

Exploratory survey

Our research aims to capture the view of the industry with respect to software architecture and architectural conformance checking. Besides that, we want to know which supporting tools the industry knows and uses and their limitations.

***Obrigatório**

First, we want to know a little about you!

1. What's your name? *

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2. How can we contact you? *

Email, phone or skype

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3. How long have you worked in IT area? *

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4. In which programming languages do you have experience? *

You can pick more than one.

Marque todas que se aplicam.

☐ Java

☐ C

☐ C++

☐ C#

☐ Python

☐ PHP

☐ Ruby

☐ JavaScript

☐ Outro:

5. Where are you currently working? *

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6. Do you have any experience with software architecture? *

Marcar apenas uma oval.

☐ Yes, I have some level of experience with software architecture.

☐ No, I have no experience with software architecture.

7. What roles have you performed on projects? *

Check all that apply.

Marque todas que se aplicam.

- ☐ Developer
- ☐ Software architect
- ☐ Designer software
- ☐ Software engineer
- ☐ Project manager
- ☐ IT Manager
- ☐ System analyst
- ☐ Test engineer
- ☐ Outro:

Show us your vision on architecture!

Although there are different ways to represent software architecture, our research is focused on the structural view of software architecture. We usually define as follows:

software architecture = components + dependencies

where components are the main modules, layers and/or classes of a system. We say that a component A depends of component B if it uses services from B (via method calls, attributes accesses, inheritance, etc.).

An architectural rule formalizes architectural decisions. Considering two hypothetical components A and B, the following examples illustrate possible architectural rules:

-> "A cannot depend of B"

-> "A can not inherit from B"

-> "A can not implement B"

8. On a scale from 1 to 6, where 1 means "irrelevant" and 6 means "totally relevant", what level of importance this view of software architecture have for your daily work? **Marcar apenas uma oval.*

	1	2	3	4	5	6	
Irrelevant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Totally relevant

9. Which other aspects of the software architecture you consider relevant and are not included in the above definition? *

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Show us more details about the architecture of your projects!

10. To answer the following questions, we ask you to consider a system in which you are working or have ever worked. Could you inform what is the name of this system? *
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11. Would you say that the architecture of this system is well documented? *

Marcar apenas uma oval.

- ☐ Yes *Ir para a pergunta 13.*
- ☐ No *Ir para a pergunta 12.*

Show us more details about the architecture of your projects!

12. Why the architecture is not well documented? *

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Ir para a pergunta 16.

Show us more details about the architecture of your projects!

13. What types of documents are used in the project to register the software architecture? *

Check all that apply.
Marque todas que se aplicam.

- ☐ Files .doc/.docx
- ☐ ADLs
- ☐ UML
- ☐ Emails
- ☐ Pictures
- ☐ Outro:

14. In the system of the previous questions, the architectural rules changed during the development/evolution? *

Marcar apenas uma oval.

- ☐ Yes
- ☐ No

15. On a scale from 1 to 6, where 1 means "never" and 6 means "always", how often the team updates the software architecture documentation? *

Marcar apenas uma oval.

	1	2	3	4	5	6	
Never	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Always

Ir para a pergunta 16.

Show us more details about the architecture of your projects!

16. On a scale from 1 to 6, where 1 means "most developers ignore rules" and 6 means "all developers are fully aware of the rules", what is the level of knowledge of the staff about the architectural rules of the system in question? *

Marcar apenas uma oval.

	1	2	3	4	5	6	
Most developers ignore rules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	All developers are fully aware of the rules

17. If a new developer join the team, how he/she gets to know the main architectural rules of that system in question? *

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18. How many people participate in making architectural decisions? *

Marcar apenas uma oval.

☐ All developers

☐ Only a small group

☐ Only senior developers

☐ Only 1 person

☐ Outro:

19. On a scale from 1 to 6, where 1 means "never" and 6 means "always", how often the team discusses architecture? *

Marcar apenas uma oval.

	1	2	3	4	5	6	
The team never discusses the architectural rules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	There are regular meetings to discuss and review architectural rules

20. How the architecture is discussed in your project? **Marque todas que se aplicam.*

- ☐ Email
- ☐ Face conversations
- ☐ Chats
- ☐ Comments/annotations in the code
- ☐ Outro:

Show us your vision of architectural conformance checking!

We often say that, in practice, the whole system has two architectures:

- Planned: the one which was idealized by the architecture team (and perhaps documented);
- Implemented: the actual implemented architecture in the system.

Checking architectural conformance is the task of verifying whether the implemented architecture is consistent with the rules contained in the planned architecture. The differences between the two architectures are called architectural violations.

21. Have you had problems due to architectural violations in your project? **Marcar apenas uma oval.*

- ☐ Yes
- ☐ No

22. If you answered yes, what problems faced by the project you assign to architectural violations? Or what consequences you would attribute to these violations?

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23. In the project in question, there are activities which purpose is to check for architectural conformance? **Marcar apenas uma oval.*

- ☐ Yes *Ir para a pergunta 25.*
- ☐ No *Ir para a pergunta 24.*

Show us your vision of architectural conformance checking!**24. Why there is no activities for checking architectural conformance in the project? ***

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Ir para a pergunta 32.

Show us your vision of architectural conformance checking!

25. In the project in question, how often is the architectural conformance checked? *

Marcar apenas uma oval.

- ☐ Daily
- ☐ Once per week
- ☐ Once in 15 days
- ☐ Once per month
- ☐ Outro:

26. Did/Do the developers use some tool to support the architectural conformance checking? *

Marcar apenas uma oval.

- ☐ Yes *Ir para a pergunta 27.*
- ☐ No *Ir para a pergunta 30.*

Show us your vision of architectural conformance checking!

27. Which tools your team uses or has used? *

Write one tool per line, please.

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28. On a scale from 1 to 6, where 1 means "unsatisfied" and 6 means "very satisfied", what is the degree of satisfaction with the used tools? *

Marcar apenas uma oval.

	1	2	3	4	5	6	
Unsatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfied

29. What are the main limitations of the used tools? *

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Ir para a pergunta 32.

Show us your vision of architectural conformance checking!

30. Why no supporting tool was used? *

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31. Do you know any architectural conformance checking tool or technique? If yes, which one? *

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Ir para a pergunta 32.

Who would you indicate as a research respondent?

32. Could you tell us IT professionals who you think will be interesting to answer this survey?
Please indicate name and contact (email, phone, skype, etc). One person per line, please.

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33. Do you think it would be appropriate/interesting to send this survey to your company list (or some other project)?
Please indicate the e-mail list or group.

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Finally ...

34. **Considering the above, would you have any comments that you consider relevant for our research?**

You may comment freely, including suggestions to this survey's improvement or to give additional information about the research topic.

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Thanks for answering this survey!

