Ask the Expert: Architecture Q&A Session

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boomi

Agenda

01 Upcoming Events

02 Introductions

03 Questions

Upcoming events!

Boomi Integration 101

Date: March 26th, 2024, 11:30am EDT
Registration: Please Register **here**
Agenda: Join us for a comprehensive integration session. We'll guide you through each step to ensure a successful integration. Learn how to transform requirements into a functional integration, conduct effective testing, and deploy it correctly.

https://usergroups.boomi.com/

Ask the Expert: Architecture

Date: April 16th, 2024, 1:00pm EDT
Registration: Please Register here
Agenda: This Q&A session is led by Boomi Professional Services, come listen and feel comfort knowing you are getting your questions answered by experts! We strongly encourage you to submit questions beforehand so our expert can effectively and fully answer your question(s)!

Developer: Document Flow

Date: April 25th, 2024, 11:30am EDT
Registration: Please Register here
Agenda: What is a Boomi Document? Exactly how does it flow through the shapes in my process? By the end of this session, you'll be able to predict your document looping and flow, no crystal ball required! Join Senior Integration Captain, Brad Detlefsen for "Developer: Document Flow" as part of the Role-Based Path series.

Siva Chavali

Sr. Technical Architecture, Boomi

- About 15 years of IT experience with specialization in Integrations domain.
- Has hands-on experience in different integration platforms across On-premises, Cloud and Hybrid integration environments.
- Has been with Boomi PSO as a Sr. Technical Architect for the last 2 years.
- Worked on a variety of assignments including Boomi Greenfield implementations, Migrations, Architectural evaluations, Optimization etc.

Questions

Question:

What are the best practices from converting to message queueing from cache components in an existing process build?
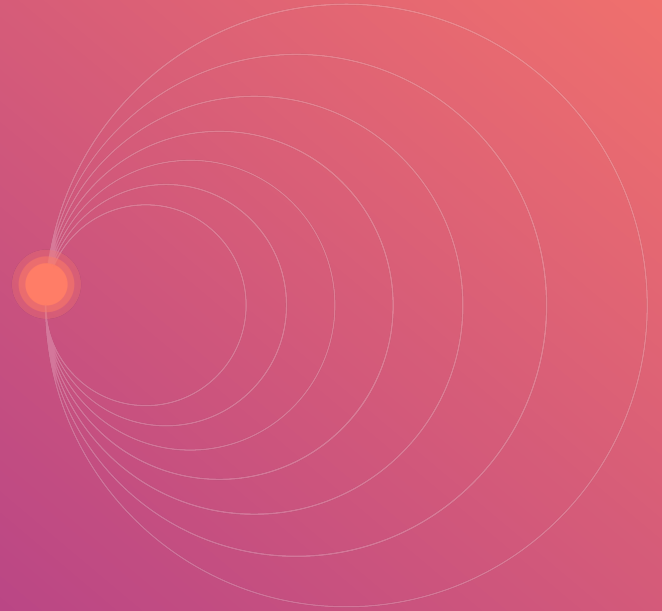
Converting to Queuing from Caching

- What kind of Cache (Boomi Cache vs External Caching solution) and
- What is the chosen Message Queuing Solution? (Boomi Atom Queues vs Event Streams vs External ones like Solace or etc)
- Hosting of the queueing solution and Network latencies
- Data Residency Requirements
- Define Payload sizes, the transaction volumes (IOPS) and adjusting the settings as appropriate
- Defining Dead-letter queue definitions and defining TTL.

Question:

What are the pros and cons of using the messaging queueing?

What are the best use cases for utilizing this function?

What are the known issues?
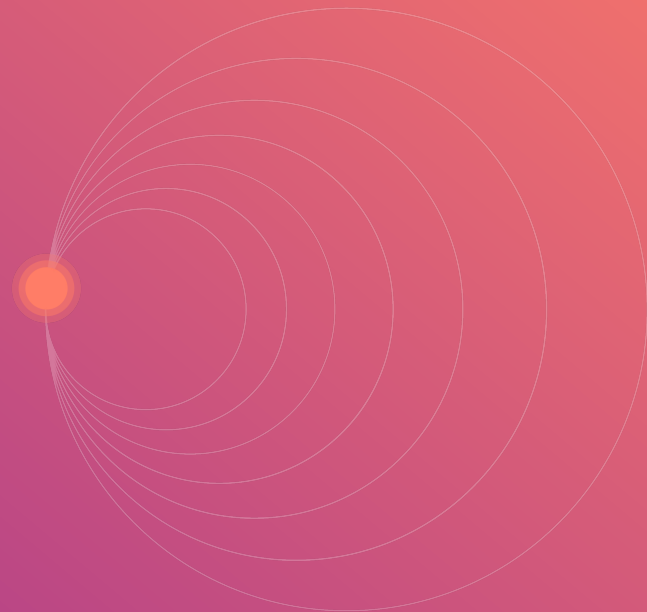
Message Queuing

https://help.boomi.com/docs/Atomsphere/Integration/Event-based%20integration/c-atm-Atom_Message_Queuing_5310fd40-efdf-4bb2-bb3c-6ef099472b36

Benefits:

- Store and forward
- Asynchronous messaging
- Decoupling
- Fan-Out
- Resiliency
- Guaranteed delivery
- Sequential delivery etc.

Considerations:

- Choice of message queuing provider - Atom queues, Event Streams, Solace, Kafka, other JMS systems etc.
- Limitations with Atom queues
- Network latencies / Data compliance needs based on the hosting of the provider etc.
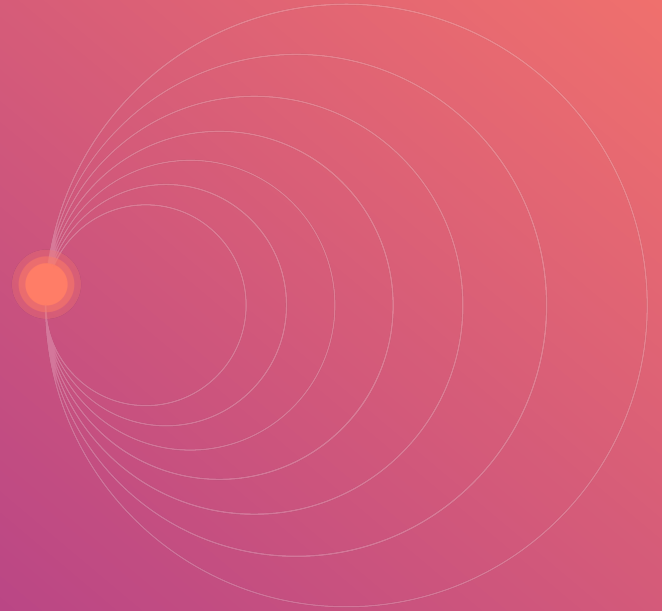
Use cases:

- Planned or unplanned outages can be handled without data loss.
- Master Data Synchronization across multiple downstream applications
- Ability to retry failures per consumer basis
- Asynchronous logging

Question:

Can you speak to disaster management handling on Boomi Runtimes?

# Boomi Disaster Recovery

https://boomi.my.site.com/community/s/article/bestpracticesforruntimehighavailabilityanddisasterrecovery

Considerations:

- Depends on
    - the hosting - Public Cloud vs MCS vs Customer Hosted
    - The runtime - Atom vs Molecule vs Private Atom Cloud
- Active - Active vs Active - Passive
- Defining RTO and RPO
- DR solutioning across the other Enterprise applications
- Connectivity - Whitelisting rules
- Usage of Atom Queues / Counters / Persisted Process Properties etc.

Question:

How do you increase performance
of integrations?
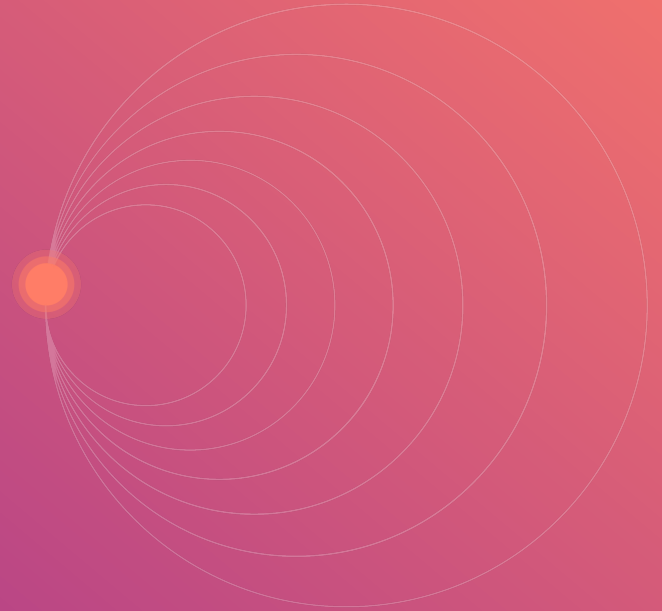
Performance Optimization of Integrations

Solution is multifold. Systemic approach would help narrow down the focus area:

- Identify the bottleneck - Caused by boomi / downstream systems
  - Within boomi - Integration process design / development / configuration / Infrastructure etc.
- Identify the root cause
- Identify the solution options
- Implement in non-prod environment
- Assess the performance testing results under true conditions as much as possible
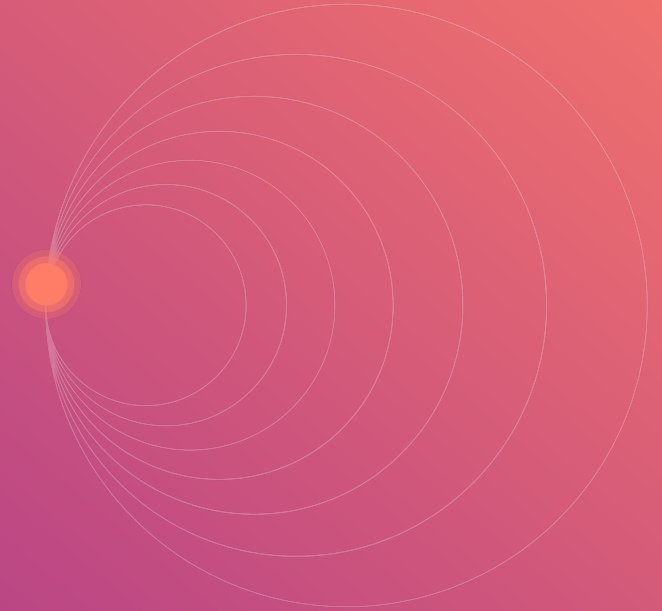- Promote the changes
- Monitor
- Repeat the cycle

Performance Optimization of Integrations

Common Considerations:

- Optimize the API calls / Transaction volumes -Reduce the full data load scenarios and use deltas as much as possible.
- Define and Adhere to the SLAs across the integration hops - Revisit the timeout settings and the issues with Data integrity; Optimize the end systems performance as applicable
- Molecule Nodes to NFS latencies - Reduce the reliance on NFS as and when possible*
- Throttling with Message Queuing
- System tuning - thread pools / memory / CPU usage optimization
- Connection Management via OOTB Connectors - Connection pool threads
- Flow Control - Multi thread processing vs Multi process
- Usage of Custom libraries and scripts
- Java scripts are proven to be 40%-50% more performant over Groovy scripts.
- Do not use connector lookups inside map
- Exercise caution around the usage of shapes that load full data into memory. E.g Data process shape w/ Custom scripting etc.
-

Question:

What are best practices for folder structure?

Boomi Folder Structure

https://community.boomi.com/s/article/Boomi-Blueprint-Component-Explorer-Folder-Structure

Folder Structure best practices are quite subjective to each organization and their IT landscape / Integration landscape / SDLC management etc.

- Go through Boomi Development and Architecture Training course.
- Create #Connections Folder and set permissions on it for only admins / lead engineers to manage connections creation process as it is tied with licensing.
- Maintain reusable assets in a dedicated folder (#Common / #Utilities / #Canonical structures etc) to be discoverable across teams and/or developers. Assign folder permissions
- Different mechanisms followed by teams - Region Specific (North America, EU etc) / Functionality specific (Manufacturing, OMS etc) / Integration_pattern specific (EDI / API / File transfer) etc.
- Ancillary assets are recommended to be kept outside of the above folders.
- Maintain #Sandbox folders for developer POCs / research activities.

Question:

What are some best practices around creating custom roles?
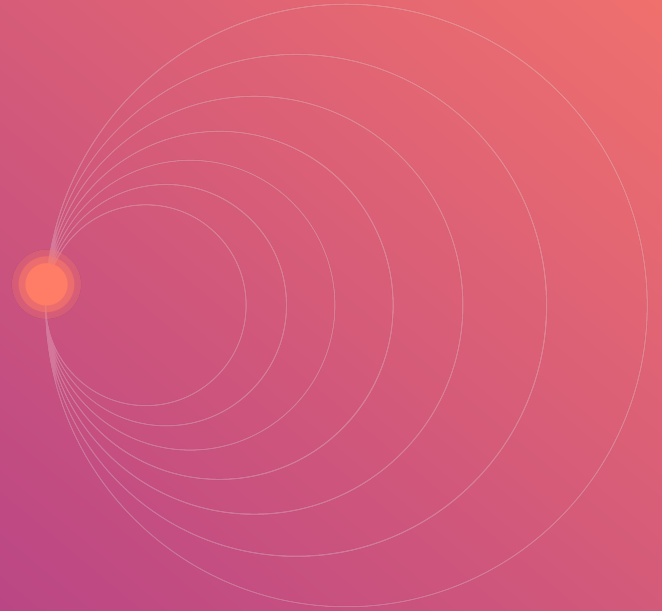
User Management - Custom Roles

Best practices are subjective to each organization, based on their security and SDLC policies.

General best practices include:

- Follow least privileges principle
- Set fine grained roles for Development, Operational and Administration and functional custom roles
- Distinguish between Custom roles and standard out of the box roles via naming conventions: E.g. CR-Developer-Production etc.
- Identify the user roles and responsibilities and create custom roles according to the needs by mapping required privileges
- Exercise caution with view data functionality about who can view the integration data vs who cannot.
- Create custom roles for Development and release coordination - based on business functionality, SDLC practices, Read-only views for administrative screens etc.
- Can define Custom Roles for External users like - QA testers, IT Managers, Functional teams / Business users etc.
- Refer to: User Roles and User mgmt and custom roles

Question:

What are best practices when it comes to debugging a process?

If one branch fails, can we prevent it from failing the entire flow?
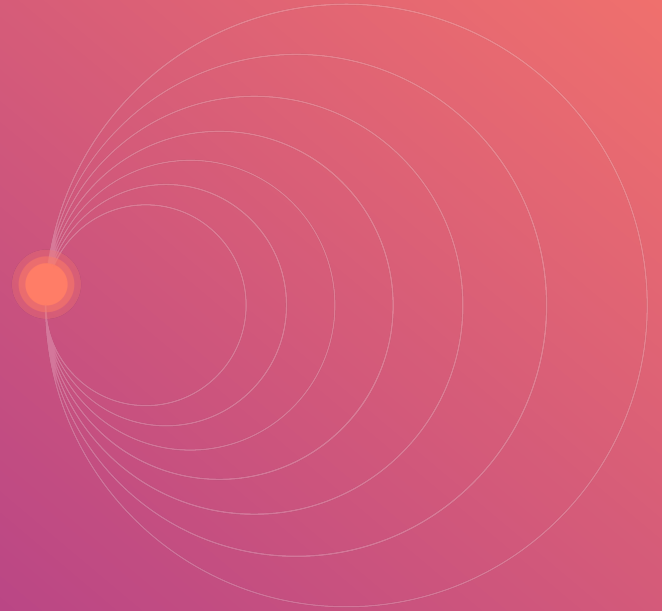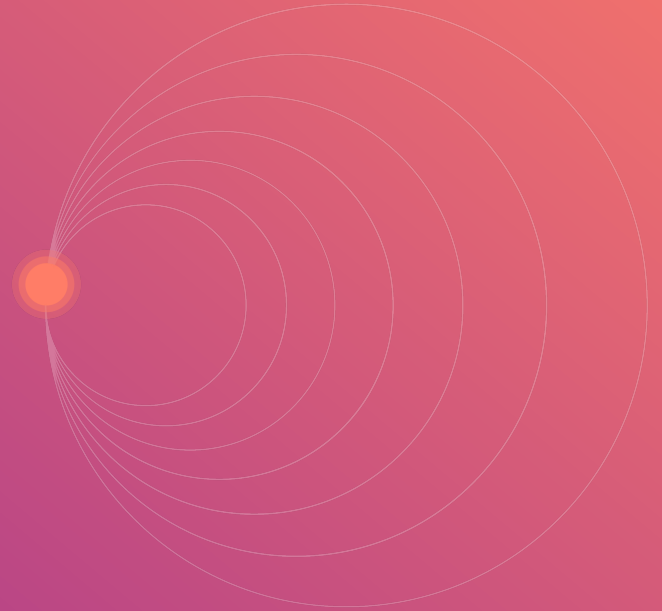
Debugging a Process – Error handling

- Use Try - Catch
- Check Return Application Error responses
- Stop and Continue the other execution paths
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Question:

What are some EKS deployment best practices and potential limitations when compared to a EC2 (VM) deployment?
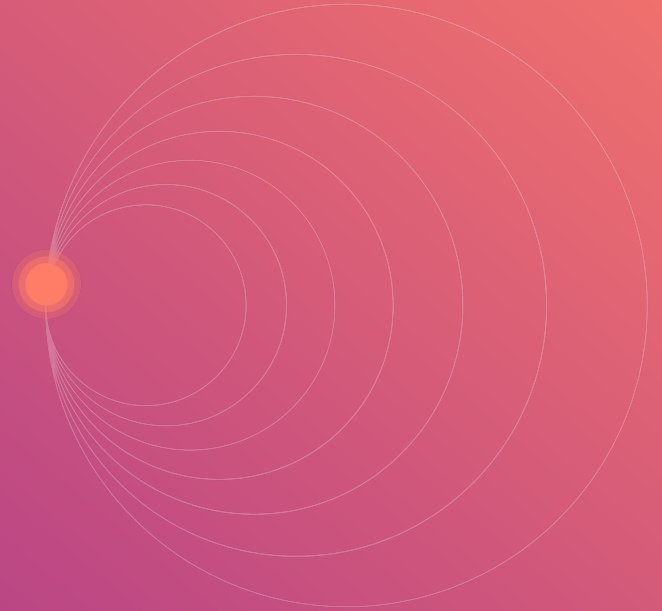
EKS Best Practices and Comparison with EC2

Refer to:

- [Kubernetes Best Practices](#)
  -
- [Architecture](#)

Question:

Can we create API endpoints to read and update data on premise from Boomi platform?

Access Enterprise On-prem Data systems via Boomi APIs

- Boomi platform? Public cloud?
- Not recommended, but if needed firewall needs to be opened. Refer to [Public Cloud runtime IP Addresses](#)
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Questions

We are Boomi.

Be Bold. Be You. Be Boomi.