Alibaba Cloud Alibaba Cloud Container Service for Kubernetes

Release notes

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Generic conventions

Table -1: Style conventions

| Style | Description | Example |
|-----------------|--|--|
| | This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results. | Danger: Resetting will result in the loss of user configuration data. |
| A | This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results. | Warning: Restarting will cause business interruption. About 10 minutes are required to restore business. |
| | This indicates warning informatio n, supplementary instructions, and other content that the user must understand. | Notice: Take the necessary precautions to save exported data containing sensitive information. |
| | This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user. | Note: You can use Ctrl + A to select all files. |
| > | Multi-level menu cascade. | Settings > Network > Set network type |
| Bold | It is used for buttons, menus , page names, and other UI elements. | Click OK. |
| Courier font | It is used for commands. | Run the cd / d C : / windows command to enter the Windows system folder. |
| Italics | It is used for parameters and variables. | bae log list instanceid <i>Instance_ID</i> |
| [] or [a b] | It indicates that it is a optional value, and only one item can be selected. | ipconfig [-all -t] |

| Style | Description | Example |
|-------------|--|-----------------------|
| {} or {a b} | It indicates that it is a required value, and only one item can be selected. | swich {stand slave} |

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IV Issue: 20190905

1 Release notes

This topic provides a summary of the release notes of Alibaba Cloud Container Service for Kubernetes (ACK).

June 2019

| New feature | Description | Supported regions | References |
|--|---|------------------------------|------------|
| More available regions for Managed Kubernetes | More regions have been added to support Managed Kubernetes. Starting from June 2019, you can use Managed Kubernetes in Japan (Tokyo) and UK (London). | Japan (Tokyo) UK (London) | #unique_4 |

| New feature | Description | Supported regions | References |
|---|--|-------------------|------------|
| High-density deployment supported by the new Terway plug-in | The new version of the Terway plugin is available. It supports both the exclusive ENI mode and the inclusive ENI mode. The default mode is the inclusive ENI mode. • Exclusive ENI mode. • Exclusive ENI mode, the number of deployed pods must match the number of the created ENIs on each node. This mode can improve network performance. • Inclusive ENI mode: In this mode, you can have multiple container instances corresponding to one ENI. This mode improves the container deployment | All | #unique_5 |
| | density of a single node. | | |

| New feature | Description | Supported regions | References |
|-----------------|---------------------------|-------------------|--------------------|
| Adding support | Knative is a | All | #unique_6#unique_7 |
| for the Knative | serverless | | |
| framework | framework based | | |
| | on Kubernetes. | | |
| | Knative is used to | | |
| | create a serverless | | |
| | orchestration | | |
| | standard for | | |
| | deploying cloud | | |
| | -native and | | |
| | cross-platform | | |
| | services. Knative | | |
| | implements this | | |
| | serverless standard | | |
| | by integratin | | |
| | g container or | | |
| | function creation | | |
| | , workload | | |
| | management (| | |
| | auto scaling), and | | |
| | event models. ACK | | |
| | introduces the | | |
| | Knative deployment | | |
| | feature, which | | |
| | can help to install | | |
| | and upgrade the | | |
| | Build, Serving | | |
| | , and Eventing | | |
| | components. You | | |
| | must deploy Istio | | |
| | before using the | | |
| | Knative feature | | |
| | . A wizard for | | |
| | deploying sample | | |
| | applications and | | |
| | solutions for | | |
| | tracing, monitoring | | |
| | , and logging are | | |
| | also provided. | | |

| New feature | Description | Supported regions | References |
|---|---|-------------------|------------|
| Adding support to search by node IP addresses and pod IP addresses | Searching for a pod by node IP address and pod IP address is supported. In the management console, choose Application > Pods and specify the node IP address or pod IP address to manage a pod. | All | None. |

May 2019

| New feature | Description | Supported regions | References |
|--|---|--|------------|
| More available regions for Managed Kubernetes on Alibaba Cloud and Alibaba Finance Cloud | More regions have been added to support the Managed Kubernetes on Alibaba Cloud and Alibaba Finance Cloud. Starting from May 2019, you can use Managed Kubernetes on Alibaba Cloud in Australia (Sydney) and use Managed Kubernetes on Alibaba Finance Cloud in China (Shanghai). | Australia (Sydney) China (Shanghai) | #unique_4 |

| New feature | Description | Supported regions | References |
|------------------------|---------------------------------------|-------------------|------------|
| Genomics | Container Service has launched | All | None. |
| computing cluster | | | |
| that is designed | the genomics | | |
| for genomics computing | computing clusters for Dedicated | | |
| computing | Kubernetes. The | | |
| | clusters contain | | |
| | the worker nodes | | |
| | that use high- | | |
| | performance | | |
| | ECS instances | | |
| | and support the | | |
| | workflow engine of | | |
| | high specification. | | |
| | It allows you | | |
| | to process a | | |
| | large amount of | | |
| | batch genomics | | |
| | computing tasks | | |
| | in the following | | |
| | file formats: BCL, | | |
| | FASTQ, BAM, SAM, | | |
| | and VCF. Genomic | | |
| | computing tasks | | |
| | include genomic | | |
| | data analysis, | | |
| | alignment, and | | |
| | mutation detection. | | |
| | In the management | | |
| | console, choose | | |
| | Clusters > Clusters, and click Create | | |
| | Kubernetes | | |
| | Cluster. On the | | |
| | Select Cluster | | |
| | Template page, | | |
| | select the Dedicated | | |
| | Genomics | | |
| | Computing Cluster | | |
| | template to create | | |
| | the Dedicated | | |
| | Genomics | | |
| | Kubernetes cluster. | | |

| New feature | Description | Supported regions | References |
|---|---|-------------------|------------|
| Adding support for image and video encoding acceleration in FPGA clusters | Container Service has launched FPGA clusters, which use FPGA F3 instances as worker nodes. An FPGA cluster is suitable to perform video and image computing tasks, such as encoding videos with the H.265 standard and converting JPEG images to HEIF images. The time spent on implementing FPGA solutions of video encoding is reduced from more than one week to 15 minutes. This significantly saves the CDN bandwidth for the bitrate of transcoding and optimization of non-compression video quality. In the management console, choose Clusters > Clusters, and click Create Kubernetes Cluster. On the Select Cluster Template page, select the Dedicated FPGA Cluster template to create the Dedicated FPGA Kubernetes cluster. | All | None. |

| New feature | Description | Supported regions | References |
|---|---|-------------------|------------|
| New version of Cloud Controller Manager (CCM) | The CCM component is upgraded to v1.9.3.110-g4938309-aliyun, which supports more features of SLB configurations. This version contains the following new features: • You can configure parameters to limit whether SLB instances located in the public network can be created. • You can change the certificate ID. • You can specify a VSwitch when attaching an SLB instance located in the internal network to a service. • You can forward SLB traffic from HTTP over port 80 to HTTPS over port 443. | All | #unique_8 |

8

| New feature | Description | Supported regions | References |
|--|-----------------------|-------------------|-----------------|
| Upgrading to Istio 1 | ACK Istio 1.1.4 | All | None. |
| .1.4 to access Time | improves self- | | |
| Series and Spatial- Temporal Database | recovery capability | | |
| (TSDB). | . In this version, | | |
| | the control plane | | |
| | can automatica | | |
| | lly recover, and | | |
| | earlier versions can | | |
| | automatically be | | |
| | upgraded. ACK Istio | | |
| | 1.1.4 also provides | | |
| | the ability to access | | |
| | TSDB. TSDB is a | | |
| | database service | | |
| | that integrates | | |
| | efficient read/ | | |
| | write, compressed | | |
| | storage, and real | | |
| | -time computing | | |
| | capabilities of | | |
| | sorted data. | | |
| | To address the | | |
| | pain points of | | |
| | Prometheus | | |
| | local storage, you | | |
| | can integrate | | |
| | Prometheus with | | |
| | ACK Istio 1.1.4 | | |
| | and use a remote | | |
| | storage adapter to | | |
| | connect a TSDB | | |
| | instance. This type | | |
| | of instances offers | | |
| | remote storage | | |
| | services with | | Issue: 20190905 |
| | high performanc | | |
| | e, stability, and | | |

| New feature | Description | Supported regions | References |
|-------------------|---------------------------|-------------------|------------|
| Adding support | The feature of | All | None. |
| to synchronize | synchronizing | | |
| images across all | images across all | | |
| the regions | the supported | | |
| | regions is available | | |
| | in Container | | |
| | Registry (ACR | | |
| |) Enterprise | | |
| | Edition. This | | |
| | feature supports | | |
| | automatic image | | |
| | synchronization | | |
| | across different | | |
| | regions. This solves | | |
| | the pain points | | |
| | in the delivery | | |
| | of globalizat | | |
| | ion container | | |
| | application and | | |
| | helps enterprise | | |
| | s improve the | | |
| | efficiency of | | |
| | business innovation | | |
| | and iteration. | | |
| | Container Registry | | |
| | Enterprise Edition | | |
| | offers the capabiliti | | |
| | es of enhanced | | |
| | security protection | | |
| | and large-scale | | |
| | image distributi | | |
| | on. It is suitable | | |
| | for enterprise- | | |
| | level customers | | |
| | with high-security | | |
| | requirements and | | |
| | large-scale nodes. | | |

| New feature | Description | Supported regions | References |
|---|--|-------------------|------------|
| Multi-zone configuration and 5-master node configuration | Starting from May 2019, ACK allows you to set multiple zones when creating a Kubernetes cluster and set five master nodes for a dedicated Kubernetes cluster . This improves the availability of the Kubernetes clusters . | All | None. |

April 2019

| New feature | Description | Supported regions | References |
|---|---|-------------------|------------|
| Support for upgrading to Kubernetes v1.12.6 | Kubernetes v1. 12.6 is available in all regions. If you are using the Dedicated Kubernetes clusters and Managed Kubernetes clusters of the version v1.11 .5, you can upgrade the cluster version to v1.12.6 in the console. | All | None. |
| Adding support for audit logs in Managed Kubernetes clusters | Collecting audit logs is supported in Managed Kubernetes. Audit logs for API servers can help cluster administrators to record or trace the daily operations of different users. | All | #unique_9 |

| New feature | Description | Supported regions | References |
|--------------------------------|----------------------------|-------------------|------------|
| Adding support | ACK Istio is | All | #unique_10 |
| to manage | upgraded to v1.1. | | |
| applications in the management | You can manage | | |
| console through | applications in | | |
| Istio v1.1. | Kubernetes clusters | | |
| | in which the Istio | | |
| | v1.1 is deployed. | | |
| | You can use the | | |
| | graphic user | | |
| | interface (GUI) to | | |
| | create and manage | | |
| | Istio applications | | |
| | and services. In | | |
| | different phases, | | |
| | you can create | | |
| | versions for | | |
| | applications | | |
| | and set various | | |
| | policies. You can | | |
| | also configure fault | | |
| | injection polices to | | |
| | test the resilience | | |
| | of your services. In | | |
| | the management | | |
| | console, choose | | |
| | Service Mesh > | | |
| | Virtual Service to | | |
| | configure these | | |
| | settings. | | |

| New feature | Description | Supported regions | References |
|--|--|-------------------|------------|
| Adding support to create GPU container instances in Serverless Kubernetes clusters | You can create applications based on GPU container instances in a Serverless Kubernetes cluster . You can create applications by selecting a template and specifying the pod type as GPU in the YAML file. | All | #unique_11 |
| More available regions for Container Registry Enterprise Edition | A region has been added to support Container Registry Enterprise Edition. Starting from April 2019, you can use Container Registry Enterprise Edition in China North 2 (Beijing). | China (Beijing) | None. |

| New feature | Description | Supported regions | References |
|---------------------|-----------------------|-------------------|------------|
| Adding support for | Container Service | All | None. |
| image and video | has launched FPGA | | |
| encoding accelerati | clusters, which use | | |
| on in FPGA clusters | FPGA F3 instances | | |
| | as worker nodes. | | |
| | An FPGA cluster is | | |
| | suitable to perform | | |
| | video and image | | |
| | computing tasks, | | |
| | such as encoding | | |
| | videos with the | | |
| | H.265 standard | | |
| | and converting | | |
| | JPEG images to | | |
| | HEIF images. In | | |
| | comparison to | | |
| | previous FPGA | | |
| | solutions, using | | |
| | the Dedicated | | |
| | FPGA Kubernetes | | |
| | clusters can reduce | | |
| | the time spent on | | |
| | video encoding | | |
| | acceleration from | | |
| | one week or longer | | |
| | to a short time. This | | |
| | significantly saves | | |
| | the CDN bandwidth | | |
| | for the bitrate of | | |
| | transcoding and | | |
| | optimization of | | |
| | non-compression | | |
| | video quality. In | | |
| | the management | | |
| | console, choose | | |
| | Clusters > Clusters, | | |
| | and click Create | | |
| | Kubernetes Cluster. | | |
| | On the Select | | |
| | Cluster Template | | |
| | page, select the | | |
| | Dedicated FPGA | | |
| | Cluster template | | |
| | to create the | | |
| : 20190905 | Dedicated FPGA | | |
| | Kubernetes cluster. | | |

March 2019

| New feature | Description | Supported regions | References |
|--|---|--|--------------------------------|
| More available regions for Managed Kubernetes | More regions have been added to support Managed Kubernetes. Starting from March 2019, you can use Managed Kubernetes in China (Zhangjiako u-Beijing Winter Olympics), China (Hohhot), US (Silicon Valley), and Germany (Frankfurt). | China (Zhangjiako u-Beijing Winter Olympics) China (Hohhot) Germany (Frankfurt) US (Silicon Valley) | #unique_4 |
| Container Registry Enterprise Edition | Container Registry Enterprise Edition was officially released at the Alibaba Cloud Summit on March 21, 2019. This edition offers high security and image distribution capabilities. This edition is in the beta phase and only available in China (Shanghai). Open a ticket if you want to use it. | China (Shanghai) | What is Container Registry? |
| More available regions for Container Registry Shared Edition in the International site (alibabacloud. com) | Container Registry Shared Edition is available in all regions on the International site (alibabacloud.com). | All | What is Container Registry? |

| New feature | Description | Supported regions | References |
|--|---|-------------------|------------|
| Support for upgrading to Kubernetes v1.12.6 | The Kubernetes version of the ACK is upgraded to 1.12 .6. You can create Kubernetes clusters of version 1.12 through the console . | All | #unique_12 |
| Support for the Log Service plug -in in Managed Kubernetes clusters | Log Service plug -in is supported in Managed Kubernetes clusters . You can choose to use Log Service when creating a cluster in Managed Kubernetes. This plug-in enables the strong management capabilities of Log Service to manage Kubernetes logs. | All | #unique_13 |
| Adding support to create Windows clusters for Managed Kubernetes | Managed Kubernetes supports to create Windows containers in the Kubernetes clusters. You can create clusters and deploy Windows containers through the console or APIs, allowing traditional Windows applicatio ns to integrate the agility and elasticity provided by cloud- native platforms. | All | #unique_14 |

| New feature | Description | Supported regions | References |
|-------------------------|---|-------------------|------------|
| Adding support for IPVs | The IPVS proxy mode that is different from the traditional IPTables mode has been added to ACK. The IPVS proxy mode significan tly improves the load balancing performance in large-scale Kubernetes clusters . You can use this mode in all clusters of all regions. | All | #unique_12 |
| Cluster templates | The ACK console provides the new feature of cluster templates. Based on business scenarios, you can select different cluster templates to create various Kubernetes clusters, such as Managed Kubernetes clusters, Elastic Bare Metal clusters, and Windows clusters. By using cluster templates, you can easily create customized Kubernetes clusters. | All | None. |

| New feature | Description | Supported regions | References |
|--|--|-------------------|------------|
| Expanding ECI specifications supported by Serverless Kubernetes clusters | The Serverless Kubernetes cluster expands ECI instance specifications (from 8 vCPUs to 64 vCPUs), which can support genomics computing scenarios. The maximum specification is 64 vCPUs and 256 GiB memory, and the minimum specification is 0 .25 vCPUs and 0 .5 GiB memory. A wide range of instance types allow you to have more options when deploying services to achieve the best | All | Limits |
| | performance ratio. | | |

February 2019

| New feature | Description | Supported regions | References |
|---|--|-------------------|------------|
| More available regions for Managed Kubernetes | Managed Kubernetes provides the following core benefits: | China (Shenzhen) | #unique_13 |

| New feature | Description | Supported regions | References |
|--------------------------------------|--|-------------------|------------|
| Knative add-on | Knative is a scale- to-zero and request -driven runtime environment based on Kubernetes and Istio for computing . It provides deployment and service features for serverless applications and functions. ACK released the Knative add -on to help you quickly build the Knative Serving environment based | All | #unique_6 |
| | on the ACK clusters | | |
| Intelligent cluster O &M features | Intelligent cluster O&M features can help you quickly locate cluster usage problems by performing in -depth checks on cluster resources, components, and configurations. | Mainland China | #unique_15 |

January 2019

| New feature | Description | Supported regions | References |
|---|--|-------------------|------------|
| New feature Beta version of Windows containers | ACK supports to create Windows containers in the Kubernetes clusters . Applications in Windows can also run on Kubernetes in a containeri zed manner, which integrates | All | #unique_14 |
| | the agility and elasticity provided by Kubernetes. You can add Windows containers in the Standard Kubernetes clusters and the Managed | | |
| | Kubernetes clusters by adding nodes. The Windows container feature is in the beta phase. Open a ticket if you want to use it. | | |

| New feature | Description | Supported regions | References |
|---------------------------------------|--------------------------------------|-------------------|------------|
| Beta version of Container Registry | The Container Registry Enterprise | All | None. |
| Enterprise Edition | Edition has | | |
| | implemented a | | |
| | complete set of | | |
| | container image | | |
| | repository built | | |
| | on independent resources. The | | |
| | container image | | |
| | repository | | |
| | provides secure | | |
| | management | | |
| | of enterprise- | | |
| | level images, | | |
| | strong ability of | | |
| | large-scale image | | |
| | distribution, | | |
| | and stable image | | |
| | building service. | | |
| | Container Registry | | |
| | Enterprise Edition | | |
| | is suitable for | | |
| | enterprise- | | |
| | level customers | | |
| | with large-scale | | |
| | cluster nodes | | |
| | and high-security | | |
| | requirements. | | |
| | The Container | | |
| | Registry Enterprise | | |
| | Edition is in the | | |
| | beta phase. Open a | | |
| | ticket if you want to | | |
| | use it. | | |

| New feature | Description | Supported regions | References |
|--|--|-------------------|------------|
| More regions available for the intelligent cluster O &M feature | The intelligen t cluster O&M is designed to provide you with the best practice for container clusters in different scenarios. You can quickly locate cluster usage problems by performing in- depth checks on cluster resources, components, and configurations. | China (Hangzhou) | #unique_15 |

| New feature | Description | Supported regions | References |
|-------------------|-----------------------------------|-------------------|------------|
| Application Real- | Container service | All | None. |
| Time Monitoring | is integrated with | | |
| Service (ARMS) | the ARMS. After | | |
| compatibility | you install the | | |
| | corresponding ARMS plug-ins in | | |
| | the cluster, you | | |
| | can monitor the | | |
| | performance of the | | |
| | applications that | | |
| | are deployed in the cluster. | | |
| | | | |
| | ARMS is a | | |
| | performance | | |
| | management (APM | | |
| |) software for Java | | |
| | applications. You | | |
| | only need to attach | | |
| | a probe to the | | |
| | startup script of the | | |
| | Java application | | |
| | without changing | | |
| | any code. This | | |
| | probe can fully | | |
| | monitor your Java | | |
| | application. For | | |
| | example, you can | | |
| | quickly locate the | | |
| | operations that | | |
| | are failed or slow | | |
| | to call, reproduce | | |
| | parameters, detect | | |
| | memory leaks, and | | |
| | discover system | | |
| | bottlenecks. This | | |
| | improves the | | |
| | efficiency of online | | |
| : 20190905 | diagnosis. | | |
| | ulagilosis. | | |

| New feature | Description | Supported regions | References |
|---|---|----------------------------------|-----------------|
| Starting to incur fees when using Elastic Container Instance (ECI) in Serverless Kubernetes | Starting from January 22, 2019 , you need to pay the fees of ECI container instances that are scheduled by the underlying layer of Serverless Kubernetes. If you create ECI container instances in the Serverless Kubernetes clusters , the fees of ECI container instances are incurred. However, no fee is incurred for using Serverless Kubernetes itself. | All | Billing methods |
| More available regions for Serverless Kubernetes | More regions have been added to support Serverless Kubernetes. You can deploy the Serverless Kubernetes clusters in China (Beijing) and China (Shenzhen) to obtain the benefits of Serverless Kubernetes. | China (Beijing) China (Shenzhen) | #unique_16 |

December 2018

| New feature | Description | Supported regions | References |
|--|--|---|------------|
| More available regions for ACK | More regions have been added to support ACK. You can deploy ACK in all regions of the China site (aliyun.com) and in UK (London) of the International site (alibabacloud .com) to integrate the cloud-native capabilities of Kubernetes containers. | UK (London) | #unique_12 |
| More available regions for Managed Kubernetes | More regions have been added to support Managed Kubernetes. You can deploy Managed Kubernetes in all regions of the China site (aliyun.com) and in China (Shanghai), Malaysia (Kuala Lumpur), and India (Mumbai) of the Internatio nal site (alibabaclo ud.com). | China (Shanghai) Malaysia (Kuala Lumpur) India (Mumbai) | #unique_13 |
| Adding support to remove nodes in a cluster | You can remove a specified node from the cluster and choose whether to release the ECS instance or not. | All | #unique_17 |

| New feature | Description | Supported regions | References |
|---|---|-------------------|------------|
| Adding support to deploy DaemonSet applications | You can create a DaemonSet application. DaemonSet is a daemon process that has only one Pod on each node of the cluster. | All | None. |
| Support for custom Istio gateways | You can customize the Istio ingress and egress gateways by configurin g different parameters. | All | None. |
| Support for Istio CoreDNS | Implemented DNS addressing of Istio Service Entry based on CoreDNS Plugin extension. | All | None. |
| Adding support to create a Managed Kubernetes cluster by selecting existing ECS instances | You can select an existing ECS node when creating a Managed Kubernetes cluster rather than creating a new node | All | #unique_13 |

November 2018

| New feature | Description | Supported regions | References |
|---|---|---------------------|------------|
| More available regions for Managed Kubernetes | More regions have been added to support Managed Kubernetes. You can deploy Managed Kubernetes in Indonesia (Jakarta) of the International site (alibabacloud .com) to integrate the cloud-native capabilities of Kubernetes containers. | Indonesia (Jakarta) | #unique_13 |
| Terway plug-in | Alibaba Cloud Container Service introduces the Terway plug-in , which is a high -performance network plug- in. This plug-in supports direct communications between containers through ENI with higher performanc e than VPC Flannel. | All | #unique_5 |
| Displaying performance metrics of Worker nodes through thumbnails | A feature that allows you to display the thumbnail of performance metrics for each Worker node has been added. You can use this feature to view the node status. | All | None. |

| New feature | Description | Supported regions | References |
|--|---|-------------------|------------|
| Support for adding multiple existing nodes at a time | You can add multiple existing nodes in a cluster or select multiple nodes to join a Kubernetes cluster at a time. | All | None. |
| Certificate rolling | The cluster supports certificat e rolling to avoid certificate expiration. | All | None. |

October 2018

| New feature | Description | Supported regions | References |
|--|---|-------------------|------------|
| More available regions for ACK on Finance Cloud | You can deploy ACK on the Finance Cloud in China (Shenzhen) and obtain the security and compliance guarantees of Finance Cloud. | China (Shenzhen) | #unique_12 |
| More available regions for Managed Kubernetes | None. | Outside China | #unique_13 |
| Deployment version management and rollback | ACK has optimized application management to support the version management and rollback of Deployment. | All | None. |
| In-depth integratio n between Istio add -on and Kubernetes | Supports in- depth integration between Istio and ACK clusters. | All | #unique_18 |

September 2018

| New feature | Description | Supported regions | References |
|--|---|-------------------|------------|
| Release of ACK v1. | Provides new features including the CRD upgrade, CoreDNS GA, pod priority setting, and preemptive scheduling. Supports multiple versions when creating a Kubernetes instance in the cluster. You can select Kubernetes v1 .10 or v1.11 as needed. The console supports multiple containers and stateful applications. | All | #unique_19 |
| Pulling images from private image repositories of Alibaba Cloud Container Registry without using passwords | ACK allows you to pull images from private repositories of Alibaba Cloud Container Registry without using passwords. | All | |

| New feature | Description | Supported regions | References |
|-----------------------------------|--|-------------------|------------|
| Automatic node scaling | Alibaba Cloud Container Service provides the auto scaling feature through auto scaling nodes. Standard instances , GPU instances, and preemptibl e instances can be automatically added to or remove from the scaling group according to your configurat ions. This feature is applicable to various scenarios such as instances across multiple regions, diverse instance types, and different scaling modes. | All | #unique_20 |
| Support for preemptible instances | None. | All | |

August 2018

| New feature | Description | Supported regions | References |
|--|--|-------------------|------------|
| Beta version of Managed Kubernetes | Managed Kubernetes is in the beta phase and available for all regions. | All | #unique_13 |
| Istio add-on | The Istio add-on has been released. | All | #unique_18 |

July 2018

| New feature | Description | Supported regions | References | |
|--|-------------|--------------------|--------------------|-----|
| More available regions for ACK | None. | Australia (Sydney) | #unique_12 | |
| Adding support for canary release and phased release | None. | All | #unique_21,#unique | _22 |

June 2018

| New feature | Description | Supported regions | References |
|--|---|---------------------------------|------------|
| More available regions for ACK | None. | Japan (Tokyo) China (Hohhot) | #unique_12 |
| FPGA and HugePages features | None. | All | None. |
| Application monitoring and alerts | Monitoring and alerts for applicatio ns have been added to improve the monitoring ability of ACK. | All | #unique_23 |
| Adding support to create subscription -based clusters for ACK | None. | All | #unique_24 |
| Adding support for two Kubernetes commands (kubectl attach and kubectl exec) and Kubernetes ingress for Container Service for Serverless Kubernetes | None. | All | #unique_25 |

May 2018

| New feature | Description | Supported regions | References |
|--|---|-------------------|------------|
| More available regions for ACK on Finance Cloud | You can deploy ACK on the Finance Cloud in China (Shanghai) and obtain the security and compliance guarantees of Finance Cloud. | China (Shanghai) | #unique_12 |
| Release of Container Service for Serverless Kubernetes | None. | All | #unique_26 |
| ACK supports blue -green release, canary release, and A/B testing. | None. | All | #unique_21 |

April 2018

| New feature | Description | Supported regions | References |
|--|--|---|------------|
| More available regions for ACK | ACK has been launched in all the five regions in Southeast Asia, the Middle East, and India. The latest and stable version 1 .9 is available. | Malaysia (Kuala Lumpur) Indonesia (Jakarta) Singapore India (Mumbai) UAE (Dubai) | #unique_12 |
| Multi-zone Kubernetes clusters for high-availabili ty scenarios | You can deploy your master nodes across three zones and deploy your worker nodes across multiple zones as needed to maximize the availability of cluster production. | All | #unique_27 |

| New feature | Description | Supported regions | References |
|---|---|-------------------|------------|
| Adding support for MySQL, RDS , RabbitMQ, and Spark for the service catalog | The service catalog for ACK has been updated to support MySQL, RDS, RabbitMQ, and Spark. | All | Overview |
| Adding support for managing applications released by using Helm | The application catalog for ACK has been updated to support managing applications released by using Helm. | All | #unique_29 |

March 2018

| New feature | Description | Supported regions | References |
|---|--|-------------------|------------|
| Support for Kubernetes v1.9 and custom ECS images. | Container Service supports native Kubernetes v1.9.3 and the Workloads API is officially released. Custom Resource Definition s (CRD) is enabled by default and GPU scheduling is supported. You can select a custom ECS image when creating a cluster. You can automatica lly reset an image when adding a node. | All | None. |

| New feature | Description | Supported regions | References |
|--|---|-------------------|------------|
| Application catalog | Application catalog has been released for ACK. You can use this catalog to implement one -click application deployments using Helm. | All | #unique_29 |
| Service catalog | Service catalog has been released for ACK. This catalog supports ServiceBroker. | All | Overview |
| Node monitoring through CloudMonitor | Monitoring cluster nodes through CloudMonitor is available. | All | None. |

January 2018

| New feature | Description | Supported regions | References | |
|---|---|-------------------|--------------------|------------|
| Release of both Alibaba Cloud Container Registry and ACK on the International site (alibabacloud.com) | None. | Outside China | #unique_30 | |
| Upgrading to Kubernetes v1.8.4, which provides security enhancement, auto scaling, and other features. | None. | All | #unique_20 | |
| Release of FlexVolume that supports cloud disk , NAS, and OSS | The FlexVolume for ACK feature has been released to support cloud disks , NAS, and OSS. | All | #unique_31,#unique | _32,#uniqu |

| New feature | Description | Supported regions | References |
|--|--|-------------------|------------|
| Improved network policies and bandwidth limits | Network policies and bandwidth limits to improve network management in ACK have been released. | All | #unique_34 |
| Support for ECS Bare Metal (EBM) instances | None. | All | None. |

October 2017

| New feature | Description | Supported regions | References |
|----------------------------------|--|-------------------|------------|
| New native Kubernetes | The native Kubernetes version with the ACK v1.8.1 is supported. | All | #unique_4 |
| Blockchain solution beta test | None. | All | Overview |

August 2017

| New feature | Description | Supported regions | References |
|-----------------------------|-------------|-------------------|------------|
| Alibaba Cloud ACK v1.7.2 | None. | All | #unique_12 |

2 Overview of Community Kubernetes Changes

This topic describes the changes made to the community version of Kubernetes by Alibaba Cloud Container Service for Kubernetes (ACK). The Kubernetes used by ACK shares the core code with the community Kubernetes. Therefore, each version of Kubernetes used by ACK is compatible with the corresponding version of the community Kubernetes.

Added features in V1.12.6-aliyun.1

· Shielded TLS handshake logs generated by the apiserver kubelet to perform health checks on SLB instances.

CommitID: 4f1d96e153b050d8374bfbb66803d7b3d9181abe

· Added support for kubeadm to check Docker V18.09.2.

CommitID: 3b1ebfa1b857c44f5261a36f1420b10a08e01771

· Changed the level of watch logs of the aggregation controller.

CommitID: 01a904eed3f9486caa482c8983698075d1cea2f1

- · The changes to kubeadm are as follows:
 - Increased the times of retries performed by kubeadm when cluster resources are updated.
 - Removed the feature that kubeadm deploys DNS servers.
 - Removed the feature that kubeadm deploys kubeproxy.
 - Increased the period of validity for certificates generated by kubeadm to 10 years.

For more information, see Release notes for Kubernetes released by the Kubernetes community.

3 Changes to Cloud Controller Manager

This topic describes the latest changes to Cloud Controller Manage.

| Date | Image address | Change | Relevant topic |
|----------------|---|--|----------------|
| April 15, 2019 | registry.cn-hangzhou.aliyuncs .com/acs/cloud- controller-manager -amd64:v1.9.3.105- gfd4e547-aliyun | Added the feature that multiple route tables can be set for a Kubernetes cluster in a VPC by using a configuration file Fixed the bug that caused update configurations using HTTP to fail. | #unique_34 |

| Date | Image address | Change | Relevant topic |
|----------------|--|---|----------------|
| March 20, 2019 | registry.cn-hangzhou.aliyuncs .com/acs/cloud- controller-manager -amd64:v1.9.3.81- gca19cd4-aliyun | An SLB instance created in a non-Kubernetes cluster can be reused in a managed or dedicated Kubernetes cluster. A Kubernetes node name can be customized by using Cloud Controller Manager (CCM) in addition to setting the Kubernetes NodeName parameter manually. The incompatibility between CCM 1.8.4 and Kubernetes 1. 11.5 was fixed. We recommend that you upgrade your CCM to the latest version. | #unique_34 |

| Date | Image address | Change | Relevant topic |
|-------------------|--|--------------------|----------------|
| December 26, 2018 | registry.cn- hangzhou.aliyuncs .com/acs/cloud- controller-manager | Multiple | #unique_34 |
| | | Kubernetes | |
| | | services can reuse | |
| | -amd64:v1.9.3.59- | the same SLB | |
| | ge3bc999-aliyun | instance. | |
| | | · The SLB | |
| | | instances created | |
| | | by Kubernetes | |
| | | through a | |
| | | service cannot | |
| | | be reused. | |
| | | Otherwise, the | |
| | | reused SLB | |
| | | instances may | |
| | | be removed | |
| | | by accident. | |
| | | Only the SLB | |
| | | instances | |
| | | manually created | |
| | | in the console | |
| | | or created by | |
| | | calling API can | |
| | | be reused. | |
| | | · The multiple | |
| | | services that | |
| | | reuse the same | |
| | | SLB instance | |
| | | cannot have the | |
| | | same frontend | |
| | | listening port. | |
| | | Otherwise, port | |
| | | conflicts will | |
| | | occur. | |
| | | · If you reuse an | |
| : 20190905 | | SLB instance, | |
| | | you must use the | |

| Date | Image address | Change | Relevant topic |
|-----------------|--|---|----------------|
| August 15, 2018 | registry.cn-hangzhou.aliyuncs .com/acs/cloud- controller-manager -amd64:v1.9.3.10- gfb99107-aliyun | · You can use annotation : service . beta . kubernetes . io / alicloud - loadbalanc er - master - zoneid to specify the primary zone where an automatically created SLB is located. · You can use annotation : service . beta . kubernetes . io / alicloud - loadbalanc er - slave - zoneid to specify the secondary zone where an automatically created SLB is located. Note: This parameter does not take effect in regions where a primary zone or secondary zone SLB cannot be created. · When you | #unique_34 |
| | | specify an existing SLB, | Issue: 2019090 |

you can use

40

| Date | Image address | Change | Relevant topic |
|---------------|--|--|----------------|
| June 25, 2018 | registry.cn-hangzhou.aliyuncs .com/acs/cloud- controller-manager -amd64:v1.9.3 | · You can set annotation : service . beta . kubernetes . io / alicloud - loadbalanc er - backend - label to use the Worker nodes specified by labels as backend servers. · You can use annotation : service . beta . kubernetes . io / alicloud - loadbalanc er - spec to specify an SLB type. For example, you can set a shared- performance SLB or an exclusive SLB. · The service mode externalTr afic: Local is available. Only the node where a pod is located can be added as an SLB backend server. · When you add or remove a cluster node, the system automatically processes the | #unique_34 |
| : 20190905 | | SLB backend server. That is, | 41 |

4 Terway network plugin release notes

This topic describes the latest releases of the Terway network plugin.

April 11, 2019

Version: v1.0.9.15-g3957085-aliyun

Image address: registry.cn-hangzhou.aliyuncs.com/acs/terway:v1.0.9.15-g3957085-aliyun

Changes: Fixed the bug that caused upgrade failures that occurred to the Terway network plugin.

Remark: This upgrade does not affect application functionality.

March 28, 2019

Version: v1.0.9.14-ga0346bb-aliyun

Image address: registry.cn-hangzhou.aliyuncs.com/acs/terway:v1.0.9.14-ga0346bb-aliyun

Changes:

- Fixed the bug that caused the Terway network plugin to fail to obtain the EIP information.
- · Fixed the bug that caused the error message failed to move veth to host netns: file exists. The error message was displayed when a container was created.
- · Added a new feature that enables the system to detect the status of an EIP and retrieve its exception releases.
- · Changed the health check method for the Terway network plugin from the HTTP path check to the TCP port check.

Remark: This upgrade does not affect application functionality.