SIS Solution Update

Thierry Cerpolet

Senior Manager, Business Solutions and Systems Development

IATA

Topics

- SIS File Processing Performance & IS-WEB downloads
- SIS Security Update
- SIS Major Enhancements Delivery
- SIS Infrastructure Update

SIS File Processing Performance & IS-WEB downloads

SIS File Processing Performance Update

- Volumes of Invoice Files (IS-XML/IS-IDEC) to be processed by SIS has raised by **+ 75 %** in a year (Sep 18 - Aug 19) mostly related to migration of IATA invoices for travel agents via the SIS platform

- SIS File Processing performance overall remains very high across the year with **99.0** % completed within less than 10 min
  - Ad-hoc issue observed and corrective actions
    - On May 28 (Closure), a P1 incident hit the system (Oracle error) at time a surge of files was incoming. This created a backlog and delayed the start of their processing by SIS
    - Since we have added **50%** more threads to increase the capacity of the sanity check phase and implemented a prioritization filter to delay the processing of non-invoicing files (*) vs invoicing files

(*) Supporting Documents files, MISC Payment Status Update files are also increasing in volumes

IS-WEB Download Activity

- IS-WEB display performance remains high : **99.25**% requests responded within 3 sec

  However a slower performance may hit IS-WEB from time to time and such degradation can temporarily be observed by users (e.g. in Apr 2019)

  - Analysis linked the issue to periodical IS-WEB download activity from some users creating excessive consumption of the SIS internet link bandwidth (sometimes up to several hours)
  - Action was to increase the SIS Internet Bandwidth from 10Mbps to 20 Mbps by 24 May 2019

- Still today a rather high use of significant IS-WEB downloads is recorded periodically

Questions: What kind of regular downloads are you using ?
If OAR files download, why not retrieved them directly from iiNET?

Possibility: Restrict IS-WEB downloads size as to avoid impacting others SIS users experience

SIS Security Update

Reminder

- Several security controls are performed systematically on SIS Solution under IATA Security team review/control :
  - Periodical vulnerability scanning helping proactive actions
  - Application code security and Penetration Tests performed for every Major Release via a company selected by the SIS vendor
  - External Penetration Tests performed yearly via a company selected by IATA Security (rotation of company every year)

What happened ?

- Reinforce SIS Browser restrictions (via SIS Rel. 1.14.2.0)
  - Minimum : Chrome v60, IE v11, Edge v13, Firefox v60 , Safari v12

  <u>Reminder: SIS Users must ensure they are accessing IS-WEB with a recent browser version</u>

- Clean sheet outcome for:
  - Vendor code security and Penetration Tests completed successfully for last Nov and May major releases
  - External Penetration Tests (E&Y) after last activity (Nov 2018)

What is coming ahead ?

- Reinforce IS-WEB Password Policy
  - Mentioned last year but differed until now to align with new standards
  - Main changes:
    - minimum password length: from 7 to 10 characters
    - introduction of special character
    - expiration every 90 days (was 180)
    - reference to a password dictionary to avoid use of frequent common passwords
  - When ?
    - to be implemented prior year end via a SIS Maintenance Release (TBC)
    - Users to comply to the new policy at time of their current password will expire

What is coming ahead ? (2)

- Implementation of a WAF (Web Application Firewall)
  - To help protecting SIS even better against internet threads/attacks (IATA Security recommendation)
  - In 2019, we tried in two instances implementing WAF solution (Cloudflare) but despite of testing, it created unexpected IS-WEB behavior issues for some users
    - Solution was so deactivated until we find a transparent fix to the WAF Cloudflare or another solution found

SIS Major Enhancements Delivery

What Major Enhancements added ?

- **SIS Release 1.14**
  - 15 Changes deployed in May 2019
  - In particular:
    - CMP# 727 : PAX Non-Sampling Rejection Memo Analysis Report – Comparison to Industry
    - CMP# 762 : Search for Multiple Correspondences
    - CMP# 772 : New Charge Category Aviation Fuel and New Charge Codes for this Category
    - CMP# 769 : Duplicate rejection – validation for Passenger (SIS GM 7 paper S16)
  - Please refer to Release Note communication available from IATA/SIS /Documents webpage (link)

What Major Enhancements to come ?

- **SIS Release 1.15**
  - Compliance :
    - CMP# 778 : EU GDPR – Deletion of user data
  - Solution Improvements :
    - CMP# 741 : Purging of Invoices PDF and Listing based on Payment Status
    - CMP# 761 : Correspondence Number added to the Offline File Name
    - CMP# 782 : Activation of SIS Contacts linked to inactive SIS users
  - Please refer to Release Note communication available from IATA/SIS/Documents webpage (link)

What Major Enhancements Ahead ?

- On the Roadmap (to be reviewed / prioritized by SIS SG)
  - Offer a full SIS Sandbox testing solution (not limited to File validation) but also
    - Covering IS-WEB functionalities
    - Creation of PDF and Output Files
  - Develop and improve SIS integrations
    - for settlement Bilateral options (using IFG - IATA Financial Gateway)
    - By offering a SIS Invoice API as an alternative to current file submissions (IS-WEB/IS-IDEC)

SIS Infrastructure Update

What happened ?

- SIS Switchover between secondary and primary site occurred by 23 Feb 2019
- Implemented Third-party components upgrades to new recent versions & improved performance at time of SIS Rel. 1.14 (8 May 2019) in particular for those areas:
  - Framework used by entire SIS application and IS-WEB
  - IS-WEB on screen reports, Listing PDFs, CSVs, Off-line reports
  - Bridge between application and the Oracle database…
- Improved by x2 the internet bandwidth to 20Mbps by 24 May 2019

SIS Infrastructure Future

- Short Term
  - SAN Net App storage version upgrade (2 steps)

- Mid Term
  - SIS infrastructure as best practice should be refreshed after 5 years (so by 2021)

  - For optimization, capacity, scalability, improved performance, higher network availability… consideration is to move SIS to a Cloud infrastructure instead of re-upgrading the in-house solution
    - Technology has improved and Cloud reliability, efficiency, infra security is now offered at a better cost
    - A PoC is planned to occur first in 2020 to validate SIS is working seamlessly on a Cloud infra
    - Outcome of PoC will permit to confirm the move of SIS to a Cloud infra or not.

Questions ?

Thank you

Thierry Cerpolet

cerpolett@iata.org

www.iata.org