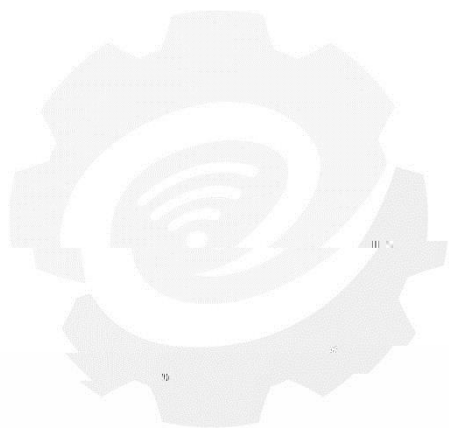


2016



工业互联网产业联盟

AII

2017 7

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工业互联网产业联盟

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Ecode

.....



工业互联网产业联盟



OPC/OPCUA

-

Handle

ONS

ONS Handle

OID	Ecode
-----	-------

-

1.

1.1

5671

1997

2010

600

1.2

2-1-1



工业互联网产业联盟

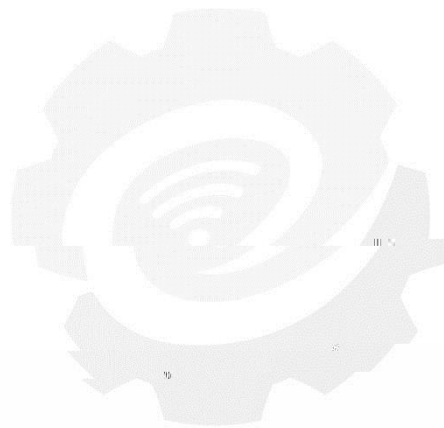
2-1-2

45%

21%

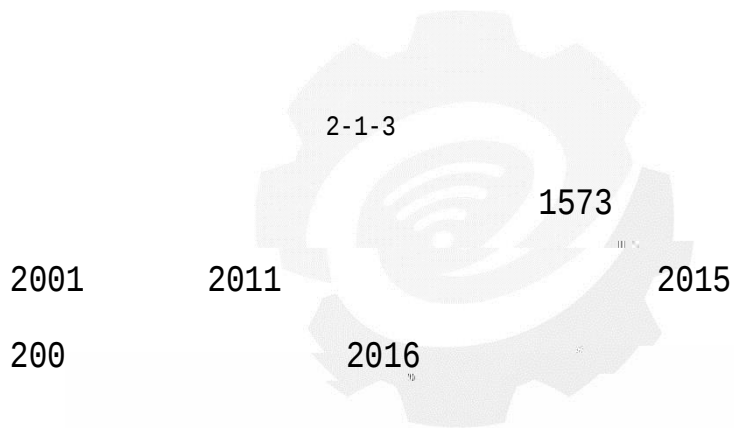
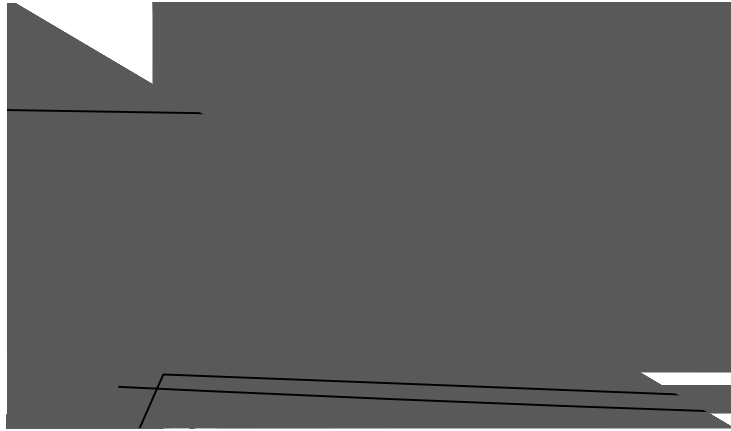
1.3 Siemens ABB ROCKWELL GE

Siemens PROFIBUS
PROFINET ROCKWELL Devicenet Ethernet/Ip Siemens
ROCKWELL



工业互联网产业联盟

PROFINET



2.2

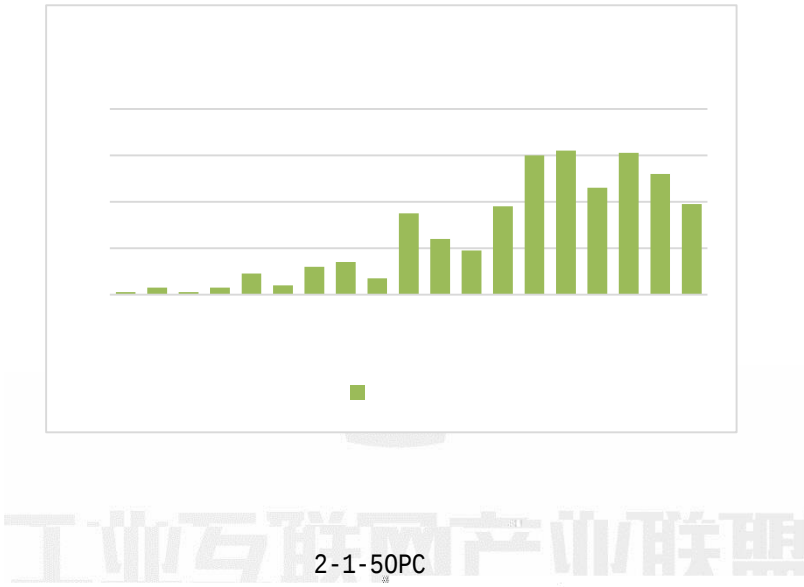
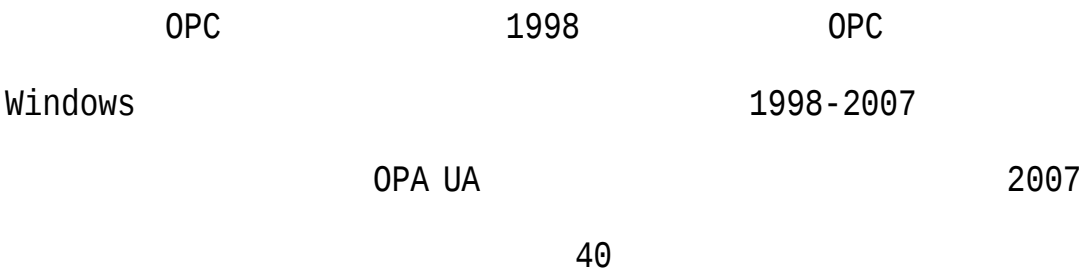
工业互联网产业联盟

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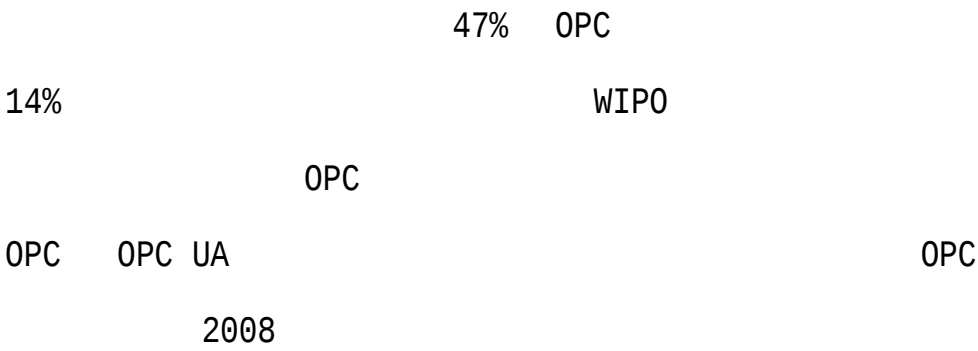
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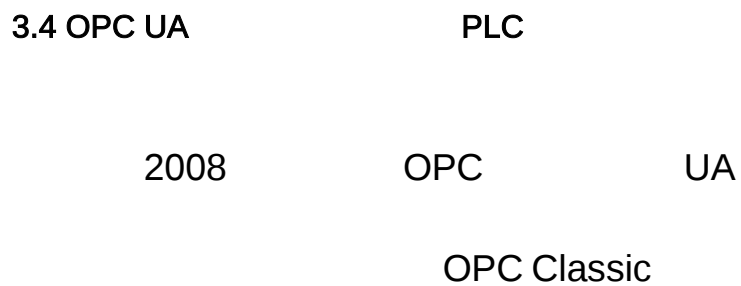
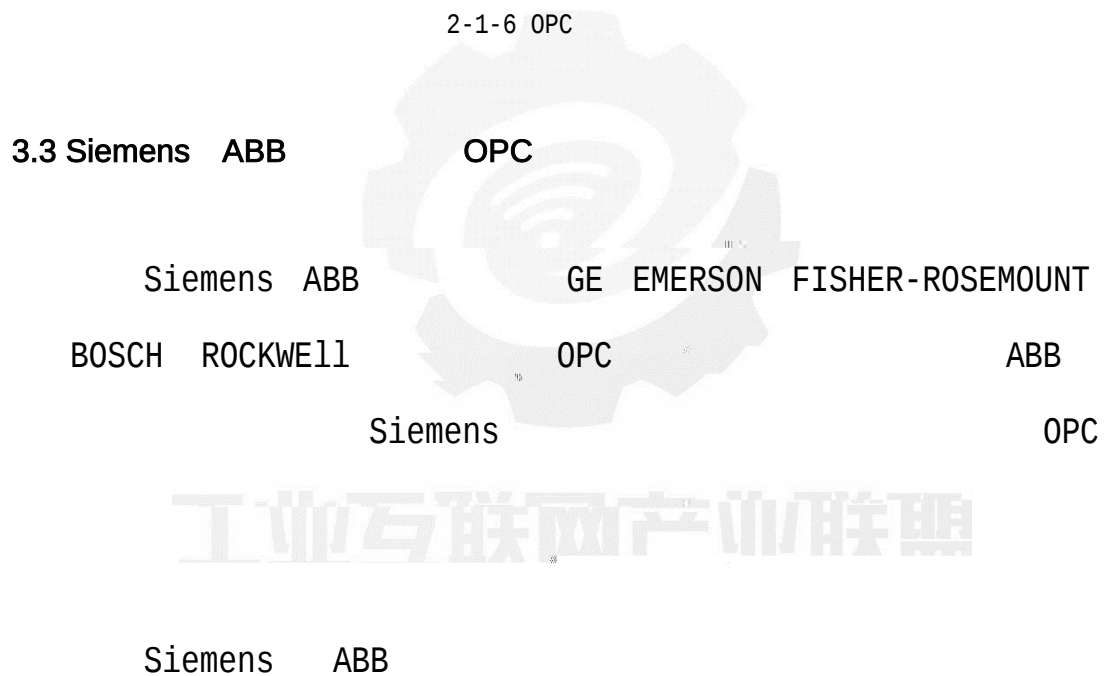
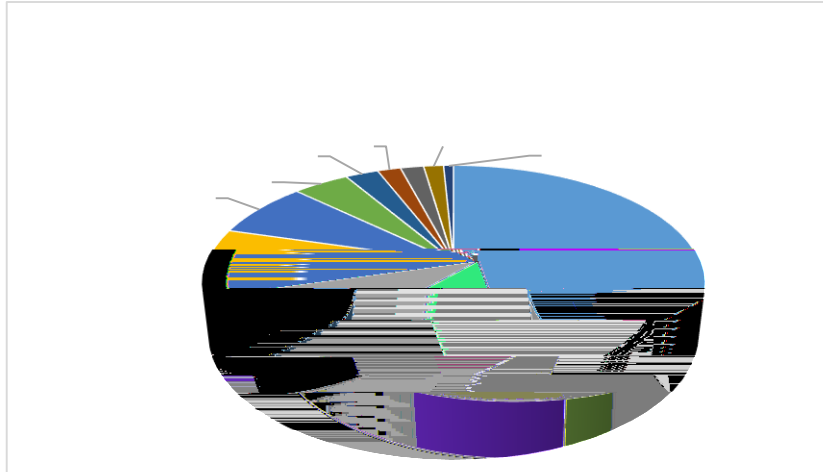
3. OPC/OPC UA

3.1 OPC/OPC UA 2012



3.2 OPC





OPC

30%

OPC UA



3.5 OPC UA

OPC UA

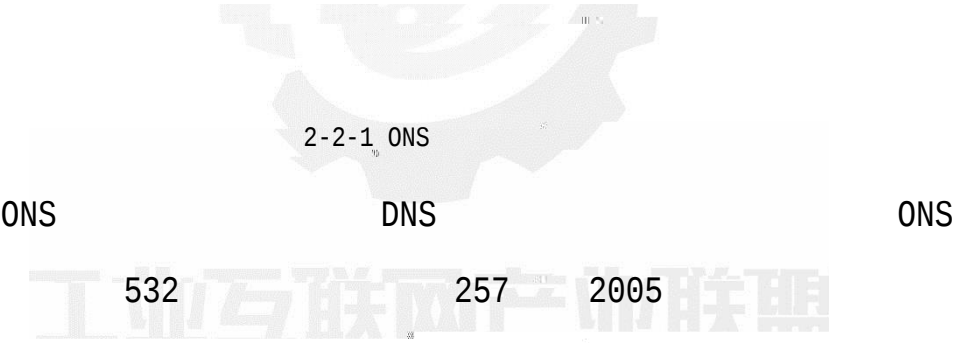
OPC UA

OPC UA

OPC UA

1.0NS

1.1 ONS



2-2-2 ONS

ONS

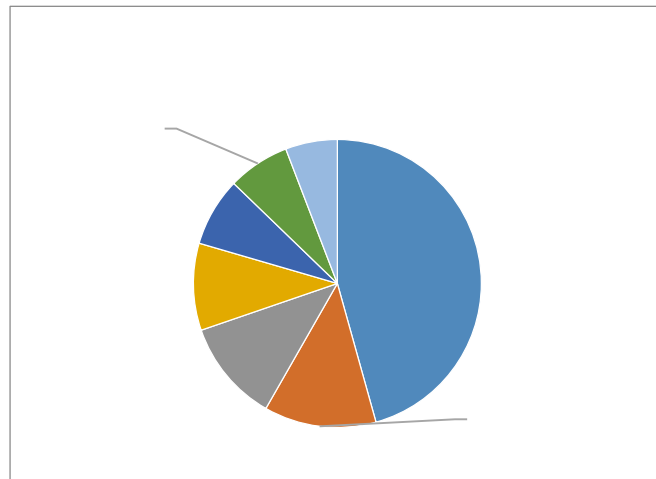
2012

2013

1.2

ONS

ONS



2-2-3 ONS

工业互联网产业联盟

AT&T IBM

GE
(IIC)

1.3 ONS

Cisco

ONS

80

IBM

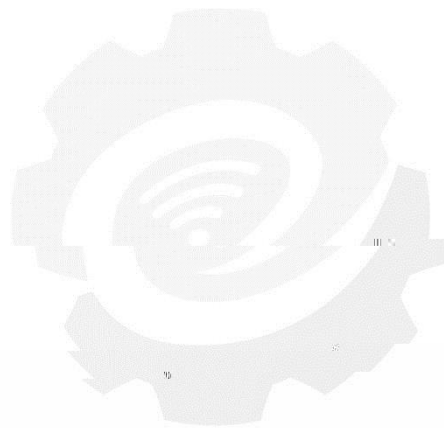
ONS

70

ONS

1.4 ONS

ONS



工业互联网产业联盟

2.2 Handle

Handle

Handle



2-2-5 Handle

工业互联网产业联盟

CONTENT DIRECTIONS

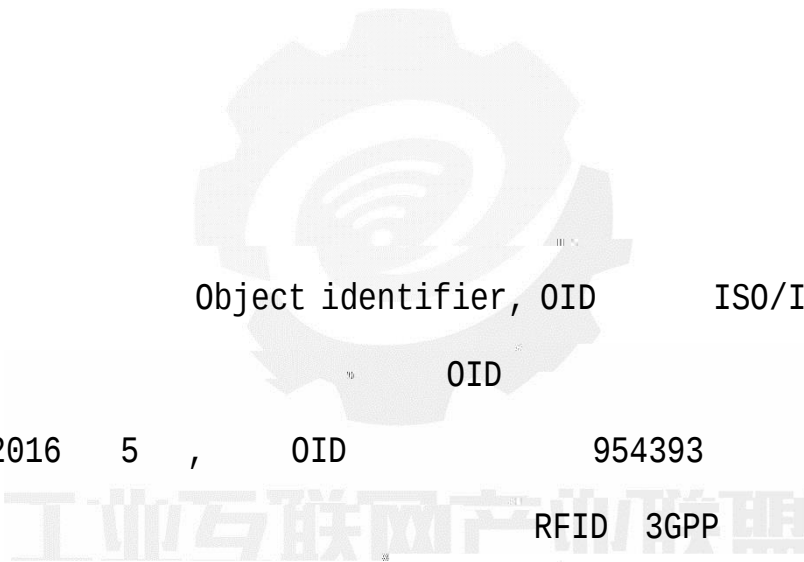
AMERICAN EXPRESS TRAVEL RELATE

2.4 Handle

Handle

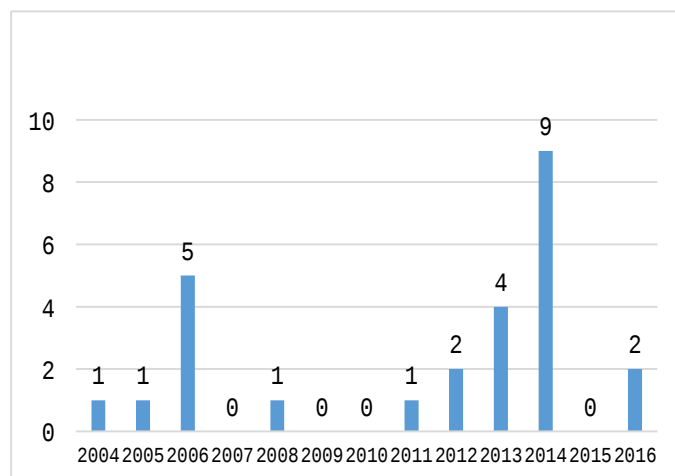
3.OID

3.1 OID



Object identifier, OID		ISO/IEC	ITU
OID			
2016	5	, OID	954393
			OID
		RFID	3GPP
OID		130	

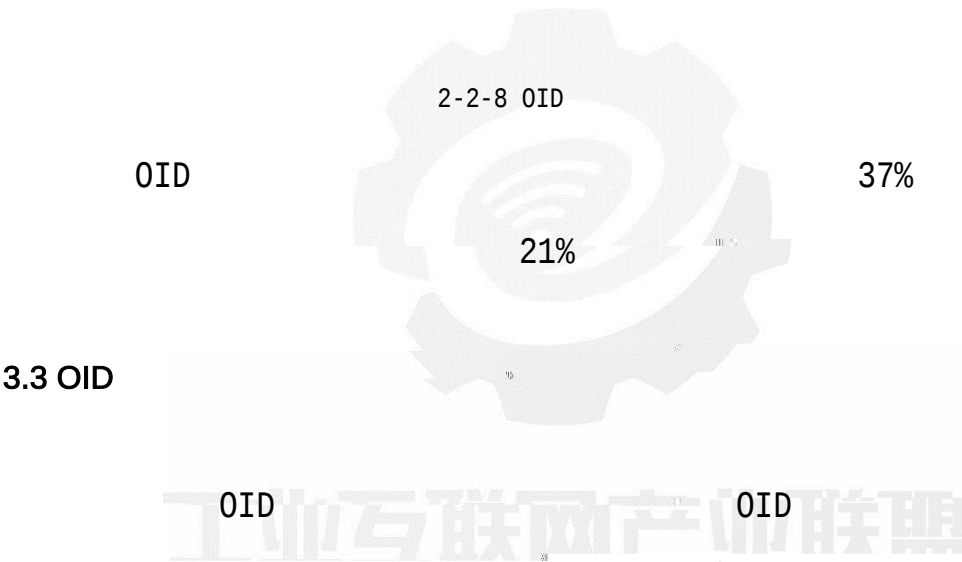
OID



3.2 OI D

OID					
				ISO	ISO-ITU
(JOINT-ISO-ITU-T)	ITU-T			ISO	ISO-ITU

OID



ETRI

14

ULTRATA

12

3.4 OID

RFID

OID

RFID

OID

4.Ecode

4.1 Ecode

2013

Ecode

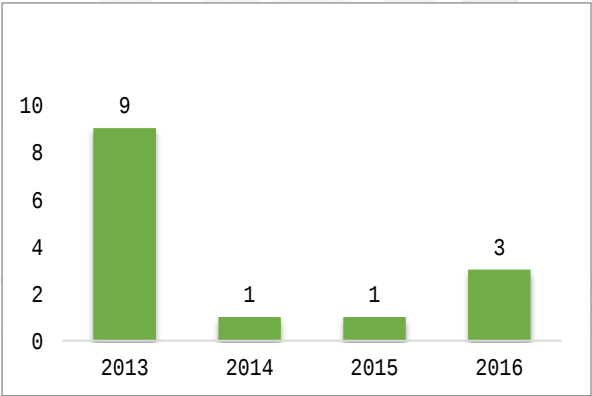
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22

14

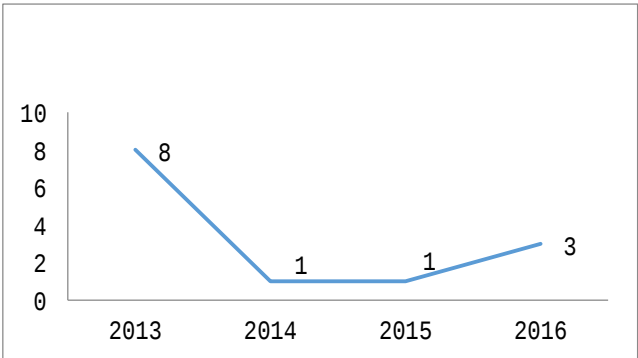
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2013



2-2-9

Ecode



2-2-10 Ecode

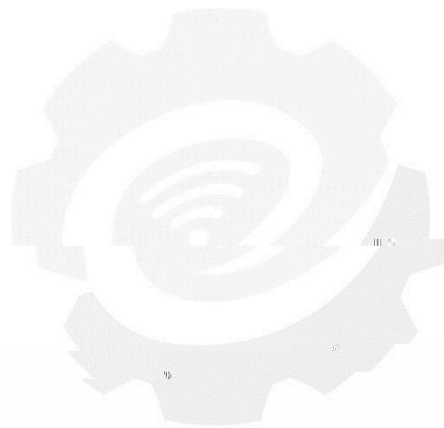
Ecode 20 13

Ecode

4.2. Ecode 4. 4.

Ecode

Ecode



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2-2-11 Ecode

Ecode

2 Ecode

4.4 Ecode

Ecode



1.

1.1 NoSQL

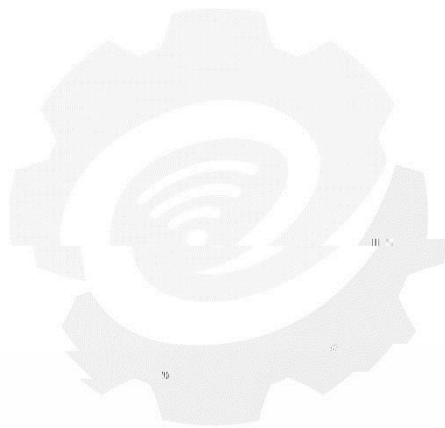
NoSQL

NoSQL

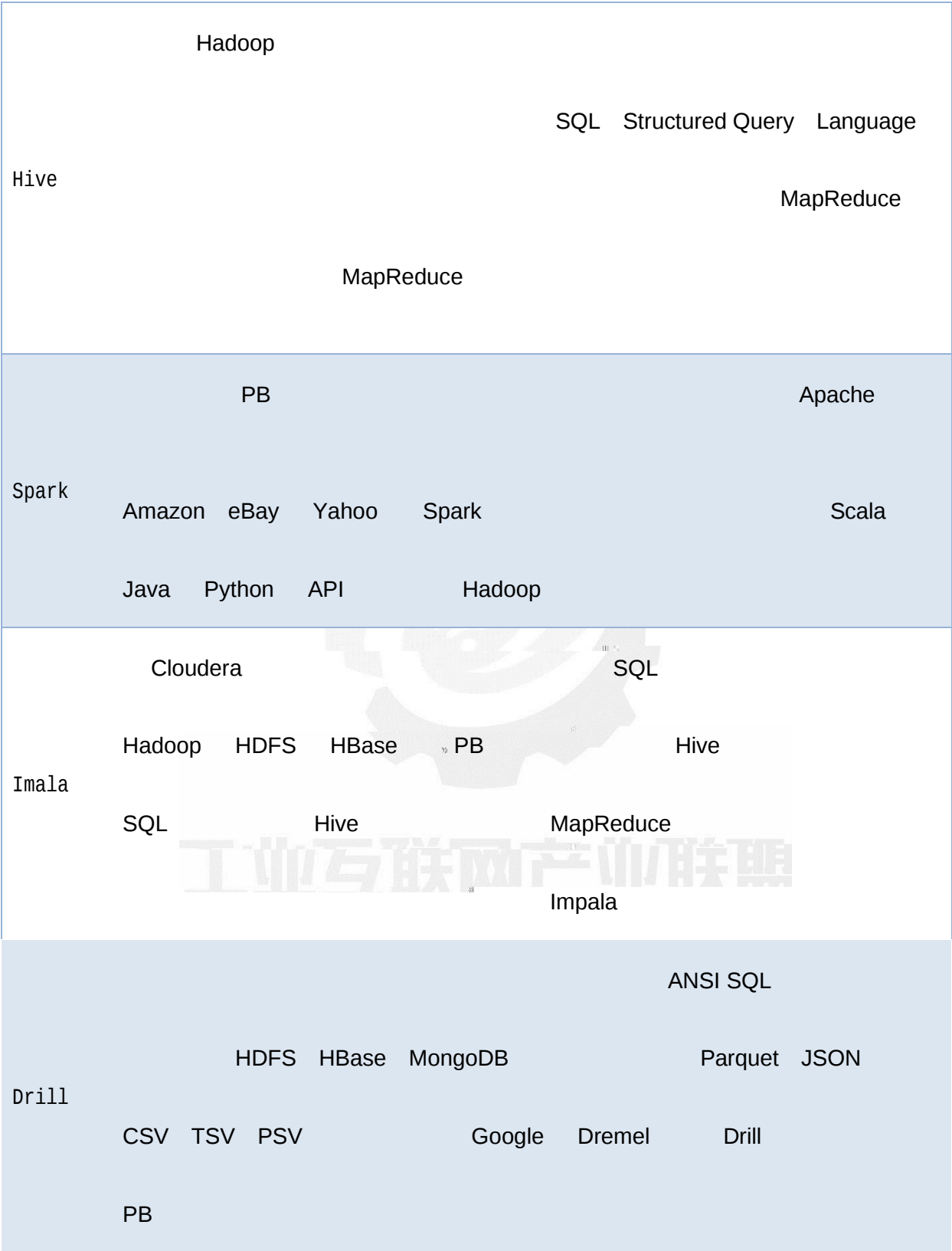
IBM

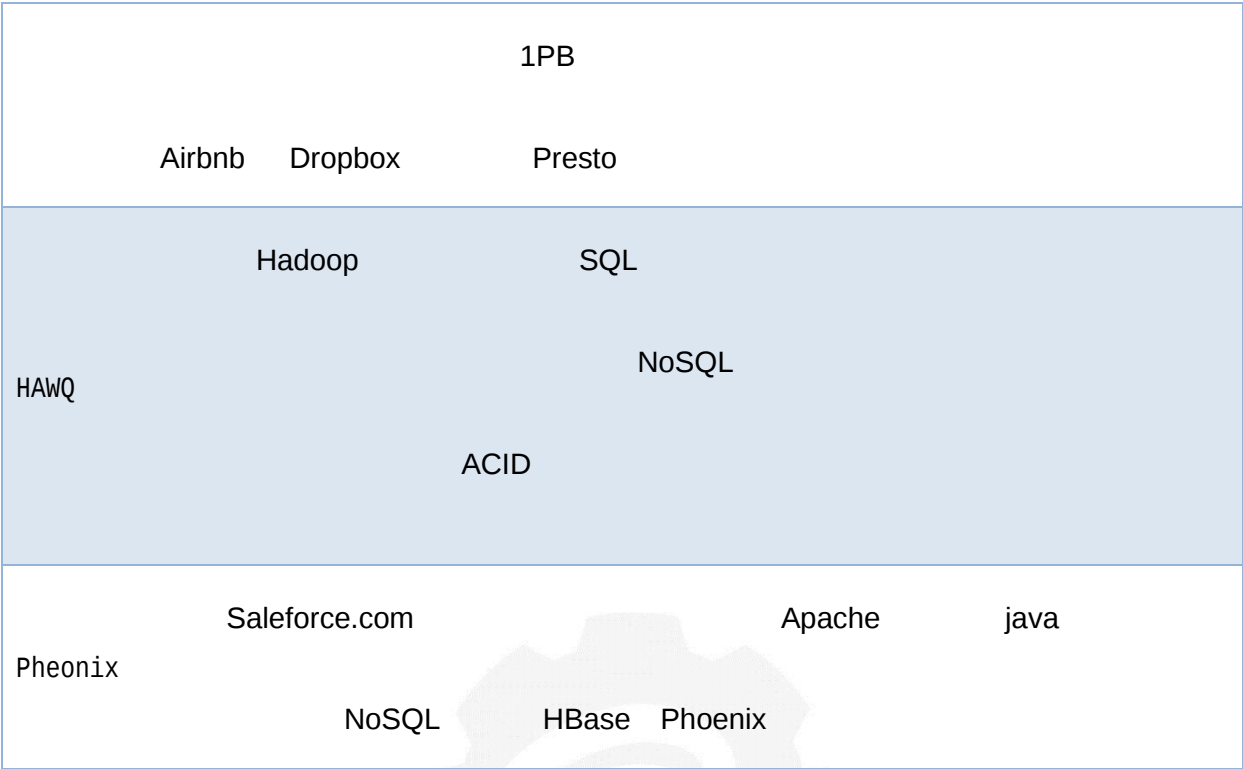


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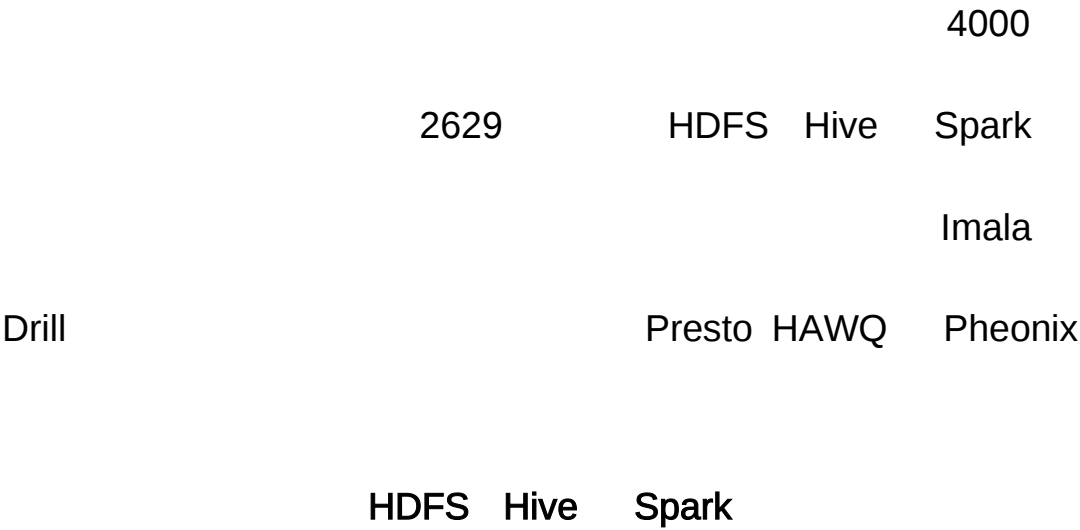


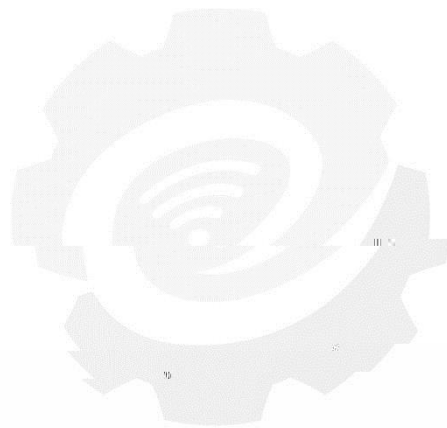


2.2

2.2.1 HDFS Hive Spark

2009 工业/互联网产业联盟





工业互联网产业联盟

addo

Spark

2009

2016

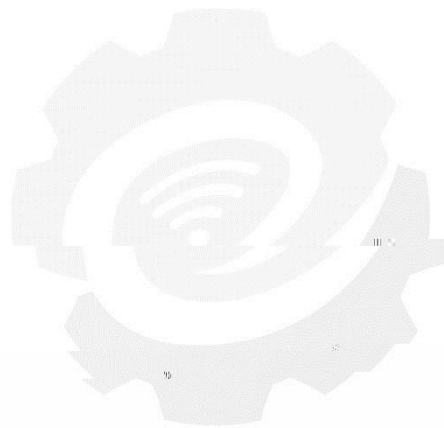
910

579

Spark

Hive

MapReduce



工业互联网产业联盟

HAWQ

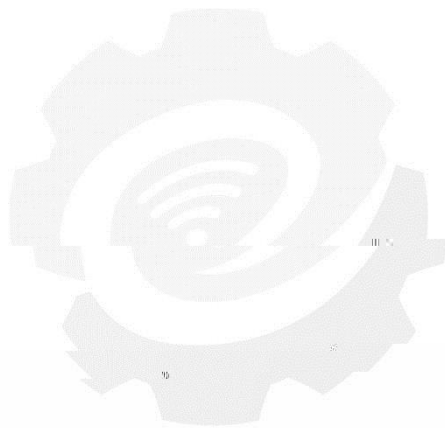
2.2.2

24%



2-3-6

2.2.3 IBM FACEBOOKD 57BDC BT1 0 0 1 399.7 2850 1 4240BDC B/F16 14.04



工业互联网产业联盟

Hive

Hive

Hadoop

Spark

Spark

Spark

工业互联网产业联盟

Pheonix

Pheonix

3.

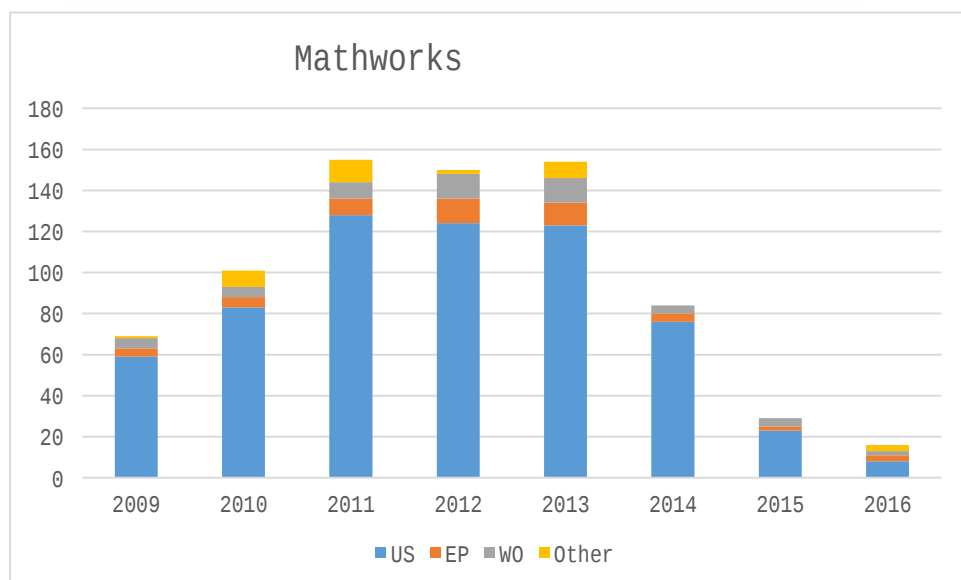
3.1 Mathworks

Mathworks

1679 2009

2011

2013



2-3-7 Mathworks

Mathworks

Mathworks

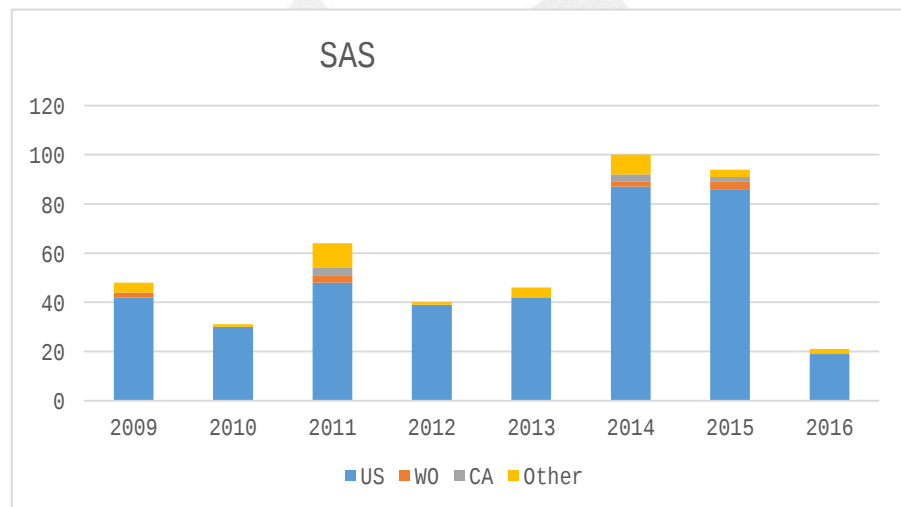
3.2 SAS

SAS

1976 SAS

SAS INSTITUTE INC

SAS



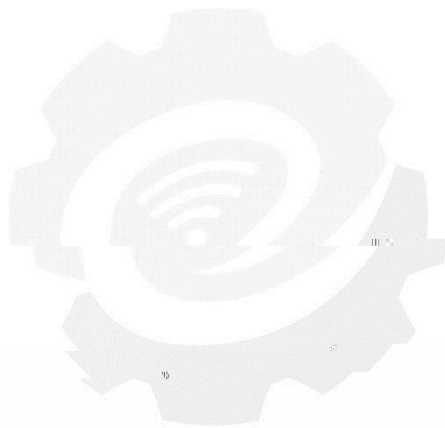
2-3-8 SAS

SAP

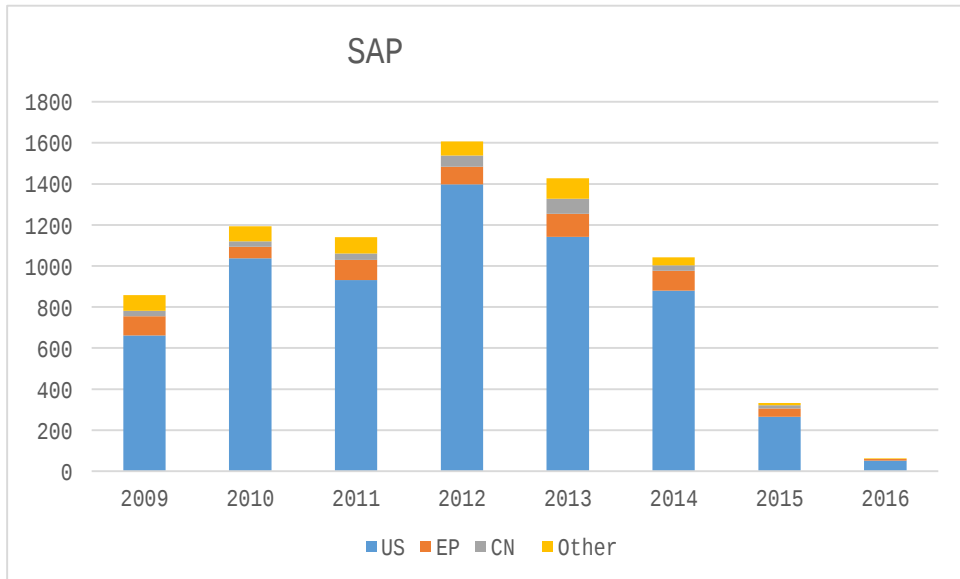
SAS INSTITUTE INC

694

2009



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SAP

2-3-9 SAP

SAP

工业互联网产业联盟

4.

4.1 Pivotal software

Cloud Foundry

GreenPlum

Pivotal software

Pivotal

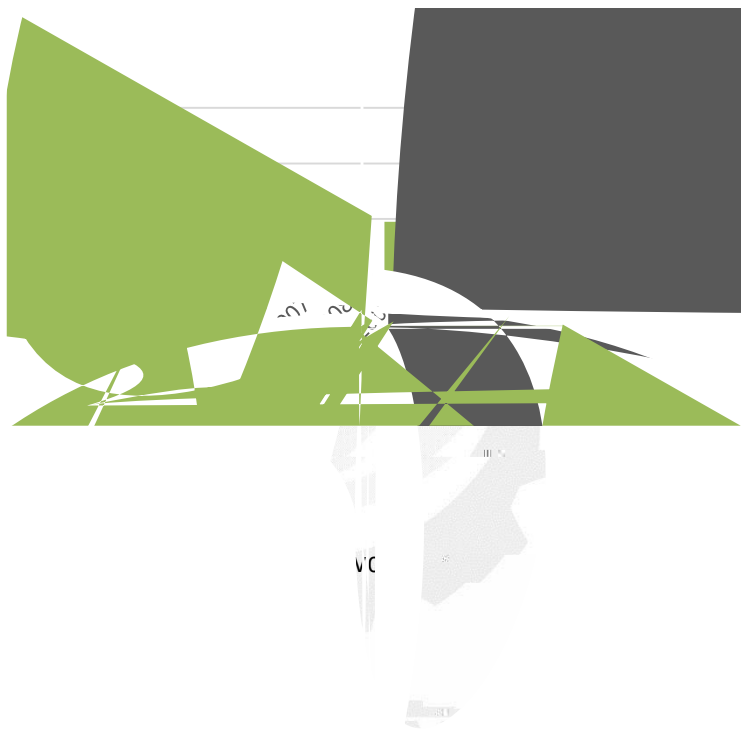
Pivotal One

Pivotal

Pivotal

4.1.1 Pivotal

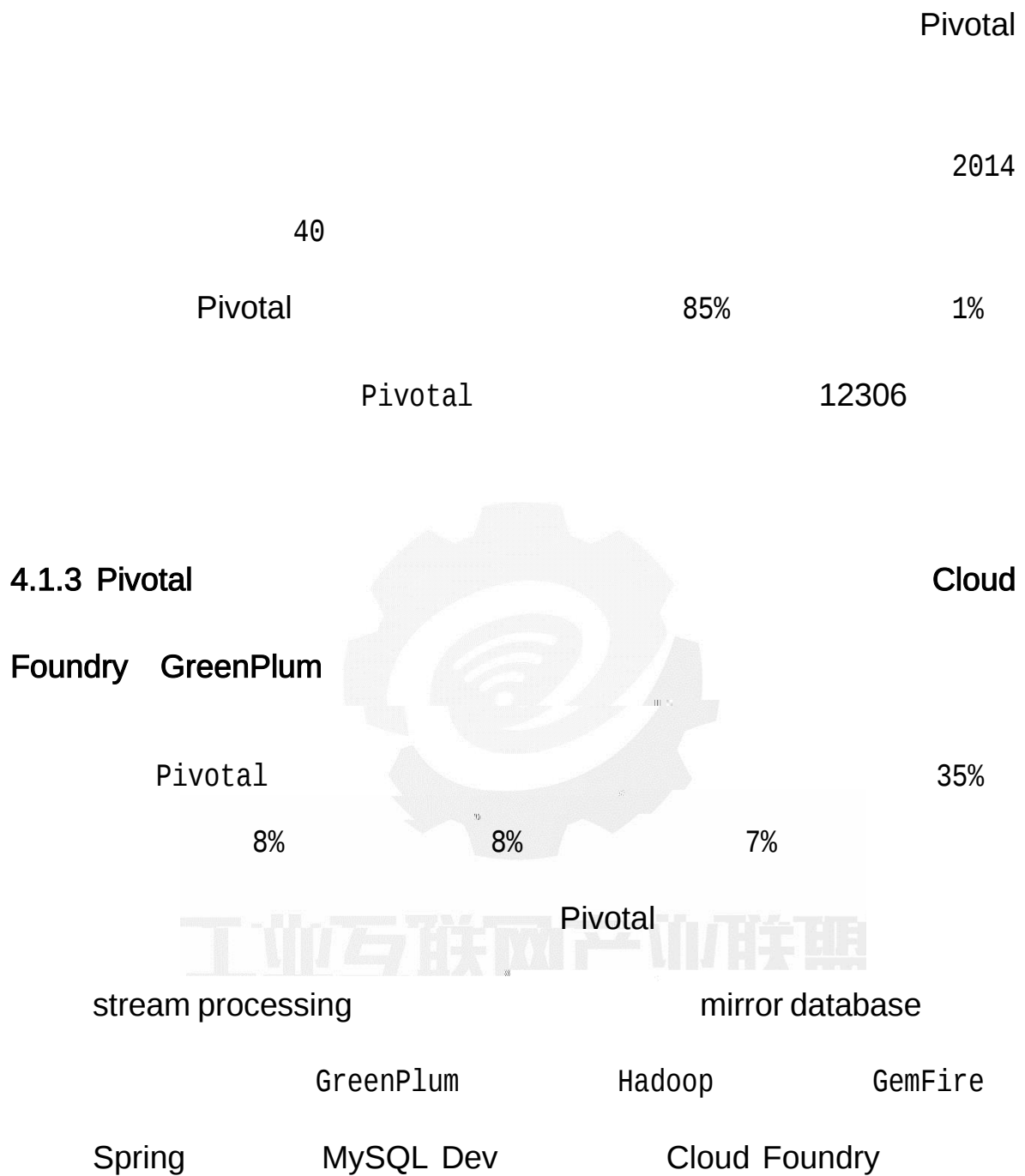
VMware EMC

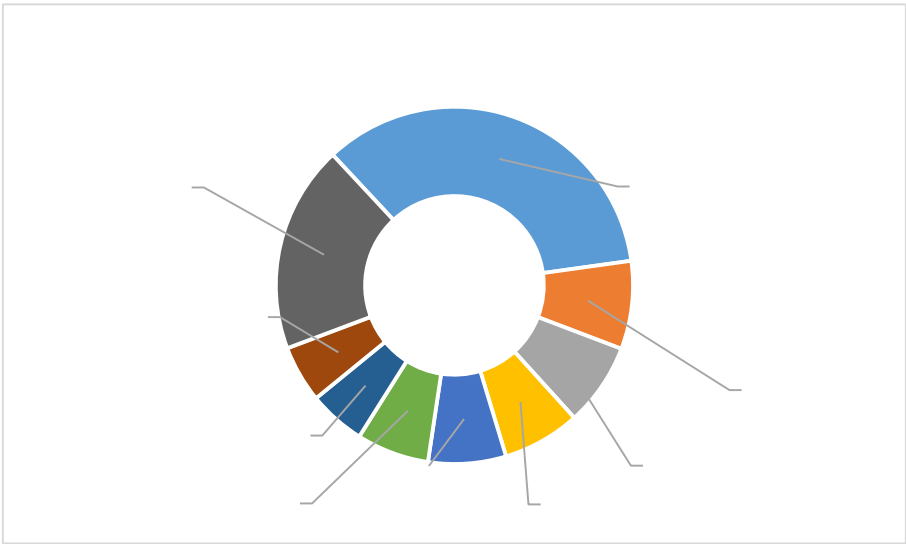


l P.

18.

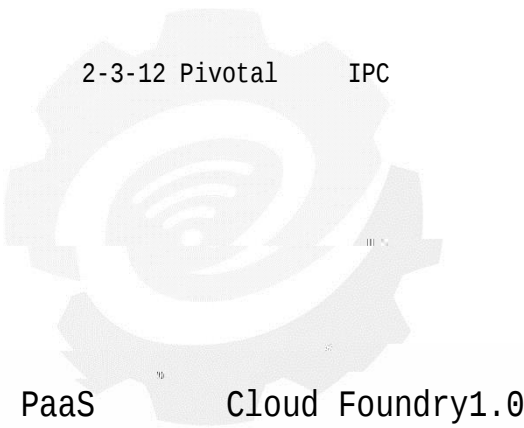
ware





4.2 VMware

VMware



4.2.1 VMware

VMware

1032

2001

VMware

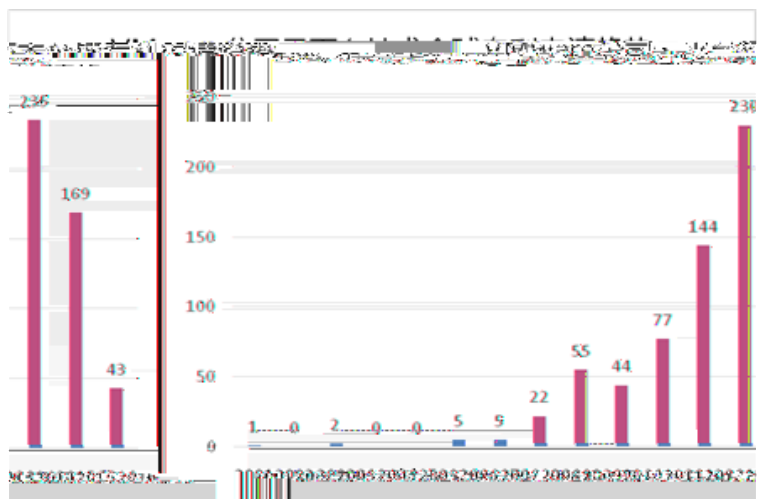
2008

VMware

2014

235

VMware



2-3-13 VMware

4.2.2 VMware

VMware

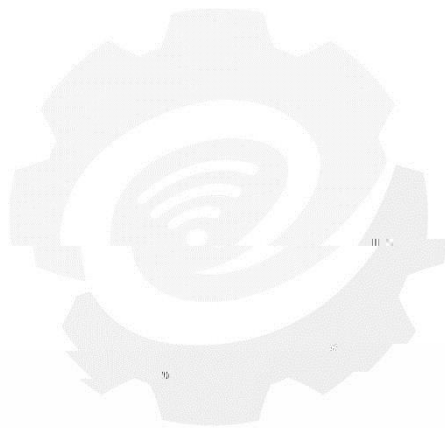
89%

VMware

工业石联网产业联盟

2-3-14 VMware

VMware



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