INTRO TO LINUX SERVER & CCR

SESSION 02

By: Ningji Wei

October 15, 2018

University at Buffalo The State University of New York

About Last Session

Note1 : first time login CCR, you need to reset your password in CCR Identity Management Portal

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Search: Linux Server CCR

Course Checklist

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Basics:
know how to finish common tasks in CCR

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Basics:
know how to finish common tasks in CCR

- [ ] Connect to CCR
- [ ] Filesystem Operations
- [ ] CCR Operations
- [ ] File Transfer

Advanced Tools:
more convenient and efficient

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not now ...

Contents:

Basic Linux Commands Recap

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Usage	Command
Change directory	$ cd PATH
List contents	$ ls PATH
Print	$ echo STRING
Create file	$ touch FILE
Create folder	$ mkdir FOLDER
Remove file/folder	$ rm [-r] FILE/FOLDER
Move file/folder	$ mv [-r] FILE/FOLDER
Copy file/folder	$ cp [-r] FILE/FOLDER

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Trick	Hotkey
Auto complete	tab
Show candidates	tab twice
Jump to the start of the line	C-a
Jump to the end of the line	C-e
Move cursor	left/right
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Practice:

1. create folder prac1, prac2
2. create files test1.dat, test2.dat, test3.dat, na.info in folder prac1

New Trick: Wildcards

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Wildcards	Symbol	Meaning	Examples
Star Wildcard	*	string with arbitrary length	$ ls *.txt $ rm *exp*.dat
Question Mark Wildcard	?	exactly one character	$ ls *.???

Square Brackets Wildcard	[xyz]	any letter in brackets	$ ls *.[xyz]?
			$ ls [a-cst]*
			$ ls jones[0-9][a-z][A-Z]

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Practice:

3. copy all files with .dat format in folder prac1 to folder prac2
4. remove all files in prac1
5. remove folder prac1

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- $ man CMD # manual for CMD

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- $ CMD --help # help info for CMD

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Where to search?

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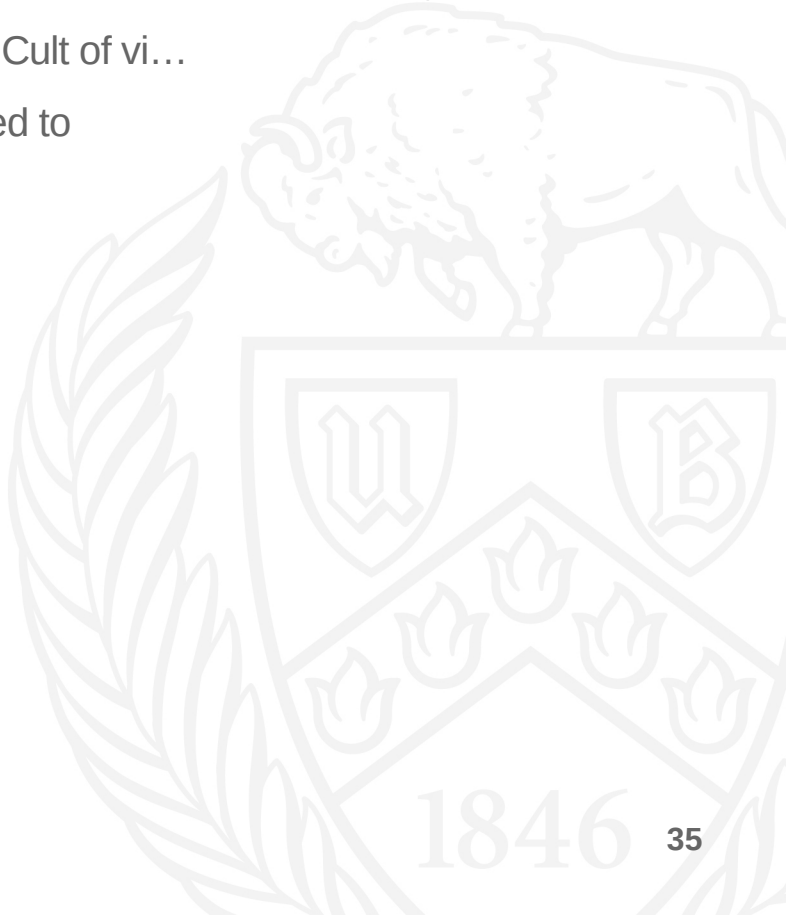

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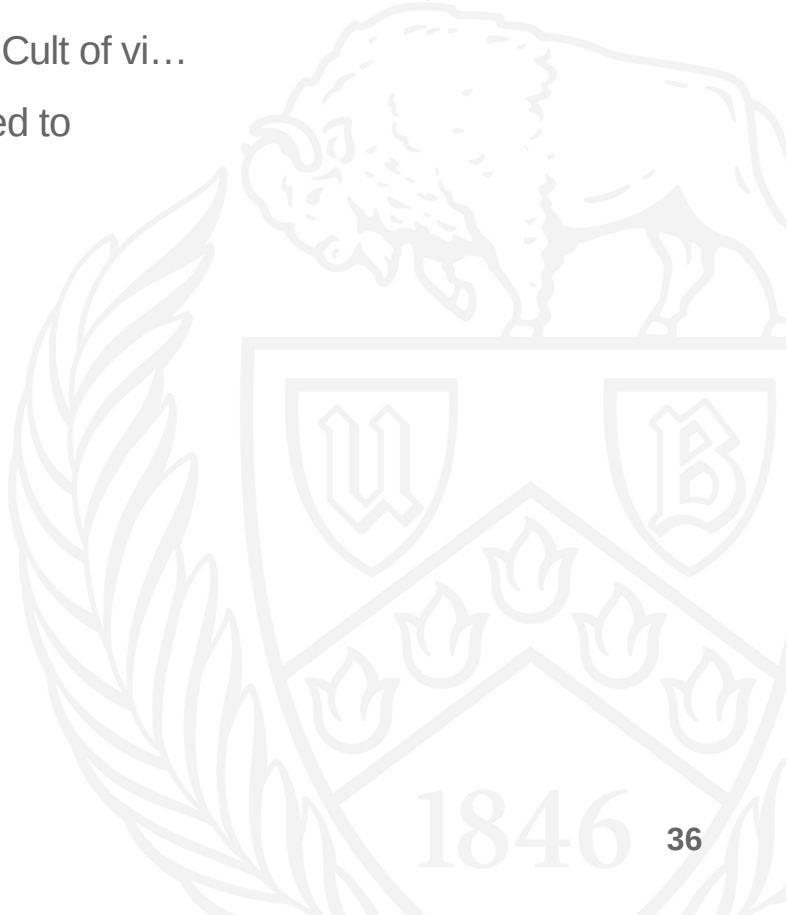

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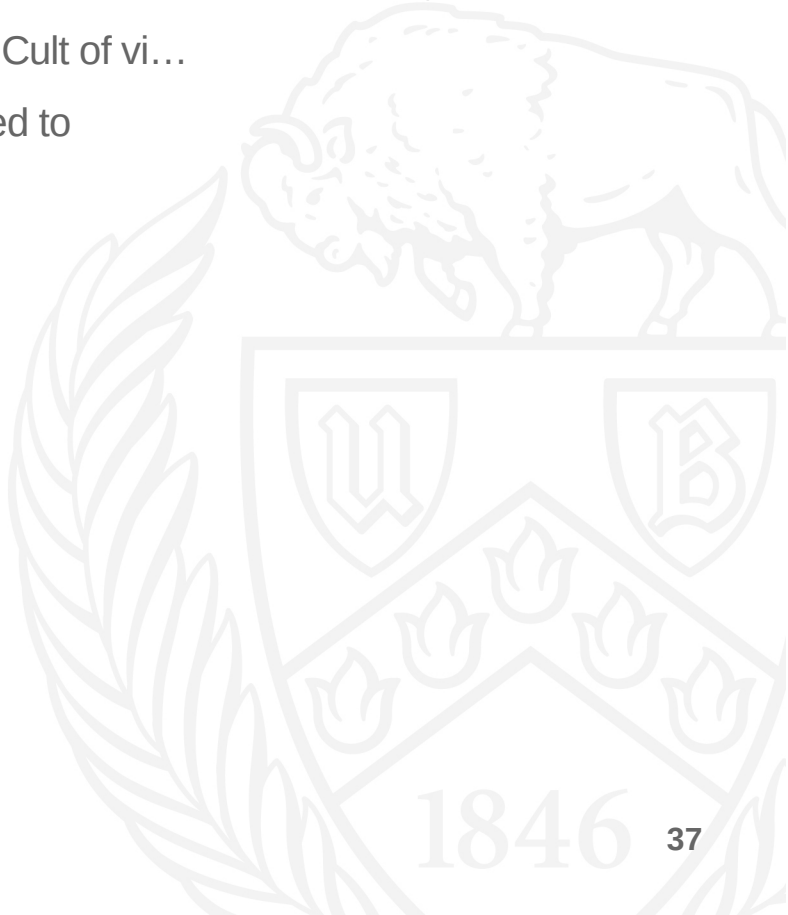

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Practice:

1. create a new file
2. write something
3. save as “first.conf” and close
4. open “first.conf”, do some changes
5. save and close

Well Done!

Basics:
know how to finish common tasks in CCR

- [x] Connect to CCR
- [ ] Filesystem Operations
- [ ] CCR Operations
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Contents:

What is CCR

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- A group of computers connected by network

What is CCR

- A group of computers connected by network
- Form a more powerful machine

Logic Structure of CCR

CCR

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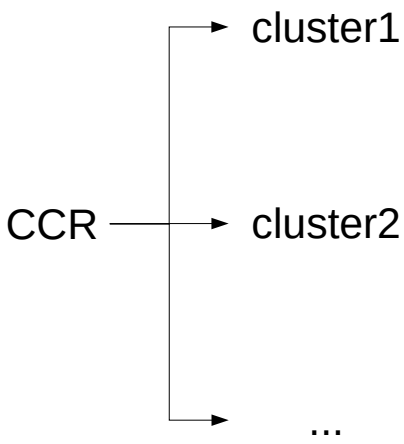

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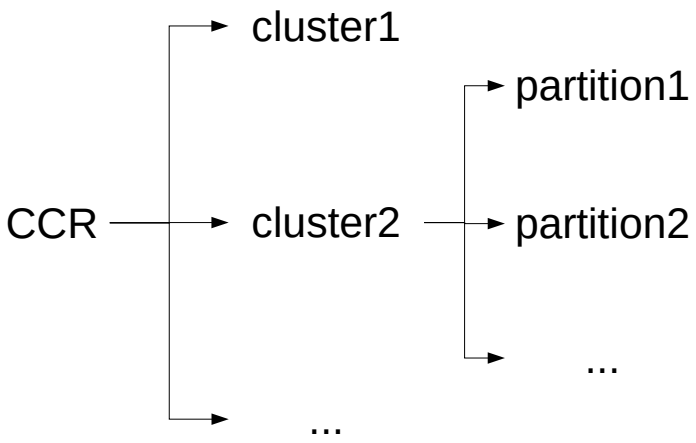

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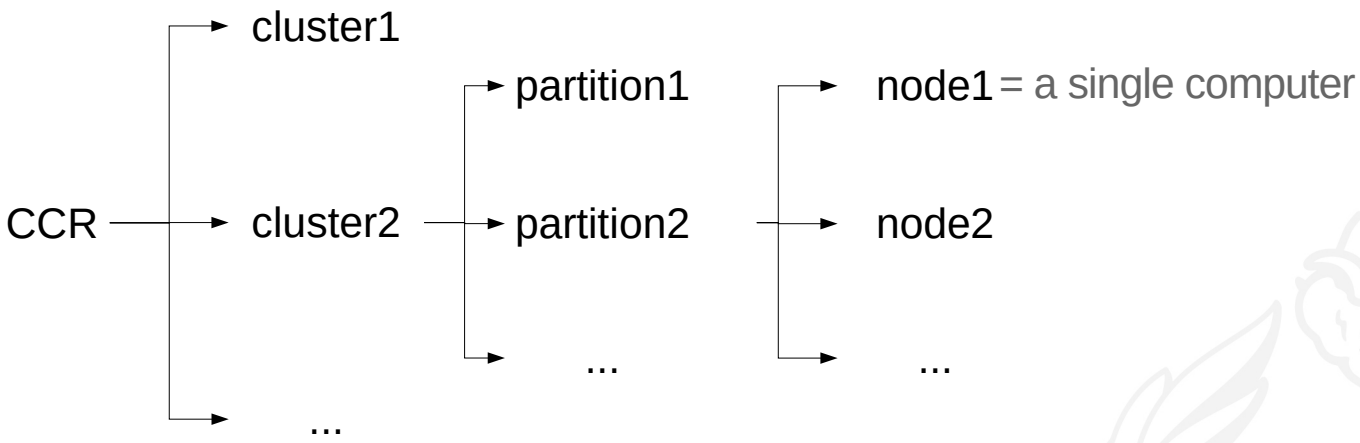

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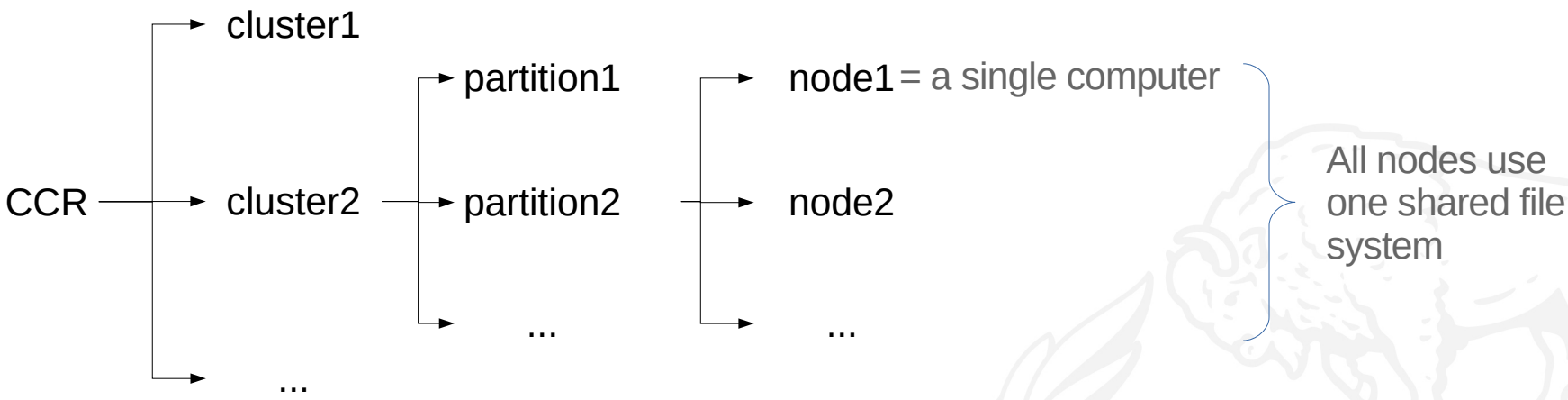

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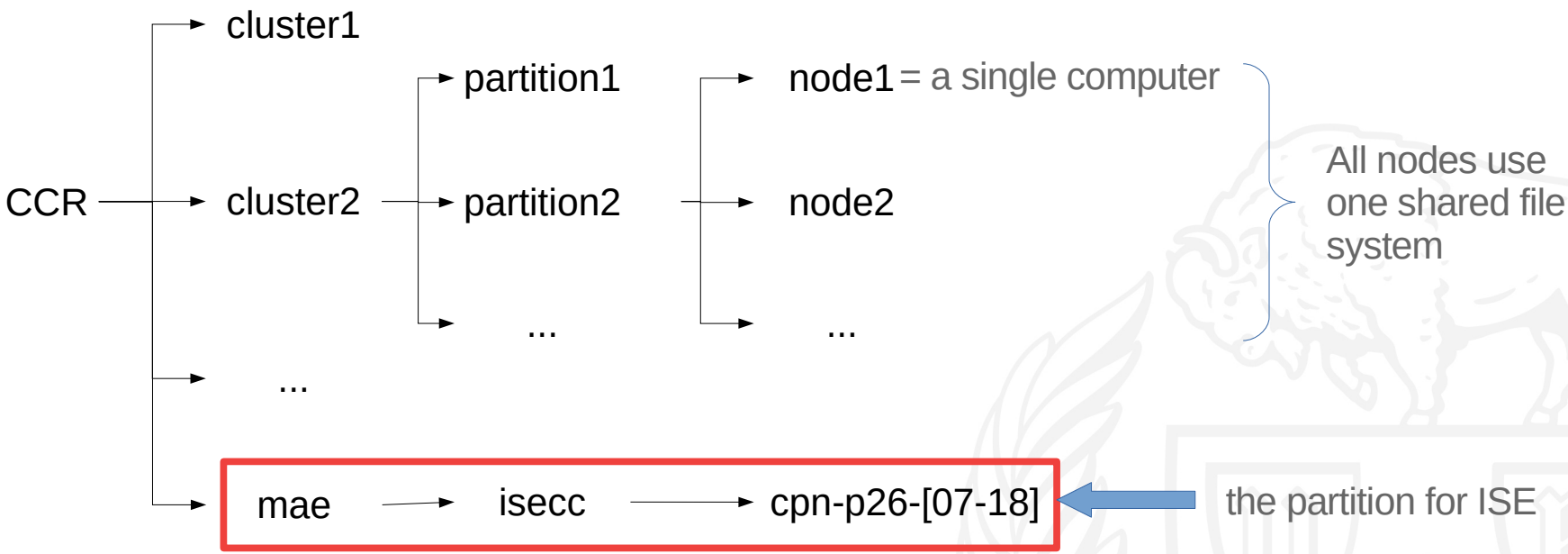

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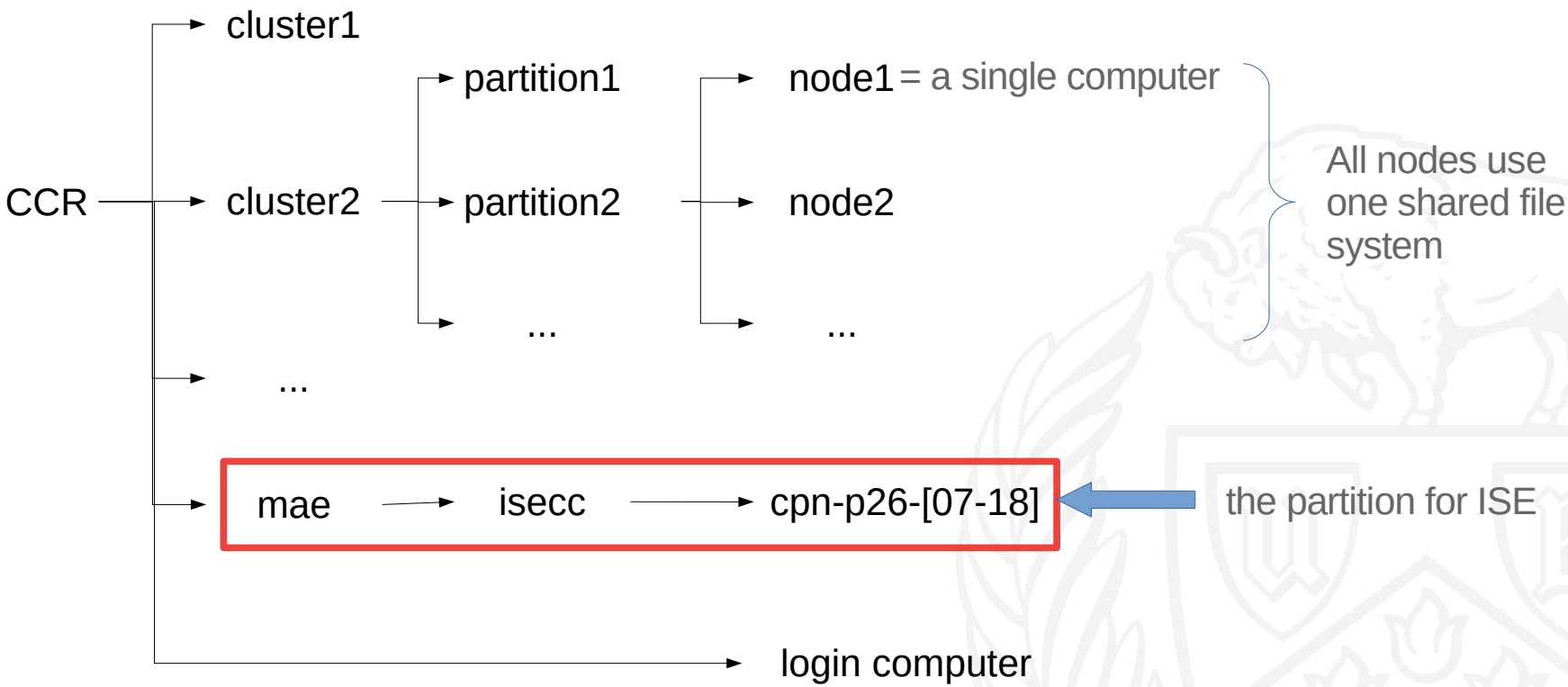

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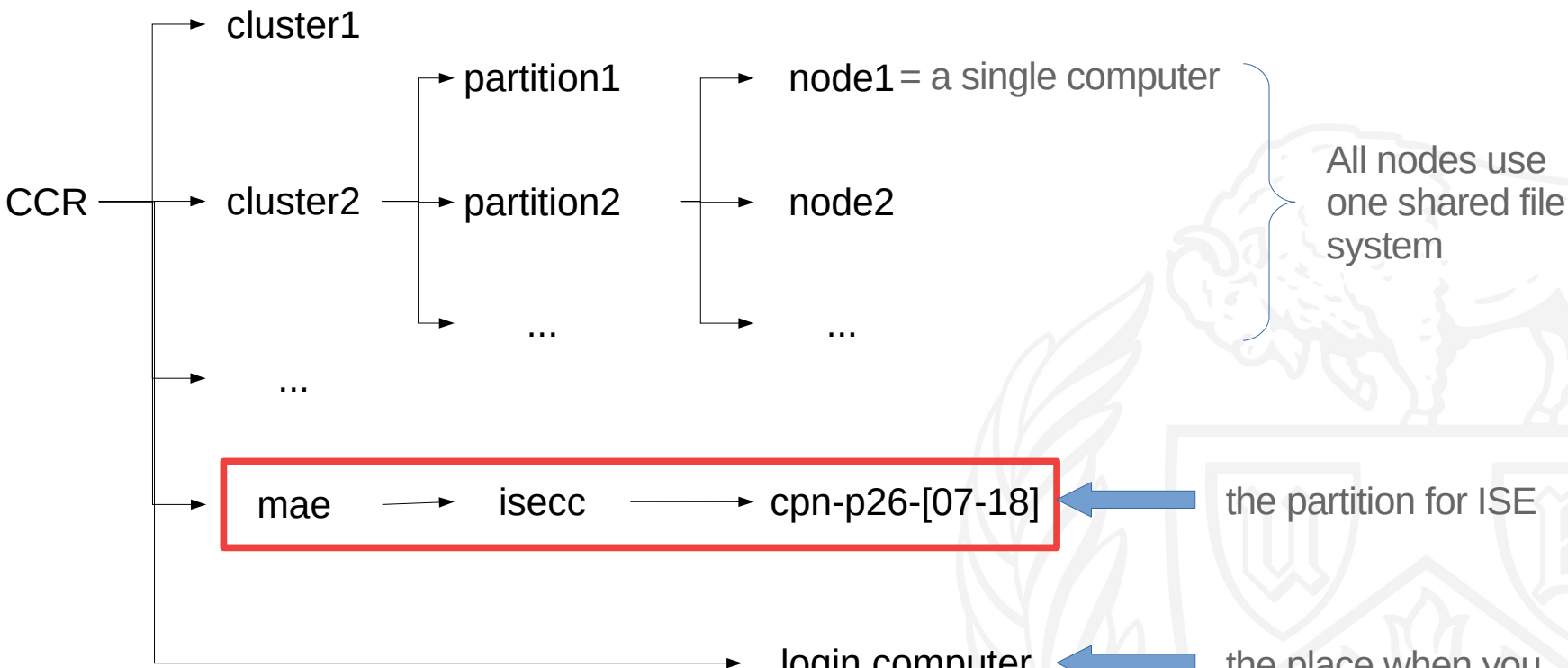
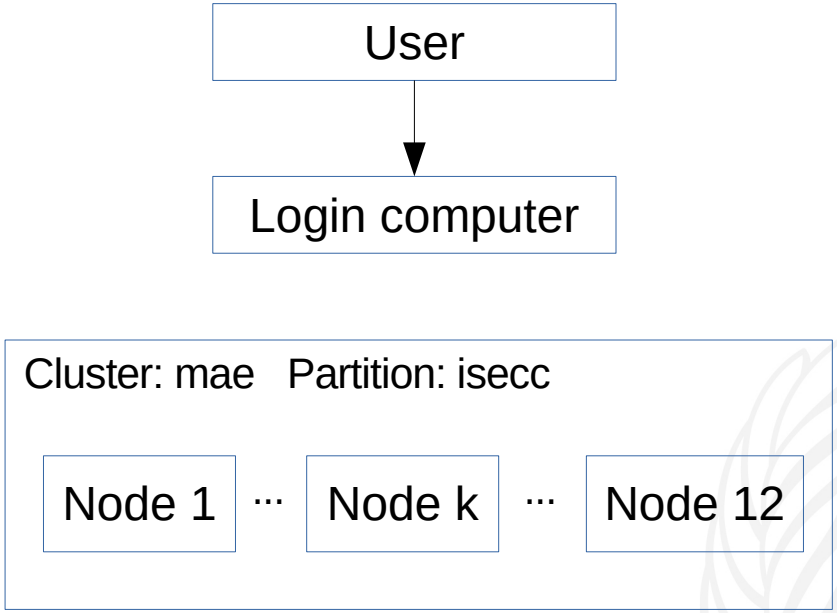


Different Ways of Running Jobs in CCR



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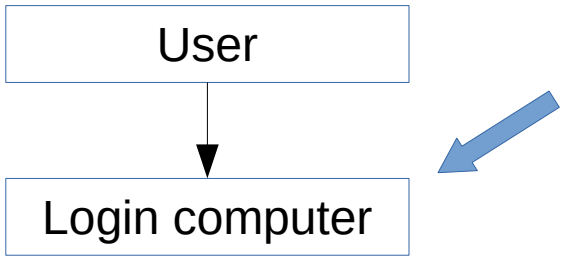

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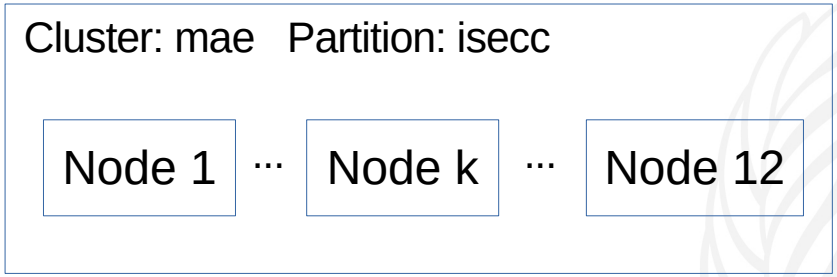
- Good testing environment
- Very restrictive time limit
- Lower computation power



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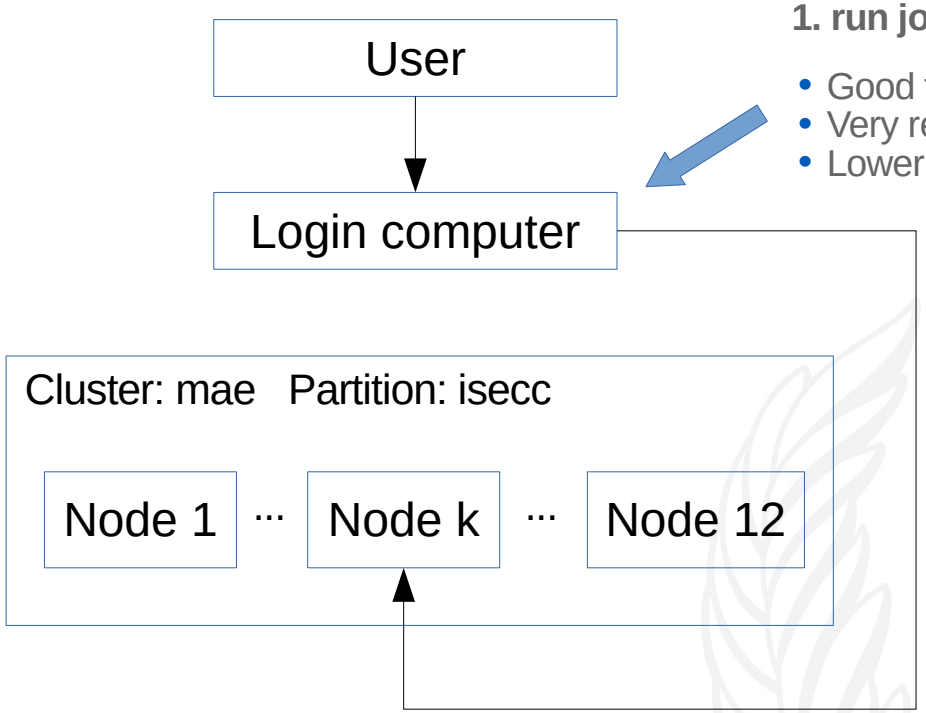

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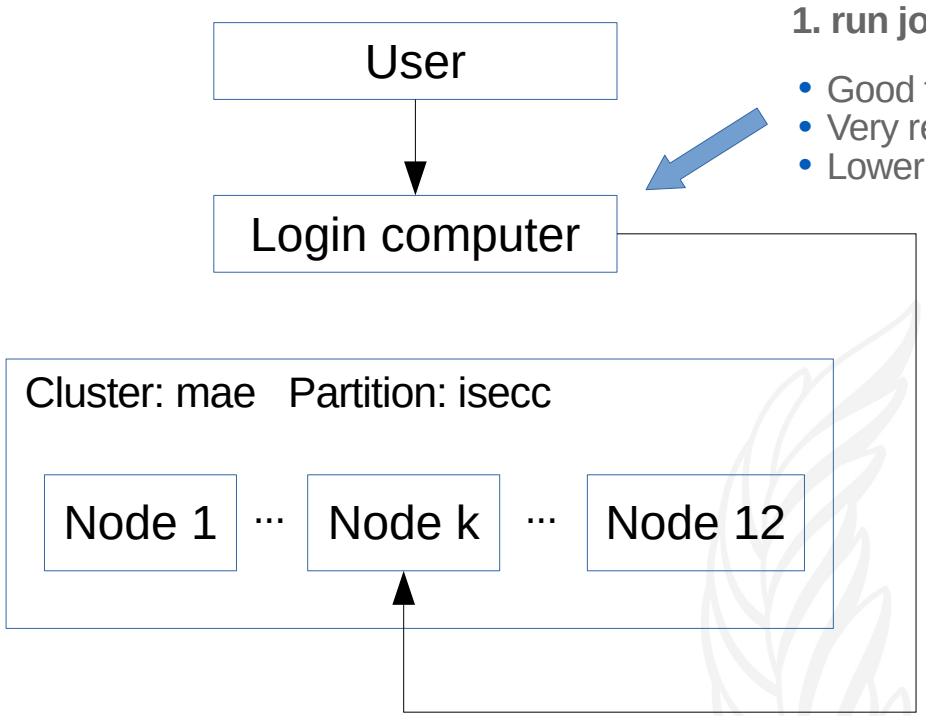

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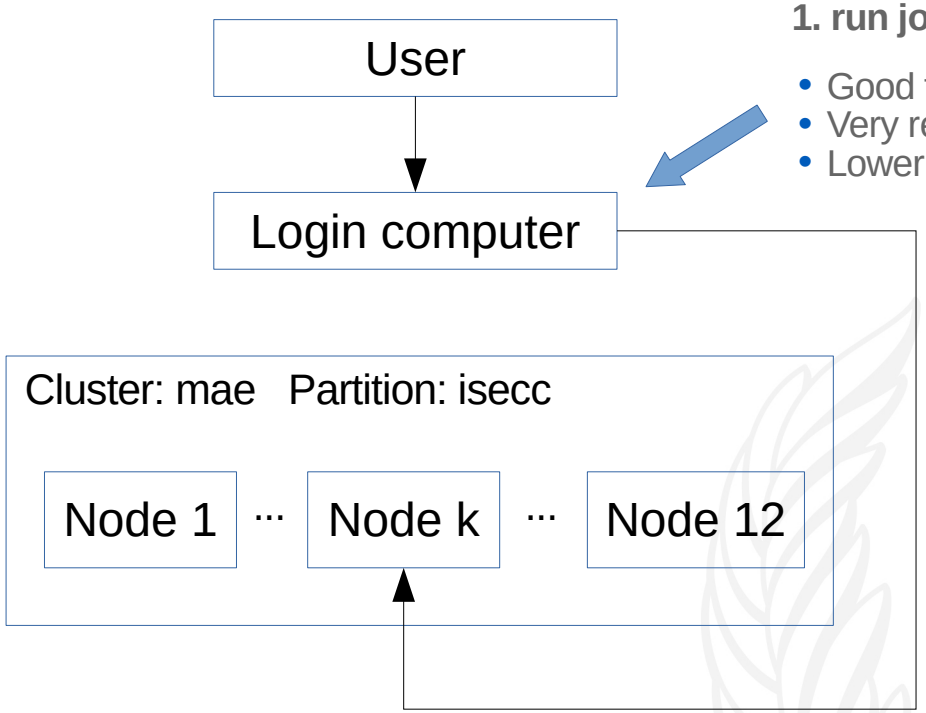

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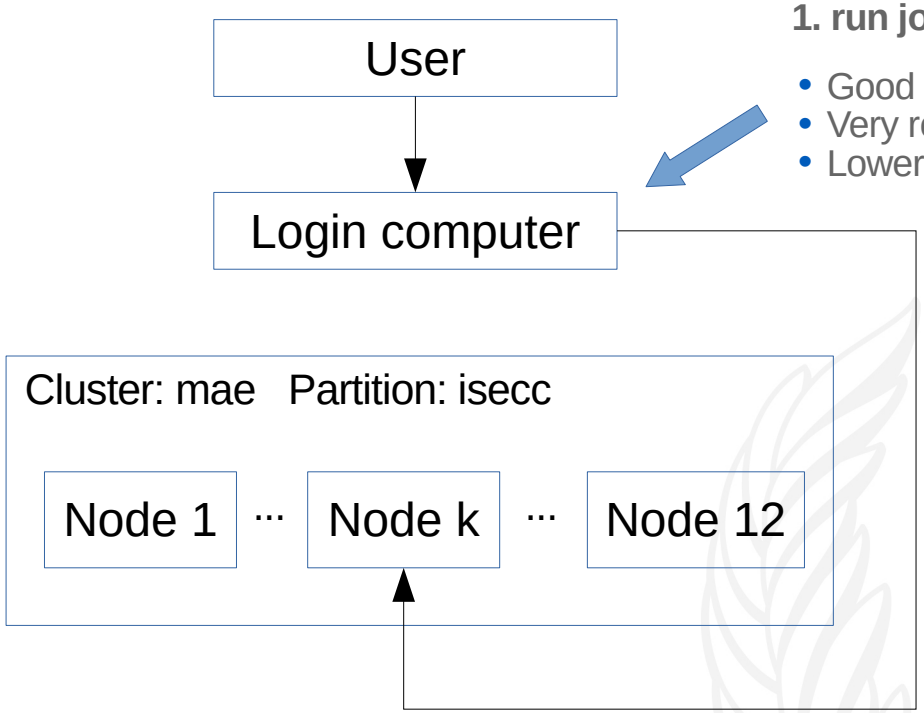

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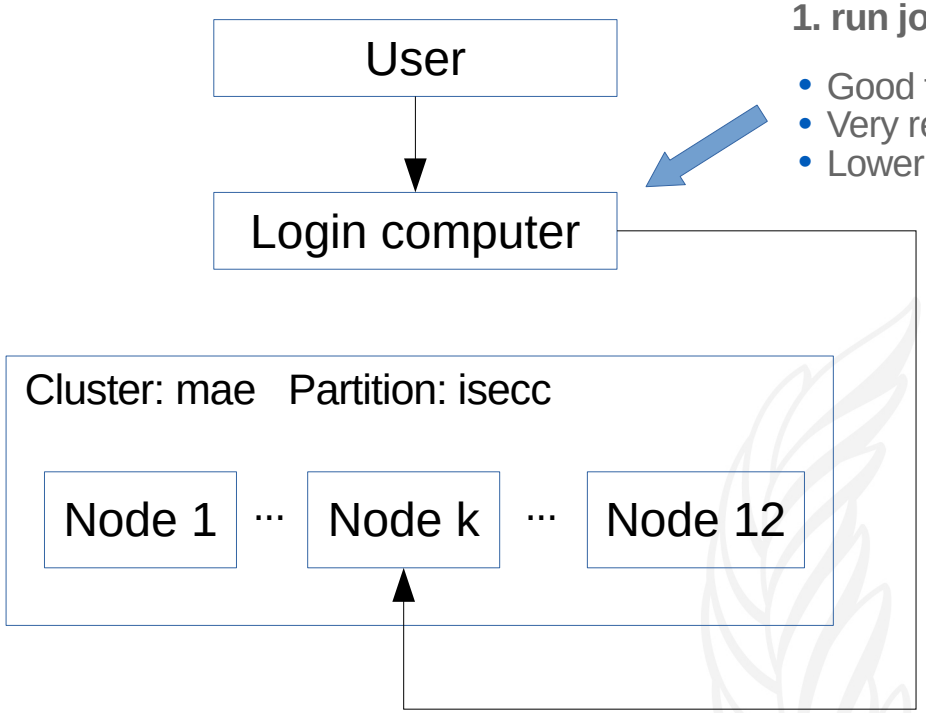

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- Higher computation power
- Run single script a time

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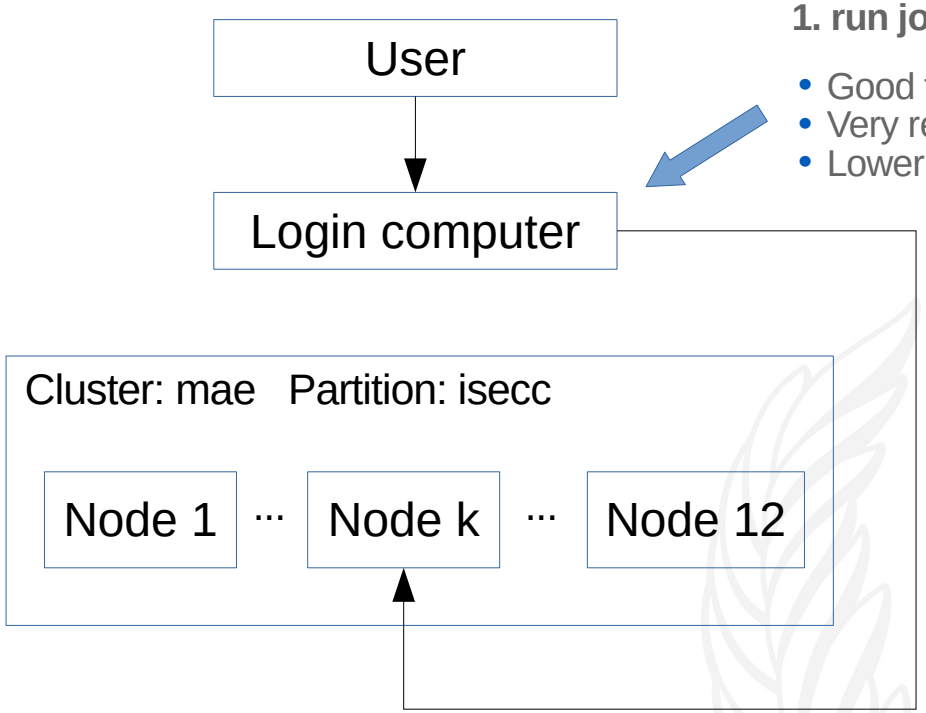

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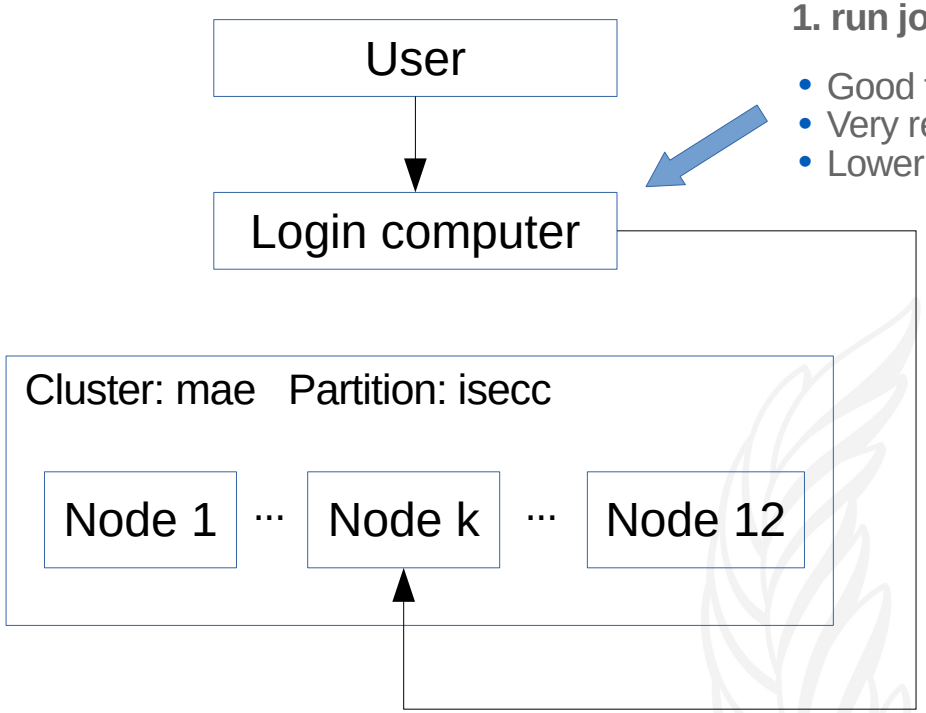

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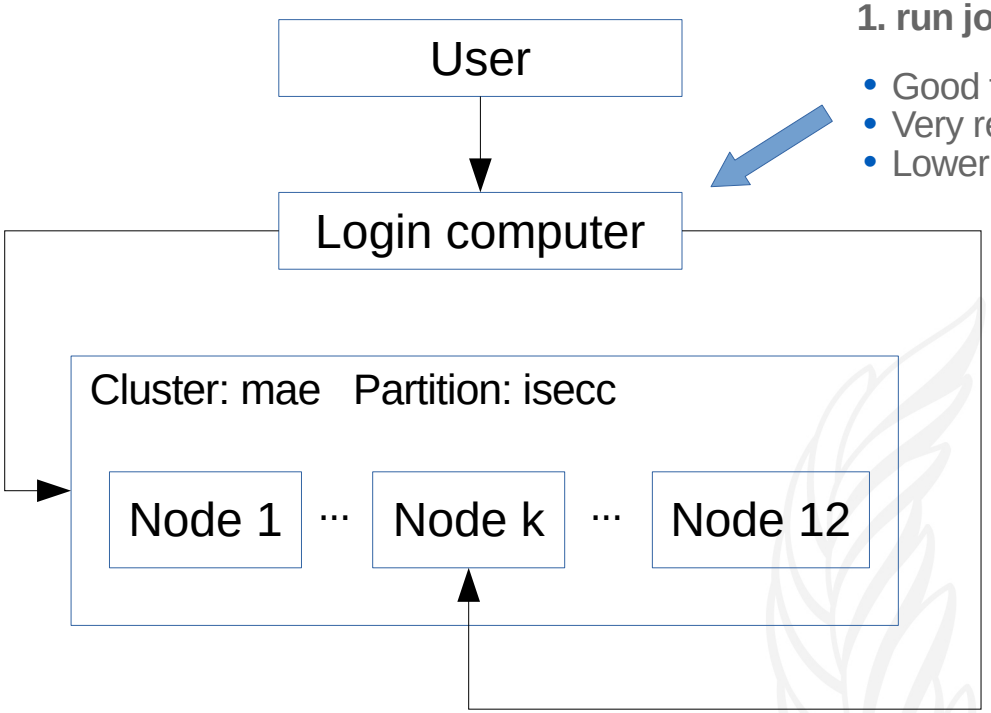

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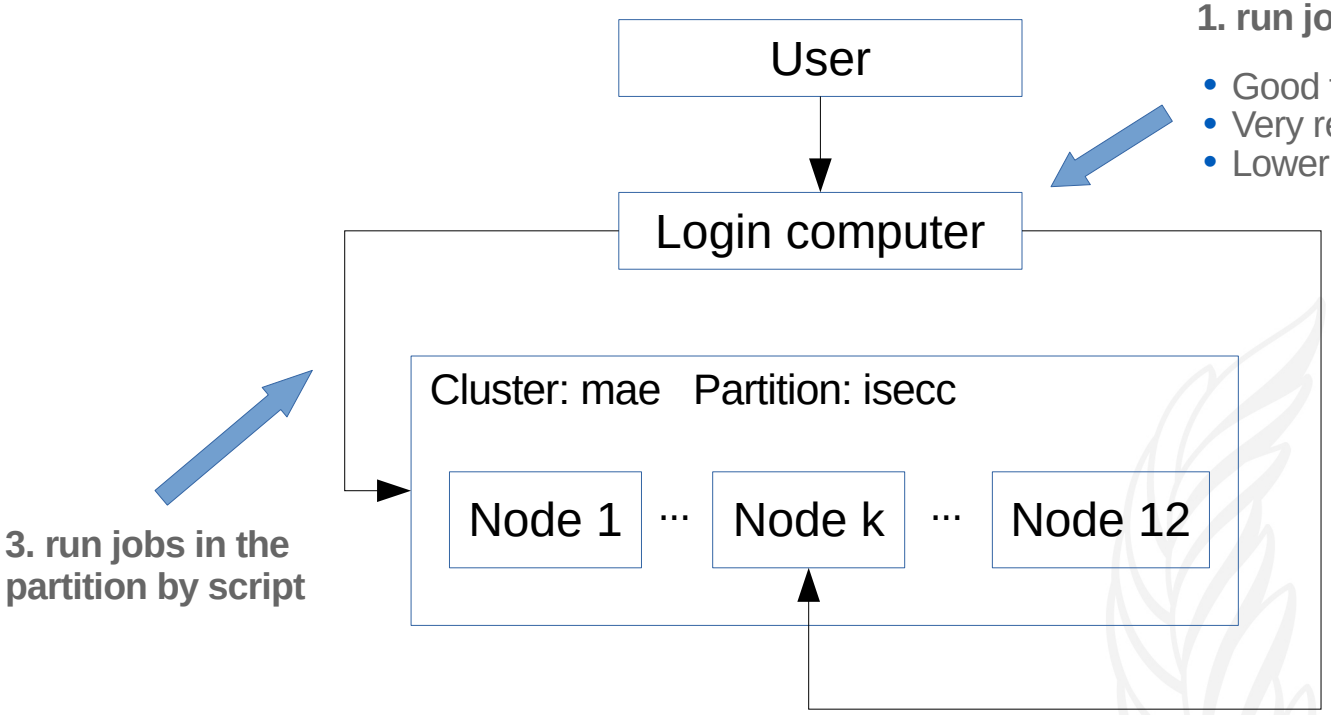

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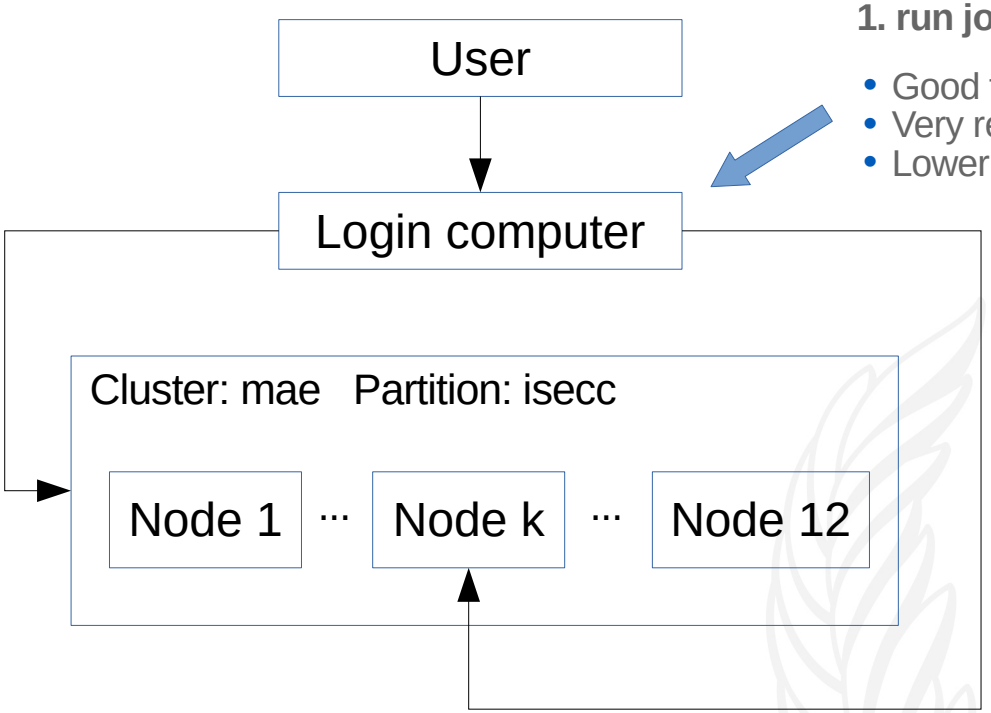

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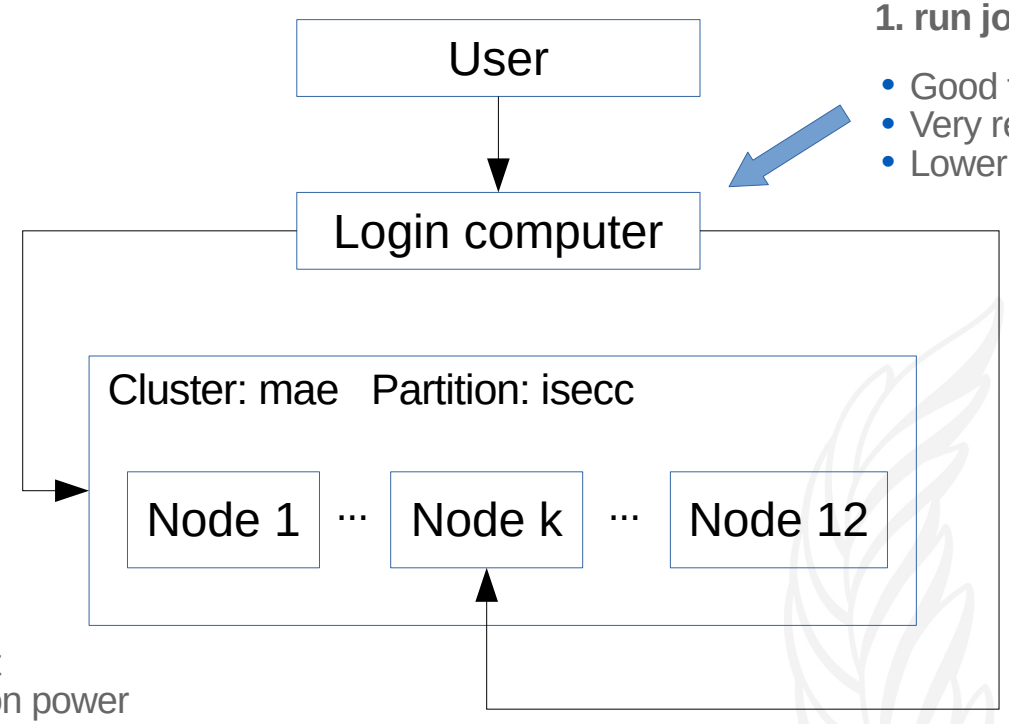

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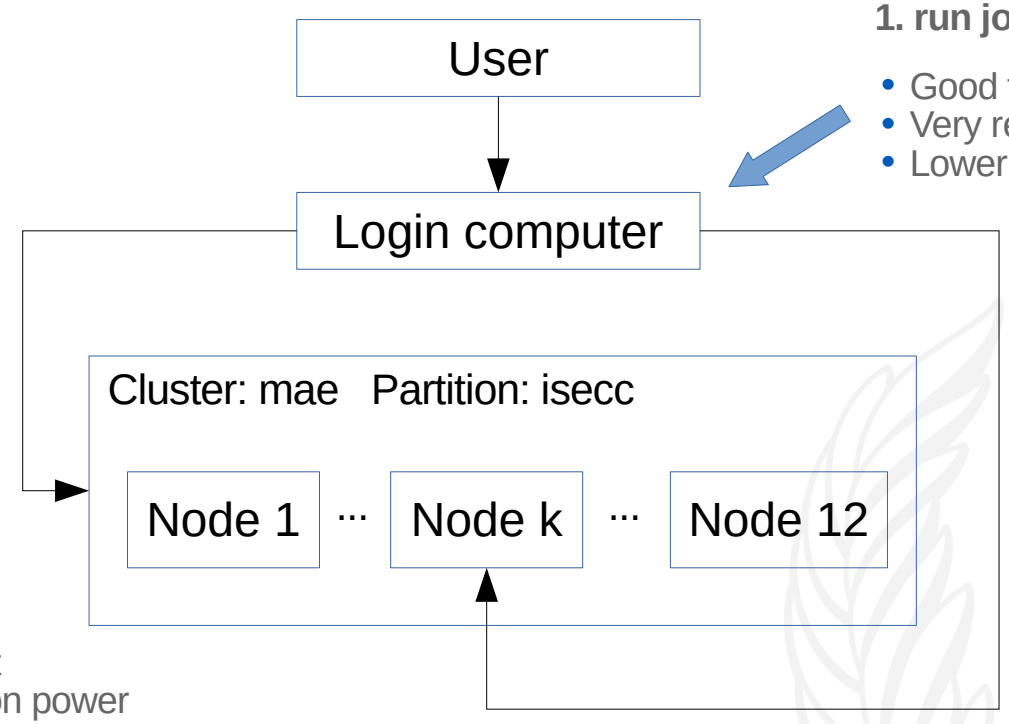

1. run jobs in the login computer

- Good testing environment
- Very restrictive time limit
- Lower computation power

2. run jobs in a node interactively

- Specify time limit
- Higher computation power
- Run single script a time
- Cancel job when disconnected
- Special testing environment

3. run jobs in the partition by script

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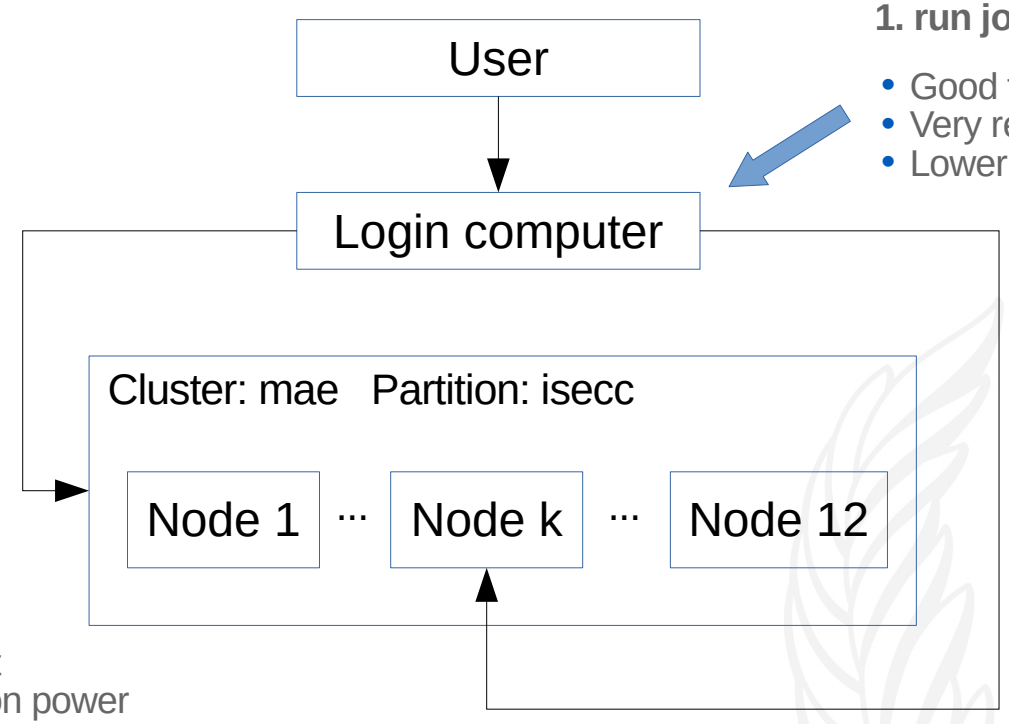

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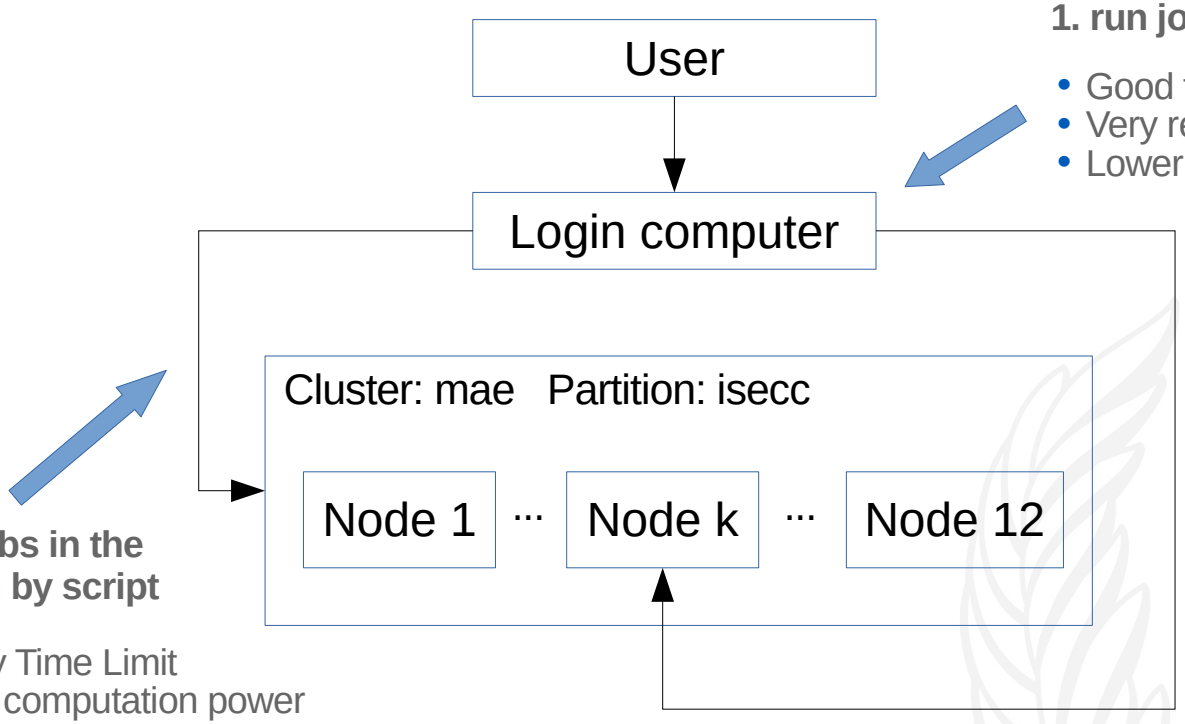

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Hello World

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!!NOTE: Only in method 3, using sbatch with script

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- use --exclude to specify nodes that **DON'T** use