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| Description: |
| Deploy a new EKS node group using Crossplane resource claim functionality, managed via Argo CD. Ensure the node group is provisioned with the desired configuration and integrates correctly with the EKS cluster. |
| Setup: |
| 1. Ensure Crossplane is installed and running on the main EKS cluster.  2. Verify the AWS Provider configuration in Crossplane with proper credentials for managing node groups.  3. Ensure Argo CD is installed and configured in the EKS cluster.  4. Prepare a Git repository with a folder for the resource claim manifest, organized in a way that Argo CD can track the changes.  5. Configure Argo CD to sync the repository folder containing the Crossplane resource claim manifest. |
| Process of Testing: |
| 1. Prepare the Resource Claim Manifest  2. Push the Manifest to Git  - Commit and push the ‘ng-claim.yaml’ file to the configured GitLab repository:  3. Configure Argo CD Application  - In the Argo CD UI track the folder containing the claim.  4. Sync the Application  - Sync the application in Argo CD:  - Through the Argo CD UI, click on the ‘Sync’ button for the application.  5. Validate Node Group Creation  - Use AWS Management Console or CLI to validate the node group creation:  - Confirm that the node group matches the desired configuration.  6. Cluster Integration Check  - Verify that the new nodes appear in the cluster:  - kubectl get nodes  - Ensure the nodes are in `Ready` status and have the correct labels and taints:  kubectl describe node <node-name>  7. Cleanup  - Remove the ng-claim.yaml from the Git repository, push the changes, and sync the application in Argo CD to clean up resources. |
| Expected Results from the Test: |
| 1. Argo CD successfully applies the Crossplane resource claim.  2. Crossplane provisions a new node group in AWS with:  - The correct instance type.  - Desired count parameters.  - Correct labels and taints.  3. Nodes in the new group appear in the cluster with the ‘Ready’ status.  4. Cleanup removes all resources associated with the node group. |
| Results/Observation: |
| 1. Argo CD logs indicate successful synchronization of the resource claim.  2. Crossplane logs show successful provisioning and reconciliation of the node group.  3. Nodes behave as expected within the EKS cluster, adhering to the specified labels, taints, and scaling parameters.  4. Record any issues with Argo CD sync, Crossplane resource creation, or integration with the cluster for troubleshooting. |
| Screenshots: |
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| Comments: |
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