Cisco Workload Automation Amazon S3 Adapter Guide

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Preface

This guide describes the installation, configuration, and usage of the Amazon S3 Adapter with Cisco Workload Automation (CWA).

Audience

This guide is for administrators who install and configure the Amazon S3 Adapter for use with Cisco Workload Automation, and who troubleshoot CWA installation and requirements issues.

Related Documentation

See the Cisco Workload Automation Documentation Overview for your release on cisco.com at:

http://www.cisco.com/c/en/us/support/cloud-systems-management/tidal-enterprise-scheduler/products-docum entation-roadmaps-list.html

... for a list of all Cisco Workload Automation guides.

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Document Change History

Document Change History

The table below provides the revision history for the Amazone S3 Adapter Guide.

Version Number	Issue Date	Reason for Change
6.1.0	October 2012	New Cisco version.
6.2.1	June 2014	Available in online Help only.
6.2.1 SP2	June 2015	Configuration provided in the <i>Cisco Tidal Enterprise Scheduler Installation Guide</i> ; usage provided in online Help only.
6.2.1 SP3	May 2016	Consolidated all Amazon S3 Adapter documentation into one document.
6.3	August 2016	Rebranded "Cisco Tidal Enterprise Scheduler (TES)" to "Cisco Workload Automation (CWA)". Miscellaneous edits for the 6.3 release.

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Introducing the Amazon S3 Adapter

This chapter provides an overview of the Cisco Workload Automation Amazon S3 (Simple Storage Service) Adapter and its requirements:

- Overview, page 7
- Prerequisites, page 8

Overview

Amazon Simple Storage Service (S3) is persistent storage that provides a simple web service interface that customers use to store and retrieve any amount of data. Like a file system, Amazon S3 data is conceptualized into buckets (folders) and objects (files).

The Cisco Workload Automation (CWA) Amazon S3 Adapter automates the execution of Amazon S3 jobs as a part of Workload Automation's managed process. It is an API-level integration solution. As a platform independent solution, the Amazon S3 Adapter can run on any platform where the Cisco Workload Automation master runs.

An Amazon S3 Adapter job can be used to create buckets that can store large volumes of data. It also provides authentication mechanisms to ensure that data is kept secure from unauthorized access, objects can be made private or public, and rights can be granted to specific users.

The Adapter provides the following features.

- Connection/Availability Reports the connectivity status.
- Data organization Allows user to create a bucket, move/copy/rename/restore objects from one bucket to another bucket or within the same bucket.
- Data security for bucket Allows user to configure ACL permission to a buck
- Data storage and retrieval can be integrated with Data Mover Job to allow user to upload/download objects(s).
- Data protection Allows you to specify server-side encryption while uploading/downloading object(s) from/to the Amazon S3 Bucket Amazon S3 service. APIs allow the Amazon S3 Adapter to make requests to Amazon S3 service.
- Data security for object Allows user to configure ACL permission to an object. User can set ACL permission for an object.
- Free/cleanup data storage (objects) Allows user to delete objects and bucket.

The Amazon S3 Adapter uses the AWS SDK, which is a set of application programming interfaces (APIs) that allow interaction with the Amazon S3 service. The APIs allow the AmazonsS3 Adapter to read, write and delete objects, manage lifecycle of buckets and objects, configure or update bucket and object properties, and manage files within Amazon S3 buckets.

Prerequisites

Prerequisites

An Amazon S3 Adapter user must have an AWS Account or AMI user credentials (Access Key ID, Secret Access Key) to make requests to Amazon S3 service.

Generally, CWA supports the latest version of Amazon S3. See the *Cisco Workload Automation Compatibility Guide* for a complete list of support and requirements for all Workload Automation products.

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2 Configuring the Amazon S3 Adapter

Overview

The Amazon S3 Adapter software is installed as part of a standard installation of Cisco Workload Automation. However, you must perform the following steps to license and configure the adapter before you can schedule and run Amazon S3 jobs:

- Licensing an Adapter, page 7 Apply the license to the Adapter. You cannot define a Amazon S3 connection until you have applied the license from Cisco.
- Securing the Adapter, page 8 Define Amazon S3 users that the adapter can use to establish authenticated sessions with the Amazon S3 service and permit requests to be made on behalf of the authenticated account.
- Defining a Connection, page 12 Define a connection so the master can communicate with the Amazon S3 service.

See Configuring service.props, page 39 for details about configuring service.props to control such things as polling, output, and log gathering.

Licensing an Adapter

Each CWA Adapter must be separately licensed. You cannot use an Adapter until you apply the license file. If you purchase the Adapter after the original installation of CWA, you will receive a new license file authorizing the use of the Adapter.

You might have a Demo license which is good for 30 days, or you might have a Permanent license. The procedures to install these license files are described below.

To license an Adapter:

1. Stop the master:

Windows:

a. Click on Start and select All Programs>Cisco Workload Automation>Scheduler>Service Control Manager.

b. Verify that the master is displayed in the Service list and click on the Stop button to stop the master.

UNIX:

Enter tesm stop

- 2. Create the license file:
 - For a Permanent license, rename your Permanent license file to master.lic.

- For a Demo license, create a file called *demo.lic*, then type the demo code into the *demo.lic* file.
- 3. Place the file in the C:\Program Files\TIDAL\Scheduler\Master\config directory.
- 4. Restart the master:

Windows:

Click Start in the Service Control Manager.

UNIX:

Enter tesm start

The master will read and apply the license when it starts.

5. To validate that the license was applied, select Registered License from Activities main menu.

Securing the Adapter

There are two types of users associated with the Amazon S3 Adapter, **Runtime Users** and **Schedulers**. You maintain definitions for both types of users from the **Users** pane.

Runtime Users

Runtime users in the context of Amazon S3 jobs represent those users and passwords required for authentication. Amazon S3 operations require authentication against a valid Amazon S3 user as defined by a Amazon S3 administrator. You can also use runtime users to override data source logons used by your reports. See Defining Runtime Users, page 8.

Schedulers

Schedulers are those users who will define and/or manage Amazon S3 jobs. There are three aspects of a user profile that grant and/or limit access to scheduling jobs that affect Amazon S3:

- Security policy that grants or denies add, edit, delete and view capabilities for Amazon S3 jobs. See Configuring Security Policies for Amazon S3 Adapter Jobs, page 9.
- Authorized runtime user list that grants or denies access to specific authentication accounts for use with Amazon S3 jobs. See Defining CWA Users, page 10.
- Authorized agent list that grants or denies access to specific Amazon S3 Adapter connections for use when defining Amazon S3 jobs. See Defining CWA Users, page 10.

Defining Runtime Users

To define a runtime user:

- 1. From the **Navigator** pane, expand the **Administration** node and select **Runtime Users** to display the defined users.
- 2. Right-click Runtime Users and select Add Runtime User from the context menu (Insert mode).

-or-

Click the Add button on the CWA menu bar.

The User Definition dialog displays.

3. Enter the new user name in the User Name field.

- 4. For documentation, enter the Full Name or description associated with this user.
- In the Domain field, select a Windows domain associated with the user account required for authentication, if necessary.
- 6. To define this user as a runtime user for Amazon S3 Adapter jobs, click Add on the Passwords tab.

The Change Password dialog displays.

- 7. Select AmazonS3 from the Password Type list.
- 8. Enter a password (along with confirmation) in the **Password/Confirm Password** fields.

Only those users with a password specified for Amazon S3 will be available for use with Amazon S3 jobs. The password might be the same as the one specified for Windows/FTP/DataMover jobs.

9. Click OK to return to the User Definition dialog.

The new password record displays on the **Passwords** tab.

User Definition [AKI	AIKSLSGRO	DJBQISBDQ]		?	? 🗆 🗙
User Name	ADARS	LEAROJECKERDO] (ОК
Full Name	ARIARISI	LSAROJEOISEDO			Cancel
Domain					
Passwords Kerbe	eros Desc	ription			
Windows/FTP/Data	Mover	•••••	•••••		
Adapter		▼Password		Add	
AmazonS3 Passwi	ord	***		Edit	
				Delete	
				Denece	

10. Click OK to add or save the user record in the CWA database.

For further information about the User Definition dialog, see your Cisco Workload Automation User Guide.

Configuring Security Policies for Amazon S3 Adapter Jobs

To configure a security policy for Amazon S3 jobs:

1. From the Navigator pane, select Administration>Security Policies to display the Security Policies pane.

2. Right-click Security Policies and select Add Security Policy from the context menu. You can also right-click to select an existing security policy in the Security Policies pane and select Edit Security Policy.

Secur	ity Policy Name Amazon	n S3 Secu	irity Policy	ОК
Fun	ctions Description			Cance
	Category 🔹	Function	ns Assigned	
	Agent Lists			A
	Alerts		Amazon53 Jobs	×
	AmazonEC2 Jobs		Add Amazon53 Johs	OK
	AmazonS3 Jobs	Add, Edi		
	BO BI Platform Actions		Edit Amazon53 Jobs	Cancel
	BO BI Platform Events	· · · · · · · ·	Delete Amazon53 Jobs	
	BO BI Platform Jobs		☑ View Amazon53 Jobs	
	BusinessObjects Actions			
	BusinessObjects DS Jobs			
	BusinessObjects Events			
	BusinessObjects Jobs			
	Calendars			
	Cognos Jobs			
	Configuration/Licensing			
	Connections			
	Email Events			
-	En de Manitar		C. C	

- 3. In the Security Policy Name field, enter a name for the policy.
- 4. On the Functions page, scroll to the AmazonS3 Jobs category, click the ellipses on the right-hand side of the dialog and select the check boxes next to the functions that are to be authorized under this policy (Add, Edit, Delete and View AmazonS3 Jobs).
- 5. Click Close on the Function drop-down list.
- 6. Click **OK** to save the policy.

For further information about setting up security policies, see your Cisco Workload Automation User Guide.

Defining CWA Users

To define a CWA user to work with Amazon S3 Adapter jobs:

- 1. From the **Navigator** pane, expand the **Administrative** node and select **Interactive Users** to display the defined users.
- 2. Right-click **Interactive Users** and select **Add Interactive User** from the context menu (*Insert* mode). You can also right-click a user in the **Interactive Users** pane and select **Edit Interactive User** from the shortcut menu (*Edit* mode).

The User Definition dialog displays.

User Definit	ion [Amazo	on 53 I	int User]						? 🗆 🗙
User Name	Ai	mazo	n S3 Int L	Jser					ОК
Full Name	A	mazo	n S3 Int U	Jser					Cancel
Domain	Ci	sco							
Security	Runtime U	sers	Agents	Notification	Passwords	Kerberos	Workgroups	Description	
Security Polic	У								-
C Super L	Jser								
Other			Amaz	on S3 Secu	ity Policy			v	1
			Admir	nistrator					1
			Amaz	on S3 Secur	ity Policy				
			Inquir						
			Opera	ator		NE			
			Scheo	duler		*			
			Schee	duler_Admini	istrator				
			test						
			User						
									,

- 3. If this is a new user definition, enter the new user name in the User/Group Name field.
- 4. For documentation, enter the Full Name or description associated with this user.
- 5. In the **Domain** field, select a Windows domain associated with the user account required for authentication, if necessary.
- On the Security page, select the Other option and then select the security policy that includes authorization for Amazon S3 Adapter jobs.
- 7. Click the Runtime Users tab.

User Definition [Ama	izon 53 Int User]	? ⊑ ×
User Name	Amazon S3 Int User	ОК
Full Name	Amazon S3 Int User	Cancel
Domain	Cisco	
Security Runtime	Users Agents Notification Passwords Kerberos Workgroups	Description
Show Users	C Show Groups (Windows)	
AK5AJ58P458	munanymup	<u>^</u>
🗖 BO\Administr		
🗖 Copy\bhusha	h2	
🔲 INFA\infa		E
D JDE		
PS		
TIDALSOFT.L	_OCAL\hdfs	
TIDALSOFT.I	.OCAL\mapred	
TIDALSOFT	ohushah2	
TIDALSOFT \	qatest	
	adhtu\bhushah2	-

- 8. Select the Amazon S3 Adapter users that this scheduling user can use for Amazon S3 Adapter authentication from Amazon S3 Adapter jobs.
- 9. Click the Agents tab.
- **10.** Select the check boxes for the Amazon S3 Adapter connections that this scheduling user can access when scheduling jobs.

Defining a Connection

11. Click **OK** to save the user definition.

Defining a Connection

You must create one or more Amazon S3 connections before CWA can run your Amazon S3 Adapter jobs. These connections also must be licensed before CWA can use them. A connection is created using the **Connection Definition** dialog.

To define an Amazon S3 connection:

- 1. From the Navigator pane, navigate to Administration>Connections to display the Connections pane.
- 2. Right-click Connections and select Add Connection>AmazonS3 Adapter from the context menu.

The Amazon S3 Adapter Connection Definition dialog displays.

Connection	Definition (E	dit M	ode)	[Amazon	53 Adapter[An	nazon53]]	? □ ×
	Name	Ama	700	Amaz S3 Adapt	on53 Adapter		ОК
Ceperal					Description		Cancel
General		.imit		outages	Description		
Defa				AJ5BP4Zł	KPNW3KVTNO	2 v	
🗹 Enabled	l An Sana Sana Sa	Us	e as	default fo	or Amazon53 Jo	bs	

- 3. On the General page, enter a name for the new connection in the Name field.
- 4. In the **Job Limit** field, select the maximum number of concurrent active processes that CWA should submit to the Amazon S3 server at one time.
- 5. From the **Default Runtime User** drop-down list, you have the option to select the name of a default user for Amazon S3 Adapter jobs. The runtime user is auto-selected when defining Amazon S3 Adapter jobs.

Only authorized users that have been defined with Amazon S3 passwords display in this list. The selected user is automatically supplied as the default runtime user in a new CWA Amazon S3 Adapter job definition.

Defining a Connection

6. Click the Amazon S3 connection tab.

onnection	Definition (E	dit Mode) [Amazon 53 Adapter[Amazon53]]	? □ ×
		Amazon53 Adapter	ОК
	Name	Amazon S3 Adapter	Cancel
General	Amazon 53	Options Outages Description	
	Protocol :	нттря	
	Host Name :	s3.amazonaws.com	
Acces	s User Name	AKIAJ5BP4ZKPNW3KVTNQ	
🗷 Enabled		Use as default for Amazon53 Jobs	

The connection Protocol is HTTPS and Host Name is s3.amazonaws.com.

7. From the Access User Name list, select the S3 user name.

Note: The Access User will be used for to interact with Amazon S3 and request needed information. The connection availability pings Amazon S3 without actually logging in to Amazon S3. Click Test to verify that your access credentials are valid.

- 8. (Optionally) Click the Test button to verify connectivity.
- 9. Click the **Options** tab to specify Global Job Parameters that are applicable to all jobs using the connection. If the job definition specifies the same job parameters, the values defined in the job definition will override the corresponding connection values. The Configuration Parameters are general connection parameter options. Currently, there are no connection level parameters for the Amazon S3 Adapter.

Connection Definition (E	dit Mode)	[Amazon	53[Amaz	:on53]]			? = ×
Name	Amazcn S		on53 Ada	pter			OK Cancel
General Amazon 50 Polling Interval (in seconds) Connection Poll Configuration Farameters		Outage <i>s</i>	Descript	ion	~~		
Name connectionTimeout		✓ Value 15000				Add Edit Delete	
🗹 Enabled	🗖 Use as d	default fo	r Amazor	153 Jobs			

10. To add a parameter, click Add to display the Parameter Definition dialog.

11. Click **OK** to save the new Amazon S3 connection. The configured connection displays in the **Connections** pane.

Defining a Connection

The status light next to the connection indicates whether the CWA Master is connected to the Amazon S3 service. If the light is green, the Amazon S3 service is connected.

A red light indicates that the master cannot connect to the Amazon S3 service. Amazon S3 jobs will not be submitted without a connection to the Amazon S3 service. You can only define jobs from the Client if the connection light is green.

If the light is red, you can test the connection to determine the problem. Right-click the connection and select **Test** from the shortcut menu. A message displays on the **Test Amazon S3 Connection** dialog describing the problem. Or go to **Operator>Logs** to look for error messages associated with this connection.



Using the Amazon S3 Adapter

This chapter covers these topics:

- Defining Amazon S3 Jobs, page 17
- Monitoring Amazon S3 Job Activity, page 35
- Controlling Adapter and Agent Jobs, page 39

Defining Amazon S3 Jobs

This section provides instructions for defining an Amazon S3 job in CWA and descriptions of the various operation types that can be defined:

Create Bucket Operation, page 17 – Allows you to create a new bucket, define region, configure bucket Access Control Lists (ACL) and user permission objects security policy, and enable versioning.

To apply parameter value into the supported field, user use ":" as an indication for a parameter variable. The parameter is defined on the Parameters tab and the parameter variable's value will be substituted during runtime.

- Update Bucket Operation, page 23- Allows you to update a selected bucket configuration. You can modify user permissions and bucket policies, website, lifecycle, and versioning.
- Delete Bucket Operation, page 27 Allows you to delete a bucket. When deleting a bucket, all objects and all versions, only if versioning is enabled, will be deleted including previously deleted markers.
- Update Object(s) Operation, page 27 Allows you to modify the objects' configuration including user permissions, storage, and metadata.
- Rename/Restore Object Operation, page 31 Allows you to rename an object within the same bucket or retrieve/restore a specified version of object. Renaming an object across buckets involves the Copy and Delete operations. Restoring an object from a specific version into a different bucket involves the Copy operation only.
- Move, Copy, and Delete Object(s) Operations, page 33:
 - Move objects You can move one or more objects to a different bucket. The move operation involves the Copy and Delete operations.
 - Copy objects You can copy one or more objects from one bucket to another. Additionally, you can copy all versions of a given object(s).
 - Delete objects You can delete one or more objects.

Create Bucket Operation

This section describes the basic steps for defining an Amazon S3 job for creating a bucket.

To define an Amazon S3 job that creates a bucket:

- 1. In the Navigator pane, select **Definitions>Jobs** to display the **Jobs** pane.
- Right-click Jobs and select Add Job>AmazonS3 Job from the context menu. The Amazon S3 Job Definition dialog displays.

Amazon53 Job Definition [Ama	ozon S3, Create Bucket[\Amazon S3 Job Group]] ? 😐 🗙
Amazon53 Job Name	Amazon S3, Create Bucket
Job Class	v Owner Cancel
Parent Group	VAmazon S3 Job Group
Amazon 53 Schedule Run Agent/Adapter Information	Dependencies Resources Job Events Options Run Book Notes History Images
Ru	apter Name Amazon S3[AmazonS3] Agent List Intime User Internet SLOPPO Interne
Duration(in minutes)	xternal ican output: Normal String(s) ican output: Abnormal String(s)
🗹 Enabled	Last Modified : 08/11/2012 22:37:42

The **Run** tab is selected by default. You must first specify a name for the job, the Amazon S3 Adapter connection that will be used for the job and a valid runtime user who has the appropriate Amazon S3 authority for the job being scheduled.

- 3. In the upper portion of the dialog, specify the following information to describe the job:
 - Job Name Enter a name that describes the job.
 - Job Class If you want to assign a defined job class to this job, select it from the drop-down list. This field is
 optional.
 - Owner Select the Amazon S3 owner of the selected report/ Web Intelligence. The user must have the appropriate Amazon S3 authority for the operation.
 - Parent Group If this job exists under a parent group, select the name of the parent group from the drop-down list. All properties in the Agent Information section are inherited from its parent job group.
- 4. Specify the following connection information in the Agent/Adapter Information section:
 - Agent/Adapter Name Select the Amazon S3 Adapter connection to be used for this job from the drop-down list.

-or-

Agent List Name - Select a list for broadcasting the job to multiple servers.

 Runtime User - Select a valid runtime user with the appropriate Amazon S3 authority for the job from the drop-down list.

Note: Verify the runtime user who will have required permission rights for the above operations to avoid a failed job.

- 5. Specify the appropriate Tracking and Duration information for the job. Refer to the *Cisco Workload Automation User Guide* for information on these options.
- 6. Click the Amazon S3 tab.
- 7. On the General tab, select the Create Bucket operation from the Operation Type list.

Amazon53 Jot	b Definition [Ama	izon 53, Create I	Bucket[\Ama	azon 53 Grouj)]]					? ⊑ ×
Amaz	zon53 Job Name	Amazon S3, Cr	eate Bucket	t						ОК
	Job Class				-	Owner S	Schedul	ers	·	Cancel
	Parent Group	∖Amazon S3 Gr	oup		~					
Amazon 53	Schedule Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
	Operation Type	Create Bucket			•					
	Output	Detail			•					
General	ermissions Para	meters Versio	ning							
	Bucket Name	:bucketname						erify		
	Region	US Standard				•				
	Bucket ACL	Owner Full Co	ntrol			•				
		NOTE: If the Buc the owner of th Grantee ACL on	e job is unab	le to modify l						
🗹 Enabled					Last	Modified : 0	8/07/20	012 21:17	:53	

Except for US Standard, use the following guidelines when naming a bucket to remain DNS compliant.

- Bucket names must be between 3 and 63 characters long
- Bucket name must be a series of one or more labels separated by a period (.), where each label:
 - Must start with a lowercase letter or a number
 - Must end with a lowercase letter or a number
 - Can contain lowercase letters, numbers and dashes
- Bucket names must not be formatted as an IP address (e.g., 192.168.5.4)

In the US Standard region, you can optionally name a bucket using the following less restrictive rules:

- Bucket names can be longer, between 3 and 255 characters long
- Bucket names can contain any combination of uppercase letters, lowercase letters, numbers, periods (.), dashes
 (-) and an underscores (_)

Additionally, you can use a parameter variable in the **Bucket Name** field by specifying ":" in front of the field value.

For example:

General	Permissions	Parameters	Versioning	
		0	Bushet Ourse	
	Bucket N	lame Owner:	Bucket_Owner	Verify
	Re	egion US Sta	ndard 🗸	
	Buckel	ACL Owner	Full Control 🛛 👻	

- 8. From the **Output** list, select one of the following output types:
 - Simple will only return bucket name which allows bucket name to as input for another job, such as data mover job.
 - Detail will return create bucket operation detail.
- 9. In the Bucket Name field, enter a name for the new bucket.
- 10. Click Verify to verify that the entered bucket name is available. A verification message displays.
- 11. From the Region list, select one of the following bucket locations.
 - US Standard This is the default region. The US Standard Region automatically routes requests to facilities in Northern Virginia or the Pacific Northwest.
 - US West Region–Uses Amazon S3 servers in Oregon and Northern California.
 - EU Region-Uses Amazon S3 servers in Ireland.
 - Asia Pacific Region–Uses Amazon S3 servers in Singapore and Tokyo.
 - South America Region–Uses Amazon S3 servers in Sao Paulo.
- 12. From the **Bucket ACL** list, assign the bucket permission during creation. The default permission is Owner Full Control.
- 13. Click the **Permissions** tab to add, edit, or delete Grantee ACL Users and assign them permissions.

	b Definition [/	Amazon 53, Creat	e Bucket[\Am	azon 53 Grou	ip]]				? 🗆 🗙
Amaz	zon53 Job Nai	me Amazon S3, I	Create Bucket	t					ОК
	Job Cla	ass			v 0v	mer Schedul	ers	v	Cancel
	Parent Gro	pup (Amazon S3	Group		~				
Amazon 53	Schedule F	Run Dependencie	es Resources	Job Events	Options Run	Book Notes	History	Images	
	Operation Ty	ype Create Bucke	ət		•				
	Out	put Detail			•				
		Parameters Vers	Norming						
Grantee ACL			sioning						
User		→ Full Control	Read	Write	Read ACP	Write ACP		Add	
				Write	Read ACP	Write ACP		Edit	
User		v Full Control	Read V						

Amazon S3 stores objects in buckets. All buckets and objects are associated with access control policies. ACL is a mechanism which decides who can access what and consists of a set of permissions of read, write and update on Object as well as Bucket on the basis of these ACLs. Bucket ACLs are completely independent of Object ACLs. Meaning, ACLs set on a bucket can be different of ACLs set on any object, contained in bucket.

To add a grantee, click **Add** to display the **Add User** dialog.

Add User		? ×
User Type	Authenticated Users	OK
 ✓ Full Control ✓ Read ✓ Write ✓ Read ACP ✓ Write ACP 	Authenticated Users Canonical User Email Everyone Log Delivery Owner	

From the User Type list, select one of the following types for an ACL:

- Owner By default, an owner has full permission. An owner can create access and delete objects. The owner can also view and modify ACLs of each and every owner owned Bucket and its object(s).
- Email If an owner wants to share or allow another Amazon S3 user to access a bucket, then the owner should know the email address of the invitee. This will only work if the invitee has registered his/her Amazon s3 account with that email address.
- Authenticated Users This group represents all Amazon AWS accounts. Access permission to this group allows any Amazon AWS account to access the resource.
- Canonical User Access permission to this group allows anyone with a Canonical User Id access to buckets and objects within your Amazon S3 account. The canonical user id is specific to S3 and is a 64 character long hex string.
- **Everyone** Access permission to this group allows anyone to access the resource. The requests can be signed (authenticated) or unsigned (anonymous).
- Log Delivery WRITE permission on a bucket enables this group to write server access logs to the bucket.

Select the ACL type for the selected permission. The following type of ACL are provided by Amazon S3:

With reference to Bucket:

- Read Authorized user can list the file names, their size and last modified date from a bucket.
- Write Authorized user can upload new files in your bucket. They can also delete files on which they don't have permission. Someone with write permission on a bucket can delete files even if they do not have read permission to those files.
- Read ACP Authorized users can check ACL of a bucket.
- Write ACP Authorized user can update ACL of the bucket.

With reference to Object:

- **Read** Authorized user can download the file.
- Write Authorized user can replace the file or delete it.
- **Read ACP** Authorized user can list ACL of that file.

• Write ACP - Authorized user can modify the ACL of the file.

Optionally, on the **General** tab, you can click **Add Policy** to add a permission policy via the **Bucket Policy Definition** dialog.

Bucket Policy Definition	? ×
Permission Policy	ОК
<pre>{ "Verssion":"2008-10-17", "Statement": [("Sid":"AddPerm", "Effect":"Allow", "Principal":("AWS": "*"), "Action":"S3:6ctbject"], "Resource":["arn:aws:s3:::tes-123/*"], }] </pre>	E
,	

A permission policy is a JSON string containing the policy contents and statements. The policy can have granular control of the object, but is controlled at the bucket level. A policy includes:

- Optional policy-wide information (at the top of the document)
- One or more individual statements

Each statement includes the core information about a single permission.

14. Click the **Parameters** tab to view or edit a list of parameters specified on the **General** tab. The parameter value is resolved during runtime.

Amazon53 Job	Definition	[Ama	izon53,	Create B	ucket]							? 🗆 🗙
Amaz	on53 Job N	ame	Amazo	nS3. Cre	ate Bucket	8						ОК
	Job (-	Owner	Schedu	lers	•	Cancel
	Parent G	roun										
Amazon 53			Denen	densies	Decourses	Job Events		Dup Baal	Natas	History	Images	
Amazon 55	Schedule	Run	vepen	dencies	Resources	JOD Events	Uptions	KUN BOO	notes	History	Images	
	Operation	Туре	Create	Bucket			-					
	0	itout	Simple									
		put	ompio	•								
General Pe	ermissions	Para	meters	Versio	nina							
Name		,		Value							Edit	
Bucket_Owr	her			<jobow< td=""><td>ner></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></jobow<>	ner>							
🗹 Enabled							Last	Modified :	08/09/2	012 20:15:	51	

To edit a parameter, select the parameter, then click Edit to display the Parameter Definition dialog.

15. Click the Versioning tab to set the versioning status and behavior.

Amazon53 Jol	b Definition	[Ama	izon 53, Create I	Bucket[\Am	azon 53 Grou	P]]				? □ ×
Amaz	zon53 Job N	ame	Amazon S3, Cr	eate Bucke	t					ОК
	Job	Class				~	Owner S	Schedulers	•	Cancel
	Parent G	iroup	∖Amazon S3 Gr	oup		-				
Amazon 53	Schedule	Run	Dependencies	Resources	Job Events	Options	Run Book	Notes Hist	ory Images	
	Operation	Туре	Create Bucket			-				
	0	utput	Detail			•				
General P	ermissions	Para	meters Versio	ning						
Versioning S	tatus	Θc	off	C Ena	bled	C e	Suspend			
			: When enabled e non-current v		-			-	in this bucket	•
		mes	e non-currenc ¥	ersion objec	us are niuuei	i anu req	uire scoragi	e space.		
🔽 Enabled						Last	Modified : 0	8/07/2012 2	1:17:53	

Versioning enables you to keep multiple versions of an object in one bucket. You must explicitly enable versioning on your bucket. By default, versioning is disabled. Regardless of whether you have enabled versioning on your bucket or not, each object has a version ID. If you have not enabled versioning on your bucket, then Amazon S3 sets the version ID value to null. If you have enabled versioning on your bucket, Amazon S3 assigns a unique version ID value for the object.

16. Click OK to save the job.

Update Bucket Operation

This section describes the basic steps for defining an Amazon S3 job for updating a bucket.

To define an Amazon S3 job that updates a bucket:

1. From the Amazon S3 tab, and select Update Bucket from the Operation Type list.

Amazon53 Jot	Definition [Ama	izon 53, Update I	Bucket[\Am	azon 53 Grou	p]]			? 😐	×		
Amaz	on53 Job Name	Amazon S3, Up	idate Bucke	t				OK	\Box		
	Job Class				~	Owner Sched	lulers	▼ Canc	:el		
	Parent Group	Amazon S3 Group				▼					
Amazon 53	Schedule Run	Dependencies	Resources	Job Events	Options	Run Book Note	s History	Images			
	Operation Type	Update Bucket			-						
	Output	Detail			-						
General Pe	ermissions Web	site Lifecycle	Parameters	Versioning							
D.	icket Name tes-	1				v					
DU		1									
	Vi	ew Details									
	_										
Enabled					Last	Modified : 08/07,	2012 21:07	:31			

- 2. From the **Output** list, select one of the following output types:
 - Simple will only return the updated bucket name.
 - Detail will return updated bucket operation detail.
- 3. From the **Bucket Name** list, select the bucket you want to update.
- 4. Optionally, click View Details to display the Bucket Details dialog.

Bucket Details		? × `
Region:	US Standard	Close
Creation Date :	Tue Aug 07 19:27:33 2012	
Owner :	satyabir.verma	

This dialog contains the following elements:

- Region the location of the bucket.
- Creation Date the timestamp when this selected bucket was created.
- **Owner** the owner of bucket.
- 5. Click the **Permissions** tab to add, edit, or delete Grantee ACL Users and assign them permissions.

To edit a grantee, click Edit to display the Edit User dialog.

Edit User			? ×
User Type	Log Delivery	•	OK Cancel
🗆 Full Control			
🗹 Read			
🗹 Write			
🗹 Read ACP			
🗹 Write ACP			

6. Click the **Website** tab to enable and configure an Amazon S3 website using the corresponding bucket as the content source. The website will have one default domain name associated with it, which is the bucket name.

Job	Name Ama	zon S3,	Updat	teBucket	(2)					Job No. 186		OK
itatus	Audit Log	Output	Deper	ndencies	Resources	Override	Runbook	Notes	History	Amazon 53	Run Info	Cance
	Operat	ion Type	Upda	ate Bucke	et		-					
		Output	Deta	il			•					
Genera	al Permissio	ons We	bsite	Lifecycle	Parameter	s Version	ing					
	🔽 Enabl	ed										
In	idex Docume	nt inde	x.html									
E	rror Docume	ent erro	r.html									
		1			-0							
	End Po	int US.	ps:// amazo	naws.c	s3-websit om/	ce-						
	Lindito											

This dialog contains the following elements:

- **Enabled** select to enable website configuration.
- Index Document index document/page for the website if the bucket is associated with the website domain.
- Error Document error document/page for accessing the website if the bucket is associated with the website domain.
- End Point display URL assigned by Amazon S3 while creating a bucket.

7. Click the Lifecycle tab to set a lifecycle configuration on your bucket. The lifecycle configuration describes the lifetime of various objects in your bucket.

Amazon53	Job Definition	[Ama	izon53, Create B	ucket]							? 🗆 🗙
An	azon53 Job N	ame	AmazonS3, Cre	ate Bucket							ОК
	Job C	lass				-	Owner S	Chedu	ers	•	Cancel
	Parent G	oup				~					
Amazon 9	3 Schedule	Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
	Operation [•]	[vpe	Update Bucket			•					
			Detail								
	00	rpuc	Detail			•					
General	Permissions	Web	site Lifecycle	Parameters	Versioning	1					
Expiration	rules					1					
Enabled	Rule Name			Prefix			Expirati	ion(Da	ys)	Add)
V	30 days log o	bject	s expire rule	logs/			30		(Edit)
									(Delete)
•									•		
🗹 Enabled	i					Last	Modified : 0	8/09/20	012 20:15	i:51	

A lifecycle configuration contains rules, which identify an object prefix and a lifetime for objects that begin with this prefix. The lifetime is the number of days after creation that you want the object removed.

To add an expiration rule for an object, click Add to display the Add Expiration Rule dialog.

ОК
Cancel

This dialog contains the following elements:

- Enabled check to enable the expiration rule
- Rule Name name of the expiration rule
- Prefix specify a key prefix. The expiration rule applies to all objects whose key names begin with this prefix.
- **Expiration** the number of days after creation that you want the object removed.
- 8. Click the **Parameters** tab to view or edit a list of parameters specified on the **General** tab. The parameter value is resolved during runtime.

To edit a parameter, select the parameter, then click Edit to display the Parameter Definition dialog.

9. Click the Versioning tab to set the versioning status and behavior.

Versioning enables you to keep multiple versions of an object in one bucket. You must explicitly enable versioning on your bucket. By default, versioning is disabled. Regardless of whether you have enabled versioning on your bucket or not, each object has a version ID. If you have not enabled versioning on your bucket, then Amazon S3 sets the version ID value to null. If you have enabled versioning on your bucket, Amazon S3 assigns a unique version ID value for the object.

10. Click OK to save the job.

Delete Bucket Operation

This section describes the basic steps for defining an Amazon S3 job for deleting a bucket.

To define an Amazon S3 job that deletes a bucket:

1. From the Amazon S3 tab, and select the Delete Bucket operation from the Operation Type list.

Job Detai	ls [Amazon	53, Delet	e Bucket (1)]								? ⊡ ×
Job	Name Ama	azon S3,	Delete Bucket	(1)]	Job No. 459		OK
Status	Audit Log	Output	Dependencies	Resources	Override	Runbook	Notes	History	Amazon 53	Run Info	Cancel
	Operal	tion Type	Delete Bucket	3		-					
		Output	Simple			•					
Genera	al Paramet	ers									
	Bucket N	ame ibu	cketlifecycle				~				
		_									
		(v	iew Details								
								Prin	t • 🗍 🔲)efaults)

- 2. From the **Output** list, select one of the following output types:
 - Simple will only return the deleted bucket name.
 - Detail will return deleted bucket operation detail.
- 3. From the **Bucket Name** list, select the bucket you want to delete.
- 4. Optionally, click View Details to display the Bucket Details dialog.
- 5. Click the **Parameters** tab to view or edit a list of parameters specified on the **General** tab. The parameter value is resolved during runtime.

To edit a parameter, select the parameter, then click **Edit** to display the **Parameter Definition** dialog.

6. Click OK to save the job.

Update Object(s) Operation

This section describes the basic steps for defining an Amazon S3 job for updating objects.

To define an Amazon S3 job that updates object(s):

1. From the Amazon S3 tab, and select the Update Object(s) operation from the Operation Type list.

Amazon53 Job	Definition	[Ama	zon 53, Update	Dbject(s)[\A	mazon Job G	roup]]					? ⊑ ×
Amaz	on53 Job N	ame	Amazon S3, Up	date Objec	t(s)						ОК
	Job (lass				-	Owner o	llung		•	Cancel
	Parent G	roup	Amazon Job G	roup		~					
Amazon 53	Schedule	Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images]
	Operation	Туре	Update Object(s)							
	0.	ıtput	Simple			-					
Objects St	orage Per	missi	ons Metadata	Parameters	Versioning						
			TEO 1								
Listing Key Crite	Bucket M	ame	TES-1				-				
LISUNG KEY CHU	sna										
	Key Name F	refix	abc					Previe	w List		
Key	Name Delii	niter	/								
			c								
🗹 Enabled						Last	Modified : 0	8/09/2	012 22:17	7:51	

- 2. From the **Output** list, select one of the following output types:
 - **Simple** will only return the updated object(s) name.
 - **Detail** will return updated object(s) operation detail.
- 3. From the Bucket Name list, select the bucket you want to update the objects for.
- 4. In the Key Name Prefix field, enter a common prefix for the names of related keys.

Optionally, you can click the Preview list button to display the Preview Key Name List dialog.

Preview Key Name List		? ×
		Close
Key Name		
<jobname></jobname>	*	
<jobnamep></jobnamep>		
Factorial8_test.java		
Salarycalc Main		
Salarycalc mapper		
abc		
abc.txt		
audio_mpr3		
image_bmp	E	
image_gif		
image_jpeg		
pdfs		
tes		
test		
test.pdf		
test2.pdf		
word	-	
•	4	

The dialog contains a list of existing key names that exist for the selected bucketed based on the Key Criteria entered.

- 5. In the **Key Name Delimiter** field, enter a special character that will be used to mark the keys for delimiting hierarchy.
- 6. Click the Storage tab to set the storage type and server side encryption.

Amazon53 Jot	Definition [Ar	nazon 53, Update Object(s)[\Am	iazon Job Group]]	? ⊑ ×
Amaz	on53 Job Nam	Amazon S3, Update Object(s	3)	ОК
	Job Clas	5	Owner cllung	▼ Cancel
	Parent Grou	Amazon Job Group	~	
Amazon 53	Schedule Ru	Dependencies Resources J	ob Events Options Run Book Notes I	History Images
	Operation Typ	Update Object(s)	•	
	Outp	t Simple	•	
Objects St		sions Metadata Parameters	Versioning	
		Standard	C Reduced Redundancy	
<u>-</u>	5erver Side End	ryption (* None	C AES-256	
🔽 Enabled			Last Modified : 08/09/201	12 22:17:51

This tab contains the following elements:

- **Storage Type** Amazon S3 supports the following types of storage:
 - **Standard** select for standard Amazon S3 storage. This is default.
 - Reduced Redundancy Stores non-critical, reproducible data at lower levels of redundancy than the standard storage.
- Server Side Encryption Amazon S3 will maintain encryption key and decrypted while downloading the objects.
 - None No server side encryption. This is the default.
 - AES-256 256-bit AES is used to encrypt your data.

7. Click the **Permissions** tab to add, edit, or delete Grantee ACL Users and assign them permissions.

Amazon53 Jot	Definition [Amazon 53, Upd	ate Object(s)[\#	Amazon Job G	iroup]]					? ⊡ ×
Amaz	on53 Job Na	me Amazon S3	, Update Objec	t(s)						OK
	Job Cl	ass			v	Owner o	llung		-	Cancel
	Parent Gro	Amazon J	ob Group		V					
Amazon 53	Schedule F	Run Dependen	ies Resources	Job Events	Options	Run Book	Notes	History	Images	
	Out	ype Update Ob put Simple nissions Metad	ject(s) ata Parameter		•					
User		▼ Full Control	Read	Read ACP		ACP		(Add)
Everyone								(Edit)
Owner								(Delete)
🔽 Enabled					Last N	1odified : C	18/09/20	012 22:17	:51	

To edit a grantee, select the grantee record, then click Edit to display the Edit User dialog.

Click the Metadata tab to add, edit or delete system and user-defined metadata. Metadata is a set of name-value pairs.

mazon53 Job		-					iroup]]					? □ ×
Amaz	on53 Job N	ame	Amaz	on S3, Up	odate Objec	t(s)						ОК
	Job C	lass					~	Owner o	llung			Cancel
	Parent Gi	roup	Amaz	on Job C	àroup		v					
Amazon 53	Schedule	Run	Depe	ndencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
Objects St	orage Per	Jtput	Detai				•					
Metadata				Value							Add)
x-amz-meta	-aaa			aaa						Ì	Edit	í
										Ì	Delete	5
✓ Enabled							Last	Modified : 0	8/09/20	012 22:17	:51	

- To add metadata for an object, click **Add** to display the **Add Metadata** dialog.
- To edit an existing metadata record, select Edit to modify the metadata via the Edit Metadata dialog.
- 9. Click the **Parameters** tab to view or edit a list of parameters specified on the **Objects** tab. The parameter value is resolved during runtime.

To edit a parameter, select the parameter, then click Edit to display the Parameter Definition dialog.

10. Click the Versioning tab to set the versioning status and behavior.

Amazon53 Jo	b Definit	ion [Ama	azon	53, Update	Object(s)[\A	mazon Job G	roup]]					? 🗆 🗙
Ama	zon53 Ja	b Name	Ama	azon S3, Up	odate Object	(s)						OK
	J	ob Class					~	Owner o	llung		•	Cancel
	Paren	nt Group	(Am	azon Job G	iroup		~					
Amazon 53	Schedu	ule Run	Dep	oendencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
	Operati	ion Type	Upo	late Object((s)		-					
		Output					-					
Objects 9	itorage	Permissi	ions	Metadata	Parameters	Versioning]					
	🔽 Oner	ation wil		lu to all obi	ect versions							
	I ∪per	acion wii	l app	iy co all obje	ect versions							
🗹 Enabled							Last	Modified : 0	8/09/20	012 22:17	:51	

Select the **Operation will apply to all object versions** option if you want the update operation to update all versions associated with the assigned object(s).

11. Click OK to save the job.

Rename/Restore Object Operation

This section describes the basic steps for defining an Amazon S3 job for renaming or restoring objects.

To define an Amazon S3 job that renames or restores objects:

1. From the Amazon S3 tab, and select the Rename/Restore Object operation from the Operation Type list.

Amazon53 Job De	finition [Rena	ame Object : tes	61.demo.1[[\]	S3 Object Re	name Ol	bject]]				? 🗆 🗙
AmazonS	i3 Job Name	Rename Objec	t : tes.61.dei	mo.1						ОК
	Job Class				•	Owner 📄	112		•	Cancel
P	arent Group	\S3 Object Ren	ame Object		-					
Amazon 53 Scl	hedule Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
Ope	eration Type	Rename/Resto	re an Object		-					
	Output	Simple			-					
Object Param	eters Versio	ning								
Source										
E	Bucket Name	tes.61.demo.1				~				
	Key Name	abc.txt				~				
Destination										- 1
E		tes.61.demo.1				_				
	Key Name	abc.txt.new								
—										
Enabled					Last	Modified : 07/	/13/20	12 13:38	:36	

2. From the **Output** list, select one of the following output types:

Simple - will only return the updated bucket name.

- Detail will return update bucket operation detail.
- 3. From the Bucket Name list, select the source bucket objects you want rename or restore.
- 4. In the Key Name field, enter the key name of the object.
- 5. From the Bucket Name list, select the destination bucket you want to put the renamed or restored bucket objects.
- 6. In the Key Name field, enter the key name of the object.

7. Click the **Parameters** tab to view or edit a list of parameters specified on the **Objects** tab. The parameter value is resolved during runtime.

imazon53 Jot	b Definition [Res	ore Object : tes.	61.demo.1[\	,53 Object Re	ename Ob	ject]]				? 🗆 🗙
Amaz	zon53 Job Name	Restore Object	: tes.61.den	no.1						ОК
	Job Class				Y	Owner	AN I LAND			Cancel
	Parent Group	\S3 Object Ren	ame Object		~					
Amazon 53	Schedule Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
	Operation Type	Rename/Resto	re an Object	t .	•					
	Output	Simple			-					
Object Par	rameters Versio	oning								
Name		▼ Value							Edit	
Bucket_Nan	ne	<s3 bud<="" th=""><th>ket -</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></s3>	ket -							
1										
Enabled					Last	Modified : 0	7/13/2	012 13:36	:10	

To edit a parameter, select the parameter, then click Edit to display the Parameter Definition dialog.

8. Click the Versioning tab to set the versioning status and behavior.

		-	ore Object : tes.			ename Ob	ject]]				? • ×
Amaz			Restore Object	: tes.61.der	no.1		-				OK
	Job (lass				<u> </u>	Owner	Hourse.			Cancel
	Parent G	roup	\S3 Object Ren	ame Object	t	-					
Amazon 53	Schedule	Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images]
Object Par	0.	utput	Rename/Resto Simple	re an Objec		•					
	Object	Versi	on ID					•			
· Enabled						Last	Modified : 0	7/13/2	012 13:36	:10	

If applicable, from the **Object Version ID** list, select the version of the object you want to restore or rename.

9. Click **OK** to save the job.

Move, Copy, and Delete Object(s) Operations

This section describes the basic steps for defining an Amazon S3 job for moving, copying, or deleting objects.

To define an Amazon S3 job that moves, copies, or deletes objects:

1. From the Amazon S3 tab, and select the Move Object(s) or Copy Object(s) operation from the Operation Type list.

Amazon53 Jol	b Definition [Ama	izon 53, Move Ol	jects[\Ama	zon 53 Job G	roup]]					? □ ×
Amaz	zon53 Job Name	Amazon S3, Mo	ve Objects							ОК
	Job Class				~	Owner o	llung			Cancel
	Parent Group	∖Amazon S3 Jo	o Group		~					
Amazon 53	Schedule Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
	Operation Type	Move Object(s)			-					
	Output				-					
Objects Pa	arameters Vers	ioning								
Source										
	Bucket Name	tes.61.demo				-				_
	Key Name Prefix	abc					Preview	w List		
Key	Name Delimiter	/								
Destination										
	Bucket Name	tes.61.demo				v				
🗹 Enabled					Last	Modified : 0	8/11/20	012 21:51	:47	

For the **Delete Object(s)** operation type, the **Objects** tab displays as follows:

Amazon53 Jot	Definition [Am	azon 53, Delete (bjects[\Am	azon 53 Job (Group]]					? □ ×
Amaz	on53 Job Name	Amazon S3, De	lete Object:	8						ОК
	Job Class				~	Owner o	llung		•	Cancel
	Parent Group	∖Amazon S3 Jo	b Group		-					
Amazon 53	Schedule Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images	
	Operation Type	Delete Object(3)		•					
	Output	Simple			-					
Objects Pa	arameters Vers Bucket Name	tes.61.demo				v				
	Key Name Prefix Name Delimiter	abc-1.txt					Previe	w List		
₩ Enabled					Last	Modified : 0	8/11/2	012 22:15	i:12	

2. From the **Output** list, select one of the following output types:

- **Simple** - will only return the moved or copied object(s) name.

- Detail will return the moved or copied object(s) operation detail.
- 3. From the Bucket Name list, select the source bucket you want to move, copy, or delete the objects from.
- 4. In the Key Name Prefix field, enter a common prefix for the names of related keys.

Optionally, you can click the **Preview** list button to display the **Preview Key Name List** dialog.

This dialog contains a list of existing key names that exist for selected bucket and entered Key Name Prefix.

- 5. In the **Key Name Delimiter** field, enter a special character that will be used to mark the keys for delimiting hierarchy.
- For the Move Object(s) or Copy Object(s) operations, select the source bucket you want to move or copy the objects to from the Bucket Name list.
- 7. Click the **Parameters** tab to view or edit a list of parameters specified on the **Objects** tab. The parameter value is resolved during runtime.

To edit a parameter, select the parameter, then click Edit to display the Parameter Definition dialog.

8. Click the Versioning tab to set the versioning status and behavior.

Amazon53 Jot	Definition (Am	azon 53, Move Ol	ojects[\Ama	izon 53 Job G	roup]]					? = ×	
Amaz	Amazon53 Job Name Amazon S3, Move Objects										
	Job Class				-	Owner o	llung			Cancel	
	Parent Group	∖Amazon S3 Jo	b Group		$\overline{}$						
Amazon 53	Schedule Run	Dependencies	Resources	Job Events	Options	Run Book	Notes	History	Images		
	Operation Type	Move Object(s))		-						
	Outpul	Detail			-						
Objects Pa	arameters Ver	sioning									
	Operation wi	ill apply to all obje									
	Operation w	и аррія со ан орј	ett versions								
-											
✓ Enabled					Last	Modified : 0	8/11/2	012 21:51	:47		

- Select the Operation will apply to all object versions option if you want the Move or Copy operation to move or copy all versions associated with the assigned object(s).
- 10. Click OK to save the job.

Monitoring Amazon S3 Job Activity

As Amazon S3 operations run as pre-scheduled jobs, you can monitor the jobs as you would any other type of job in CWA using the **Job Details** dialog. You can also use Business Views to monitor job activity and view when the jobs are active (see your *Cisco Workload Automation User Guide* for instructions on using Business Views).

To monitor job activity:

1. In the Navigator pane, select Operations>Job Activity to display the Job Activity pane.

2. Right-click to select a job and choose **Details** from the context menu.

The **Job Details** dialog displays. On the **Status** page, you can view the status of the job, the start and end time, how long it ran, and how it was scheduled. The external ID is the run ID associated with the specific execution of the job.

3. Click the **Output** tab to view the job output.

If you selected Simple from the Job Definition's Output list, the Output tab displays as follows:

Job Details [Amazon 53, Upda	ate Bucket (2)]				7	? □ ×
Job Name Amazon S3,	Update Bucket (2)			Job No. 4	55	ОК
Status Audit Log Output	Dependencies Resource	es Override Rur	book Notes	History Amazon	53 Run Info	Cancel
Refresh output						
Run: <u>1</u>						
tes.61.demo						
Completed at 08/1	1/2012 10:38 PM					
∢ [F	
				Print •	Defaults	

If you selected **Details** from the Job Definition's **Output** list, the **Output** tab displays as follows:

Job Name Amazon S3, Copy Object	(s) (2)					Job No. 454		ОК
itatus Audit Log Output Dependencie				Cancel				
	is Resources	Overnue	KUIDOOK	notes	nistory	AIIId2011 55	Kullino	Canter
Refresh output								
un: <u>1</u>								
							E	
4-IMAGE.jpg							-	
abc-txt								
abc.txt								
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cloudfront/output/2012-06-14	-20/edge-1	ocation-	-request	-count	:/ នបCC	CESS	-	
< III					_			

CWA can be configured to save or discard job output by default from the **Defaults** tab of the **System Configuration** dialog. Regardless of the system default, any individual job instance can be configured from its job definition to override the system default. Each time a job is rerun, that run's output is separated by a block of number signs.

4. Click the Amazon S3 tab to view the original request along with variables used when this job was submitted. This tab allows you to override the output format and parameter values prior to run or rerun. Overrides are not permitted when the job is running.

Job Details	[Amazon S	53, Updal	eBucket (2)]							4	? ⊡ ×
Job N	ame Amaz	zon S3, l	JpdateBucket	(2)					Job No. 186		UK
Status /	Audit Log 🛛	Output	Dependencies	Resources	Override	Runbook	Notes	History	Amazon 53 R	un Info	Cancel
	Operati	ion Type	Update Bucket			Ŧ					
		Output	Detail		S3 Job	Run					
	1										
General	Permissio	ons Web	site Lifecycle	Parameter	s Version	ing					
	Bucket Na	me tes-	1				T				
							_				
		(Vi	ew Details								
								Dein		pudte	
								Prin	t v j Den	aults	

While the job is running, the fields are disabled; however, prior to running or rerunning the job, you can override any value on this screen. Your changes here only apply to this instance of the job (the original job definition is not affected).

Controlling Adapter and Agent Jobs

5. Click the **Run Info** tab to view the run status, start, and end time for each step in the Amazon S3 job. This tab is read-only.

Job Details	[Amazon §	53, Upda	teBuc	ket (2)]								? □ ×
Job N	ame Ama	zon S3, I	Upde	teBucket	(2)]	Job No. 186		ПК
Status /	udit Log	Output	Depe	ependencies Resources Override Runbook Notes						Amazon 53	Run Info	Cancel
	Operati	ion Type	Upd	ate Buckei	t							
		Output	Deta	ail			-					
					25							
General	Permissio	ons Web	osite	Lifecycle	Parameter	s Version	ing					
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	Rule Nan	ne			▼ Prefix				piration	(Days)	View	
V	rule-1			aaa 30				30				
•			_		III					Þ		
									Prin	t v)efaults	

6. When you have finished viewing the job activity details, click **OK** to close the dialog.

Controlling Adapter and Agent Jobs

Scheduler provides the following job control capabilities for either the process currently running or the job as a whole:

- Holding a Job–Hold a job waiting to run.
- Aborting a Job–Abort an active job.
- Rerunning a Job–Rerun a job that completed.
- Making One Time Changes to an Adapter or Agent Job Instance–Make last minute changes to a job.
- Deleting a Job Instance before It Has Run-Delete a job instance before it has run.

Holding a Job

Adapter/agent jobs are held in the same way as any other Scheduler jobs.

Adapter/agent jobs can only be held before they are launched. Once a job reaches the Adapter/Agent system, it cannot be held or suspended.

To hold a job:

- 1. From the **Job Activity** pane, right-click on the job.
- 2. Select Job Control>Hold/Stop.

Aborting a Job

Adapter/agent jobs are aborted in the same way as any other Scheduler jobs.

To abort a job:

- 1. From the Job Activity pane, right-click on the job.
- 2. Select Job Control>Cancel/Abort.

Rerunning a Job

On occasion, you may need to rerun an Adapter/Agent job. You can override parameter values first, if necessary, from the Adapter/Agent tab.

To rerun a job:

- 1. From the Job Activity pane, right-click the Adapter/Agent job you need to rerun.
- 2. Select Job Control>Rerun option from the context menu.

Making One Time Changes to an Adapter or Agent Job Instance

Prior to a run or rerun, you can edit data on the specific **Adapter/Agent** tab. To ensure that there is an opportunity to edit the job prior to its run, you can set the **Require operator release** option on the **Options** tab in the Adapter **Job Definition** dialog. Use this function to make changes to an Adapter job after it enters Waiting on Operator status as described in the following procedure.

To make last minute changes:

- 1. From the Job Activity pane, double-click the Adapter/Agent job to display the Job Details dialog.
- **2.** Click the Adapter tab.
- 3. Make the desired changes to the job and click OK to close the Job Details dialog.
- 4. If this job is Waiting on Operator, perform one of the following tasks:
- To release the job, select Job Control->Release.
- To rerun the job with changes, select **Job Control->Rerun**.

Deleting a Job Instance before It Has Run

Adapter/Agent job instances are deleted in the same way as any other Scheduler job.

Deleting a job from the **Job Activity** pane removes the job from the Scheduler job activity only. The original definition is left in tact.

To delete a job instance:

- 1. From the Job Activity pane, right-click the Adapter/Agent job to be deleted.
- 2. Select Remove Job(s) From Schedule.

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Configuring service.props

About Configuring service.props

The **service.props** file is used to configure adapter behavior. **service.props** is located in the \config directory located under the Adapter's GUID directory, You can create both the directory and file if it does not yet exist. Properties that can be specified in service.props control things like logging and connection configuration. Many of the properties are specific to certain adapters; others are common across all adapters.

service.props Properties

The table below lists many of the parameters that can be specified in service.props. Some properties apply to all adapters (shaded in the table) and some properties are adapter-specific as indicated by the **Applicable Adapter(s)** column. The properties are listed in alphabetical order.

Property	Applicable Adapter(s)	Default	What It Controls
BYPASS_SEC_VALIDATION	Oracle Apps	N	If set to Y, the secondary user validation is bypassed. If not, secondary user validation is performed.
CLASSPATH	All	<none></none>	(Optional) – The path to the JDBC driver. If the default CLASSPATH used when the Adapter process is started does not include an appropriate JDBC driver jar required to connect to the PowerCenter Repository Database, you will need to specify this <i>service.props</i> configuration
CONN_SYNC	Informatica, Oracle Apps, SAP	N	Setting this flag to Y allows synchronous connections without overloading the RDOnly Thread. If set to N, the adapter might stop trying to reconnect after an outage or downtime.
DISCONN_ON_LOSTCONN	Informatica	N	Setting this flag to Y avoids an unnecessary logout call to the Informatica server when the connection is lost. This logout call usually hangs.
EnableDynamicPollingInterval	All	N	Use to avoid frequent polling on long-running jobs. When set to Y in service.props of a particular adapter, these properties are enabled: MinDynamicPollInterval–Minimum value should be 5 seconds. MaxDynamicPollIntervalInMin–Maximum value should be 5 minutes. PercentOfEstDuration–Default value is 5.

service.props Properties

Property	Applicable Adapter(s)	Default	What It Controls
HADOOP_JAVA_HOME	Sqoop	<none></none>	If the Java version used in the Hadoop environment is lower than Java 8, then install the same lower JDK version in the in the Master and include the path of the JDK in this property.
IGNORE_CODES	Informatica	<none></none>	This parameter can be set in service.props, job configuration and connection configuration parameters. The order of precedence is service.props (applicable for all jobs running in all connections), job level (only for that particular job), and connection (applicable for all jobs in the connection). This parameter is used to specify Informatica-specific error codes, separated by commas (,), that you want to ignore while running a job.
IGNORESUBREQ	Oracle Apps	N	Y or N. Setting this flag to Y stops huge job xml file transfers back and forth between the adapter and the AdapterHost during polls when a single request set has multiple sub-requests of more than 100. The default value is N or empty.
kerbkdc	MapReduce	<none></none>	If the Hadoop cluster is Kerberos secured, use this value to specify the KDC Server. For example, kerbkdc=172.25.6.112
kerbrealm	MapReduce	<none></none>	If the Hadoop cluster is Kerberos secured, use this value to specify the Kerberos Realm. For example, kerbrealm=TIDALSOFT.LOCAL
Keystore	BusinessObje cts, BusinessObje cts Bl, BusinessObje cts DS, Cognos, JD Edwards, Oracle Applications, UCS Manager, VMware, Web Service	<none></none>	Specify Keystore=c:\\ <adapter_certificate_directory>\\<your_tr usted_keystore>.keystore when importing certificates into a Java keystore.</your_tr </adapter_certificate_directory>
LAUNCH_DELAY (in milliseconds)	Informatica	<none></none>	This parameter can be set in service.props, job configuration and connection configuration parameters. The order of precedence is service.props (applicable for all jobs running in all connections), job level (only for that particular job), and connection (applicable for all jobs in the connection). If a non-zero value is set for this parameter, then the jobs are delayed for the specified number of milliseconds before being submitted to Informatica.

service.props Properties

Property	Applicable Adapter(s)	Default	What It Controls
LoginConfig	BusinessObje cts Bl Platform, BusinessObje cts Data Services	<none></none>	Specifies the location of the login configuration if using WinAD or LDAP authentication. For example: LoginConfig=c:\\windows\\bscLogin.conf where "c:\\windows\\bscLogin.conf" is the location of the login configuration information. Note the use of \\ if this is a Windows location.
MaxLogFiles	Informatica, JDBC, PeopleSoft	50	(Optional) - Number of logs to retain.
OUTPUT_ASYNC_LOGOUT	Informatica	N	Setting this flag to Y avoids jobs getting stuck in Gathering Output status.
OUTPUT_SYNC	All	Y	Enables concurrent output gathering on a connection. To enable this feature, set the value to N.
POLL_SYNC	All	Y	Enables concurrent polling on connections of the same type. This is helpful when there is a heavily load on one connection of an adapter. The heavily loaded connection will not affect the other adapter connection. To enable this feature, set the value to N.
QUERY_TIMEOUT	Oracle Apps	N	Y or N. If set to Y, the timeout value defined using the parameter QUERY_TIMEOUT_VALUE is applied to the SQL queries. Default value is N or empty.
QUERY_TIMEOUT_VALUE	Oracle Apps	unset	The time period in seconds that SQL queries wait before timeout. If 0 or not set, there is no timeout.
READPCHAINLOG	SAP	Y	Used to control the log gathering in SAP Process Chain jobs. This property depends on the Summary Only check box of the job definition Options tab.
SCANFOR_SESSIONSTATS	Informatica	Y	Y or N - Set this parameter to N to turn off the default behavior of Informatica jobs collecting the session statistics during the job run.
SCANFOR_SESSIONSTATS_A FTER_WF_ENDS	Informatica	N	Y or N - Set this parameter to Y to turn off the gathering of session statistics during each poll for the status of Informatica jobs.
TDLINFA_LOCALE	Informatica	<none></none>	Points to the Load Manager Library locale directory. See "Configuring the Informatica Adapter" in the <i>Informatica</i> <i>Adapter Guide</i> for how to set this for Windows and Unix environments.
TDLINFA_REQUESTTIMEOUT	Informatica	<none></none>	(Optional) - The number of seconds before an API request times out. The default is 120 seconds, if not specified.
TDLJDBC_LIBPATH	JDBC	<none></none>	(Windows only, optional) An alternate path to the JDBC library files. The library file path should have been configured given system environment variables. This option is available in case you wish to use an alternate set of libraries and may be helpful for trouble-shooting purposes.

service.props Properties

Property	Applicable Adapter(s)	Default	What It Controls
TDLJDBC_LOCALE	JDBC	<none></none>	The path to the JDBC locale files.
TRANSACTION_LOG_BATCH_ SIZE	MS SQL	5000	Set this parameter if more than 5000 lines need to be read from the transaction table.
version_pre898	JD Edwards	N	If running on a JD Edwards server version that is less than 8.9.8, set version_pre898=Y.