

# 以雲端技術為基礎之綠色校園需量反應及再生能源整合計畫

執行單位

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計畫主持人

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- 本計畫目標著重於建設校園綠色計算系統為主，將分散於校園各處、區域網路連線單位之計算服務、資訊儲存整併於雲端系統中，配合其他既有服務發展智慧營運系統，以期達成節能省碳之最大營運效益



- 本計畫以發展校園運算及資訊設備雲端化集中為主要目標，將校園運算及資訊設備集中及雲端化，並建立推廣與監督機制、永續經營機制，結合學術網路資訊資源集中，期達到支援研究及教學的雲端整合服務及校園節能減碳之最大效益。
- 本計畫發展並導入以下技術
  - ◆ 虛擬化平台擴充建置
  - ◆ 高速儲存與網路建置運用
  - ◆ 授權軟體集中雲端化控管
  - ◆ 資訊服務委外等級雲端服務提供
  - ◆ 未來將陸續導入智慧運算GPU、智慧網路防禦等智慧應用
- 累積收容133個服務共163台，另有虛擬桌面100台提供五種類授權軟體

# A Cloud Computing Based Green Campus Initiative with Focus on Demand Response and Renewable Energy Integration

Execution Unit

National Sun Yat-sen University

Project Director

Ying-Yao Cheng

- The project focuses in the cloud technology applications for energy demand response and renewables integration in green campus. Integrate the computing services facilities located in different academic and administrative departments under a unified green cloud computing service platform developed in this project.
- The platform cooperate with other existing services to develop intelligent operation system.



- For sustainable development, the researchers will promote campus energy conservation and establish a project supervision mechanism to reinforce campus research and teaching computing. To achieve computing research project supporting and integrated co-teaching services. With a unified operational management scheme, it is anticipated that the energy conservation and carbon reduction on the campus can be maximized.
- Platform has :
  - ◆ Virtualization platform.
  - ◆ High speed Storage devices and networks.
  - ◆ Campus authentication software centralized on cloud.
  - ◆ High-level information services.
  - ◆ GPU computing 、 intelligent network security in the future.
- In total, 133 services on 163 vms, 100 virtual desktops provide 5 kinds of authentication softwares during the project.