Trusted Manager (TMAN)

Streaming Data

Link 16

GMTI

Full Motion Video

Web Services

JMS

NRTI

SOAP

Providing high-speed, secure information sharing for modern military, intelligence, and law enforcement

Trusted Manager (TMAN) is a multi-level security (MLS) cross-domain intelligence sharing solution. TMAN provides a secure platform for transferring approved file types and streaming data to and from networks operating at different security classifications. Security requirements are enforced in accordance with Director of Central Intelligence Directive (DCID) 6/3 standards. TMAN is currently accredited by the Air Force Intelligence Surveillance and Reconnaissance Agency (AFISRA) and is listed on the United Cross Domain Management Office (UCDMO) Cross Domain Inventory.

TMAN is a Lockheed Martin product created and maintained by a dedicated team of developers, testers, information assurance personnel, field specialists, and trainers. The TMAN team has a proven track record in customer satisfaction with successful site installations, hands-on training, and mission support. TMAN systems and professional services are available on the General Services Administration Advantage ® website at www.gsaadvantage.gov.

Secure Data Transfer

TMAN supports multiple streaming transport protocols that employ socket-based connections including TCP, UDP, JMS, JMS over SSL, HTTP, HTTPS, and JREAP-C. TMAN may be configured as a proxy to support server-client models and may also act as a distribution hub in a hub-spoke model using the Java Message Service (JMS). TMAN supports multiple concurrent connections and multiple security levels (enclaves). One-to-many data streams may be configured for the UDP protocol to allow a single source stream to be disseminated to multiple destinations.

SOA Web Services

TMAN supports Web services utilizing HTTP. TMAN inspects HTTP headers, SOAP envelopes, and XML payloads and supports embedded Sensitivity Labels. MTOM support is included, which provides a method to efficiently send and retrieve multi-gigabyte binary payloads. TMAN supports Hypertext Transfer Protocol Secure (HTTPS) and is configurable to support bi-directional authentication.

XML Validation and Transformation

TMAN provides a robust XML processing capability. TMAN includes a schema plug-in tool that allows customer-defined XML messages to be added and/or updated on the TMAN system, alleviating the need for development of dedicated parsers. TMAN has years of experience in working with customers to help define rule sets for their data types, providing guidance on security standards and security markings, and helping customers through the certification process.

TMAN's XML processing capabilities include configurable schema selections for each data path, embedded sensitivity label validation (e.g., IC-ISM), geographic filtering using customer-defined "areas of no-dissemination," and the ability to redact, sanitize, and transform XML using XSLT. TMAN processes thousands of XML messages per second per stream and supports hundreds of streams on a single system. Multiple protocols are supported including HTTP/S, TCP, UDP, and JMS. Several XML types are natively supported, including Global Hawk PNC-SA, UCI, DDMS (DIB), ACTDF, and more.

Streaming Near Real Time Intelligence (NRTI)

TMAN has the capability to transfer Near Real Time Intelligence (NRTI), which provides timely SIGINT record traffic. NRTI is derived from Intelligence Broadcast System (IBS) and is streamed to an NRTI client in the form of compressed binary, which in turn transmits the data in the form of text. Data streams that fall under this are TAB-37, OILSOCK, USMTF, USSID SG5302, and CMF-X.

Full Motion Video (FMV) MPEG 2 and MPEG 4

Automatic Review for Downgrade of FMV

The TMAN system effectively ingests and disseminates data streams in MPEG format embedded with Key-Length-Values (KLV). TMAN supports UAV and UAS KLV metadata sets. TMAN allows delivery of MPEG data to one or more destinations operating at a security level lower than the level of the source-side. TMAN receives an MPEG 2 transport stream (TS) provided by a source-side client via Secure Socket Layer (SSL). This provides an encrypted path from the source to the guard. The MPEG 2 TS may contain either MPEG 2 or MPEG 4 audio and/or video. Each MPEG data stream is validated for content and structure and may be filtered for sensitivity labels as well as geographic coordinates contained within the KLVs.

Automatic Review for Upgrade of FMV

To receive the data for upgrade, TMAN joins a source-side multicast group. Upon receipt of MPEG data, the packet is inspected for correctness then transferred to the user-designated higher classification. MPEG data is delivered to hosts operating at a security level at or above the level of the source-side. In addition, users may define multiple destination-side multicast addresses for dissemination of streaming MPEG data. TMAN supports 600 concurrent low latency MPEG audio and video streams with a total aggregate throughput of over 1.8 Gbps on a single X4270.

Ground Moving Target Indicator (GMTI)

GMTI is a binary, message-oriented format used for the prompt dissemination of moving target indicator data defined by STANAG 4607. GMTI data is sent in the form of packets to allow organized transmission. The exploited GMTI data, when used in conjunction with other source data, plays a significant role in creating an Operational Picture of the target. TMAN validates that the format meets spec and performs Sensitivity Label verification on embedded security metadata.

Data Stream Type	Validation Methods	Supported Protocols
SOAP/ XML/ MTOM	- Plug-in Schema - Time Delta Filter - Sensitivity Labels	HTTP, HTTPS
XML	- Plug-in Schema - Geographic Filters - Sensitivity Labels - ASCII Validation	TCP/IP, UDP/IP, HTTP, HTTPS, JMS
Link 16	- Data Format - Geographic Filters - J Series Type	TCP/IP
MPEG 2 / MPEG 4	- Data Format - KLV - Geographic Filters - Sensitivity Labels	MPEG 2 TS (UDP/UDP over SSL)
GMTI	- Data Format - Sensitivity Labels	TCP/IP
NRTI	- Customizable Regular Expression	TCP/IP
RTP/ RTCP	- Data Format	UDP

Link 16

TMAN supports Link 16 (aka TADIL-J) messages, which are transmitted to the guard via JREAP-C (MIL-STD-M3011C) protocol. TMAN's Link 16 parsers follow MIL-STD-6016, which ensures compatibility and interoperability with multiple fielded systems. TMAN is capable of filtering messages based on geographic location and message type. Each J series message is validated and optionally geographically filtered before it is disseminated via the M3011C protocol to the destination-side. Invalid or filtered J series messages are dropped from the stream without disrupting the communication link. TMAN supports the majority of Link 16 messages: J2 series, J3 series, J5.4, J6.0, J7 through J10 series, J12 through J15 series, J17.0, J28 series, and J30 series.

Automatic Upgrade of VoIP

Real-Time Transport Protocol (RTP)

TMAN is able to automatically upgrade Voice over IP (VoIP) or Radio over IP (RoIP) data from the low side to one or more high side destinations. TMAN joins a source-side multicast group on the low side that streams audio using Real-Time Transport Protocol (RTP). RTP is a binary, message-oriented format for the transfer of various real-time data formats (payloads), including several VoIP codecs, such as G7.11 and G.729. RTP packets are parsed for structural correctness and legitimate data field values for header information and packet length. Once validated, TMAN sends the VoIP packets to one or more high side destinations via UDP multicast and/or unicast.

Modes of Operation

Data streams processed by the TMAN system are automatically reviewed according to the associated upgrade or downgrade security policy.

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