

# UK OAV Runbook

Primary Owner [buyer-safety-experience \(LDAP\)](#)

Last modified 4 months ago by [agkrakow](#).

[Runbook](#) | [Dashboards](#) | [Ops Meeting](#) |  <https://badges.corp.amazon.com/oncall/team-avocado-oncall.svg>

Don't panic

Experian is running maintenance work every Sunday from 20:00 - 24:00 UTC and every 1st and 3rd Thursday of the month 18:00 - 21:00 BST (London time). You don't need to report an issue during these times (and should not receive tickets for them).




**Responding to a high severity ticket?** Check the [Common error scenarios](#) in the table of contents to the right.

## 1 Prerequisites

- If you are onCall for the first time, make sure you have done [OnCall and Event Response](#) training
- Set up [Amazon UC](#) for making phone calls

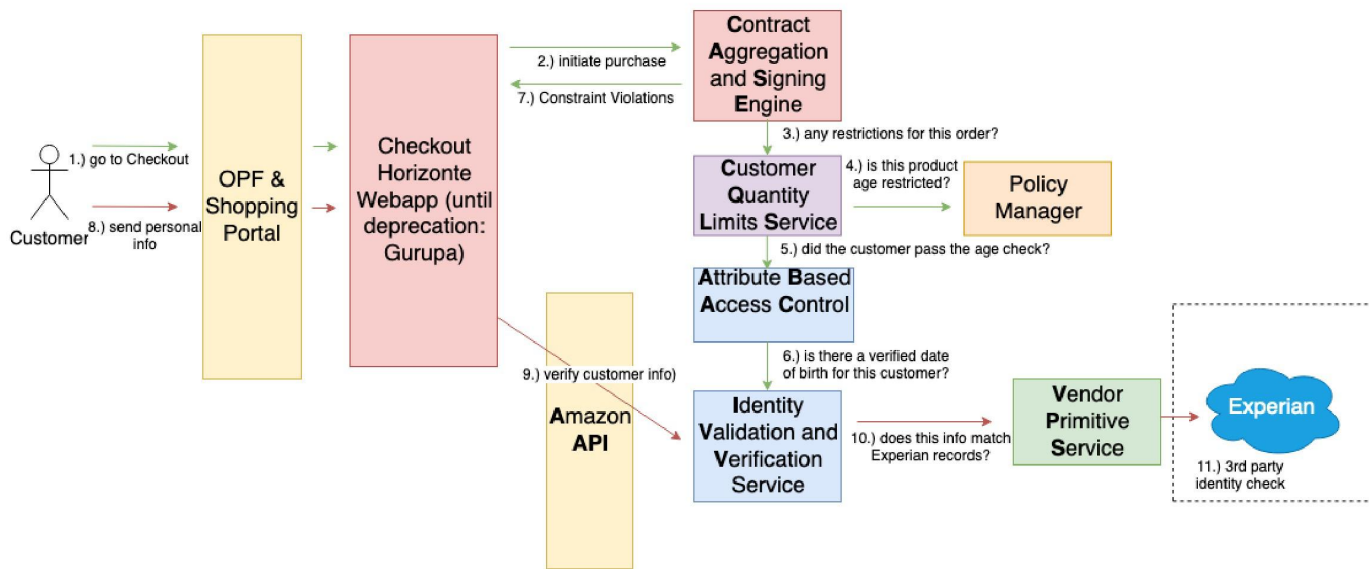
## 2 Alarms & Dashboards

There are three alarms set up for Blades:

-  The [Primary Monitor](#) is active at all times and alarms for extended outages (30 minutes and longer) at Sev2.5
-  **Error: not found** The [Secondary Monitor](#) has tighter thresholds and alarms faster, but is only active from 08:00 - 22:00 London time (to avoid false positives during low traffic times)
-  The [Tertiary Monitor](#) is deprecated

The dashboard for Blades can be found at [UK OAV Dashboard](#). Dependency dashboards are linked at the bottom of that dashboard under [Dependencies](#)

## 3 Blades Quick Overview



UK Online Age Verification works in two stages:

In the **GET path** (diagram green arrows), Checkout flow controlled by CASE determines that a product needs age verification, and raises a Constraint Violation if customers have not previously verified their age.

The **SET path** (diagram red arrows) begins in case such a Constraint Violation is returned (diagram step 7). Checkout Webapp will render the age verification page, where customers can either submit their personal information to pass the age check, or continue checking out with the age restricted products removed from their cart.

The status of and communication between the systems involved in age verification is monitored by the metrics in the [UK OAV](#) and [dependencies](#) dashboard.

## 4 Common error scenarios

This section lists common error scenarios that might lead to Blades operational incidents, **sorted by likelihood of occurrence**. Text in bold refers to metric names in the [UK OAV Dashboard](#).

### 4.1 Experian soft outage

An Experian soft outage happens when Experian is still serving our requests, but their backend is broken and blanket rejects customers.

During an Experian soft outage:

- **Verification success rate** goes into alarm and drops significantly
- **Attempts, Successes & Failures** shows an elevated number of failures, AND dropping number of successes. Might show an elevated number of total requests (as customers re-attempt)
- other metrics, in particular **VerificationApiAvailability** and **Availability vs VPSLatency** are fine

In case of an Experian soft outage, confirm that [/verify\\_dashboard](#) in EU shows similar low verification success rate and wait until Identity engages Experian, no further action is needed.

### 4.2 Experian full outage

An Experian full outage happens when Experian (partially) stops serving requests, either failing with an error code or failing to respond within the 8 second timeout window.

During an Experian full outage:

- **Verification success rate** goes into alarm and drops significantly
- **Attempts, Successes & Failures** shows a spike of Unavailable responses, along with a drop in Success responses
- **VerificationApiAvailability** might go into alarm
- **Experian Latency** shows a spike in latency

In case of an Experian soft outage, confirm that [/verify\\_dashboard](#) in EU shows similar low verification success rate / availability and wait until Identity engages Experian, no further action is needed.

## 4.3 IVV outage

---

An IVV outage happens when the IdentityValidationVerification service (partially) stops serving requests, either failing with an error code or failing to respond within the 8 second timeout window.

During an IVV outage:

- **Verification success rate** and **VerificationApiAvailability** go into alarm and drop significantly
- **Attempts, Successes & Failures** shows a spike of Unavailable responses, along with a drop in Success responses
- Operational metrics in the [IVV Cloudwatch dashboard](#) show increased Errors/Faults or dropped Availability

In case of an IVV outage, [cut a ticket to IVV](#) with severity depending on customer impact.

## 4.4 CASE/Retail outage

---

A CASE or Retail outage happens when the Checkout ordering backend or dependent systems are experiencing problems. These will look similar to [CQLS/ABAC outages](#), since they will impact the number of raised Constraint Violations (due to less orders being processed overall).

During a CASE/Retail outage:

- **AgeLimitationConstraintViolations Rate** might go into alarm
- Sev1 will be visible on <https://lse.amazon.com/> (look for keywords "Retail", "Orders", "CASE")

In case of a CASE or Retail outage, take any actions that might help resolve the Sev1, if it is caused by Blades (unlikely). Otherwise, wait for the Sev1 to resolve and ensure the metrics are going back to normal.

## 4.5 CQLS/ABAC outage

---

An outage in CQLS or ABAC happens when either of these services stops serving requests correctly and it becomes impossible to determine if a product needs age verification or customers have already passed age verification. In such a case, CQLS will not return any Constraint Violations to Checkout and customers will not see an age verification page and can complete their purchases. However, all orders for bladed products placed during the outage by unverified customers will be cancelled by an offline process checking for unresolved Constraint Violations before fulfilment.

During a CQLS/ABAC outage:

- **AgeLimitationConstraintViolations Rate** goes into alarm and drops significantly
- **CQLS validateSalesRestriction UK CASE-side** drops significantly
- Errors are visible on the CQLS or ABAC dashboards linked under [Dashboard Dependencies](#)

In case of a CQLS or ABAC outage, first check if it's not a [CASE/Retail outage](#) and then use the [dependency dashboards](#) to determine which service shows signs of operational issues and [cut them a ticket](#) with severity depending on customer impact.

## 5 Other procedures

---

### 5.1 A customer who successfully completed verification gets age verification page

---

Systems involved in determining if verification page should be rendered are CASE, CQLS, ABAC and IVV.

1. Do you have customerID for a customer affected by this? If yes, we can see if ABAC returns "Deny" for this customer. Follow instructions from this [quip](#) to make a "Check Access" request for the customer. For a verified customer, Check Access should return "Allow" and not "Deny". What did CheckAccess return?
  1. If "Deny", engage IVV to investigate by cutting them a ticket.

2. If "Allow", proceed to the next hypothesis.
2. Customer Quantity Limits Service is the Checkout plugin we use to determine whether an order needs to be age verified. Is it a problem in CQLS?
  1. If yes, cut a ticket to [IVV](#).
3. The age verification process is displayed in the Checkout frontend systems. Is it a problem in Checkout frontend?

## 5.2 Age verification is showing for unexpected products

1. Is age verification showing for **all** products?
  1. If yes, check if any of these non-bladed products is actually classified as bladed by the policy [using the PolicyManager datapath view](#).
    1. If yes, contact the Restricted Products team about mis-classification.
    2. If no, find out what system is incorrectly triggering age verification
      1. Customer Quantity Limits Service is the Checkout plugin we use to determine whether an order needs to be age verified. Is it a problem in CQLS?
      2. Policy Manager is the system that determines whether a product needs age verification in Checkout. Is it a problem in Policy Manager?
  2. If no, contact the Restricted Products team about mis-classification.

## 5.3 Ticket for "Your age could not be verified..."

Although Customer Service is aware of the age verification process, occasionally tickets about an individual customer not being able to pass verification might still come in. These tickets will mention one of more customers being displayed this error message: *Your age could not be verified. Please review your entries and resubmit or proceed to purchase without the age-restricted item(s)*. It means the data entered by customer could not be verified by our third party vendor. This is expected behaviour and we should close the ticket with the corresponding quick response.

**SOP:** If the ticket mentions the error message *Your age could not be verified. Please review your entries and resubmit or proceed to purchase without the age-restricted item(s)*, use the "Age Verification Failure Response" quick response to resolve the ticket as shown below and set root cause to "Project - Blades - Verification Failure".

The screenshot shows a ticket interface with three tabs: 'All', 'Correspondence', and 'Worklog'. Below the tabs is a text area for 'Add comment' with a 'Markdown' toggle. A dropdown menu is open, showing 'Choose quick response' with a search bar and a list of options: 'Filter quick responses', 'Manage Quick Responses', 'My Quick Responses', 'Age Verification Failure Response', and 'Shared Responses'. The 'Age Verification Failure Response' option is highlighted. Below the dropdown is a 'Remove Draft' button. At the bottom, there is a search bar for 'Search communication' and a 'Search' button. The main content area contains the following text:

Hi,  
 You've reached the correct CTI for age verification of bladed products on amazon.co.uk.  
 Age verification is a legal requirement in the UK. We cannot resolve verification failures for individual customers. In such cases we recommend to try and submit the details of someone else in their household.  
 We are working with a third party identity verification provider to verify the customer's name, legal residence and

age. This provider checks the provided contact details and validates whether they belong to an existing person. If the provider isn't able to confirm that the details correspond to a person, the verification is a failure and the customer cannot proceed with the checkout of the age restricted items.

In rare cases the provider will not have enough information and will not be able to confirm a customer's details, even though they are entered correctly and correspond to a real identity.

This is expected behavior and the customer will not be able to proceed with purchase of the bladed item.

If you have any further questions or concerns about this process, feel free to re-open this ticket.

## 6 Dashboard metrics explained

### [UK OAV Dashboard](#)

#### 6.1 SET path metrics

- **Verification Success Rate** is the number of successful verification attempts divided by the number of all age verification attempts (diagram step 8) x 100. This is not a per-customer metric, so a customer getting rejected over a typo in their data and then correcting it and succeeding on their second verification attempt would register as two data points in this metric (one failure, and one success). This rate should generally be around 73% during GB daytime (08:00 - 22:00 London time), and is less reliable in the night time due to high variance caused by low number of customers. This metric monitors the overall health of the age verification process. Customer attempts that fail because of technical reasons are counted as rejected for this metric.

- **VerificationApiAvailability** is the number of unsuccessful requests made to the verification Amazon API (diagram step 9) divided by the number of all age verification requests x 100. An unsuccessful request is any request that returns with an error code or times out. Further details about what caused a drop in this metric can be found

- **Attempts, Successes & Failures** records the number of total verification attempts made (diagram step 9), and how their results divide into Success, Failure or Unavailable. Success means that customer info was accepted by Experian and customers were marked as passing age verification. Failure means that customers were rejected by Experian and will be asked to correct their information on the age verification page. Unavailable means that a technical problem occurred for the request. Service problems in the SET path should lead to an increase of Unavailable.

- **Availability vs VPSLatency** shows the latency of age verification requests as measured in VPS (diagram step 10), graphed as the time taken for the Experian call only, and the total request time. During Experian or VPS outages, this metric might increase, along with dropping Availability.

- **AAPI call unexpected error responses** shows the error codes received by Checkout Webapp when calling IVV via AAPI in diagram step 9. These might be useful when communicating with IVV during an IVV service outage.
  - **Checkout Controller Availability** should only drop because of Checkout Webapp operational problems.
  - other useful metrics to check are the IVV and VPS [dependency dashboards](#).

#### 6.2 GET path metrics

- **AgeLimitationConstraintViolations** measures the total number of age verification Constraint Violations raised by CQLS, triggering the display of the age verification page and prompting customers to submit their data for the SET path. During problems in the GET path, this metric might either unusually increase (customers cannot get verified / age verification is triggered for non-restricted products) or drop (age verification is not triggered for restricted products).

- **CQLS validateSalesRestriction UK CASE-side** measures the same thing as **AgeLimitationConstraintViolations** but from the perspective of Constrained Violations received by CASE instead of raised from CQLS

- **ABAC EU CheckAccess** records the number of requests received by ABAC from CQLS checking whether a given customer is already age verified, along with the request latency. If there's an ABAC outage, this metric would drop.

- **Remote Render Page Hits** records the number of times the age verification page was rendered by Checkout Webapp because Constraint Violations were raised. Remote render hits are cached, but the graph shape should more

or less follow the **AgeLimitationConstraintViolations** metric at much lower numbers.

- other useful metrics to check are the CQLS, ABAC and IVV [dependency dashboards](#).

## 7 CTI/Email for dependencies

IVV	<a href="#">IdentityServices/IVV/Other</a>
Experian	See <a href="#">Contacting Experian</a> below
Checkout	<a href="#">Website/Amazon Checkout Pipeline/Other</a>
CQLS	<a href="#">Shipping Platform/Policy/Sales Restrictions</a>
ABAC	<a href="#">IdentityServices/ABACService/Others</a>
PolicyManager	<a href="#">IT Dev/Selection Classification/Policy Management</a>
Restricted Products - ASIN Review	<a href="#">COPS/ASIN review/AVD flags</a>

## 8 Contacting Experian (no longer needed)

We no longer need to contact Experian as Identity owns Experian connectivity, but this section remains in case of an emergency.

Experian is running maintenance work every Sunday from 20:00 - 24:00 UTC and every 1st and 3rd Thursday of the month 18:00 - 21:00 BST. You don't need to report an issue during these times (and should not receive tickets for them).

Depending on severity, we can contact Experian in the following ways:

1. Ongoing customer impacting issue: Contact Tech Support at **+44 333 000 3030**. If you're not currently responding to an issue, you can set up [Amazon UC](#) for making phone calls.
  - 1.1. In case you are not able to speak to support within 10 minutes (hotline not working or on hold), please proceed to also send them an e-mail.
2. Low sev/mitigated issue: Contact Tech support at Email Id: [product.support@experian.com](mailto:product.support@experian.com) . Provide the details listed below in the email

When engaging Experian, Identify yourself as Amazon OAV team. We are using their Prove ID API. Experian will assign you an incident number in the form of **INC1234567**. Please mention this incident number in the SIM ticket.

Details Experian team will ask for:

- Email: ~~eu-help-ocall@amazon.com~~ team-avocado-ocall@amazon.com
- Name: Provide your name
- Phone: Provide your phone number
- API Username: AmazonID\_XML
- API Endpoint: <https://xml.proveid.experian.com/IDSearch.cfc>
- Product-code: ProveID
- Affected use case: Online age verification for bladed products
- Environment: Production
- Description of the issue
- Percentage of customers affected
- Date and time of the issue
- More details here - <https://drive.corp.amazon.com/documents/EU%20HCTP/ExperianEngagementDocument.pdf>

## 8.1 After immediate incident response

---

**Only after** you have taken all measures to mitigate customer impact and contacted Experian support as explained above, please also notify our Experian account managers [Jenni Smith](#) and [Kyle Nequest](#) (click [here](#) to mail both) and notify them of the incident and the current status.

Experian will assign you an incident number in the form of **INC1234567**. Please mention this incident number in the SIM ticket.

Please update our internal [Experian Incident Tracker](#) so we can monitor actual service levels provided.

## 9 Useful Links

---

- [LogDigger](#) - For accessing checkout logs. [Documentation](#)
- [IGraphHelper](#) - GreaseMonkey/TamperMonkey script for enhanced iGraph features.
- [Fetching Gurupa Logs](#) - Instructions to download RetailWebsite logs from Prod hosts

## 10 FAQ

---

1. Q: Can you tell me if there were any changes to the verification process in 2024?  
A: Yes, there was a team which added age verification to other MPs and did some migration in Checkout (rendering layer so shouldn't have any impact on CVs or being able to purchase without verification).  
<https://issues.amazon.com/issues/CPX-TechDesignReview-1111> <https://issues.amazon.com/FeatureRequest-5318> is for AU but the same team did something for other MPs incl. UK too. We briefly tested UK age verification after this was done and it was working fine.
2. Q: Would you be able to share a visual of how this widget looks like at checkout?  
A: <https://quip-amazon.com/zQ1aAUsUFyv2/UK-Blades-OAV-High-Level-Tech-Design#eaY9CAyEPdO>
3. Q: Can you confirm if it is only enabled in UK MP?  
A: different age verification processes are enabled for different MPs, and they use different rules and even different backend systems to trigger and handle age verification. Examples: UK Blades, US (California) weed, AU Alcohol, DE Alcohol
4. Q: Are you able to give me access to [this quip](#) recommended by [this runbook](#):  
A: Enabled link sharing

## 11 Escalations' Hint

---

note that Checkout widget is just rendering; actual verification is enforced by a combination of PolicyEngine policy (defines restriction) + CQLS CASE plugin (evaluates age verification policy) + ABAC check (I don't remember what it does) & IVV lookup for customers' verification state. All of these were done as away team contributions and transferred to service owners, and we have very limited visibility and no observability for any of these besides Checkout rendering. (edited)

Tags: