Challenges with Docker technologies

This survey was developed under the scope of Preparação da Dissertação (PDIS) in regards to two dissertations related to Docker technologies. The objective is to identify and gauge the challenges developers encounter when working with Docker technologies namely dockerfiles and docker compose.

* Required

Personal context

1. Before LDSO I was experienced in ... *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
writing a dockerfile for a software system					
writing a docker-compose.yml file for a software system					

2. At this point in time I am experienced in... *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
writing a dockerfile for a software system					
writing a docker-compose.yml file for a software system					

Until now, approximately in how many projects have you ...

3. ... worked on that had a Dockerfile? *

Mark only one oval.

0	1	2	3	4	5	6	7	8	9	10
◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

4. ... worked on that had a docker-compose.yml file? *

Mark only one oval.

0	1	2	3	4	5	6	7	8	9	10
◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

5. ... used Dockerfiles created by others (colleagues or third parties)? *

Mark only one oval.

0	1	2	3	4	5	6	7	8	9	10
◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

6. ... used docker-compose.yml files created by others (colleagues or third parties)? *

Mark only one oval.

0	1	2	3	4	5	6	7	8	9	10
◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

7. ... created/updated a Dockerfile? *

Mark only one oval.

0	1	2	3	4	5	6	7	8	9	10
◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

8. ... created/updated a docker-compose.yml file? *

Mark only one oval.

0	1	2	3	4	5	6	7	8	9	10
◯	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

9. In the Dockerfiles I've developed, I've specified...

Check all that apply.

- [ ] ... arguments/variables (ARG instruction).
- [ ] ... volumes (VOLUME instruction).
- [ ] ... the user (USER instruction).
- [ ] ... the working directory (WORKDIR instruction).
- [ ] ... environment variables (ENV instruction).

10. In the docker-compose.yml files I've developed, I've configured...

Check all that apply.

- [ ] ... volumes.
- [ ] ... networks.

Working with Docker technologies

11. When I write a Dockerfile, I spend a lot of time... *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
finding out what parent image is the most suitable.					
finding out what are the dependencies of the system that must be added to the docker image.					
finding out what are the Dockerfile commands that I need.					
trying to understand if the resulting container is working as intended (e.g., running commands and tests on the container).					
trying to understand why the resulting container is not working as intended.					
finding out which commands are responsible for the container misbehaviour.					
rebuilding the image and re-running the container to confirm that it is working as intended.					

12. What steps or strategies do you usually follow in order to diagnose and fix bugs in the creation of Dockerfiles?

13. Do you use any plugins/tools when developing Dockerfiles? *

Mark only one oval.

- Yes
- No

14. If so, which ones and how do they help you?

15. When I write a docker-compose.yml file, I spend a lot of time... *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
finding out what are the keys that I need.					
finding out what images are available.					
trying to understand why the services are not working as intended.					
(re)starting the services to confirm that they are working as intended.					
configuring the properties of each service (e.g. port mapping, name, ...).					
configuring the dependencies between the services (e.g. depends_on).					
configuring volumes and how they are attached to the services.					
configuring networks and how they are connected to the services.					

16. What steps or strategies do you usually follow in order to diagnose and fix bugs in the creation of docker-compose.yml files?

17. Do you use any plugins/tools when developing docker-compose.yml files? *

Mark only one oval.

- Yes
- No

18. If so, which ones and how do they help you?

19. When I read a docker-compose.yml file, I spend a lot of time trying to understand ... *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
what the services are.					
the dependencies between services (e.g. depends_on).					
what volumes are used and how they are attached to the services.					
what networks are used and how they are connected to the services.					

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