



Ask the Expert: Architecture

 Regan Knepp, Community Events and User Groups
Team, Boomi

boomi

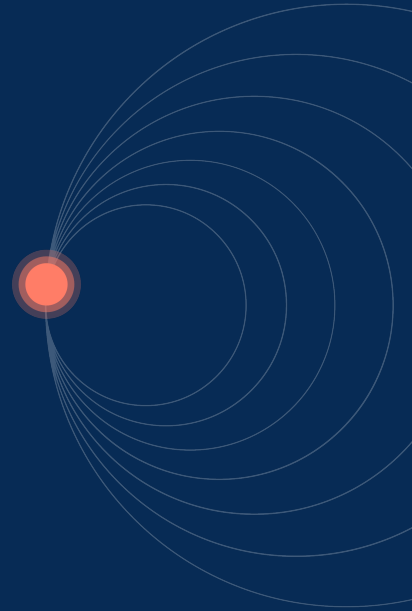


Brian Brinley

Technical Architect, Boomi

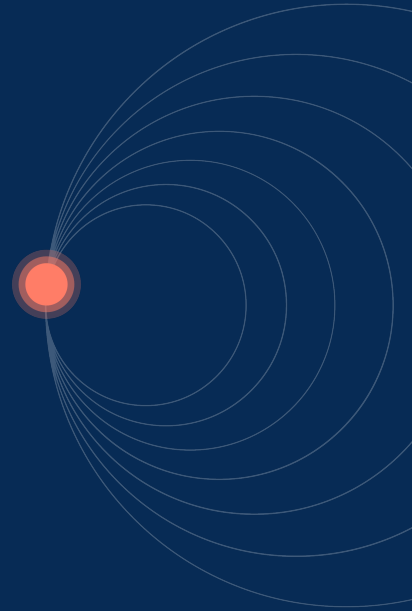
- Been involved with Boomi Architecture for nearly 9 years.
 - Rollercoaster to Boomi: Customer > Partner > Customer > Employee
- Graduated from New England Institute of Technology
- Has 23 years of Systems Administration, Application Development, and Life Cycle management under his belt.
- 10x Boomi Certified.
- Loves camping and outdoor activities!


Questions



QUESTION

What's an example of an architecture configuration or decision that many people get wrong for their business? How can I avoid that same error?





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Consider what High Availability means to you.

What is an acceptable amount of failures you're willing to be able to recover from?

Define your SLA for both your runtimes and specific integrations.

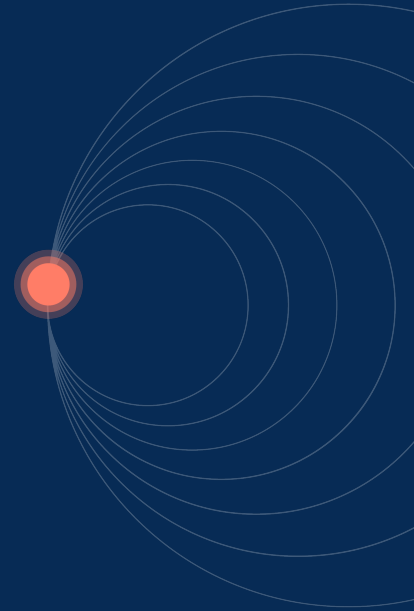
What is your organization's process to handle outages, patching and updates?

Monitor from the start, Quantify the decisions with Data.

Plan for Failure.... AND Recovery!

QUESTION

How can we leverage Boomi as part of our Data strategy. Data ingestion, Data integration, Data governance, Microservices development?





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Data Strategy – Define Common Models and Reusable Components. Setup your business entities for consistency across applications. Use a Validate, Enrich, Standardize and Transform (V.E.S.T) type policy.

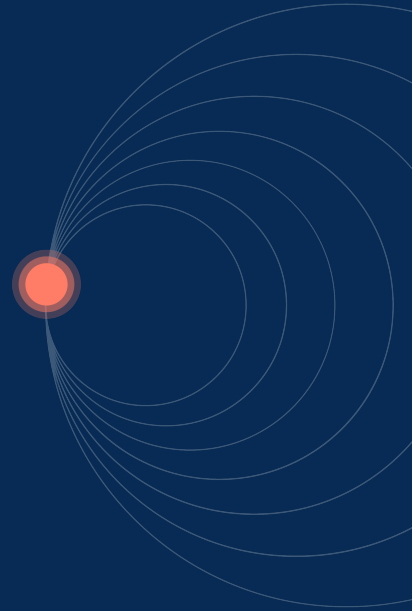
Data Integration – Leverage the Shared V.E.S.T Patterns across your integrations to accelerate adoption and onboarding.

Data Governance – Use the reusable components to govern how this data is accessed and distributed

Microservices – Utilize Advance API Management features – API Services for method aggregation, Advanced Security Features, API Policies and Plans to manage access.

QUESTION

How can we leverage Boomi with our AI initiatives?





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Leverage Boomi as an access and security point when using AI Services, both egress and ingress.

AI Guiding principles should be security minded as a first point of consideration.

Using common access points ensures controls over data ingestion, as well as consistency across consumers of your critical data.

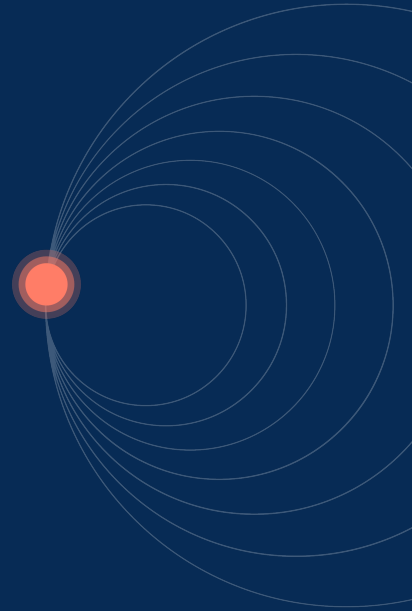
Utilize Generative AI for Integration Development. Boomi Suggest, Integration Templates.

boomi.ai

<https://boomi.com/platform/ai/>

QUESTION

How do you create reusable processes that accept inputs for verification?

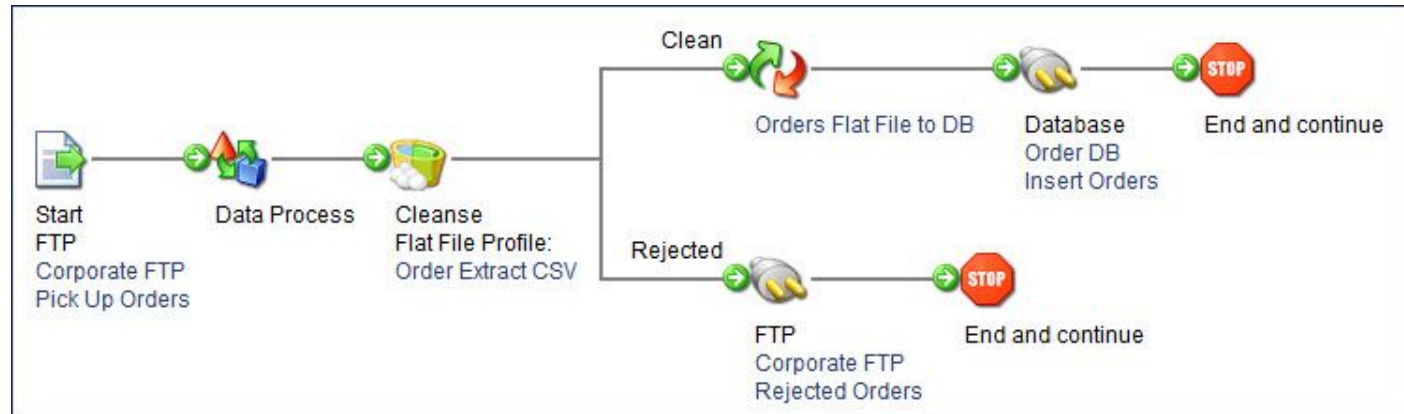


How do you create reusable processes that accept inputs for verification?

Use Integration Harnesses – Example: Process Routes – Establish consistent handling of Accepted and Rejected records

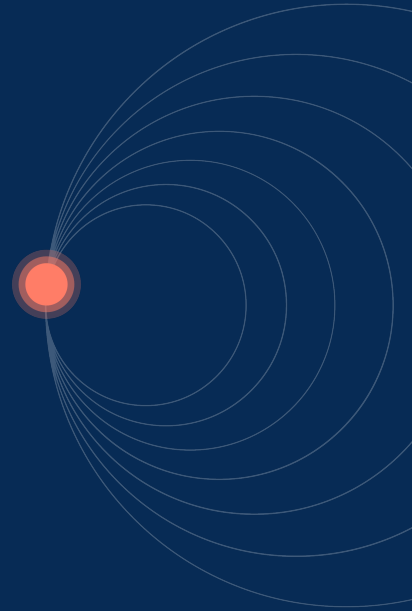
Leverage the Cleanse Data Shape –

https://help.boomi.com/docs/atmosphere/integration/process%20building/r-atm-cleans_e_shape_bb7ec8bb-3fc3-42a7-bd84-2ffa00ef269d/



QUESTION

What are some disaster recovery strategies?



What are some disaster recovery strategies?

High Availability is **not** a Disaster Recovery Strategy

Establish a clear RPO and RTO. Without these parameters the next decision is arbitrary.

On-Premise vs Cloud – Consistency is key.

Atom vs Molecule

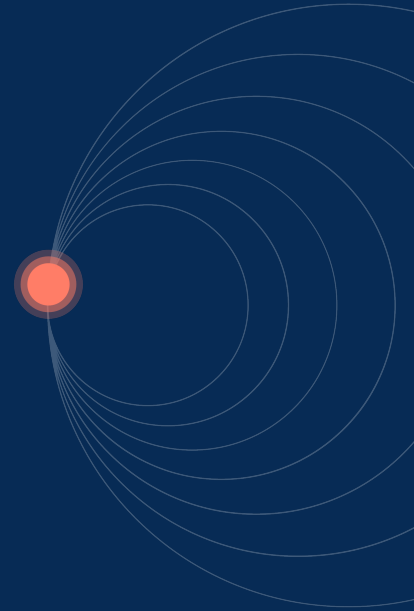
Batch Scheduling vs Real-Time

Active/Active vs Active/Passive

Scope Management – What does a “Boomi” Failover event mean to the organization?

QUESTION

What are some best ways to optimize processes that require a large amount of calls?



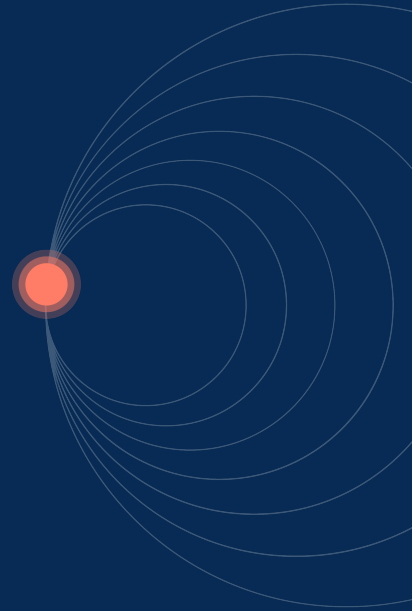


What are some best ways to optimize processes that require a large amount of calls?

1. Reduce in memory documents. Utilize Document Caches and cross execution access.
2. Multi thread where possible. Flow Control with parallel processing
3. Batch wherever possible. Use Bulk APIs, Bulk Migrate to staging tables, etc..
4. Understand document flow. Documents execute until completion.
5. Limit try/catch nesting.

QUESTION

Do you have any tips on how to minimize production outage when we migrate from atom to molecule in Kubernetes? How to deal with persisted process properties during the migration?



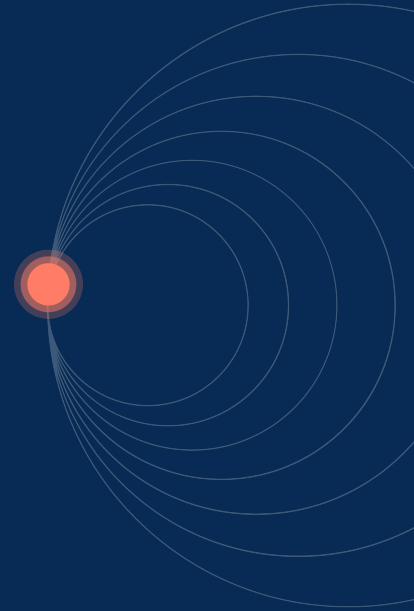


Do you have any tips on how to minimize production outage when we migrate from atom to molecule in Kubernetes?

1. Stage as much as possible. Build new runtime, attach to existing environment, then test prior to cut-over.
2. Isolate batch from real time integrations if possible.
3. Move historical data after migration.
4. Persisted Properties - Utilize the atomsphere API to copy persisted properties across Atom Id's -
https://help.boomi.com/docs/atomsphere/integration/atomsphere%20api/int-persisted_process_properties_object_d0048f97-5bf6-412f-922f-5b1ff7a7355b/#:~:text=The%20Persisted%20Process%20Properties%20object,properties%20for%20a%20specified%20container.

QUESTION

SQL Commits of Transactions – How to commit SQL changes made by Program Command shape?





How to commit SQL changes made by Program Command shape?

Essentially, you don't.... At least not from in boomi.

If you need to leverage commit/transactional executions then the next best option is to leverage a DBMS Stored procedure that maintains that logic.

By definition, the command shape does not return data so therefore it is not able to pass along this data for future execution context usage.

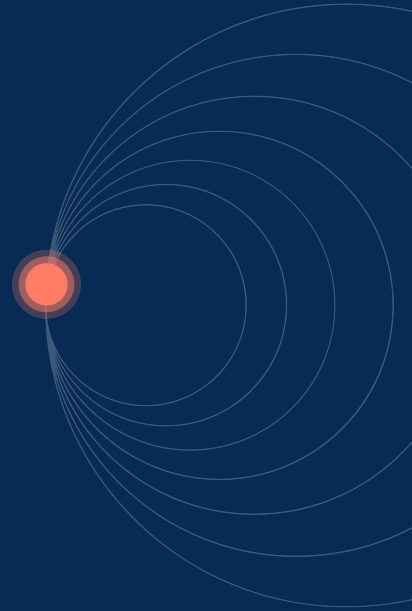
For more info:

https://help.boomi.com/docs/atomsphere/integration/process%20building/r-atm-program_command_shape_2bfcdb5d-04d2-4d7a-b50f-9c45eedd8744/

QUESTION

DateTime formats (SQL, JSON, XML...) DBv2 (json) to Salesforce (xml) and Boomi's own format.

How best to handle these datetime format changes?

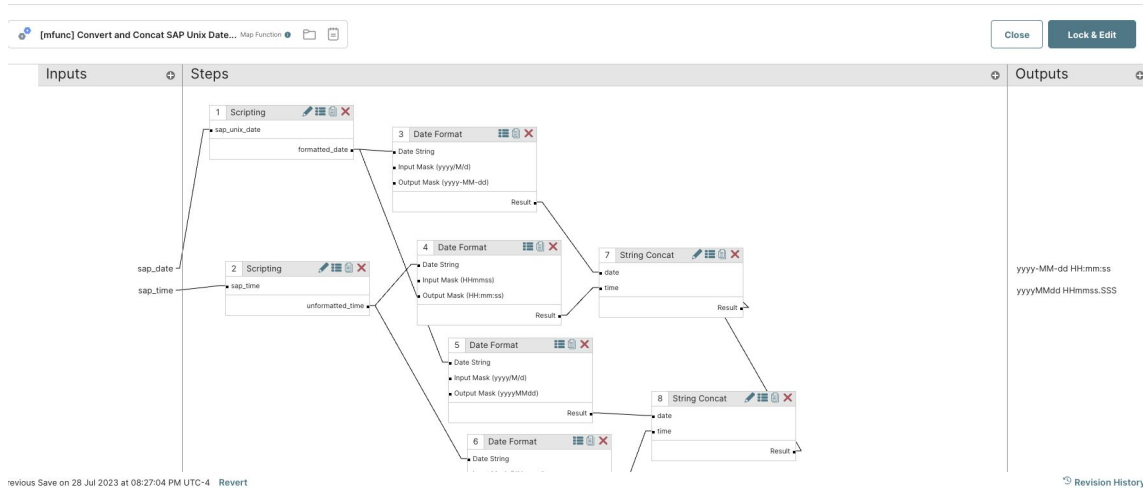


DateTime formats (SQL, JSON, XML...)

What is a format anyways these days....

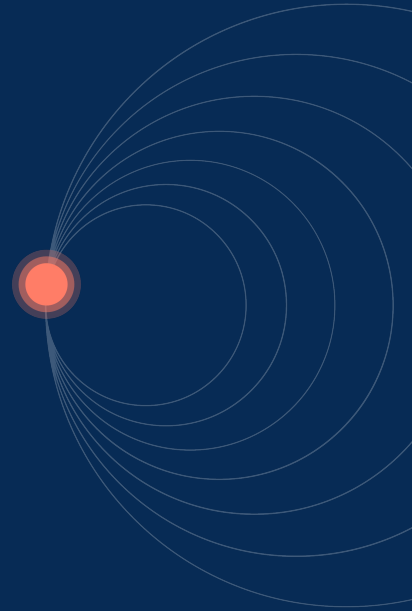
This is an age old challenge that is best defined by using reusable Map Functions with multiple output formats.

Consider time zone offsets. An often overlooked attribute of date time formatting.



QUESTION

How best to handle lookup values without overloading destination data source?
Cache lookup dataset and do lookup locally rather than at the source itself maybe?





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Cache lookup dataset and do lookup locally rather than at the source itself maybe?

Document Cache's are the simplest way to gather this lookup data via the integration in flight.

However, there are a few key considerations.

Is this look up data slowly changing?

Is this data transactionally relational?

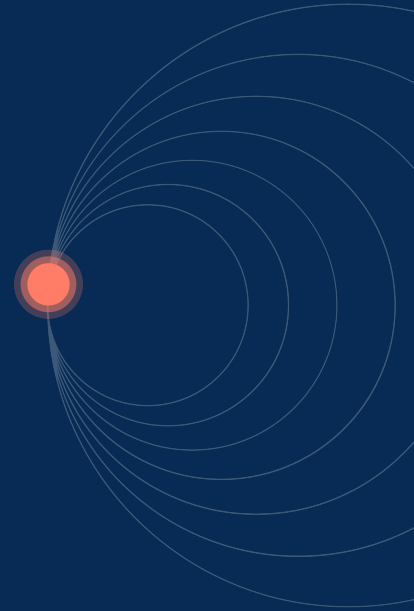
What is the volume of the lookup data?

Is this lookup data useful across executions?

Consider using external caching mechanisms such as Redis or Elasticache

QUESTION

What are consideration when hosting an AS2 server on a Boomi on premise installation where we expect high volume of transactions from both internal and expert customers. Should it be a separate dedicated environment?



What are consideration when hosting an AS2 server

1. High Availability
 - a. Utilize a molecule for high availability
2. Isolated Environment Considerations – AS2 Traffic, burstable or constant? Does the AS2 transaction require higher availability than other integrations. Does your organization leverage APIM
3. Internal vs External Customers: Philosophical vs Practical. Are the expectations different depending upon the client?
4. AS2 Artifacts – Certificate management, execution artifacts, etc..
<https://community.boomi.com/s/article/as2-basics-for-boomi>
<https://community.boomi.com/s/article/inbounddatawiththeas2sharedserverortradingpartnerstartshapes>
https://help.boomi.com/docs/atomsphere/integration/atom,%20molecule,%20and%20atom%20cloud%20setup/r-atm-installation_directories_fec3863c-e459-439a-91c3-da8bea9b4fb8/

We are Boomi.

Be Bold. Be You. Be Boomi.

