



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



1-929-236-9306

MMS
4:58 PM



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

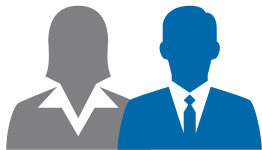
O	OCP	Open-Closed Principle
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Software entities should be open for extension,
but closed for modification.

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

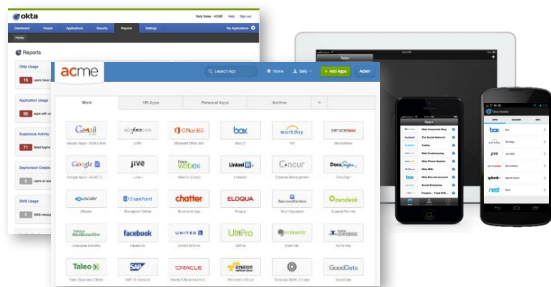


Employees,
Contractors



Identity & Mobility Service:

Identity Management
Mobility Management
Strong Authentication

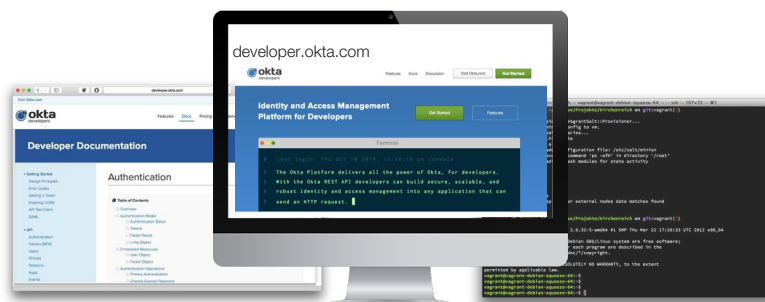


Partners,
Customers



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



The background is a vibrant blue with a dynamic, radial pattern of light streaks emanating from the center. Overlaid on this are several semi-transparent, concentric circles in a slightly darker shade of blue, arranged in a grid-like fashion. The Okta logo, consisting of the word "okta" in a white, lowercase, sans-serif font, is centered in the upper half of the image.

okta

Thank You