

Full AI Competitor Research and Web Monitoring Server

by Code Creator

Ubuntu 26.04

Customer Instructions

Private AI competitor research, browser automation, scheduled monitoring, change detection, and decision ready intelligence on AWS

Purpose: Launch a private competitive intelligence server, connect Amazon Bedrock through an EC2 IAM role, run one time research, schedule recurring monitors, detect meaningful changes, and export decision ready reports.

Quick Start

Step	Action	Success
1	Launch with a public IP and allow TCP 22, 80, and 443.	Instance passes EC2 health checks.
2	Connect by SSH using the ubuntu username.	FIRST_LOGIN.txt is available.
3	Open the generated HTTPS URL and sign in.	Dashboard loads securely.
4	Attach an EC2 IAM role with Amazon Bedrock inference permissions.	Dashboard shows AWS Bedrock ready.
5	Run a Browser Task or create a Competitor Monitor.	Research appears in the Command Center, history, and exports.

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1. Product Overview

This AMI turns competitor websites into private, repeatable intelligence inside your AWS account. Run one time Browser Tasks, schedule recurring monitors, detect meaningful changes, and export reports for teams, archives, and BI workflows. Chromium performs browsing, Amazon Bedrock supplies reasoning, and records remain on the EC2 instance.

Feature	Customer Value
Browser Tasks	Run focused website research with optional domain restrictions.
Competitor Monitors	Repeat research automatically every 6, 12, 24, or 72 hours.
Command Center	Track monitors, run outcomes, domains researched, and latest intelligence.
Change Detection	Classify recurring results as Baseline, None, Minor, or Significant.
Executive Intelligence	Review evidence and recommended action for recent changes.
Monitor Controls	Enable, disable, or run a monitor now without changing its schedule.
Visual Analytics	See 14 day research activity and top researched domains.
Exports	Download JSON, Markdown, and consolidated analytics CSV files.
Private by design: The product runs inside your AWS account. It does not include seller AWS credentials or a shared external research service.	

2. Launch and First Login

AWS launch requirements

Protocol	Port	Purpose
TCP	22	SSH administration. Restrict to trusted IP addresses when practical.
TCP	80	Certificate validation and redirect to HTTPS.
TCP	443	Secure dashboard access.
Important: Do not expose TCP 6379 or TCP 8000. They are internal application services.		

Recommended: 4 vCPU and 16 GiB RAM, such as m7i.xlarge or an equivalent instance. Minimum for light testing: 4 vCPU and 8 GiB RAM.

First boot

First boot detects the new public IP, creates a unique dashboard password, configures a nip.io HTTPS hostname, and starts the Docker stack. Wait until the instance passes both EC2 health checks before connecting.

Connect by SSH using your Amazon private key and the **ubuntu** username. Then display the generated login information:

```
cat /home/ubuntu/FIRST_LOGIN.txt
```

The file contains the HTTPS dashboard URL, public IP, username, generated password, provider guidance, and helper commands. Protect FIRST_LOGIN.txt because it contains administrator credentials.

3. Enable Amazon Bedrock

Attach an EC2 IAM role to the running instance. The AMI contains no AWS access keys. The validated configuration uses AWS Region us-east-1 and model us.amazon.nova-2-lite-v1:0.

Suggested EC2 role name: AIBrowserBedrockRole

IAM policy

Create a policy such as AIBrowserBedrockInvoke with the following permissions:

```
{
  "Version": "2012-10-17",
  "Statement": [{
    "Effect": "Allow",
    "Action": [
      "bedrock:InvokeModel",
      "bedrock:InvokeModelWithResponseStream",
      "bedrock:GetInferenceProfile"
    ],
    "Resource": "*"
  }]
}
```

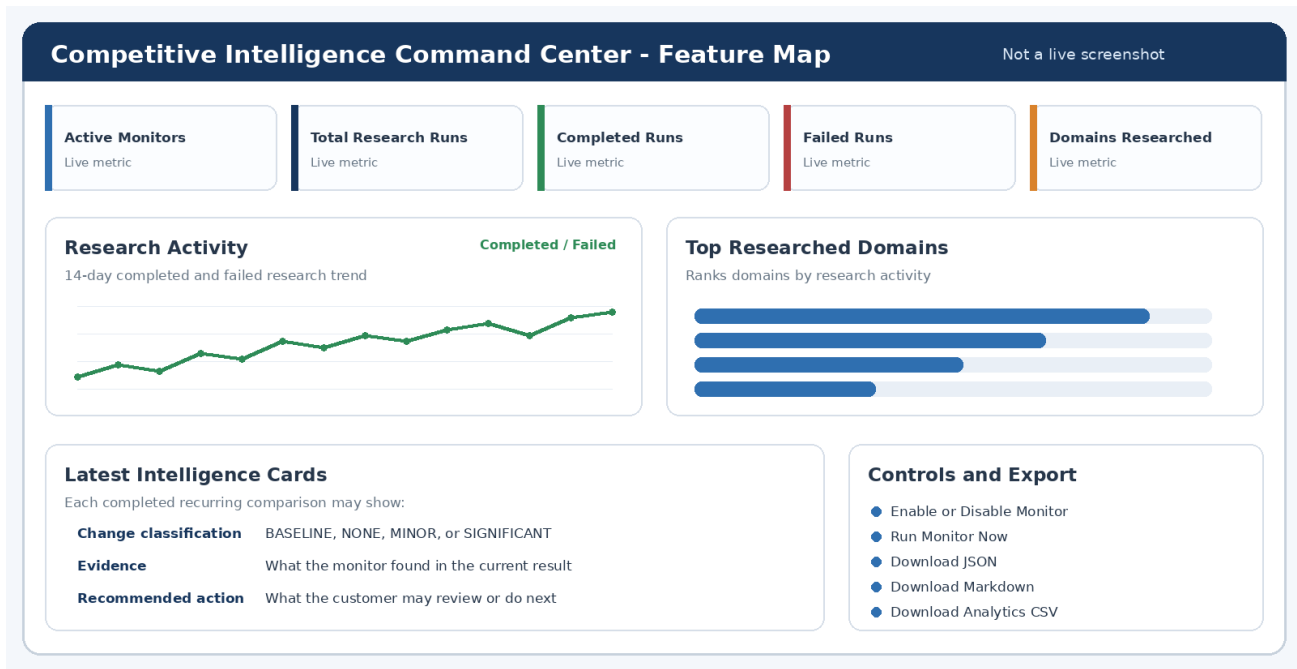
Important: Attach the role:

1. Create an IAM role trusted by the EC2 service and attach the policy.
2. In EC2, select the instance and choose **Actions, Security, Modify IAM role**.
3. Attach the role and save.
4. Return to the dashboard and recheck provider status.

AWS infrastructure and Amazon Bedrock inference charges are billed separately by AWS.

4. Competitive Intelligence Command Center

The Command Center converts manual research and scheduled monitor runs into an executive view of market activity, change evidence, and recommended action.



Dashboard feature overview - illustrative layout

Dashboard Area	What It Shows
Summary Cards	Active monitors, total runs, completed runs, failed runs, and domains researched.
Research Activity	Completed and failed research over the latest 14 days.
Top Researched Domains	The websites receiving the most research activity.
Latest Intelligence	Change level, evidence, and recommended action from recent monitor runs.
Download Analytics CSV	One consolidated file for spreadsheets, BI tools, or Amazon QuickSight workflows.

5. Run Browser Research

A Browser Task is a one-time research request.

1. Describe the exact deliverable, including websites, facts, comparison points, headings, and desired conclusion.
2. Add Allowed Domains when browsing should be limited to approved websites.
3. Select Run Browser Task once and wait for Queued, Running, then Completed.
4. Review important findings before business use.

Good prompt: Compare competitor pricing, positioning, supported platforms, security claims, and new announcements. Return Key Changes, Evidence, Competitive Impact, and Recommended Action.

Allowed Domains

Enter domains only, separated by commas. Example:

company1.com, company2.com

Leave the field blank only when broad public web access is genuinely required. Websites may still block automation, require login, present a CAPTCHA, or change their page structure.

6. Competitor Monitors and Change Detection

A Competitor Monitor repeats a research instruction automatically. Each run is saved in history, compared with prior results, and added to the Command Center.

Control	Use
Interval	Run every 6, 12, 24, or 72 hours.
Enable or Disable	Pause or resume future scheduled runs without deleting the monitor.
Run Monitor Now	Start an immediate run while preserving the normal recurring schedule.
Next and Last Run	See when the monitor will run again and when it last completed.

How change detection works

Level	Meaning
Baseline	The first successful monitor run establishes the reference result.
None	No meaningful change was detected.
Minor	A limited change was found and should be reviewed.
Significant	A material change may affect positioning, pricing, product strategy, or response planning.

Comparisons can include evidence and recommended action so teams receive useful intelligence instead of a simple page changed alert.

7. Task History and Exports

Recent Task History stores completed manual and scheduled research. Each record includes the instruction, domains, timestamps, provider, model, browser steps, elapsed time, result, and failure details.

Download	Best Use
JSON	Structured task record for automation, processing, archives, and audit trails.
Markdown	Readable report for sharing, editing, documentation, or knowledge bases.
Analytics CSV	Consolidated manual and scheduled research for spreadsheets, dashboards, BI analysis, and QuickSight-ready workflows.
Data location: Task and monitor records are stored under /opt/codecreator-ai-browser/data. Customers control backup and retention.	

8. Server Commands and Troubleshooting

Customer-entered SSH commands are shown in red.

Show first login information:

```
cat /home/ubuntu/FIRST_LOGIN.txt
```

Show the dashboard URL:

```
codecreator-ai-browser-url
```

Show product status:

```
codecreator-ai-browser-status
```

Show first boot status:

```
codecreator-ai-browser-firstboot-status
```

Show Docker services:

```
cd /opt/codecreator-ai-browser
```

```
sudo docker compose ps
```

Troubleshooting

Issue	Check
Dashboard does not open	Confirm TCP 80 and 443, then check FIRST_LOGIN.txt and first boot status.
Login is rejected	Use the exact generated username and password with no extra spaces.
Provider setup required	Attach the Bedrock EC2 IAM role and recheck provider status.
Task remains queued	Confirm the worker and Valkey services are healthy.
Website cannot be accessed	Confirm the domain is allowed and public; the site may block automation or use CAPTCHA.
Monitor does not run	Confirm the scheduler is healthy, the monitor is enabled, and a next run is shown.
Public IP changed	Use an Elastic IP for stability or follow Code Creator guidance to rebind the HTTPS hostname.

Resources and Support

Amazon Bedrock documentation: <https://docs.aws.amazon.com/bedrock/>