KubeCon | CloudNativeCon Europe 2019

How LivePerson is Tailoring its Conversational Platform using OpenFaaS

Simon Pelczer LIVEPERSON

Ivana Yovcheva vmware

Agenda

WHAT IS LIVEPERSON ?

WHAT ISSUES DID WE FACE ?

HOW DID WE SOLVE THEM ?

OpenFaaS

LIVE DEMO

Simon Pelczer

Software Engineer
Platform Enablement

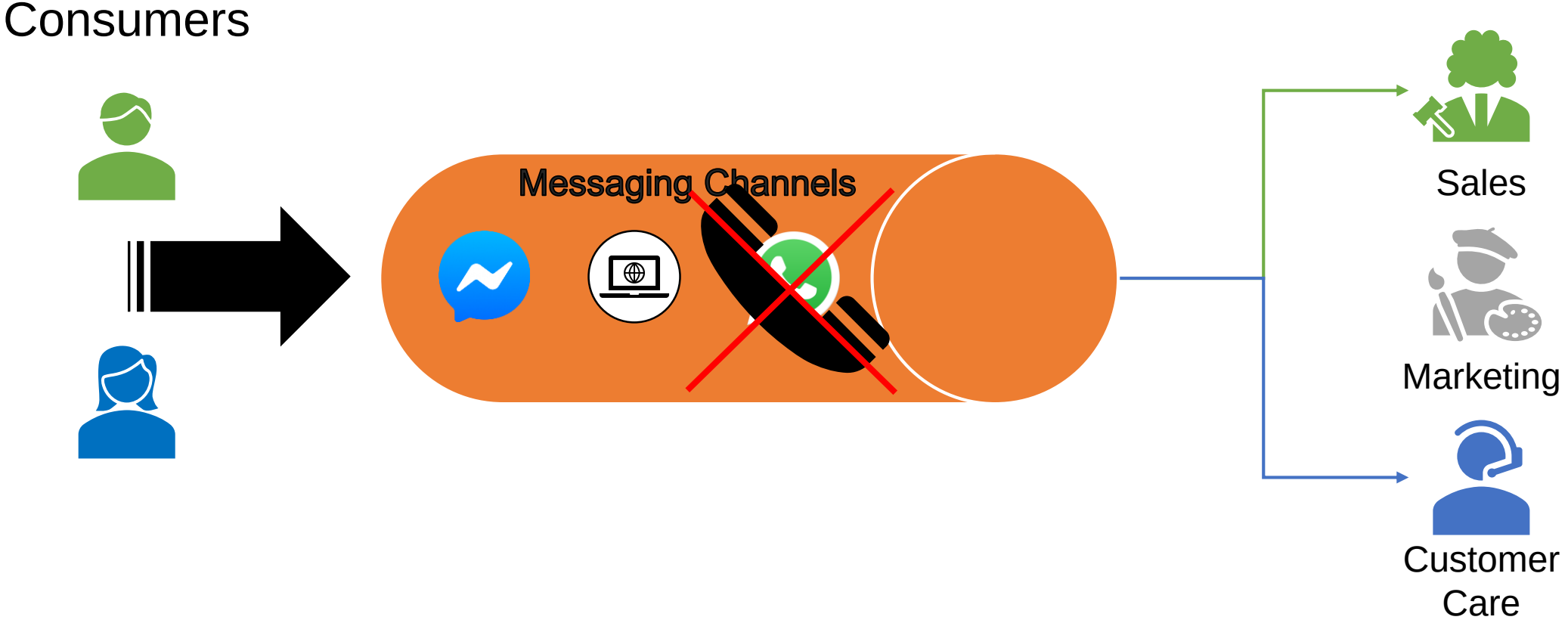
Ivana Yovcheva

Open Source Software Engineer
VMware / Contributor

What do we do at LivePerson?

"We define Conversational Commerce powered by AI"

Connecting People with Brands



Conversational Commerce

LivePerson Conversational Commerce Platform

Consumer

SMS

WEB

APPLE BUISNESS CHAT

BRAND APP

ALEXA

Conversation Builder

Conversation Manager

Conversation Intelligence

Maven: AI Engine: Intent Detection, Continuous Learning

Open Platform: 40+ APIs & SDKs

World Class Private Cloud & Managed Services

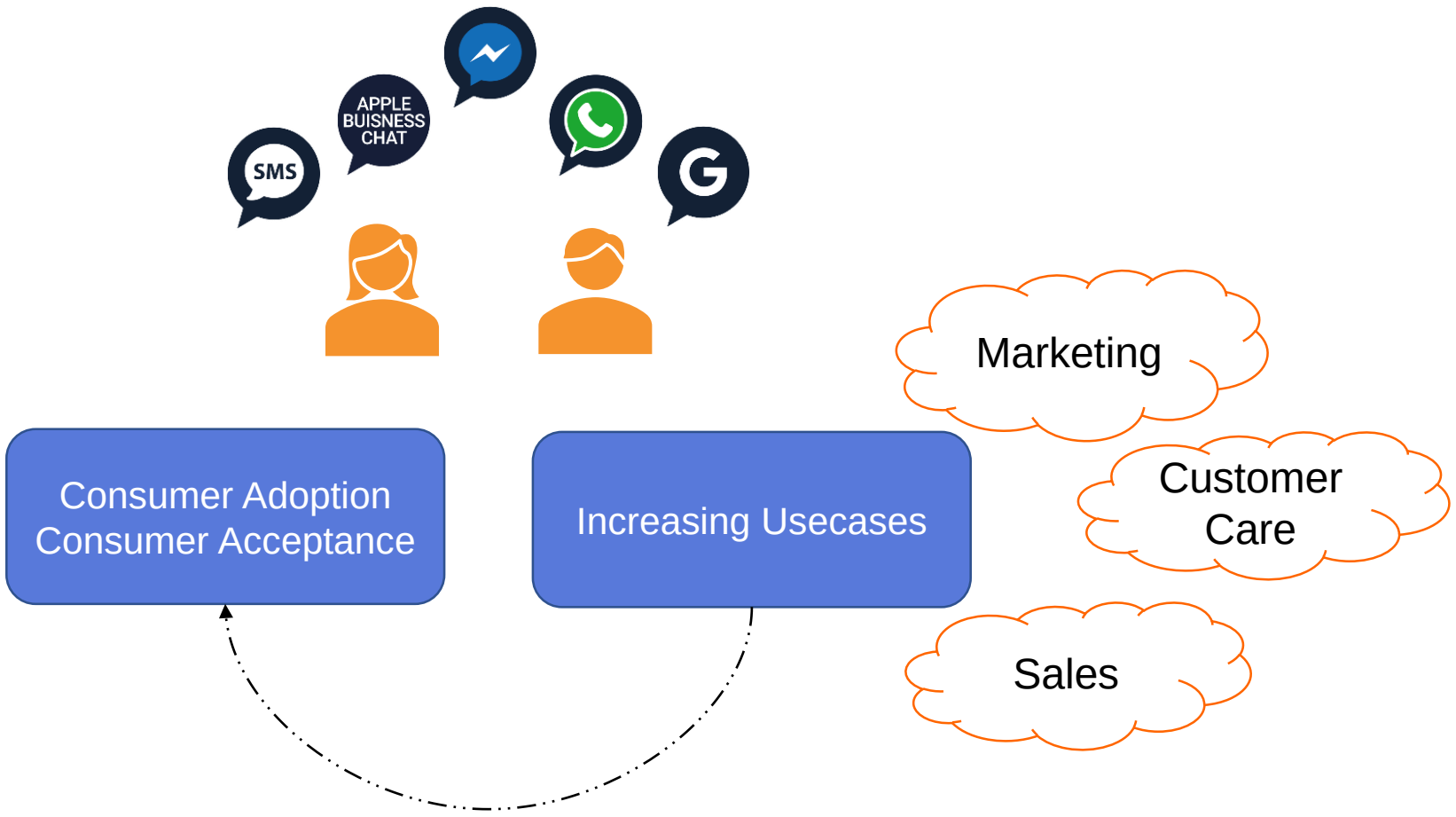
Integrations

BI, CRM, e-Commerce WFM

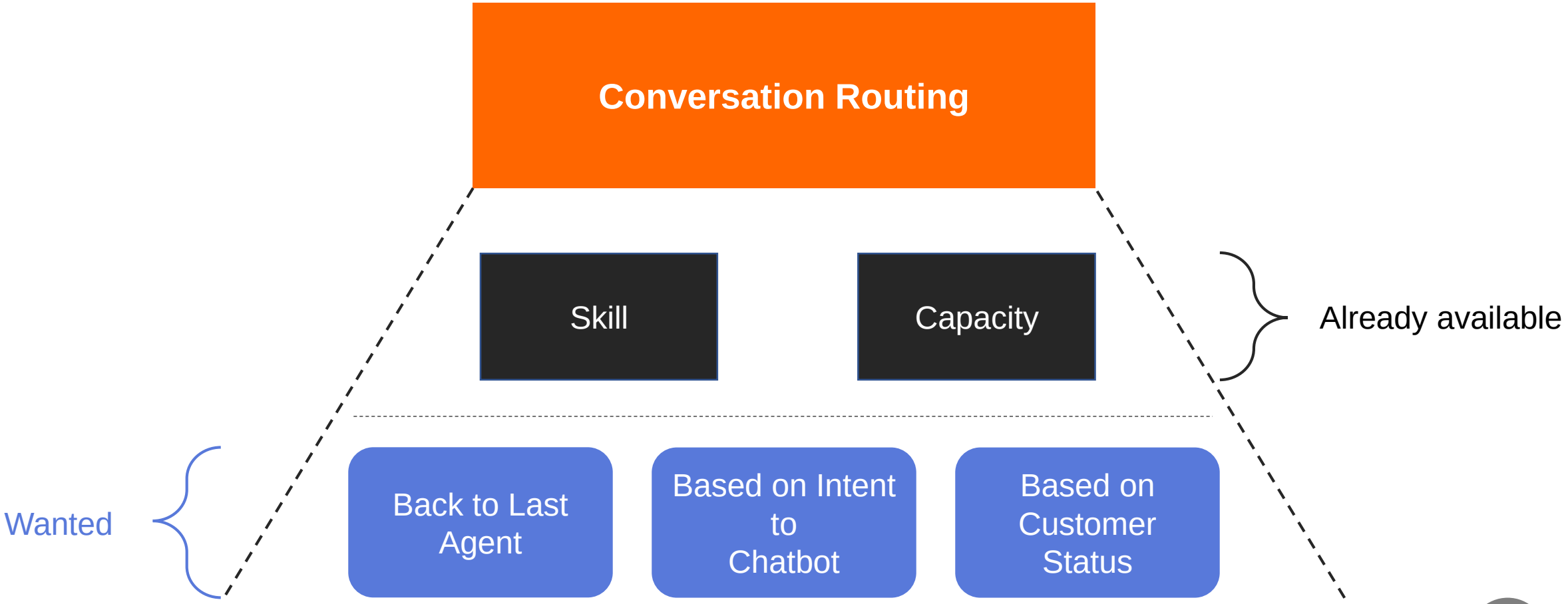
Google, IBM Watson, Microsoft - any open platform

What issues were we facing?

Too many Feature Requests



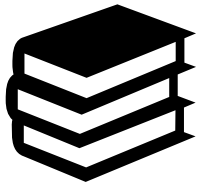
Unique Requests



Common Issues

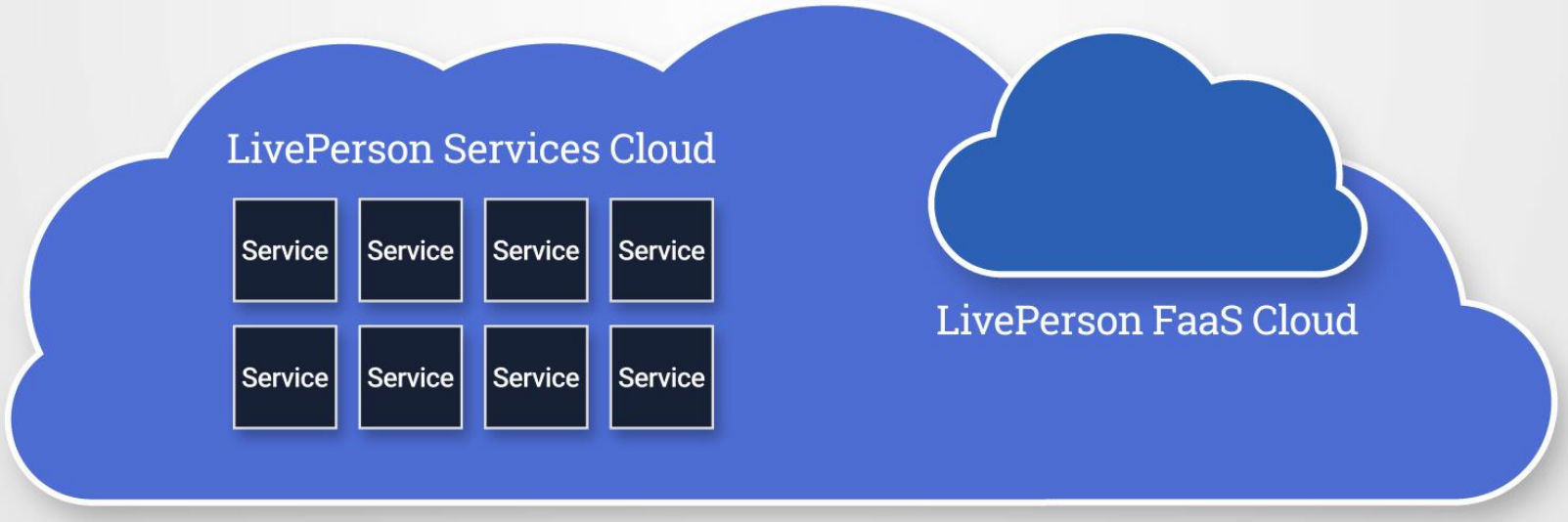
High
Time-To-Market

Maintenance
efforts SDKs /APIs

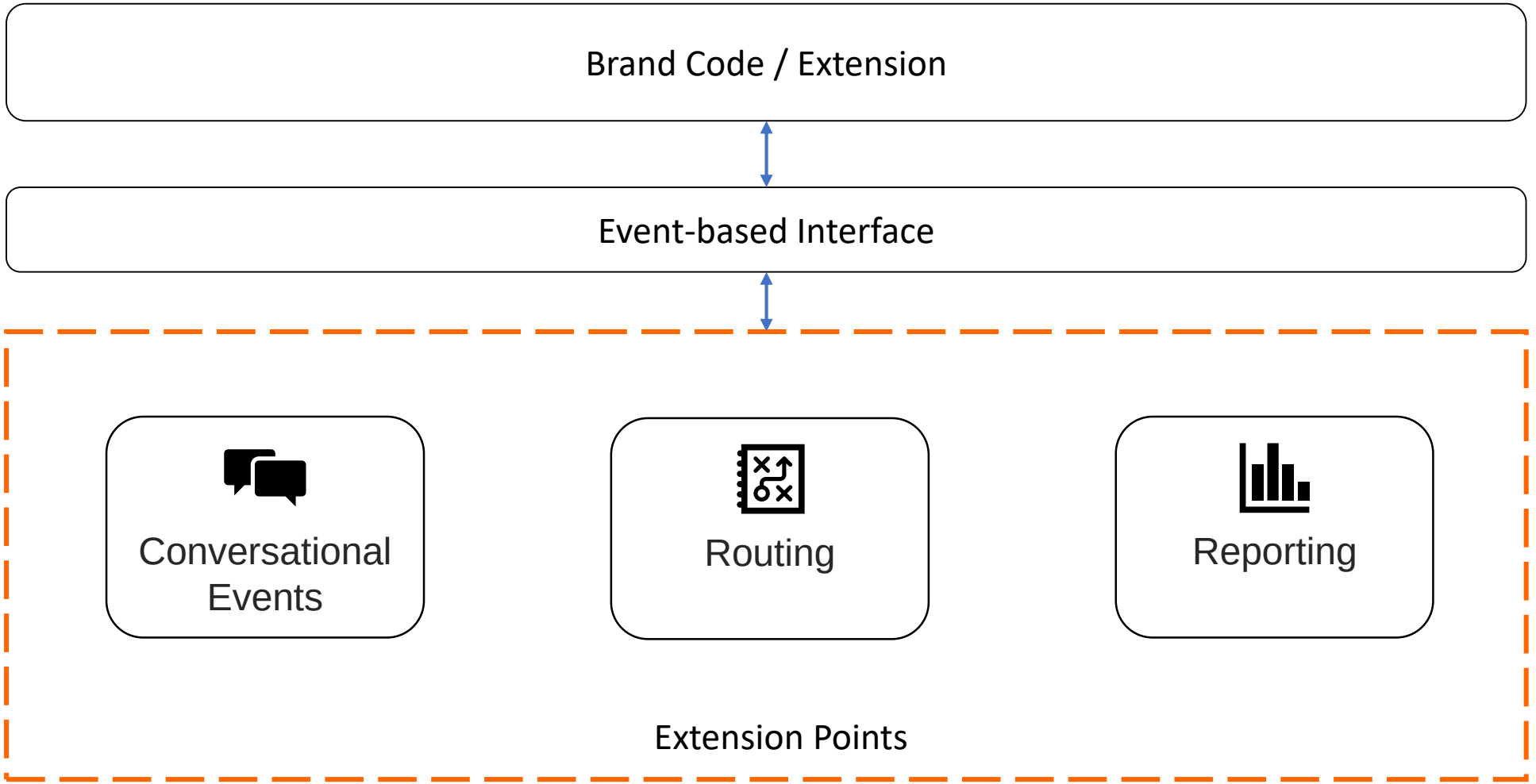


Keeping
Documentation
Up-To-Date

How did we solve them?


LivePerson Services Cloud
Service
Service
Service
Service
Service
Service
Service
Service
LivePerson FaaS Cloud

Allow customizing of the Platform



Developer focused API's

Developer Center

Reduced Time-To-Market

OpenFaaS @ Heart

Predefined Templates

One-Click Deployment

Editor Experience

CSAT_Example CLOSE SAVE Unsaved changes

```
1  function lambda(input, callback) {
2      let allSurveyEmails = [];
3      //csatRank value range: 1-5, 1=very dissatisfied, 5=very satisfied
4      let csatRank = input.payload.csatRank > -1 ? input.payload.csatRank : null;
5      let skillName = input.payload.skillName;
6      let agentName = input.payload.agentName;
7      let questionsAndAnswers = input.payload.questionsWithAnswers;
8      if (csatRank && csatRank <= 3 &&
9          input.payload.skillName.match(/CustomerCare/i) !== null &&
10         input.payload.agentName.match(/John Doe/i) !== null) {
11         let surveyEmail = {
12             targetEmail: 'ReplaceMe@company.com',
13             senderName: 'Sender X',
14             senderEmail: 'ReplaceMe@company.com',
15             subject: 'Email Transcript Notification',
16         };
17         surveyEmail.se
18     function()
19
20         allSurveyEmail
21     }
22     //Return result
23     callback(null, all
24 }
```

```
senderEmail          (property) senderEmail: string
senderName
surveyEmail
subject
skillName
allSurveyEmails
```

SETTINGS PAYLOAD

```
1  {
2      "headers": [],
3      "payload": {
4          "csatRank": 3,
5          "agentName": "John Doe",
6          "skillName": "CustomerCare",
7          "questionsWithAnswers": [
8              {
9                  "answer": "No",
10                 "question": "Was the chat helpful?"
11             }
12         ]
13     }
14 }
```

Deployment View

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Select function — 2 Review deployment

Review your deployment | APPROVE & DEPLOY | CANCEL

Description:	Extention that provides information to the user on current offerings.
UUID:	ebe20d28-2731-4761-9047-736b6b2abbfa
Event:	Messaging New Conversation
Last modified at:	13.05.2019 - 06:22 UTC
Last deployed at:	-
Runtime:	Node.js 10
Dependencies:	-
Environment variables:	-

Source code:

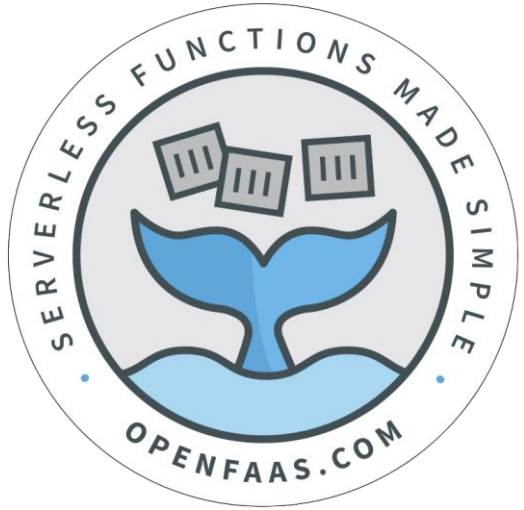
```
1  function lambda(input, callback) {
2      // Set conversation data.
3      let conversation = input.payload;
4      // Some processing ...
5      // Result can be either an object or array.
6      // Hint: Make sure to only return each type once.
7      let result = [
8          {
9              type: "systemMessage", // Returns a system message into the conversation.
10             text: "your messdage"
11         },
12         {
13             type: "transfer", // Transfers the conversation to a new skill.
14             skillId: "123456"
15         },
16         {
17             type: "closeConversation" // Closes the conversation.
18         }
19     ];
20     callback(null, result);
21 }
```

Deployed Functions ↑	Undeployed changes from	Last successful deployment	Deployment state	Actions
InformUser	13.05.2019 - 06:27 UTC	Pending ...	Deploy Start	INVOKE MORE

Refreshing every 5 seconds...

OpenFaaS

Serverless Functions Made Simple



OpenFaaS

FOUNDED BY ALEX ELLIS IN NOV/16

> 17K STARS ON GITHUB (MIT)

> 200 CONTRIBUTORS

2x BOSSIE AWARDS

PRODUCTION USERS

OpenFaaS end-user community

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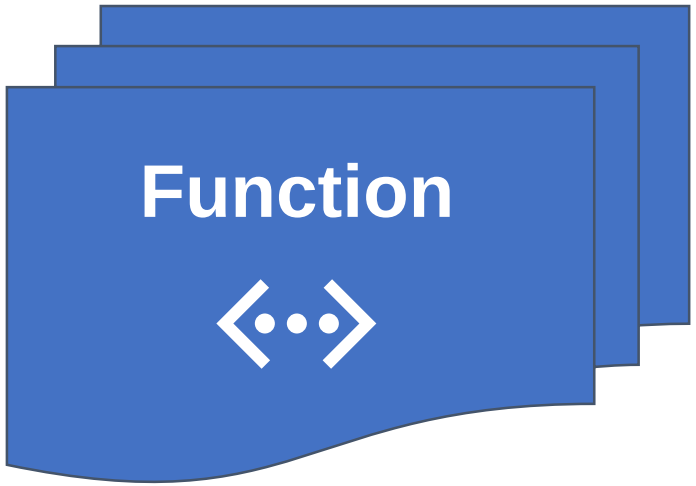
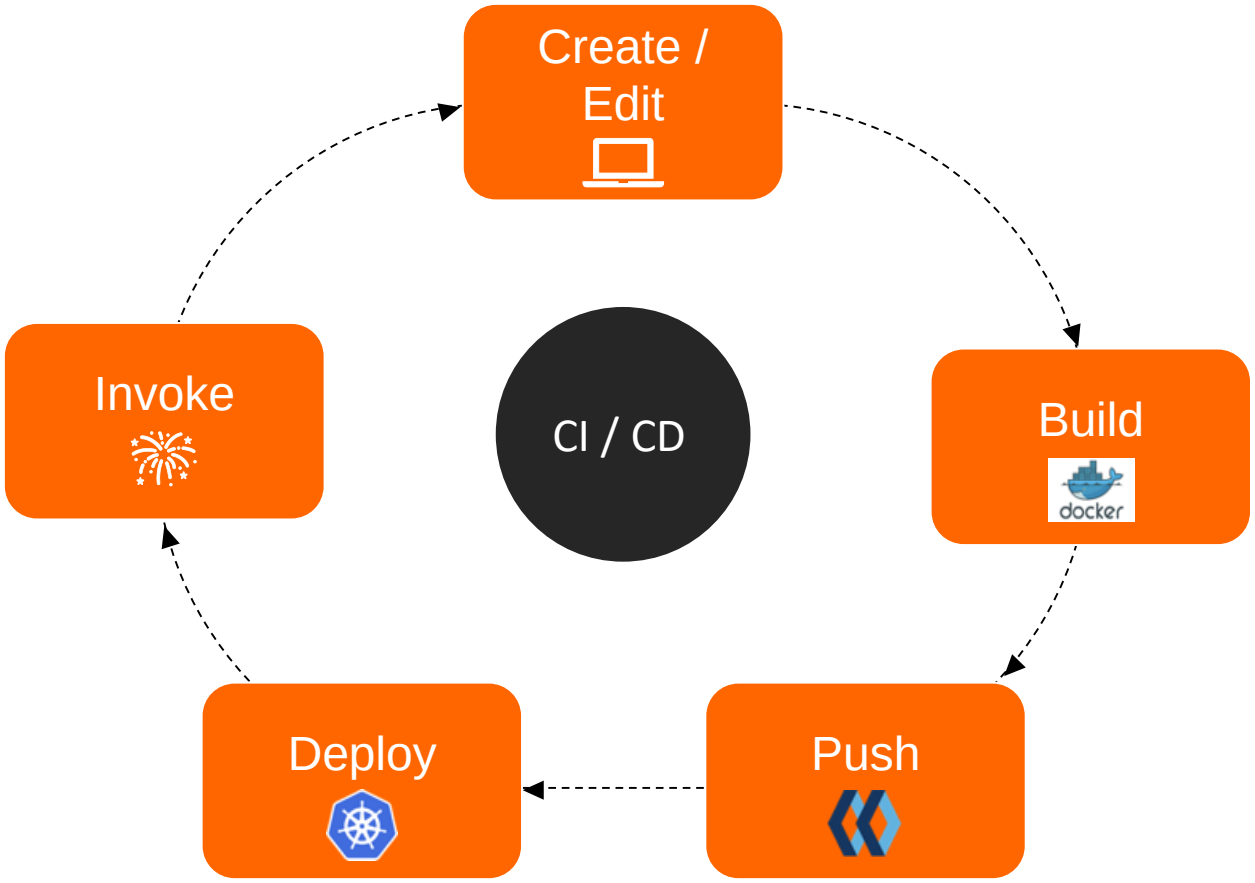
What are Functions?

- Single-purpose
- Short-lived
- No state
- Auto-scaling



Citation: "Functions as a Service (2016)" by Alex Ellis

Function Lifecycle




```
$ faas-cli new --lang python uptime
```

handler.py

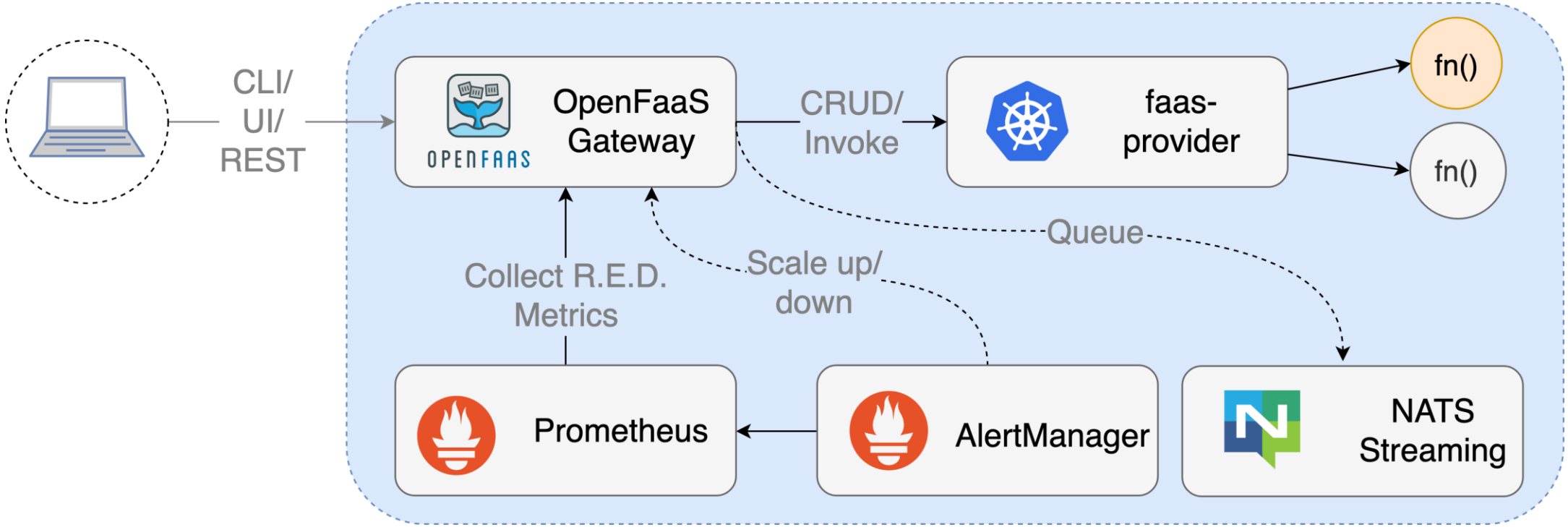
```
def handler(req):
    r = requests.get(req)
    return str(r.status_code)
```

requirements.txt

```
requests
```

```
$ faas-cli up
```

Under the Hood



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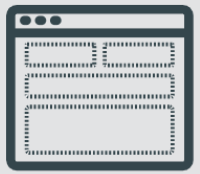
OpenFaaS Ecosystem

Functions Store

An ecosystem for sharing, reusing and collaborating on functions



Templating system

Reduce boilerplate code, share code in the templates store

Functions or Microservices

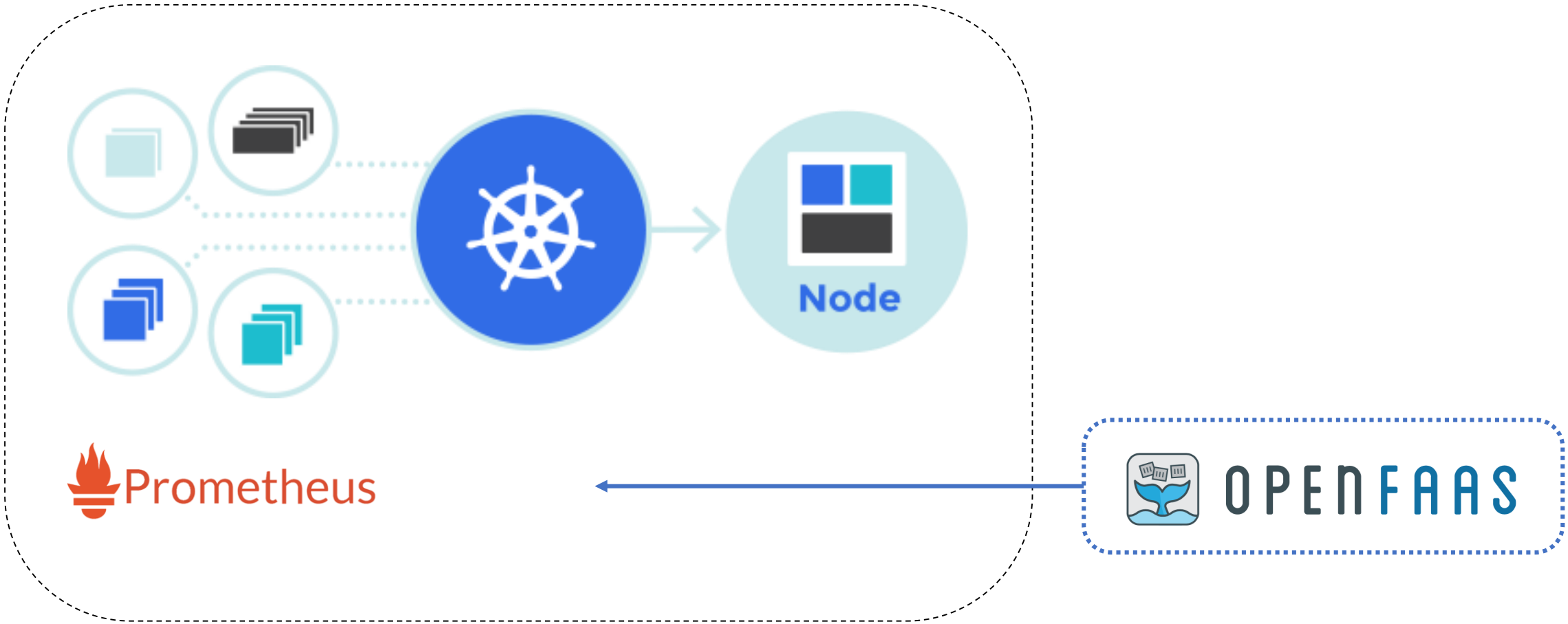
Deploy existing microservices using Express.js, Sinatra, ASP.NET Core or simplify with functions.

Image copyright: www.openfaas.com 2019

OpenFaaS benefits

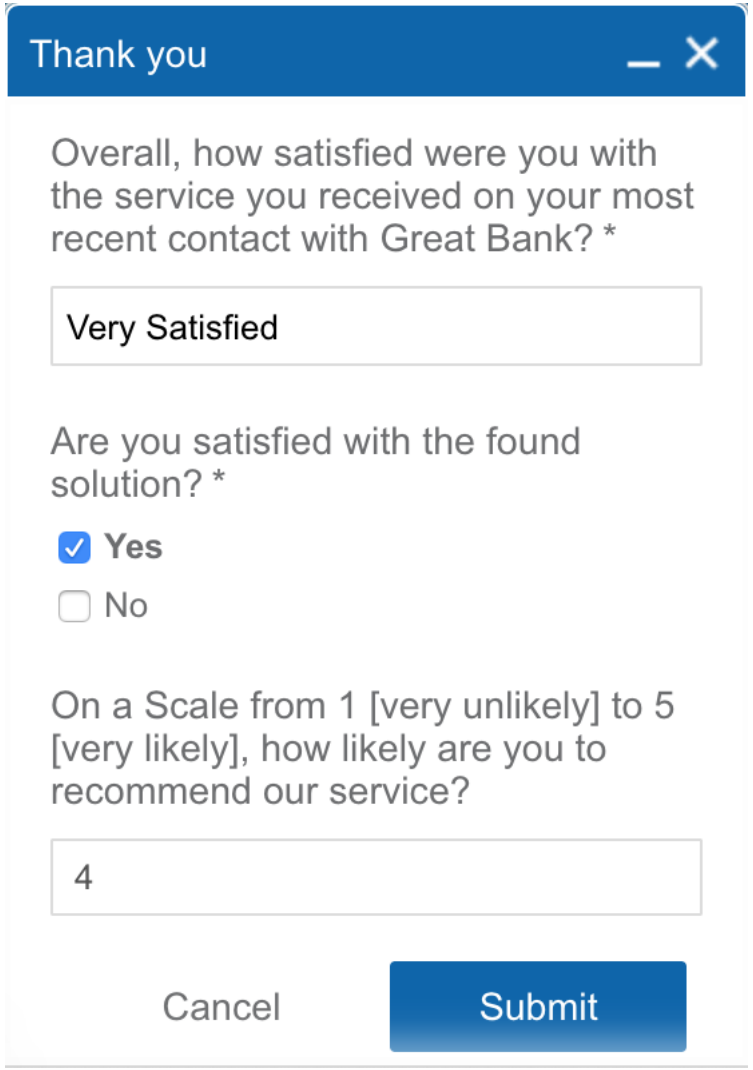
- Any code
- Anywhere
- Any scale

Benefits for LivePerson



Demo Time

Conditional sending of Emails



Rules

Send Email to Manager when:
- Dissatisfied / Very Dissatisfied
- Agent was not helpful

Send Email to Customer when:
- When Email Address was provided

Roadmap

LIVEPERSON

OPENFAAS

- Secret Management powered by Vault
- Active Debugging
- Conversational Commands

- OpenFaaS Cloud – multi-user platform
- Gateway federation for multi-region
- Brand new website launched! www.openfaas.com

Thank you for your attention!

liveperson.com

openfaas.com