

如何从ISE导出配置和操作数据备份

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简介

本文档介绍如何获取身份服务引擎(ISE)的按需配置数据和操作数据备份。

先决条件

要求

Cisco 建议您了解以下主题：

- 身份服务引擎(ISE)的基本知识。
- 如何配置存储库。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- 思科身份服务引擎2.7

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

背景信息

确保ISE在环境中可用的另一个关键策略是拥有可靠的备份策略。ISE备份有两种类型：配置备份和操作备份。

思科ISE允许您备份来自主PAN和监控节点的数据。可以从CLI或用户界面进行备份。

配置数据 — 包含特定于应用的和Cisco ADE操作系统的配置数据。可以使用GUI或CLI通过主PAN进行备份。

运行数据 — 包含监控和故障排除数据。备份可通过主PAN GUI或使用监控节点的CLI完成。

备份存储在存储库中，可以从同一存储库中恢复。您可以安排备份自动运行，也可以按需手动运行。您可以从GUI或CLI查看备份的状态，但只能从CLI查看恢复的状态。

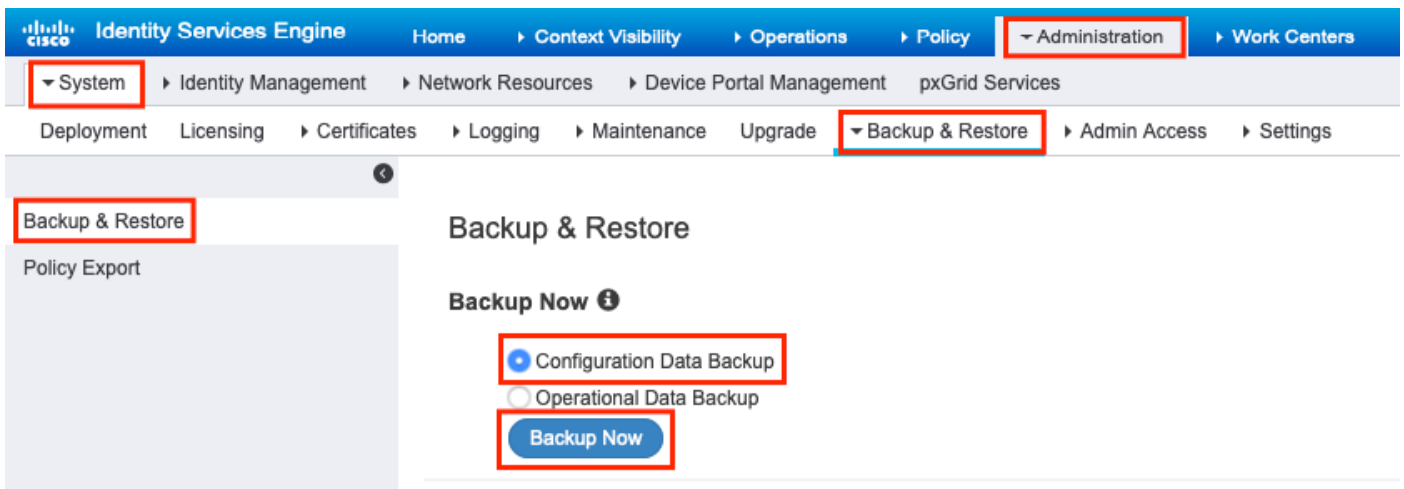
警告：思科ISE不支持VMware快照以备份ISE数据。使用VMware快照或任何第三方备份备份ISE数据会导致停止思科ISE服务。

配置

从GUI执行按需ISE配置数据备份

步骤1.配置存储库请参阅[如何在ISE上配置存储库](#)

步骤2.登录ISE，导航至Administration > System > Backup & Restore，选择Configuration Data Backup，单击Backup Now，如图所示：



步骤3.提供备份名称、存储库名称和加密密钥，然后点击备份。

提示：确保记住加密密钥。

Backup Configuration Data

*Backup Name	<input type="text" value="Config-Backup"/>
*Repository Name	<input type="text" value="FTP-Repo"/>
*Encryption Key	<input type="password" value="*****"/>
*Re-Enter Encryption Key	<input type="password" value="*****"/>

i Internal CA Certificate Store is not in this backup. It is recommended to export it using "application configure ise" CLI command

Cancel

Backup

注意：ISE配置备份包含系统和受信任证书，且不包含内部证书颁发机构(CA)证书。

要从ISE CLI手动备份内部证书颁发机构(CA)存储。通过SSH登录ISE主管理节点(PAN)节点并运行命令应用程序 `configure ise > select` 选项7以导出内部CA存储。

```
ise/admin# application configure ise
```

Selection configuration option

- [1]Reset M&T Session Database
- [2]Rebuild M&T Unusable Indexes
- [3]Purge M&T Operational Data
- [4]Reset M&T Database
- [5]Refresh Database Statistics
- [6]Display Profiler Statistics
- [7]Export Internal CA Store**
- [8]Import Internal CA Store
- [9]Create Missing Config Indexes
- [10]Create Missing M&T Indexes
- [11]Enable/Disable ACS Migration
- [12]Generate Daily KPM Stats
- [13]Generate KPM Stats for last 8 Weeks
- [14]Enable/Disable Counter Attribute Collection
- [15]View Admin Users
- [16]Get all Endpoints
- [17]Enable/Disable Wifi Setup
- [18]Reset Config Wifi Setup
- [19]Establish Trust with controller
- [20]Reset Context Visibility
- [21]Synchronize Context Visibility With Database
- [22]Generate Heap Dump

```
[23]Generate Thread Dump
[24]Force Backup Cancellation
[25]CleanUp ESR 5921 IOS Crash Info Files
[0]Exit
```

7

```
Export Repository Name: FTP-Repo
Enter encryption-key for export:
Security Protocol list Start
Inside Session facade init
Old Memory Size : 7906192
Old Memory Size : 7906192
Export in progress...
Old Memory Size : 7906192
```

The following 5 CA key pairs were exported to repository 'FTP-Repo' at 'ise_ca_key_pairs_of_ise':

```
Subject:CN=Certificate Services Root CA - ise
Issuer:CN=Certificate Services Root CA - ise
Serial#:0x08f06033-2a4c4fcc-b297e75a-04f11bf9
```

```
Subject:CN=Certificate Services Node CA - ise
Issuer:CN=Certificate Services Root CA - ise
Serial#:0x3a0e8d8a-5a2846be-a902c280-b5d678aa
```

```
Subject:CN=Certificate Services Endpoint Sub CA - ise
Issuer:CN=Certificate Services Node CA - ise
Serial#:0x33b14150-596c4552-ad0a9ab1-9541f0bb
```

```
Subject:CN=Certificate Services Endpoint RA - ise
Issuer:CN=Certificate Services Endpoint Sub CA - ise
Serial#:0x37e17494-cf1d4372-bf0bale6-83653826
```

```
Subject:CN=Certificate Services OSCP Responder - ise
Issuer:CN=Certificate Services Node CA - ise
Serial#:0x68a694ed-bc48481d-bc6cc58e-60a44a61
```

ise CA keys export completed successfully

从CLI执行按需ISE配置数据备份

步骤1.配置存储库请参阅[如何在ISE上配置存储库](#)

步骤2.登录PAN节点的CLI并运行命令：

```
backup <backup file name> repository <repository name> ise-config encryption-key plain
<encryption key>
```

```
ise/admin# backup ConfigBackup-CLI repository FTP-Repo ise-config encryption-key plain
```

```
% Internal CA Store is not included in this backup. It is recommended to export it using
"application configure ise" CLI command
% Creating backup with timestamped filename: ConfigBackup-CLI-CFG10-200326-0705.tar.gpg
% backup in progress: Starting Backup...10% completed
% backup in progress: Validating ISE Node Role...15% completed
```

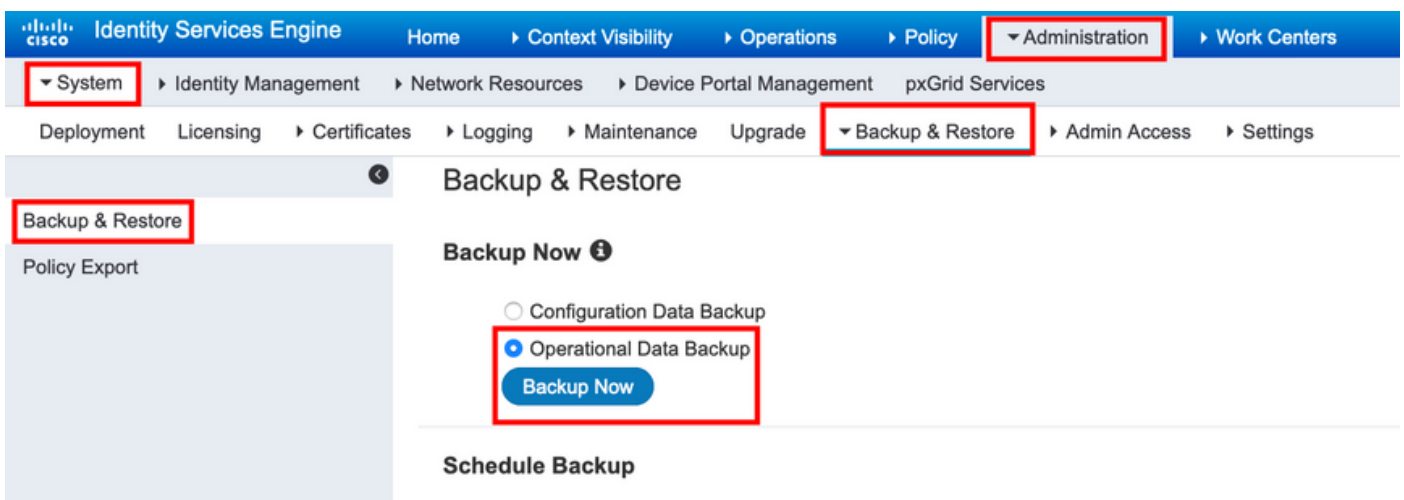
```
% backup in progress: Backing up ISE Configuration Data...20% completed
% backup in progress: Backing up ISE Indexing Engine Data...45% completed
% backup in progress: Backing up ISE Logs...50% completed
% backup in progress: Completing ISE Backup Staging...55% completed
% backup in progress: Backing up ADEOS configuration...55% completed
% backup in progress: Moving Backup file to the repository...75% completed
% backup in progress: Completing Backup...100% completed
ise/admin#
```

从GUI执行按需ISE操作数据备份

步骤1.配置存储库请参阅[如何在ISE上配置存储库](#)

步骤2.启动ISE操作备份。

登录ISE GUI，导航至Administration > System > Backup & Restore，选择Operational Data Backup，单击Backup Now，如图所示：



步骤3.提供备份名称、存储库名称和加密密钥，然后点击备份。

提示：确保记住加密密钥。

从CLI执行按需ISE操作数据备份

步骤1.配置存储库请参阅[如何在ISE上配置存储库](#)

步骤2.登录到主MNT节点的CLI并运行命令：

```
backup <backup file name> repository <repository name> ise-operational encryption-key plain
<encryption key>
```

```
ise/admin# backup Ops-Backup-CLI repository FTP-Repo ise-operational encryption-key plain
<backup password>
% Creating backup with timestamped filename: Ops-Backup-CLI-OPS10-200326-0719.tar.gpg
% backup in progress: Starting Backup...10% completed
% backup in progress: starting dbbackup using expdp.....20% completed
% backup in progress: starting cars logic.....50% completed
% backup in progress: Moving Backup file to the repository...75% completed
```

% backup in progress: Completing Backup...100% completed
ise/admin#

验证

导航至**管理>系统>备份和还原**以查看**配置数据备份**进度，如图所示：

The screenshot displays the Cisco Identity Services Engine (ISE) Backup & Restore interface. The navigation path is **管理 > 系统 > 备份和还原**. The main content area shows the **Configuration Data Backup** progress bar at 20% completion, with a **Stop** button. Below this, the **Backup Now** section has **Configuration Data Backup** selected. The **Schedule Backup** table lists backup tasks with **Schedule** links. The **Last Backup Details** section provides the following information:

Field	Value
Backup Name	Config-Backup
Repository Name	FTP-Repo
Start Date & Time	Sat Mar 07 10:43:07 IST 2020
Status	Backup is in progress...
Scheduled	no
Triggered From	Admin web UI
Execute On	ise-1.ise.local

导航至**管理>系统>备份和恢复**，以便查看**运行数据备份**进度，如图所示：

The screenshot shows the Cisco ISE Backup & Restore interface. At the top, there's a navigation bar with 'Administration' selected. Below it, the 'Backup & Restore' section is active. A progress bar for 'Operational Data Backup' is shown at 20% completion, with a 'Stop' button. Below the progress bar, there are options for 'Backup Now' (Configuration Data Backup and Operational Data Backup) and a 'Schedule Backup' table. The 'Last Backup Details' section is divided into 'Configurational Backup Details' and 'Operational Backup Details'. The 'Operational Backup Details' section shows the backup name 'ops-backup', repository 'FTP-Repo', start date 'Fri Mar 13 13:55:02 IST 2020', and status 'Backup is in progress...'.

您还可以从PAN节点的CLI检查配置备份的进度。

```
ise/admin# show backup status
%% Configuration backup status
%% -----
%      backup name: ConfigBackup-CLI
%      repository:  FTP-Repo
%      start date:  Thu Mar 26 07:05:11 IST 2020
%      scheduled:   no
%      triggered from: CLI
%      host:
%      status:      Backup is in progress
%      progress %:  50
%      progress message: Backing up ISE Logs

%% Operation backup status
%% -----
% No data found. Try 'show backup history' or ISE operation audit report
ise/admin#
```

备份完成后，您可以将备份状态视为成功。

The screenshot shows the Identity Services Engine (ISE) Backup & Restore interface. The navigation menu includes System, Identity Management, Network Resources, Device Portal Management, pxGrid Services, Administration, and Work Centers. The Backup & Restore section is active, showing options for Configuration Data Backup and Operational Data Backup. A table lists scheduled backups for both types. Two detail boxes provide information about the last backup: Configurational Backup Details (ConfigBackup-CLI, FTP-Repo, success) and Operational Backup Details (Ops-Backup-CLI, FTP-Repo, success).

故障排除

确保ISE索引引擎服务在ISE管理节点上运行。

```
ise-1/admin# show application status ise
```

ISE PROCESS NAME	STATE	PROCESS ID
Database Listener	running	15706
Database Server	running	89 PROCESSES
Application Server	running	25683
Profiler Database	running	23511
ISE Indexing Engine	running	28268
AD Connector	running	32319
M&T Session Database	running	23320
M&T Log Processor	running	16272

要在ISE上调试备份还原，请使用以下调试：

```
ise-1/admin# debug backup-restore backup ?
<0-7> Set level, from 0 (severe only) to 7 (all)
<cr> Carriage return.
```

```
ise-1/pan# debug backup-restore backup 7
ise-1/pan#
ise-1/pan# 6 [25683]:[info] backup-restore:backup: br_history.c[549] [system]: ISE
backup/restore initiated by web UI as ise.br.status is 'in-progress' in /tmp/ise-cfg-br-flags
7 [25683]:[debug] backup-restore:backup: br_backup.c[600] [system]: initiating backup Config-
Backup to repos FTP-Repo
7 [25683]:[debug] backup-restore:backup: br_backup.c[644] [system]: no staging url defined,
using local space
7 [25683]:[debug] backup-restore:backup: br_backup.c[60] [system]: flushing the staging area
7 [25683]:[debug] backup-restore:backup: br_backup.c[673] [system]: creating /opt/backup/backup-
Config-Backup-1587431770
7 [25683]:[debug] backup-restore:backup: br_backup.c[677] [system]: creating /opt/backup/backup-
Config-Backup-1587431770/backup/cars
7 [25683]:[debug] backup-restore:backup: br_backup.c[740] [system]: creating /opt/backup/backup-
Config-Backup-1587431770/backup/ise
```



```
7 [25683]:[debug] backup-restore:backup: br_backup.c[781] [system]: calling script
/opt/CSCOcpm/bin/isecfgbackup.sh
6 [25683]:[info] backup-restore:backup: br_backup.c[818] [system]: adding ADEOS files to backup
6 [25683]:[info] backup-restore:backup: br_backup.c[831] [system]: Backup password provided by
user
6 [25683]:[info] backup-restore:backup: br_backup.c[190] [system]: No post-backup entry in the
manifest file for ise
7 [25683]:[debug] backup-restore:backup: br_backup.c[60] [system]: flushing the staging area
6 [25683]:[info] backup-restore:backup: br_backup.c[912] [system]: backup Config-Backup-CFG10-
200421-0646.tar.gpg to repository FTP-Repo: success
6 [25683]:[info] backup-restore:backup: br_history.c[487] [system]: updating /tmp/ise-cfg-br-
flags with status: complete and message: backup Config-Backup-CFG10-200421-0646.tar.gpg to
repository FTP-Repo: success
```

使用no debug backup-restore backup 7可禁用节点上的调试。

```
ise-1/admin# no debug backup-restore backup 7
```