



Alert Tuning for IT Monitoring

# My Role

I worked as the lead UX Designer on the Alert Tuning tab at LogicMonitor. This part of the product allows users to customize and manage when they will be alerted for changes in the data they track.

This is a vital aspect of the product because alerting thresholds determine when potential issues are found, and thus how successful our users will be at their jobs.

I took on the project from a previous designer and saw it through to development, where I designed through technical limitations as they arose.

# The Problem

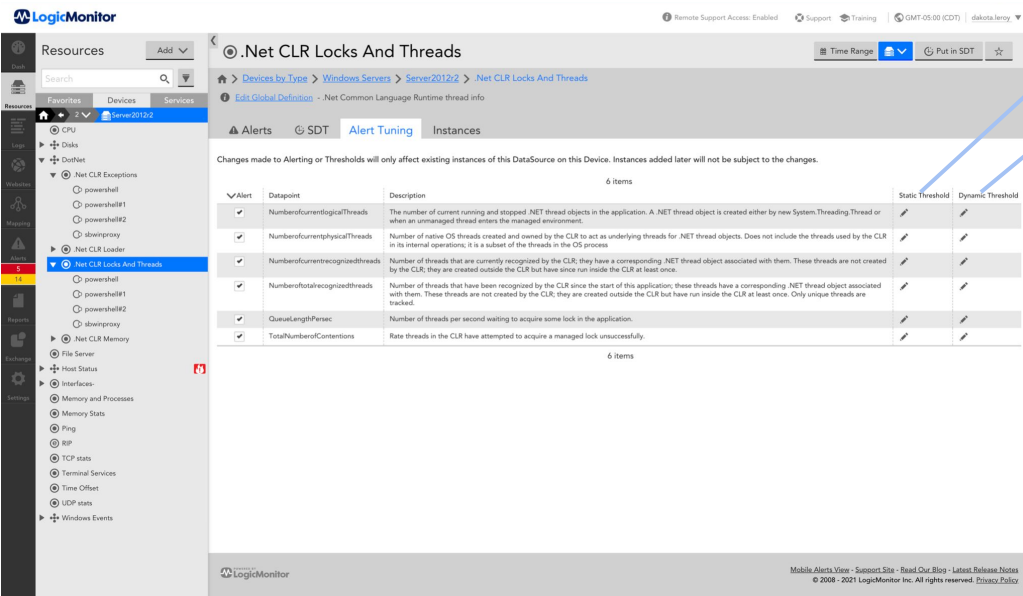
The biggest issues with the Alert Tuning tab were that it was confusing to use, difficult to understand how alerting thresholds would behave once they were set, and easy for novice users to mess up alerting preferences by mistake.

Some users did not even take advantage of some of the features at all because of how confusing it was.

My goal was to make an extremely complicated feature as simple as possible by redesigning it over the course of a few months.

# Existing Design

This shows the old process of adding a new alert threshold.



Resources

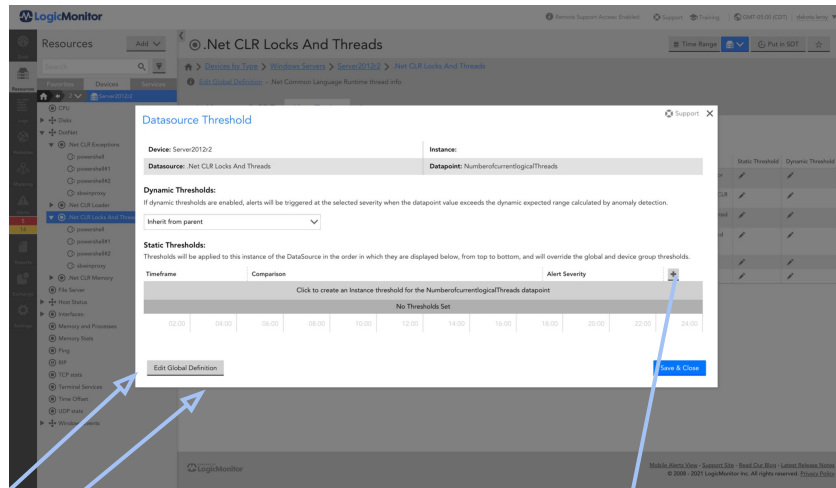
Search

Devices by Type > Windows Servers > Server20122 > .Net CLR Locks And Threads

Alerts SDT Alert Tuning Instances

Changes made to Alerting or Thresholds will only affect existing instances of this DataSource on this Device. Instances added later will not be subject to the changes.

Alert	Datapoint	Description	Static Threshold	Dynamic Threshold
<input checked="" type="checkbox"/>	NumberOfCurrentThreads	The number of current running and stopped .NET thread objects in the application. A .NET thread object is created either by new System.Threading.Thread or when an unmanaged thread enters the managed environment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	NumberOfCurrentPhysicalThreads	Number of native OS threads created and owned by the CLR to act as underlying threads for .NET thread objects. Does not include the threads used by the CLR in its internal operations; it is a subset of the threads in the OS process.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	NumberOfCurrentRecognizedThreads	Number of threads that are currently recognized by the CLR; they have a corresponding .NET thread object associated with them. These threads are not created by the CLR; they are created outside the CLR but have since run inside the CLR at least once.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	NumberOfRecognizedThreads	Number of threads that have been recognized by the CLR since the start of this application; these threads have a corresponding .NET thread object associated with them. These threads are not created by the CLR; they are created outside the CLR but have run inside the CLR at least once. Only unique threads are tracked.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	QueueLengthPersec	Number of threads per second waiting to acquire some lock in the application.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	TotalNumberOfContentions	Rate threads in the CLR have attempted to acquire a managed lock unsuccessfully.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Resources

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Datasource Threshold

Device: Server20122 Instance: NumbersOfCurrentThreads

Datasource: .Net CLR Locks And Threads Datapoint: NumbersOfCurrentThreads

**Dynamic Thresholds:**  
If dynamic thresholds are enabled, alerts will be triggered at the selected severity when the datapoint value exceeds the dynamic expected range calculated by anomaly detection.

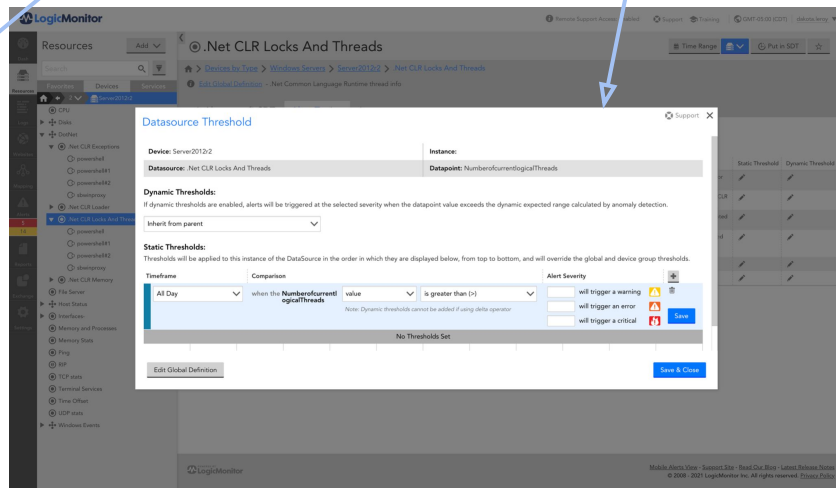
Inherit from parent

**Static Thresholds:**  
Thresholds will be applied to this instance of the DataSource in the order in which they are displayed below, from top to bottom, and will override the global and device group thresholds.

Timeframe Comparison Alert Severity

No Thresholds Set

Edit Global Definition Save & Close



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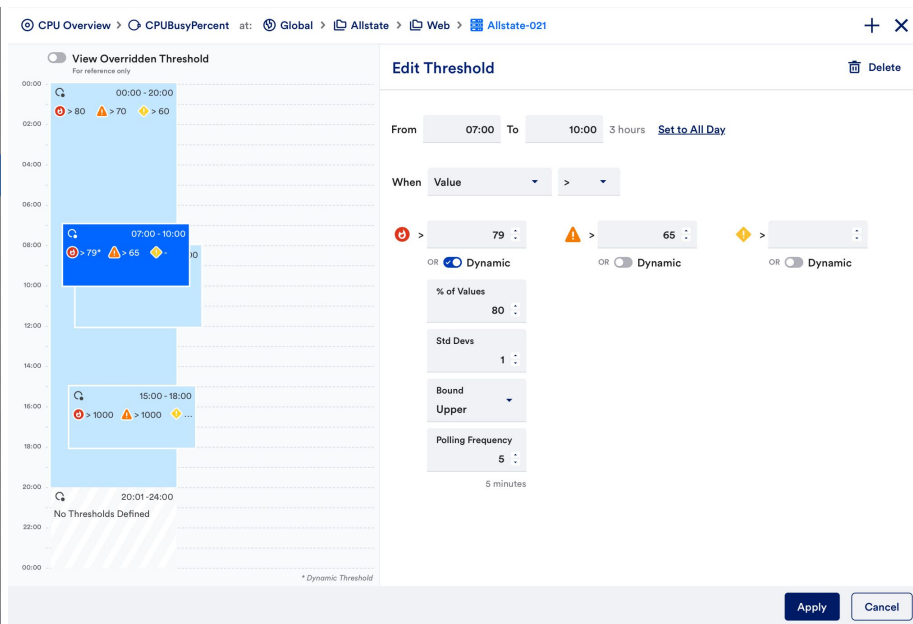
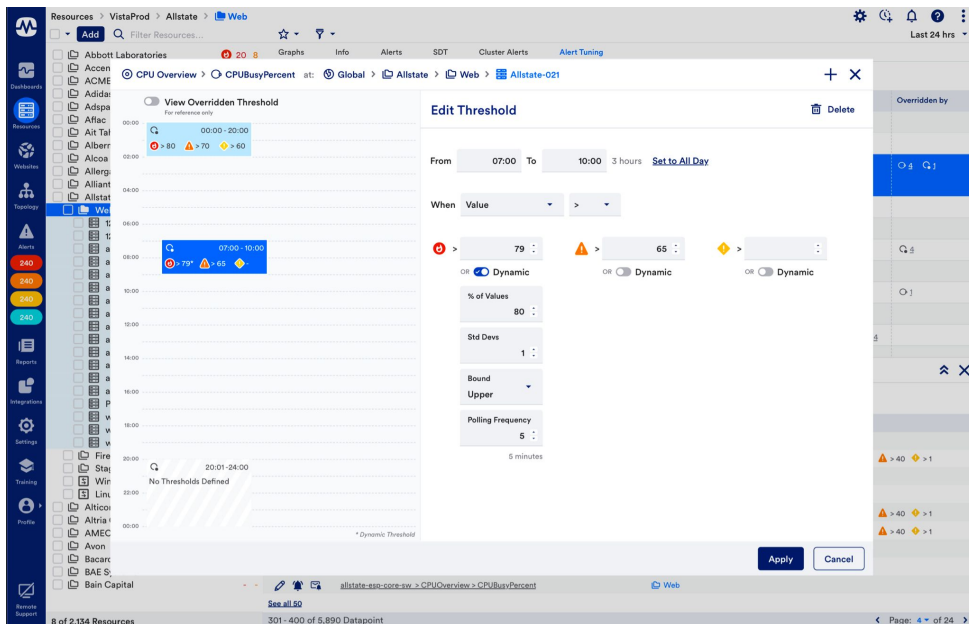
All Day when the NumbersOfCurrent logicalThreads value is greater than [x] will trigger a warning will trigger an error will trigger a critical

No Thresholds Set

Edit Global Definition Save & Close

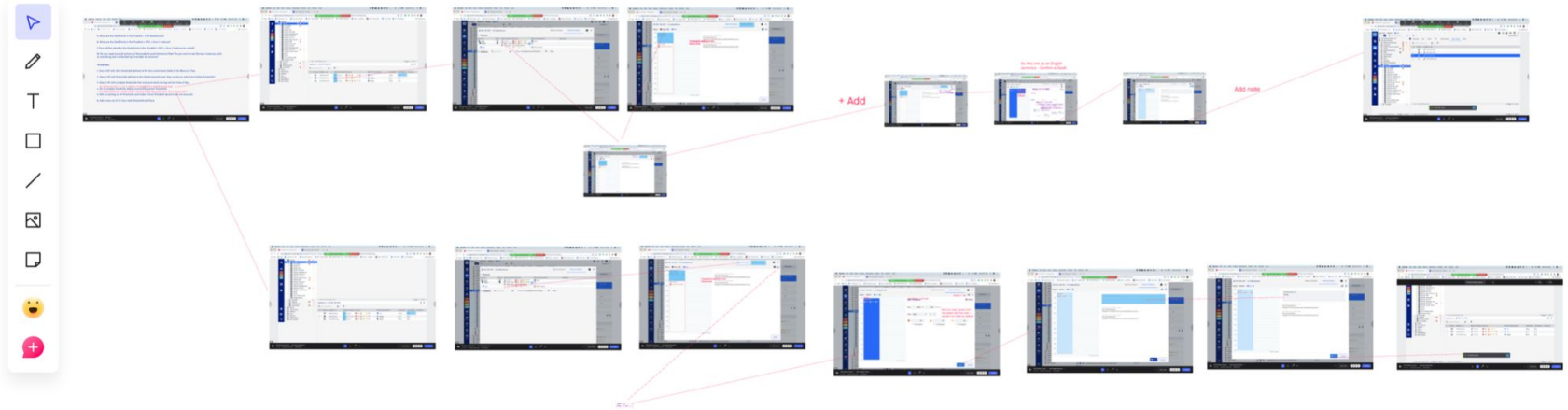
# Starting Point

I began with the ideas from the previous designer and input from my team. I interviewed dozens of customers about how they understood the feature.



# Iterating and Testing

I continued to iterate on my designs based on user feedback. The biggest takeaways from my research were that users wanted alerting behaviors spelled out, visualizations of their alerting thresholds, and a clear representation of the inheritance hierarchies at play.



# Final Designs

The new main page offers more insight into what is going on at the DataPoint and DataSource levels.

Users can now see high-level information at a glance with the DataPoints details panel.

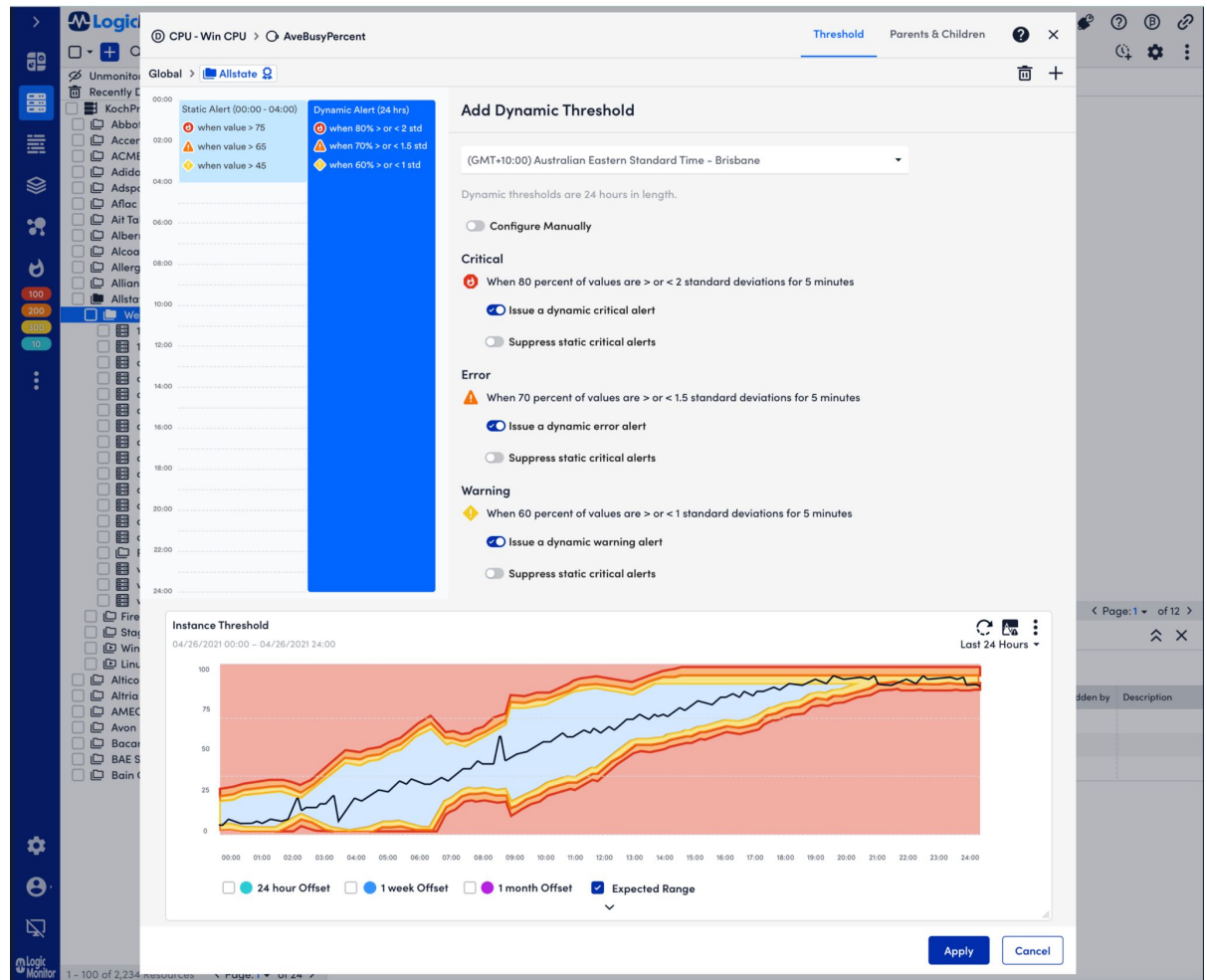
The screenshot displays the LogicMonitor web interface. The top navigation bar includes the LogicMonitor logo, the path 'Allstate > Web', and a date range 'Jun 04 2020 06:45 AM - Jun 05 2020 10:30 AM'. The left sidebar shows a tree view of resources under 'Unmonitored Resources' and 'Recently Deleted', with 'Web' selected. The main panel is titled 'Alert Tuning' and shows a list of DataSources. The 'CPU (Win CPU)' DataSource is selected, and the 'DataPoints' details panel is open, showing a table of alerting rules.

Alerting	Datapoint	Effective Threshold	Effective Threshold Set at	Inherited By	Overridden by	Description
<input type="checkbox"/>	CPUBusyPercent	24 Hours > 80 > 70 > 60	Web	20	4	
<input type="checkbox"/>	AveBusyPercent	00:00 - 04:00 > 80 > 70 > 60	Allstate	2	0	
<input type="checkbox"/>	PercentRemaining	24 Hours > 90 > 80 > 70	Global	20	0	

# Final Designs

This modal tells users what will happen for each selection with clear descriptions and the blue rectangle visual guides.

The threshold graph below shows users how their selection would have behaved during the selected time period





# Final Designs

The Parents & Children view gives more granular details about what thresholds are inherited and where.

There are also brief overviews of how those thresholds are defined.

The screenshot displays the LogicMonitor interface, specifically the 'Parents & Children' view for the 'CPU-BusyPercent' threshold. The interface shows a hierarchy of resources and their associated thresholds.

**Parents View:**

Ancestors	Alerting	Effective Threshold	Effective Threshold Set at
Global		24 Hours  > 90  > 80  > 70	Global
Allstate		00:00 - 04:00  > 80  > 70  > 60	Allstate
Web		04:00 - 24:00 No Threshold Defined	Self

**Children View:**

Children	Alerting	Effective Threshold	Effective Threshold Set at
Windows Hosts		24 Hours  > 70  -  > 50	Self
www-441		-	-
CPU (CPU Win)		24 Hours  > 80  -  > 60	Self
Instance1		24 Hours  > 80  -  > 60	www-441 > CPU (CPU Win)
Instance2		24 Hours  > 80  -  > 60	www-441 > CPU (CPU Win)
Prod-41A		-	-
CPU (CPU Win)		24 Hours  > 85  -  > 60	Self
InstanceA		24 Hours  > 90  -  > 70	Self
InstanceB		24 Hours  > 90  -  > 70	Windows Hosts

**Summary View:**

Resource	Alerting	Effective Threshold	Threshold Set at	Count	Description
CPUBusyPercent		24 Hours  > 80  -  > 60	Web	20	
AveBusyPercent		00:00 - 04:00  > 80  > 70  > 60	Allstate	2	
PercentRemaining		24 Hours  > 90  > 80  > 70	Global	20	