederationID, DestinationApplication, DestinationDeviceType -> value is T
Io.whiteStar.cohort	When cohort disconnects: SourceEndpointID, SourceFederationID, DestinationEndpointID, DestinationFederationID, DestinationApplication, DestinationDeviceType -> value is F


Sensor Group
Create/Delete Sensor Group
Add/Remove Sensor
MCP
Owner Key
Write Key
Read Key
From Warp 10
SensorGroupID
SensorGroup Name
List <FID> Members
N
-A customer has 0+ Sensors
-Each sensor group has read and/or write keys
-These keys are used to create sensor data for Federations
-Each group could have many types of sensors
-Each sensor spec can have unique read keys for sorting
-Some sensor readings may be shared with a third-party
Federation Info
List of <Sensor Specs> Core Sensors
M
Invite Token
SensorGroupID
Sensor Specs
Payloads
Add/Remove Sensors
Reconciliation of Core Sensors


Core Sensor Types
-Cohort Sensors
-Log Sensors
-Content Trace
<Origin, Relay, Destination, Ingestion, Change, Deletion, Viewed, Etc>
-SEE Keynote ContentOrientedNetworking
Core Sensors
Web
FIB
Core Sensors
EP1
MCP
Log
GTS
FIB
Core Sensors
EP2
Log
Cohort
Content Trace
R1
Step 4
Update [GTS Input]
R100
Table
Write Token -> [GTS Input]
Q
EP1
IP Address
(Location)
EP2
Step 3
Add map to Q
Step 1
GTS Input
(Map of Write Token -> [GTS Input]
Step 2
Correct [GTS Input] Locations

WhiteStar

Network