



Thursday, 12 September 2024

Major Incident Reference: 020924c

Incident Date & Time: 2nd September – 5th September 2024

Incident Owner: Simon Walters – Interim Chief Operating Officer

Incident Summary:

During the period Monday 2nd September through to Thursday 5th September 2024, Bromcom customers were affected by periods of performance degradation when trying to access Bromcom services. This resulted in interruption of services, delays in response times when attempting to log in and/or general service unavailability.

Incident Conditions:

During the w/c 26th August, Bromcom software engineers, via our internal Change Approval Board (CAB), requested to increase the Microsoft Azure Services allocated resources by 100%, effectively doubling the available resources to meet the anticipated customer demand as schools return from summer holidays.

This is a standard change, classified as low risk/low impact and one that has been completed successfully on multiple previous occasions.

The change was approved for the early hours of Sunday 1st September.

When the engineering team attempted to scale the service tiers to the 'higher' level, via the Microsoft Azure Services portal, the operation failed and returned an error. In all changes reviewed and approved by our internal CAB, a roll back option is required. The roll back option in this change request was to revert to the previous service tier.

The engineering team attempted to revert to the previous service tier, but again the operation failed and returned an error.

At this stage, Bromcom had <40% of the pre-increase allocated resources available.

The Bromcom engineering team opened a SEV1 high priority case with Microsoft support to request further assistance and started the internal escalation process to Bromcom SLT to raise awareness. The team continued to work with Microsoft over the next ~72 hours, attempting to restore the capacity.

Issue Investigation:

Despite continuous escalation, both directly with Microsoft, and with Bromcom's Microsoft Support Partner, the issue was not resolved until ~01:30 BST on Thursday 5th September.

Microsoft have now confirmed in several statements to Bromcom that the issue was related to UK regional Azure issues that they experienced Monday 2nd September and resource allocation issues that they experienced Tuesday 3rd through to Thursday 5th September.

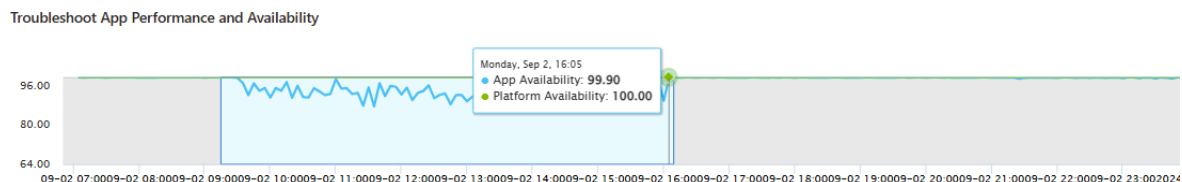


Microsoft Statements:

Monday 2nd September:

A subset of Microsoft customers in the UK may have experienced intermittent errors, timeouts and/or latency when trying to log into the Azure Portal or connect to some of their Microsoft resources. Retries may have been successful for customers during this time. We observed a transient networking issue which caused intermittent connectivity issues for the Azure Portal and a set of Microsoft resources in this region.

This issue was self-healed by the Azure Platform. I have also checked your applications issue started around 9:30 and around resolved at 16:05, the below graphs are your application availability.



Tuesday 3rd September – Thursday 5th September:

As checked with our Product Group (PG) team, Unfortunately, due to high demand for App Services in this region, you may experience transient allocation issues.

Product Group is continually investing in additional infrastructure to expand our available resources. Ensuring capacity for our customers is a top priority for Microsoft and working around the clock to deliver on this.

The increasing demand for Azure services is evidence of the popularity of Azure and emphasizes the need to scale up our infrastructure even more rapidly. With that in mind, we are expediting expansions and are improving our resource deployment process to respond to this strong customer demand. In fact, we are adding a significant amount of compute infrastructure monthly. We have identified several improvements on how we load-balance under a high resource usage situation, and how to trigger the timely deployment of needed resources.

Furthermore, we are increasing our capacity significantly – and will continue to plan for strong customer demand across all our regions. Product Group team is actively working on improving the capacity experience on App Services and thank you for your patience.

Due to an unusually high demand for App Services in this region, the quota was previously unavailable, which may have impacted your operations. It is important to note that specific quota allocations are not visible at the subscription level, which can sometimes lead to confusion when such issues arise.



Cont...

Currently our product group (PG) team has granted [your allocated] instances with Zone Redundancy enabled in the UK south region for your subscription.

Please be aware that while PG team have provisioned an additional 100% of instances for your use in the UK South region, there is a possibility that similar quota constraints could be encountered in the future. This could occur in other regions within the same subscription or even within the same region once the currently provided quota is fully utilized.

It is essential to understand that these quota limitations are specific to each subscription and Azure region. As demand fluctuates and resource consumption varies, the availability of additional instances may be affected.

Incident Conclusion:

We can only apologise for the impact that our customers experienced during this period.

We understand that customers rightly expect Bromcom services to be available, reliable and performant, irrespective of who ultimately is responsible for the delivery of these services in a cloud delivery environment.

Through years of experience in providing MIS and supporting services to schools, the operations and software teams at Bromcom are acutely aware of the increased demand for services as schools return from the summer holiday period, and as such, had proactively planned for such increases.

As with many SaaS providers, Bromcom are highly reliant on the availability of multiple service providers in our delivery of our services to school.

In this instance, that reliance failed, and again, we apologise.

Next Steps:

Based on our findings, we commit to:

- Working together with Microsoft and our Microsoft Support Partner to investigate alternative options for redundancy and where we can, within reason, eliminate any single points of failure.
- Review of all planned changes scheduled for the next ~8 weeks, and subject to meeting contractual customer requirements, rescheduling where we can, to further mitigate any potential risk of service interruption.
- Where planned & approved changes to the Azure resources/service tiers are required, and must be completed by a known deadline to meet demand for services/service availability, ensure direct engagement with Microsoft/Microsoft Partner ***at a minimum*** one week in advance of making any changes, to ensure that previously committed resources are not returned to Microsoft until new resources have been allocated, ensuring a roll back is always possible.



If any customer has any questions on the details included in this RCA, or would like a meeting to discuss further, please contact me directly at simon.walters@bromcom.com

Yours sincerely,

Simon Walters.

Simon Walters
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