

Summary of IT Outages and Resolution

Prepared by the WWU Information Technology Services (ITS) Team

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This document provides a brief overview of the recent IT outages that affected the campus community, the root causes of the issue, and the steps taken to resolve it. The document also highlights the impact of the outages on campus operations and data integrity.

Background

As part of the ITS datacenter infrastructure lifecycle management, ITS has been replacing the end-of-life datacenter infrastructure requiring a migration, rebuilding, and decommissioning of 396 servers to completely new hardware. For more information on this effort see the description of our [datacenter migration project](#).

Infrequent, intermittent outages of this new infrastructure began in January and started to accelerate in frequency and scope throughout the month of February, causing many critical IT systems like Banner and campus websites to stop working for hours at a time. These outages disrupted the normal functioning of the campus and affected the academic and administrative activities of our students, faculty, and staff.

Root Causes

The ITS team conducted a thorough investigation with the assistance of our hardware and software providers (DataOn and Microsoft) and identified two main root causes of the issue:

- Operating software installed across our datacenter infrastructure had gotten out of sync due to a configuration issue with automatic updates. Because systems were out of sync, the datacenter lost its ability to balance our application workloads evenly across the infrastructure.
- Additionally, a previously unidentified single point of failure in the datacenter related to authentication requests failed due to the unbalanced load, causing all systems to go offline.

Resolution

ITS took the following actions to fix the root causes and restore the services:

- Disabled automatic updates across the infrastructure so that the systems can no longer drift out of sync.
- Removed the single point of failure in the system which was dependent upon our datacenter. This single point of failure will remain offline until redundancy can be built.
- Rebooted and synchronized all the systems in the datacenter.
- Tested and verified the functionality and performance of all the critical IT systems.

Impact and Outcomes

ITS acknowledges the disruption and frustration caused by the outages and apologizes for the impact on campus operations. The team also appreciates the patience and cooperation of the campus community during the resolution process. The team reports the following impact and outcomes of the outages:

- No critical data was lost or compromised due to the outages, and major services like payroll and financial aid disbursement were completed on time.
- The datacenter infrastructure is now more stable and resilient, and the risk of future outages is significantly reduced.
- ITS will continue to monitor and optimize the performance of the datacenter and our IT systems. We will communicate any planned maintenance or upgrades in advance.
- ITS will conduct a series of post-mortem analyses and “lessons learned” sessions to identify and implement best practices and improvements for future IT service delivery.