

# Critical Threats Project delivers timely, actionable intelligence with Linkurious



## Customer

American Enterprise Institute

## Country

United States of America

## Industry

Public policy think tank

## Challenge

CTP's 20-person team has to analyze multiple data sources and generate insights about networks of people and events to understand threats to US national security. This process was both time-consuming and very complicated.

## Solution

The team implemented Linkurious Enterprise to visualize and analyze connections as they gather intelligence data (events, people, locations, organizations). It enables the analysts to piece together intelligent pictures of conflict dynamics, understand threats, and share recommendations.

## Benefits

- Ability to understand complex networks of multiple entities.
- Ability to visualize networks of geographical data.
- Higher level of autonomy for analysts who visualize in real time the data collected and the entries created in the database.
- Publication-ready visualizations for threat reports.

The American Enterprise Institute (AEI) is a world-class public policy think tank founded in 1938, dedicated to defending human dignity, expanding human potential, and building a freer and safer world. Its policy areas include foreign and defense, economics, health care, and education.

In 2009, AEI created the Critical Threats Project (CTP). The goal of this project is to highlight the complexity of the global challenges the United States faces with a primary focus on the threats posed by Iran and the global al Qaeda network.

A team of 20 analysts and support operators conducts intelligence analysis on open source intelligence (OSINT) data within the project. They produce influential assessments, forecasts, and policy recommendations to inform and educate policymakers, the intelligence and military communities, and all interested citizens. →

**“As the value of using graph technology becomes more widely recognized, the need for good visualization tools will grow. Linkurious can assist with visualization for other intelligence organizations as it has done for CTP.”**

### - Frederick W. Kagan

Resident Scholar and Director,  
Critical Threats Project and  
Robert H. Malott Chair





# Piecing together disparate data and generating insights is a challenge for intelligence analysts



Unlike the conventional intelligence-gathering model, CTP analysts both collect and analyze the data, reducing delays and the misinterpretation risk associated when collection and analysis are separated. They gather data from publicly available sources such as local and international media, social media posts, and public reports and ingest them into their database system on a daily basis. However, without the appropriate technology, the CTP team couldn't take full advantage of their intelligence model.

"What we have found repeatedly is that if you are ingesting new entities and linking them together, visualization is essential," explains Frederick Kagan, CTP director. "The solutions we experimented with were not well designed for continuously updating data, requiring additional workflow steps when analysts were to update the data."

At the same time, the process of insight generation is extremely complex. Analysts are dealing with intricate networks that involve multiple data elements such as events, people and locations. The ability to dynamically navigate the data is crucial to make sense of it.

**"What we have found repeatedly is that if you are ingesting new entities and linking them together, visualization is essential."**

"The sort of human and event networks we are working with become very complicated very quickly. If you have something that presents either a static network or some force directed model that you can't adjust, it's not really usable."

Analysts must also identify geographical patterns and connect the dots between those various pieces of information while correlating the findings with the reality on the ground.

"The inability to visualize networks of geo-localized data is a major obstacle to effectively taking advantage of data." →





# Graph technology to generate insights from complex and connected data



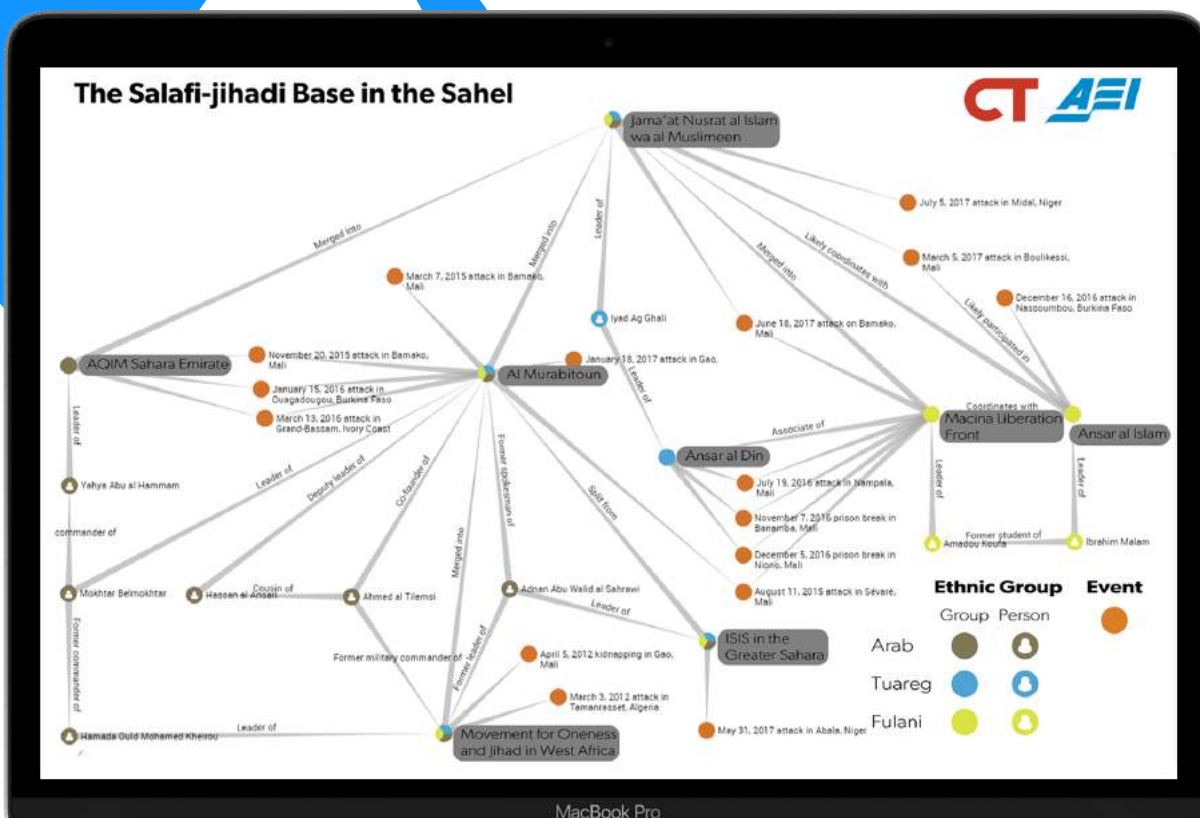
To empower its team and make the insight generation process as effective as possible, the CTP director decided to use graph technology.

“As soon as we learned what graph technology was, we wanted to move to it because it was so clearly optimal for the kind of work we do.”

They built their data-intelligence platform with a data ingestion and management system based on a Neo4j database and Python scripts. Linkurious Enterprise provides the graphical user interface layer with visualization capabilities, letting analysts visualize entities both as networks and geographically. “Linkurious Enterprise was the only tool we found that allowed us to dynamically update a database without user intervention and that could produce publication-ready graphics. We now use it for entity network mapping and visualization on a daily basis.”

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The CTP team uses the interactive graph visualization interface in Linkurious Enterprise to dynamically explore networks of data collected beforehand. With the help of the geo-spatialization feature, analysts can analyze geo-localized data to unveil and understand patterns of events. “We were able to geo-visualize using Google Earth, but the stylization is unimpressive, and again, did not dynamically update. The geo-visualization tools of Linkurious helped us get to a much more optimal solution to that problem as well.” →





# A cohesive intelligence picture increasing threats discovery and understanding

With a consolidated workflow, including data processing, visualization, and analysis, CTP analysts can fully take advantage of their intelligence model. They save time and generate accurate networks based on their understanding and knowledge of the data.

“Analysts ingest data into our database system and create entities and connections while visualizing the networks as they are shaping themselves.”

**“The integration of Linkurious helps unlock the full potential of our data, tools, and workflow.”**

They are also able to find critical insights thanks to the interactive visualization interface or the geo-spatialization feature. CTP's analysts can piece together complex networks involving individuals, geographical or event data in order to understand and predict conflict dynamics.

“For instance, we use the Linkurious geo-spatialization feature a lot. We geolocate what we call 'kinetic events' to the best of our abilities and analyze where and why they are occurring. With a good ability to visualize the geo-spatialized relationships, our analysts can identify patterns and recognize anomalies.” Linkurious Enterprise is now part of CTP's analysts' daily missions. The team uses it to conduct intelligence investigations and to produce data graphics in its weekly Threat Update publication.

“The integration of Linkurious helps unlock the full potential of our data, tools, and workflow. It saves us time, in terms of analysis and publications, allowing us to get insight out there much more rapidly. Linkurious is now part of our base workflow and core products.” ©

Photo by Christopher Burns.

## About us

Linkurious offers an intuitive financial crime investigation platform that enables swift and precise detection and investigation of even the most sophisticated criminal networks for optimal risk mitigation and protection. More than 3000 investigators in Global 2000

companies, public organizations, governments, and NGOs use Linkurious to harness their complex connected data and uncover fraud and money laundering schemes that would otherwise remain hidden.

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