

Title: Azure Active Directory B2C - Mitigated

Tracking ID: [QTRM-RPZ](#)

Event Type: Service Issue

Status: Resolved

Service(s): Azure Active Directory B2C

Region(s): Global

Start time: 2024-05-05T13:44:29.387Z

Resolve time: 2024-05-06T00:27:00.000Z

Last update time: 2024-05-09T00:45:17.827Z

Impacted subscriptions: 2a376eda-f2d3-43f2-ad3f-d6d4354db204

Last update:

What happened?

You were impacted by a platform issue that caused some of our Azure Active Directory B2C customers in Europe to experience elevated failure rates for end users accessing B2C applications between 13:40 UTC on 5 May 2024 and 00:27 UTC on 6 May 2024. This issue impacted approximately 70% of Azure AD B2C customers in Europe, including one or more of your Azure subscriptions. We're providing you with this Post Incident Review (PIR) to summarize what went wrong, how we responded, and the steps Microsoft is taking to learn from this and improve.

What went wrong and why?

The incident was caused by an unusually sharp spike in requests to Azure Active Directory B2C service in North Europe and West Europe regions. We're choosing not to characterize the high surge of traffic at this time. While the service was scaled out to handle the increase in load, this increase in traffic was much higher than the service could handle. As a result of the traffic spike, server machines started running out of resources to handle requests leading to an increase in failed requests.

How did we respond?

At 13:44 UTC on 5 May 2024, Azure AD B2C monitoring detected a decrease in availability, and elevated failure rates for end users in North Europe and West Europe regions, so we began an investigation.

While efforts to understand and remediate the issue began immediately, a combination of elevated traffic, conservative timeout limits, and excessive retries caused the system to become overloaded - leading to resource exhaustion and request failures. Due to the nature of the spike, the failures were happening in both the North Europe and West Europe regions where Azure Active Directory B2C is deployed within the Europe geography - and our mitigation option of failing over to other regions was not available to us.

Since the failures were happening across multiple regions, we investigated if there was an incident in the services on which we are dependent. Once we confirmed there was not, we identified the cause of the resource exhaustion as a sudden

spike in incoming traffic. Once this was understood, we deployed configuration changes to manage the pace of incoming traffic better, and to remove problematic requests more accurately. As a result of these configuration changes, we saw the resource utilization come down and the service start to recover. This configuration change led to partial recovery. Our team deployed an additional set of configuration changes to further reduce resource utilization.

Once this next set of configuration changes was deployed, service recovered to full health as request queues on our infrastructure were cleared. All customer impact was confirmed as fully mitigated by 00:27 UTC on 6 May 2024.

How are we making incidents like this less likely or less impactful?

Our Azure AD B2C team has rolled out configuration changes to throttle the types of traffic patterns that caused this incident, and to improve timeouts and retry logic, in order to preserve service health for other customers. (Completed)  
Our Azure AD B2C team is improving automation that identifies customers with elevated end user error rates, so we can notify all potentially impacted customers of issues like this more quickly in future. (Estimated completion: May 2024)  
Our Azure AD B2C team is working on systematically reviewing failure modes throughout our system, and implementing changes to improve efficiency of managing resources under load. (Estimated completion: June 2024)  
Our Azure AD B2C team is working on a plan to improve the mitigation process and reduce the time taken to mitigate similar issues in the future. (Estimated completion: June 2024)

How can customers make incidents like this less impactful?

Consider applying the best practices for protecting and monitoring your Azure Active Directory B2C solution to ensure your users can sign in to applications without disruption: <https://learn.microsoft.com/en-us/azure/active-directory-b2c/security-architecture>  
Consider ensuring that the right people in your organization will be notified about any future service issues - by configuring Azure Service Health alerts. These can trigger emails, SMS, push notifications, webhooks, and more: <https://aka.ms/ash-alerts>

How can we make our incident communications more useful?

You can rate this PIR and provide any feedback using our quick 3-question survey: <https://aka.ms/AzPIR/QTRM-RPZ>

#### Update history:

Thu May 09 2024 03:45:17 GMT+0300 (Eastern European Summer Time)

#### What happened?

You were impacted by a platform issue that caused some of our Azure Active Directory B2C customers in Europe to experience elevated failure rates for end users accessing B2C applications between 13:40 UTC on 5 May 2024 and 00:27 UTC on 6 May 2024. This issue impacted approximately 70% of Azure AD B2C customers in Europe, including one or more of your Azure subscriptions. We're providing you with this Post Incident Review (PIR) to summarize what went wrong, how we responded, and the steps Microsoft is taking to learn from this and improve.

#### What went wrong and why?

The incident was caused by an unusually sharp spike in requests to Azure Active Directory B2C service in North Europe and West Europe regions. We're choosing not to characterize the high surge of traffic at this time. While the service was scaled out to handle the increase in load, this increase in traffic was much higher than the service could handle. As a result of the traffic spike, server machines started running out of resources to handle requests leading to an increase in failed requests.

#### How did we respond?

At 13:44 UTC on 5 May 2024, Azure AD B2C monitoring detected a decrease in availability, and elevated failure rates for end users in North Europe and West Europe regions, so we began an investigation.

While efforts to understand and remediate the issue began immediately, a combination of elevated traffic, conservative timeout limits, and excessive retries caused the system to become overloaded - leading to resource exhaustion and request failures. Due to the nature of the spike, the failures were happening in both the North Europe and West Europe regions where Azure Active Directory B2C is deployed within the Europe geography - and our mitigation option of failing over to other regions was not available to us.

Since the failures were happening across multiple regions, we investigated if there was an incident in the services on which we are dependent. Once we confirmed there was not, we identified the cause of the resource exhaustion as a sudden spike in incoming traffic. Once this was understood, we deployed configuration changes to manage the pace of incoming traffic better, and to remove problematic requests more accurately. As a result of these configuration changes, we saw the resource utilization come down and the service start to recover. This configuration change led to partial recovery. Our team deployed an additional set of configuration changes to further reduce resource utilization.

Once this next set of configuration changes was deployed, service recovered to full health as request queues on our infrastructure were cleared. All customer impact was confirmed as fully mitigated by 00:27 UTC on 6 May 2024.

#### How are we making incidents like this less likely or less impactful?

Our Azure AD B2C team has rolled out configuration changes to throttle the types of traffic patterns that caused this incident, and to improve timeouts and retry logic, in order to preserve service health for other customers. (Completed) Our Azure AD B2C team is improving automation that identifies customers with elevated end user error rates, so we can notify all potentially impacted customers of issues like this more quickly in future. (Estimated completion: May 2024)

Our Azure AD B2C team is working on systematically reviewing failure modes throughout our system, and implementing changes to improve efficiency of managing resources under load. (Estimated completion: June 2024)

Our Azure AD B2C team is working on a plan to improve the mitigation process and reduce the time taken to mitigate similar issues in the future. (Estimated completion: June 2024)

How can customers make incidents like this less impactful?

Consider applying the best practices for protecting and monitoring your Azure Active Directory B2C solution to ensure your users can sign in to applications without disruption: <https://learn.microsoft.com/en-us/azure/active-directory-b2c/security-architecture>

Consider ensuring that the right people in your organization will be notified about any future service issues - by configuring Azure Service Health alerts. These can trigger emails, SMS, push notifications, webhooks, and more: <https://aka.ms/ash-alerts>

How can we make our incident communications more useful?

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Mon May 06 2024 05:27:20 GMT+0300 (Eastern European Summer Time)

Impact Statement: Between 13:40 UTC on 05 May 2024 and 00:27 UTC on 06 May 2024, you were identified among a subset of customers using Azure Active Directory B2C who may have experienced intermittent failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may have also experienced failures. Due to an increase in the incoming requests the backend service responsible for handling the requests reached an operational threshold which resulted in failures for sign-up or sign-in to B2C applications.

Mitigation: As a part of mitigation strategy, we deployed a configuration change to mitigate the issue. Following the mitigation, based on our telemetry we can now conclude that the service health is back to normal.

Next Steps: We will further continue to establish the full root cause of the issue to prevent any future occurrences. Stay informed about Azure service issues by creating custom service health alerts: <https://aka.ms/ash-videos> for video tutorials and <https://aka.ms/ash-alerts> for how-to documentation.

Mon May 06 2024 03:45:49 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C who may experience intermittent failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We have identified the root cause of this issue. We deployed a configuration change as an initial mitigation step and saw partial recovery to service health as previously communicated. At 21:40 UTC on 5 May 2024, we started rolling out additional mitigation steps to bring the service back to full health. We continue to roll out these additional mitigations and we are seeing continuous recovery in service health. The next update will be provided in 60 minutes, or as events warrant.

Mon May 06 2024 02:37:55 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C who may experience intermittent failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We have identified the root cause of this issue. We deployed a configuration change as an initial mitigation step and saw partial recovery to service health as previously communicated. At 21:40 UTC on 5 May 2024, we started rolling out additional mitigation steps to bring the service back to full health. We continue to roll out these additional mitigations and we are seeing continuous recovery in service health. The next update will be provided in 60 minutes, or as events warrant.

Mon May 06 2024 01:37:51 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C who may experience intermittent failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We have identified the root cause of this issue. We deployed a configuration change as an initial mitigation step and saw partial recovery to service health as previously communicated. At 21:40 UTC on 5 May 2024, we started rolling out additional mitigation steps to bring the service back to full health and we are seeing continuous recovery. The next update will be provided in 60 minutes, or as events warrant.

Mon May 06 2024 00:14:31 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C who may experience intermittent failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We have deployed a configuration change as a mitigation step, and we are seeing gradual recovery in service health. We continue to investigate the root cause and monitor the progress of the mitigation. The next update will be provided in 60 minutes, or as events warrant.

Sun May 05 2024 22:36:45 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C in Europe who may experience intermittent failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We have identified the root cause of this issue. We are deploying a configuration change as a potential mitigation step which is in progress. The next update will be provided in 60 minutes, or as events warrant.

Sun May 05 2024 21:40:20 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C in Europe who may experience failures when trying to sign-up or sign-in to B2C applications.

Password resets by end users may also experience failures. Retries may be successful.

Current Status: We have identified the root cause of this issue and we have a potential mitigation plan in-progress. The next update will be provided in 60 minutes, or as events warrant.

Sun May 05 2024 21:00:50 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C in Europe who may experience failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We are actively working to Identify the root cause and determine the mitigation work streams. The next update will be provided in 120 minutes, or as events warrant.

Sun May 05 2024 20:16:27 GMT+0300 (Eastern European Summer Time)

Impact Statement: Starting at 13:40 UTC on 05 May 2024, you have been identified among a subset of customers using Azure Active Directory B2C in Europe who may experience failures when trying to sign-up or sign-in to B2C applications. Password resets by end users may also experience failures. Retries may be successful.

Current Status: We are actively working to Identify the root cause and determine the mitigation work streams. The next update will be provided in 120 minutes, or as events warrant.