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CCW3970 - Building and debugging outbound REST API integrations

Lab Guide: https://goo.gl/qvXRt2
Lab Instance: http://clabs.link/ccw3970
URL Shortcuts: https://goo.gl/EQWFn7

Credentials
User: admin
Pw: 3970W206#K17

servicenow

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CCW3970 - Building and debugging outbound REST API integrations

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Agenda

Introduction & Overview

Lab Setup

Lab 1

Lab 2

Lab 3

Conclusion & Next steps

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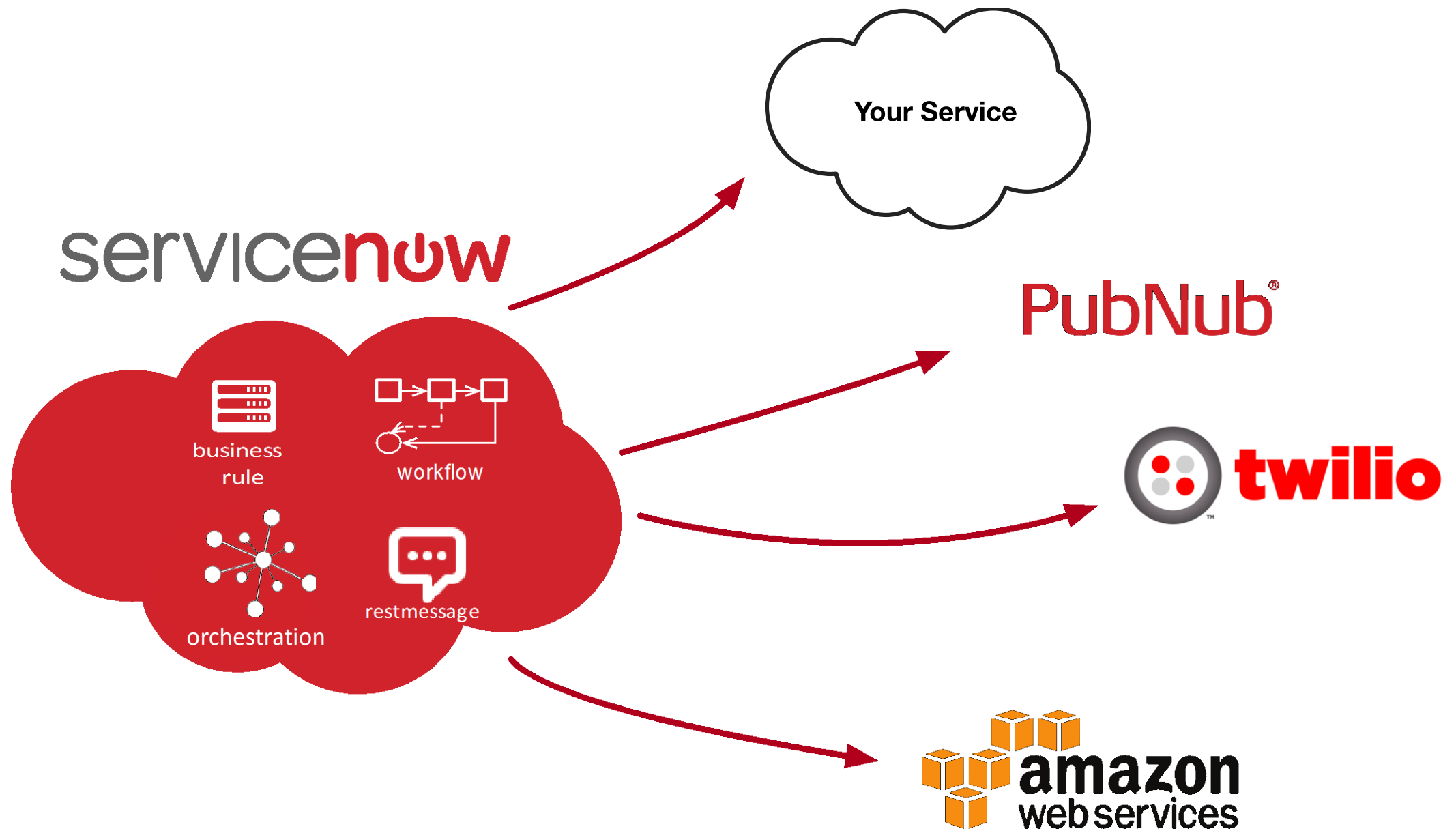May 9–11 • Orange County Convention Center • Orlando, FL
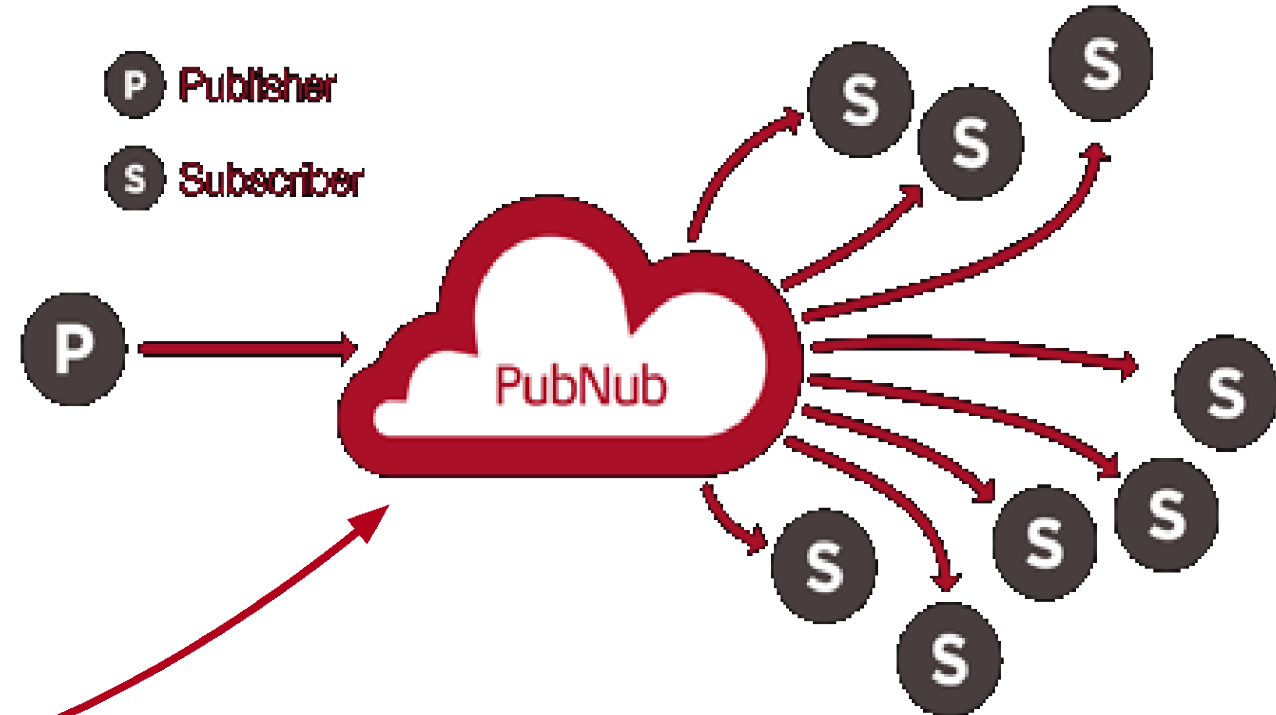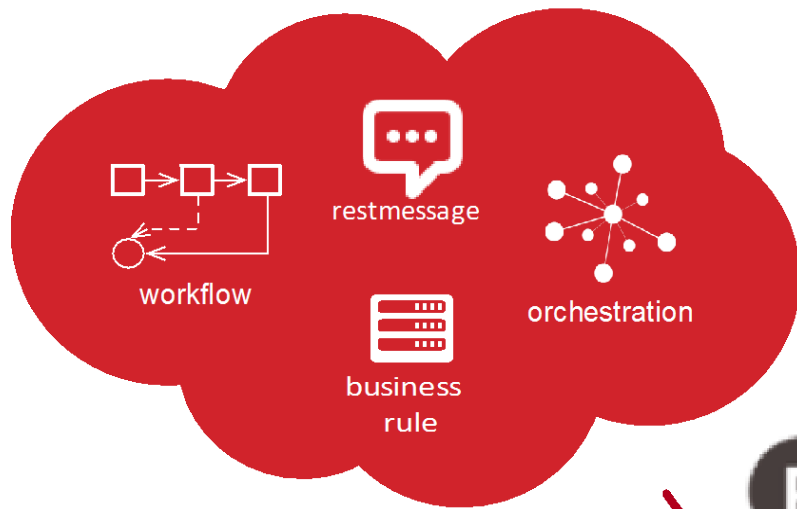
Objectives and What You Will Learn

Objectives

– Provide you with experience and insight on building outbound REST API integrations with ServiceNow.

– Educate participants on options available in ServiceNow to build integrations with REST APIs.

What you will learn

– How and when to use RESTMessage or Orchestration to consume REST APIs.

– Pattern for building integrations that consume 3rd party REST APIs.

– How to use Outbound HTTP Request logging to debug integrations.

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What is PubNub® ?

Publish / Subscribe Messaging

### What's Included:

✓ **Broadcast –** Supports bidirectional 1-to-many broadcast messaging.

✓ **Unicast –** Supports bidirectional 1-to-1 device signaling and messaging via dedicated channels.

✓ **Multiplexing –** Bundle many streams together on a single connection to minimize bandwidth and battery drain.

✓ **Channel Groups –** Manage thousands of channels as a single unit for a more elegant architecture and easier programming.

✓ **Supported Everywhere –** With over 70 SDKs for mobile, web, server, and embedded devices, PubNub connects to virtually any device with an internet connection.

✓ **Protocol Independent –** The PubNub API uses the best protocol for optimal connectivity in any environment. Never worry about choosing the right protocol again.
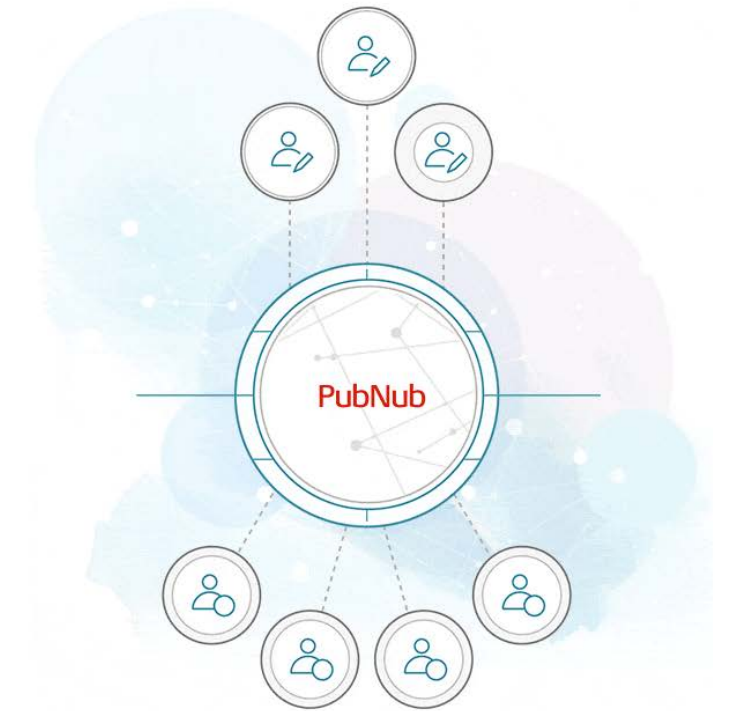
PubNub

Lab Setup

Goals:

- Fork workshop application

- Import forked app to your ServiceNow lab instance

- Install Postman

- Prepared to work on rest of lab w/ necessary tools and Repo

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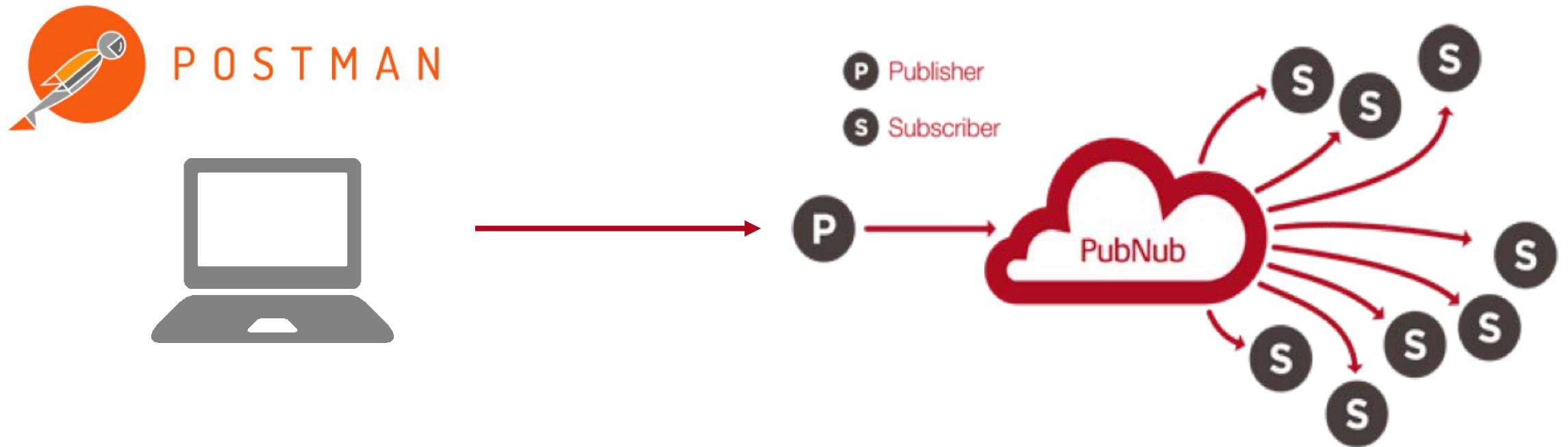May 9–11 • Orange County Convention Center • Orlando, FL

Lab 1

Goals:

- Review PubNub REST API for publishing messages
- Use Postman to build mock requests and test those requests

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Lab 1

Summary

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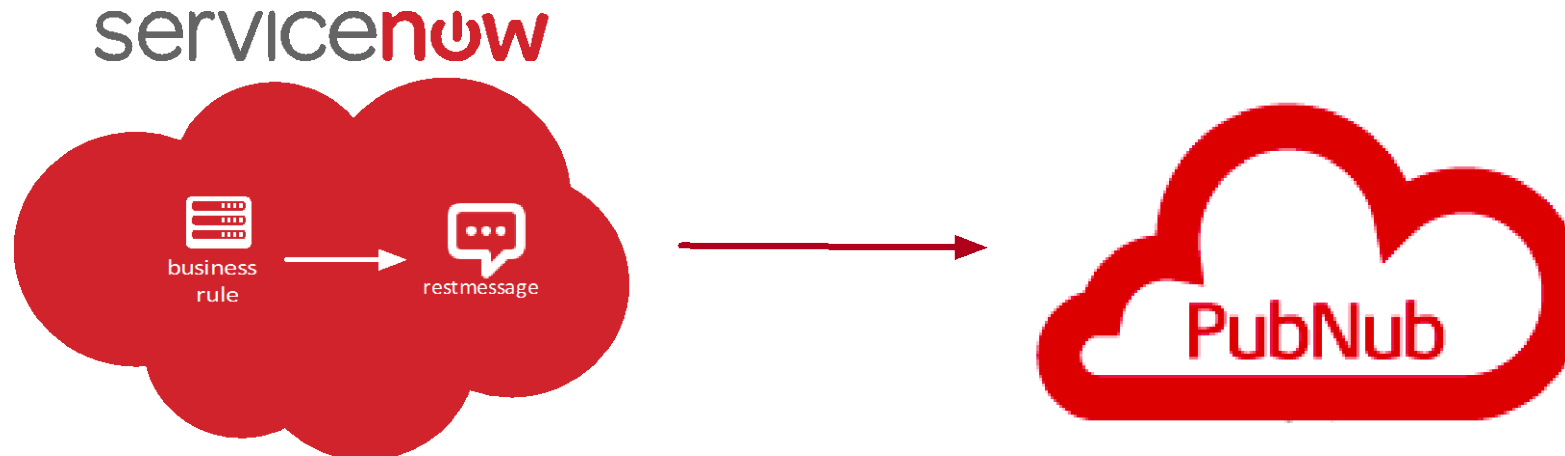May 9–11 • Orange County Convention Center • Orlando, FL
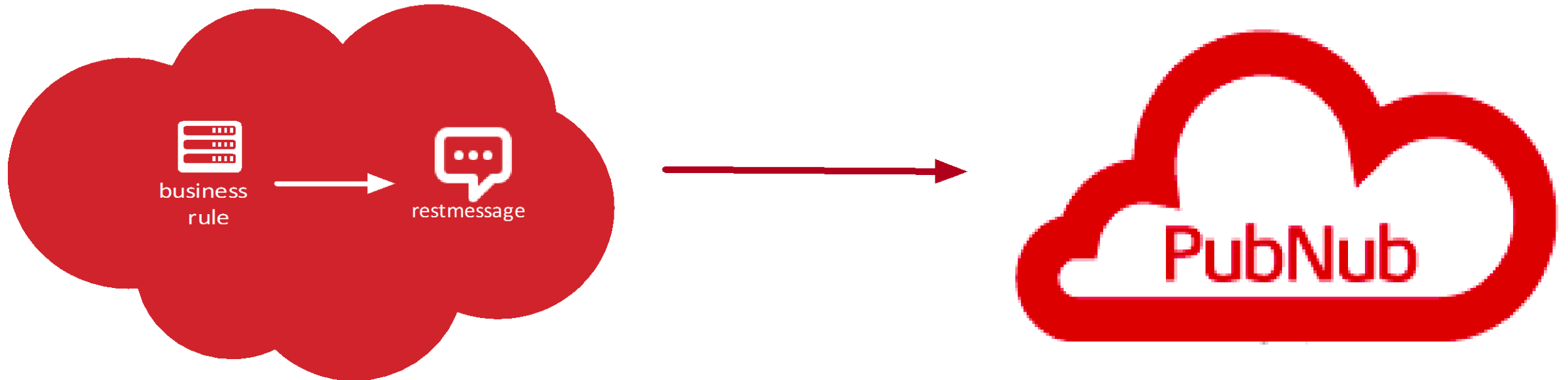
Lab 2

Goals:

- Build RESTMessage to wrap PubNub REST API

- Use Outbound HTTP Request Logging to debug outbound requests

- Utilize Scripts Background to quickly execute requests for validation

- Configure a Business Rule to use RESTMessage to publish mutations to the PubNub REST API

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Lab 2

Summary

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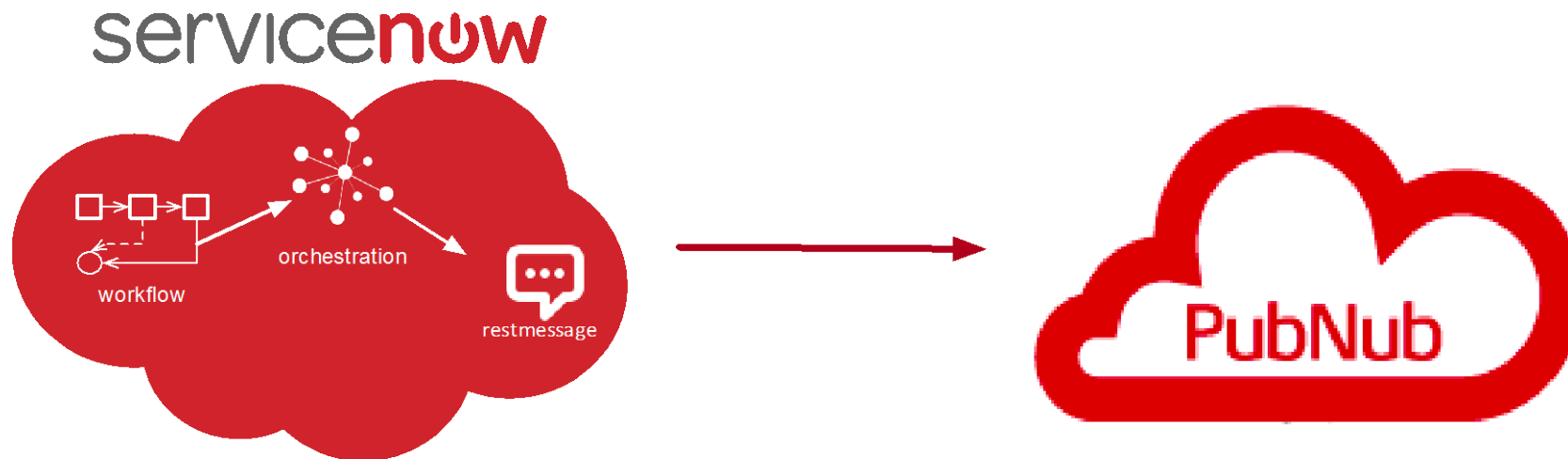May 9–11 • Orange County Convention Center • Orlando, FL
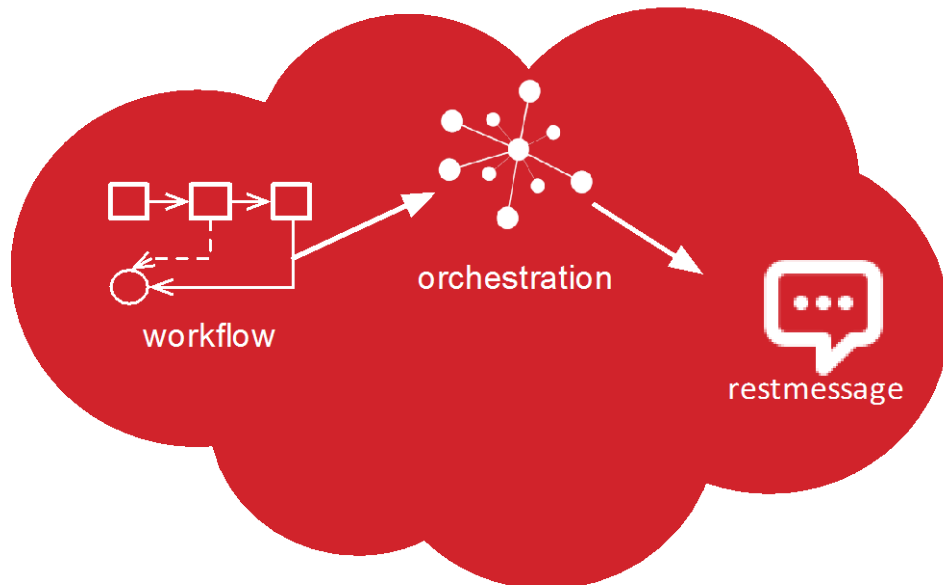
Lab 3

Goals:

- Leverage Workflow, Orchestration and REST Activities to send outbound messages

- Understand how to use Business Rules and Script vs. Workflow and Orchestration for outbound integrations

- Reinforce that outbound messages regardless of which method is used to send in ServiceNow can be viewed in Outbound HTTP Logs

Lab 3

Summary

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Recap

You built an integration between ServiceNow and PubNub REST API to publish mutations (updates & inserts) to Incidents for consumption by other 3rd applications (subscribers)
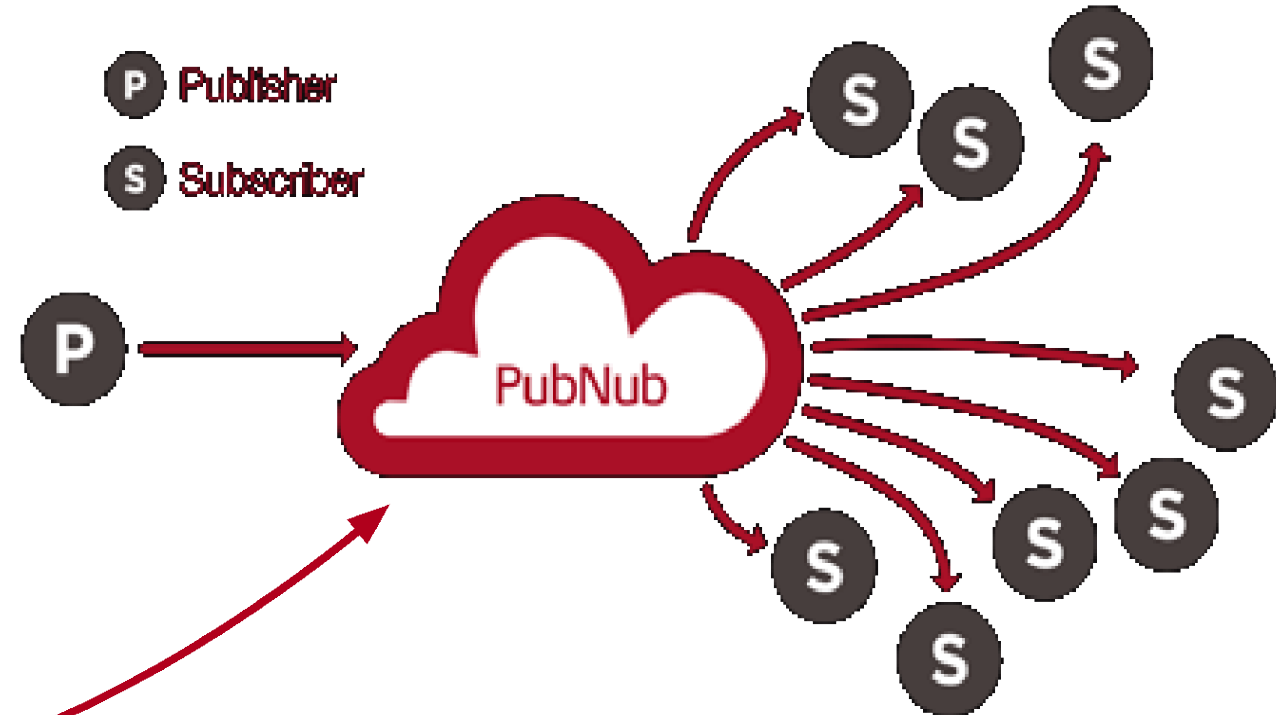
Lab Setup: Scoped App (you now have a copy)

Lab 1: Postman & PubNub REST API

Lab 2: RESTMessage, Script and Business Rules

Lab 3: Workflow and Orchestration Activities

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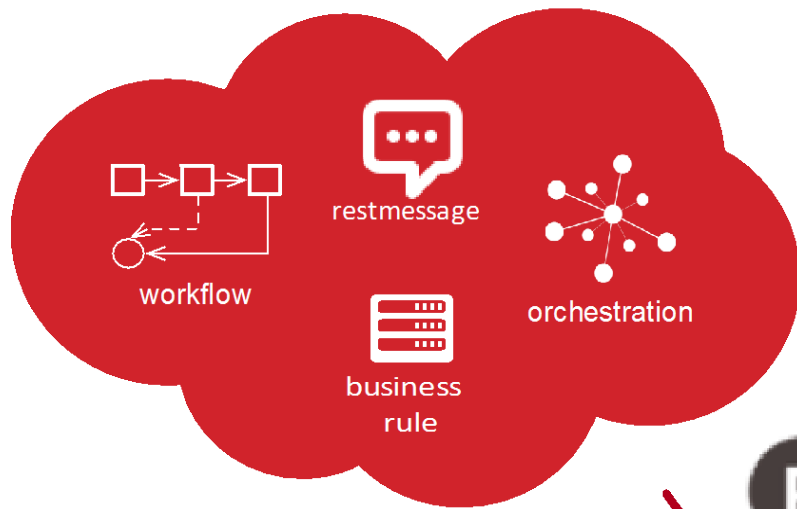
8 steps to build outbound REST API Integrations with ServiceNow

1. Review and understand the REST API you will be integrating with

2. Use agile local API testing tool (Postman, Paw, cURL) to build and test requests

3. Build REST API wrapper (RESTMessage / Orchestration Activities)

4. Test wrapper in development

5. Review Outbound HTTP Requests logs to verify messages validity

6. Integrate wrapper with your business process

7. Add error and retry handling as required

8. Build tests to verify your integrations behavior and monitor 3rd party APIs for availability and changes

After this workshop…

- How can you expand on this lab / scoped app

  - Add error handling and retry functionality

  - Increase message detail

  - Use your imagination

- Investigate the PubNub service and REST API

  - Setup your own account and continue testing (need new keys)

  - Add a real-time dashboard

  - Consider Pub/Sub model for your own integrations

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Reference & Materials

- RESTMessage Documentation

  - https://docs.servicenow.com/bundle/istanbul-servicenow-platform/page/app-store/dev_portal/API_reference/RESTMessageV2/concept/c_RESTMessageV2API.html

- Orchestration Documentation

  - https://docs.servicenow.com/bundle/istanbul-it-operations-management/page/product/orchestration/reference/r-orchestration.html

- PubNub REST API

  - https://www.pubnub.com/docs/pubnub-rest-api-documentation

- API Testing Tools:

  - Postman: https://www.getpostman.com

  - cURL: https://curl.haxx.se/

- PubNub Channel Log Source at GitHub: https://github.com/bryanbarnard/ccw3970_glitch/tree/glitch

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Top Takeaways

1

RESTMessage and Orchestration make Outbound Integrations Possible

2

8 Steps to

Building successful outbound REST API Integrations

3

Outbound Request Logging

Thank You

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