



okta

SOLID in Action: from Slack to Twilio

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# Welcome!

- Agenda
  - SOLID in Action (35 mins)
  - Okta 101 (5 mins)
  - Q&A (10 mins)

# S.O.L.I.D

S	SRP	Single Responsibility Principle
O	OCP	Open-Closed Principle
L	LSP	Liskov Substitution Principle
I	ISP	Interface Segregation Principle
D	DIP	Dependency Inversion Principle

[https://join.slack.com/t/random-magic-card/shared\\_invite/enQtNDI1NDYyOTkwNTE2LWQ2ZTg5NTA1ODkxZGM1ZWNhNjUyNTJIZGY2ZDFhNDNmM2ZmYzY2Njk2YTY1NmZhN2RhYmlzMDhiZmM3ZWlxMTQ](https://join.slack.com/t/random-magic-card/shared_invite/enQtNDI1NDYyOTkwNTE2LWQ2ZTg5NTA1ODkxZGM1ZWNhNjUyNTJIZGY2ZDFhNDNmM2ZmYzY2Njk2YTY1NmZhN2RhYmlzMDhiZmM3ZWlxMTQ)



1-929-236-9306



# Slack

D	DIP	Dependency Inversion Principle
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High-level modules should not depend on low-level modules. Both should depend on abstractions.

Abstractions should not depend on details. Details should depend on abstractions.

*tag: slack-first-pass*

I	ISP	Interface Segregation Principle
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Many client-specific interfaces are better than one general-purpose interface.

*tag: slack-first-pass*



S	SRP	Single Responsibility Principle
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A class should have only a single responsibility.

“A class should have only one reason to change.” - Robert (Uncle Bob) Martin

*tag: twilio-breaks-srp*

# The Magic TwiML Problem

<http://.../Image.ashx?multiverseid=144276&type=card>

```
<Response>  
  <Message>  
    <Body/>  
    <Media>  
      http://.../Image.ashx?multiverseid=144276&type=card  
    </Media>  
  </Message>  
</Response>
```

# The Magic TwiML Problem

<http://.../Image.ashx?multiverseid=144276&type=card>

```
<Response>
  <Message>
    <Body/>
    <Media>
      <![CDATA[
        http://.../Image.ashx?multiverseid=144276&type=card
      ]]>
    </Media>
  </Message>
</Response>
```

# The Magic TwiML Problem

<http://.../Image.ashx?multiverseid=144276&type=card>

```
<Response>  
  <Message>  
    <Body/>  
    <Media>  
      http://myserver/api/v1/magic_proxy/144276  
    </Media>  
  </Message>  
</Response>
```

S	SRP	Single Responsibility Principle
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A class should have only a single responsibility.

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*tag: twilio-breaks-srp*



D	DIP	Dependency Inversion Principle
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High-level modules should not depend on low-level modules. Both should depend on abstractions.

Abstractions should not depend on details. Details should depend on abstractions.

*tag: modules-ftw*

L	LSP	Liskov Substitution Principle
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Objects in a program should be replaceable with instances of their subtypes without altering the correctness of that program.

*tag: slack-violates-lsp*

O	OCP	Open-Closed Principle
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Software entities should be open for extension,  
but closed for modification.

# S.O.L.I.D Recap

S	Single Responsibility Principle	Tag: twilio-fixes-srp - break TwilioController in two to keep each controller singly purposed.
O	Open-Closed Principle	Tag: master - SlackResponse is complete and does not need to be changed. It can be extended without changing existing service code.
L	Liskov Substitution Principle	Tag: master - none of the SlackResponse children returns null or has unneeded methods or annotations.
I	Interface Segregation Principle	Tag: slack-first-pass through master - MagicCardService and SlackResponseService perform different functions and are therefore separate services
D	Dependency Inversion Principle	Tag: slack-first-pass through master - Dependent services are autowired into controllers. Constructor injection is the "best practices" way to do dependency injection. Modules enforce DIP.

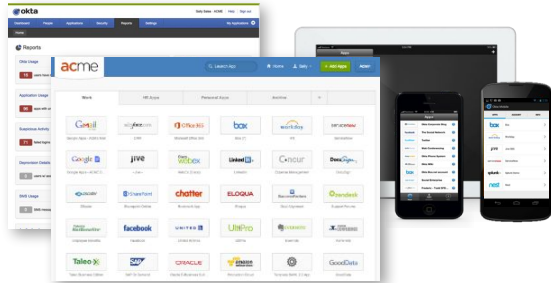
# Okta Enables Companies to Do Both IT & API



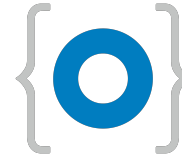
Employees,  
Contractors



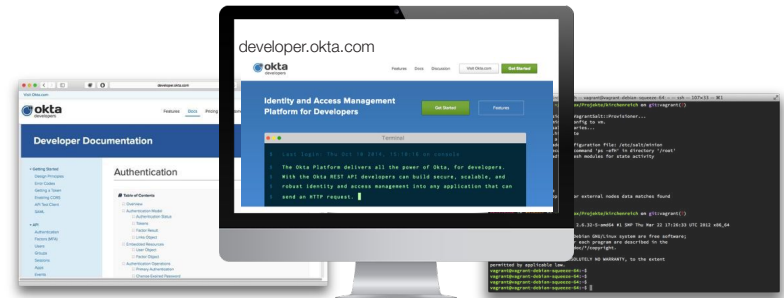
**Identity & Mobility Service:**  
Identity Management  
Mobility Management  
Strong Authentication



Partners,  
Customers



**Identity API Products:**  
Identity API for Any App  
Developer Tools  
and Community





# Resources

- <https://github.com/dogearred>
  - [/solid-from-slack-to-twilio](#)
  - [/magic-with-slack-and-twilio](#)
- @afitnerd @OktaDev
- [https://en.wikipedia.org/wiki/SOLID\\_\(object-oriented\\_design\)](https://en.wikipedia.org/wiki/SOLID_(object-oriented_design))
- <http://butunclebob.com/ArticleS.UncleBob.PrinciplesOfOod>
- OIDC Playground - <https://okta-oidc-fun.herokuapp.com>
- <https://developer.okta.com/blog/2017/07/25/oidc-primer-part-1>
- HTTPie - [github.com/jkbrzt/httpie](https://github.com/jkbrzt/httpie)



The image features a blue background with a radial burst pattern of light streaks emanating from the center. Overlaid on this are several semi-transparent blue circles, each containing a white dot in the center, arranged in a grid-like pattern. The Okta logo is centered in the upper half of the image.

# okta

Thank You