AEM Go Live Assessment Recommendations
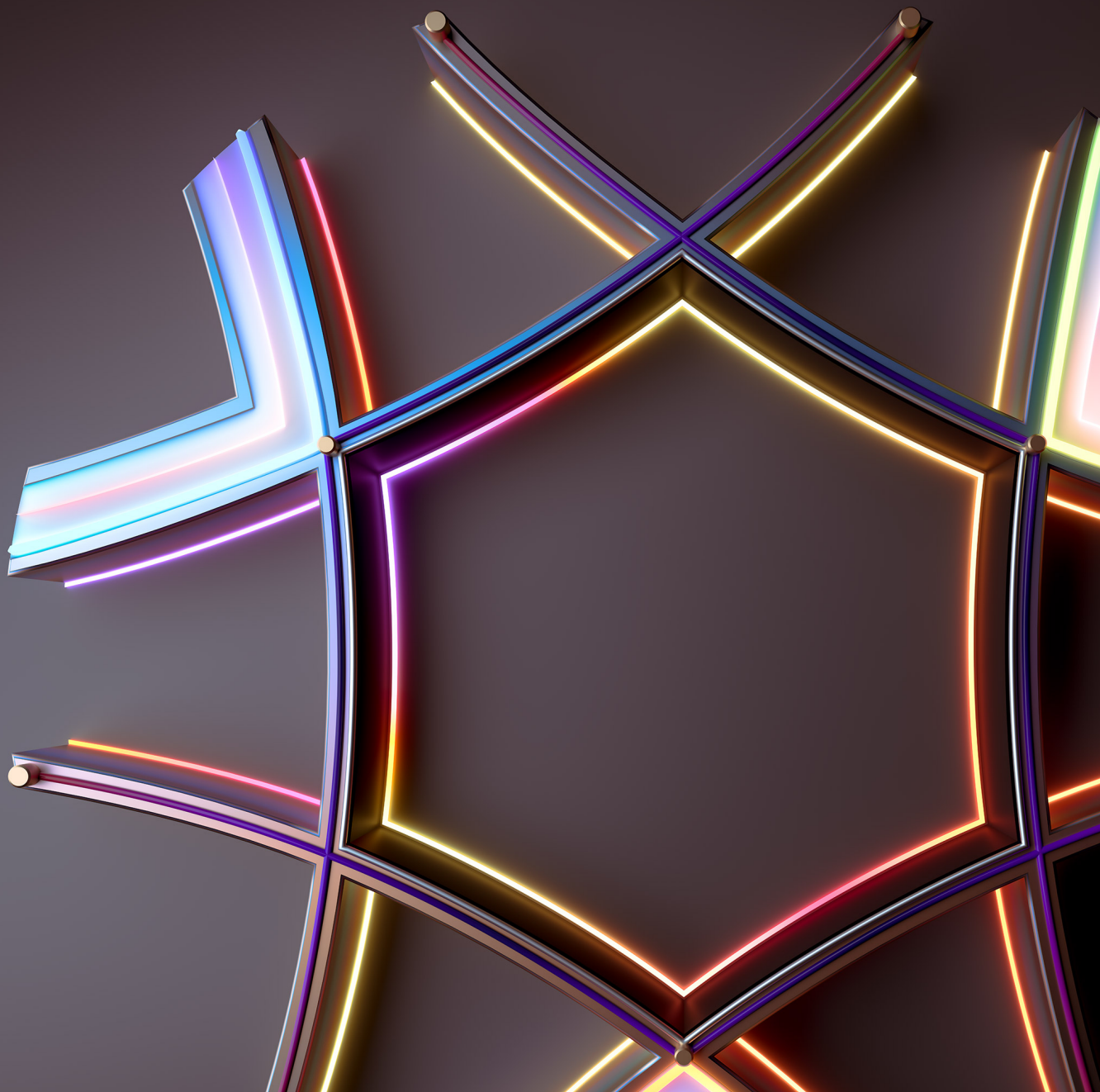
Launch Advisory Services

Document Title	AEM Go Live Assessment Recommendations Launch Advisory Services
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2			

Purpose and summary

This document highlights the areas for improvement and accompanying expert recommendations during the go-live readiness assessment conducted by Adobe.

Go live readiness review is conducted through a series of workshops with implementation partner – Infosys. Adobe team does not have access to M1's AEM environment, hence no direct review or analysis was performed on the M1 platform.

Adobe Experience Manager
Premier Support Launch Advisory Services

SUMMARY

ISSUES/RISKS	PRIORITY		
	HIGH	MEDIUM	LOW
Log Analysis – API performance can be improved		1	
Dispatcher Configuration – Caching rules are not following best practices		1	
ACL Set up completed – Proper handover and testing			1
Performance & Load Testing – Need proper test environments	1		
Performance & Load Testing – Test criteria and KPI not well defined	1		
CDN/Dispatcher rules – Caching rules not following best practices		1	
Latest recommended hotfix/service pack not installed		1	
Authors are not yet trained on AEM			1
Security Vulnerability : APIs are not secure	1		
TOTAL ISSUES/RISKS = 9	3	4	2

RECOMMENDATIONS - DETAILS

The following recommendations for improvement were identified during the go live readiness assessment and are in high, medium, and low priority order.

RECOMMENDATION 1	PRIORITY: MEDIUM
Checklist item	Log Analysis – API performance can be improved
Issue/risk if not addressed	AEM servlet API calls currently use the query parameters, this implies that none of the calls will be cached by dispatcher or CDN. While this make sense for dynamic data, API calls which return static information like catalog details, etc. can be cached. All the uncached hits will be redirected to publish servers, there by increasing load on servers and impacting performance.
Recommendation(s)	Static API calls can be restructured to leverage the sling selector concepts. Selectors are cacheable at the dispatcher and CDN level. For example: Following API call uses query params: /content/bluesky.getCatalogDetails.json?key=object&nodePath=/etc/commerce/catalogs/prod/simcard&nodeProperty=simcard&jsonPath=result This could be restructured to use selectors as below. /content/bluesky.getcatalogDetails.key.object.nodepath.prod-simcard.nodeProperty.simcard.json This reduces load on servers and greatly improves the application performance
Comments	

RECOMMENDATION 2	PRIORITY: MEDIUM
Checklist item	Dispatcher Configuration – Caching rules are not following best practices
Issue/risk if not addressed	M1 dispatcher configuration currently disallows caching of all objects/requests and selectively caches few elements. This is not as per Adobe best practices which states cache all and disallows caching if there is any dynamic requests. This setting can adversely effect the performance of AEM servers.
Recommendation(s)	Adobe's recommendation is to cache all requests and disallows caching when there is a dynamic elements. While we understand most of the pages are dynamic in nature for microsite, there still lies value in following this best practice. For instance, allow all caching rules allows caching of CSS, js, font files, images, etc. which might not be dynamic or specific to customer. If required, rules can be set to not allow cache for specific pages or even a generic .html/.json calls. Even though, Adobe's recommendation is to disable caching for specific set of pages through a regular expression based rule.
Comments	

RECOMMENDATION 3	PRIORITY: LOW

Checklist item	ACL Set up – Handover to M1 still pending
Issue/risk if not addressed	It looks like M1 content authors are yet to test the access on AEM.
Recommendation(s)	Adobe recommends that all critical content authors be onboarded to AEM and access issues & authoring process be validated before go live.
Comments	

RECOMMENDATION 4	PRIORITY: HIGH
Checklist item	Performance & Load Testing – Need proper test environments
Issue/risk if not addressed	Performance & load testing is performed in UAT environment, which is not a true replica of production environment. This could lead to incorrect test simulation and results.
Recommendation(s)	UAT environment should be a replica of production, as called out during solution design recommendation. This will help the performance and load test to simulate the actual production traffic and load. This can understand the peak load handling capability of environment. These metrics will be critical to avoid system outages during new campaign launches/events.
Comments	

RECOMMENDATION 5	PRIORITY: HIGH
Checklist item	Performance & Load Testing – Test criteria and KPI not well defined
Issue/risk if not addressed	Key performance indicators (KPI)s for expected loading time for pages, average & peak traffic load, etc. were not clearly specified in the performance & load test summary. These threshold values are required to proper assess the system performance
Recommendation(s)	Performance & load test thresholds and KPIs has to be defined and agreed with M1. This values should reflect the current and projected growth of traffic during normal and peak usage times. This will help us understand the scalability of system and can help plan for marketing campaigns or events properly.
Comments	

RECOMMENDATION 6	PRIORITY: MEDIUM
Checklist item	CDN/Dispatcher rules – Caching rules not following best practices
Issue/risk if not addressed	Caching rules in dispatcher are currently disabled by default and enabled only for selected pages. This could have a performance impact on the application
Recommendation(s)	As per Adobe's guidelines, caching should be enabled for all by default. Only dynamic pages can be disabled for caching. While we understand that most of the pages in microsite is dynamic in nature, there is still advantage in following the best practice. This will allow static assets, CSS/js/font files, etc to be cached. Need to re-look at the caching strategy post go-live
Comments	

RECOMMENDATION 7		PRIORITY: MEDIUM
Checklist item	Latest recommended hotfix/service pack not installed	
Issue/risk if not addressed	Current AEM version for M1 is AEM 6.5.4. However, Adobe has released AEM service pack 7 (6.5.7) already.	
Recommendation(s)	Adobe regularly releases Experience Manager hotfixes to address issues of security and stability. It is recommended to stay current on what has been released and get any related critical fixes installed and tested before going live. A list of hotfixes for Experience Manager can be found at https://experienceleague.adobe.com/docs/experience-manager-65/release-notes/service-pack/sp-release-notes.html?lang=en#install	
Comments		

RECOMMENDATION 8		PRIORITY: LOW
Checklist item	Authors are not yet trained on AEM	
Issue/risk if not addressed	It looks like content authors are still not trained in the AEM environment. It's critical to onboard the actual marketing users who manages content to AEM platform and train them on the custom components/content features	
Recommendation(s)	Adobe understands that there is quite limited marketing content in microsite. And Infosys is preparing the manual document. However, it's still important to provide key stakeholders access and training on the system.	
Comments		

RECOMMENDATION 9		PRIORITY: HIGH
Checklist item	Security Vulnerability : API are not secure	
Issue/risk if not addressed	M1 has reported issues with API security. Based on the analysis, there were 2 issues found with some of the APIs 1. Some of the GET request parameters can be manipulated to get more information regarding reserved numbers, etc. 2. API calls can be fired from bots/scripts.	
Recommendation(s)	Recommendation on how to address this is discussed and agreed upon. 1. GET request parameters will be converted as server side parameters. There will be code level validations to accepts only known parameters. 2. AEM CSRF framework has to be enabled for all servlet API calls to avoid any bot attacks. More details on AEM CSRF framework here: https://experienceleague.adobe.com/docs/experience-manager-65/developing/introduction/csrf-protection.html?lang=en#the-csrf-protection-framework	
Comments	Infosys is already working on #1 fix. Infosys also confirmed #2 is in place. Here is the screenshot of configuration shared: As per this, all API calls (/bluesky/*) are excluded from CSRF filter. This is not recommended. Please re-look at configuration and ensure all API servlets are included as part of CSRF filter.	

RECOMMENDATIONS – IMPACT AND EFFORT SUMMARY

Here is another view of recommendations from an M1 perspective, this report indicates the impact to go live and effort involved to incorporate the recommendation along with priority.

- **Priority**: Severity of the issue based on AEM platform design and maintainability perspective.

- **Impact**: Is this impacting the upcoming supernova launch of M1?

- **Effort**: Effort required to incorporate the recommendation.

ISSUES/RISKS	PRIORITY	IMPACT	EFFORT
Log Analysis – API performance can be improved	MEDIUM	YES	HIGH
Dispatcher Configuration – Caching rules are not following best practices	MEDIUM	YES	MEDIUM
ACL Set up completed – Proper handover and testing	LOW	NO	MEDIUM
Performance & Load Testing – Need proper test environments	HIGH	YES	HIGH
Performance & Load Testing – Test criteria and KPI not well defined	HIGH	YES	MEDIUM
CDN/Dispatcher rules – Caching rules not following best practices	MEDIUM	YES	MEDIUM
Latest recommended hotfix/service pack not installed	MEDIUM	NO	MEDIUM
Authors are not yet trained on AEM	LOW	NO	LOW
Security Vulnerability : API are not secure	HIGH	YES	LOW

This table should help M1 and Infosys to plan for incorporating the recommendations.

- All those recommendations marked with high priority and impacting go-live should be incorporated asap.
- All those recommendations marked with medium priority, has go live impact and low efforts can be addressed easily and should be considered next.

As per this, please ACT immediately on the below items.
- Ensure performance and load testing is performed with well defined criteria so that we have clear understanding of max traffic levels which can be handled by platform. This will help us understand if platform needs to be scaled before go-live, and avoid system outages.
- Ensure CSRF filters are configured properly to avoid any API security issues