Bandwidth Allocation Report during Emergency Situations

Introduction:

This report provides an overview of the bandwidth allocation process during emergency situations, highlighting the priorities being managed, nodes involved, and the resulting allocations.

Emergency Situation Overview:

The emergency situation is characterized by a high volume of critical emergencies requiring immediate attention. The priority nodes are those responsible for handling these emergencies, which include:

1. **Critical Care Nodes**: These nodes are designated to handle life-threatening emergencies, such as cardiac arrests or severe allergic reactions.
2. **Urgent Response Nodes**: These nodes are responsible for responding to urgent situations that require prompt attention, but may not be life-threatening.

Bandwidth Allocation:

The bandwidth allocation process is designed to prioritize the critical care nodes and allocate available bandwidth accordingly. The initial bandwidth allocation is based on the node's capacity and the emergency situation's requirements.

1. **Initial Bandwidth Allocation**: The initial bandwidth allocation is 364.0333779818326 Mbps, with a remaining bandwidth of 120.37345050890328 Mbps.
2. **Node Bandwidth Initial Allocation**: Each node receives an initial allocation based on its capacity:
 * 1ef414e0-17c2-4151-b8de-71fd4d538b93: 96.0297950834709 Mbps

* 195b9c63-4b7e-4146-9fa5-6defd24f88dd: 78.40477627133899 Mbps
* 88891fa4-55ed-49fb-a5be-d44427dadd71: 73.88933842284212 Mbps
* 04dfeb74-f13c-44ba-bce7-ea92e4e1c8f8: 70.92349174987737 Mbps
* b316b277-9f0e-4099-84c9-db9fa9a29066: 39.53118130403076 Mbps
* e8df124d-17f7-4ccf-9b81-47b9db90504a: 4.366137444143314 Mbps
* c2066ffb-9afc-4916-8f98-e5fd0a07b2f1: 0.88865770612917 Mbps

Bandwidth Re-allocation:

As the emergency situation evolves, bandwidth is re-allocated to prioritize critical care nodes and ensure timely response.

1. **Node Bandwidth Final Allocation**: The final bandwidth allocation reflects the reallocated bandwidth:
* 1ef414e0-17c2-4151-b8de-71fd4d538b93: 10.518397289917434 Mbps
* 195b9c63-4b7e-4146-9fa5-6defd24f88dd: 5.965896012589013 Mbps
* 88891fa4-55ed-49fb-a5be-d44427dadd71: 2.108161766022576 Mbps
* 04dfeb74-f13c-44ba-bce7-ea92e4e1c8f8: 56.995018986071 Mbps
* b316b277-9f0e-4099-84c9-db9fa9a29066: 39.53118130403076 Mbps
* e8df124d-17f7-4ccf-9b81-47b9db90504a: 4.366137444143314 Mbps
* c2066ffb-9afc-4916-8f98-e5fd0a07b2f1: 0.88865770612917 Mbps

Unhandled Emergencies:

The report highlights two unhandled emergencies:

1. **Emergency #2: Cardiac Arrest Event**: This emergency requires 87.47170615421027 Mbps of bandwidth, which is not currently allocated.

2. **Emergency #3: Severe Allergic Reaction**: This emergency requires 89.18897902157966 Mbps of bandwidth, which is also not currently allocated.

Conclusion:

This report provides an overview of the bandwidth allocation process during emergency situations. The priority nodes are critical care nodes, and the initial bandwidth allocation is based on node capacity and emergency requirements. As the situation evolves, bandwidth is re-allocated to prioritize critical care nodes and ensure timely response. The report highlights two unhandled emergencies that require additional bandwidth allocation.