**Scotia Bank**

SMC Optimization Assessment

Version 1.1

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Prepared by:

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1. Version control

This is a living document, and all modifications should be documented, descriptively, as part of change control.

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Change | Contribution By | Date |
| 1.0 | First Draft | Tony Bell | 1/20/2021 |
| 1.1 | Draft update | Tony Bell | 1/22/2021 |
| 1.1 | Final | Tony Bell | 1/27/2021 |
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1. Executive Summary

Scotia Bank purchased and covered their eTeller & IAP services with a Premier Mission Critical support contract. To be able to serve Scotia Bank and best cover the solution, technical and operations assessments needed to take place.

The purpose of the Optimization Assessment which took place on January 19, 2021 was to understand the eTeller & IAP operations of Scotia Bank to align our SMC service delivery to the operational needs of Scotia Bank. This ensures Microsoft supports the solution effectively and the contract provides the value expected.

The assessment starts with the issue collection, followed by the issue prioritization. With that, the most urgent operational issues are defined. The nature of issues and importance to the business of Scotia Bank are driven by the audience.

In this document, the focus will be on the operational issues which will support the eTeller and IAP solution for Scotia Bank and contains the following information:

* The issues from the workshop
* The consolidated issues
* The consolidated charts including all tasks.
* A roadmap and operational delivery architecture
* A recommendation section.

The recommendation section in combination with the roadmap and architecture should be used for follow-up discussions; what has the focus for implementation. The focus areas based on the analysis are:

1. MSM Monitoring Dedicated Support Engineer
2. MSM Governance for Azure
3. MSM Cost Optimization for Azure
4. MSM Operational Roles and Tasks for Azure

SMC Operations Assessment

SMC offers enhanced service delivery management aligned with precision proactive and reactive services, which are organized into three Practice Areas. Each of these three Practice Areas work together and they are mutually reinforcing.

* **Assess & Plan** is about thoroughly assessing the solution environment and developing a plan to drive ongoing solution stability and improvement.
* **Optimize & Remediate** focuses on establishing business continuity by executing services and practices that improve health and performance across the entire Microsoft solution environment.
* **Restore & Protect** is focused on restoring systems during service interruptions, is also directly related to the other two Practice Areas as we leverage root cause learnings to help keep problems from reoccurring.

Assess  
& Plan

Optimize   
& Remediate

Restore   
& Protect

Figure 1: SMC Overview

The focus of the SMC Optimization Assessment workshop is in the assess and plan stage and the primary focus of it is to:

* Identify all organizational and operational issues around the SMC Solution.
* Consolidate these issues into a prioritize set.
* Create an activity list based on the top list.
* Create a roadmap to work on these issues.

This is done in a series of workshop where all the supporting roles for the SMC Solution have attended. Figure 2 shows an overview of the roles who are expected in the workshop:

Figure 2: Workshop roles

* 1. Attendees

|  |  |  |  |
| --- | --- | --- | --- |
| Ovidiu | Timpanariu | Microsoft | SMC Lead |
| Tony | Bell | Microsoft | Customer Engineer |
| Cecilio | Silva | Scotia Bank |  |
| Jitendra | Sewchan | Scotia Bank |  |
| Rowina | Kwok | Scotia Bank |  |
| Vic | Jhurry | Scotia Bank |  |
| Giovanni | Moya | Scotia Bank |  |
| Carolyn | Munro | Scotia Bank |  |
| Alessandra | Rutigliano | Scotia Bank |  |
| Brian | Tran | Scotia Bank |  |
| Saradha | Gobinathan | Scotia Bank |  |
| Vincent | Woo | Scotia Bank |  |
| Alex | Axenov | Scotia Bank |  |
| Sunny | Chi | Scotia Bank |  |
| Dale | Jones | Scotia Bank |  |
| Bin | Chen | Scotia Bank |  |
| Faizal | Shermohammed | Scotia Bank |  |
| Martha | Gonzalez | Microsoft | CSAM |
| Nehal | Bhatt | Microsoft | Customer Engineer |

During the workshop, which took place on January 19, 20, and 21, 2021 via a remote audio and video delivery and the following people attended the workshop:

**Tab**le 1: Workshop Attendees

* 1. Purpose

The purpose of the workshop is to identify all organizational and operational issues and map them to boxed solutions which can be used for the creation of a delivery roadmap to support the Scotia Bank SMC solution.

* 1. Scope

The scope of the engagement was limited to the <#SMC Solution> Solution as supported by the SMC contract for the Scotia Bank IT environment, relevant team, roles, and accountabilities involved in the management and operation of the environment.

* 1. Engagement Core Deliverables
* Issue Collection
* Issue Prioritization
* Recommendations
* Closeout Presentation
* Optimization Assessment Report (Charter)

1. Session Details

The following sessions are conducted during the Operations Assessment Workshop. The first part of the engagement is the onsite engagement. The second part are the offsite activities of the engagement.

|  |  |  |
| --- | --- | --- |
| Session |  | |
| Kick-off Meeting |  | |
| **Engagement Workshops** | |  |
| Issues collection and pain point analysis workshop | |  |
| Issues Prioritization Workshop |  | |
| Backwards imaging workshop for Deployment |  | |
| Backwards imaging workshop for Scalability |  | |
| Backwards imaging workshop for Monitoring |  | |
| **Engagement Closeout** |  | |
| Closeout Meeting |  | |
| **Post Assessment Activities** |  | |
| Collecting results |  | |
| Analyzing Results |  | |
| Creating Roadmap |  | |
| Creating Charter |  | |
| Close out meeting with CSAM & DTU Engineer |  | |
| Delivering material to CSAM |  | |

Table 2: Sessions overview

1. Assessment Results

In the initial workshop, all issues have been collected (Table 3) before these are consolidated into a prioritized list (Table 4).

* 1. Workshop 1: Issues Overview

In Table 3 “Issues Collection” an overview of all the different issues collected during the initial stage of the workshop can be found. This is ‘raw’ data and is a direct copy from the attendees in the workshop. These issues are used in the next stage, issues prioritization.

|  |  |
| --- | --- |
| **Issues Collection** | |
| **ISSUE #** | **ISSUE DESCRIPTION** |
| 1 | IAP - Legacy IBP uses obsolete technology causing software upgrade issues |
| 2 | IAP - obsolete technology used by IBP restricting from fully comply with new security requirements |
| 3 | IAP - obsolete technology used by IBP restricting from using new UI features like HTML5, etc. |
| 4 | IAP - obsolete technology used by IBP restricting from using cloud, scalability |
| 5 | eTeller - Fastlane deployment issues in various environments. |
| 6 | eTeller - Improve the definition of the roles and responsibilities. |
| 7 | eTeller - Challenges running NFT as a Global product, including environment limitations. |
| 8 | eTeller - Lack of a unified automation framework for a Global product, not all teams have prioritized automation in their delivery. |
| 9 | ETELLER - Jenkins build fails because of antifactory is unavailable. |
| 10 | ETELLER - Splunk does not provide JVM report specially for NFT performance testing. |
| 11 | ETELLER - Deployment is failing frequently (every alternate deployment) |
| 12 | ETELLER - ScotiaGlobe scheduled jobs (migration) runs during day (working hours) which impact testing and development. |
| 13 | ETELLER - Fastlane version keeps on changing, but doesn't get notified. Due to that deployment fails. |
| 14 | eTeller and IAP 2.0: Not clear on which Team supports what functions / pieces that makes up the overall Application. Very clear in the backend once a transaction huts Datapower and then the AS400 Host. The Cloud modules / systems / Servers / Applications / Authentication process...........unclear when a problem occurs on who to call and escalate to. |
| 15 | eTeller / IAP in terms of provisioning / utilization / billing....................Can Microsoft explain how the model works? is the Bank billed on what is provisioned or what is used per app ? (Maybe not an issue for here but just for my understanding) |
| 16 | eTeller - Build and deploy database from pipeline |
| 17 | eTeller - Utility that is device agnostic (cross platform) |
| 18 | IAP 2.0 - Doing it the right way? or Doing it the Fastest way?  An issue that's we have seen over and over again if we should approach an enhancement the right way or do it the fastest way in order to meet timelines.   Doing it the right way Pro: No technical debt.  Con: Possible impact to timelines  Doing it the Fastest way Pro: Meet timelines Con: Technical Debt |
| 19 | IAP 2.0 - How to Address Technical Debt  Through the life cycle of IAP 2.0 Retail and Credit, the team has accumulated a lot of technical debt that we have no had a chance to go back and review |
| 20 | IAP - Deployment issues during scheduled change windows caused by instability of the cloud/pipeline services which leads to delays and exceeding change window timeframe |
| 21 | eTeller - There is not way to Monitor the Health of the Encrypted or Non-Encrypted Database at Low Level, like Memory, Disk, Performance that can be accessed by the Developers Area. This happened in Non-Production Azure Sites as in Production. |
| 22 | eTeller - There is no better way to measure when we need to have scalability available in the APPs for every site in CC or USE2. |
| 23 | eTeller - Primary and backup environments are divided between Azure and on-prem (private cloud) which results in increased operational overhead to keep in sync. |
| 25 | eTeller - Deploying on IaaS involves a great deal of orchestration to be fully automated. With few experts on Puppet and 'Fastlane' within BNS, it would be better to have a PaaS solution |
| 26 | IAP 2.0 - Whenever the weak ciphers are removed or changes related to ciphers are made to the non-prod environments, IAP 2.0 application will not be working |

Table 3: Issues Collection

* 1. Workshop 2: Consolidated Issues

During The prioritization workshop the following issues here selected by the team as the most urgent issues. Only process issues have been used to create a task list during the following Backwards Imaging workshops.

|  |  |  |  |
| --- | --- | --- | --- |
| **ISSUES CONSOLIDATION** | | | |
| **ISSUE #** | **ISSUE DESCRIPTION** | **COUNT** | **GROUPING** |
| 1, 5, 11, 12, 16, 17, 25 | ETELLER - Deployment is failing frequently (every alternate deployment) | 7 | Deployment |
| 3, 4, 7, 8, 22, 24 | eTeller - Challenges running NFT as a Global product, including environment limitations. | 6 | Scalability |
| 9, 10, 21 | ETELLER - Splunk does not provide JVM report specially for NFT performance testing. | 3 | Monitoring |
| 6, 14, 15 | eTeller - Improve the definition of the roles and responsibilities. | 3 | Roles |
| 20, 23, 26 | *IAP - Deployment issues during scheduled change windows caused by instability of the cloud/pipeline services which leads to delays and exceeding change window timeframe* | 3 | Deployment issues |
| 18, 19 | IAP 2.0 - Doing it the right way? or Doing it the Fastest way? | 2 | Technical Debt |
| 2 | IAP - obsolete technology used by IBP restricting from fully comply with new security requirements | 1 | Technical Debt |
| 13 | ETELLER - Fastlane version keeps on changing but doesn't get notified. Due to that deployment fails. | 1 | Deployment Fails |

Table 4: Consolidated Issues

1. Analysis
   1. Topic 1 – Deployment

Application teams are spending time fixing or addressing pipeline issues which is causing high failure rates. This is not limited to a specific environment. The build process should be re-useable across the enterprise. Time is also spent on non-application issues such as patching of VMs. Need to develop a process to automate the creating, updating, patching, and modifying DB. Need a utility/agent that can run on any device.

* 1. Topic 2 – Scalability

Obsolete technology is preventing use of new UI features or prevent moving to the cloud and taking advantage of scalability.

Challenges deploying updates while sharing non-prod environments…causing delays. Possible impact while other teams are testing.

Teams are not working per directive/framework – automation is not present in all locales.

Capacity planning – Not clear on who is doing capacity planning/cost optimization. Need a monthly review of plan and if additional resources are needed or not.

* 1. Topic 3 – Monitoring

Monitoring tools are available, however monitoring is not enabled or not sure where monitoring can aid.

* Need to understand the roles and responsibilities, this is not just support inquiries. Confirm Virginia is the product owner of eTeller.
* Builds are failing because artifactory is physically unavailable.
* Not clear on which team supports what functions/pieces that make up the overall application.
* Not able to see performance indicators relating to DB.
* Monitoring or alerting/thresholds not defined…. monitoring is stating everything fine, but user was receiving an error.

1. Creating the task list and activities model

In the second half of the assessment the backwards imaging workshops have been conducted. During these sessions, the attendees have worked on identifying tasks and activities which are part of creating solutions for the identified issues. These results have been used in the analysis stage to create a proactive architecture of the different solutions and are consolidated in a roadmap. In the next paragraphs, the results of the different workshops are shown. The issues which were selected to work on where:

1. Deployment
2. Scalability
3. Monitoring

The fishbone diagrams in the next paragraphs represent all the individual comments of the respondents during the workshop and are a 1:1 copy of the discussions which took place on the whiteboards and flipcharts. See addendum for some screenshots of these sessions. Each leave represents an activity which contributes to the ‘solved issue’ represented by the end nod of each of the diagrams.

* 1. Workshop 1: Deployment

Timeline

Description automatically generated with medium confidence

Figure 3: Backwards Imaging for Deployment

* 1. Workshop 2: Scalability

Timeline

Description automatically generated

Figure 4: Backwards Imaging for Scalability

* 1. Workshop 3: Monitoring

Timeline

Description automatically generated

Figure 5: Backwards Imaging for Monitoring

1. Recommendation Overview

Based on the findings in the workshop and the analysis of the results the following recommendations have been made.

* 1. **Recommendation 1 – Modern Service Management DSE (Dedicated Support Engineer) Monitoring**
     1. DSE imagines and realizes the art of the possible. By combining your unique environment and business goals with deep knowledge of Microsoft technologies, together we methodically develop an effective plan for your continued success.
* Educates teams on Azure Monitor and its capabilities.
* Assesses customer’s processes, policies, and governance.
* Assist with defining / updating a strategy plan.
* Recommends proactive policies using Microsoft best practices for Azure.
* Coach the customer to adopt Modern Service Management practices.
* Best practices for Monitoring your Azure environment.
  1. **Recommendation 2 –** **Modern Service Management Operational Roles and Task for Azure**
     1. Modern Service Management (MSM) Operational Roles and Tasks (ORT) for Azure, we share the tasks, timing, activities, and processes from our experience of managing and maintaining Azure IaaS resources and components.
        1. Define a consistent checklist model to run operation maintenance plan is key to keep environment with high availability and reduce risks.
  2. **Recommendation 3 –** **Modern Service Management Governance for Azure**
     1. The goal of the Governance for Azure workshop is to help you plan your governance model through a series of knowledge transfer sessions covering key topics which underpin Azure governance. Furthermore, information collected throughout the engagement is exploited to provide a list of best practices and recommendations to be considered for your governance framework.
  3. **Recommendation 4 –** **Modern Service Management Cost Optimization for Azure**
     1. The goal of the MSM Cost Optimization for Azure is to enable you to holistically understand cloud financial management and establish the right approach to manage and optimize your cloud expenditures through a series of sessions covering key topics which underpin Cost Management and Optimization on Azure. Furthermore, information collected throughout the engagement is exploited to provide a Cost Management Policy document.
        1. Objectives: IT to be proactive and Ensure IT readiness to manage, govern and optimize cloud expenditures. Maintain Control: Best practices and recommendations to keep cost expenditures on Azure under control. Mitigate Risks: Identify and mitigate risks related to cost.

1. Additional Comments
   1. IP Overview

In this table, an overview of the different official IP naming solutions is provided as mentioned in this paper.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Package/Service Name | Service Description | Duration |
| 1 | Monitoring DSE | Azure Monitor is becoming a challenge in most of the companies who are in the Cloud adoption processes because resistance to the use of new technology or manage the operations of Cloud based services affect the consumption of Azure Services like Insights, Log Analytics, Storage Accounts, Event Hub, AAD, API and more.  Companies struggle with how to modernize their Monitoring plan.​ | 400 to 600 hours |
| 2 | MSM ORT | Modern Service Management (MSM) Operational Roles and Tasks (ORT) for Azure, we share the tasks, timing, activities, and processes from our experience of managing and maintaining Azure IaaS resources and components. | 5 days |
| 3 | MSM Azure Governance | The goal of the Governance for Azure workshop is to help you plan your governance model through a series of knowledge transfer sessions covering key topics which underpin Azure governance. Furthermore, information collected throughout the engagement is exploited to provide a list of best practices and recommendations to be considered for your governance framework. | 5 days |
| 4 | MSM Cost Optimization for Azure | The goal of the MSM Cost Optimization for Azure is to enable you to holistically understand cloud financial management and establish the right approach to manage and optimize your cloud expenditures through a series of sessions covering key topics which underpin Cost Management and Optimization on Azure. Furthermore, information collected throughout the engagement is exploited to provide a Cost Management Policy document. | 5 days |

Table 5: IP Overview

1. Addendum
   1. Screenshots

Timeline

Description automatically generated with medium confidence

Figure 9: Backwards imaging workshop 1 – Deployment

Timeline

Description automatically generated

10: Figure Backwards imaging workshop 2 - Scalability

Timeline

Description automatically generated

Figure 11: Backwards imaging workshop 3 - Monitoring