

Alibaba Summer of Code Proposal

Part 2 Your Proposal

Hollow Man

***Problem description**

There are currently two parts to the online tutorial written by Katacoda for Arthas, both are a little bit too long, and adding new content to it will make tutorials longer and longer, and users tend to lose patience. Users want to see the usage of a command directly, temporarily it's hard to find what they need as users.

So the aims are as follows:

1. Provide a separate tutorial for each command, such as a separate tutorial for the 'watch' command, so that many tips can be written in.
2. One tutorial per case to make it easier for users to learn to use Arthas.

Tasks:

1. Register an account of katacoda and write a tutorial for Arthas' commands.
2. Test the tutorials, then send the PR.
3. Update the web page of the online tutorials.
4. Merge the tutorial code base into Arthas main code base. (Solved by me during application)

TO-DO list:

Please refer to here for the to-do list:

Task 1-2: <https://github.com/alibaba/arthas/pull/1239#issue-427893981>

Task 3: <https://github.com/alibaba/arthas/pull/1241#issue-428033983>

***Implementation plan**

1. Tutorials

For tutorials, I have done some sample work (Please refer to 'Biographical Information – Other Information' for more details). I will do my job in the way of my sample work.

In order to reach the main goal, that is for the convenience of the users, I plan to divide the tutorials into three parts: Use cases part, Basic Commands and knowledge part and other commands part.

1) Use cases part

I plan to add the cases into a single scenario so that when users encountered some issues or problems, they can refer to this part. I have already added some use cases in the advance tutorial to my sample work.

- Web Console
- Troubleshooting method invoke exception
- Hotswap code
- Change Logger Level
- Troubleshoot logger conflicts
- Get the Spring Context
- Troubleshooting HTTP request returns 401
- Troubleshooting HTTP request returns 404
- The ClassLoaders in Spring Boot application
- Find CPU usage Top N threads
- arthas-boot supported options

More cases are waiting to be added...

I plan to add the use cases in the issue labeled 'user-case' when I work and translate them in both English and Chinese, which is 34 cases in total: <https://github.com/alibaba/arthas/issues?q=label%3Auser-case+is%3Aclosed>

If time permits and I can find a perfect fit, I will write my own use cases for the tutorial.

2) Basic commands and knowledge part

I plan to add the cases into a single scenario so that the starters of Arthas can refer to this part. I have done a part of this job in my sample work and I think it's nearly completed. If I find more tips of using Arthas, I will add them to this part.

3) Other commands part

I plan to create separate scenarios for each command so that users can easily refer to the tutorials in their daily use. It acts like a Wikipedia Tutorial and I think users will benefit from it a lot.

Here is the command list:

<https://alibaba.github.io/arthas/en/commands.html>

I will refer to this document to create a detailed usage tutorial for each command. Then I will put the related use cases into the scenario so that users can practice and use them in real problems.

The steps of such kind of scenarios is like this:

... -> **[Command Usage]** -> **[Use Cases (if applicable)]** -> ...

I have already done the 'ognl' command tutorial in the sample work.

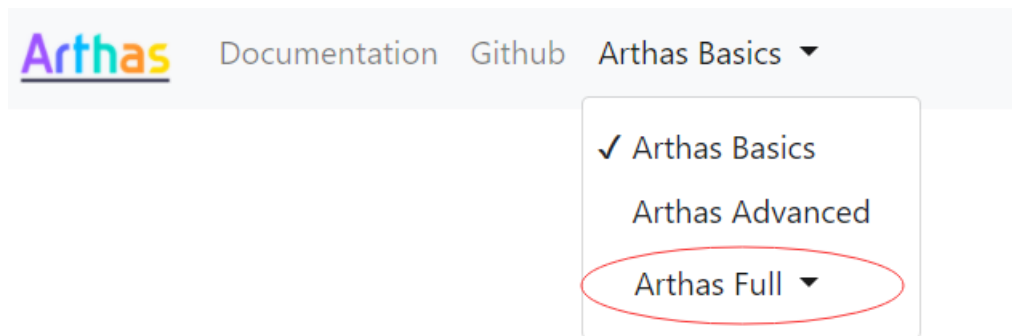
The steps for each scenario should be like this:

[Start demo] -> **[Start arthas-boot]** -> ... -> **[Exit/Stop]**

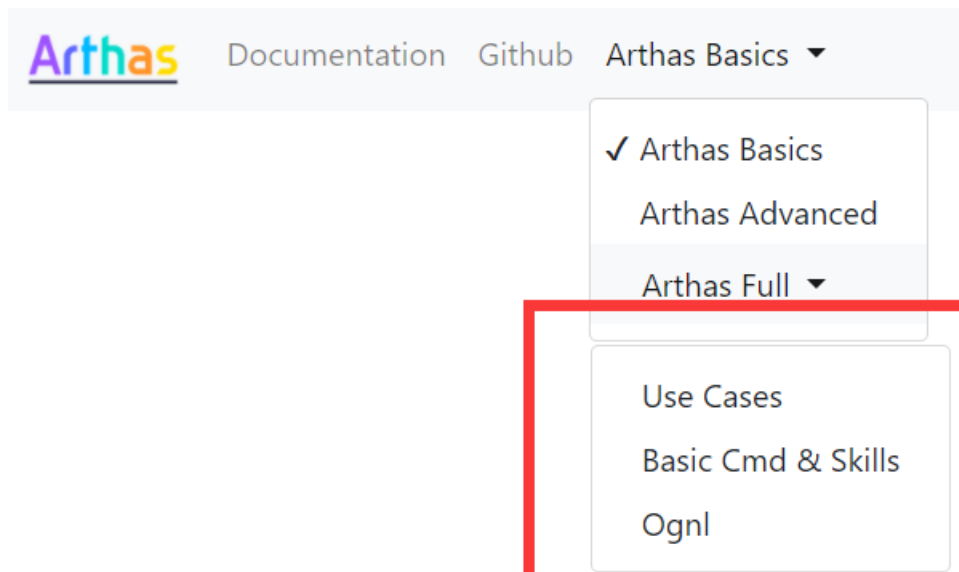
2. Web Page

I plan to add a dropdown menu for the scenarios in my tutorial so that users won't get confused when first time they opened the menu, a sample work looks like this:

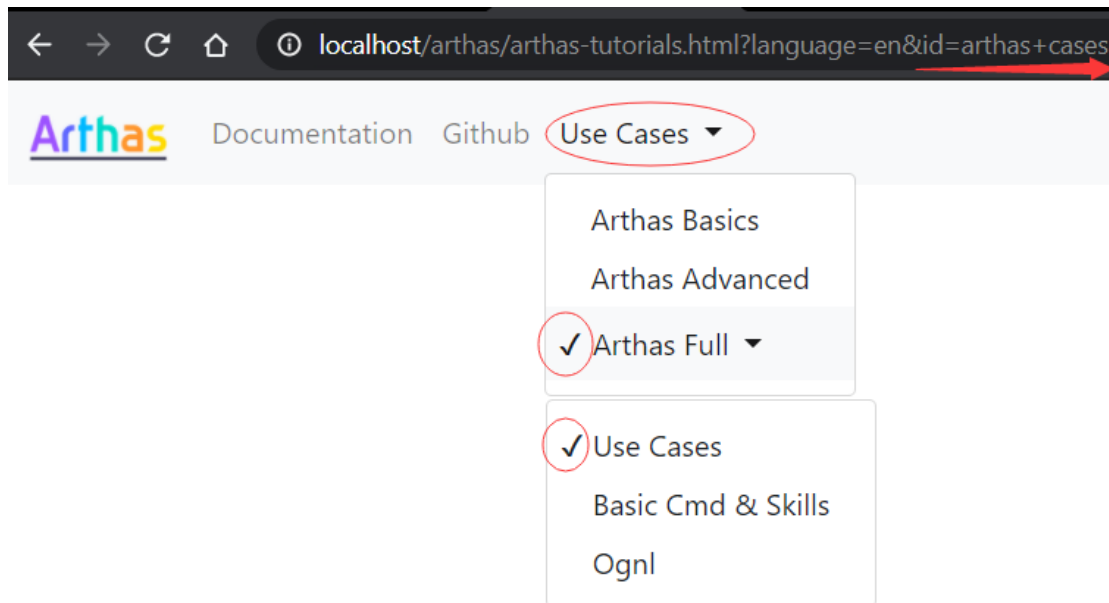
The tutorial button:



Click on it, then the menu will collapse, and you can see the scenarios:



Click on the collapsed menu, you will open the corresponding scenario, a tick will appear on both before the scenario and the tutorial, and the scenario's name will appear at the navigate bar:



This work has been done by me during application, I have modified related HTML and JS functions and added the constant 'courses' and 'scenarios' to save related information so that the nested menu and related tutorials and scenarios can be visited.

I use "[course id] + ' + [scenarios id]" as the URL id parameter for the scenario.

I use "arthas/courses/[course id]/[scenarios id]" as the embedded katacoda id because a sample of the embedded katacoda link is:

<https://www.katacoda.com/embed/arthas/courses/arthas-cn/cases>

More scenarios will be added to the web page as tutorial-writing progress.

***Deliverables**

1. The finished “Arthas Full” Tutorials with three parts of scenarios described as above.
2. The modified web page linked to the scenarios.

***Timeline**

I can work full time (unlimited time, at least 40 hours per week) because I have no other commitments during summer.

I know a mentor isn't a replacement for Google or stack overflow. I will only discuss the difficulties that I can't overcome by myself with mentors and send a “summary of the week” every week by email to mentors to inform my progress of the work so far and what I have achieved this week.

Since there are 34 use cases existed and 31 commands(basic commands are not included) waiting to be added to the tutorial, and the coding period is 2 month(8 weeks), I plan to use 6 weeks for the existed uses case and 7 weeks for commands. The remained weeks are for making new uses cases and time for unexpected delay, so a week's workload is:

- **6 cases' tutorials**
- **5 commands' tutorials**
- **Testing and debugging**
- **Adding them to the web page**

I will also ask for users' advice for the tutorials during work if necessary: <https://alibaba.github.io/arthas/contact-us.html>