

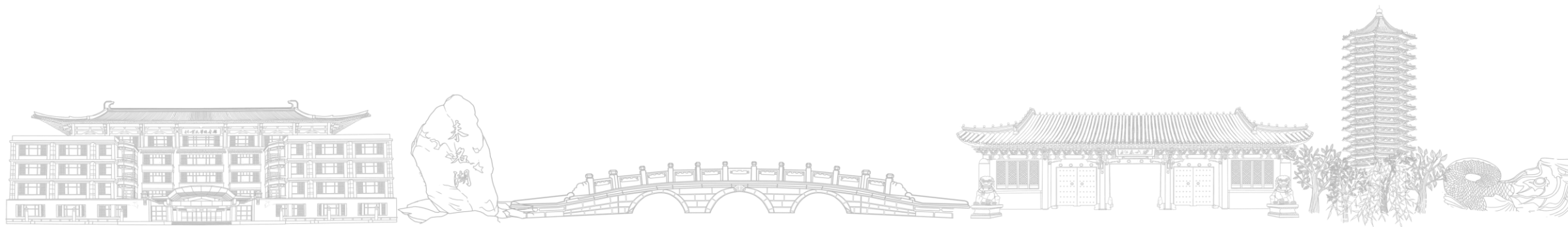
# Challenges and Opportunities in China CERNET Identity Federation (CARSI)

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WANG BO

Peking University, CERNET, China



# Agenda

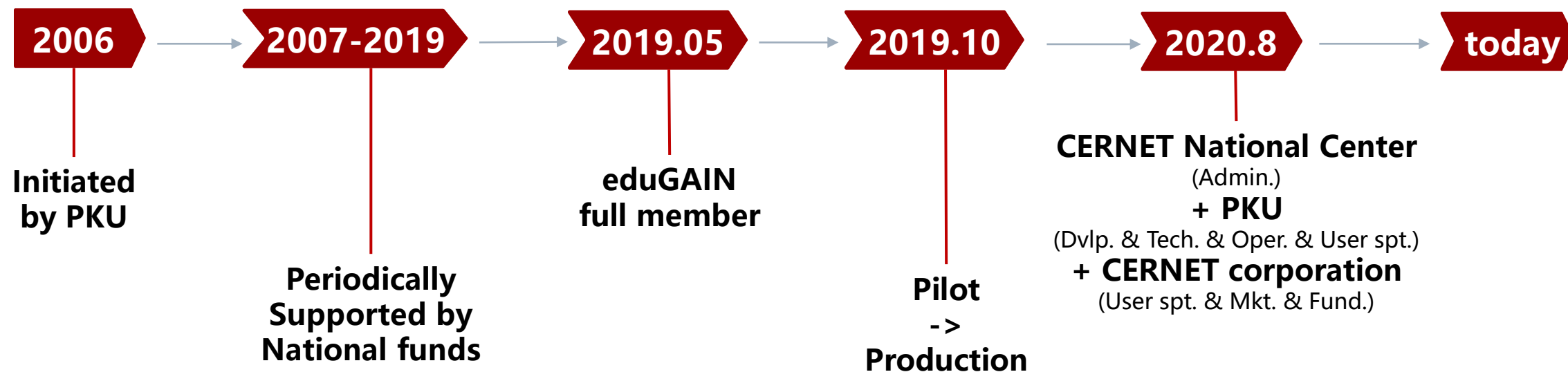
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- ☐ About CARSI
- ☐ Real World Challenges and Opportunities

## About CARSI

### CERNET **Authentication** and **Resource Sharing** Infrastructure

- Chinese NREN Identity Federation
- 104 SPs, 651 IdPs



# Challenges and Opportunities

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## □ Challenges: What motivates IdPs to join CARSI/eduGAIN?

- Does CARSI membership grant free access to SP resources?
- Users: I'm a student from XXX University, I am not able to log in to CARSI!
- Boss: I've heard XXX University already joined CARSI, how about us?
- Other universities: Hey, we've joined CARSI last month, it's awesome!
- Contribute more: How can I recommend a service provider to join CARSI?

## □ Opportunities:

- Easier access to resources
- Resources for free / with lower price / with better pricing options (exclusive discounts, 30-day free trial, and free core features)
- Keep up with the trend: what kind of SPs are popular in the federation (reading papers + AI, HPC, etc.)

# Challenges and Opportunities

序号	服务提供商	资源/产品名称	访问链接	访问流程	服务开通
81	Elsevier	ENGINEERING VILLAGE COMPENDEX	<a href="https://www.engineeringvillage.com/">https://www.engineeringvillage.com/</a>	查看	查看
82	Elsevier	EMBASE	<a href="https://www.embase.com/">https://www.embase.com/</a>	查看	查看
83	Elsevier	REAXYS	<a href="https://www.reaxys.com/">https://www.reaxys.com/</a>	查看	查看
84	Elsevier	CLINICALKEY	<a href="https://www.clinicalkey.com/">https://www.clinicalkey.com/</a>	查看	查看
85	Elsevier	SCOPUS	<a href="https://www.scopus.com/">https://www.scopus.com/</a>	查看	查看
86	Elsevier	SCIENCEDIRECT	<a href="https://www.sciencedirect.com/">https://www.sciencedirect.com/</a>	查看	查看
87	爱墨瑞得（北京）信息科技有限公司	EMERALD INSIGHT	<a href="https://www.emerald.com/insight">https://www.emerald.com/insight</a>	查看	查看
88	Encyclopaedia Britannica Australia Ltd	大英百科学术版	<a href="https://shibboleth.eb.com/edugate/bol">https://shibboleth.eb.com/edugate/bol</a>	查看	查看
89	European Molecular Biology Organization (EMBO)	EMBO Press	<a href="https://www.embopress.org">https://www.embopress.org</a>	查看	查看

# Challenges and Opportunities

ds.carsi.edu.cn/resource/resource\_en.php

CARSJ 教育网联邦认证与资源共享基础设施  
CERNET Authentication and Resource Sharing Infrastructure

About CARSJ News Resources Members Documentation JOIN Contact Us 北京大学教师

Home > Resources

## CARSJ Resources

mb Search All Resources

共13条结果 ☐ Show My School visit low to ...

Resource (10  
Type 项)  
Subject (7项)

EMBOpress EMBO Press 个人可购买	Cambridge Core	Parallels Desktop for Mac 试用 个人可购买
OVID EMBASE数据库	德古意特美国大学出版社电子书	德古意特在线 校购
德古意特拉丁语大词典和文学在线 校购	尼采在线数据库	马恩全集电子书

# Challenges and Opportunities

[首页](#) > [应用资源](#) > [资源详情](#)



## EMBO Press

EMBO出版平台 (EMBOPRESS.ORG) 是一个用于展示EMBO科学出版物的独立出版平台, 其五种期刊 (THE EMBO JOURNAL, EMBO REPORTS, EMBO MOLECULAR MEDICINE, MOLECULAR SYSTEMS BIOLOGY, LIFE SCIENCE ALLIANCE) 发表了全球生命科学的重要进展, 涵盖从计算、合成和系统生物学到分子医学。

类型及数量: 全文 2.8万篇, 电子期刊 5种

学科: 物理学, 生物工程, 基础医学, 临床医学

语种: 英文

出版商: European Molecular Biology Organization (EMBO)

个人购买: 支持

访问流程: 查看

个人收藏: ☐ 注: 加入收藏的资源会优先展示

提示: 高校用户只能访问本校购买的资源, 如不确定资源购买情况请于本校信息网络中心或图书馆联系。

# Challenges and Opportunities



AI Academic Search for Scientists - Solving Scientific Problems

Ask any scientific question

Auto Discipline-All Disciplines



Powered by AISI



The impact of the intracellular environment on protein folding stability



How to design catalysts for efficient water splitting?



Controlled-release fertilizers in rubber tree seedlings.



How to infer sparsity structures in high-dimensional data statistically?



How to ensure renewable energy stability in smart grids?

## Recommended

Default



Journal of the American Medical Directors Association

2020-03-01 | 334 | Citations 923

Open Access PDF

Asian Working Group for Sarcopenia: 2019 Consensus Update on Sarcopenia Diagnosis and Treatment

Liang-Kung Chen Jean Woo +25



2005 IEEE Computer Society Conference on Computer Graphics and Communications

2022-12-10 | 140 | Citations 13,196

Open Access PDF

Histograms of Oriented Gradients for Human Detection

Navneet Dalal Bill Triggs +2

Abstract: We study the question of feature sets for robust



2017 IEEE Conference on Computer Vision and Pattern Recognition

2017-07-01 | 223 | Citations 25,717

Open Access PDF

Densely Connected Convolutional Networks

Gao Huang Zhuang Liu +3

Abstract: Recent work has shown that convolutional networks can be substantially deeper, more accurate, and efficient to

SciL



# Challenges and Opportunities

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## 玻尔为CARSI联盟高校师生提供**专属权益**



### 关于CARSI

中国教育和科研计算机网联邦认证与资源共享基础设施（CERNET Authentication and Resource Sharing Infrastructure），简称CARSI，为已经建立校园网统一身份认证的高校和科研单位，提供联邦认证和全球学术信息资源共享服务。

玻尔已全面接入CARSI，全国 1000+ 所高校的师生可以用校园网身份直接登录玻尔，获取专属权益～



### 使用CARSI登录，每日可免费领取 300 光子

（每日领取，当天有效）

AI科研助手与翻译功能全新升级  
使用**光子**解锁多种高级模型：科研加速，快人一步！

**Auto**  
适合日常科研问答

**Pro**  
知识挖掘更加深入

**深度思考(R1)**  
DeepSeek 科研推理模型

更多CARSI用户专属权益持续更新中，敬请期待～

CARSI登录

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# Challenges and Opportunities

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## □ Challenges: What motivates SPs to join CARSI/eduGAIN?


- I can easily access to 600/6000 universities in the federation, without charge?!
- Users: I've put our purchased SP links on our library website, can you give me yours?
- Boss: XXX Journals is in CARSI/eduGAIN, how about us?
- Boss: Let us be the 1<sup>st</sup> SP of “reading papers with AI”, hurry!
- Contribute more: This year we'll release a new product, we want to use CARSI for authentication too!

## □ Opportunities:

- Easier access to teachers/students with a standard way
- CARSI's voice reaches to the end users, newsletters, resource portal, work groups
- New SP products
- IP range => CARSI everywhere, a different business model

# Challenges and Opportunities

Full memeber (IdP)

 Online: 888
  Debugging: 196
  Total: 1084

ALL ▼	school name	Search	Service Provider (SP)	Join CARSI
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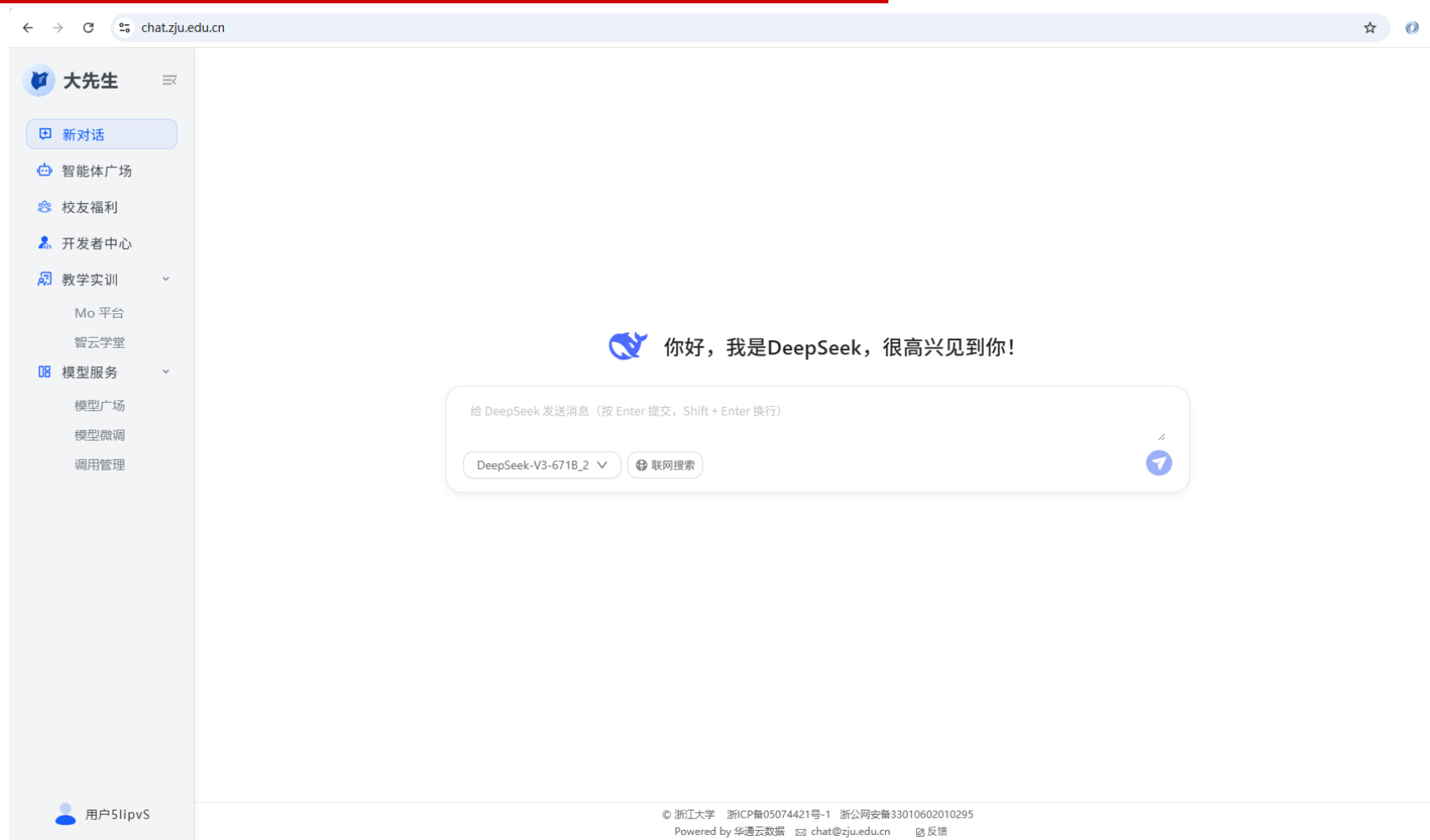
  

No	University	IdP URL	Online Date ▲▼	Status
1	Peking University	https://idp.pku.edu.cn/idp/shibboleth	2019-06-01	Online
2	Xiamen University	https://idp.xmu.edu.cn/idp/shibboleth	2019-06-25	Online
3	EAST CHINA NORMAL UNIVERSITY	https://idp.ecnu.edu.cn/idp/shibboleth	2019-07-12	Online
4	Shenyang Agricultural University	https://idp.syau.edu.cn/idp/shibboleth	2019-07-15	Online
5	University of Science and Technology of China	https://idp.ustc.edu.cn/idp/shibboleth	2019-07-26	Online
6	Shandong University	https://idp.sdu.edu.cn/idp/shibboleth	2019-09-20	Online
7	Xi'an Jiaotong-Liverpool University	https://idp.xjtlu.edu.cn/idp/shibboleth	2019-10-08	Online
8	Changchun University of Science and Technology	https://idp.cust.edu.cn/idp/shibboleth	2019-10-18	Online
9	Zhejiang Gongshang University	https://idp.zjgsu.edu.cn/idp/shibboleth	2019-10-23	Online
10	Shanghai University of Finance and Economics	https://idpcarsi.shufe.edu.cn/idp/shibboleth	2019-10-29	Online
11	Tianjin University	https://idp.tju.edu.cn/idp/shibboleth	2019-10-31	Online
12	RENMIN UNIVERSITY OF CHINA	https://idp.ruc.edu.cn/idp/shibboleth	2019-11-04	Online
13	Tsinghua University	https://idp.tsinghua.edu.cn/idp/shibboleth	2019-11-05	Online

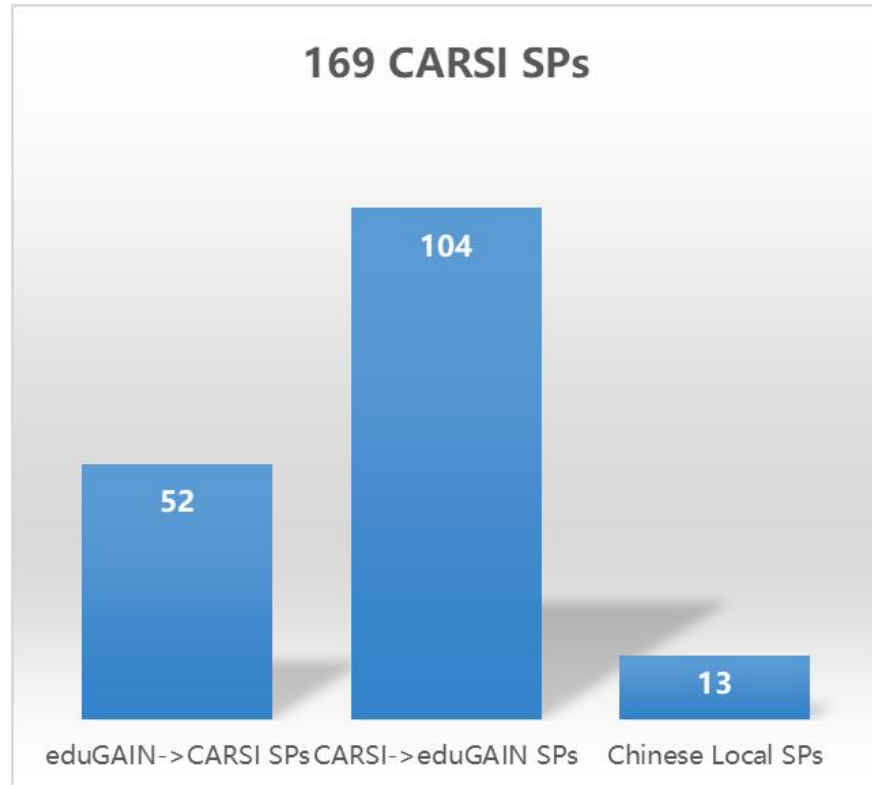
# Challenges and Opportunities



# Challenges and Opportunities



# Challenges and Opportunities



## □ Resources

- Papers: e-journals, e-books, dissertations and thesis, and other lib res.
- Patents, research data, research reports/projects, multimedia resources, .....
- Teaching, researching & IT assistance: software, pdf tools, paper tools, online virtual labs, PKI Certs, .....
- Public services: Bus card, Campus 5G Private Net, etc.
- AI resources

# Challenges and Opportunities

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## □ Challenges: Why IdPs and SPs are still hesitating?

- How can I set up an IdP server? Can your team assist us with the technical configuration?
- As an SP unfamiliar with SAML/Shibboleth, how do we integrate with CARS?
- How to protect user privacy from SP perspective?

## □ Opportunities:

- Easier technical solution, standing on the shoulders of giants: Shibboleth, eduPerson, SAML, eduGAIN, CAS, OAuth 2.0, GEANT, REFEDS, other federations, communities, work groups, etc.
- SP Gateway: SAML => OAuth 2.0
- User properties, as less as possible, data always within university
- Sensitive data: IdP release the hash, SP collects from end user, verify whether they match

# Challenges and Opportunities

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```
[carsi@www ~]$ sudo sh ./idp512-openeuler-anolisos-jetty11-install.sh
Install shibboleth idp at 2024.04.22 15:18:24
Shibboleth IdP 5.1.2 is installing.
Script Version v5.1.2
Checking Internet access...
Check Internet access success!
Setting timezone...
Install tar ...
Install zip and unzip...
Testing installing envirenment...
Check shibboleth idp installation file success!
Check Jetty installation file success!
```

Please chosing your idp authentication type...

- 1.LDAP(easiest way)
- 2.CAS
- 3.Oauth2
- 4.Tencent WeChat Work
- 5.exit

Please enter your choice:

```
download fileforldap1 success!
download fileforldap2 success!
download fileforldap3 success!
download fileforldap4 success!
download fileforall1 success!
download fileforall2 success!
download fileforall3 success!
download fileforall4 success!
download fileforall5 success!
download fileforall6 success!
download fileforall7 success!
download fileforall8 success!
download fileforall9 success!
download fileforall10 success!
```



# Challenges and Opportunities

Information Release



CERNET 联邦认证与  
资源共享基础设施

您将要访问此服务:

CARSi线上环境测试DS服务 of CARSI

此服务的描述信息:

<https://dspre.carsi.edu.cn/ds/index.html>

提供给服务的信息

Scoped affiliation

faculty@pku.edu.cn

以上信息会被共享给您操作的服务。您是否同意每次访问此服务时都共享这些信息?

选择发布信息的时长:

☐ 下次登录时再次提示

☒ 当提供给此服务的信息变化时再次提示我

☐ 不要再次提示我

我同意 我同意 我同意

我同意 我同意 我同意

我同意 我同意 我同意

接受

拒绝

此设置可以在登陆页面中勾选上复选框来取消

证书查看者: idp.pku.edu.cn

基本信息(G)

详细信息(D)

证书层次结构

▼ USERTrust RSA Certification Authority

▼ TrustAsia RSA OV TLS CA G3

idp.pku.edu.cn

证书字段

▼ idp.pku.edu.cn

▼ 证书

版本

序列号

证书签名算法

颁发者

▼ 有效期

不早于

字段值

CN = TrustAsia RSA OV TLS CA G3

O = TrustAsia Technologies, Inc.

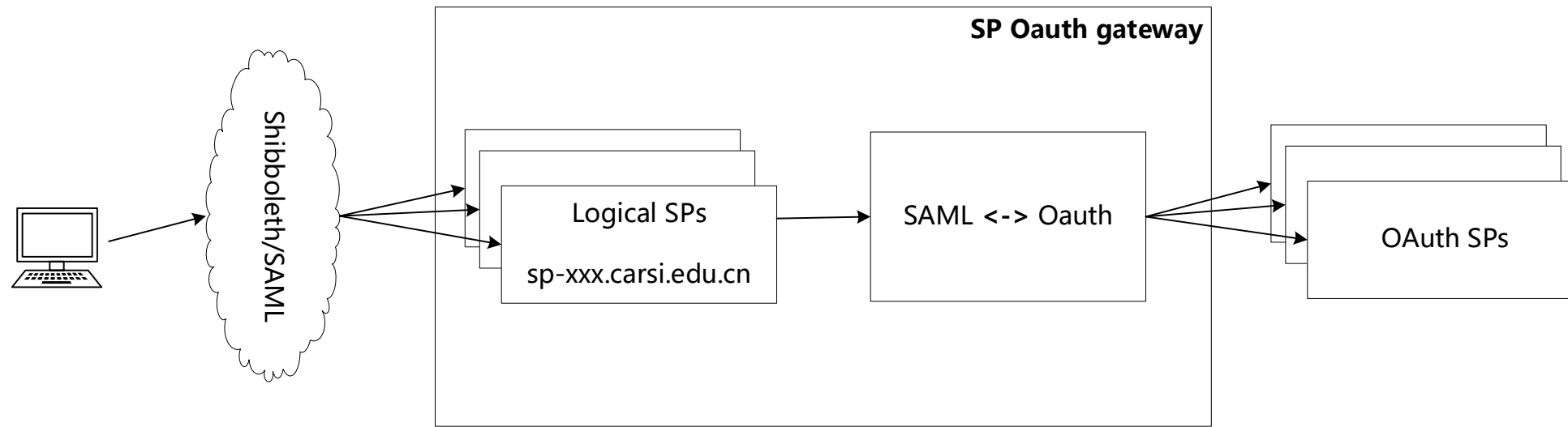
C = CN

导出(X)...

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# Challenges and Opportunities

## □ SP OAuth Gateway



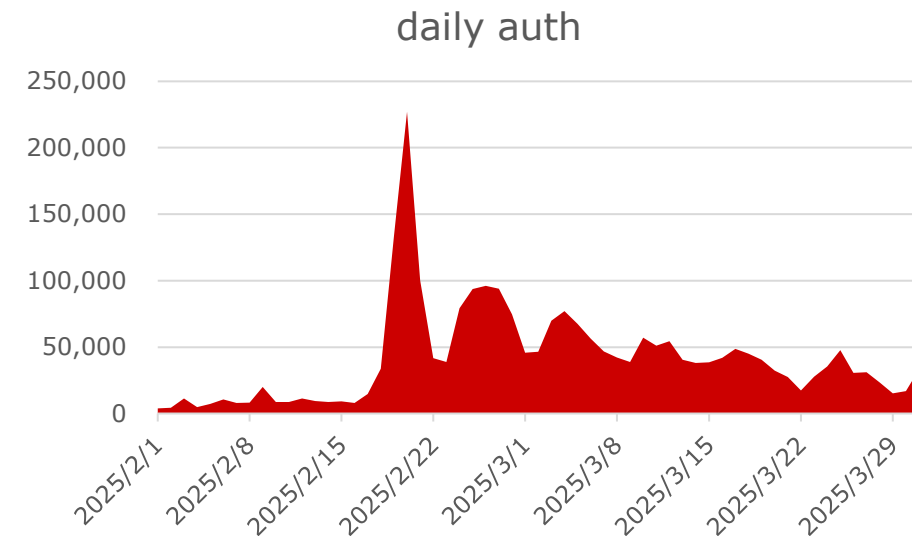
# Challenges and Opportunities

## □ Challenges: Are the users enjoying it now?

- CARSI appears unstable after DeepSeek's recent integration — can you investigate?
- What are the top 10 popular SPs in my university?
- A SP reported a user has downloaded 2,000 papers yesterday, what should I do

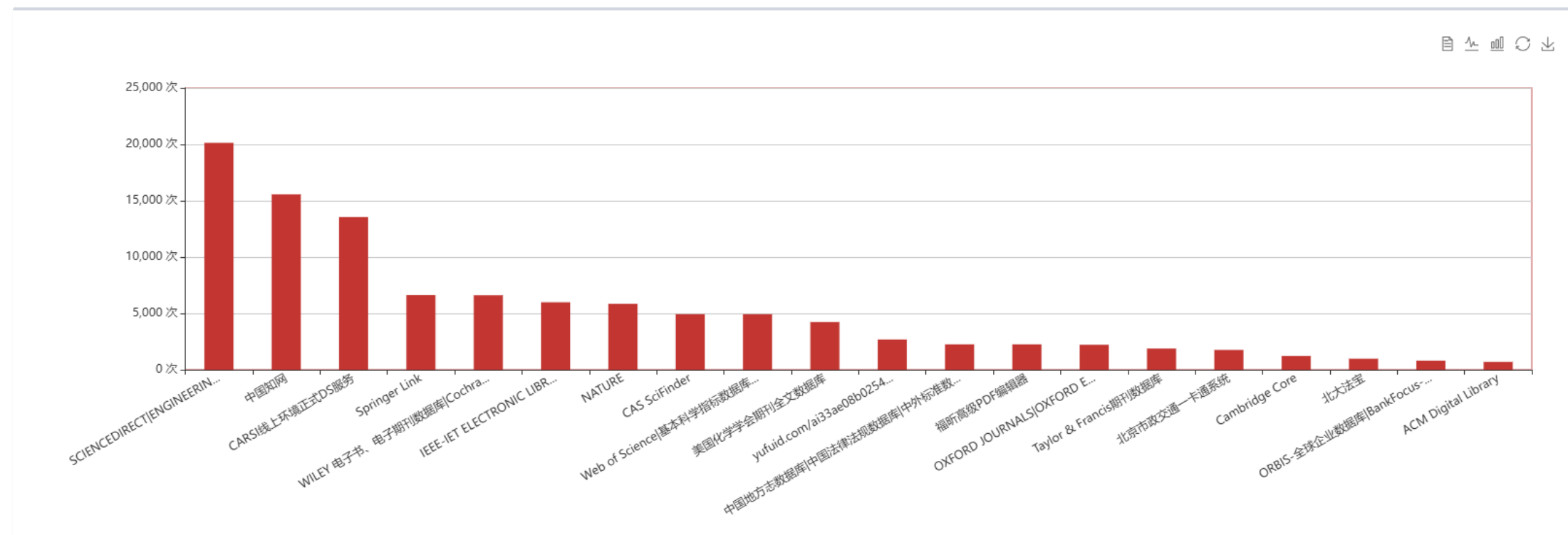
## □ Opportunities:

- Scaling, Maintenance
- Graphical statistics, reports
- Mechanism for preventing abuse: screening, blocking, etc.



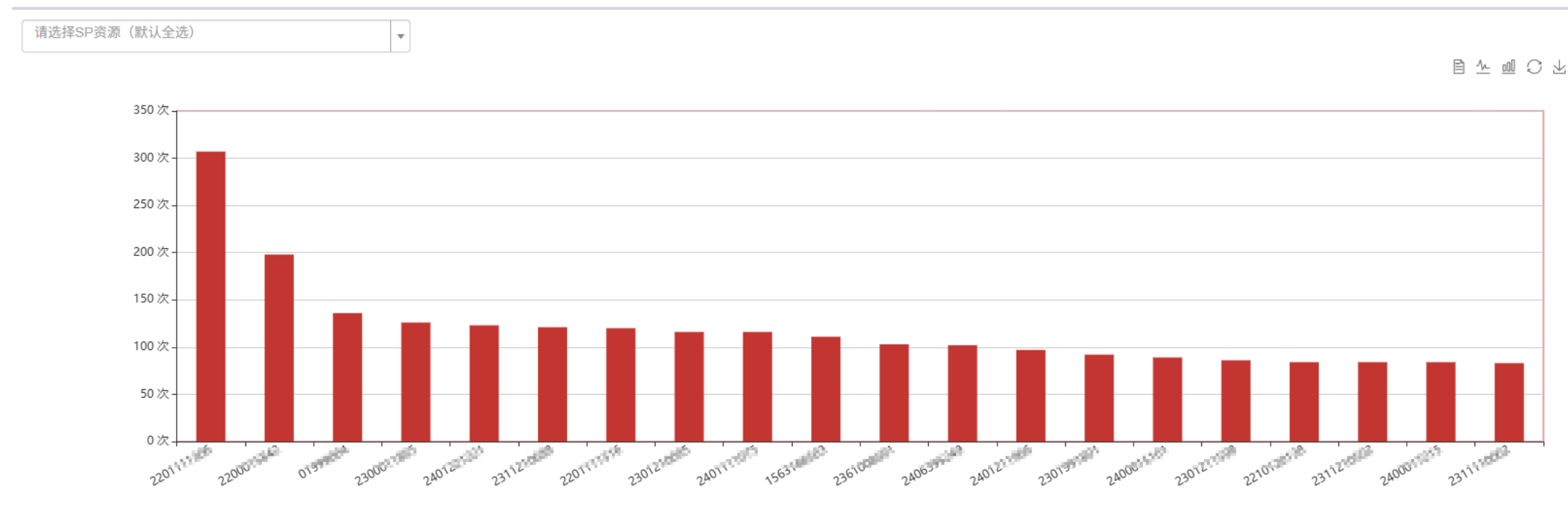
# Challenges and Opportunities

按资源统计



# Challenges and Opportunities

## 按用户统计



# Challenges and Opportunities

## 疑似IdP用户账号违规使用提醒:"[redacted]大学"

CARSI 发送给 [redacted]@pku.edu.cn, [redacted]@pku.edu.cn 抄送 CARSI

▶ 发送成功 查看详情 共发给 3 个收件人, 其中1 个 成功到达对方邮箱, 2 个 成功到达对方服务器

[redacted], 您好!

经CARSI后台监测发现 "[redacted]" (idp.[redacted].cn) 线上IdP在最近一周可能存在用户账号违规使用的情况, 请确认是否正常。登录 [CARSI会员自助服务系统](#) 可详细查询本校CARSI服务运行情况。

账号: [redacted], 过去一周总认证次数: 23688

账号: [redacted], 过去一周总认证次数: 231

账号: [redacted], 过去一周总认证次数: 229

账号: [redacted], 过去一周总认证次数: 229

备注: 此邮件的报警阈值为单个用户的日均认证次超过25次, 即过去一周认证次数超过175次。

谢谢! 祝工作愉快!

北京大学CARSI项目组  
2025-05-26

## CARSI @ TNC25

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### □ CARSI yesterday, today and the coming future

Friday, June 13<sup>th</sup> , 9:00 – 12:30  
SIDE MEETING: REFEDS

SIDE MEETING  
**REFEDS**

Renaissance Suite  
09:00 - 12:30

### □ Federation Management in CARSI

Friday, June 13<sup>th</sup> , 14:00 – 17:30  
SIDE MEETING: eduGAIN Town Hall

SIDE MEETING  
**eduGAIN Town Hall**

Renaissance Suite  
14:00 - 17:30



# Thank you!

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Homepage: <https://www.carsi.edu.cn>

Email: [carsi@pku.edu.cn](mailto:carsi@pku.edu.cn)