CLAIMS

1. A method for capturing metrics in a network, comprising:

receiving, at a network utility and from a client device, a first request to configure a network element at a first network edge site for a first customer, wherein the first network element comprises at least one of a first network device and a first workload;

sending, by the network utility, at least a first configuration file for the first network element, wherein the first configuration file comprises a first capture template for metrics collection;

configuring the first network element at the first network edge site, including a first capture component that comprises a refactored first capture template;

receiving, at a metrics storage system, instances of metrics from the first capture component of the first network element;

receiving a request for the metrics at the metrics storage system; and

providing the instances of the metrics.

2. The method of claim 1, wherein the request for the metrics is received from, and the instances of metrics are provided to, an edge recommendation system, the method further comprising:

determining, by the edge recommendation system, a recommended edge network site for a second workload of a second customer;

providing the recommended edge network site for the second workload to the second customer.

3. The method of claim 2, the method further comprising:

storing the first capture component in a capture component repository;

receiving, at the network utility and from a second client device, a second request to configure a second network element at the second network edge site for the second customer, wherein the second network element comprises at least one of a second network device or the second workload;

sending, by the network utility, a second configuration file for the second network element, wherein the second configuration file comprises a second capture template for metrics collection; and

configuring the second network element at the second network edge site, including a second capture component that comprises a refactored second capture template.

4. The method of claim 3, further comprising:

in response to receiving the second request, determining that the second network element is of a similar type to the first network element;

wherein sending the second configuration file comprises generating the second capture template based on the first capture template.

5. The method of any preceding claim, wherein when the first network element is the network device, the first capture component is a capture agent, and when the first network element is the first workload, the first capture component is an embedded API in the first workload.

6. The method of any preceding claim, wherein the network utility is an internet of components (IoC) factory.

7. The method of any preceding claim, wherein the first capture component comprises a parameter that indicates permissions regarding access to the instances of the metrics from the first capture component, further comprising:

checking the permissions before providing the instances of the metrics.

8. The method of any preceding claim, wherein the first configuration file specifies a set of mandatory metrics, further comprising: configuring the first network element at the first network edge site only when the first capture component is instrumented to collect the set of mandatory metrics.

9. The method of any preceding claim, wherein the first capture component comprises a command line runner and an instrumentation template.

10. The method of claim 2, wherein the first capture component is configured to participate in at least one algorithm of the following algorithms used in determining the recommended edge network site:

a Nash equilibrium algorithm;

a bidding algorithm;

a polling algorithm;

a sampling algorithm;

a prediction algorithm; or

a probability algorithm.

11. The method of claim 10, wherein the at least one algorithm is executed in part by a metrics presentation engine.

12. A method for recommending a network edge site, the method comprising:

receiving, from a first client device, a first request to recommend a network edge site within a provider network to configure a first network element for a first customer, wherein the first network element comprises at least one of a first network device and a first workload, and wherein the request includes first component information and first optimization criteria;

determining, based on the first component information and the first optimization criteria, first relevant metrics;

querying a metrics storage system for the first relevant metrics, wherein the metrics storage system stores instances of the first relevant metrics from other network elements operating on the provider network;

receiving the instances of the first relevant metrics;

using the instances of the first relevant metrics to generate a recommendation of at least a first network edge site for the first network element; and

providing the recommendation to the first client device.

13. The method of claim 12, further comprising:

receiving a selection of the first network edge site;

configuring the first network element for the first customer at the first network edge site.

14. The method of claim 12 or 13, further comprising:

receiving, from a second client device, a second request to recommend a network edge site within the provider network to configure a second network element for a second customer, wherein the second network element comprises at least one of a second network device and a second workload, and wherein the request includes second component information and second optimization criteria;

determining, based on the second component information and the second optimization criteria, second relevant metrics that are different from the first relevant metrics;

querying the metrics storage system for the second relevant metrics, wherein the metrics storage system stores instances of the second relevant metrics from other network elements operating on the provider network;

receiving the instances of the second relevant metrics;

using the instances of the second relevant metrics to generate a recommendation of at least a second network edge site for the second network element; and

providing the recommendation to the second client device.

15. The method of any one of claims 12 to 14, wherein the first relevant metrics are specific to a type of the first network element.

16. A system, comprising:

at least one processor; and

memory, operatively connected to the at least one processor and storing instructions that, when executed by the at least one processor, cause the system to perform a method, the method comprising:

receiving, at a network utility and from a client device, a first request to configure a network element at a first network edge site within a provider network for a first customer, wherein the first network element comprises at least one of a first network device and a first workload;

sending, by the network utility, at least a first configuration file for the first network element, wherein the first configuration file comprises a first capture template for metrics collection;

configuring the first network element at the first network edge site, including a first capture component that comprises a refactored first capture template;

storing, at a metrics storage system, instances of first metrics from the first capture component of the first network element;

receiving, from a second client device, a request to recommend a network edge site within the provider network to configure a second network element for a second customer, wherein the second network element comprises at least one of a second network device and a second workload, and wherein the request to recommend includes component information and optimization criteria;

determining, based on the component information and the optimization criteria, relevant metrics;

querying the metrics storage system for the relevant metrics;

receiving the instances of the relevant metrics;

using the instances of the relevant metrics to generate a recommendation of at least a second network edge site for the second network element; and

providing the recommendation to the second client device.

17. The system of claim 16, wherein the relevant metrics include at least some of the first metrics.

18. The system of claim 16 or 17, wherein determining the relevant metrics comprises comparing the component information to information about the first network element, and when the component information matches at least a portion of the information about the first network element, determining that the relevant metrics includes at least some of the first metrics.

19. The system of any one of claims 16 to 18, wherein the method further comprises:

storing the first capture component in a capture component repository;

receiving, at the network utility and from the second client device, a second request to configure the second network element at the second network edge site for the second customer;

sending, by the network utility, a second configuration file for the second network element, wherein the second configuration file comprises a second capture template for metrics collection; and

configuring the second network element at the second network edge site, including a second capture component that comprises a refactored second capture template.

20. The system of claim 19, wherein the method further comprises:

in response to receiving the second request, determining that the second network element is of a similar type to the first network element;

wherein sending the second configuration file comprises generating the second capture template based on the first capture template.