

METEORSTORM Data Model

TAXONOMIC ELEMENT NOMENCLATURE (TEN) REFERENCE

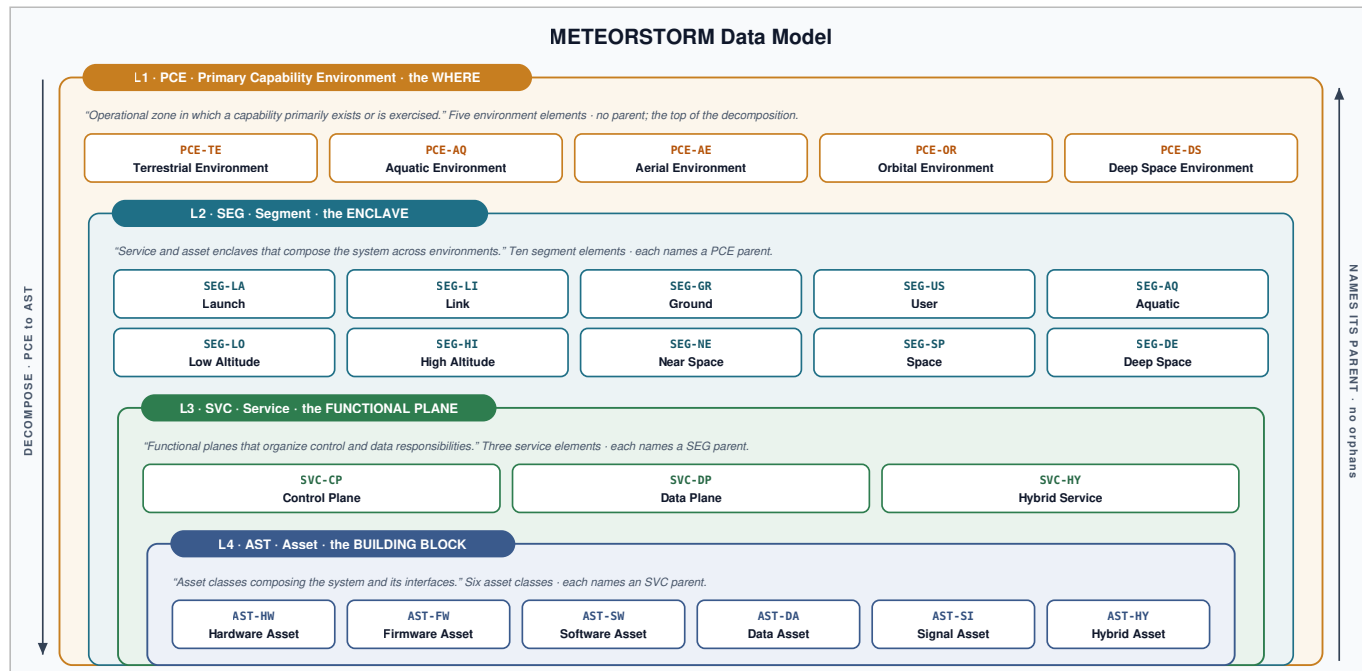
This is the METEORSTORM TEN data model: five layers defining 30 taxonomic elements, each named by a Taxonomic Element Nomenclature (TEN) that carries its published definition. The verbatim rule below governs every definition.

METEORSTORM DATA MODEL FIELDS

LAYER	The layer the element belongs to: PCE , SEG , SVC , AST , or AN .
TAG	The published tag for the element within its layer, for example OR .
LABEL	The published name that corresponds to the tag, for example Orbital .
DEFINITION	The published definition for the element, quoted verbatim.

Select any element below to reveal its full nomenclature. To name one real occurrence on your platform, switch to the colon ETEN nomenclature in the companion [ETEN reference](#).

Verbatim rule. Every definition in the tables below is the published METEORSTORM taxonomy text, quoted exactly. On this platform an element definition is never abbreviated, paraphrased, or reworded. When you need to describe how an element applies to your actual system, that is the job of the ETEN, not an edit to the definition.



L1 PRIMARY CAPABILITY ENVIRONMENT (PCE)

Predicate: "Operational zone in which a capability primarily exists or is exercised." The WHERE, the zone. PCE elements have no parent; they are the top of the decomposition.

Terrestrial Environment

TEN NOMENCLATURE

PCE-TE-Terrestrial Environment-Surface-based operational zones on planetary bodies.

LAYER	PCE Primary Capability Environment (L1)
TAG	TE
LABEL	Terrestrial Environment
DEFINITION	Surface-based operational zones on planetary bodies.

Aquatic Environment

TEN NOMENCLATURE

PCE-AQ-Aquatic Environment-Water-based operational zones, including but not limited to Earth's maritime domains.

LAYER	PCE Primary Capability Environment (L1)
TAG	AQ
LABEL	Aquatic Environment
DEFINITION	Water-based operational zones, including but not limited to Earth's maritime domains.

Aerial Environment

TEN NOMENCLATURE

PCE-AE-Aerial Environment-Atmospheric operational zones spanning lower, upper, and near-space regions.

LAYER	PCE Primary Capability Environment (L1)
TAG	AE
LABEL	Aerial Environment
DEFINITION	Atmospheric operational zones spanning lower, upper, and near-space regions.

Orbital Environment

TEN NOMENCLATURE

PCE-OR-Orbital Environment-Operational zones within planetary or satellite orbits.

LAYER	PCE Primary Capability Environment (L1)
TAG	OR
LABEL	Orbital Environment
DEFINITION	Operational zones within planetary or satellite orbits.

Deep Space Environment

TEN NOMENCLATURE

PCE-DS-Deep Space Environment-Operational zones beyond planetary orbital regimes.

LAYER	PCE Primary Capability Environment (L1)
TAG	DS
LABEL	Deep Space Environment
DEFINITION	Operational zones beyond planetary orbital regimes.

L2 SEGMENT (SEG)

Predicate: “Service and asset enclaves that compose the system across environments.” The ENCLAVE of services and assets. Every SEG names its PCE parent.

Launch

TEN NOMENCLATURE

SEG-LA-Launch-Surface-based services and assets for primary launch operations.

LAYER	SEG Segment (L2)
TAG	LA
LABEL	Launch
DEFINITION	Surface-based services and assets for primary launch operations.

Link

TEN NOMENCLATURE

SEG-LI-Link-Services and assets enabling platform communications across signal paths.

LAYER	SEG Segment (L2)
TAG	LI
LABEL	Link
DEFINITION	Services and assets enabling platform communications across signal paths.

Ground

TEN NOMENCLATURE

SEG-GR-Ground-Surface-based services and assets for primary platform operations, serving as the primary locus of control plane activity.

LAYER	SEG Segment (L2)
TAG	GR
LABEL	Ground
DEFINITION	Surface-based services and assets for primary platform operations, serving as the primary locus of control plane activity.

User

TEN NOMENCLATURE

SEG-US-User-Services and assets for primary end-user operations.

LAYER	SEG Segment (L2)
TAG	US
LABEL	User
DEFINITION	Services and assets for primary end-user operations.

Aquatic

TEN NOMENCLATURE

SEG-AQ-Aquatic-Water-based services and assets for primary platform operations, not limited to Earth's maritime domains.

LAYER	SEG Segment (L2)
TAG	AQ
LABEL	Aquatic
DEFINITION	Water-based services and assets for primary platform operations, not limited to Earth's maritime domains.

Low Altitude

TEN NOMENCLATURE

SEG-LO-Low Altitude-Aerial services and assets in the lower atmosphere.

LAYER	SEG Segment (L2)
TAG	L0
LABEL	Low Altitude
DEFINITION	Aerial services and assets in the lower atmosphere.

High Altitude

TEN NOMENCLATURE

SEG-HI-High Altitude-Aerial services and assets above the lower atmosphere but below near space.

LAYER	SEG Segment (L2)
TAG	HI
LABEL	High Altitude
DEFINITION	Aerial services and assets above the lower atmosphere but below near space.

Near Space

TEN NOMENCLATURE

SEG-NE-Near Space-Aerial services and assets above high altitude and below orbital regions.

LAYER	SEG Segment (L2)
TAG	NE
LABEL	Near Space
DEFINITION	Aerial services and assets above high altitude and below orbital regions.

Space

TEN NOMENCLATURE

SEG-SP-Space-Services and assets operating in planetary or satellite orbits.

LAYER	SEG Segment (L2)
TAG	SP
LABEL	Space
DEFINITION	Services and assets operating in planetary or satellite orbits.

Deep Space

TEN NOMENCLATURE

SEG-DE-Deep Space-Services and assets operating beyond planetary orbital regimes.

LAYER	SEG Segment (L2)
TAG	DE
LABEL	Deep Space
DEFINITION	Services and assets operating beyond planetary orbital regimes.

L3 SERVICE (SVC)

Predicate: “Functional planes that organize control and data responsibilities.” The functional PLANE. Every SVC names its SEG parent.

Control Plane TEN NOMENCLATURE SVC-CP-Control Plane-Services for managing and orchestrating platform control functions. LAYER SVC Service (L3) TAG CP LABEL Control Plane DEFINITION Services for managing and orchestrating platform control functions.	Data Plane TEN NOMENCLATURE SVC-DP-Data Plane-Services for managing and orchestrating mission product functions. LAYER SVC Service (L3) TAG DP LABEL Data Plane DEFINITION Services for managing and orchestrating mission product functions.
Hybrid Service TEN NOMENCLATURE SVC-HY-Hybrid Service-Services integrating both control and data plane functionalities. LAYER SVC Service (L3) TAG HY LABEL Hybrid Service DEFINITION Services integrating both control and data plane functionalities.	

L4 ASSET (AST)

Predicate: “Asset classes composing the system and its interfaces.” The building-block COMPONENT. Every AST names its SVC parent.

Hardware Asset

TEN NOMENCLATURE

AST-HW-Hardware Asset-Physical components supporting platform operations.

LAYER	AST Asset (L4)
TAG	HW
LABEL	Hardware Asset
DEFINITION	Physical components supporting platform operations.

Firmware Asset

TEN NOMENCLATURE

AST-FW-Firmware Asset-Embedded control code governing hardware functions.

LAYER	AST Asset (L4)
TAG	FW
LABEL	Firmware Asset
DEFINITION	Embedded control code governing hardware functions.

Software Asset

TEN NOMENCLATURE

AST-SW-Software Asset-Applications and logic executing operational tasks.

LAYER	AST Asset (L4)
TAG	SW
LABEL	Software Asset
DEFINITION	Applications and logic executing operational tasks.

Data Asset

TEN NOMENCLATURE

AST-DA-Data Asset-Information generated, processed, or consumed by the platform.

LAYER	AST Asset (L4)
TAG	DA
LABEL	Data Asset
DEFINITION	Information generated, processed, or consumed by the platform.

Signal Asset

TEN NOMENCLATURE

AST-SI-Signal Asset-Communication channels and transmission frequencies.

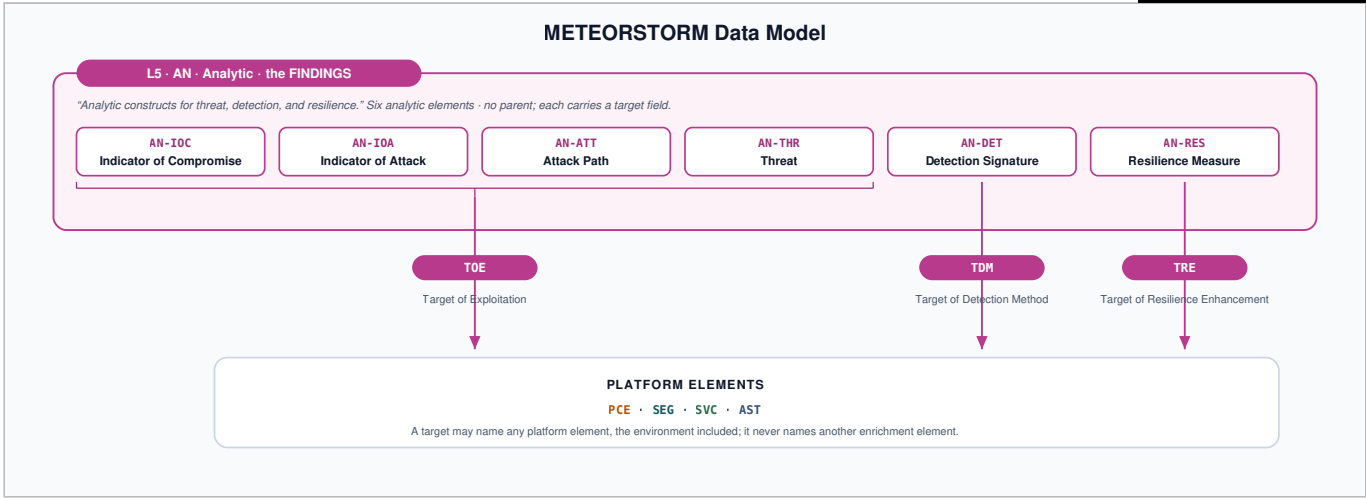
LAYER	AST Asset (L4)
TAG	SI
LABEL	Signal Asset
DEFINITION	Communication channels and transmission frequencies.

Hybrid Asset

TEN NOMENCLATURE

AST-HY-Hybrid Asset-Composite elements combining multiple asset types.

LAYER	AST Asset (L4)
TAG	HY
LABEL	Hybrid Asset
DEFINITION	Composite elements combining multiple asset types.



L5 ANALYTIC (AN)

Predicate: “Analytic constructs for threat, detection, and resilience.” The ENRICHMENT layer. Every AN element is an enrichment element; it anchors to the platform element it concerns through its target field.

METEORSTORM DATA MODEL FIELDS	
TOE	Target of Exploitation. Carried by Attack Path, Indicator of Compromise, Indicator of Attack, and Threat; names the platform elements the adversary activity is directed at.
TDM	Target of Detection Method. Carried by Detection Signature; names the platform elements the signature observes.
TRE	Target of Resilience Enhancement. Carried by Resilience Measure; names the platform elements the measure protects.

The target field is fixed by the element; it is never chosen freely. It references platform elements in any layer, PCE, SEG, SVC, or AST, so a threat can anchor to the environment itself; it never references another enrichment element.

Indicator of Compromise

TEN NOMENCLATURE

AN-IOC-Indicator of Compromise-Confirmed indication that a converged space system has been compromised.

LAYER	AN Analytic (L5)
TAG	IOC
LABEL	Indicator of Compromise
DEFINITION	Confirmed indication that a converged space system has been compromised.
TARGET	TOE Target of Exploitation

Indicator of Attack

TEN NOMENCLATURE

AN-IOA-Indicator of Attack-Confirmed indication that a converged space system has been attacked.

LAYER	AN Analytic (L5)
TAG	IOA
LABEL	Indicator of Attack
DEFINITION	Confirmed indication that a converged space system has been attacked.
TARGET	TOE Target of Exploitation

Attack Path

TEN NOMENCLATURE

AN-ATT-Attack Path-Confirmed attack path for a converged space system.

LAYER	AN Analytic (L5)
TAG	ATT
LABEL	Attack Path
DEFINITION	Confirmed attack path for a converged space system.
TARGET	TOE Target of Exploitation
SOURCES	RDS Required Data Source · RSS Required Signal Source

Threat

TEN NOMENCLATURE

AN-THR-Threat-Confirmed and active threat against a converged space system.

LAYER	AN Analytic (L5)
TAG	THR
LABEL	Threat
DEFINITION	Confirmed and active threat against a converged space system.
TARGET	TOE Target of Exploitation

Detection Signature TEN NOMENCLATURE AN-DET-Detection Signature-Validated and operational pattern, signal, or logic that triggers on contextualized threat behavior for a converged space system. <table><tr><td>LAYER</td><td>AN Analytic (L5)</td></tr><tr><td>TAG</td><td>DET</td></tr><tr><td>LABEL</td><td>Detection Signature</td></tr><tr><td>DEFINITION</td><td>Validated and operational pattern, signal, or logic that triggers on contextualized threat behavior for a converged space system.</td></tr><tr><td>TARGET</td><td>TDM Target of Detection Method</td></tr><tr><td>PLAYBOOK</td><td>PB the authorized response this signature triggers</td></tr></table>	LAYER	AN Analytic (L5)	TAG	DET	LABEL	Detection Signature	DEFINITION	Validated and operational pattern, signal, or logic that triggers on contextualized threat behavior for a converged space system.	TARGET	TDM Target of Detection Method	PLAYBOOK	PB the authorized response this signature triggers	Resilience Measure TEN NOMENCLATURE AN-RES-Resilience Measure-Validated and operational protective capability ensuring converged space system resistance or recovery from confirmed threats. <table><tr><td>LAYER</td><td>AN Analytic (L5)</td></tr><tr><td>TAG</td><td>RES</td></tr><tr><td>LABEL</td><td>Resilience Measure</td></tr><tr><td>DEFINITION</td><td>Validated and operational protective capability ensuring converged space system resistance or recovery from confirmed threats.</td></tr><tr><td>TARGET</td><td>TRE Target of Resilience Enhancement</td></tr></table>	LAYER	AN Analytic (L5)	TAG	RES	LABEL	Resilience Measure	DEFINITION	Validated and operational protective capability ensuring converged space system resistance or recovery from confirmed threats.	TARGET	TRE Target of Resilience Enhancement
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Enumeration. This card carries the taxonomy and ontology of the METEORSTORM data model. Enumerating a platform against it produces the ETEN record: each element named with an ordinal and a description. The companion [ETEN reference](#) applies all five layers to the Kestrel Orbital Day-1 CONOPS: a tailored enumeration of 44 elements scoped to the telecommand path under Function 01, Concept of Operations, not the whole platform.