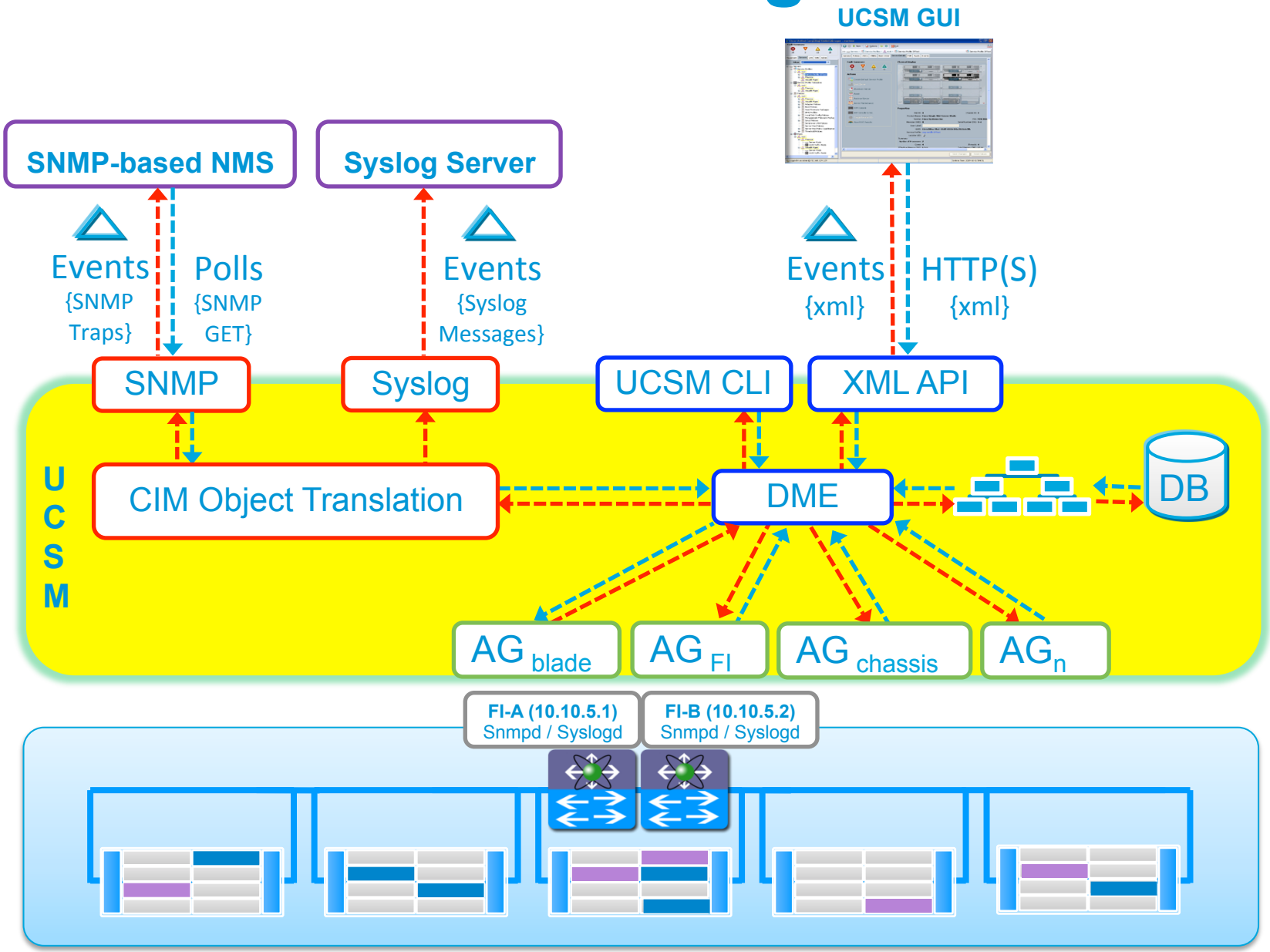
The Core of UCS Manager



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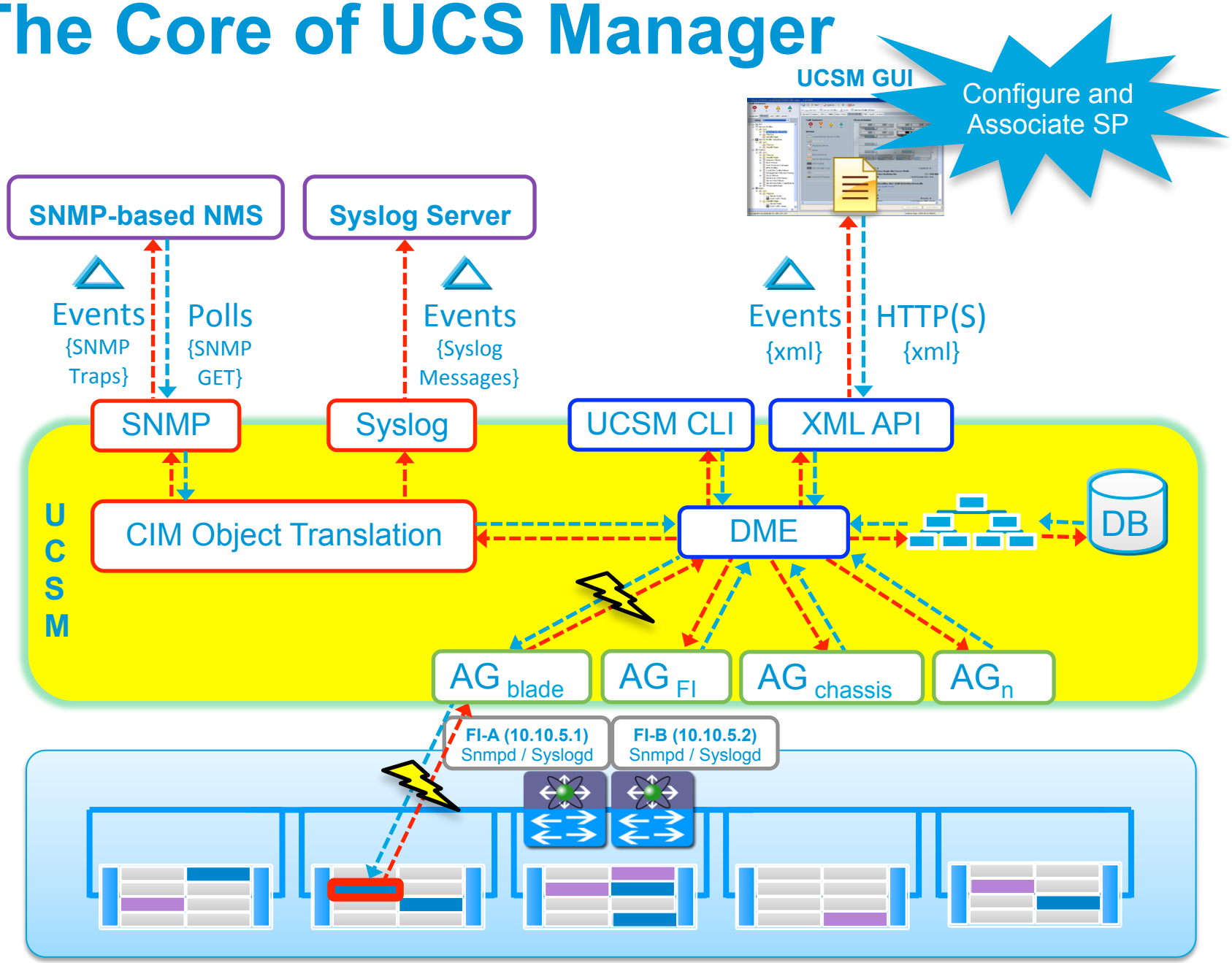
The Core of UCS Manager



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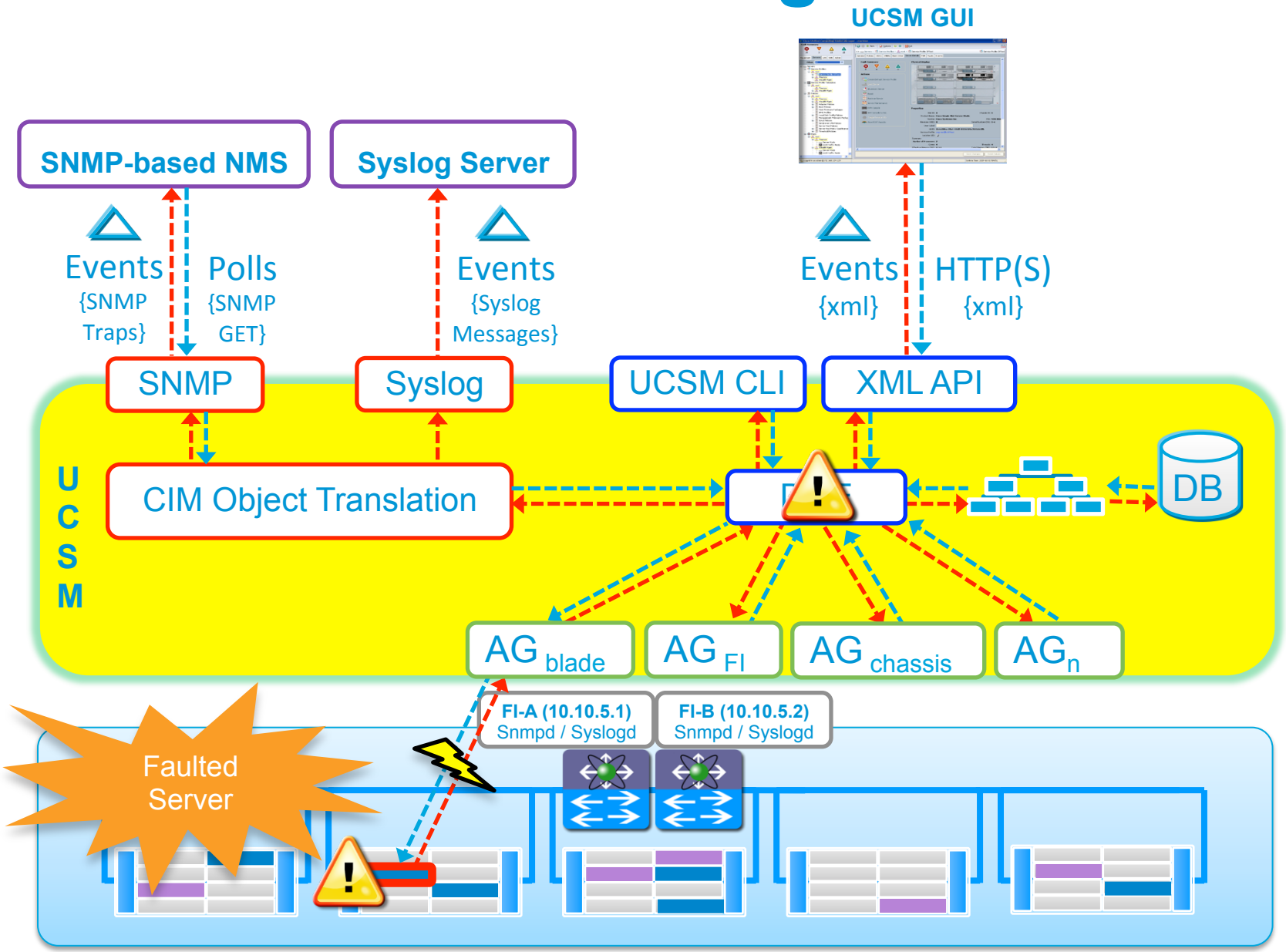
The Core of UCS Manager



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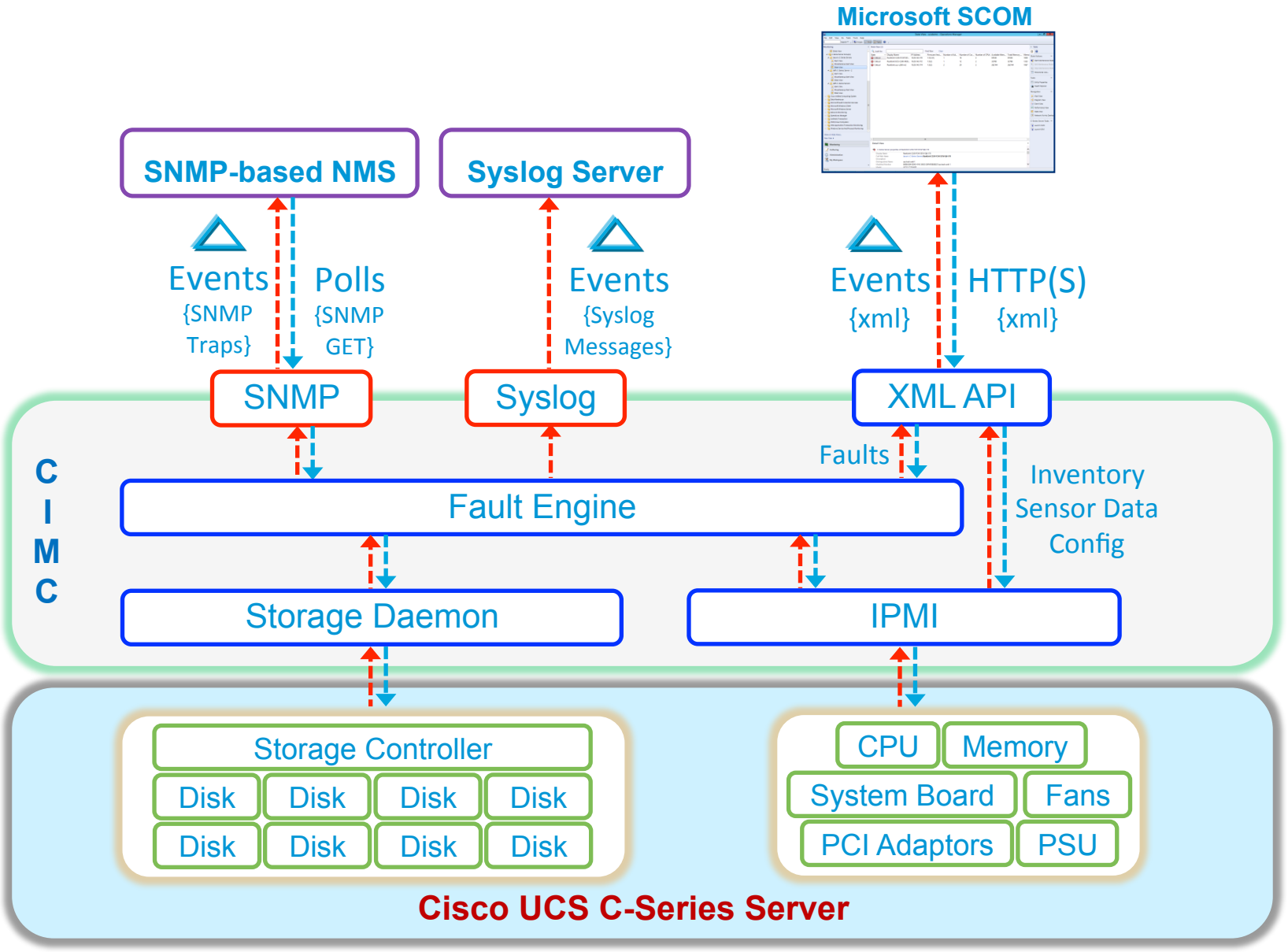
The Core of C-Series IMC



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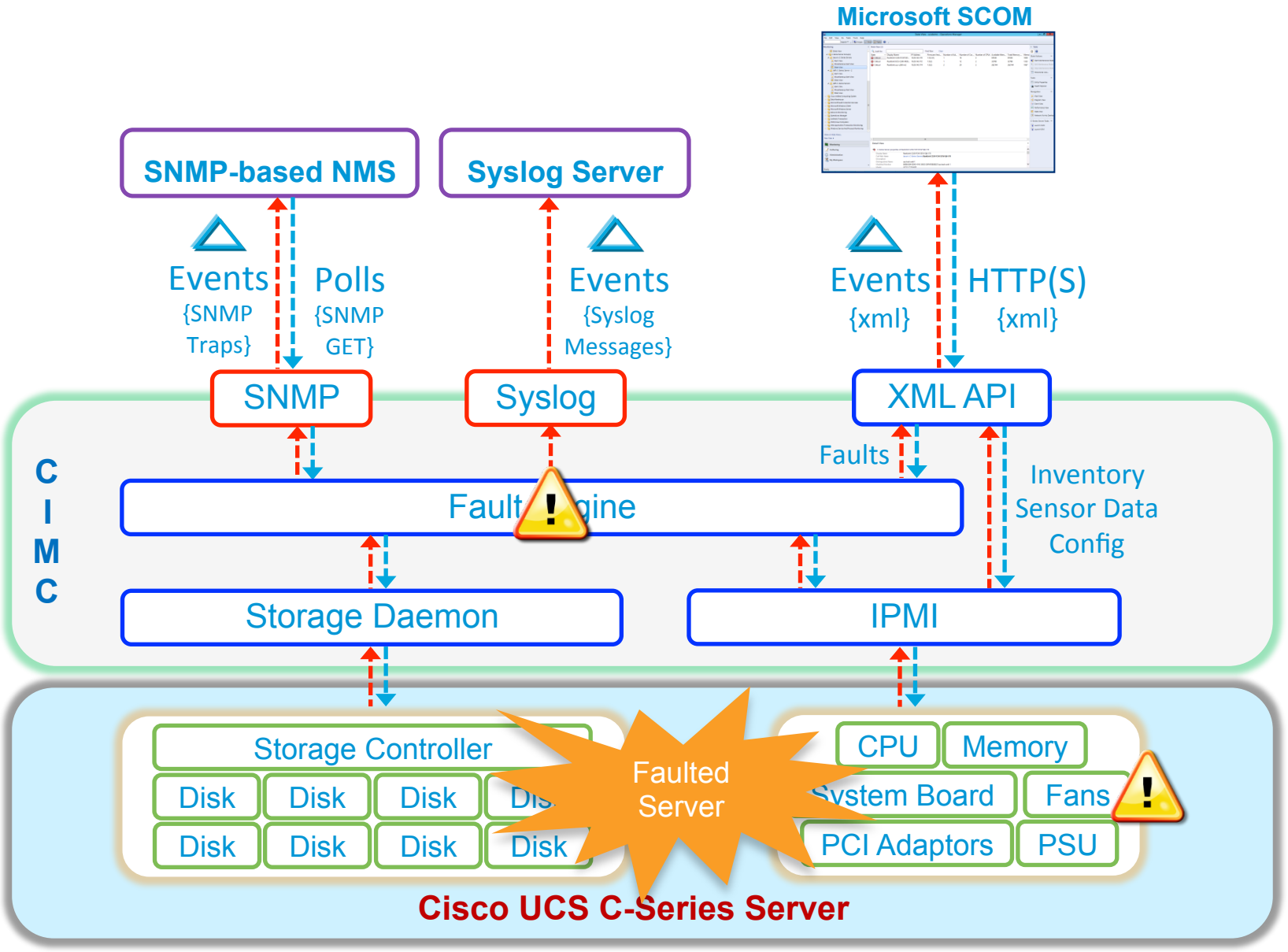
The Core of C-Series IMC



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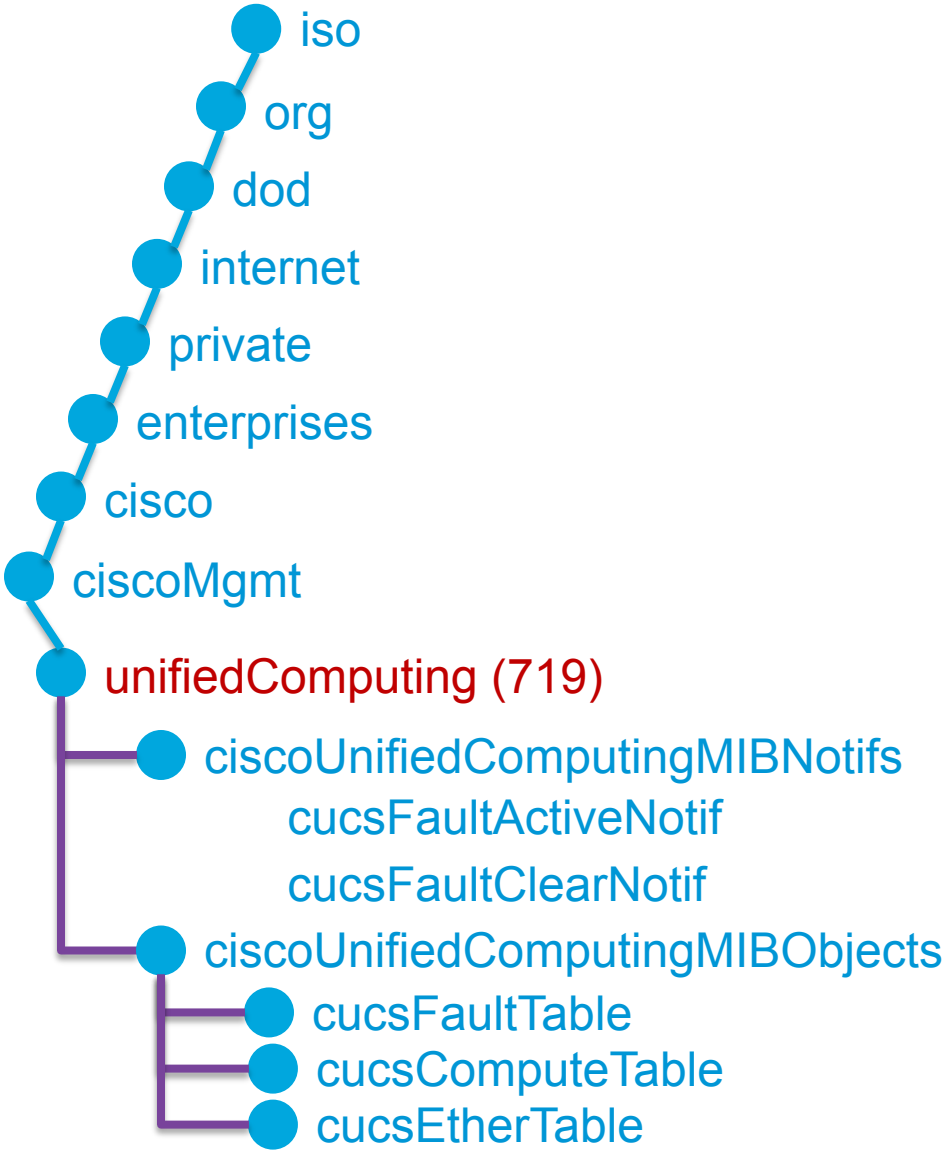
UCS Fault MIB Sub Tree



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UCS Fault SNMP Traps

- **cucsFaultActiveNotif (**.1.3.6.1.4.1.9.9.719.0.1)

  Sent when a fault is active, or when any of the fault attributes change

    Severity changes, number of occurrences changes…

- **cucsFaultClearNotif (**.1.3.6.1.4.1.9.9.719.0.2)

  Sent when a fault is cleared

- Trap Variable Bindings help to identify the nature and cause of the problem

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UCS Fault SNMP Trap Var Binds

- **Fault Instance ID (Table INDEX)**: A unique integer identifying the fault
- **Affected Object DN**: The distinguished name of the MO that has this fault
- **Affected Object OID**: The OID of the MO that has this fault
- **Creation Time**: the time when the fault object was created
- **Last Modification**: the time when any of the attributes below were modified
- **Code**: A code providing specific information about the nature of the fault
  - **UCSM:** 1900+ total fault codes. **Recommendation:** Monitor 300+ fault codes not of type "FSM"
  - **Standalone C-Series:** 85+ total fault codes. All C-Series fault codes are relevant for general monitoring.
- **Type**: The type of the fault (broad categorization)
  - **UCSM:** 11 fault types: configuration, connectivity, environmental, management, equipment…
  - **Standalone C-Series:** 4 fault types: environmental, equipment, operational, server
- **Cause**: A probable cause of the fault
  - **225+ fault probable causes:** firmware upgrade problem, config-failure, equipment offline, power problem…
- **Severity**: The severity of the fault
  - **6 fault severities**: information, warning, minor, major, critical, cleared
- **Occurrence**: the number of time this fault has occurred since it was created
- **Description**: a human readable string providing more information about the fault, including possibly more information about the probable cause

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UCS Manager Syslog Format

- Apr 19 17:11:12 UTC: %UCSM-6-LOG_CAPACITY: [F0461][info][log-capacity][sys/chassis-1/blade-7/mgmt/log-SEL-0] Log capacity on Management Controller on server 1/7 is very-low
- **FACILITY—** Refers to the source of the message, such as a hardware device, a protocol, or a module of the system software. Note that this FACILITY is Cisco specific and is only relevant within the message string. It is different from the facility defined in RFC 3164 for the syslog protocol. For UCSM derived messages, it will be UCSM.
- **SEVERITY—** Syslog severity code
- **MNEMONIC—** This is a device-specific code that uniquely identifies the message. This maps to the fault type in UCSM.
- **Message-text—** This is a text string that describes the message and can contain details such as port numbers and network addresses.

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UCS Manager Fault Types

Type	Description
fsm	UCSM was executing a Finite State Machine (FSM) and the FSM failed to complete successfully, or UCSM is retrying one of the FSM stages
equipment	UCSM has detected a physical component is inoperable, such as component health problems, equipment missing or unidentified
server	UCSM is unable to complete a server task. For example, it is unable to associate a Service Profile to a blade, or a blade server has diagnostic failures
configuration	UCSM was unable to successfully configure a component
environmental	UCSM has detected an environmental issue, such as power problems, thermal problems, voltage problems, or loss of CMOS settings
management	UCSM has detected a serious management issue, such as failing to start critical services, failing to elect the primary switch, detecting that a management service has become unresponsive, or detecting software version incompatibilities
connectivity	UCSM has detected a connectivity issue to one of its components
network	UCSM has detected a network link failure
operational	UCSM has detected an operational issue, such as a log datastore reaching its maximum capacity, being unable to transfer files, or being unable to discover components

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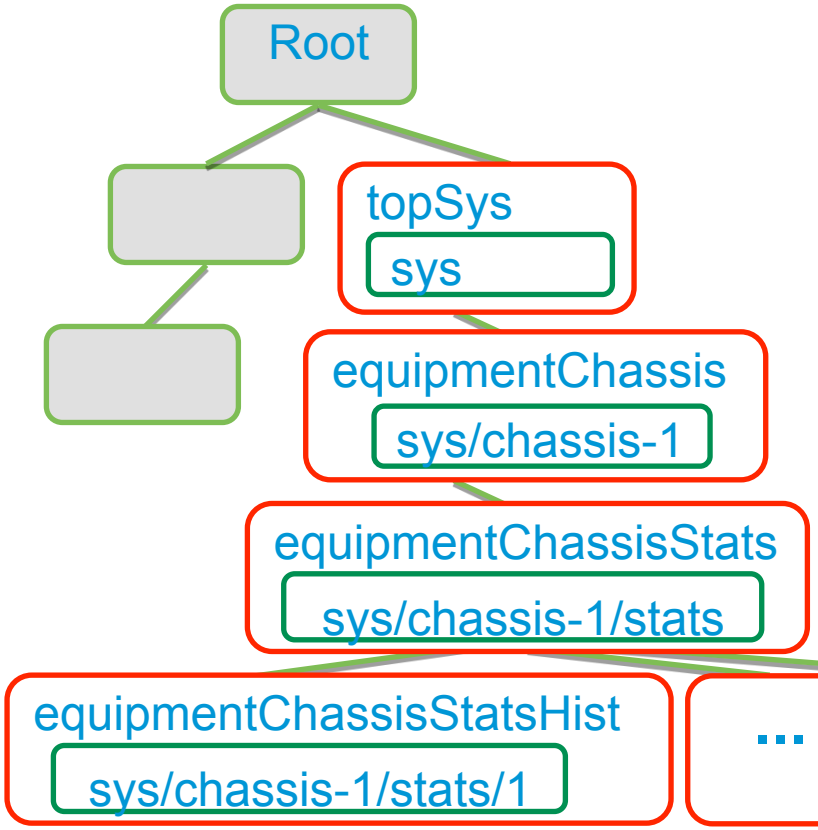
UCS Manager Statistics



- **Statistics are instances of statsCurr**
- **Statistics are contained by monitored object**
- **5 most recent stats history records are contained by the current stats instance.**
- **Stats history are subclasses of the stats.**
- **Statistics dn is often deducible.**

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UCS Manager Statistics Reporting

A Systemwide Set of Stats Collection Policies (One per Application Domain) Allow Configuration of Collection and Reporting Intervals.

Domains: **adapter, chassis, host, port, server**

- **collectionInterval**: frequency that endpoints will send stats updates to DME
- **reportingInterval**: frequency that DME will report stats updates to external collectors and update stats history

When a Collection Interval Is Changed, the reportingInterval Is Restarted

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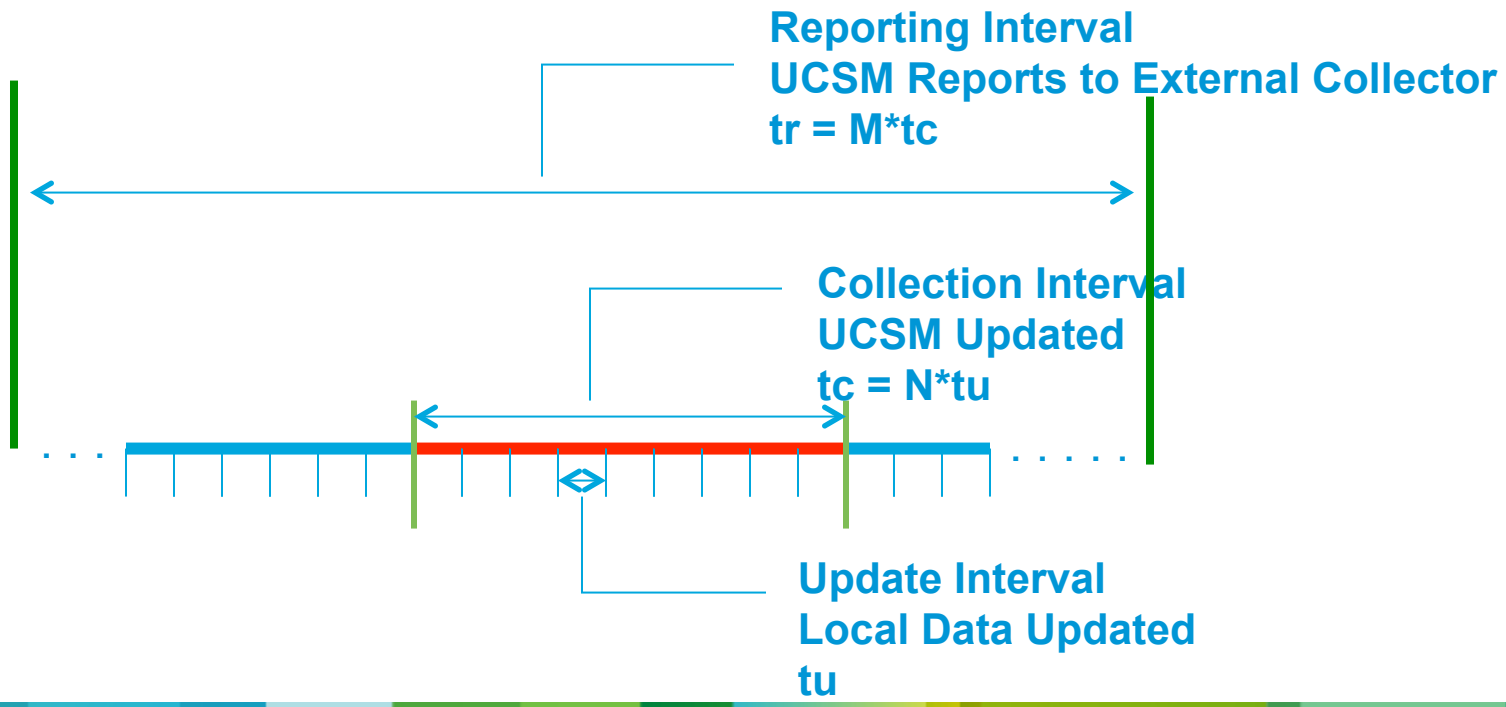
UCS Manager Stats Collection Policies

Managed Endpoints Collect and Update Statistics Data for Each Monitored Sensor Based on User-Configurable Collection Intervals.



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