

# Emirates Education Advances with 21<sup>st</sup> Century Network



Abu Dhabi Education Council implements next phase of IP network transformation.

EXECUTIVE SUMMARY
<p><b>Customer Name:</b> Abu Dhabi Education Council</p> <div style="text-align: center;">  <p>مجلس أبوظبي للتعليم Abu Dhabi Education Council التعليم أولاً Education First</p> </div> <p><b>Industry:</b> Primary education, 270 schools  <b>Location:</b> Abu Dhabi, United Arab Emirates  <b>Network users:</b> 175,000 students, teachers, and administrators</p>
<p><b>BUSINESS CHALLENGE</b></p> <ul style="list-style-type: none"> <li>Isolated schools cannot share information, processes and resources</li> <li>Schools suffer from limited access to Internet</li> <li>IT must reduce bandwidth expenses while providing better service quality to support new business and tele-learning applications</li> </ul>
<p><b>NETWORK SOLUTION</b></p> <ul style="list-style-type: none"> <li>Optimize WAN to accelerate application delivery and make the most of limited bandwidth</li> </ul>
<p><b>EXPECTED BUSINESS RESULTS</b></p> <ul style="list-style-type: none"> <li>Highly available network provides access to learning management tools, resources and the Internet anytime, anywhere</li> <li>Up to 80 percent reduction in response times for critical student administration, HR and ERP applications accessed over WAN</li> </ul>

## Business Challenge

The Abu Dhabi Education Council (ADEC) develops and implements educational policies and programs to improve education in the United Arab Emirates (UAE). As part of its charter, the council directly regulates and operates 270 public schools.

Three years ago, ADEC began an ambitious project to raise the entire emirate’s standard of education by investing in a next-generation education IP infrastructure. As Mohammed Younes, ICT division manager for ADEC, says, “When we started this project, we found that most of our schools had very little connectivity; some principals and secretaries or computer labs had individual ADSL connections for Internet access and email, but no system-wide infrastructure existed.”

The goal of the first phase of the project was to meet basic operational requirements. The council worked closely with Cisco® Advanced Services and Cisco partners to plan and create a scalable WAN foundation that connected all schools and would support future planned voice, data, and video needs. At the same time, ADEC began furnishing computing devices to teachers and administrative staff at every school, and supplying every classroom with a computer, digital “smart board,” and projector.

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Over 300 Cisco 2900 Series Integrated Services Router Generation 2s (ISR G2s) were deployed to securely connect the data center and schools over the IP backbone and provide Internet access. Remote management capability in the ISR G2s enables ADEC's small IT staff to centrally manage and monitor all of the schools' information systems, significantly reducing operation costs. Once more, online administrative applications, such as a student registration system, began to replace a mix of paper-based systems to improve productivity and establish consistent system-wide processes.

However, IP bandwidth is a limited and costly resource in the emirate, and ADEC soon realized that in order to deploy more demanding enterprise business and learning management applications, it needed to either increase WAN links or deploy a WAN optimization solution.

### Network Solution

After conducting an in-depth cost-benefit analysis, ADEC concluded WAN optimization was the best short- and long-term solution for its situation and investigated offerings from Blue Coat and Cisco.

Younes says, "We take an extensive holistic approach in selecting solution providers: we look at technology leadership, service and support capabilities, financial health, partner strength, regional commitment, industry reputation, and SLA capabilities. Cisco had all the right components, which is critical for us."

Cisco offers several flexible WAN optimization options (software and hardware-integrated solution for data centers, branches, and virtual cloud services) all through the award-winning Cisco Wide Area Application Services (WAAS).

ADEC chose the Cisco Wide Area Virtualization Engine (WAVE) 594 and WAVE 694 appliances for its primary schools. The Cisco WAVE 8541 appliance, which can support up to 150,000 TCP connections and 2-Gbps optimized WAN throughput, is being deployed in the data center to manage and monitor the remote appliances so the IT staff can quickly adapt to changing traffic and application conditions.

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— Mohammed Younes, ICT division manager, Abu Dhabi Education Council

### Expected Business Results

ADEC is currently piloting the Cisco WAN optimization solution in four schools and a district office. Depending on the protocols used by each application, Younes expects to see up to 20 to 80 percent improvement in bandwidth utilization, thanks to the transport optimization, data compression, application-specific optimization, and intelligent file caching mechanisms embedded in Cisco WAAS appliances.

Younes also expects that the Cisco WAAS solution will deliver an optimal experience for administrators and teachers as they access HR and ERP business applications from anywhere on the WAN, streamlining processes and enhancing productivity.

More importantly, in its next phase of education reform, ADEC will be implementing a host of learning management tools that will transform the way that teachers teach and students learn in the emirate. As Younes says, "These tools will be rolled out to thousands of users, adding a lot of stress to our network. It is critical to our success that these applications are delivered with no compromise in quality or service."

Younes is confident that ADEC's investment in a proven Cisco Borderless Network will continue to pay dividends in a scalable architecture that can easily change to accommodate new applications and capabilities over the next three to five years with minimal adjustments.

PRODUCT LIST	
<b>Hardware</b>	<ul style="list-style-type: none"><li>• Cisco Integrated Services Routers G2 (ISR G2)</li><li>• Cisco Wide Area Virtualization Engine (WAVE) 594 appliances in small schools, Cisco WAVE 694 appliances in large schools</li><li>• Cisco WAAS 8541 appliance in the headquarters data center</li></ul>
<b>Software</b>	<ul style="list-style-type: none"><li>• Cisco Wide Area Application Services (WAAS) software on the appliances</li></ul>
<b>Services</b>	<ul style="list-style-type: none"><li>• Cisco Advanced Services</li></ul>

### For More Information

- To find out more about Cisco ISR G2 with integrated unified wireless go to: <http://www.cisco.com/go/isrg2>.
- To find out more about Cisco WAAS, go to: <http://www.cisco.com/go/waas>.



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