EE / CprE / SE 491 – sdmay 21-17
Webserver Attack Blocking AI
Report 6

03/30/2021 – 04/12/2021
Client: Andrew Dakin (Cylosoft)
Faculty Advisor: Douglas W. Jacobson

Team Members:

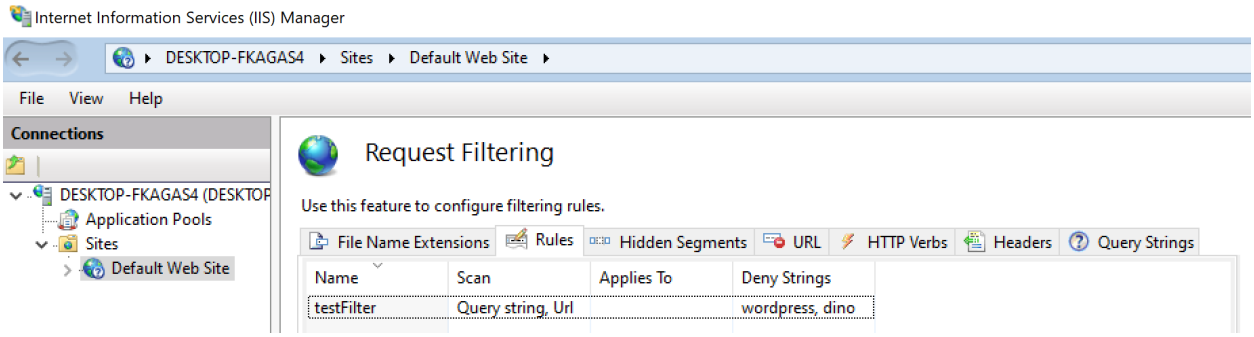
Megan Hill ---------- Website Engineer
Jamie Sampson ---------- Security Engineer
Emily Young ---------- Database Engineer
Andrew Marek ---------- Administrator / Software Engineer
Paul Degnan ---------- Automation Engineer

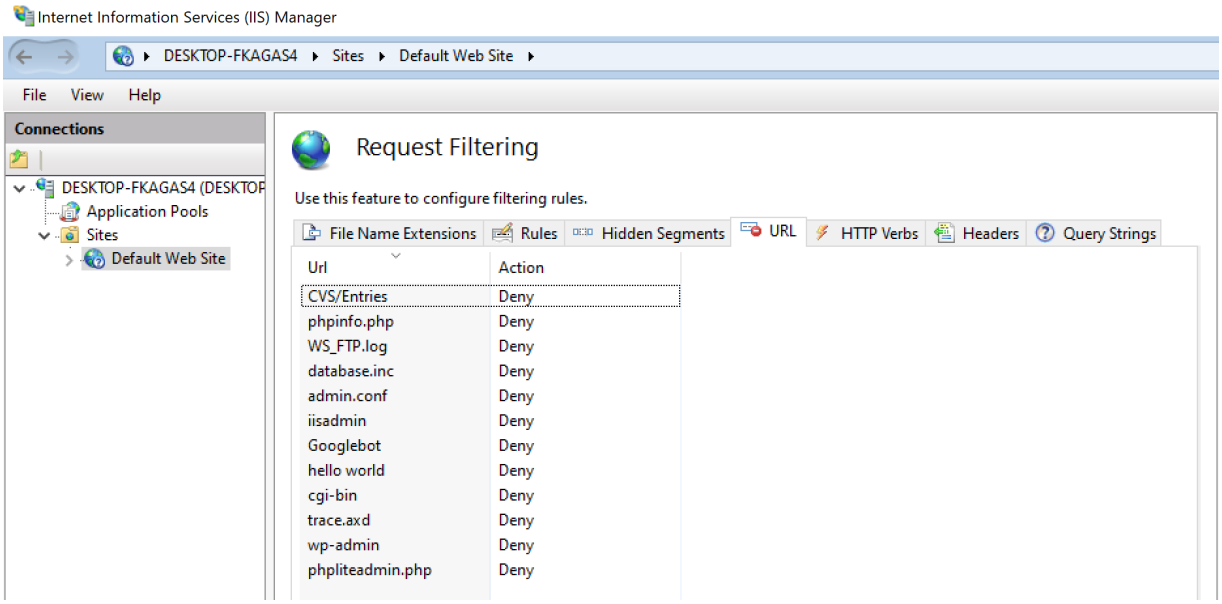
Summary

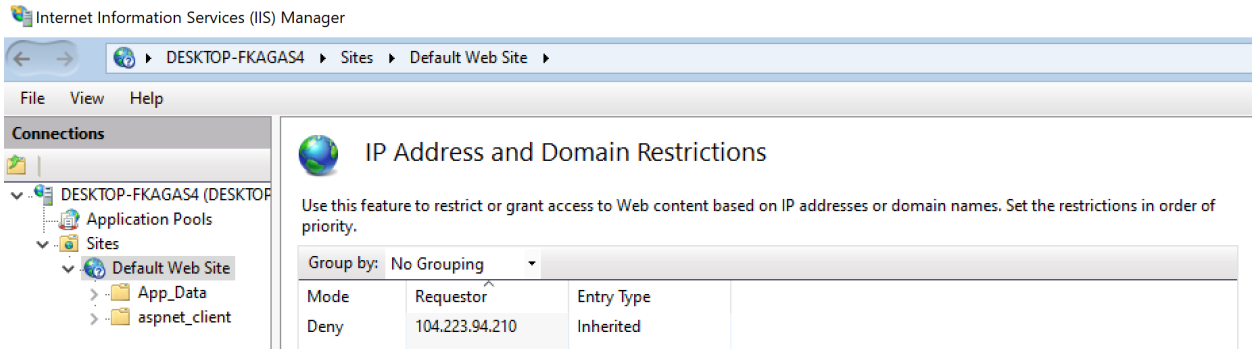
This week we got an environment where we are able to run all parts of our application. This meant that we were able to do work on connecting IIS and the database to our application. We also began work on our PIRM presentation as well as some of the other projects/presentations we need to do for the end of the semester.

Past Week Accomplishments

- IIS Settings - Jamie
    - Tested functions that called IIS APIs to ensure they communicated correctly with IIS. Ran into some issues with duplicate entries causing the app to crash, but resolved them.
    - Defaulted values so that users don't have to provide all fields along with creating a document listing details on what features Smartblock was compatible with.
    - Ensured multiple sites each with different JSON settings were initialized correctly on app start-up.

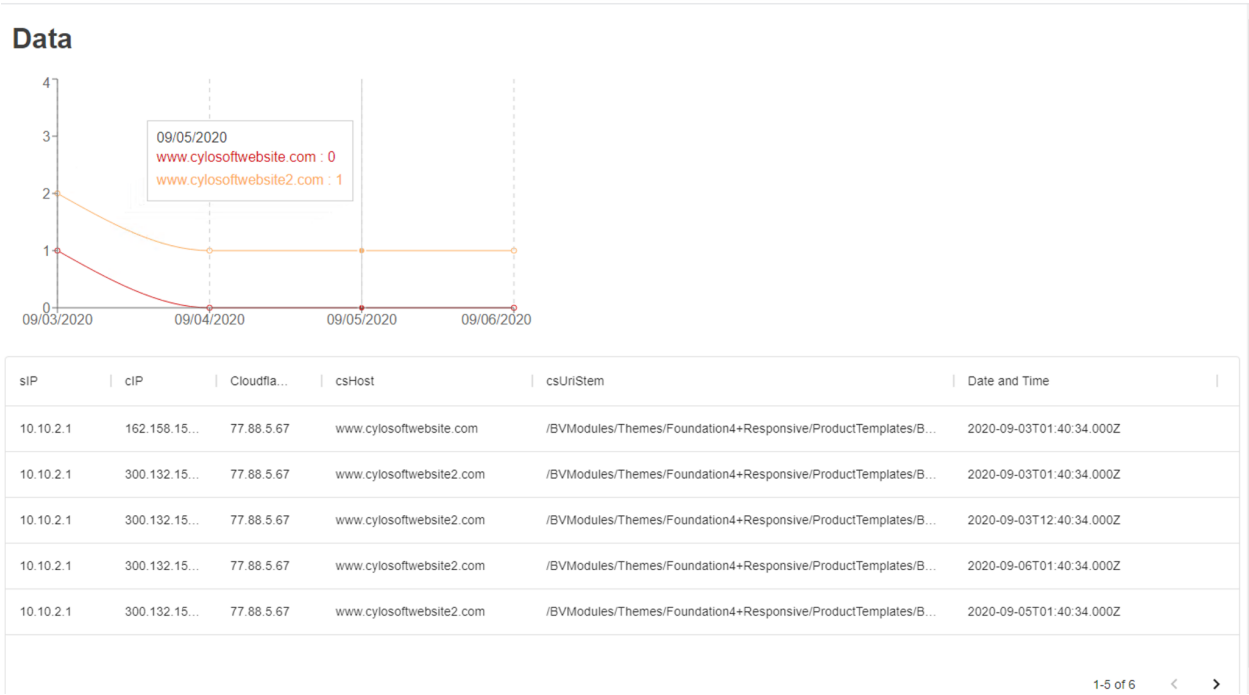






- Remote Desktop - Jamie
    - Requested the CS department to create a remote desktop space for our team so that we could all access a shared environment where we could connect to the database, IIS, and our application.
    - All the joys of setting up a new environment to run all parts - installing and Googling how to resolve unique issues in setup.
- File Watcher - Paul
    - Created automated subdirectory functionality for file watcher
    - Created a backup method for the small chance FileWatcher can't access the files in read mode while the file is being written to in read write mode.
    - Changed the functionality where the file watcher only parses recent log entries to work with subdirectories.
- Parsing sc-substatus field - Andrew
    - Added parsing of sc-substatus field, which returns a particular HTTP code.
    - If it returns 501/502, then the entry's IP is already blocked. We want to use this information for our website component.
- Final Report - Andrew
    - Began outline for final report, started brainstorming for various components.

    - Used past years projects as an example on how to structure it.
- Database - Emily
    - We're finally connecting to the database consistently
    - All query testing is completed
        - Complete overhaul of Insert() (lots of syntax errors and it was easier to scrap and start over)
        - Website is now able to utilize these methods to display real data
- Website - Megan
    - Downloaded applications necessary to run website on remote server
    - Figured out bugs around running website in new environment
    - Connected website to database using knex
    - Wrote SQL queries to query for data to display on website
    - Wrote js code to parse results of sql queries into expected data
    - Adapted existing UI to use information from database
    - Adapted UI to handle a wider range of values (future-proofing)



Pending Issues

- Figuring out a useful - similar to what we would be given - way of mimicking IP requests to our website - as a testing environment. - Jamie
- Related to the testing environment, getting actual data populating our database instead of the mock data we are using now. - Megan

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Megan Hill	Wrote SQL queries for the data we would need on the website. Connected website to database. Updated UI to reflect the wider variety of data that is possible.	10	32
Jamie Sampson	Ensured that site settings were set correctly within IIS. Fixed duplicates causing crashes. Added documentation. Setup a remote desktop to run the app.	9	30.5
Emily Young	Overhaul Insert() to work smoothly. Completed all testing to query methods	6	26.5
Andrew Marek	Added more features to log parser basically. Unit tested those as well. Started on final report.	3	17
Paul Degnan	Created automated subdirectory functionality for file watcher. Created a backup method for FileWatcher in case it can't access the files in read mode while the file is being written to. Extended subdirectory functionality where the file watcher only parses recent log entries instead of all.	3	22

Plans for Coming Week

- Give a demo / walkthrough of what our application does to our client to receive feedback. - All
- Establish a complete trip or "demo" of our application. - All
- Attempt to set up making requests to our website to mimic some kind of traffic - not necessarily the same type of requests in real implementation. - Jamie
- Make significant progress on final report
- Add Search (by IP) functionality to website - Megan
- Clean up UI on website - Megan
- Aid in database transaction coding - Emily