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ORAchk Healthchecks Plug-in User's Guide 13.2.1.0 E73557-01

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Oracle Enterprise Manager ORAchk Healthchecks Plug-in User's Guide, 13.2.1.0

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Preface

This document describes how to use the ORAchk Healthchecks plug-in to leverage features of ORAchk/Exachk for Enterprise Manager targets such as Oracle Exadata Database Machine, Exalogic Elastic Cloud, Cluster Database, Single Instance, and so forth. ORAchk provides functionality for system administrators to automate the assessment of Engineered Systems and non-Engineered Systems for known configuration problems and best practices.

Audience

This document is intended systems and database administrators tasked with monitoring Engineered Systems products.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup? ctx=acc&id=docacc.

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Related Documents

For more information, see the following documents available in My Oracle Support (https://support.oracle.com):

• Oracle Exadata Best Practices (Doc ID 757552.1):

https://support.oracle.com/rs?type=doc&id=757552.1

• Oracle Database Machine Monitoring Best Practices (Doc ID 1110675.1):

https://support.oracle.com/rs?type=doc&id=1110675.1

• ORAchk/EXAchk Master Reference (Doc ID 1969085.1):

https://support.oracle.com/rs?type=doc&id=1969085.1

Conventions

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

The following text conventions are used in this document:

What's Changed

This table provides a brief overview of the document changes for the latest publication of the *Oracle*[®] *Enterprise Manager ORAcheck Healthchecks Plug-in User's Guide*:

Part Number	Change Summary
E73557-01	Updated for Enterprise Manager Cloud Control 13c Release 13.2.1.0.

1

ORAchk Healthchecks Plug-in Overview and Requirements

This chapter provides an overview description of the ORAchk plug-in and summarizes the prerequisites required before configuration.

- Overview of the ORAchk Healthchecks Plug-in
- Supported Hardware and Software Versions
- ORAchk Plug-in Prerequisites
- Downloading the ORAchk Plug-in
- Deploying the Plug-in
- Upgrading the Plug-in
- Undeploying the Plug-in

1.1 Overview of the ORAchk Healthchecks Plug-in

The ORAchk plug-in integrates ORAchk/Exachk with Oracle Enterprise Manager. Once installed and integrated into Oracle Enterprise Manager Cloud Control, the ORAchk plug-in yields the following benefits:

- Install and set up ORAchk/Exachk from the Enterprise Manager console instead of the command line on individual hosts.
- View ORAchk results as compliance results at the target level.
- Trending, scoring and other compliance standard framework features for ORAchk results.
- Receive notifications in case the ORAchk/EXAchk daemon goes down.

1.2 Supported Hardware and Software Versions

The ORAchk plug-in supports a variety of Oracle hardware and software products:

- Supported Hardware Versions
- Supported Software Versions

1.2.1 Supported Hardware Versions

The ORAchk plug-in supports Engineered Systems hardware, including all variants of Exadata Database Machine and Exalogic Elastic Cloud.

Supported hardware types include:

- Exadata (physical configuration only)
- Recovery appliance
- Exalogic (virtualized configuration)
- Exalogic (physical configuration)

Hardware types currently not supported include:

- Exadata (virtual configuration)
- Oracle SuperCluster
- Oracle Private Cloud Machine

1.2.2 Supported Software Versions

The ORAchk Healthchecks plug-in supports Oracle Enterprise Manager Cloud Control 12*c* Release 12.1.0.5, 13*c* Release 13.1.0.1 and higher. It also supports non-Engineered Systems hardware such as Cluster Database, Single Instance, and so forth.

1.3 ORAchk Plug-in Prerequisites

The following prerequisites must be met before you can deploy the plug-in:

- **1.** Verify that your Engineered Systems hardware and software are at the supported level as described in Supported Hardware and Software Versions.
- 2. All Engineered System plug-ins should be deployed.
- **3.** InfiniBand switches and storage cells should be an Enterprise Manager-managed target for the respective engineered system.
- 4. Expect package should be installed on the hosts.

1.4 Downloading the ORAchk Plug-in

You can download plug-ins in online or offline mode. *Online mode* refers to an environment where you have Internet connectivity, and can download the plug-in directly through Enterprise Manager from My Oracle Support. *Offline mode* refers to an environment where you do not have Internet connectivity, or where the plug-in is not available from My Oracle Support.

See the *Managing Plug-ins* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for details on downloading the plug-in in either mode.

1.5 Deploying the Plug-in

You can deploy the plug-in to an Oracle Management Service instance using the Enterprise Manager Cloud Control console, or using the EM Command Line Interface (EMCLI). While the console enables you to deploy one plug-in at a time, the command line interface mode enables you to deploy multiple plug-ins at a time, thus saving plug-in deployment time and downtime, if applicable.

See the *Managing Plug-ins* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for instructions on deploying the plug-in.

1.6 Upgrading the Plug-in

The Self Update feature allows you to expand Enterprise Manager's capabilities by updating Enterprise Manager components whenever new or updated features become available. Updated plug-ins are made available via the Enterprise Manager Store, an external site that is periodically checked by Enterprise Manager Cloud Control to obtain information about updates ready for download.

See the *Updating Cloud Control* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to update the plug-in.

1.7 Undeploying the Plug-in

See the *Managing Plug-ins* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to undeploy the plug-in.

2

Manage Health Checks Tools

This chapter explains how to provision and stop the ORAchk plug-in to monitor your Engineered/non-Engineered Systems assets.

Warning:

You should not attempt to associate ORAchk compliance standards to targets directly, but rather follow the below process. Failing to do so will result in incorrect or no results.

The following sections are provided:

- Provisioning ORAchk
- Update the ORAchk Version

2.1 Provisioning ORAchk

Once the plug-in is deployed, follow the steps below to provision ORAchk/Exachk to monitor your Engineered System/Cluster or Hosts running single instance databases assets:

- **1.** All member targets of Engineered and non-Engineered System targets should be discovered and promoted before provisioning ORAchk.
- 2. From the Enterprise menu, select **Provisioning and Patching**, then **Procedure Library**.

The Provisioning page displays the Deployment Procedure Manager.

Tip:

The Procedure Library contains tools or *procedures* that enable you to enact best practices for effective monitoring and management of your Oracle products.

3. On the Provisioning page, select the **Provision ORAchk/Exachk** procedure and click **Launch**, as shown in Figure 2-1:

Manage ORAchk/Exachk Manage Health Check tools

Figur	e 2-1	Laun	ch Provisio	on ORAchk Pro	cea	lure				
Provis	sioning									
Deployr	nent Proce	dure Ma	nager							
Proced	ure Library	Procedure	Activity Recycle Bin							
Launch		, Go	Edit Procedure D	efinition Create Like Launch	h			Previous 1-2	5 of 84 🗨	Next
Select	Procedure		Туре	Pa	arent	Version	Last Updated	Description	Last Modified By	Owner
0	Analysis Proce Exadata Tarq	edure For ets	Patch Oracle Software	e No	one	15.10	Nov 7, 2015 4:40:16 PM UTC	Analysis Procedure For Exadata Targets	Oracle	Oracle
0	Patching Siebe	el targets	Patch Oracle Software	No	one	12.46	Nov 7, 2015 4:36:30 PM UTC	Test Procedure for analyzing Siebel patch.	Oracle	Oracle
0	<u>Delete Oracle</u> Infrastructure Software	<u>Grid</u> /Database	User Defined	No	one	1.0	Nov 7, 2015 4:35:04 PM UTC	This procedure deletes Oracle Grid Infrastructure/Oracle Database Software for versions 11g Release 2 and higher from given virtual Hosts.	Oracle	Oracle
۲	Provision ORA	.chk/Exachk	Manage Health Check	tools No	one	1.0	Nov 7, 2015 4:32:29 PM UTC	Provisions and starts ORAchk/Exachk instance. Integrates the newly set up instance with targets.	Oracle	Oracle

None 1.0

4. After you click Launch, the Provision ORAchk/Exachk wizard begins with the Target and Frequency, as shown in Figure 2-2. On this page, you must set up ORAchk/Exachk for the selected target.

Nov 7, 2015 4:32:29 PM UTC Procedure to manage already provisioned instances. Oracle Oracle

Figure 2-2 Target Selection for ORAchk/Exachk Provisioning

	O							
Target and Frequency	Configuration	Confirmation						
Provision ORA	chk/Exachk: Tar	get and Freque	ency		Back	Step 1 of 3	Next	Cancel
Use this guided proces information about the t	as to set up ORAchk/Ex ool, see My Oracle Sup	achk tool on system t oort Note 1969085.1.	argets to enable (compliance standar	ds on	the membe	r targets	a. F <mark>or more</mark>
Target and Free	quency Selectio	n						
All member targets of t	the system should be di	scovered and promote	d before set up.					
System Type			•					
TIP Always pick the largest target containing the system type. If a host is part of a cluster, th host or cluster is part of an engineered system, then pick the appropriate engineered system type					hen pic e.	k the "cluster"	system t	ype. If a
System Target Name	<no s<="" system="" targets="" th=""><th>elected.> 🔍</th><th></th><th></th><th></th><th></th><th></th><th></th></no>	elected.> 🔍						
Host Credential	≺No Credentials sele	sted.> 🤍						
Install Location <no location="" selected=""> A subdirectory called "orachk" will be created in this location.</no>								
Daemon Schedule 👘 Nonday 🖱 Tuesday 💭 Wednesday 💭 Thursday 💭 Friday 💭 Saturday 🖉 Sunday								
	Start time 2 ^	✓ hours						

Enter the following information:

a. Select a System Type. The target type list is presented for the systems supported by ORAchk/Exachk.

Click the drop-down menu and make a selection of an appropriate system, as shown in Figure 2-3:

Figure 2-3 Select a System Type for ORAchk/Exachk Provisioning

	-
Cluster	
Exalogic Elastic Cloud	
Exalytics System	
Host Oracle Evedete Detebage Machine	
Recovery Appliance	

Based on target type selection, more inputs may be needed. For example, if you select Oracle Exadata Database Machine, then you may have to select **Cluster** because one instance of Exachk is required per cluster.

Tip:

Always pick the highest available system type in the topology. If the host is part of cluster, then pick **cluster** system type. If the host or cluster is part of an engineered system, then pick the appropriate engineered system type.

b. After you select the system type, select the **System Target Name**. Click the search icon and select a target name from the list. In the example shown in Figure 2-4, if you select an Exadata Databse Machine target type, then all available targets are shown in the list:

Figure 2-4	Select a Target Name for ORAchk/Exachk Provisioning

Note:

Only targets that have already been discovered by Enterprise Manager will appear in this list.

- **c.** If the system type you select has a cluster, then choose the cluster on which you want to configure Exachk. One instance of Exachk is needed for each cluster. Select a cluster name from the **Cluster** drop-down menu.
- **d.** Set the Host Credential. Click the search icon and select either **Preferred** or **Named** in the pop-up window, as shown in Figure 2-5:

Figure 2-5 Select Preferred or Named Credentials for ORAchk/Exachk Provisioning

Host Credentials					
Enter RDBMS owner or root credentials.					
Credential	Preferred Interview Name	I 🔘 New			
Credential Name	NC_HOST_2015-10-13-1	•			
	Attribute	Value			
Credential	UserName				
Details	Password	*****			
	More Details				
			ок	Cancel	

If the credentials are not set for the target, then click **New** and enter the information as shown in Figure 2-6:

Host Credentials						
Enter host credentials to configure ORAchk.						
Credential	Preferred	🔘 Named 🔘 N	ew			
* UserName						
* Password						
* Confirm Password						
	Save As Orac	le ORAchk User				
	Set As Preferred (Credentials				
B	Test					
			OK Cancel			

Figure 2-6 Set New Credentials for ORAchk/Exachk Provisioning

- e. The Install Location should then be populated (by default) with the location for where the orachk subdirectory will be created. Click the search icon to change the location.
- **f.** Set the Daemon Schedule. Select the day and the time you want to begin. By default, the schedule is set for 2 am Sunday morning.

Click **Next** to begin the configuration. Provisioning processing takes about 5 minutes.

- **5.** On the Configuration page (Figure 2-7), enter the following configuration information:
 - **General Configuration:** Verify the CRS home directory. The ORAchk/Exachk wizard will pre-populate this field with the necessary information.
 - **Cell Cluster Configuration:** Select an option to evaluate the best practices on the storage cells of a cluster or to skip the checks for the storage cells.

Note:

For evaluating best practices on the storage cells of a cluster, root level privileges are required on the cells. You can select an option to use the same root password on all storage cells. Otherwise, enter the password for each storage cell.

• InfiniBand Configuration: Select an option to evaluate the best practices on the InfiniBand switch of the cluster or to skip the checks on the InfiniBand switch.

Note:

For evaluating best practices on the InfiniBand switch of a cluster, root level privileges are required. You can select an option to use the same root password on all InfiniBand switches. Otherwise, enter the password for each InfiniBand switch.



Target and Frequency Configuration Confirmation						
Provision ORAchk/Exachk: Configuration	Back Step 2 of 3 Submit Cancel					
Enter the following configuration information:						
General Configuration						
CRS Home /u01/app/11.2.0.3/grid						
Cell Cluster Configuration						
For evaluating best practices on the storage cells of a cluster, root level options:	privileges are required on the cells. Select one of the following					
Specify root password for each storage cell						
Skip checking best practices on storage cells						
InfiniBand Configuration						
For evaluating best practices on the InfiniBand switches of a cluster, root level privileges are required on the switches. Select one of the following options:						
Specify root password for each InfiniBand switch						
Skip checking best practices on InfiniBand switch						

6. Click Submit.

- **7.** On the Confirmation page, the Exachk setup begins. Click **Show Status** to view the setup details as the process continues.
- 8. Click Finish.

Note:

Repeat these steps for each Engineered Systems target to set up ORAchk.

The steps described above can vary from engineered system to system. The questions/details asked for will vary.

2.2 Update the ORAchk Version

ORAchk versions will be made available through the Self Update feature of Enterprise Manager. To update the ORAchk plug-in:

• Stop the ORAchk Daemon

• Update Entities

2.2.1 Stop the ORAchk Daemon

Once ORAchk has been set up as the daemon, you can stop it, as needed:

1. From the Enterprise menu, select **Provisioning and Patching**, then **Procedure Library**.

The Provisioning page displays showing the Deployment Procedure Manager.

2. On the Provisioning page, select the **Manage ORAchk/Exachk Services** procedure and click **Launch** as shown in Figure 2-8:

Figure 2-8 Manage ORAchk/Exachk

Provis	ioning											
Deployn	nent Procedu	ire Man	ager									
Proced	ure Library P	rocedure A	Activity	Recycle Bin								
Procedur procedur	es are best practic e to fit your enviro	es provide nment.	ed by Orac	de for various	Provisioning	and Patching tas	ks. Proced	lures creat	ted by Oracle cannot be edited	, but can be extended using 'Create Like', so that you o	an customi	ze the
Se	arch Text Fields					Go	Advanced	Search				
Launch		Go	Edit	Procedure De	finition C	Create Like Lau	unch			Previous 1-2	5 of 84 💌	Next 25
Select	Procedure		Туре				Parent	Version	Last Updated	Description	Last Modified By	Owner
0	Analysis Procedur Exadata Targets	e For	Patch Ora	acle Software			None	15.10	Nov 7, 2015 4:40:16 PM UTC	Analysis Procedure For Exadata Targets	Oracle	Oracle
0	Patching Siebel ta	rgets	Patch Ora	ade Software			None	12.46	Nov 7, 2015 4:36:30 PM UTC	Test Procedure for analyzing Siebel patch.	Oracle	Oracle
0	Delete Oracle Grid Infrastructure/Da Software	<u>tabase</u>	User Defi	ined			None	1.0	Nov 7, 2015 4:35:04 PM UTC	This procedure deletes Oracle Grid Infrastructure/Oracle Database Software for versions 11g Release 2 and higher from given virtual Hosts.	Orade	Oracle
0	Provision ORAchk	/Exachk	Manage H	Health Check t	tools		None	1.0	Nov 7, 2015 4:32:29 PM UTC	Provisions and starts ORAchk/Exachk instance. Integrates the newly set up instance with targets.	Oracle	Oracle
۲	Manage ORAchk/	Exachk	Manage H	Health Check t	tools	2	None	1.0	Nov 7, 2015 4:32:29 PM UTC	Procedure to manage already provisioned instances.	Oracle	Oracle

3. On the Manage ORAchk Services page, a list of all targets monitored by the ORAchk plug-in is displayed, as shown in Figure 2-9:

Figure 2-9 Targets Monitored by ORAchk/Exachk

Manage ORAchk/Exach	ık: Services				Cancel
▶ Search					
This table lists system targets for	r which ORAchk/Exachk instances have been set u	up. To perform an operation on an	instance, highlight	the row and select an operation.	
Select Credentials Sto	p Service				
Target Name	System Type	Version	Status	Host Credentials	Install Location
cluzdira08	Recovery Appliance	12.1.0.2.5_20151023	STARTED	NC_HOST_2015-10-29-210810	/u01/app/oracle/product/ravigu_main/orachk
host1.example.com	Host	12.1.0.2.5_20151028	STARTED	MYUSER_SUDO	/u01/app/oracle/product/remmimat/orachk
/denp01cn02Exalogic	Exalogic Elastic Cloud	12.1.0.2.5_20151023	STARTED	EXLGCDENP01CN02ROOT	/scratch/oracle/satydasa/FromSLC01NEQ/orachk
/slcn08	Exalogic Elastic Cloud	12.1.0.2.5_20151028	STOPPED	SLCN08_ROOT	/u02/app/oracle/product/orachk
scab03-Q1	Oracle Exadata Database Machine	12.1.0.2.5_20151028	STARTED	NC_HOST_2015-11-04-011932	/u01/app/oracle/product/ravigu_sh/orachk

The table contains the following information:

- **Target Name:** The target name as recognized by Enterprise Manager.
- **System Type:** The type of the system you set during the provisioning (see Provisioning ORAchk).
- Version: The release version of the ORAchk plug-in running for a particular target.

• **Status:** The current monitoring status of the plug-in. The status field is provided to help users track progress of setup activities and are described below:

Provisioned – Tool bits have been staged on mentioned location. However, configuration data has not been provided to start the daemon process.

Processing – Daemon setup is in progress.

Collection Enabled – OMS has been configured to collect Orachk/Exachk results for the system target (or cluster target wherever applicable). Configuration Extensions feature of the platform is used to collect Orachk/Exachk results.

Started – The setup process is complete.

Stopped – The Orachk services has been stopped successfully.

Terminal states are **Provisioned**, **Started**, and **Stopped**. If a procedure activity has failed and the status in not amongst these terminal states, refer to Troubleshooting the ORAchk Plug-in to recover.

- Host Credentials: The host credentials of the target that were last used during the provisioning. This user must have the privileges to stop the ORAchk plug-in.
- Location: The directory location of the ORAchk plug-in.
- **4.** Select the target you want to exclude from ORAchk monitoring and click **Stop Service**. A stop job will be submitted to Enterprise Manager.

Figure 2-10 Stop ORAchk

Manage ORAchk/Exachk: Services	Finish	Show Status
Stop ORAchk is in progress.		
To monitor the status click on "Show Status" button		

5. Click **Show Status** to see the progression, as shown in Figure 2-11. The Procedure Steps show each part of the stop process. A check mark indicates that the step is complete.

Figure 2-11 Status of Stop Job

Provi	sioning			
Proce	edure Activity: stopOrachk 1446831			
A ()	Elapsed Time: 10 seconds			
	Run stopOrachk 1446831	Schedul	ed Nov 6, 2015 9:35:58 AM PST	Elapsed Time 10 seconds
P	rocedure Manage ORAchk/Exachk	Start Da	te Nov 6, 2015 9:35:58 AM PST	Execution Id 23A03438B8E569B9
	Owner SYSMAN	Last Updat	ed Nov 6, 2015 9:36:06 AM PST	
	Status Running	Completed Da	te	
Proce	dure Steps			
View	Show All Steps	-	() Information	
Selec	Name	Status	Select an execution step from the F	Procedure Steps tree on the left to see the details.
	⊿ Iterates over list of targets	۲		
0	✓ host1.example.com	۲		
	Disable compliance standards evaluations	~		
	Disable results collection	~		
	Stop instance	٢		

2.2.2 Update Entities

Three entities must be updated to use the latest version of ORAchk:

- 1. Updating Diagnostic Tools Updates Entity
- 2. Updating Compliance Content Entity
- 3. Updating ORAchk Metadata Entity

After applying these entities, every subsequent setup will use the new ORAchk. Older instances will continue to use older version of ORAchk.

2.2.2.1 Updating Diagnostic Tools Updates Entity

This entity is used for updating ORAchk binaries:

1. Download the available update for Support Tool entity. Figure 2-12 shows an example of what the ORAchk entries will look like:

Figure 2-12 Support Tools Updates Example

	ILE.	Enterprise Manag	jer C	loud Control 13c			
<mark>⊗</mark> Self Upda	te						
Self Update > S	Support Too	ols					
Support T	fools U	pdates					
Actions 🔻	👌 Dow	nload 🔞 Apply	•	Search Description	1	٠	
Status		Tool Name	Ver	sion	Vendor	Size(MB)	Description
👌 Download	led	ORAchk 12.1.0.2.4	13.1	1.0.0.0	ORACLE	7.834	ORAchk Kit version 12.1.0.2.4

- **2.** Download the available update of other two entities. This is to ensure that all updates related to ORAchk versions are applied together.
- **3.** Apply the update and verify in software library if correct version has been updated (Figure 2-13).

Figure 2-13 Software Library Example

ORACLE Enterprise Manager Cloud Control 13c		
Software Library Software Library > View Entity: ORAchk Binaries (0.2)		
View Entity: ORAchk Binaries (0.2)		Stage / Edit OK
Describe Configure Select Files Set Directives		
Name ORAchk Binaries Description ORAchk Binaries Type Component Subtype Generic Component Parent Directory ORAchk Maturity Production Status Ready Other Attributes		
Name	Value	Description
ProductVersion	12.1.0.2.4_20150305	Product Version of the software component
Product	ORAchk	Product the software component represents
Vendor	Oracle	Vendor of the software component
Attachments No attachment has been added yet. No note has been added yet.		

2.2.2.2 Updating Compliance Content Entity

All new/modified ORAchk compliance standards and rules will be shipped using this entity:

1. Download the available update for Support Tool entity. Figure 2-14 shows how the ORAchk entries will look:

Figure 2-14 Self Update Compliance Content Updates Example

Self Update Self Update > Complia Compliance C	E Enterpr	ise Manager Clou pdates	d Control 13c							
Actions 👻 🎂 🕻	ownload 🤇	Apply 😰 Comp	liance Content	Search Description]				
Status	Name					Versien	Vender 🔻	Size(MB)	Description	
👌 Downloaded	Exalogic	Compliance Content	or ORAchk v12.1.0	0.2.4		13.1.0.0.0	ORACLE	0.001	Exalogic Compliance Content for ORAchk v12.1.0.2.4	
👌 Downloaded	Exalytics	Compliance Content	for ORAchk v12.1.0	0.2.4		13.1.0.0.0	ORACLE	0.001	Exalytics Compliance Content for ORAchk v12.1.0.2.4	
Past Activities										-
Actions		Status	Name		Version		Administrator		Start Time	Elapsed Time(Sec)
Download		Succeeded	Exalogic	Compliance Content for ORAchk v12.1	13.1.0.0.0		SYSMAN		Jul 31, 2015 3:05:06 PM IST	4.00
										1.00

2. Apply these updates.

2.2.2.3 Updating ORAchk Metadata Entity

This entity is used to keep mapping of ORAchk checks on Enterprise Manager targets:

1. Download the available update. Figure 2-15 shows a sample entry:

Figure 2-15 Self Update ORAchk Metadata Updates Example

ORAC	ILE.	Enterprise Man	ager Cl	loud Contr	ol 13c						
Self Upda Self Update > C ORAchk M	ite DRAchk Me Vietadat	^{tadata} ta Updates									
Actions 🔻	👌 Dow	nload 🔞 Apply		Search De	escription		•				
Status		Supported ORAchk Version	Versio	n	Vendor	Size(MB)	Descriptio	on			
👌 Download	led	12.1.0.2.4	13.1.0.0	0.0	Oracle	0.000	ORAchk Int	tegration Metadat	ta for ORAchk v12.1.0.2.4		
Past Activities	5										
Actions		Status	5		Supported ORAch	nk Version		Version	Administrator	Start Time	Elapsed Time(Sec)
Download		Succe	eded		12.1.0.2.4			13.1.0.0.0	SYSMAN	Jul 31, 2015 3:05:32 PM IST	0.25
Available		Succe	eded		12.1.0.2.4			13.1.0.0.0	SYSMAN	Jul 31, 2015 3:05:32 PM IST	0.06

2. Apply these updates.

Using the ORAchk Plug-in

This chapter describes how to use the ORAchk plug-in, including how to access compliance results and general troubleshooting steps.

The following sections are provided:

- Accessing Compliance Results Details
- Compliance Standards for All Supported System Types
- Self Updates
- Troubleshooting the ORAchk Plug-in

3.1 Accessing Compliance Results Details

The Compliance Results shows a listing of all targets including targets that are 100% compliant to a particular standard and targets that have compliance issues. ORAchk results are included in this list to show any Engineered Systems target that may be out of compliance.

You can access the Compliance Results for ORAchk/Exachk by:

- Accessing ORAchk/Exachk Compliance Results through the Enterprise Menu
- Accessing ORAchk/Exachk Compliance Results through the Target Home Page
- Accessing ORAchk/Exachk Compliance Framework Details through the Compliance Dashboard
- Compliance Content for Optional Targets

3.1.1 Accessing ORAchk/Exachk Compliance Results through the Enterprise Menu

To view the Compliance Results for ORAchk/Exachk:

1. From the Enterprise menu, select Compliance, then select Results (Figure 3-1):

* •		
Summary		
Monitoring Job Reports		
Configuration		
Compliance	•	Dashboard
Provisioning and Patching	►	Results
Quality Management My Oracle Support	•	Library Real-Time Observations
Cloud Chargeback Consolidation Planner	•	

Figure 3-1 Compliance Results Menu

2. The Compliance Results page displays showing the evaluation results for all targets (Figure 3-2). By default, the Compliance Standards and Evaluation Results are shown.

Figure 3-2 Evaluation Results

Difance Frameworks Compliance Standards Target Comp	liance									
luation Results Errors										
Search										
Compliance Standards	Applicable To	Compliance	Eve	Target aluatio	t DNS	Vi	olatio	ns	Average Scot	-a /%
comprance standards	Applicable to	Standard State	8	Δ		8	▲	A ,	Average Scor	- (A
Exachk Cluster ASM Best Practices For Oracle Exadata Database Machine	Cluster ASM	Production	0	0	1	0	0	0		10
Exachk Oracle Exadata Storage Server Best Practices For Oracle Exadata Database Machine	Oracle Exadata Storage	Production	0	0	3	0	0	0		10
Exachk Systems Infrastructure Switch Best Practices For Oracle Exadeta Database Machine	Systems Infrastructure S	Production	0	0	з	0	0	0		10
Exachk Cluster Best Practices For Oracle Exadata Database Machine	Cluster	Production	0	0	1	0	0	0		10
Exachk Host Best Practices For Oracle Exadata Database Machine	Host	Production	0	0	2	2	2	13		9
Exachk Automatic Storage Management Best Practices For Orade Exadata Database Machine	Automatic Storage Mana	Production	0	0	2	2	1	0		9
Exachk Cluster Database Best Practices For Oracle Exadata Database Machine	Cluster Database	Production	0	0	1	5	3	1		9
Exachk Oracle High Availability Service Best Practices For Oracle Exadata Database Machine	Oracle High Availability S	Production	0	0	2	2	0	0		9
Exachk Database Instance Best Practices For Oracle Exadata Database Machine	Database Instance	Production	0	0	2	32	8	0		8

3. To limit the results to ORAchk or Exachk, expand the Search area, enter **ORAchk%** or **Exachk%** in the Compliance Standard field, and click **Search**. The page will refresh and show the filtered compliance standards (Figure 3-3):

Figure 3-3	ORAchk	Compliance	Standards
------------	--------	------------	-----------

liance Frameworks Compliance	Standards Target Compliance										
Juation Results Errors											
d Search atch ⊛ All ⊚ Any											
Compliance Standard	Exachk%	Target Name									
Average Compliance Score	100	Target Type				-					
										Advanced So	arch Bonot
										rigram	
ew ▼ ∞ Show Details 🥒	Manage Violations			Tornat	Fueluet	lone	V	olotion			
ew ▼ ○ Show Details /	Manage Violations	Applicable To	Compliance Standard State	Target I	Evaluat	tions	Vi	olation	ns A,	Ave	rage Score ('
Compliance Standards	Manage Violations) For Oracle Exadata Database Machine	Applicable To Cluster ASM	Compliance Standard State	Target	Evaluat	tions	Vi S 0	olation	ns A, O	Ave	rage Score (
ew Compliance Standards Exach: Cluster ASM Best Practices Exach: Oracle Exadata Storage Se	Manage Violations 5 For Oracle Exadata Database Machine rver Best Practices For Oracle Exadata Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server	Compliance Standard State Production Production	Target	Evaluat 0	tions	Vi 20 0	olation 0	ns A, O	Ave	rage Score (1 1
ew	Manage Violations 3 For Oracle Exadata Database Machine vver Best Practices For Oracle Exadata Database Machine tch Best Practices For Oracle Exadata Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server Systems Infrastructure Switch	Compliance Standard State Production Production Production	Target C 0 0	Evaluat 0 0	tions 1 3 3	Vi 20 0	olation 0 0 0	ns 0 0 0	Ave	rage Score (1 1 1
ew	Manage Violations S For Oracle Exadata Database Machine wer Best Practices For Oracle Exadata Database Machine tch Best Practices For Oracle Exadata Database Machine Oracle Exadata Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server Systems Infrastructure Switch Cluster	Compliance Standard State Production Production Production Production	Target 0 0 0 0 0	Evaluat 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tions	Vi © 0 0 0	olation 0 0 0 0	15 A 0 0 0 0 0	Ave	rage Score (1 1 1 1
ew oo Show Details Compliance Standards Exachk Cluster ASM Best Practices Exachk Orade Exacha Storage Se Exachk Orade Exacha Storage Se Exachk Cluster Reservaciase Sr Exachk Cluster Reservaciase Sr Exachk Cluster Reservaciase Sr Exachk Cluster Reservaciase Sr	Manage Violations For Oracle Exadula Database Machine rvvr Best Practices For Oracle Exadula Database Machine Itch Best Practices For Oracle Exadula Database Machine Oracle Exadula Database Machine ade Exadula Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server Systems Infrastructure Switch Cluster Host	Compliance Standard State Production Production Production Production Production	Target 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Evaluat 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tions 1 1 3 1 2	Vi 2 Vi 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0	0lation 0 0 0 0 2	ns ▲ 0 0 0 0 13	Ave	rage Score (1 1 1 1
ev	Menoge Violations For Oracle Exadata Database Machine Inver Best Practices For Oracle Exadata Database Machine Itch Best Practices For Oracle Exadata Database Machine Oracle Exadata Database Machine and Exadata Database Machine ment Best Practices For Oracle Exadata Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server Systems Infrastructure Switch Cluster Host Automatic Storage Management	Compliance Standard State Production Production Production Production Production	Targot 0 0 0 0 0 0 0 0 0	Evaluat 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tions 1 1 3 1 2 2 2	Vi 2 2	0lation 0 0 0 0 2 1	ns 0 0 0 13 0	Ave	rage Score (1 1 1 1
ev or Show Details Compliance Standards Erachi: Cluster ASM Best Practices Erachi: Oracle Exadata Storage Se Erachi: Storade Initrastructure Swi Erachi: Storage Initrastructure Swi Erachi: Atomate: Storage Initrastructure Erachi: Atomate: Storage Initrastructure Erachi: Atomate: Storage Initrastructure Erachi: Cluster Database Best Pro	Menoge Violations S For Oracle Exadata Database Machine wer Best Practices For Oracle Exadata Database Machine Itch Best Practices For Oracle Exadata Database Machine Oracle Exadata Database Machine adle Exadata Database Machine ment Best Practices For Oracle Exadata Database Machine Idous For Oracle Exadata Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server Systems Infrastructure Switch Cluster Host Automatic Storage Management Clustor Database	Compliance Standard State Production Production Production Production Production Production Production	Target 0 0 0 0 0 0 0 0 0 0 0	Evaluat 0 0 0 0 0 0 0 0 0 0 0	tions 1 1 3 3 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1	Vi 2 2 5	0lation 0 0 0 2 1 3	ns A, 0 0 0 13 0 1	Ave	rage Score (1 1 1 1
ew or Show Details Compliance Standards Erachi: Cluster ASM Best Practices Exachi: Oracle Exadata Storage Se Exachi: Cluster Destinations For Exachi: Cluster Destinations For Exachi: Austimatic Storage Manage Exachi: Austimatic Storage Manage Exachi: Cluster Destage Manage Exachi: Cluster Destage Manage Storage Manage Storage Manage Storage Manage Mana	Manage Violations S For Oracle Exadata Database Machine Inver Best Practices For Oracle Exadata Database Machine Itch Best Practices For Oracle Exadata Database Machine Oracle Exadata Database Machine adte Exadata Database Machine intent Best Practices For Oracle Exadata Database Machine Vice Best Practices For Oracle Exadata Database Machine Vice Best Practices For Oracle Exadata Database Machine	Applicable To Cluster ASM Oracle Exadata Storage Server Systems Infrastructure Switch Cluster Host Automatic Storage Management Cluster Database Oracle High Availability Service	Compliance Standard State Production Production Production Production Production Production Production	Target. C C C C C C C C C C C C C C C C C C	Evaluat 0 0 0 0 0 0 0 0 0 0 0 0 0	tions 1 1 3 3 1 2 2 1 1 2 1 2 1 1 2 1 1 1 1 1	Vi 2 2 5 2	olation 0 0 0 0 2 1 3 0	15	Ave	rage Score (1 1 1 1

4. Click a link in the Compliance Standards column to view details about the standard (Figure 3-4). In the navigation tree, all rules for the standard are listed.

Figure 3-4 Results by Target

Compliance Results									
Compliance Results > Exachk Oracle Ex	adata Storage Server Best Practic	es For Oracle Exadata Database Machine							
Exachk Oracle Exadata St	torage Server Best Pr	ractices For Oracle Exadata D	atabase Machine						
Exachk Oracle Exadata Storage :	Exachk Oracle Exad	ata Storage Server Best Prac	tices For Oracle Exadata	Database Machin	e (Con	nplia	ance	Standard)	
Verify there are no memory (Summary Trend Overview	Violations							
RAID controller version on s	Target Scorecard	Rule Evaluations							
Set "mpt_cmd_retry_count="""	-								
Exadata celidisk predictive ti Exadata celidisk predictive ti			-						
Configure Storage Server all =		Complant	Critical						
Verify storage server disk co		Warning	Warning Minor Warning						
Exadata storage server root		Error	Error						
Exadata storage server syst	Targets By Severity	Rule Evaluations	\$						
Verify RAID Controller Batter;	Result By Target Result B	ly Compliance Standard Rule							
Verify RAID Controller Batter									
Verify Electronic Storage Mo:	Tarreet Name			Required Data	Vio	lation	15	Score (%)	Last Evaluation
Verify celldisk configuration c	raigername			Available	8		A ,	Scole (A)	Date
Exadata Critical Issue EX11	host1.example.com			Yes	0	0	0	100	Nov 10, 2015
Exadata Critical Issue EX9	host2.example.com			Yes	0	0	0	100	Nov 10, 2015
Exadata Critical Issue EX12	host3.example.com			Yes	0	0	0	100	Nov 10, 2015
Verify Exadata Smart Flash C									

3.1.2 Accessing ORAchk/Exachk Compliance Results through the Target Home Page

To access Compliance Results for ORAchk/Exachk from the target home page:

1. From the target's menu, select **Compliance**, then select **Results**:

host1	0		
🚼 Exalogio	Elastic Cloud 🔻		
Home			
	Open in new window	.	
Monitor	ing	Þ	
Diagno	stics	•	
Membe	rs	Þ	
Configu	ıration	Þ	
Compli	ance	•	Results
Target	Setup	Þ	Standard Associations
Target	Sitemap		Real-time Observations
Target	nformation		

Figure 3-5 Target Menu - Compliance Results

2. The Compliance Results page shows all ORAchk/Exachk evaluation results for the target (Figure 3-6):

Figure 3-6 ORAchk Results for a Single Target

_	Exalogic-host1 🕲											
t e	🔠 Exalogic Elastic Cloud 🔻											
E	calogic-host1 > Compliance Results											
Com	pliance Results											
Comp	Compliance Frameworks Compliance Standards Target C	mpliance										
Eva	luation Results Errors											
Ň	▲ Search latch ⊛ All ⊚ Any											
	Compliance Standard											
	Average Compliance Score 100											
										Advanced	Search	Reset
V	ew 🔻 👓 Show Details 🥒 Manage Violations											
	Compliance Standards	Applicable To	Compliance	T Eva	arget luatio	ns	Vie	olation	15		verage	Score (%)
		Applicable to	Standard State	8	▲	P	8	▲	4		tronugo	20010 (14)
	Exachk Best Practices For Exalogic Elastic Cloud	Exalogic Elastic Cloud	Production	0	0	1	0	0	0			100

3. Click a link in the Compliance Standards column to view details about the standard (Figure 3-7) as it applies to the target. In the navigation tree, all rules for the standard are listed.

/Exalogic-host1 > Compliance Results > Exachk1	Best Practices For Exalogic	Elastic Cloud				
kachk Best Practices For Exalogi	c Elastic Cloud					
	Exachk Best Pra	ctices For Exalo	gic Elas	tic Cloud	(Compliance Standa	rd)
Evachic Best Bractices For Evaluatic Elastic Cloud	Summary Trend Oven	view Violations				
NTP Configuration Consistency with Physica						
NTP Configuration for Compute Nodes	Target Scorecard		Rule Eva	aluations		
Firmware Version Consistency in Storage No			,			
NTP Configuration for Control vServers		Compliant			Compliant Critical	
NTP Configuration Consistency with Oracle V	1	Warning			Warning Minor Warning	
OVS Repo Consistency		Error			Error	
Hostname Consistency with DNS on Oracle 1	Targets By Seve	rity	Rule	e Evaluations		
Is Exachk configured	Result By Target Re	sult By Compliance Stan	dard Rule			
is Exachk collection stale		Required Data	Violat	ions		Last Evaluation
1	Target Name	Available	8 🔺	4	Score (%)	Date
	100 10 1 1 1 1 1 1	14			400	0.000

Figure 3-7 Target Compliance Standard Details

3.1.3 Accessing ORAchk/Exachk Compliance Framework Details through the Compliance Dashboard

To access the compliance framework details through the compliance dashboard:

1. From the **Enterprise** menu, select **Compliance**, then select **Dashboard** as shown in Figure 3-8:

Summary		
Monitoring	►	
Job	►	
Reports	►	
Configuration	►	
Compliance	•	Dashboard
Provisioning and Patching	►	Results
Quality Management	►	Library
My Oracle Support	•	Real Time Observations
Cloud	►	

Figure 3-8 Dashboard Menu

2. On the Compliance Dashboard page, select a Framework from the drop-down menu (for example, select Exachk Best Practices for Oracle Exadata Database Machine) as shown in Figure 3-9:

Figure 3-9 Select Framework

Compliand	ompliance Dashboard						
Complia	nce Framework Summary						
Framework	PCI DSS (Version 2.0) - Example Only	•					
 No Active 	Exachk Best Practices for Oracle Exadata Database Machine Exachk Best Practices for Recovery Appliance Oracle 11.2g Database Security Technical Implementation Guide (STIG) Oracle Engineered Systems Compliance Oracle Generic Compliance Framework Oracle Identity Management Compliance PCI DSS (Version 2.0) - Example Only Security Technical Implementation Guide (STIG) Security Technical Implementation Guides (STIG) Support Policy	e e					

3. The Compliance Framework Summary will refresh with a graphic overview of the components of the framework you have selected (Figure 3-10). These dials provide a high-level overview of the system component, including the score:





4. Click a dial to see additional information (Figure 3-11):

Figure 3-11 Dial Details



- **5.** In the Compliance Summary section, there are three areas where you can drill down for details:
 - **Frameworks** shows the Compliance Frameworks you have selected (Figure 3-12):

Figure 3-12 Compliance Summary: Frameworks

rameworks	Standards Targets	
Use 🔍 C	ompliance Score 🔘 Violations 🔄 View Trends	
Name		Average Compliance Score (%)

• **Standards** show all of the best practices standards being monitored for your target (Figure 3-13):

ameworks	Standards	Targets	
Use 🖲 C	compliance Sc	ore 🔘 Violations 🖂 View Trend	Is
Name			Average Compliance Score (%)
Exachk D	atabase Insta	nce Best Practices For Oracle Ex	87
Exachk C	luster Databa	se Best Practices For Oracle Exa	97
Exachk A	utomatic Stora	age Management Best Practices F	97
Exachk C	racle High Ava	ailability Service Best Practices Fo	98

Figure 3-13 Compliance Summary: Standards

• **Targets** show the compliance score for the targets monitored by ORAchk/ Exachk (Figure 3-14):

Figure 3-14 Compliance Summary: Targets

Compliance Summar	у		
rameworks Standards	Targets		
Use 🔘 Compliance Sc	ore 🔘 Vic	olations 🖂 View Trend	s »
Target Name	1	Target Type	Average Compliance Score (%)
host1.example.com	F	Host	99
		lost	00

For additional target types to appear in this section, click >> and select the target types from the list (Figure 3-15):



Figure 3-15 Compliance Summary: Target Types

3.1.4 Compliance Content for Optional Targets

The ORAchk Healthchecks plug-in registers compliance content for all supported target types. In cases where users have not deployed optional plug-ins that ships some of the supported target types, compliance content will not be registered for such types.

For example, for target types such as TimesTen Database for Exalytics System, Oracle ZFS Storage Appliance target for Exalogic System, and so forth, if you deploy such plug-ins later, then you can download the compliance content from Self update and apply later.

Note:

Compliance contents for the same ORAchk version should be deployed as available in the Software library.

3.2 Compliance Standards for All Supported System Types

The following sections list the compliance standards for all supported system types:

- Oracle Exadata Database Machine Compliance Standards
- Exalogic Elastic Cloud Compliance Standards
- Exalytics System Compliance Standards

- Cluster Compliance Standards
- Recovery Appliance Compliance Standards
- Host Compliance Standards

3.2.1 Oracle Exadata Database Machine Compliance Standards

- Exachk Cluster Best Practices For Oracle Exadata Database Machine
- Exachk Oracle High Availability Service Best Practices For Oracle Exadata Database Machine
- Exachk Host Best Practices For Oracle Exadata Database Machine
- Exachk Database Instance Best Practices For Oracle Exadata Database Machine
- Exachk Oracle Exadata Storage Server Best Practices For Oracle Exadata Database Machine
- Exachk Oracle Infiniband Switch Best Practices For Oracle Exadata Database Machine
- Exachk Systems Infrastructure Switch Best Practices For Oracle Exadata Database Machine
- Exachk Cluster ASM Best Practices For Oracle Exadata Database Machine
- Exachk Automatic Storage Management Best Practices For Oracle Exadata Database Machine
- Exachk Cluster Database Best Practices For Oracle Exadata Database Machine

3.2.2 Exalogic Elastic Cloud Compliance Standards

- Exachk Best Practices For Exalogic Elastic Cloud
- Exachk Host Best Practices For Exalogic Elastic Cloud
- Exachk Oracle Infiniband Switch Best Practices For Exalogic Elastic Cloud
- Exachk Systems Infrastructure Switch Best Practices For Exalogic Elastic Cloud
- Exachk Oracle ZFS Storage Server Best Practices For Exalogic Elastic Cloud
- Exachk Oracle VM Guest Best Practices For Exalogic Elastic Cloud
- Exachk Oracle VM Server Best Practices For Exalogic Elastic Cloud
- Exachk Sun ZFS Storage 7000 Best Practices For Exalogic Elastic Cloud

3.2.3 Exalytics System Compliance Standards

- Exachk Best Practices For Exalytics System
- Exachk Host Best Practices For Exalytics System
- Exachk Oracle BI Instance Best Practices For Exalytics System
- Exachk TimesTen In Memory Database 11g Best Practices For Exalytics System

3.2.4 Cluster Compliance Standards

- ORAchk Best Practices For Cluster
- ORAchk Oracle High Availability Service Best Practices For Cluster
- ORAchk Host Best Practices For Cluster
- ORAchk Database Instance Best Practices For Cluster
- ORAchk Automatic Storage Management Best Practices For Cluster
- ORAchk Cluster Database Best Practices For Cluster

3.2.5 Recovery Appliance Compliance Standards

- Exachk Cluster Best Practices For Recovery Appliance
- Exachk Oracle High Availability Service Best Practices For Recovery Appliance
- Exachk Host Best Practices For Recovery Appliance
- Exachk Database Instance Best Practices For Recovery Appliance
- Exachk Oracle Exadata Storage Server Best Practices For Recovery Appliance
- Exachk Oracle Infiniband Switch Best Practices For Recovery Appliance
- Exachk Systems Infrastructure Switch Best Practices For Recovery Appliance
- Exachk Automatic Storage Management Best Practices For Recovery Appliance
- Exachk Cluster Database Best Practices For Recovery Appliance

3.2.6 Host Compliance Standards

- ORAchk Oracle High Availability Service Best Practices For Host
- ORAchk Best Practices For Host
- ORAchk Database Instance Best Practices For Host
- ORAchk Automatic Storage Management Best Practices For Host

3.3 Self Updates

The regular updates for compliance standards, for each ORAchk/Exachk release, will be provided through Enterprise Manager Cloud Control's Self Update feature. For every ORAchk/Exachk release, the following self update downloads will be available:

- ORAchk/Exachk Generic Compliance Content
- Exachk Exalogic Compliance Content
- Exachk Exalogic Virtualization Compliance Content
- Exachk Exalogic Sun ZFS Compliance Content
- Exachk Exalytics Compliance Content

• Exachk Exalytics TimesTen Compliance Content

All updates are organized into multiple downloads to allow users to choose among these depending upon the applicability for an Enterprise Manager instance. For example, all users may not need the Exalytics update because they do not have an Exalytics target.

3.4 Troubleshooting the ORAchk Plug-in

This section describes common problems you may encounter with the ORAchk plugin, including:

- Special Purpose Compliance Rules
- Failures in Provisioning the ORAchk/Exachk Procedure Activity

3.4.1 Special Purpose Compliance Rules

Two compliance rules, which are available in the ORAchk plug-in, help users to self service some of the issues that your system may encounter:

• "Is ORAchk configured" or "Is Exachk Configured"

This rule aids in identifying if users associate the compliance standard meant for ORAchk/Exachk directly with a target. The ORAchk/Exachk standards can be associated only using deployment steps explained in Provisioning ORAchk.

• "Is Exachk collection stale" or "Is ORAchk collection stale"

This rule violates if ORAchk/Exachk results are older than the expected date (based on configuration frequency). Incidents will be created whenever this compliance rule is violated.

3.4.2 Failures in Provisioning the ORAchk/Exachk Procedure Activity

Problem: Deployment procedure activities can fail due to environment issues in target system or incorrect information provided by the user.

Resolution: Depending upon the situation, correct remedial actions can be taken. Primarily these actions involve retrying the activities from failed step or recover from failed setup attempts by using stop Orachk service and start the provisioning process from beginning.

To facilitate the latter, the system allows users to stop Orachk irrespective of the state of the instance. It automatically skips the steps depending upon the failure point during provisioning activity.

Moreover, multiple stop activities can be submitted in succession. For example, if users provide a wrong password in the "stop Orachk" activity, which caused failures in third step, they can submit another activity by providing correct password.

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