2.11. Security

AIR CARGO AND SUPPLY CHAIN SECURITY

Supply chain security is an increasingly important and complex element in air cargo operations and workflows as governments and organizations pursue a network and layered approach to security regulations, program requirements and technologies. Below is an overview of the primary international instruments and compulsory and voluntary supply chain security programs that are relevant to international air cargo operations.

International instruments relating to air cargo security

ICAO Annex 17 and the Known Consignor and Regulated Agent systems
The International Civil Aviation Organization (ICAO) is one of two primary international organizations that provide standards, recommended practices and guidance material for countries and states in the field of air cargo security. The ICAO Standards and Recommended Practices related to air cargo security are contained in Annex 17 to the Chicago Convention on International Civil Aviation.

Annex 17 includes the concepts of regulated agent, known consignor and account consignor, created to enable the development of supply chain solutions that are secure but also efficient. The regulated agent, known consignor and account consignor systems facilitate the application of security screening and controls upstream in the air cargo supply chain by entities approved by appropriate national authorities.

A known consignor is a “consignor who originates cargo or mail for its own account and whose procedures meet common security rules and standards sufficient to allow the carriage of cargo or mail on any aircraft” (ICAOAnnex 17). A known consignor can therefore be a shipper or consignor who has been approved by an appropriate authority, originates cargo and mail on its own account and whose cargo can be loaded on board passengers aircraft.

An account consignor is a “consignor who originates cargo or mail for its own account for carriage on all-cargo aircraft only and who applies procedures that meet common security rules and standards set by the appropriate authority sufficient to allow carriage of its cargo and mail only on all-cargo aircraft” (ICAO Annex 17). An account consignor can be a shipper or a consignor who originates cargo and mail on its own account, has been approved by its regulated agent or aircraft operators and whose cargo can be loaded on board of all-cargo and all-mail aircraft.

A regulated agent is “an agent, freight forwarder or any other entity who conducts business with an operator and provides security controls that are accepted or required by the appropriate authority in respect of cargo or mail” (ICAO Annex 17). Operationally a regulated agent is a freight forwarder, a screening technology provider, a ground handler or a carrier that provides security controls that are accepted or required by the appropriate authority in respect of cargo or mail.

Annex 17 also includes the concept of the consignment security declaration. This document, which is issued by the party that secures the consignment, such as a known consignor, a regulated agent or an aircraft operator, reports the security status (SPX, SCO or SHR) of the cargo and mail and displays other important security information that can be electronically transmitted to each party involved in the secure supply chain.

Electronic - Consignment Security Declaration (e-CSD)
In 2010, IATA working with industry and regulators developed an electronic standard consignment (cargo and mail) security declaration (e-CSD) that provides regulators with an audit trail of security information of a typical supply chain movement. This highlights who secured what consignment, how and when, and ensures that security measures have been applied through a harmonized mechanism and a standard template.

The security declaration accommodates the following data elements:

1. Identifies who has taken responsibility to secure the cargo and who has maintained its integrity until it is loaded onto the aircraft (e.g. unique identification of the regulated agents as party accountable for accepting and securing the cargo).
2. Provides information on the content of the consignment such as the unique consignment identification, the cargo description and security status. (e.g. can be loaded on (i) passenger aircraft or (ii) all-cargo aircraft only).
3. Identifies the reasons why the security status was issued (e.g. known cargo coming from a known consignor) and the means of screening deployed to secure that cargo (e.g. x-ray equipment, particle explosive trace detection or hand search).
4. Identifies the name of the person acting for the regulated agent who issued the security status, or an equivalent identification including the date and time of the security status issuance.
5. Provides room for specific country emergency textual statements that secure operators have to comply with (e.g. (i) this consignment does not contain any components originating from country X, (ii) this account has been known to the agent for the past 6 months or other NSP textual statement).

The standard consignment security declaration can be applied for direct and consolidation shipments and can be administered by all types of regulated agents (at house and master air waybill) and airlines.

It is applicable for direct and consolidation shipments and can be used in countries with a recognized cargo security program in place, as well as countries that accept the use of an e-CSD.

The e-CSD has been adopted at the IATA Cargo Services Conference (CSC) as part of Recommended Practice 1630 “Cargo Security”.

ICAO approved the consignment security declaration layout that is now part of the ICAO Guidance Material Chapter 13.

The e-CSD has been translated in French, Arabic, Russian and Chinese.

An example of the standard consignment security declaration layout is shown at the end of this section.

WCO SAFE and the Revised Kyoto Convention
The World Customs Organization (WCO) is also an international organization providing standards and recommended practices to enhance the security of the international supply chain. The WCO’s SAFE Framework of Standards to Secure and Facilitate Global Trade contains standards for delivering international supply chain security through Customs-to-Customs and Customs-to-Business pillars. Approximately one hundred and seventy countries have signed up to implement the WCO’s SAFE Framework of Standards.

There are four core elements to SAFE: 1) harmonization of advance electronic cargo information requirements on inbound, outbound and transit shipments; 2) employment of a consistent risk management approach to address security threats; 3) outbound inspection of high-risk cargo and/or transport conveyances at the request of Customs in receiving nations, preferably using non-intrusive detection equipment such as large-scale x-ray machines and radiation detectors; and 4) definition of benefits that Customs should provide to businesses that meet minimal supply chain security standards and best practices through Authorised Economic Operator programs.

The SAFE Framework is considered by the WCO to be a minimum set of standards for supply chain security. However, it is recognized that it is unreasonable to expect every Customs administration will be able to implement SAFE immediately and that it will be implemented at various stages in accordance with each Customs administration’s capacity and the necessary legislative authority.

The WCO Council adopted the revised Kyoto Convention (International Convention on the Simplification and Harmonization of Customs procedures) as the global blueprint for modern and efficient Customs procedures. The Convention promotes trade facilitation and controls through legal provisions and includes rules that are legally binding on contracting parties. The key principles of the Convention are:

- transparency and predictability of Customs actions
- standardization and simplification of the goods declaration and supporting documents
- simplified procedures for authorized persons
- maximum use of information technology
- minimum necessary Customs control to ensure compliance with regulations
- use of risk management and audit-based controls
- coordinated interventions with other border agencies
- partnership with the trade

Major compulsory air cargo and supply chain security programs

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AEI - Advance Electronic Information (also known as ACI-Advance Cargo Information)
The SAFE Framework of Standards stipulates that Customs administrations should require electronic information in time for adequate risk assessment to take place. SAFE provides standards to harmonize the advance electronic information requirements on inbound, outbound and transit shipments, including recommended deadlines for submission of data.

The objective of AEI is to improve detection of high-risk consignments, thereby ensuring better security against terrorism and other crimes.

Many countries, including the US, Canada, Japan and the 28 EU countries, have enacted legislation making AEI a legal requirement. With approximately 170 countries currently signed up to implement SAFE, many more are expected to enact similar legislation in coming years.

ACAS (Air Cargo Advance Screening)
(Currently in pilot stage, expected to be compulsory in 2016)
US Customs and Border Protection (CBP) and the Transportation Security Administration (TSA) developed the ACAS pilot program following the Yemen incidents in October 2010. ACAS is currently a voluntary pilot testing a pre-departure electronic information system for security risk analysis. ACAS will be an additional layer in addition to the existing Air Automated Manifest Systems (Air AMS) requirements for air cargo bound for the US.

ACAS involves the provision of cargo data elements prior to loading or departure (this has yet to be defined) of cargo on US-bound flights to facilitate the targeting of cargo shipments that may be high risk and therefore require additional information or additional security measures.

ACAS is currently a pilot program and rulemaking will eventually be required to ensure mandatory submission of data.

PRECISE - Pre-loading Consignment Information for Secure Entry
(Currently in development stage, expected to be compulsory in 2016)
The EU is developing requirements for its Pre-loading Consignment Information for Secure Entry (PRECISE) program. PRECISE is similar to the US ACAS program described above in that it relates to the provision of cargo data elements prior to loading or departure (this has yet to be defined)of cargo on EU-bound flights to facilitate the targeting of cargo shipments that may be high risk and therefore require additional information and/or additional security measures.

Major voluntary air cargo and supply chain security programs

AEO – Authorized Economic Operator
Developing an Authorized Economic Operator (AEO) program is a central part of the SAFE Framework of Standards. Parties involved in the international movement of goods can be accredited by Customs as AEOs when they are proven to have high quality internal processes that prevent goods in international transport from being tampered with. This includes ensuring the integrity of information related to shipments, ensuring the integrity of employees, and ensuring the security of premises so that unauthorized persons cannot interfere with cargo. SAFE provides global standards for launching an AEO program.

Countries / regions with operational AEO programs include: Algeria (AEO), Argentina (Customs System of Reliable Operators), Canada (PIP), China (Classified Management of Enterprises), Colombia (Customs Facilitation Programme for Reliable Trade), Costa Rica (AEO), Dominican Republic (AEO), EU (AEO), Guatemala (AEO), Hong Kong (AEO), Israel (AEO), Japan (AEO), Jordan (Golden List Programme), Kenya (AEO), Korea (AEO), Malaysia (AEO), Mexico (New Programme for Certified Companies), New Zealand (Secure Exports Scheme), Norway (AEO), Singapore (Secure Trade Partnership), US (C-TPAT), Zambia (Customs Accredited Clients Programme).

Countries / regions with Customs compliance programs include: Brazil (Blue Line), Egypt (Accounting Management Services), El Salvador (PACE), Indonesia (Mitra Utama), Rwanda (Gold Card Scheme, Pre-clearance Facilitation), Senegal (Privileged Partnerships Programme), Serbia (Procedure for Simplified Declaring of Goods), Tanzania (Compliant Traders Scheme), Thailand (Gold Card).

Many Customs administrations with established AEO programs have formalized AEO mutual recognition arrangements (MRAs) with other Customs administrations in order to avoid duplication of requirements and effort.

Concluded AEO program MRAs
New Zealand / US
Japan / New Zealand
Canada / US
Jordan / US
Japan / US
EU / Norway
EU / Switzerland
Canada / Japan
Canada / Korea (Republic of)
Canada / Singapore
EU / Japan
Korea (Republic of) / Singapore
Korea (Republic of) / US
Andorra / EU
Japan / Korea
Korea / New Zealand
Japan / Singapore
EU / US
China / Singapore
EU / China

For further information and detail on national AEO programs, please visit www.wcoomd.org

ACC3 - Air Cargo or Mail Carrier operating into the Union from a Third Country Airport
(EU Regulation 185/2010 Cargo Security) & IATA Center of Excellence for Independent Validators

In October 2010 two improvised explosive devices were transported as air cargo consignments with intended US destinations. The two devices were intercepted on-route at transfer points.

These incidences highlighted to regulators and air carriers concerns regarding the security of air cargo consignments and the risk of explosive devices being introduced at some stage in supply chains.

In response, the EU Commission commenced a review of aviation security legislation and in August 2011 the EU adopted new regulations for the security of incoming air cargo and mail.

The regulations require air carriers flying air cargo and mail into the EU to be designated as an “Air Cargo or Mail Carrier operating into the Union from a Third Country Airport” (ACC3).

ACC3s are therefore obliged to ensure that cargo and mail destined for the EU is screened or comes from a secure supply chain (this can be evidenced with a consignment security declaration).

Until June 30 2014 the security standards foreseen by ICAO as a minimum must apply.

From July 1 2014 the EU regulations state that on-site security verifications of ACC3 cargo and mail operations take place at the relevant non-EU airports. This activity must be undertaken by an independent validator, certified by an EU regulator.

According to the EU Commission Regulation 185/2010, ACC3 must ensure that:

- on-site airport station verification of cargo and mail security measures has been carried out by an EU aviation security independent validator.
- business relations with regulated agents and known consignors are independently validated by an EU aviation security independent validator,
- a database is maintained by the ACC3 with details of the RA, KC and AC they are accepting cargo from.

The current estimate is that 700 ACC3 airport operations will need independent validation by 30 June 2014 and a further 2,700 ACC3 airport operations up to 30 June 2019. Each independent validation will have to be redone on a five year cycle.

In order to assist the aviation industry and the regulators, IATA has established a Center of Excellence for independent validators (CEIV) that offers a comprehensive and harmonized solution to the ACC3 challenges.

The IATA CEIV helps airlines to:
- Meet the new air cargo security regulations
- Provide assurances that Independent Validators auditing airlines are trained and assessed to common approved and documented standards
- Protect their revenue and reduce costs

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Secure Freight
Secure Freight is a global air cargo supply chain security program that promotes government standards and principles in which freight is secured upstream early on in the supply chain and then protected from unlawful interference until it reaches its destination. Developed and managed by the International Air Transport Association (IATA), Secure Freight addresses deficiencies in existing cargo security regimes and brings countries up to the level of ICAO Annex 17 and 9 standards with the help of various tools.
The Secure Freight tools include a National Secure Freight Program to regulate the air cargo industry within the State; the Secure Freight Standards Manual, which defines how Secure Freight operators in that State comply with standards that allow shipments to be transported securely across supply chains, the Secure Freight Operational Procedures, which provide practical guidance on how to move cargo and its associated information through the secure supply chain; Security Programs template for SF Operators, Validation & Certification Check lists for SF Operators (Dec 2013), among others. Secure Fright pilot programs are currently running in a range of countries on different continents. Following completion of a pilot, authorities are expected to implement quality assurance processes that ensure adherence to the standards outlined in the program as well as to undertake the necessary changes to national law/regimes for full implementation.

TAPA - The Transported Asset Protection Association (TAPA)
The Transported Asset Protection Association (TAPA) is a coalition of companies and organizations including manufacturers, shippers, cargo carriers, insurers and government agencies focused on dealing with the problem of crime in transportation supply chains. TAPA identifies fields in which members experience losses and it shares information on effective routines and practices. TAPA's efforts are concentrated on the transport of high-value goods. TAPA has two main initiatives: the Incident Information Service (IIS) and the Freight Suppliers Minimum Security Requirements (FSR). IIS is a service for the exchange of security-related information that TAPA provides for its members. FSR are requirements that are placed on general security in the supply chain and which include, among other things, external security, premises and security routines.

For further information on TAPA, please visit: www.tapaonline.org

Columbus program
The Columbus program is a Customs capacity building program designed by the World Customs Organization (WCO) to help WCO members, particularly developing countries, to implement the SAFE Framework of Standards and related international obligations. The program has three phases. In the first phase, Needs Assessment, capacity building experts assess the current situation in the Customs administration via interviews and using the WCO's Diagnostic Framework tool. The resulting report suggests the way forward through a number of recommendations. The second phase, Implementation, involves support for action planning, donor matchmaking, planning of pilot activities and implementation. The third phase consists of monitoring of progress and evaluation.

BASC-Business Alliance for Secure Commerce
BASC is an international business alliance created to promote secure international trade in cooperation with governments and international organizations. It is a private sector-led and managed coalition supported by US Customs and Border Protection (CBP).
BASC examines the entire process of manufacturing and shipping of merchandise from foreign countries to the United States, emphasizing the creation of a more security-conscious environment throughout the supply chain. It operates in 13 countries of Latin America and the Caribbean: Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Panama, Peru, the Dominican Republic, Paraguay and Venezuela.
BASC's security standards are designed to improve supply chain security and deter contraband smugglers and terrorists from introducing contraband and implements of terror in legitimate shipments.

For further information on BASC, please visit: www.wbasco.org

Completion Instructions

Box Description

[1] Regulated Entity Category (KC, RA or AO) and Identifier
The regulated agent, known consignor, or aircraft operator that originally issued the security status, identified by its category (i.e. RA, KC or AO) and its unique identifier, must be entered.

[2] Unique Consignment Identifier
The identification of the consignment itself must be entered. This may be an air waybill (format is nnn-nnnnnnnn), a house bill or a mail consignment identifier.

[3] Content of the consignment
The identification of the consignment details (e.g. goods description) must be entered for a direct air waybill shipment or house waybill shipment.
For a consolidation shipment, i.e. a master air waybill with associated house waybill(s), the consolidation box should be ticked in lieu of the goods description.

[4] Origin
The identification of the origin of the consignment must be entered.
This is the origin related to the appropriate transport documentation (air waybill or house waybill) as identified in Box 2 (e.g. IATA three-letter airport or city code).

[5] Destination
The identification of the final destination of the consignment must be entered.
This would be the destination related to the appropriate transport document (air waybill or house waybill) as identified in Box 2 (e.g. IATA three-letter airport or city code).

[6] Transit/Transfer points
The identification of an en-route stopping point where cargo may be transferred to another aircraft or remain on board the same aircraft should be entered if known to the issuer (e,g, IATA three-letter airport or city code). Otherwise this entry may be blank.

[7] Security Status
The coded identification of the security status assigned to the consignment must be entered to indicate whether the consignment is secure for:
a. passenger, all-cargo and all-mail aircraft (some regions use the code "SPX");
b. all-cargo and all-mail aircraft only (some regions use the code "SCO"); or
c. passenger, all-cargo and all-mail aircraft, in accordance with high-risk requirements (some regions use the code "SHR").

[8] Received from
The coded identification of the category (i.e. known consignor, regulated agent or aircraft operator) that tendered the consignment must be entered. If no other reason, i.e. "screening method" or "grounds for exemption" is indicated and the consolidation box is not ticked then this entry cannot be blank.

[9] Screening Method
The coded identification of the screening methods (ICAO codes are still under development) used by the regulated agent known consignor, or aircraft operator when securing the consignment may be entered as a reason that the security status was issued, e.g. screening method codes.
If no other reason, i.e. "received from" or "grounds for exemptions" is indicated and the consolidation box is not ticked then this entry cannot be blank.
In some cases a single screening method may not be sufficient to inspect all types of consignments, therefore more than one screening methods may be listed.

[10] Grounds for Exemptions
The coded identification (ICAO codes are still under development) indicating why a consignment is exempted from screening as defined in State national civil aviation security programmes may be entered as a reason that the security status was issued, e.g. screening exemptions codes.
If no other reason, i.e. "received from" or "screening method" is indicated and the consolidation box is not ticked then this entry cannot be blank.

[11] Other Screening Method(s)
If the code entered in Box 9 indicates that any other means were applied then text specifying the other means used must be entered.

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[12] Security Status Issued by
If the consolidation box is not ticked then the individual of the regulated agent, known consignor, or aircraft operator who issued the security status must be identified by name or employee number.

[13] Security Status Issued on
If the consolidation box is not ticked then the exact date and time when the security status was issued by the regulated agent, known consignor, or aircraft operator employee must be indicated.

[14] Regulated Entity Category (KC, RA or AO) and Identifier
The identifier of any regulated agent, known consignor or aircraft operator that accepts custody of the cargo and accepts the security status originally issued by the regulated agent, known consignor or aircraft operator identified in Box 1 must be entered.
This entry would confirm that the cargo has remained secure and would follow any other entries for other regulated agent, known consignor or aircraft operator that have also accepted the original security status.

[15] Additional Security Information
Any additional security information that may be required by an ICAO Member State, e.g. any national regulation applicable to the responsibilities in the event of a false declaration, or any applicable emergency amendment.
A signature of the responsible person initially issuing a hardcopy consignment security declaration set out in box 1 should be inserted when the supply chain is paper based.

Consignment Security Declaration

Regulated Entity Category (KC, RA or AO) and Identifier (of the regulated party issuing the security status) 1	Unique Consignment Identifier (if AWB format is nnn-nnnnnnnn) 2
Contents of Consignment 3 ☐ Consolidation	
Origin 4	Destination 5 / Transfer/Transit points (if known) 6
Security Status 7	Reasons for issuing the Security Status: Received from (codes) 8 / Screening Method (codes) 9 / Grounds for Exemption (codes) 10
Other Screening Method(s) (if applicable) 11	
Security Status Issued by 12 Name of Person or Employee ID	Security Status Issued on 13 Date (ddmmmyy) ..... Time (tttt) ....
Regulated Entity Category (KC, RA or AO) and Identifier (of any regulated party who has accepted the security status given to a consignment by another regulated party) 14	
Additional Security Information 15	

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Message Completion Technical Instructions
IATA EDI messages, e.g. Cargo-IMP or Cargo-XML, can be used to exchange the required security information for a consignment.

For the purpose of these instructions, it is the IATA Cargo Interchange Procedures (Cargo-IMP) Air Waybill Data (FWB) message used as the reference point.

[1] Regulated Entity Category (KC, RA or AO) and Identifier
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.3 ISO Country Code + Ref. 29.5 Information Identifier (ISS) + Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (RA and ED) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

ISS - the regulated agent issuing the security status

OCI/GB/ISS/RA/001-011

///ED/0213

[2] Unique Consignment Identifier
Ref. 2.1 AWB Identification

125-12345675LHRJFK/T1K40.0

[3] Content of the consignment
Ref. 12.11 Goods Description or Ref. 12.12 Consolidation

/NC/CONSOLIDATION

[4] Origin
Ref. 2.2.1 Airport/City Code (of Origin)

125-12345675LHRJFK/T1K40.0

[5] Destination
Ref. 2.2.2 Airport/City Code (of Destination)

125-12345675LHRJFK/T1K40.0

[6] Transit/Transfer points
Ref. 4.2.2 Airport/City Code and 4.3.2 Airport/City Code

RTG/JFKII

[7] Security Status
Ref. 25. Special Handling Details

SPH/SPX

[8] Received from
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.3 ISO Country Code + Ref. 29.5 Information Identifier (ISS) + Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (KC + ED) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information:

OCI/GB//KC/001-011
///ED/0213

[9] Screening Method
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (SM) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

///SM/RES

[10] Grounds for Exemptions
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (L) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

///L/DIPL

[11] Other Screening Method(s)
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (SM) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

///SM/AOM-SPECIFY ANY OTHER MEANS

[12] Security Status Issued by
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (SN) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

///SN/JOHNNY WALKER

[13] Security Status Issued on
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (SD) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

///SD/05MAR131200

[14] Regulated Entity Category (KC, RA or AO) and Identifier
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.3 ISO Country Code + Ref. 29.5 Information Identifier (OSS) + Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (RA and ED) + Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information
OSS - the regulated agent accepting the security status given by another regulated agent

OCI/GB/ISS/RA/001-011
///ED/0213
/US/OSS/RA/002-022
///ED/0215

[15] Additional Security Information
Ref. 29 Other Customs, Security and Regulatory Control Information in particular Ref. 29.7 Customs, Security and Regulatory Control Information Identifier (ST)+ Ref. 29.9 Supplementary Customs, Security and Regulatory Control Information

///ST/THIS MASTER AIR WAYBILL CONTAINS NO
///ST/1. FREIGHT FROM THAT COUNTRY
///ST/2. TONER CARTRIDGE GREATER THAN 550
///ST/ GRAMS TRANSFERRING THIS COUNTRY

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