Rapid adoption of online and remote learning
Because of the continued need for social distancing, online learning has become the new norm. Thanks to national vaccination campaigns in many countries, more and more universities are getting back to campus life as usual. Yet, the demand among students for online learning persists.

Campus resilience and operations
Resilience, agility, and continuity are now highly prioritized by many universities. These characteristics are key requirements for safeguarding student enrollment and the reputation of any university.
The quest for resilience, agility, and continuity manifests itself in digital transformation processes, including adopting hybrid cloud strategies for learning and working and enabling the virtualization of the workforce, operations, study planning, and facility management.

Delivery of online services to students and staff
Over the last year, university services such as admissions, program & course registration, examinations, certifications, collaborative libraries, and finance & accounting services all became available online, in rapid order, even among traditionally “late adopters” in the community of universities and other institutions. These online services are critical components of the entire student experience and significantly affect the university’s overall reputation.

Worldwide Trends and IT Challenges
The global pandemic was a game-changer in many aspects of life - how we meet each other, shop, receive vital services, learn, and more.
Because of social distancing requirements, universities and other higher education institutions had to redefine their priorities and adapt themselves to the ‘New Normal’. Up-to-date market research shows that the pandemic was a catalyst for rapid technology adoption and digital transformation processes in a wide variety of domains.

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This accelerated technology adoption has an extreme impact on university IT department
Universities must ensure complete visibility and control over their networks in light of the significant increase in online learning and online services provision. Students, in general, tend to be major consumers of bandwidth for games, videos, and sports programming and sometimes even use someone else’s bandwidth to access online content. With thousands of students simultaneously relying on online education and services alongside the university’s need for reliable operations, admissions, accounting and planning applications, it is essential to manage network traffic properly.
Additionally, the transition from face-to-face interactions to online learning and online working is ongoing.
Excellent digital experience is critical for student success and employee satisfaction, and productivity. Therefore, university IT departments must be able to monitor and ensure the end-user digital experience.

The Allot Traffic Intelligence Platform for the Higher Education Assures learning continuity and reputation

The massive transition to online learning and working has increased the number of digital interfaces dramatically, enlarging the attack surface and leading to higher vulnerability to cyber disruption. IT must be prepared to safeguard the network and minimize downtime caused by DDoS attacks and other cyber threats.

The Allot Traffic Intelligence Platform assures learning continuity and excellent digital experience for online learning and the university’s mission-critical applications

The Allot Traffic Intelligence Platform
Assures learning continuity and reputation
Higher Education Use Cases

- Separation between faculty and student bandwidth consumption
- Providing fair/equal online access to all students while optimizing internal network resources
- Assure excellent digital experience for online learning and mission-critical applications such as: finance & accounting, admissions, program & course registration, examinations and certifications
- Assure learning continuity for remote locations
- Online course delivery
- See and assure Google classroom applications

Benefits

Assure learning continuity
  - Digital Experience Monitoring (DEM) for online learning and services
  - Control network utilization through enforcement of configurable policies
  - Minimizing network downtime due to DDoS attacks and other vulnerabilities

Provide excellent digital experience for university employees
  - True QoS for the university’s mission-critical applications such as: admissions, accounting, examinations, and planning is assured thanks to advanced traffic shaping and prioritization
  - The QoE score of the university’s applications is calculated to track and assure a consistent and high digital experience for employees

Safeguard university networks with DDoS protection and mitigation
  - Detects and mitigates both inbound and outbound DDoS attacks, on the spot, at Terabits/second
  - Ensure that no network element is overwhelmed and that QoE is maintained, even during an attack

Reduces TCO
  - Scalable, centralized management for streamlined operation and control
  - Can scale to support university’s future IT network expansion
Features

Advanced Digital Experience Monitoring

Multiple performance metrics, including jitter, delay, packet loss, error, and many others, are analyzed. Digital experience for students and staff is quantified using the Allot Quality of Experience (QoE) score, which provides a real-time metric of the current digital experience of every learning session and online service provided by the university.

Graphical dashboards with advanced analytics and real-time troubleshooting inform IT infrastructure and operations (I&O) personnel about the digital experience story of the university. Corresponding alerts and root cause analysis enable I&O personnel to take prompt action before any degradation in end-user Digital Experience.
Complete Traffic Visibility

For university IT departments, the Allot Traffic Intelligence and Assurance platform provides a 360° view of network traffic and the digital experience that students (on university premises or in dormitories) and employees (in local or remote branches), get from the university datacenter. It also sheds light on students’ highly popular recreational data usage, which might otherwise go unnoticed.

Integration with Microsoft Active Directory provides traffic intelligence per user, so IT personnel can better understand how employees consume university applications and network resources.

Key visibility features include:
- Layer 7 application visibility
- In-line SSL encrypted traffic visibility (e.g., cryptomining applications which students commonly use) without decryption
- Web content and web threat visibility
- User and endpoint visibility with L4-L7 quality of Digital Experience KPIs
- Dashboard monitoring and analytics
- Live, self-refreshing performance metrics with down-to-the-second reporting granularity

High-Resolution Traffic Management

The Allot Traffic Intelligence Platform virtually partitions the university LAN, WAN, and internet resources so that users and applications no longer compete with one another for bandwidth and Quality of Service (QoS). This is extremely important in university IT environments because students are major consumers of recreational content such as games and videos. Therefore, powerful policy tools enable definition and enforcement of the Acceptable Use Policy and prioritize the university’s mission-critical applications at office, user, and application level.

Leading Traffic Classification

Allot’s Dynamic Actionable Recognition Technology (DART) engine, embedded in the platform, inspects every single packet and classifies traffic per application, user, IP address, location, and by any static or dynamic policy element. Allot’s extensive application and protocol classification logic uses powerful ML and AI engines, which constantly adapt to detect new applications and maintain up-to-date definition logic for Allot-empowered devices. The Allot Traffic Intelligence Platform contains a comprehensive signature library that identifies thousands of web applications and protocols and supports user-defined signatures. Automated DART protocol pack updates from the Allot cloud keep the university’s deployments up-to-date with the latest application and web developments to ensure accurate traffic classification.

Leading DDoS Attack Protection

The Allot Traffic Intelligence platform protects against fast-moving, high volume, encrypted DDoS attacks as well as concise duration threats. It provides the first line of defense against both inbound and outbound attacks. Inbound DDoS attacks are automatically mitigated by discarding the DDoS traffic and allowing legitimate traffic to pass through. It identifies and then isolates possible threats originating from individual hosts, preventing outbound attacks that can disrupt the performance and integrity of university’s network infrastructure and services.

Central Management, Scalability, and Superior Performance

The Allot Traffic Intelligence platform comprises a central management layer that enables university IT personnel to effectively control and manage appliances located in remote locations and offices, providing complete coverage over the entire network. The platform appliance is designed to scale from small to large enterprises networks, delivering superior performance up to Tera-bit scale and accommodating any future university network expansion.