



Soluções inteligentes na Educação

Rodrigo Ayres
Gerente de Produtos
+55 61 981231254
rodrigo.ayres@huawei.com

LEADING NEW ICT



Conteúdo

01

**Tendências de
Transformação
na Educação**

02

**Soluções de
Educação
Inteligente da
Huawei**

03

**Casos de
Sucesso**

Países do mundo todo estão se concentrando na construção educacional de TIC



Computer Room for School



Digital Textbook Plan (2011)



Local Elementary Education System Modernization



Learning and Technical Policy Framework



Education "eStrategy" Next-generation Learning Movement (2010)



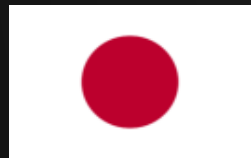
FATIH Project (2010): Movement to Increase Opportunities and Enhance Technologies



'Developmental Strategy on ICT in Education for 2009–2013' 'School for the 21st Century' (ESF)



Transforming American Education: Learning Powered by Technology (2010) ConnectedED (2013)



Educational IT Construction Outlook (2010)



SchoolNet (2013)



Education informatization 10 Year plan (2011)



Mexico "Conectado" Program (2014)



Digital Education Revolution (2008)



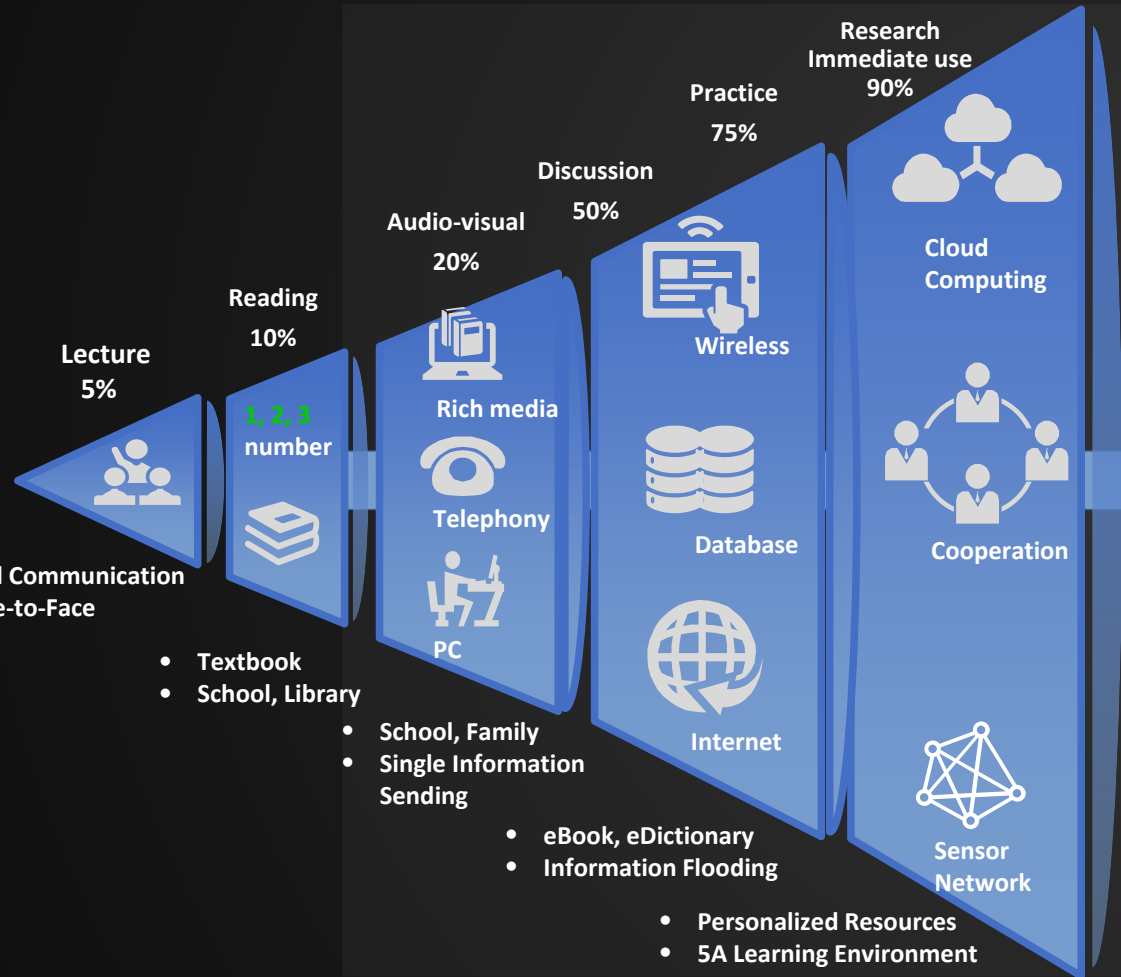
"E-Digital" Transformation



Balboa Project

TIC abre um novo paradigma de educação "centrada no aluno"

TIC permite uma educação mais inteligente



Educação no Futuro



Como a Huawei entende a "Educação Inteligente" para Escolas e Universidades



Educação igualitária



Ensino Interativo



Aprendizagem em todos os lugares



Gestão altamente eficiente



Segurança no Campus



Melhoria das habilidades de ensino

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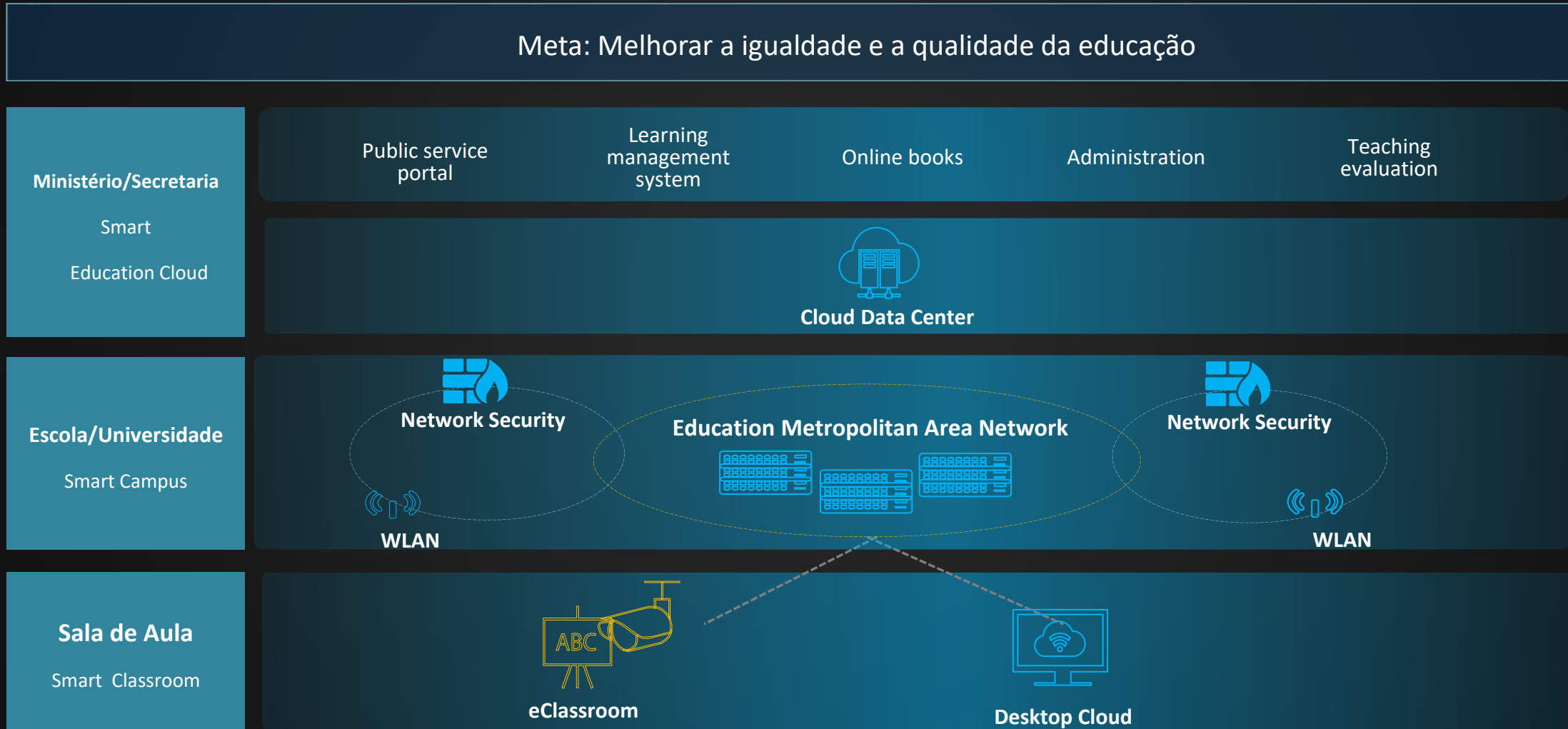
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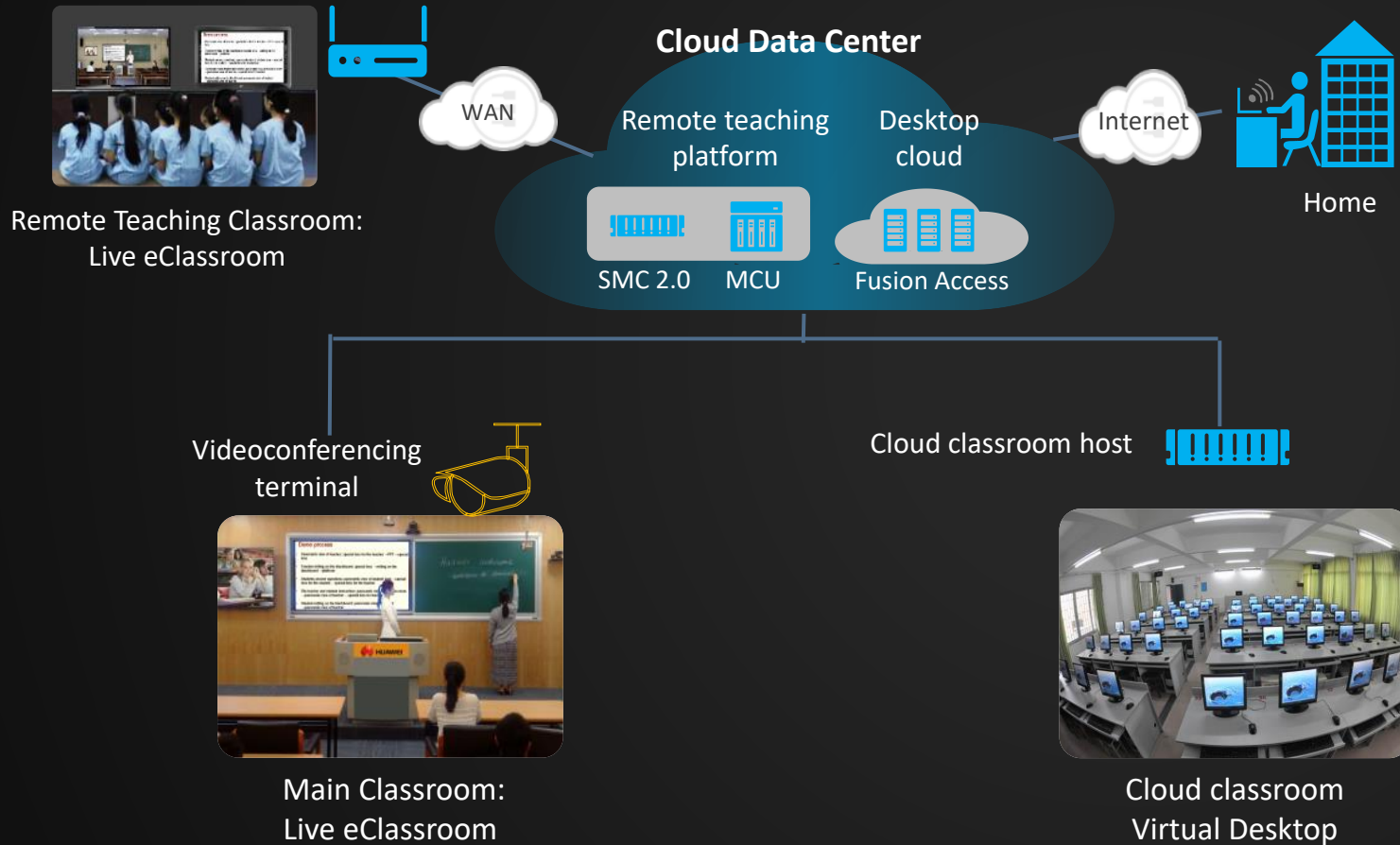
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Visão geral da solução "Smart Education" da Huawei



Smart Classroom



eClassroom: Sharing high-quality resources

- **1080p HD** full-process lesson recording, as well as live broadcasting and offline VoD learning
- Automatic teaching focus tracing based on image recognition, providing remote HD teaching and **immersive** learning experiences

Cloud classroom: Management efficiency increases

- Perfect convergence of teaching applications and desktop management: O&M efficiency **↑10x**
- Huawei-developed HDP (Huawei Desktop Protocol): Better multimedia teaching experience

eClassroom: Ensino Remoto promove a igualdade na educação

Live eClassroom



School A

Branch classroom



School B

Live Virtual Classroom



Office, home, and traveling

Close-up shoots



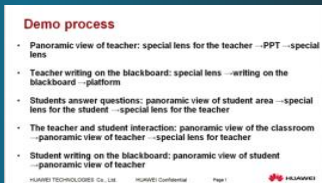
Close-up of the teacher



Panoramic view of the platform



Panoramic view of the students



Courseware



Blackboard

Live eClassroom

- Automatic tracking and intelligent directing: Automatic switchover between panoramic view of the teacher, students, close-up view of the teacher, or blackboard area
- 1080p HD recording/live broadcast/VOD; support access of multiple terminals, anytime, anywhere
- Supports live broadcasts, recording, and online VOD

Document Sharing

- File sharing for Word/PPT/PDF, application and desktop sharing

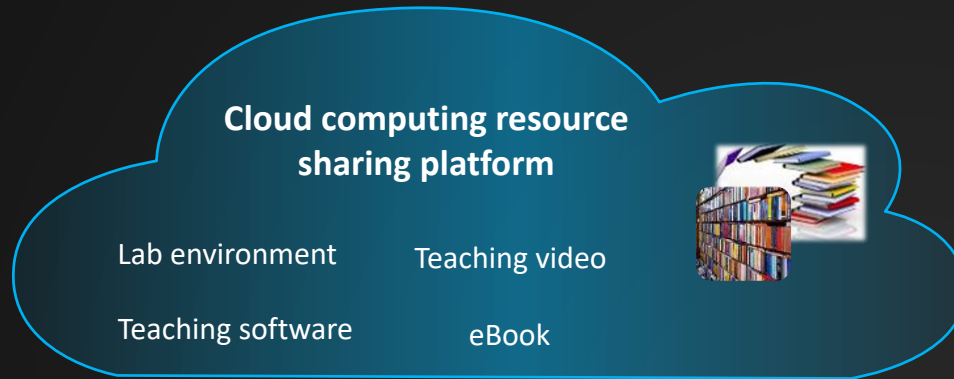
Interactive Whiteboard

- Users can write and draw on shared documents for interaction

Panoramic, interactive, multi-party HD classes; 1080p@60fps dual stream; real-time interaction

Virtual Desktop melhora a experiência de aprendizado e o custo total de propriedade

Large numbers of teaching resources



Various access terminals



Student



Access anytime and anywhere
Rich learning resources

Teacher



Personalized operation system
Access anytime and anywhere

IT Operations Center



Centralized management
Flexible resource allocation

Agility for Teaching

- Anytime, anywhere access with their own desktops from any device (Android, iOS, MAC, Windows, or Linux)
- Centralized control of student's operation, easy for group teaching

High Security

- Data separated from terminals and centralized management ensures data security
- No USB flash drives are required, no virus infection

Low TCO

- Centralized management, flexible upgrades, batch desktop distribution. **2,000 virtual desktops** per maintenance person.
- Multiple classrooms share one resource pool, improving the resource reuse rate

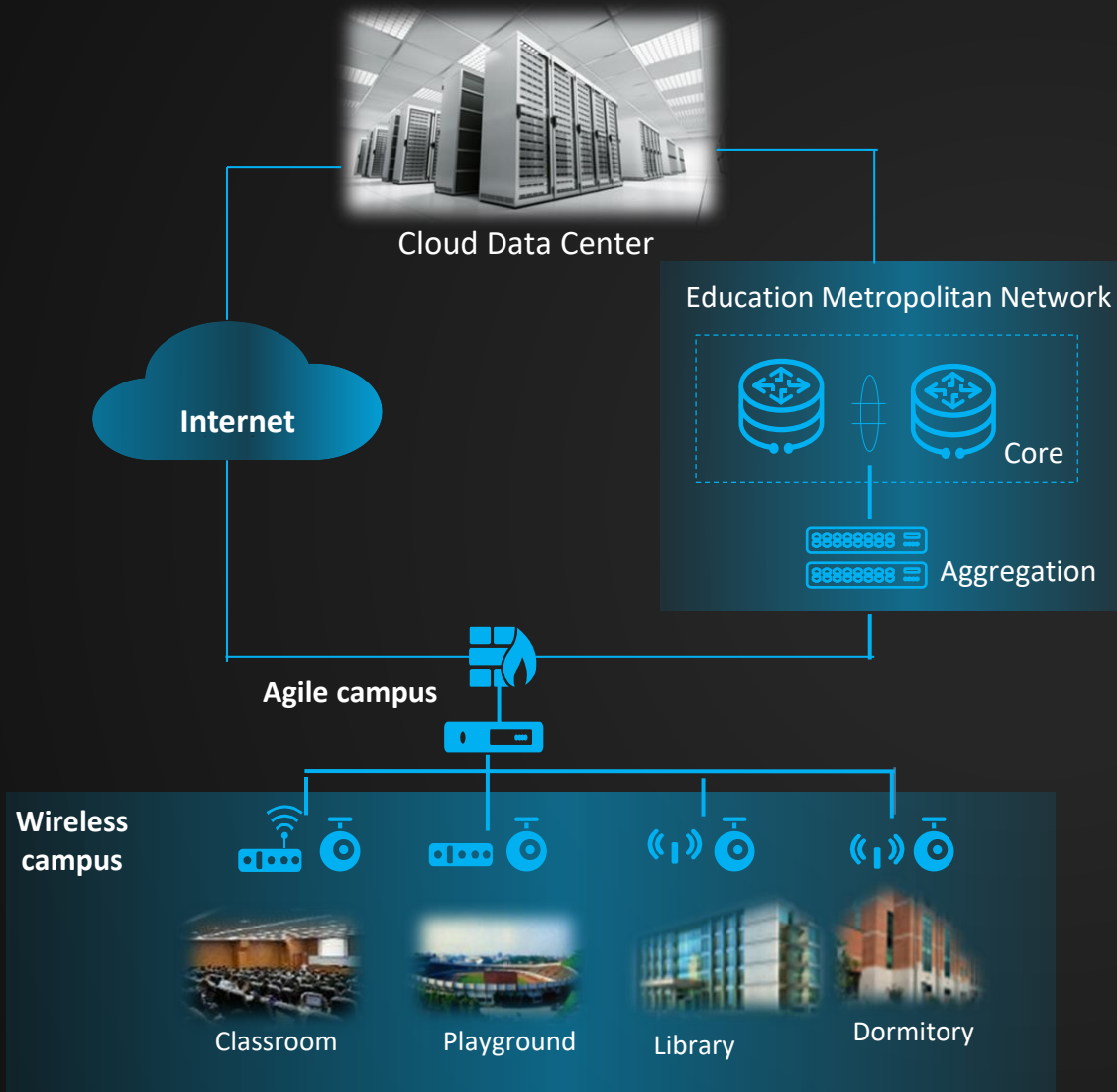
Energy Saving

- Power of a TC is 10W

Reliability

- Lifespan 20% longer than that of a PC

Smart Campus



Education Metropolitan Network

- Reliable interconnection with education administrative organizations
- VPN multi-service transmission ensures service quality

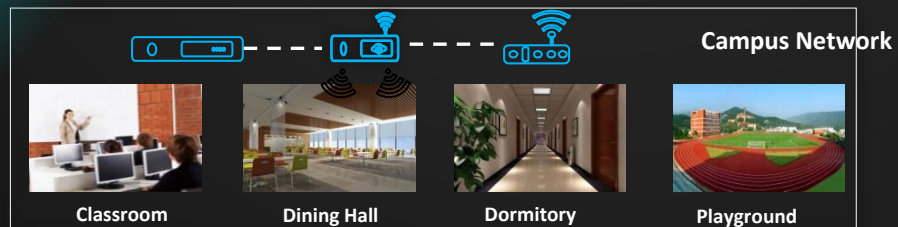
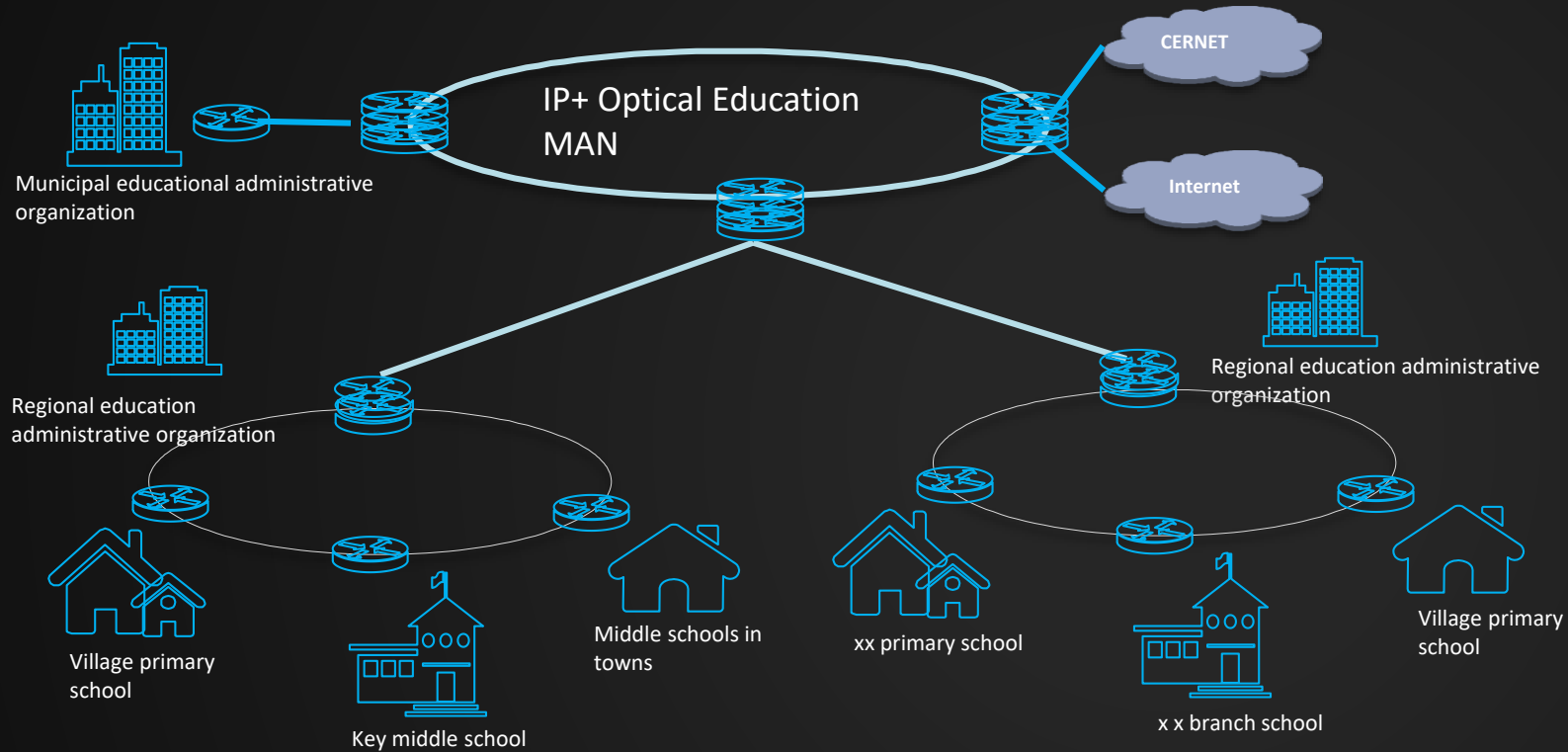
Agile Campus

- Campus network access control, Internet threat prevention, and BYOD service security

Wireless Campus

- Wi-Fi coverage: Seamless Wi-Fi, E2E ultra-wideband experience increases by 30%
- Minimal O&M: Wired/wireless convergence, iPCA, efficiency increases by 50%

Educação MAN, Interconexão entre Escolas



High-speed core network

- Two-layer network structure
- VPN multi-service transmission ensures service quality

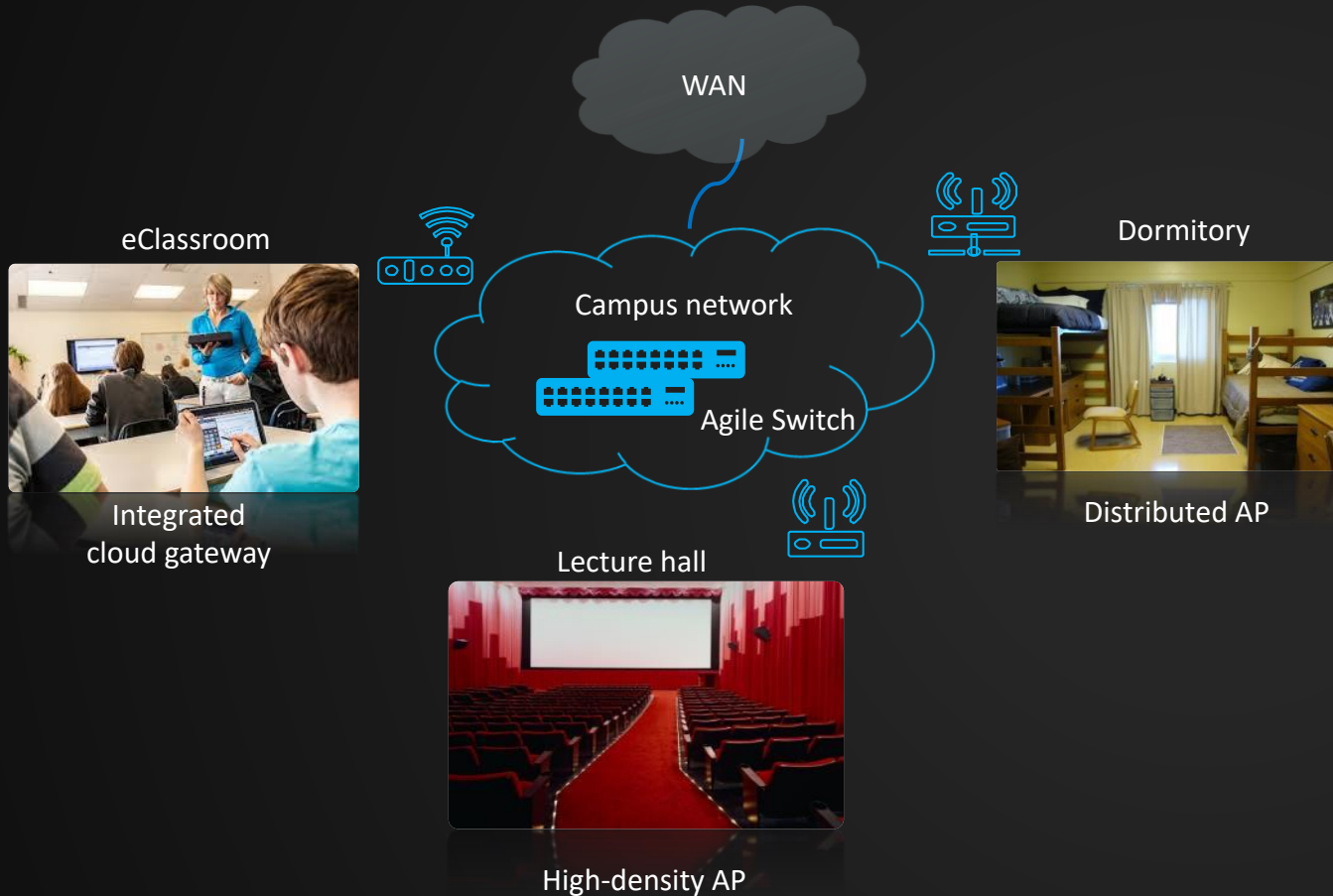
Highly reliable MAN

- Fast convergence of hardware Bidirectional Forwarding Detection (BFD) in 200 ms enables uninterrupted education applications
- 3G network backup for access to the network at any time

High-quality access network

- MPLS VPN multicast scheme ensures the service quality of educational videos
- Five-level QoS scheduling ensures school teaching services first

Wireless Campus Enables Learning Anytime and Anywhere



Cloud-managed Education Network Saved OPEX by 80%+

Distributed Access Points (APs)

Agile network connections in dormitories without dead zones

- Single AP coverage, enabling full signal coverage
- Independent RF module, improving performance

High-density AP

Allowing ultra-speed Wi-Fi experience in large-scale activities

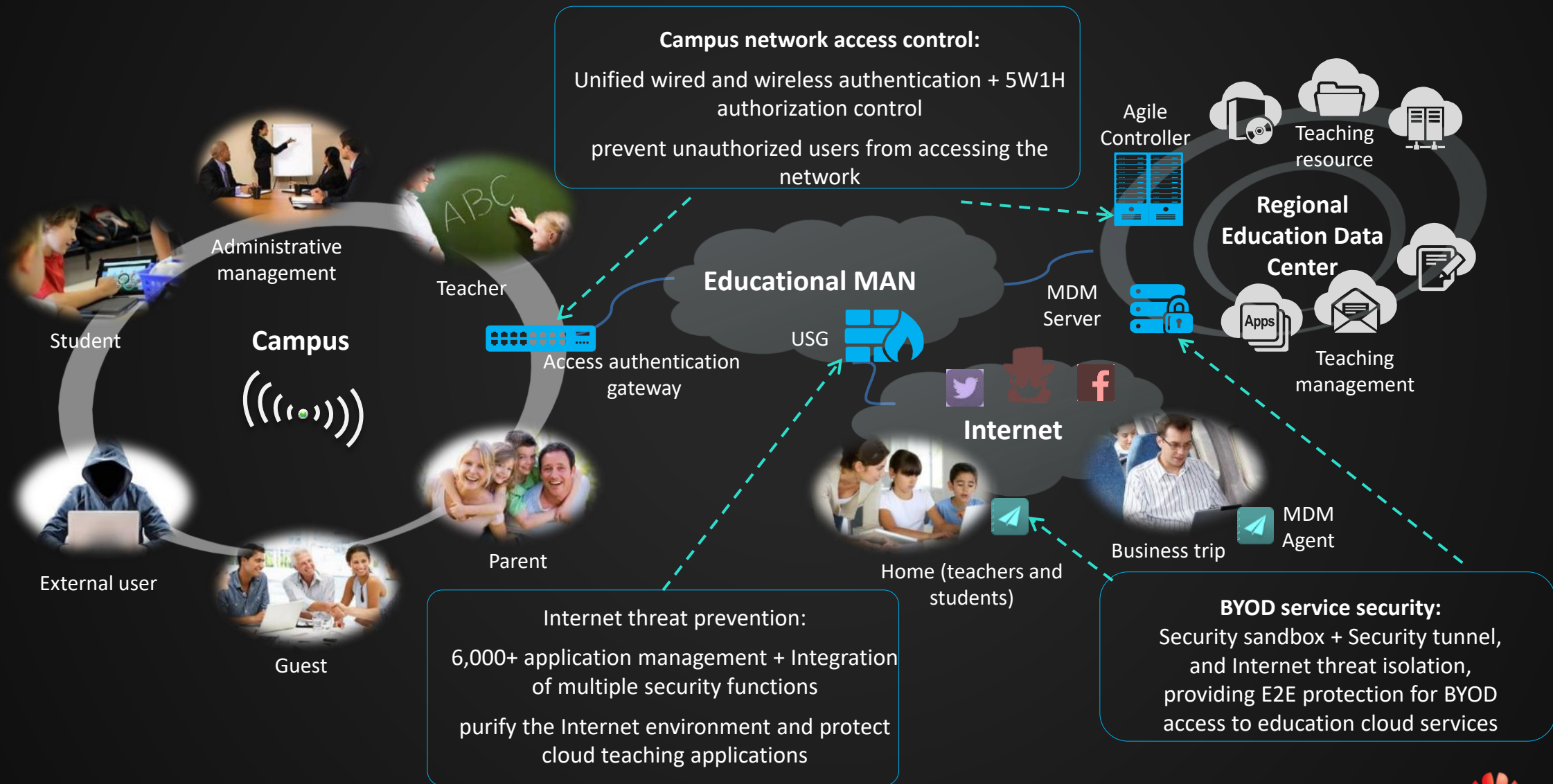
- Multi-User Multiple-Input Multiple-Output (MU-MIMO) user access performance improved by 50%
- Customized antennas, interference decreased by 30% and performance improved by 20%

Integrated cloud gateway

Making interactive classroom deployment easier

- Unified access from eWhiteboards, projectors, mobile devices, and others
- Built-in AP supports teacher-student interaction in eClassrooms

Construindo uma rede de campus segura





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**Casos de
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A Huawei está atendendo clientes em todo o mundo

70+

Países

500,000+

Escolas e
Universidades

858,000,000+

Estudantes

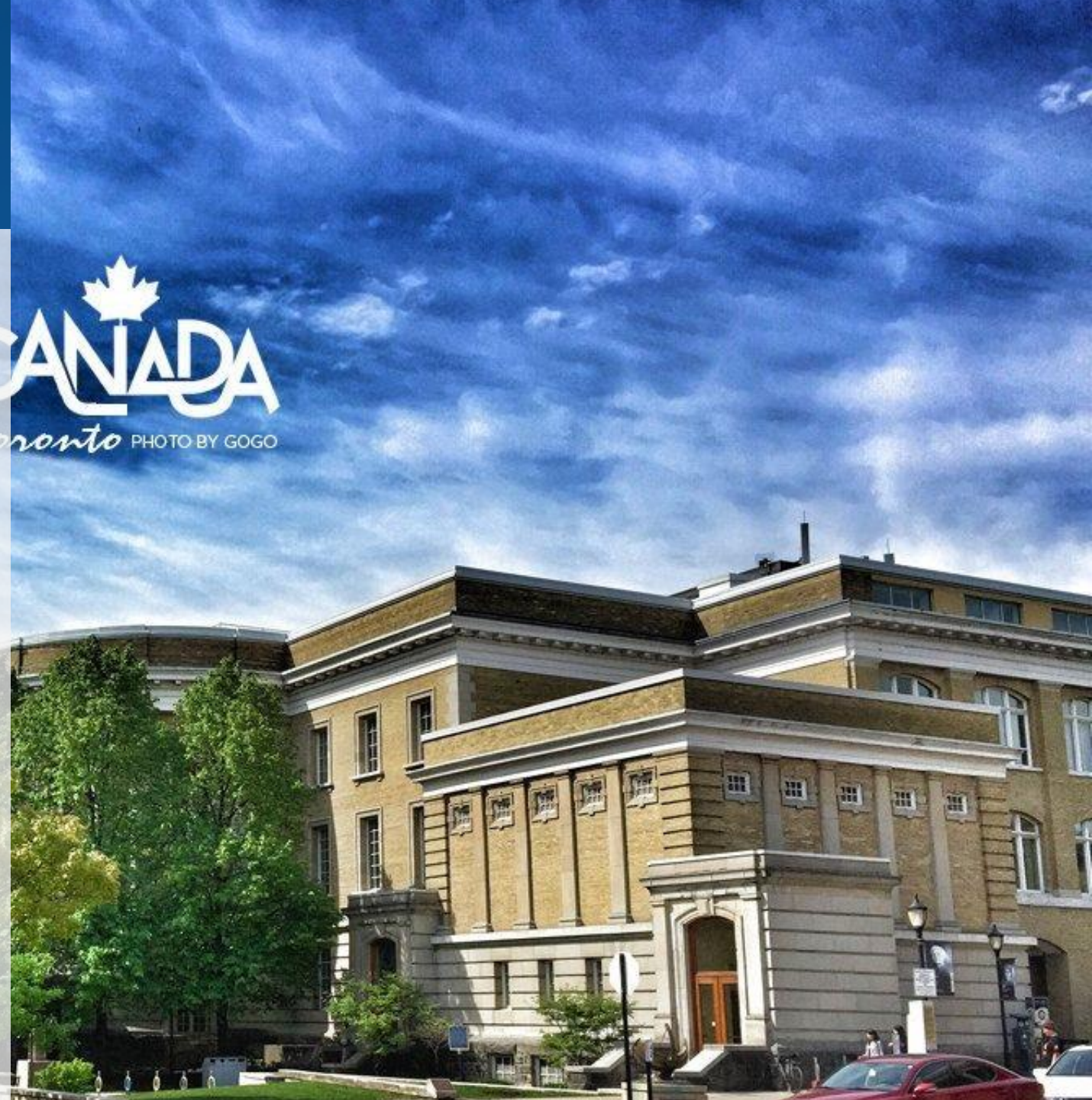
University of Toronto Builds an Ecosystem Modeling Lab for Cutting-Edge Research with Huawei HPC

Solution

- HPC fat nodes FusionServer 8100 V3 (8* Intel Xeon E7 8880 v3 18-core CPUs)
- 1 TB memory, 3 x 7.2K SAS HDDs & 4 x 400 GB SSDs

Benefits

- Up to 12 TB memory capacity per node, 5x the ecosystem modeling computing requirement, enough for long-term expansion
- Shortens the 4D simulation computing result time for the integrated watershed-receiving waterbody model from ten days to four hours



European Nuclear Research Center (CERN): "Helix Nebula" Science Cloud Computing Platform



1000+

high-performance
computing
nodes

World's
largest
particle
accelerator

Single
computing node
with

150k

IOPS

CERN builds the "helix nebula" science cloud simulation platform

1000+ high-performance computing nodes with 150k IOPS per node and 125 MB/s read-write capacity

Brazil RNP: 40 x 100G Backbone Network, Enables Access for Over 1,500 Organizations

40 lambda
100G
OTN

Distance
6,000
Kilometers

Ready for
Future
5-10
Years of
Service

- Provide Internet access for more than **1,500** education and research institutes.
- 40 Wavelength **100G DWDM Backbone network**, 65 sites.
- DWDM solution, longest single span 257 km, total distance of 6,000 km

Core IT Services

- Computer Account Admin
- Desktop Services (PSS)
- Email and Calendaring
- Filestore
- Internet and Network Connection
 - Overview
 - Requirements to Connect
 - Connection Methods
 - Network Services
 - Service Definition
- Software Provision
- Smartcards
- Printing Services (Staff)
- Telephones (staff)

Help & Advice

Teaching & Learning

Communication & Collaboration

Research

Campus Network Upgrade Projects

As part of the Digital Campus Initiative, and in response to Recommendation #1 of the KPMG Review 2011 to "establish a common University infrastructure", the University is investing in a major upgrade to the campus network infrastructure.

The new network will bring a significant uplift in capacity to both the campus core network (4x initially, more later) and various core-to-building connections (10x-40x in most cases) to remove congestion points and lay the ground for pushing network improvements further into buildings as demand increases.

The work to bring the new network online is already underway, and a schedule of planned maintenance to migrate buildings onto the new infrastructure has been drawn up, starting with the Claremont Complex week commencing 3rd February 2014. The rollout will then continue, more slowly initially, but ramping up to approximately 1 building/week through to the end of 2014.

Update -

The majority of the campus of now is using the new [Huawei Campus Network](#). Only 3 Building migrations currently remain:

- Week Commencing 02-03-2014 - Percy Buildings
- Week Commencing 09-03-2014 - Freeman Hospital
- Week Commencing 16-03-2014 - Royal Victoria Infirmary

CERN seleciona T-Systems e Huawei para criar nuvem híbrida europeia

Serviço de nuvem pública aberta vai atender dez das principais organizações públicas de pesquisa da Europa

Da Redação

24/11/2016 às 16h29






Página Inicial > Notícias > PUCRS e Huawei implantam Smart City Innovation Center no Rio Grande do Sul

PUCRS e Huawei implantam Smart City Innovation Center no Rio Grande do Sul

Parceria tem apoio da Procergs e Ceic

INOVAÇÃO 07/10/2015 - 16h31

👍 Curtir 0 Compartilhar   

A PUCRS, por meio das [Faculdades de Informática \(Facin\)](#) e de [Administração, Contabilidade e Economia](#), e a [Huawei](#)  anunciaram hoje uma nova fase de sua cooperação em pesquisa e desenvolvimento com a implantação do *Smart City Innovation Center*. Localizado em Porto Alegre, o centro terá como principal objetivo a pesquisa e o desenvolvimento de soluções voltadas para Cidades Inteligentes e Internet das Coisas, além de ser uma estrutura para testes e provas de conceitos que agreguem valor ao setor produtivo. As áreas de Saúde e Educação também estão contempladas com projetos do Centro.



Obrigado!

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