

•

nn

v nl

P

v nl

nn

v nl

nn

| | | |
|--|------|--|
| | | |
| | v nl | |
| | nn | |
| | | |
| | | |

M

v nl

v nl

•

• **M**

Python
Python

M

M

1

OS

a

nn

nn

P

ck

•

• **a**

Hadoop

HDFS HDFS ;
HDFS ;
Hive
HQL

•
•

Python
HTTP
HTTP
Cookie

urllib3 Requests HTTP
Chrome Xpath Beautiful Soup

JSON

•

•

matplotlib pyplot

•

| | | |
|--|------|--|
| | | |
| | | |
| | v nl | v nl v nl v nl |
| | nn | nn nn nn P nn ck nn |
| | | ck ck p ck Pn |
| | | |

| | | |
|--|--|-----------------------|
| | | |
| | | ! d p ! ! ! |
| | | p ! !n ! ! nl np ck ! |
| | | p ! !n ! ! nl np ck ! |
| | | p ! !n ! ! nl np ck ! |