CLAIMS:

1. A method of modeling a deployed system infrastructure of a cloud computing environment, the method comprising:

generating, by one or more processors, an abstract system model comprising one or more model elements corresponding to one or more infrastructure elements of the deployed system infrastructure, wherein:

each model element of the one or more model elements specifies one or more selectors, and

for each model element of the one or more model elements, each selector of the respective one or more selectors of the model element includes an indication of at least one infrastructure element, from the one or more infrastructure elements, that is associated with the model element;

building, by the one or more processors, an inventory of the one or more infrastructure elements;

for at least one model element of the one or more model elements, identifying, by the one or more processors, the at least one infrastructure element of the inventory associated with the at least one model element as indicated by the respective one or more selectors of the at least one model element;

generating, by the one or more processors, a bound system model by combining the inventory of the one or more infrastructure elements with the abstract system model based on the one or more model elements, the respective one or more selectors of the one or more model elements, or a combination thereof, the bound system model mapping the one or more model elements of the abstract system model to corresponding infrastructure elements from the inventory based at least in part on the identified at least one infrastructure element of the inventory associated with the at least one model element, wherein the bound system model comprises one or more element bindings that associate respective model elements of the abstract system model with corresponding infrastructure elements of the inventory, one or more data bindings that associate metric data of the corresponding infrastructure elements with respective element bindings, and one or more relationship bindings that identify relationships among the element bindings; and

outputting, by the one or more processors, data indicative of a status of the deployed system infrastructure, an incident occurring within the deployed system infrastructure, or both, the data generated using the bound system model.

2. The method of claim 1, wherein the one or more infrastructure elements comprise:

one or more physical elements of the deployed system infrastructure,
one or more virtual elements of the deployed system infrastructure, or
a combination thereof.

3. The method of claim 1, wherein building the inventory of the one or more infrastructure elements comprises obtaining information regarding the one or more infrastructure elements from:

a service hosting the deployed system infrastructure,
an application programming interface (API), or
a combination thereof.

4. The method of claim 1, wherein the respective one or more selectors of the at least one model element include, in the indication of the at least one infrastructure element associated with the at least one model element, one or more aspects of an ancestor element, the one or more aspect of the ancestor element used to determine the one or more associations between the one or more model elements of the abstract system model and the inventory of the one or more infrastructure elements.

5. The method of claim 4, wherein the one or more aspects of the ancestor element comprise:

a label of the ancestor element,
a property of the ancestor element, or
a combination thereof.

6. The method of claim 4, wherein identifying the at least one infrastructure element of the inventory associated with the at least one model element comprises:

(i) evaluating a first portion of the respective one or more selectors of the at least one model element that do not reference to the ancestor element,

(ii) subsequent to operation (i), evaluating a second portion of the respective one or more selectors of the at least one model element that reference the ancestor element, and

(iii) repeating operations (i) and (ii) until all of the respective one or more selectors of the at least one model element are evaluated.

7. The method of claim 4, wherein identifying the at least one infrastructure element of the inventory associated with the at least one model element comprises using:

a label-based match,

a query,

a heuristic, or

a combination thereof.

8. The method of claim 1, wherein the respective one or more selectors of the at least one model element include, in the indication of the at least one infrastructure element associated with the at least one model element, one or more variables to substitute for one or more aspects of an ancestor element of the at least one model element.

9. The method of claim 1, wherein the at least one model element comprises a stream of telemetry associated with an ancestor element, the stream of telemetry comprising:

a metric,

a log,

an event trace, or

a combination thereof.

10. The method of claim 1, wherein a child element comprises a relationship between abstract system model elements and/or inventory elements.

11. The method of claim 1, further comprising updating the bound system model in response to a detected change in the inventory of the one or more infrastructure elements.

12. The method of claim 11 further comprising maintaining a history indicative of times at which the bound system model is updated.

13. A system comprising at least one processor and memory storing instructions which, when executed, cause the system to perform:

generating an abstract system model comprising one or more model elements corresponding to one or more infrastructure elements of the deployed system infrastructure, wherein:

each model element of the one or more model elements specifies one or more selectors, and

for each model element of the one or more model elements, each selector of the respective one or more selectors of the model element includes an indication of at least one infrastructure element, from the one or more infrastructure elements, that is associated with the model element;

building an inventory of the one or more infrastructure elements;

for at least one model element of the one or more model elements, identifying the at least one infrastructure element of the inventory associated with the at least one model element as indicated by the respective one or more selectors of the at least one model element;

generating a bound system model by combining the inventory of the one or more infrastructure elements with the abstract system model based on the one or more model elements, the respective one or more selectors of the one or more model elements, or a combination thereof, the bound system model mapping the one or more model elements of the abstract system model to corresponding infrastructure elements from the inventory based at least in part on the identified at least one infrastructure element of the inventory associated with the at least one model element, wherein the bound system model comprises one or more element bindings that associate respective model elements of the abstract system model with corresponding infrastructure elements of the inventory, one or more data bindings that associate metric data of the corresponding infrastructure elements with respective element bindings, and one or more relationship bindings that identify relationships among the element bindings; and

outputting data indicative of a status of the deployed system infrastructure, an incident occurring within the deployed system infrastructure, or both, the data generated using the bound system model.

14. The system of claim 13, wherein the one or more infrastructure elements comprise:

one or more physical elements of the deployed system infrastructure,

one or more virtual elements of the deployed system infrastructure, or

a combination thereof.

15. The system of claim 13, wherein building the inventory of the one or more infrastructure elements comprises obtaining information regarding the one or more infrastructure elements from:

a service hosting the deployed system infrastructure,

an application programming interface (API), or

a combination thereof.

16. The system of claim 13, wherein the respective one or more selectors of the at least one model element include, in the indication of the at least one infrastructure element associated with the at least one model element, one or more aspects of an ancestor element, the one or more aspect of the ancestor element used to determine the one or more associations between the one or more model elements of the abstract system model and the inventory of the one or more infrastructure elements.

17. A non-transitory computer-readable storage medium comprising instructions which, when executed by one or more hardware processors, cause performance of a set of operations comprising:

generating an abstract system model comprising one or more model elements corresponding to one or more infrastructure elements of the deployed system infrastructure, wherein:

each model element of the one or more model elements specifies one or more selectors, and

for each model element of the one or more model elements, each selector of the respective one or more selectors of the model element includes an indication of at least one infrastructure element, from the one or more infrastructure elements, that is associated with the model element;

building, an inventory of the one or more infrastructure elements;

for at least one model element of the one or more model elements, identifying the at least one infrastructure element of the inventory associated with the at

least one model element as indicated by the respective one or more selectors of the at least one model element;

generating a bound system model by combining the inventory of the one or more infrastructure elements with the abstract system model based on the one or more model elements, the respective one or more selectors of the one or more model elements, or a combination thereof, the bound system model mapping the one or more model elements of the abstract system model to corresponding infrastructure elements from the inventory based at least in part on the identified at least one infrastructure element of the inventory associated with the at least one model element, wherein the bound system model comprises one or more element bindings that associate respective model elements of the abstract system model with corresponding infrastructure elements of the inventory, one or more data bindings that associate metric data of the corresponding infrastructure elements with respective element bindings, and one or more relationship bindings that identify relationships among the element bindings; and

outputting data indicative of a status of the deployed system infrastructure, an incident occurring within the deployed system infrastructure, or both, the data generated using the bound system model.

18. The non-transitory computer readable medium of claim 17, wherein the one or more infrastructure elements comprise:

one or more physical elements of the deployed system infrastructure,

one or more virtual elements of the deployed system infrastructure, or

a combination thereof.

19. The non-transitory computer readable medium of claim 17, wherein building the inventory of the one or more infrastructure elements comprises obtaining information regarding the one or more infrastructure elements from:

a service hosting the deployed system infrastructure,

an application programming interface (API), or

a combination thereof.

20. The non-transitory computer readable medium of claim 17, wherein the respective one or more selectors of the at least one model element include, in the indication of the at least one infrastructure element associated with the at least one model element, one or more aspects of an ancestor element, the one or more aspect of the ancestor element used to determine the one or more associations between the one or more

model elements of the abstract system model and the inventory of the one or more infrastructure elements.