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The SynXis Central Reservations system will be migrating from Sabre Managed Data Centers to the Google Cloud Platform (GCP). This begins Sabre Hospitality's efforts to migrate all our software services out of, and enable the decommission of, Sabre Managed Data Centers by end of 2022.

## The Migration and Its Benefits

#### 1. When is the move happening?

The cCRS migration will take place on Saturday, May 21, 2022, beginning at 3AM CT / 8AM GMT. The migration will require an extended outage of approximately 6-8 hours, longer than our typical release-related outage.

#### 2. What SynXis applications are affected by this move?

SynXis CR and SynXis Voice Agent are both moving to GCP on May 21,2022.

SynXis CR, SynXis Voice Agent, and SynXis Booking Engine will all be down during the migration window. SynXis Property Hub will operate in Offline Mode.

User Test (cUAT) was moved to GCP on May 3, 2022 and will not be affected.

#### 3. Why is Sabre migrating to GCP?

This move is designed to allow us to:

- Scale up or down to match seasonal and time of day demands
- Increase our agility for future releases
- Focus on product roadmap and growth

## Our Approach

## 4. What is the approach to the migration?

The cCRS move to GCP is a migration and is similar to going live in a Disaster Recovery environment (same code/data). We will retain all other connectivity during the migration so that your customer experience would be as seamless as possible. Further, we will retain URLs and user credentials.

## 5. What has Sabre been doing to prepare?

We have completed multiple exercises in preparation for this cCRS migration, gaining experience and continuing to fine-tune our plan for the upcoming cCRS migration. Additionally, we have been replicating code and data to keep both the Sabre Managed Data Center and the Google Cloud environments in sync since January 2022.



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We have been working intensively on the preparations for this exercise, some of our teams for the better part of two years. Teams have been completing the necessary certifications and development to complete the earlier activities (such as standing up net new GCP environment, cutover for cUAT) as well as to complete extensive testing in lower environments and to fine-tune our engineering and preparations for the migration.

#### 6. How will the migration be supported by Sabre's teams?

The migration to GCP is a complex effort and involves experts from many teams who are completing prerequisite tasks to enable readiness and plan for migration activities. The migration will be supported globally by several multi-discipline command center teams who will monitor the entire system, triage, and respond quickly to any issues.

The customer care department is establishing a robust plan for coverage, monitoring, and communications, similar to our monitoring of standard CR releases. Additional Development, Technical, Engineering, and Support team members will also continuously monitor the system during and post-migration to provide customer updates.

The same protocols that apply during a release outage will be applicable to SynXis environments and the distribution channels.

#### 7. Is there a freeze period?

Sabre is applying an internal freeze period from May 14, 2022, through May 25, 2022. Although this will limit some product/channel activation work, light activations and casework will be performed during this window except for Friday, May 20th or Monday, May 23, 2022. We will not be performing Property Connect switches during the freeze.

During the freeze window, existing customers can use our systems for normal day-to-day business except for during the outage window on Saturday, May 21, 2022, beginning at 3AM CT / 8AM GMT.

We strongly encourage customers to limit high traffic/system load activities (bulk processing, synchronization activities, and running promotions) to outside of the above noted freeze period, if at all possible.

#### 8. Is the cCRS GCP migration a lift and shift?

No, the cCRS is not a lift and shift. While we remain committed to a single codebase for our source code, many CRS services have been repackaged to be built and deployed using an automated Continuous Integration / Continuous Delivery (CI/CD) pipeline. This allows us to retain retain CRS functionality while modernizing our infrastructure. All services are now deployed with Infrastructure as Code (IaC) technologies.

As part of this migration, we are refreshing versions of the operating systems, databases, and other third-party products that are used by the CRS. We also opportunistically refactored certain areas of



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our system to take advantage of modern GCP managed services such as pub/sub, in an effort to enhance the reliability, scalability, performance, and security of the system. Throughout our preparations for the move, we have identified additional areas for greater efficiency and effectiveness to prioritize after the migration.

#### 9. How can customers be confident that the replication is an exact copy?

We are using the same replication tools and capabilities (Oracle Data Guard, Couchbase, and SQL Server) that we have for multiple years and environments to support our Production and Disaster Recovery environments. When we have used them before, we have had successful results with the technology for data replication with these tools.

#### 10. What is the potential for failover?

Our approach, backed by the power of Sabre's technical teams, is designed to enable us to be ready for issues. That said, any significant degradation of performance, security, or stability would warrant immediate review and remediation, and could constitute a scenario where we would consider a roll-back to our on-premise data center.

#### 11. Are there any changes to product URLs or naming conventions?

There are no changes to product URLs or product naming conventions. All URLs that are presently used to access the cCRS will be retained. We will continue to utilize the existing naming conventions for our products and environments that you are familiar with (e.g., SynXis CR, SynXis Voice Agent, cCRS, cUAT)

## Preparation

#### 12. What do customers need to do to prepare?

As part of the move to GCP, SynXis will have a new range of IP Addresses. Customers who safelist our applications' IP Addresses for Sabre-originated traffic should take <u>immediate action</u> to gather their technical and web development teams to:

- Review your ecosystem for any safelisting of SynXis IP Addresses
- Make plans to safelist the new IP Addresses if warranted, and
- Complete the safelisting activities as soon as possible to avoid any interruption in services
- Plan for extended system outage (6-8 hours) additional staffing, reporting, or other necessary items to support your operations
- See the section titled "IP Addresses" for instructions

For customers who require safelisting to enable connectivity today, failure to safelist the new IP Addresses will interrupt connectivity. This could include items such as connectivity to the CRS, reservation delivery, integration to property systems, and integration to revenue management or profile management systems.



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- 13. We have Single Sign On (SSO) with SynXis. Do we need to make any updates? Any SSO that has been established will continue to work as configured following the migration.
- 14. We use Supplier Link, is there any action on our part?

No. Supplier Link is accounted for in our preparations.

15. Is any action required if we use Google Analytics on SynXis Booking Engine? No actions are required.

#### IP Addresses

## 16. What new IP Addresses should be safelisted for Sabre outbound traffic?

The new IP Addresses where outbound traffic from Sabre will be originated are as follows:

cCRS GCP IP Addresses - OUTBOUND FROM SABRE					
34.124.230.5	35.189.56.76	35.204.28.40	107.167.174.56		
34.124.165.135	35.246.133.15	34.91.238.106	35.186.72.210		
34.124.212.148	34.141.126.115	34.69.44.134	35.186.75.38		
34.124.242.138	35.242.216.238	35.222.49.21	34.145.244.232		
34.124.129.0	34.141.38.38	35.223.170.93	34.85.182.168		
34.116.94.129	35.198.64.3	35.192.181.145	35.245.27.80		
35.244.91.33	35.204.45.70	34.132.184.222	34.86.254.203		
34.116.107.198	34.91.163.251	108.59.89.113	34.150.215.45		
35.244.67.224	34.147.33.204	35.186.123.63			

What about Customer-Originated Traffic IPs? What about Sabre's Email server (SMTP)?

## 17. Why are there so many IP Addresses to safelist?

This list addresses both the Production and Disaster Recovery environments. Additionally, because GCP is cloud-based, there is a larger range of IP addresses designed so that we have the bandwidth to scale up or down to match seasonal and time of day demands, and expand our disaster recovery capabilities.

18. What country will the SynXis cCRS outbound traffic originate from? The new IP addresses originate in the United States.

## 19. Will the IP addresses and traffic to properties in China be impacted?

The Google Cloud Platform (GCP) does not have a restriction on traffic coming from China. SynXis CR services hosted in Google Cloud Platform (GCP) are not blocked.



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#### 20. What do we do with existing Sabre IP Addresses that we safelisted previously?

Retain existing IP addresses for at least 1 week in the unlikely event that it is necessary to roll back to the on-premise Data Center. Prior to the migration, messages will continue to be sent from the existing IP Addresses. The new IP Addresses will be in use when we migrate to GCP.

#### 21. What happens if we safelist IP Addresses today but don't safelist the new ones?

For customers who require safelisting to enable connectivity today, failure to safelist the new IP Addresses will interrupt connectivity. This could include items such as connectivity to the CRS, reservation delivery, integration to property systems, and integration to revenue management or profile management systems.

#### 22. Can Sabre tell me how to investigate or complete any safelisting?

Sabre does not have visibility into a customer's ecosystem, and, therefore we are not able to assist with safelisting your IP addresses.

We encourage you to meet internally with your IT and technical support team and/or website service provider to determine if these changes will apply to your organization and to take immediate action if warranted.

# 23. What should I do about my other hospitality systems (property connect) or channels that are integrated with SynXis?

Sabre's partner management teams have been directly engaging with our certified integration and channel partners to help confirm that they are taking appropriate action to add the new IP Address range to their safelisting to avoid connectivity interruption.

# 24. If we have a custom booking engine and use an external web developer to build or support it, should we engage them?

If you used an external web developer for your custom booking engine, we strongly encourage you to involve them in the investigation on whether you safelist SynXis IP addresses to power your connectivity.

## 25. What about IP Addresses for customer-originated messages (Inbound to Sabre)?

There should be no changes required provided you have safelisted the Imperva IP ranges when we migrated to the Web Application Firewall (WAF) hosted by Imperva in 2021. The following represents the full range of IP Addresses for Imperva that should be utilized to send messages to Sabre from your systems

Imperva IP Addresses - INBOUND TO SABRE		
199.83.128.0/21	198.143.32.0/19	
149.126.72.0/21	103.28.248.0/22	



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Imperva IP Addresses – INBOUND TO SABRE			
45.64.64.0/22	185.11.124.0/22		
192.230.64.0/18	107.154.0.0/16		
45.60.0.0/16	45.223.0.0/16		

#### 26. Does the list of IPs include Sabre's Email server (SMTP)?

The email server will not be impacted by the GCP migration. The following are provided as a reference as we expect you would have already safelisted these addresses if required.

- ltxmail.synxis.com
- ausmail.synxis.com
- 151.193.18.41
- 151.193.20.41

## 27. Are individual IP addresses in the new list dedicated for a specific purpose, have a specific name, or protocol?

The IP addresses are part of a pool of IPs that are available for Sabre use. None will be dedicated for a single purpose.

## 28. What are the designated ports?

Destination Ports are used on the customer's side. The same customer-provided ports that Sabre called to before the migration will continue to be utilized post-migration. On the originator's side (Sabre), the port will be ephemeral and we can/will use any port.

## Migration Outage

## 29. What happens to OTA channels/bookings during the outage?

- During the planned outage ARI will not be communicated to OTA channels; ARI updates will be communicated to channels once the CR resumes
- OTA reservations will be delivered up to the outage start time
- Guests' ability to make reservations on OTA channels should not be interrupted during the outage; Hotels may receive reservations via the OTAs' failover method.
- OTAs that live shop will not be able to pull availability down
- Hotels that are concerned about selling with OTAs during the outage period can close availability prior to the beginning of the outage period
- Bookings made during an outage will be held by OTAs until the outage is over OR delivered via their respective failover method for hotel processing
  - Hotels should proceed to input reservations that are arriving during or shortly after the outage period



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 Hotels should always validate reservations communicated via the OTA's failover method in their PMS and SynXis CR; Some reservations emailed by an OTA may also be successfully integrated into SynXis; to avoid duplicate reservations, always confirm before manually entering the reservation

#### 30. What will travel agents see in the GDS during the outage?

During a CR outage, the system cannot respond so there is no means to add special messaging. The booking agent may get an 'unable to process' or timeout error type, varying by GDS

#### 31. What does the booker experience in SynXis Booking Engine during the outage?

During an outage SynXis Booking Engine displays a standard outage page that advises the booker to contact the hotel directly. A customer cannot customize this outage message.

For Custom Booking Engine, the message would vary depending on what a customer has implemented for handling outages.

#### 32. What will happen for Synxis Property Hub users during the outage?

SynXis Property Hub operates in Offline Mode during an outage. Users can perform limited actions such as room assignment, guest check-in/out, print folio and in-context reporting (e.g., housekeeping boards, room list, guest list from guest board).

## 33. What happens to Property Connect integrations during an outage?

- Sabre Hospitality sends communications to key contacts for each of our vendor, channel, and integration partners each time we send a customer communication
- This notification also addresses that we will not be receiving inbound Property Connect traffic during the outage. Property Integration Partners have been advised that the window starts an hour earlier for inbound traffic as the inbound queues will begin to be 'drained'
- During the outage window, if a Property Connect Partner sends inbound traffic to SynXis, it
  would error or time out on the Partner's side as SynXis will be down. No traffic inbound or
  outbound will be processed (or queued) during the outage
- The customer/vendor would need to resend messages that failed to integrate after the system access is restored

## 34. Will stored report subscriptions remain in place after migration?

Any report subscriptions that are in place on or before May 19 should be retained post-migration. Any new subscriptions or updates to existing subscriptions made after May 19 will need to be rebuilt after migration.



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## **Post-Migration**

#### 35. Do we need to do any data validation?

We do not anticipate data validation will be necessary. However, if you should encounter any discrepancies (comparison from pre-migration to post-migration data), please open a case with our Customer Care team.

#### 36. If we want to validate data, what reports would you recommend?

We recommend using the same reports you utilize regularly to review performance. Hotel chains may want to select a sample set (top-performing hotels or rates) to use for this purpose rather than trying to generate reporting for their entire chain-wide distribution.

Some recommendations include:

- Reservations reporting **Reports > Reports > Reservation > Reservations** (run for the same store or criteria pre-/post-migration)
- Production reporting Reports > Reports > Reservation > Corporate [or other] Production (use a similar demand time frame pre-migration as post-migration)
- Hotel information (static data) Reports > Reports > Property > Property Information

#### 37. If we encounter an issue, how should we report it?

Please follow the normal channels (Customer Care) and escalation path (Account Representative) so that we may accurately track and log all issues. Using the formal channels will help us to quickly identify trends and escalate for review and/or defect remediation by our technical teams.

Customer Care can be reached via Sabre Hospitality Community, via phone, or by email.

- <a href="https://sabrehospitality-community.force.com/CustomerCommunity/s/">https://sabrehospitality-community.force.com/CustomerCommunity/s/</a>
- <a href="https://www.sabrehospitality.com/contact/contact-care/">https://www.sabrehospitality.com/contact/contact-care/</a>

## 38. What kind of response can we expect for issues that stem from the migration?

We will be utilizing an accelerated path for defects related to the migration. In addition to the accelerated defect handling, the migration includes an All-Hands methodology that expands beyond the Development, Technical, Engineering, and Support teams operating from command centers for the migration to the full organization with all teams supplementing triage no less than 72 hours post-migration so that we would be able to quickly escalate and resolve issues.