



nn

v nl

P

v nl

nn

v nl

nn

	v nl	
	nn	

v nl

v nl

Python  
Python

1

2

OS

1

nn

nn

P

ck

Hadoop

1 HDFS HDFS ;  
Hive  
HQL

1

Python  
HTTP  
HTTP  
Cookie

urllib3 Requests HTTP  
Chrome Xpath Beautiful Soup  
JSON

1

matplotlib pyplot

**1**

**1**

	v nl	v nl v nl v nl
	nn	nn  nn nn P nn           ck nn
		ck   cp  ck   Pn



		! d p ! l !
		p ! !n ! ! nl np ck !
		p ! !n ! ! nl np ck !
		p ! !n ! ! nl np ck !