

Apple Bank for Savings ATM Channel Disaster Recovery Plan

August 2021

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Plan Name: ATM Channel Disaster Recovery Plan

REVIEW AND TRACKING CHART

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| Effective Date: | July, 2021 |
| Version Number: | 1.5 |
| Review Frequency: | Annually |
| Last Business Area Leader/Department Head Review Date*: | July, 2020 |
| Next Business Area Leader/Department Head Review Date: | July, 2022 |
| Business Area Leader/Department Head: | Debi Gupta, CTO |
| Overarching Policy or Policies: | Enterprise Business Continuity Policy, Information Security Program Policy |
| Procedures Owner: | Rajesh Kalyanaraman/Robert Sovatsky |

I. PROCEDURES PURPOSE STATEMENT AND SCOPE

The ATM Channel Disaster Recovery Plan (the“Plan”) apply to the implementation, management, monitoring, compliance with ATM Disaster Recovery at Apple Bank for Savings and its subsidiaries (collectively, “ABS,” “Apple,” or the “Bank”) in accordance with applicable state and federal statutes, rules and regulations.

All ABS employees and third party resources engaged by the Bank must comply with the terms of these Procedures to the degree applicable to them.

II. DEFINITIONS

- **Annual or Annually:** Every twelve (12) months.
- **Business Area Leader or Department Head:** The management level person who is responsible for (1) the business unit that has developed a set of Procedures and (2) the Annual review and approval of Procedures.
- **Control Form:** The form to be submitted to the PPA (defined in this Section) in connection with revised Procedures. The Control Form is available on AppleNet.
- **Legal Contact:** The attorney from the Legal Department assigned to the group responsible for these Procedures. To the extent needed, the Procedures Owner may consult with the Legal Contact in drafting and updating the Procedures.
- **Policies and Procedures Administrator (“PPA”):** The PPA is a member of Risk Management. The PPA monitors the occurrence and timeliness of scheduled Procedure reviews, obtains updated versions of Procedures, and ensures that they are uploaded to AppleNet within seven days of the approval dates of the documents.. The PPA will also provide guidance on the PPGP (defined in this Section) to Bank Personnel.
- **Policy, Standards, Procedures, and Manual Index:** An index, maintained by the PPA, which sets out the Policy, Standards, Procedures, or Manual name, Owner, regularly scheduled review dates, Regular Board Review Cycle (to the extent applicable), Designated Management Committee, and Designated Board Committee (to the extent applicable). The index is available on AppleNet.
- **Policy and Procedures Governance Policy (PPGP):** The PPGP establishes a standardized and consistent approach to the creation, review, approval and maintenance of Policies, Standards, Procedures, and Manuals across the Bank.
- **Procedures Owner:** The person responsible for managing and tracking a set of Procedures. This includes initiating the required Annual review of the relevant Procedures and recommending updates to the Procedures, to the extent needed. Procedures Owners are responsible for providing the approved documents to the PPA (defined in this Section) for upload to AppleNet. The Procedures Owner will monitor these Procedures. Any non-compliance with the Procedures will be escalated to the Business Area Leader or Department Head for resolution.

III. KEY PROCEDURES COMPONENTS

1. Executive Summary

This document outlines a plan for recovery of the Bank's ATM channel in the event of a "disaster". For the purpose of this manual, an actionable disaster is defined as either the loss of connectivity between all branch locations and the Scarsdale hub, loss of connectivity between the Scarsdale hub and the Visa DPS (VDPS) terminal driver or loss of the Bank's core. Scenarios that include loss of an ATM to the entire network are reviewed within, but only those scenarios where the DR plan will be invoked are detailed. This document also presents the network architecture diagram that underpins the ATM connectivity to terminal driver VDPS and core provider Miser.

At this time, Apple Bank deploys just under 100 ATMs, all from hardware provider, NCR. They are concentrated in the NYC metro area as well as Rockland, Westchester, Nassau and Suffolk counties. All units are operate as "on premise" devices and reconciliation and First Line Maintenance are the responsivity of the local branch.

This document outlines AFH's Procedures with respect to the implementation, management, monitoring and compliance with ATM Disaster Recovery plan requirements.

2. Objectives

The objective of this Plan is to invoke the correct steps necessary to recover the ABS ATM network in the event on any one of several types of failures that would cause complete loss of the ATM network to our customers.

3. Key Components of Procedures

A. Identification of Disaster Scenarios

This section identifies scenarios where a single ATM is affected up to and including incidents affecting all ATMs. In each scenario, it will be noted when disaster recovery will be invoked. Detailed actions for recovery will then be detailed in the Scenario Steps section.

Scenario No. 1 – A Single ATM is Down

This could be caused by a local ATM hardware problem or VDPS/Apple network related issue. This will be resolved by reaching out with a ticket to a NCR, VDPS or Apple Service Delivery to resolve the issue

Conclusion: *Not a Disaster Recovery situation; has a very low customer impact.*

Scenario No. 2 - More than One ATM is Down

Multiple ATMs can be down at various locations for different reasons. Similar to Scenario No. 1 above, this could be a local ATM hardware or VDPS/Apple network related issue. Again, this will be resolved by reaching out to NCR or VDPS with a ticket or to Apple Service Delivery to pull in the network team.

Another scenario affecting multiple ATMs would be an outage across a small regional area due to a local area network outage. Similarly this will be resolved by reaching out to Apple Service Delivery to pull in the Apple Bank Network team. If necessary, the Network team might need

to reach out to various ISP or Telecom vendors for resolution.

Also note, that in certain situations, Apple Bank may pro-actively close multiple ATMs to troubleshoot an event should the symptoms of the incident follow a certain pattern. This would be done to avoid potential negative impact to the branch and customers.

Conclusion: Not a Disaster Recovery situation; has a moderate customer impact as customers can conduct their banking within the branches.

Scenario No. 3 - Branch Network Down and ATM Down

It is very possible that the branch's local network could be down. This would impact the ATM(s) within this branch. The failure could be in the form of either a switch or router going down, thus impacting both the primary and the secondary circuits, or the actual physical primary and secondary circuits themselves could be down at the same time.

This scenario will involve reaching out to Apple Service Delivery to pull in the Network team. The network team may potentially reach out to various ISP or Telecom vendors for resolution.

Conclusion: Not a Disaster Recovery situation. Scenario has a severe impact to the local branch as customers coming in can conduct neither banking nor ATM transactions, but they can be directed to another Apple bank branch.

Scenario No. 4 – Miser Core at Scarsdale Hub is Down

Should the Miser Core become unavailable, it would impact the entire ATM channel as well as all platforms and all channels requiring access to core data and transaction authorization. This scenario will invoke the Bank-wide Disaster Recovery plan.

When the core is unavailable, communication to VDPS terminal driver will remain in place and the ATMs will continue to operate. In this mode, VDPS will stand-in for the Miser core providing authorization for all POS and ATM transactions, at reduced daily limits. Balance inquiry transactions will not be available.

All branch ATMs will continue to communicate to VDPS via Scarsdale with them providing limited stand-in authorizations. Once the secondary Miser core is established at the hot site, VDPS will then connect to the hot site and post all stored transactions as well as receive real time authorizations.

Conclusion: While this scenario is considered severe, is beyond the scope of this manual and will not be considered an ATM disaster recovery scenario, but rather a bank wide disaster recovery situation and be addressed as part of the Core DR/Business continuity plan.

Scenario No. 5 – VDPS Core Processing is Down

If VDPS Core Processing is down, all Apple ATMs will close. In addition, all Apple cardholders will be denied at merchant POS devices as well as non-Apple ATMs. There is high probability that other financial institutions driven by VDPS will be down as well. This scenario will invoke the VDPS disaster recovery plan and processing will switch over to VDPS secondary data center based on their SLAs.

Conclusion: This is a rare scenario and, if it occurs, will likely be of short duration. This will not be considered an Apple Bank ATM DR scenario, as there is nothing Apple Bank can do in this situation.

Scenario No. 6 - VDPS Primary and Secondary Communication Down at Scarsdale Hub

When both primary and secondary VDPS circuits at the Scarsdale hub are down, all Bank ATMs will close.

Conclusion: When both the primary and secondary VDPS circuits are down, then the connectivity to the VDPS terminal driver is disrupted. This will trigger a failover to the secondary circuit at Chanin.

Scenario No. 7 - Scarsdale Primary Network is Down

In this situation, all communication within the Scarsdale hub is down. There are redundancies built in at the Scarsdale hub that should make this a rare occurrence. Existing at the hub are two primary circuits as well as two secondary circuits. Each backs one another up and the Bank can literally run on only one of the 4.

If this scenario does occur, it would impact the entire ATM channel as well as all platforms and all channels requiring access to core at the Scarsdale hub. If no immediate remedy is available, a bank wide disaster recovery situation would be invoked and be addressed as part of the Core DR/Business continuity plan.

Conclusion: In this situation, the ATM channel would be failed over to the secondary circuit at Chanin providing connectivity to the VDPS terminal driver. VDPS would perform stand-in processing for Apple until such time as scenario no. 7 was resolved or we moved processing to the core hot site.

Other Scenario

The review of ATM disaster recovery scenarios also included consideration of widespread cyberattack with an outcome being one or multiple ATMs being down. It was considered out-of-scope for this document.

B. SCENARIO STEPS RECOVERY PROCESS

Scenarios 1 – 3 each affect between one and several ATMs and are not considered disasters. Procedures exist that identify these issues, notify the proper business unit(s) and affect the solution. These are not addressed in this manual, merely acknowledged that the scenario does exist and that steps in other functional areas are in place to correct them.

In Scenario 4, the Miser Core is down. All communication lines are intact. ATMs will continue to operate with reduced limits under Stand-In Processing (STIP) from VDPS. As described in the previous SCOPE section, this scenario will invoke the Bank-wide DR plan for Scarsdale. ATM recovery would follow the same steps listed below in scenario 7.

In Scenario 5, the VDPS Core is down. All communication lines are intact. This will create the situation were ALL Apple Bank ATMs are out of service, unable to service customers. This scenario will be rare, but the following steps will be executed:

- VDPS will reach out to the Bank to notify them of an issue. This will be in the form of an emergency bulletin. Bulletin will include contact information for VDPS Account Management. (Bulletin typically goes to an email group that consists of critical IT and business resources. The IT resource will inform Digital Ops team members supporting the ATM & VDPS Channel).
- The manager of the ATM Back Office group will notify ALL business units of the outage and continue to update them as information is received.
- New information is disseminated to the Bank via bulletin throughout the duration of

the outage as VDPS deems necessary.

- Bulletins will explain any settlement issues as a result of the outage and if any action is required by the Bank.
- Bulletin will notify the Bank of the conclusion of the outage that all systems are restored.
- Upon receipt of all-clear, the manager of the ATM Back Office group will notify all business units and ask that Branch Operations verify proper operation of their ATM.
- VDPS will send post-mortem bulletin once root cause analysis is completed.

In Scenario 6, all communication between the Scarsdale hub and VDPS is lost, both primary and backup. With no link to VDPS from the Scarsdale hub, all ATMs will go out of service. Due to the severity of this scenario, notification may come from VDPS, Branch Operations or Apple Network group. The following steps will be executed:

- All business units will be informed of the outage. The communication will come from one of the ATM managers who is part of the Digital Ops team.
 - A ServiceNow ticket will be created by the manager of the ATM Back Office group and assigned to the network team as well for them to start the troubleshooting process.
- Branches will be informed that a momentary loss of communication will take place as all branch activity is linked (routed) to the Chanin hub.
- The Apple Bank Network group will execute the script to link all branches to the Chanin hub.
- Once connectivity to the Chanin hub is established, all branch activity will flow through the Chanin hub including the ATM's.
 - While operating in this mode, Branch workstation activity will route from the Chanin hub to the Scarsdale core, while ATM activity will be routed out the VDPS DR circuit at the Chanin hub.
- VDPS request activity will route back via the Chanin and on to the Miser core in Scarsdale for authorization.
- All ATMs should reopen on their own. Branches will be asked to verify that their ATM is open.
- Branches whose ATMs remain out of service will open ServiceNow tickets. These tickets will be worked on an individual basis.
- Connectivity to the Scarsdale hub will be returned once VDPS and Apple confirm both primary and backup circuits have been restored.

In Scenario 7, all spokes (branches and back office) lose communication to the Scarsdale hub. This could be due to either primary and secondary circuit failure or failure of equipment supporting these circuits. While different from scenario 6, the result is the same in that all Apple ATM's will go out of service because they cannot reach the Scarsdale hub and their vendor connection to VDPS. The branches will operate in offline mode until the following steps are executed:

- All business units will be informed of the outage. The communication will come from the manager of the ATM Back Office group.
 - A ServiceNow ticket will be created and assigned to the network team as well for them to start the troubleshooting process.

- The Apple Bank Network group will execute the script to link all branches to the Chanin hub. All ATMs should reopen on their own by connecting to VDPS via their backup circuit at the Chanin hub.
- Once connectivity to the Chanin hub is established, branches will be asked to verify that their ATM is open.
- Branches whose ATM's remain out of service will open a ServiceNow ticket. These tickets will be worked on an individual basis.
- In this scenario, there is a high probability that the connection between the Chanin and Scarsdale hubs will not exist. If this is the case, then the Bank wide DR plan for Scarsdale will be invoked because the core, while up, will not be reachable. VDPS will stand-in for all ATM authorizations until the hot site is up and running.
- If there is a dedicated connection between the hubs, all transaction routing for both the ATM's and branches will be via the Chanin hub to the Scarsdale Miser core.

C. HIGH LEVEL NETWORK RECOVERY & FAILOVER PROCESS

Once a disaster scenario is identified and declared, the Network Infrastructure team will immediately act by redirecting all branch traffic to the Chanin hub. From the Chanin hub, any number of Bank systems will be able to gain access to their respective resources. For ATM network recovery, even though several DR scenarios exist, from a communication and routing standpoint, recovery is accomplished in one of two ways.

Scarsdale is the Bank's primary communications hub. Standard network configuration calls for "advertising" the default communication routes to all remote sites (branches) via the MPLS routers at Scarsdale. Changes to this standard will be made in accordance with the following scenarios:

Scenario 7

In this scenario, the primary Scarsdale hub is dark with no access and/or communication to the core MPLS routers. In the absence of these primary routers, the "advertised" routes to the remotes will be the responsibility of the MPLS router at Chanin hub.

1. Network Infrastructure team remotes into Chanin router and
2. Manually overlays existing routes with new route which will direct all branch traffic to the Chanin hub.
3. All routes are contained in documents within the DR procedures folder on the Network Infrastructure share on the network.
 - a. All Network Infrastructure team members know where this information resides and how to perform the updates.

Scenario 6

In this scenario, the primary Scarsdale hub continues to be viable and only primary and backup connections to VDPS have been lost at Scarsdale. The "advertised" routes will be handled from the MPLS1 and MPLS2 routers at Scarsdale hub.

1. Network Infrastructure team remotes into Scarsdale MPLS routers 1 and 2 and
2. Manually overlays existing routes with new route which will direct all branch traffic to the Chanin hub.
3. All routes are contained in documents within the DR procedures folder on the Network

Infrastructure share on the network.

- a. All Network Infrastructure team members know where this information resides and how to perform the updates.

In all disaster scenarios, branches will connect to the Chanin hub using their local circuits into the MPLS cloud. No changes at the remote branch sites will be required. Cutover will be seamless with only momentary loss of connectivity. Note that the Network Infrastructure team maintains their own plan covering all aspects of Bank-wide DR planning and what is covered here is only a subset of those plans. Further, detailed step-by-step instructions for the failover will be with the Network area.

D. INFRASTRUCTURE SOLUTION

The Apple Bank Network is setup primarily in a “hub and spoke” topology with the Scarsdale site acting as the hub and all branch locations the spokes. From Scarsdale, dedicated circuits and Internet connections exist to gain access to the Bank’s external service providers. VDPS, our ATM terminal driver and switch provider is among the vendors with their own managed primary and backup circuits in Scarsdale. The Bank’s Chanin location has been established as a backup hub for all communication at the Scarsdale primary site. Full network topology diagrams are maintained by the Network Infrastructure group and are beyond the scope of this manual. However, the basic ATM network topology diagram depicting connectivity should the disaster recovery plan be invoked, can be viewed in section V.

Our ATM fleet shares the same network along with all other branch devices, but operates under a dedicated VLAN. This provides for our ATM network to benefit by all built-in redundancies that are afforded all branch devices. The following two subsections describe the infrastructure that is specifically in place to back up the ATMs should any of the supported DR scenarios described previously need to be invoked.

Apple Bank Infrastructure

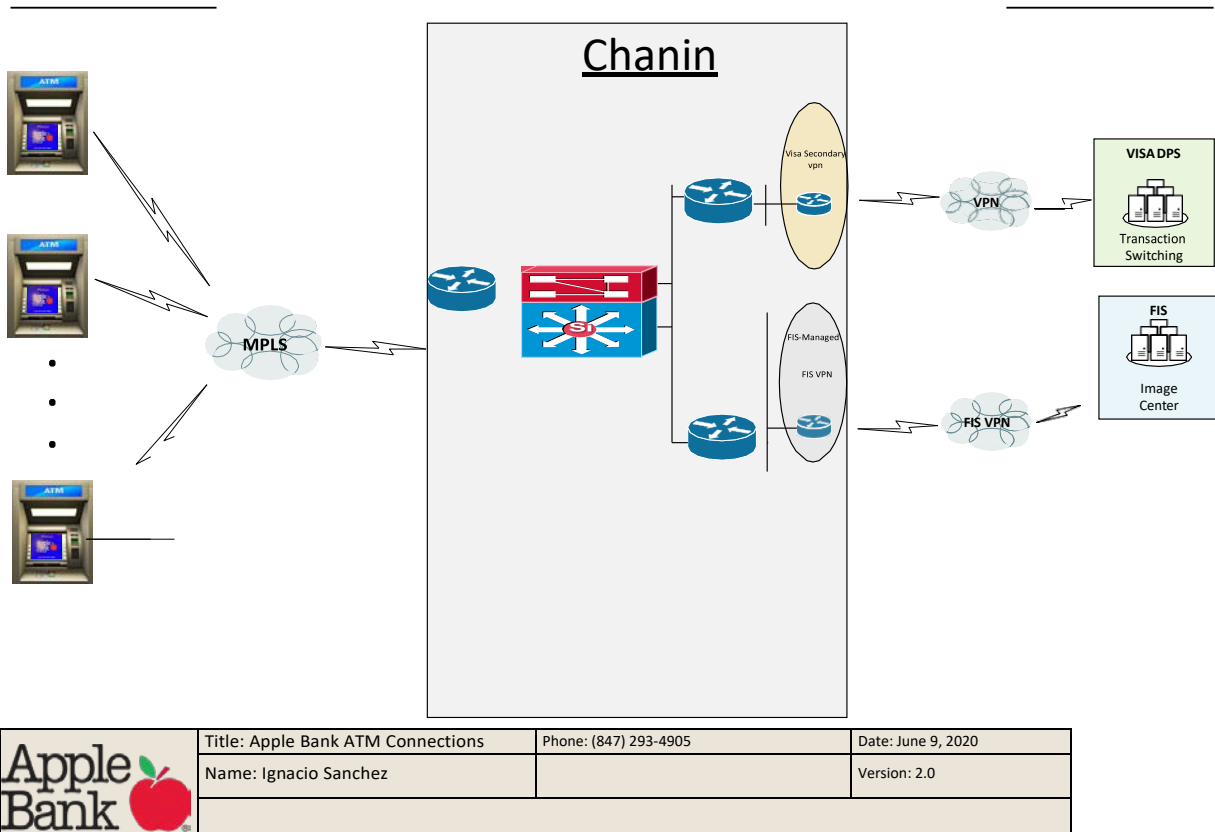
All supported scenarios require that Apple Bank branches route all traffic (ATM included) to the Chanin hub. The Network group, in the event of a declared disaster, will point each branch to the Chanin backup hub. The process will be automated through the use of scripting. The detailed steps to perform this will be documented by the Network department and are beyond the scope of this document, however, a high-level procedure is outlined later in this document. A firewall router is in place at the Chanin backup hub that front-ends the VDPS managed router described below.

VDPS Infrastructure

Installed at the Chanin hub is an always up, always monitored connection to VDPS. This is configured similarly to the VDPS backup at the Scarsdale hub. It consists of a VDPS managed router that establishes a VPN connection over Bank provided Internet service, back to their data center. All Apple ATM’s are preconfigured by VDPS on this connection and it is always ready to accept ATM activity without the need to provide advance notice to VDPS.

E. BACKUP ATM DISASTER RECOVERY NETWORK TOPOLOGY DIAGRAM

Chanin Backup Hub
ATM Network Connections



4. Escalation Procedures

The Procedures Owner will monitor these Procedures. Any non-compliance with the Procedures will be escalated to the Business Area Leader or Department Head for resolution.

IV. REQUIRED ANNUAL (12 MONTH) REVIEW

Procedures are required to be reviewed and approved at least annually by the Business Area Leader or Department Head. The Procedures Owner is responsible for initiating an Annual review of the Procedures. The Procedures Owner will track the review date for the Procedures and begin the review process early enough to provide ample time for the appropriate review to occur in a timely manner.

Once updated Procedures have been approved by the Business Area Leader or Department Head, the updated Procedures shall go into effect and the Procedures Owner shall be responsible for delivering the approved Procedures together with a Control Form to the PPA within seven days of the approval date so that it can be loaded in a timely manner to AppleNet or such other intranet site where Procedures are stored and made available to the employees of the Bank.

The Next Business Area Leader/Department Head Review Date shall be adjusted accordingly.

V. OFF-CYCLE REVIEW AND APPROVAL PROCESS

If the Procedures require changes to be made outside the Required Annual (12 Month) Review outlined in the previous section, the same steps as outlined in the previous section shall apply.

VI. EXCEPTIONS TO THE PROCEDURES

Requests for exceptions to these Procedures must be specific and may only be granted on specific items, rather than to entire sections. ABS staff must communicate their exception requests in writing to the Procedures Owner, who will then present the request to the Business Area Leader or Department Head for consideration.

VII. ROLES AND RESPONSIBILITIES

The key roles and responsibilities for this DR plan are summarized in below:

Bank Personnel:

- Network InfrastructureOversees all network communication
- Service Delivery.....Conduit for ATM helpdesk tickets; Feet on the street
- Digital OperationsATM administration; liaison for Bank business units, VDPS
- Systems & Standards.....Miser core; application team
- Digital BankingCustomer facing; fraud rules; daily limits
- AccountingBank proof
- Deposit OperationsBranch communication; branch proof; FLM

Business Area Leader or Department Head: *See Section II – Definitions.*

Internal Audit: The Internal Audit team is responsible for the periodic audit of these Procedures. Internal Audit will review the processes and any related gaps will be identified as findings to be monitored and remediated.

Legal Contact: *See Section II – Definitions.*

PPA: See Section II – Definitions.

Procedures Owner: See Section II – Definitions.

VIII. RECORD RETENTION

Any records created as a result of these Procedures should be held pursuant to the Bank's Record Retention and Disposal Policy. Should records created as a result of these Procedures require a different retention period (either a shorter or longer time period), the Procedures Owner must describe the rationale for a different retention period and share the rationale with the Business Area Leader or Department Head, who shall in turn document the deviation and supporting rationale in such a way that it can be presented to relevant parties upon request.

IX. QUESTIONS AND CONTACT INFORMATION

Questions regarding compliance with these Procedures may be addressed to the Procedures Owner listed in the tracking chart on the first page.

X. LIST OF REFERENCE DOCUMENTS

- Regional Telecom & Network vendors
 - Lightpath: (866) 611-3434 or (516) 803-6000
 - Verizon: MPLS: (800) 444-1111
 - Cogent: (877) 726-4368
 - Spectrum: (877) 227-8711
- Visa DPS (Terminal Driver)
 - VDPS 24hr ATM Help Desk (toll-free): 877-847-2577
- NCR (ATM Hardware Provider)
 - Email: US.ATMInc.Mgt@ncr.com
 - NCR Service Request Toll Free : 800-238-2310
- Apple Bank Service Delivery
 - Service Desk at servicedesk@applebank.com or
 - Phone: 646-661-7770
- Information Security Program Policy
- Enterprise Business Continuity Policy

XI. REVISION HISTORY

| Version | Date | Description of Change | Author | Approver |
|---------|------------|--|---|--|
| 1.0 | 06/30/2020 | Initial draft | Robert Sovatsky, VP Digital Ops; ATM/VDPS support | Raj Kalyanaraman, FVP – Digital Ops |
| 1.5 | 7/29/2021 | Review, convert to new template format, minor corrections and formatting | Robert Sovatsky, VP Digital Ops ATM/VDPS-support | Raj Kalyanaraman, FVP – Digital Ops David James, AVP, BC/DR |