How to Copy SAP Systems in a Federated Portal Network

Applicable Releases:

SAP NetWeaver 7.0

IT Practice:

User Productivity Enablement

IT Scenario:

Running an Enterprise Portal

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Document History

Document Version	Description
1.00	First official release of this guide

Typographic Conventions

Type Style	Description
Example Text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.
	Cross-references to other documentation
Example text	Emphasized words or phrases in body text, graphic titles, and table titles
`Example text`	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example text`	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE TEXT`	Keys on the keyboard, for example, `F2` or `ENTER`.

Icons

Icon	Description
⚠	Caution
💡	Note or Important
⚙	Example
⬆	Recommendation or Tip

Table of Contents

1. Overview

This guide provides guidelines for using the SAP system copy procedures to copy SAP servers that are integrated in a federated portal network (FPN).

By following the guidelines, you will be able to maintain the functionality of remote-based content and relationships between multiple portals – created before the system copy – on the *new* systems in your landscape after the SAP system copy has taken place.

⚠ Disclaimer

This document does not promote the use of system copy as a means to create multiple operational machines (producer and consumers) from a single template machine with existing remote content. Instead, it helps to understand the underlying processes that take place when FPN-related content is system-copied so that you can preserve existing FPN connectivity and functionality.

2. Background Information

This section provides you with some background information about the SAP system copy and federated portal networks.

2.1 Basic Terminology

The following table lists the basic FPN and system copy terms used in this guide:

Term	Description
consumer portal	A portal that uses remote content provided by other producer portals in a federated portal network.
producer portal	A portal that exposes its content for consumption by other consumer portals in a federated portal network.
producer object	A semantic object created on a (SAP NetWeaver) consumer portal when a connection to a producer portal is created by a system administrator. The object enables the consumer portal to interact with the specified producer and use the remote content that it exposes.
registration instance	A uni-directional relationship (handshake) between two remote portals – a consumer portal and a producer portal – in a federated portal network.
registration scope	A two-way recognition handshake between a consumer portal and producer portal. A complete registration scope is defined by two complementary but opposite *registration instances*: • One instance that resides on the consumer portal and references the remote producer portal. This registration instance is generated when the system administrator on the consumer portal creates an FPN connection to the producer portal. (The FPN connection is created using the FPN producer wizard and is represented by a *producer object* in the Portal Catalog.) • One instance that resides on the producer portal and references the remote consumer portal. This registration instance is generated when the system administrator on the consumer portal registers (using the FPN producer registration tool) with the producer portal.
source	The environment containing the *master* or *primary* producer and consumer systems.
target	The environment containing the *replicate* or *secondary* producer and consumer systems.
master system	An original producer or consumer portal that is or to be replicated by means of an SAP system copy.
replicate system	A new producer or consumer portal that is created as a result of an SAP system copy. It resides on a different machine as the master system.
primary system	A producer or consumer portal in the source environment that is not replicated to its corresponding producer or consumer portal that already resides in the target environment.

Term	Description
secondary system	An existing producer or consumer portal in the target environment that is not overwritten by a replicate of the master producer or consumer portal that resides in the source environment.

🛈 Note

Terminology used in this guide may differ slightly from standard terminology used in the SAP NetWeaver system copy guides available on SAP Service Marketplace.

2.2　What is an SAP System Copy?

SAP provides a standardized set of procedures that enable you to replicate an SAP system, ABAP or Java, to create consistent duplicates for development, test, or production purposes or to build up your landscape. You can also use the SAP system copy procedures to migrate an SAP system to another operating system or database.

The system copy for an SAP NetWeaver installation is based on the standard system copy for SAP systems.

For detailed information about planning and copying SAP systems, and testing your system copy, see `www.sdn.sap.com/irj/sdn/systemcopy` on SAP Developer Community Network (SDN).

2.3　What is a Federated Portal Network?

A federated portal network allows organizations with multiple portals – SAP and non-SAP – to share content. By implementing a federated portal network, organizations can provide users at each location with a single portal access point. From each portal configured as a central access point, the users are able to seamlessly access information, services and applications distributed throughout the entire organizational network.

For more information about the FPN scenario, see `www.sdn.sap.com/irj/sdn/nw-fpn` on SAP Developer Community Network (SDN).

For detailed documentation about implementing a federated portal network using SAP NetWeaver 7.0 with SAP enhancement package 1, see `help.sap.com/saphelp_nw70ehp1/helpdata/en/5b/9f2d4293825333e10000000a155106/frameset.htm` on SAP Help Portal.

The procedures in this guide focus heavily on the registration mechanism of FPN. For more information, see `http://help.sap.com/saphelp_nw70ehp1/helpdata/en/43/223b360b413fe1e10000000a11466f/frameset.htm` on SAP Help Portal.

2.4   What Issues May Arise When Performing an SAP System Copy?

After performing an SAP system copy in an FPN landscape, registration instances are duplicated resulting in the following:

- Multiple producer-consumer portal pairings that use the identical registration instance.

- Producer-consumer portal pairings with an incomplete one-way registration scope or a misaligned registration scope.

Performing actions from multiple consumer or producer portals that use the *same* or *incomplete* registration instance can lead to unexpected behavior and ultimately result in the loss of data.

This problem is illustrated in Figure 1, which shows the registration scope relationship between: (1) a producer portal and a consumer portal before their machines are replicated; and (2) between the source portals and their target replicates after an SAP system copy has taken place. After the SAP system copy, the replicate producer portal and the replicate consumer portal do not recognize each other because:

- The replicate consumer portal still recognizes the master producer portal

- The replicate producer portal still recognizes the master consumer portal

Figure 1: Registration scope relationships between producer and consumer portals before and after the system copy of both the producer and consumer machines.

In this scenario, the master consumer portal was registered with the master producer portal when the system copy took place, and no unregistration was performed after the system copy.

After performing the SAP system copy, you must not *unregister* the master consumer portal or the replicate consumer portal from the master producer portal or delete the producer connection on the master consumer portal or the replicate consumer portal. By doing so, you irreversibly damage the source and replicated registration scopes. As a result, you will not be able to:

- Reuse existing remote-based content on a different producer or consumer portal that uses the same registration scope on the source systems.

- Reuse existing remote-based content on a different producer or consumer portal that uses the replicated registration scope on the target systems.

In the example in Figure 2, the system administrator unregisters the master consumer portal following an SAP system copy of both the master producer and consumer portals. This ultimately invalidates the replicated remote-based content on the target consumer portal, since the replicated registration scope cannot be reset between the target systems.
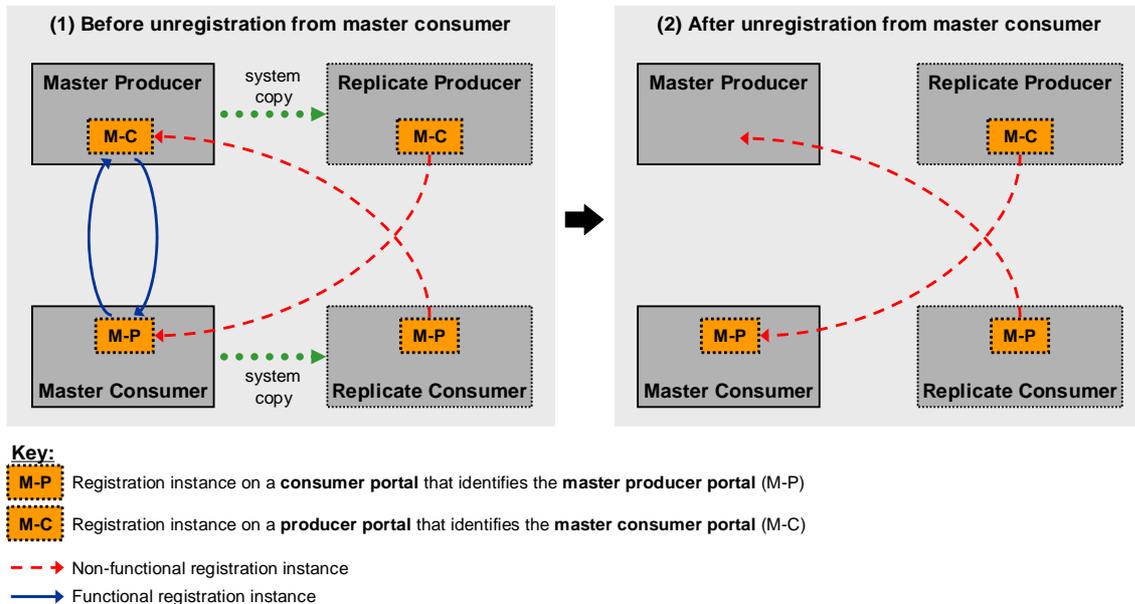
Figure 2: Unregistration from the master consumer portal following an SAP system copy indirectly invalidates the registration scope on the replicate systems.

This means that existing remote-based content on the replicate consumer portal, using the replicated registration scope, cannot be reused.

After you perform an SAP system copy in an FPN landscape, you need to reset the source and target registration scopes so that:

- The replicated portals can reuse remote content that existed prior to the SAP system copy.

- In a dev/test/production environment, the master portals in the source environment and the replicate portals in the target environment can continue to function independently (see Figure 3).

Key:
- – – → Non-functional registration instance
- ——→ Functional registration instance
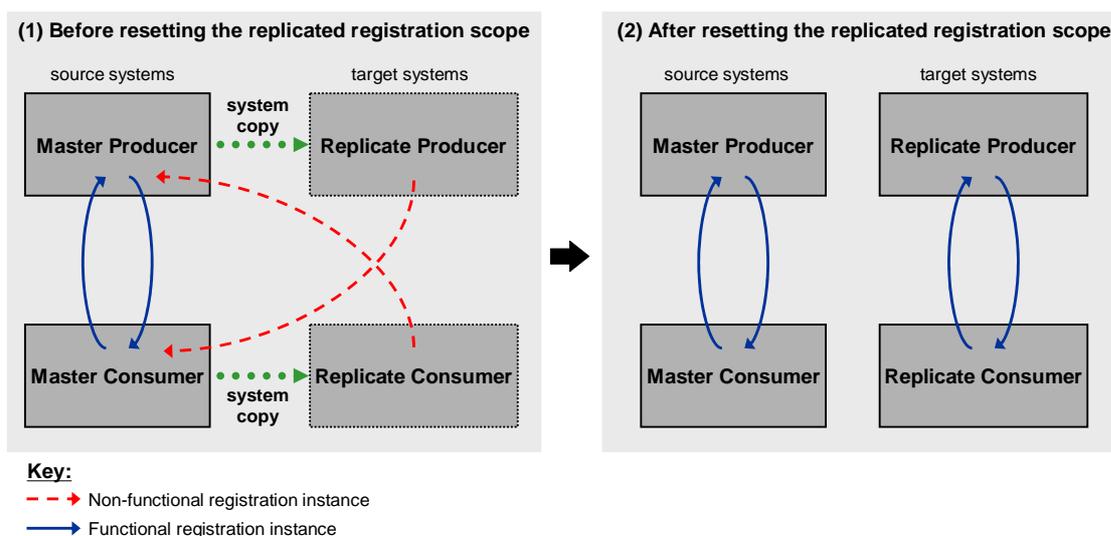
Figure 3: Resetting the registration scope between the replicate systems allows the master systems and the replicate systems networks to function independently in their respective federated portal networks.

2.5   SAP System Copy Scenarios with FPN

This guide focuses on two main areas where one might perform an SAP system copy:

- Development-test-production landscape scenario
- Backup-and-restore scenario

The main difference between the development-test-production landscape scenario and the backup-and-restore scenario is the relationship of the FPN registration between the source and target systems following the SAP system copy:

Scenario	Description
Development-test-production landscape	Following an SAP system copy, the registration scope of the replicate producer and consumer systems in the target environment must be unconnected from the master producer and consumer systems in the source environment. The source and target systems must remain independent from one another.
Backup-and-restore	Following the restoration of a backed-up system using an SAP system copy, the registration scope of the replicated producer or consumer system must then be connected back to its partner producer or consumer system in the source environment.

Development-Test-Production Landscape

After performing an SAP system copy in a development-test-production landscape, the master system (producer and/or consumer) is copied from the source environment over an existing system in the target environment.

In a development-test-production landscape, the source-target system relationships are as follows (see also Figure 4):

- The source system resides in the *development* environment, and the target system resides in the *test* environment.

- The source system resides in the *test* environment, and the target system resides in the *development* environment.

- The source system resides in the *test* environment, and the target system resides in the *production* environment.

- The source system resides in the *production* environment, and the target system resides in the *test* environment.

The corresponding producers and consumers on the source and target systems have different host names and IP addresses, and must function independently after the SAP system copy.
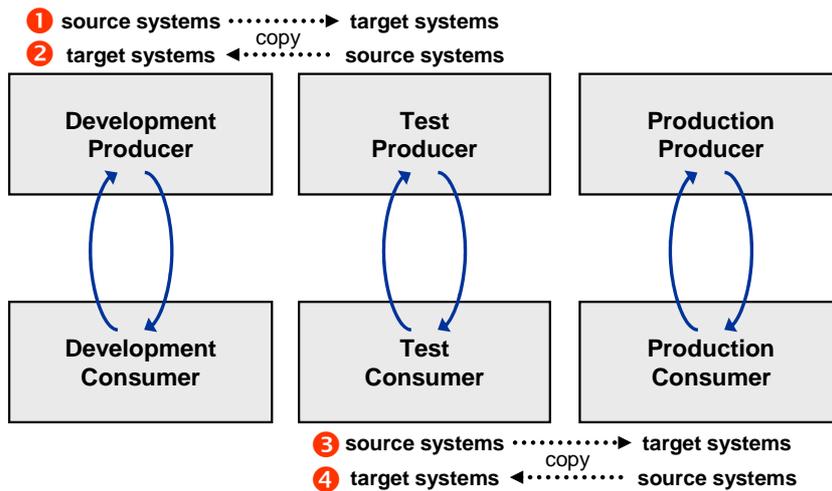
Figure 4: Replicating FPN systems between development, test, and production environments using SAP system copy.

Backup-and-Restore Scenario

In a backup-and-restore scenario, an SAP system copy is performed on a regular basis to back up the master systems. In the event of an irrecoverable system crash of the master producer or consumer system, an SAP system copy is performed to restore the failed system by copying the backup target system to a new machine and then reconnecting the restored replicate system to the primary consumer or producer.

Figure 5 illustrates the restoration of a failed FPN producer system using the backup system as the source:

1. Regular backups of master producer are performed using SAP system copy.

2. The master producer crashes and cannot be rescued.

3. The backup producer is restored to a new system using SAP system copy.

4. The original consumer portal is then reregistered with the restored producer.

Key:
– – ▶ Non-functional registration instance
——▶ Functional registration instance
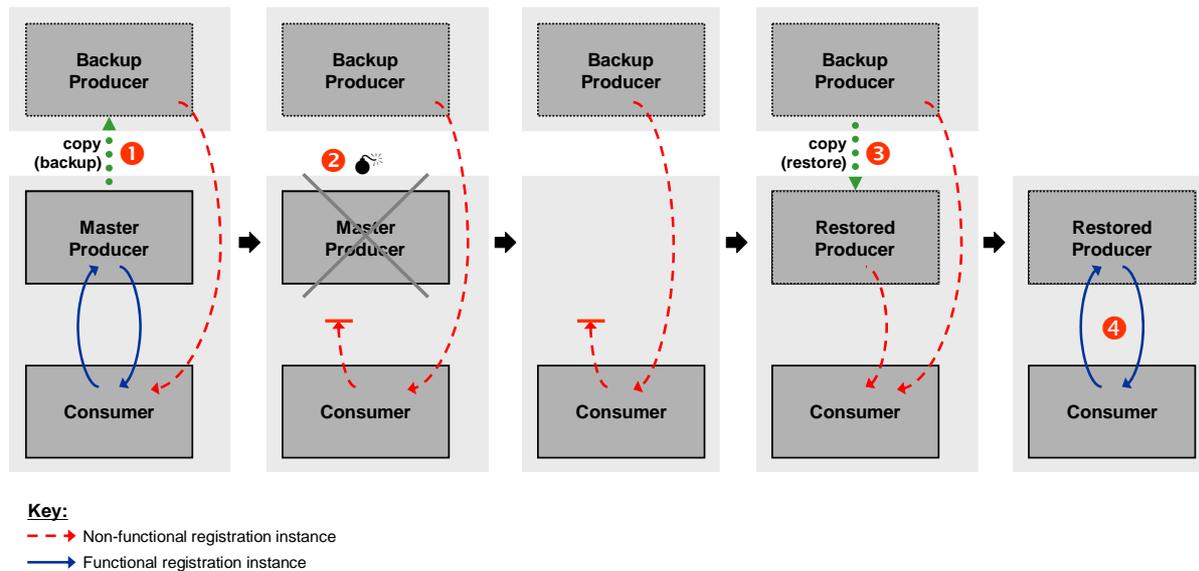
Figure 5: Restoration of a failed FPN producer system.

2.6 Summarizing Source and Target Environments

The section clarifies the terms used in this guide to describe the various systems that are present in an FPN landscape when performing an SAP system copy.

Development-Test-Production Landscape

When a system is copied from the source environment to the target environment, the terms **master** and **replicate** are used to differentiate between the source and target systems:

- The **master systems** can be described as follows:
    - **Master producer:** The producer portal in the source environment that has been replicated by means of an SAP system copy.
    - **Master consumer:** The consumer portal in the source environment that has been replicated by means of an SAP system copy (see Figure 6).

- The **replicate systems** can be described as follows:
    - **Replicate producer:** The existing producer portal in the target environment that is overwritten by a replicate of the master producer from the source environment.

        For example, this could be a *test* producer in the target environment (where the master producer is the *development* system in the source environment).
    - **Replicate consumer:** The existing consumer portal in the target environment that is overwritten by a replicate of the master consumer from the source environment (see Figure 6).

        For example, this could be a *production* consumer in the target environment (where the master consumer is the *test* system in the source environment).

When you copy only the producer system or the consumer system to the target environment, then we use the terms **primary** and **secondary** to differentiate between the preexisting systems in the source and target that are not copied. Following the SAP system copy, the replicate system needs to be registered with the secondary system already residing in the target environment. Typically, the primary

system in the source environment and the secondary system in the target environment are almost identical systems, but have different host names and IP addresses.

- The **primary systems** can be described as follows:

    o **Primary producer:** The producer portal in the source environment that is *not* replicated to the existing producer in the target environment (see Figure 6).

    For example, if the master consumer is copied from the source *test* environment to the target *production* environment, it must then be registered with the secondary *production* producer that already exists in the target environment.

    o **Primary consumer:** A consumer portal in the source environment that is *not* replicated to the existing consumer in the target environment.

    For example, if the master producer is copied from the source *test* environment to the target *production* environment, it must then be registered with the secondary *production* consumer that already exists in the target environment.

- The **secondary systems** can be described as follows:

    o **Secondary producer:** The existing producer portal in the target environment that is *not* overwritten by a replicate of the master producer that exists in the source environment (see Figure 6).

    For example, if the master consumer is copied from the source *test* environment to the target *production* environment, then it must be registered with the secondary *production* producer that already exists in the target environment.

    o **Secondary consumer:** The existing consumer portal in the target environment that is *not* overwritten by a replicate of the master consumer that exists in the source environment.

    For example, if the master *test* producer is copied from the source environment to the target *production* environment, it must then be registered with the secondary *production* consumer that already exists in the target environment.
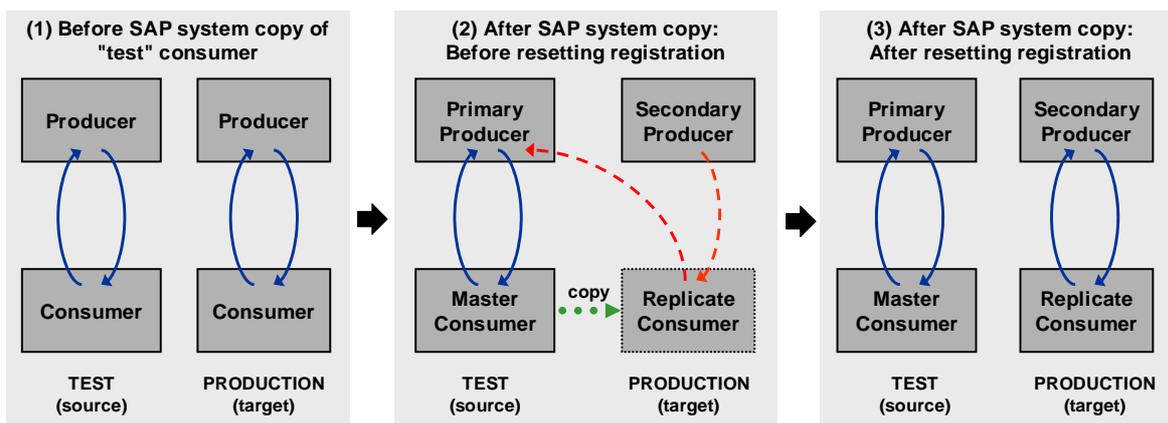
Figure 6: Replication of the consumer portal in the test environment to an existing consumer system in the production environment using SAP system copy.

The primary producer portal in the test environment is not replicated. Following the SAP system copy of the consumer, the replicated registration scope is reset so that the replicated consumer is registered with the secondary producer; both reside in the target *production* environment.

Backup-and-Restore Scenario

In a backup-and-restore scenario, we use the follows terms to differentiate between the various systems in the landscape:

- The **source systems** can be described as follows:

  o **Source producer:** The producer portal in the source environment that has been replicated to the backup environment by means of an SAP system copy.

  o **Source consumer:** The consumer portal in the source environment that has been replicated to the backup environment by means of an SAP system copy.

- The **failed systems** can be described as follows:

  o **Failed producer:** The producer portal in the source environment that has crashed and cannot be recovered.

  o **Failed consumer:** The consumer portal in the source environment that has crashed and cannot be recovered.

- The **backup systems** can be described as follows:

  o **Backup producer:** A replicate of the source producer portal that resides in the backup environment. As with all backed systems, this system must not be modified or used in any way.

  o **Backup consumer**: A replicate of the source consumer portal that resides in the backup environment. As with all backed systems, this system must not be modified or used in any way.

- The **restored systems** can be described as follows:

  o **Restored producer:** A replicate of the backup producer portal, generated by means of an SAP system copy, which replaces the failed producer system in the source environment. The restored system could be have the IP address or host name and port of the failed producer.

  o **Restored consumer:** A replicate of the backup consumer portal, generated by means of an SAP system copy, which replaces the failed consumer system in the source environment. The restored system could have the IP address or hostname and port of the failed consumer.

3. Prerequisites

- Your systems are running SAP NetWeaver 7.0 SP14 and higher

- You have expert knowledge about the SAP system copy procedures

- In a development-test-production landscape:

    o When the FPN systems in the test and production environments are initially created by means of SAP system copy, the consumer portal in the *source environment* must be registered with the producer portal in the *source environment*. This ensures that the registration scope between the producer portal and consumer portal in the target systems is generated as a result of replicating the same registration scope on the source environment.

    o After the initial SAP system copy, when the test and production environments are created, the producer connection between the producer and consumer in the *target environment* must not be deleted or recreated from scratch. This ensures that the registration scope between the producer portal and consumer portal in the target systems remains a replicate of the same registration scope in the source environment.

    ### 🔲 Note

    You are permitted to unregister the FPN connection between the systems in the target environment at later time; however, they must be reregistered when any subsequent SAP system copies take place.

- In a backup-and-restore scenario, the consumer portal is registered with the producer portal when the backups are performed.

4. System Copy Scenarios for FPN

The SAP system copy guidelines discussed in this document are presented according to the following scenarios:

- Development-test-production landscape:

  o Replication of both producer portal and consumer portal from the source environment to the target environment

  o Replication of only the producer portal from the source environment to the target environment, and reregistration with the existing (secondary) consumer portal in the target environment

  o Replication of only the consumer portal from the source environment to the target environment, and reregistration with the existing (secondary) producer portal in the target environment

- Backup-and-restore scenario:

  o Restoration of a failed producer portal in the source environment, and reregistration with the functioning consumer portal

  o Restoration of a failed consumer portal in the source environment, and reregistration with the functioning producer portal

  o Restoration of both a failed producer portal and a failed consumer portal in the source environment

  ### 🛈 Note

  In any of the backup-and-restore scenarios, if the backed up system is restored to a new system that has the same host name and port as the failed system, then in most cases, FPN functionality is fully restored upon completion of the SAP system copy, without having to reregister the restored system. Nevertheless, as a best practice, we highly recommend reregistering the FPN systems according to the procedures that are documented in this guide.

  If a backed up system is restored to new system that has a different host name and port from the failed system, or the producer connection on the failed consumer portal is IP-address-based (in other words, not based on a host name and port connection), then performing the relevant backup-and-restore procedure in this guide is mandatory.

4.1 Development-Test-Production Scenario 1: SAP System Copy of Producer and Consumer

Landscape

Your development-test-production landscape comprises the following setup (see Figure 7):

- A **producer portal** and **consumer portal** in the source environment (development or test)

- A corresponding **producer portal** and **consumer portal** in the target environment (test or production, respectively)

Purpose

Both **producer** portal and **consumer** portal systems in the source environment will be replicated separately using the SAP system copy procedure to their corresponding **producer** portal and

consumer portal systems that already exist in the target environment. Following the SAP system copy, the cross-registration scopes between the respective systems in the source and target environments will be realigned so that:

- The **replicated producer** portal and the **replicated consumer** portal in the target environment interact with one another.

- The **master producer** portal and the **master consumer** portal in the source environment continue to interact with one another.

Key:
- - - → Non-functional registration instance
——→ Functional registration instance
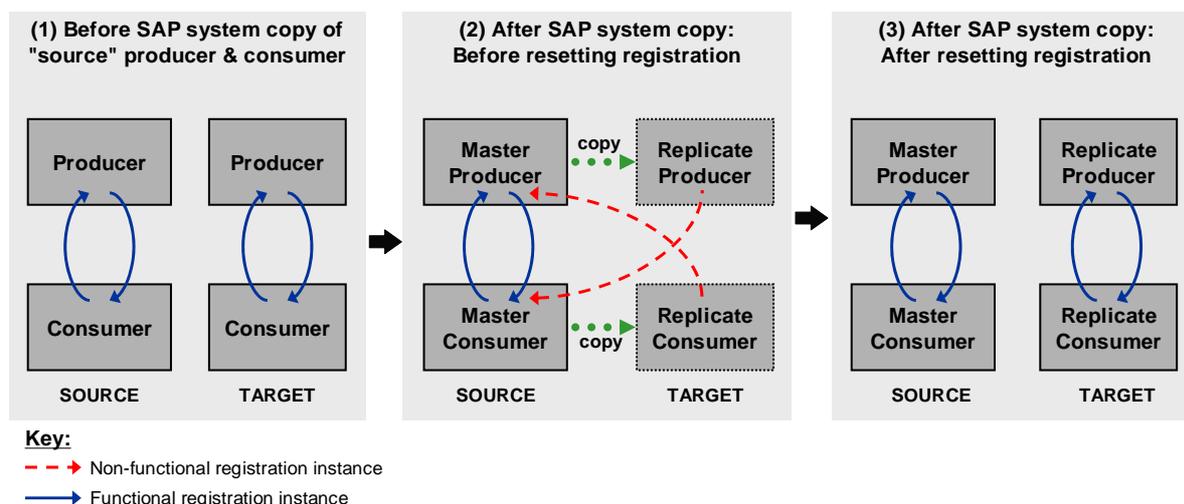
Figure 7: Replication of the producer and consumer portals in the source environment to existing producer and consumer portals in the target environment, using SAP system copy. Following the SAP system copy, the registration instances between the producer and consumer in the target environment are not aligned.

Pre-Copy Requirements

In addition to the general requirements described in Prerequisites on page 11, the following requirements are necessary before you begin the replication procedure:

- Trust has been established between the **source producer** portal and the **source consumer** portal.

- The **source consumer** portal is registered with the **source producer** portal.

Copy Procedure

Do the following:

1. Using the SAP system copy procedure, replicate the **source producer** to the **target producer** and the **source consumer** to the **target consumer**.

2. Reestablish trust between the **replicate producer** and the **replicate consumer** in the target environment.

   > ## Note
   >
   > If two-way trust is configured between the systems in the source environment, then you must establish two-way trust between the systems in the target environment.

3. From the **replicate consumer**, reset the registration scope with the **replicate producer** as follows:

   a. In the **replicate consumer** portal, navigate to *System Administration → System Configuration → Federated Portal → Myself as Content Consumer → Manage My Producers.*

   b. In the Portal Catalog, locate the producer object that corresponds to the **master producer**.

   c. In the context menu of the producer object, choose *Open → Object.*

   d. In the object editor, choose *Edit Mode.*

   ### 🔔 Note

   As a result of the replication, the editor currently displays the connection properties of the **master producer** in the source environment.

   e. Enter the connection settings of the producer system in the target environment (now the **replicate producer**).

   f. Save your updated settings.

   g. Switch to the Producer Registration editor.

   ### 🔔 Note

   The editor opens in read-write mode due to the changes you made in the previous steps. In addition, the standard *Registration* button is replaced by the *Update Registration* button.

   h. Enter the connection properties of the **replicate consumer**.

   ### 🔔 Important

   Do not change the consumer name.

   i. Choose *Update Registration.*

   j. Close the editor.

Results

- The original producer and consumer systems in the target environment are updated; they are replicates of their corresponding master systems.

- The registration scope between the replicate producer portal and the replicate consumer portal in the target environment is restored; you are permitted to work with them as needed.

- The master producer portal and the master consumer portal in the source environment are no longer connected to the replicate portals in the target environment; you are permitted to work with them as needed.

Post-Copy Guidelines and Notes

- Do not perform a new or independent registration from the replicate consumer; use only the *Update Registration* option. Using the standard *Registration* button will irreversibly overwrite the replicated registration scope between the portals in the target environment.

- Any FPN content (remote delta links or remotely assigned roles) created or modified directly on the portals in the target environment before an SAP system copy has taken place are overwritten by the copy process.

4.2 Development-Test-Production Scenario 2: SAP System Copy of Producer Only

Landscape

Your development-test-production landscape comprises the following setup (see Figure 8):

- A **producer portal** and **consumer portal** in the source environment (development or test)
- A corresponding **producer portal** and **consumer portal** in the target environment (test or production, respectively)

Purpose

Only the **producer** portal in the source environment will be replicated using the SAP system copy procedure to its corresponding **producer** portal system that already exists in the target environment. Following the SAP system copy, the cross-registration scopes between the respective systems in the source and target environments will be realigned so that:

- The **replicated producer** portal and the existing **secondary consumer** portal in the target environment interact with one another.
- The **master producer** portal and the **primary consumer** portal in the source environment continue to interact with one another.

Key:
- – – ➤ Non-functional registration instance
- ——➤ Functional registration instance
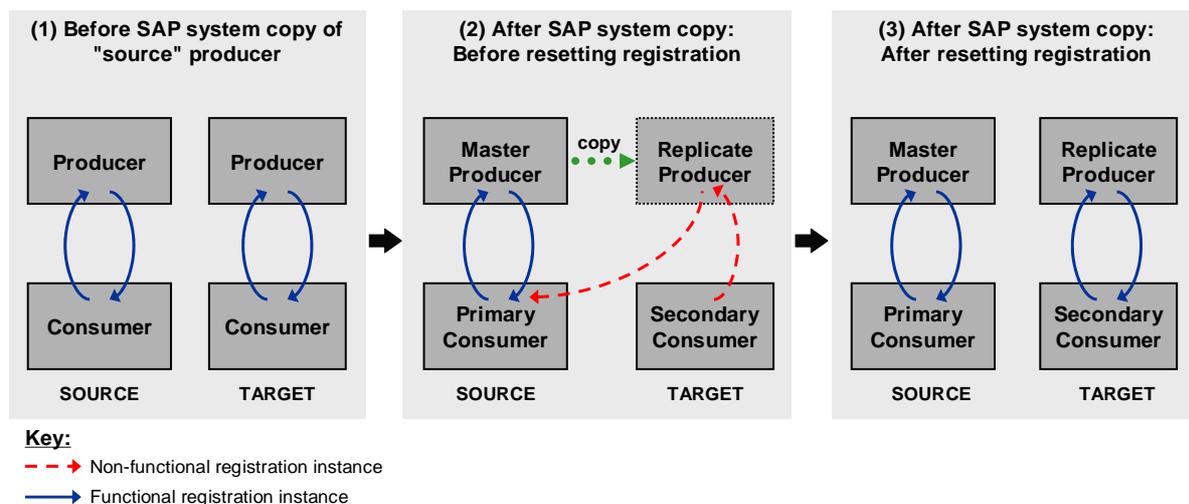
Figure 8: Replication of the producer portal in the source environment to the existing producer portal in the target environment, using SAP system copy. Following the SAP system copy, the registration instances between the producer and consumer in the target environment are not aligned.

Pre-Copy Requirements

In addition to the general requirements described in Prerequisites on page 11, the following requirements are necessary before you begin the replication procedure:

- Trust has been established between the **source producer** portal and the **source consumer** portal.
- The **source consumer** portal is registered with the **source producer** portal.
- The **target consumer** portal is registered with the **target producer** portal.

Copy Procedure

Do the following:

1. Using the SAP system copy procedure, replicate the **source producer** to the **target producer**.

2. Reestablish trust between the **replicate producer** and the **secondary consumer** in the target environment.

   > **Note**
   >
   > If two-way trust is configured between the systems in the source environment, then you must establish two-way trust between the systems in the target environment.

3. From the **secondary consumer**, reset the registration scope with the **replicate producer** as follows:

   a. In the **secondary consumer** portal, navigate to *System Administration → System Configuration → Federated Portal → Myself as Content Consumer → Manage My Producers*.

   b. In the Portal Catalog, locate the producer object that corresponds to the **replicate producer**.

   c. In the context menu of the producer object, choose *Open → Object*.

   d. In the object editor, choose *Edit Mode*.

   e. Since the connection settings are already those of the **replicate producer** system in the target environment, make a dummy change to one of the settings (for example, change the value of the HTTP/HTTPS port and then change it back to its original value).

   f. Save your updated settings.

   g. Switch to the Producer Registration editor.

      > **Note**
      >
      > ▪ The editor opens in read-write mode due to the changes you made in the previous steps. In addition, the standard *Registration* button is replaced by the *Update Registration* button.

   h. If the connection settings displayed are not those of the **secondary consumer** system, then modify them as needed (they should be correct).

      > **Important**
      >
      > Do not change the consumer name.

   i. Choose *Update Registration*.

   j. Close the editor.

Results

- The existing producer system in the target environment is updated; it is a replicate of its corresponding master system in the source environment.

- The registration scope between the replicate producer portal and the secondary consumer portal in the target environment is restored; you are permitted to work with them as needed.

- The master producer portal and the primary consumer portal in the source environment are no longer connected to the replicate portals in the target environment; you are permitted to work with them as needed.

Post-Copy Guidelines and Notes

4.3 Development-Test-Production Scenario 3: SAP System Copy of Consumer Only

Landscape

Your development-test-production landscape comprises the following setup (see Figure 9):

- A **producer portal** and **consumer portal** in the source environment (development or test)
- A corresponding **producer portal** and **consumer portal** in the target environment (test or production, respectively)

Purpose

Only the **consumer** portal in the source environment will be replicated using the SAP system copy procedure to its corresponding **consumer** portal system that already exists in the target environment. Following the SAP system copy, the cross-registration scopes between the respective systems in the source and target environments will be realigned so that:

- The existing **secondary producer** portal and the **replicated consumer** portal in the target environment interact with one another.
- The **primary producer** portal and the **master consumer** portal in the source environment continue to interact with one another.

Key:
- - - ➔ Non-functional registration instance
——— ➔ Functional registration instance
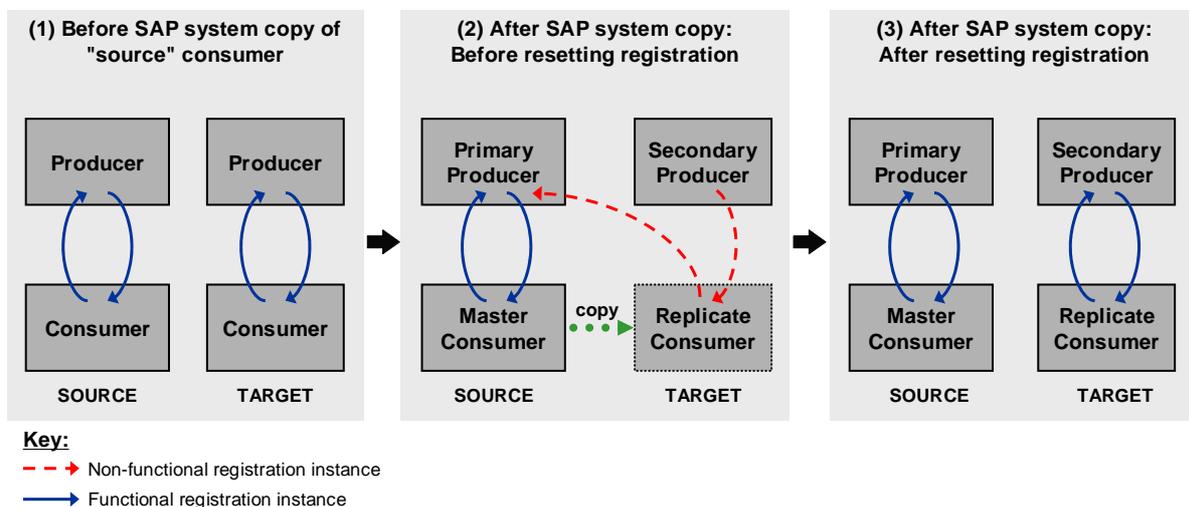
Figure 9: Replication of the consumer portal in the source environment to the existing consumer portal in the target environment, using SAP system copy. Following the SAP system copy, the registration instances between the producer and consumer in the target environment are not aligned.

Pre-Copy Requirements

In addition to the general requirements described in Prerequisites on page 11, the following requirements are necessary before you begin the replication procedure:

- Trust has been established between the **source producer** portal and the **source consumer** portal.

- The **source consumer** portal is registered with the **source producer** portal.

- The **target consumer** portal is registered with the **target producer** portal.

Copy Procedure

Do the following:

1. Using the SAP system copy procedure, replicate the **source consumer** to the **target consumer**.

2. Reestablish trust between the **secondary producer** and the **replicate consumer** in the target environment.

   Note

   If two-way trust is configured between the systems in the source environment, then you must establish two-way trust between the systems in the target environment.

3. From the **replicate consumer**, reset the registration scope with the **secondary producer** as follows:

   a. In the **replicate consumer** portal, navigate to *System Administration → System Configuration → Federated Portal → Myself as Content Consumer → Manage My Producers*.

   b. In the Portal Catalog, locate the producer object that corresponds to the **primary producer**.

   c. In the context menu of the producer object, choose *Open → Object*.

   d. In the object editor, choose *Edit Mode*.

   Note

   As a result of the replication, the editor currently displays the connection properties of the **primary producer** in the source environment.

   e. Enter the connection settings of the producer system in the target environment (the **secondary producer**).

   f. Save your updated settings.

   g. Switch to the Producer Registration editor.

   Note

   - The editor opens in read-write mode due to the changes you made in the previous steps. In addition, the standard *Registration* button is replaced by the *Update Registration* button.

   - As a result of the replication, the editor currently displays the connection properties of the **master consumer** in the source environment.

   h. Enter the connection properties of the **replicate consumer**.

   Important

   Do not change the consumer name.

   i. Choose *Update Registration*.

   j. Close the editor.

Results

- The existing consumer system in the target environment is updated; it is a replicate of its corresponding consumer system in the source environment.

- The registration scope between the secondary producer and the replicate consumer portal in the target environment is restored; you are permitted to work with them as needed.

- The primary producer portal and the master consumer portal in the source environment are no longer connected to the replicate portals in the target environment; you are permitted to work with them as needed.

Post-Copy Guidelines and Notes

See Post-Copy Guidelines and Notes on page 14.

4.4 Backup-and-Restore Scenario 1: SAP System Copy and Restoration of Producer Only

Landscape

Your landscape comprises the following setup (see Figure 10):

- A **producer portal** and **consumer portal** in the source environment.

- A corresponding **backup producer portal** in the target environment; this is a backup copy of the producer portal from the source environment, created on a regular basis using the SAP system copy procedure.

- The **producer portal** in the source environment has failed and cannot be restored.

Purpose

The **failed producer** portal in the source environment will be restored using a copy of the **backup producer** portal from the target environment. The **restored producer** (a replicate of the backup producer) must be created on a system in the source environment using the SAP system copy procedure. Following the SAP system copy, the registration scope between the **restored producer** and the existing **source consumer** is reset so that they can interact with each another.

> 🔵 **Important**
>
> Any changes made to the source producer portal after the backup was created are lost following the restoration of the producer portal.
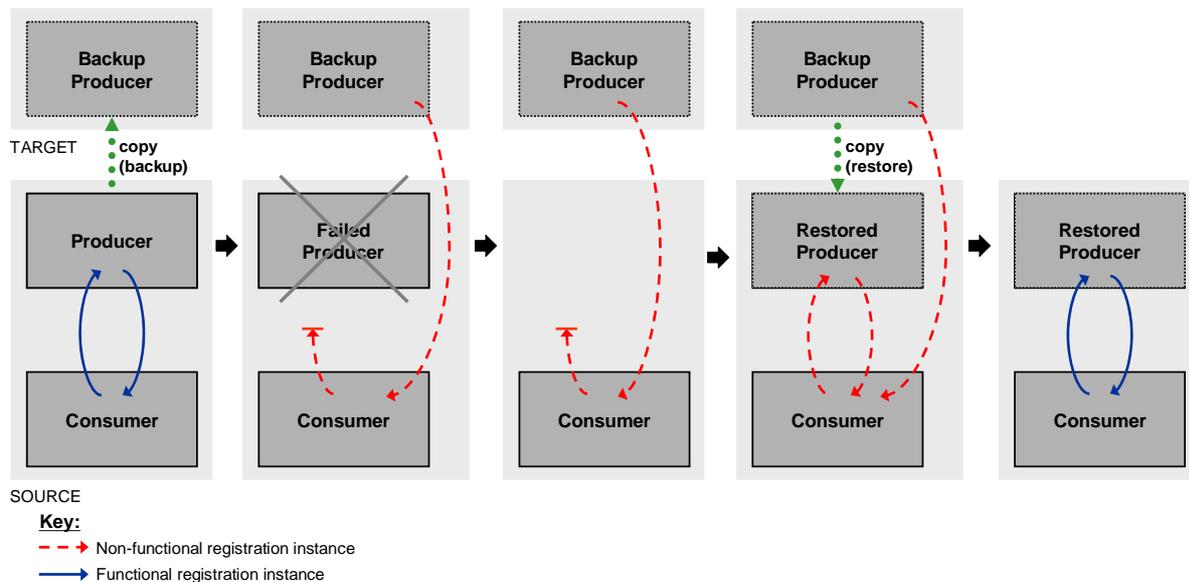
Figure 10: Restoration of the producer portal in the source environment using a backup of the producer portal. Following the SAP system copy (to restore the producer portal), the registration scope between the restored producer and the original consumer needs to be reset.

Pre-Copy Requirements

See Prerequisites on page 11.

Copy Procedure

Do the following:

1. Using the SAP system copy procedure, replicate the **backup producer** to the new producer system in the source environment.

2. Reestablish trust between the **restored producer** and the **consumer**.

   ### 🔔 Note

   If two-way trust was configured between the original systems, then you must establish two-way trust between the **restored producer** system and the **consumer** system.

3. From the **consumer**, reset the registration scope with the **restored producer** as follows:

   a. In the **consumer** portal, navigate to *System Administration → System Configuration → Federated Portal → Myself as Content Consumer → Manage My Producers*.

   b. In the Portal Catalog, locate the producer object that corresponds to the **restored producer**.

   c. In the context menu of the producer object, choose *Open → Object*.

   d. In the object editor, choose *Edit Mode*.

   e. If the connection settings displayed are those of the **restored producer** system, make a dummy change to one of the settings (for example, change the value of the HTTP/HTTPS port and then change it back to its original value).

      If the connection settings displayed are not correct, enter the connection properties of the **restored producer** system.

   f. Save your updated settings.

---

g. Switch to the Producer Registration editor.

Note

- The editor opens in read-write mode due to the changes you made in the previous steps. In addition, the standard *Registration* button is replaced by the *Update Registration* button.

h. If the connection settings displayed are not those of the **consumer** system, then modify them as needed (they should be correct).

Important

Do not change the consumer name.

i. Choose *Update Registration.*

j. Close the editor.

Results

- The failed producer system in the source environment is restored using a replicate of the backed up system.

- The registration scope between the restored producer portal and the original consumer portal in the source environment is restored.

Post-Copy Guidelines and Notes

- No administration must be performed on any backup system following the SAP system copy.

- Any FPN content (remote delta links or remotely assigned roles) created or modified on the portals in the source environment after or during an SAP system copy has taken place is overwritten by the restoration process.

4.5 Backup-and-Restore Scenario 2: SAP System Copy and Restoration of Consumer Only

Landscape

Your landscape comprises the following setup (see Figure 11):

- A **producer portal** and **consumer portal** in the source environment.

- A corresponding **backup consumer portal** in the target environment; this is a backup copy of the consumer portal from source environment, created on a regular basis using the SAP system copy procedure.

- The **consumer portal** in the source environment has failed and cannot be restored.

Purpose

The **failed consumer** portal in the source environment will be restored using a copy of the **backup consumer** portal from the target environment. The **restored consumer** (a replicate of the backup consumer) must be created on a system in the source environment using the SAP system copy procedure. Following the SAP system copy, the registration scope between the **restored consumer** and the existing **source producer** is reset so that they can interact with each another.

> 💡 **Important**
>
> Any changes made to the source consumer portal after the backup was created are lost following the restoration of the producer portal.
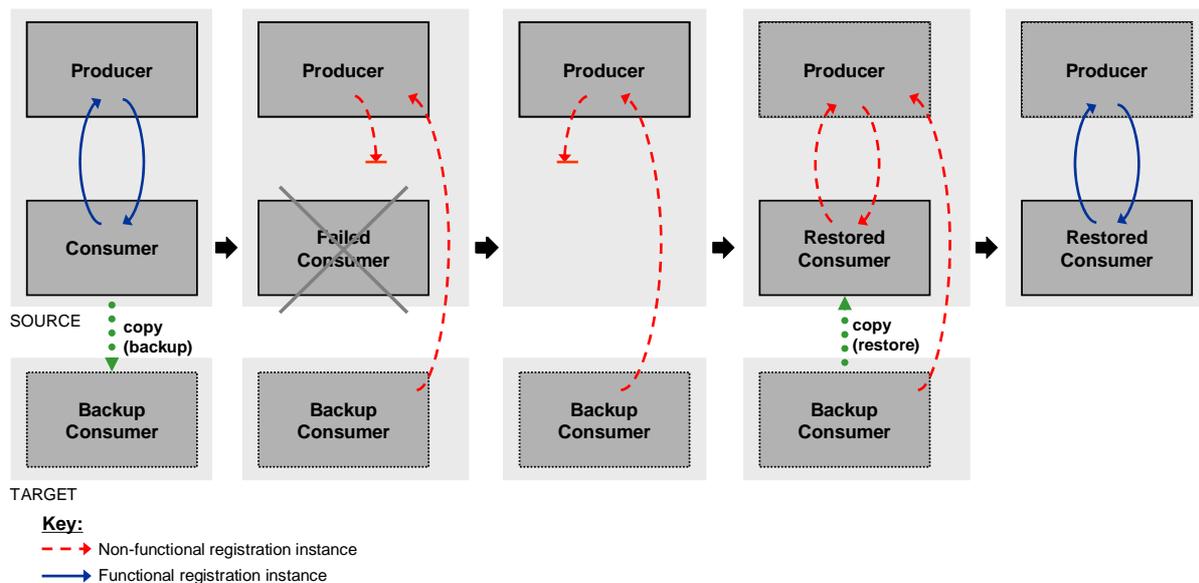

Figure 11: Restoration of the consumer portal in the source environment using a backup of the consumer portal. Following the SAP system copy (to restore the consumer portal), the registration scope between the restored consumer and the original producer needs to be reset.

Pre-Copy Requirements

See Prerequisites on page 11.

Copy Procedure

Do the following:

1. Using the SAP system copy procedure, replicate the **backup consumer** to the new consumer system in the source environment.

2. Reestablish trust between the **restored consumer** and the **producer**.

   > 💡 **Note**
   >
   > If two-way trust was configured between the original systems, then you must establish two-way trust between the **restored consumer** system and the **producer** system.

3. From the **restored consumer**, reset the registration scope with the existing **producer** as follows:

   a. In the **restored consumer** portal, navigate to *System Administration → System Configuration → Federated Portal → Myself as Content Consumer → Manage My Producers*.

b. In the Portal Catalog, locate the producer object that corresponds to the **producer**.

c. In the context menu of the producer object, choose *Open → Object*.

d. In the object editor, choose *Edit Mode*.

e. If the connection settings displayed are those of the **producer** system, make a dummy change to one of the settings (for example, change the value of the HTTP/HTTPS port and then change it back to its original value).

    If the connection settings displayed are not correct, enter the connection properties of the **producer** system.

f. Save your updated settings.

g. Switch to the Producer Registration editor.

    ### Note

    - The editor opens in read-write mode due to the changes you made in the previous steps. In addition, the standard *Registration* button is replaced by the *Update Registration* button.

h. If the connection settings displayed are not those of the **restored consumer** system, then modify them as needed.

    ### Important

    Do not change the consumer name.

i. Choose *Update Registration*.

j. Close the editor.

Results

- The failed consumer system in the source environment is restored using a replicate of the backed up system.

- The registration scope between the restored consumer portal and the original producer portal in the source environment is restored.

Post-Copy Guidelines and Notes

See Post-Copy Guidelines and Notes on page 21.

4.6 Backup-and-Restore Scenario 3: SAP System Copy and Restoration of Producer and Consumer

Landscape

Your landscape comprises the following setup (see Figure 12):

- A **producer portal** and **consumer portal** in the source environment.

- A corresponding **backup producer portal** and **backup consumer portal** in the target environment (these are backup copies of the producer and consumer portal from source environment, created on a regular basis using the SAP system copy procedure).

- Both the **producer portal** and the **consumer portal** in the source environment have failed and cannot be restored.

Purpose

The **failed producer** portal and the **failed consumer** portal in the source environment are restored using copies of the **backup producer** portal and the **backup consumer** portal from the target environment. The **restored producer** (a replicate of the backup producer) and the **restored consumer** (a replicate of the backup consumer) must be created on systems in the source environment using the SAP system copy procedure. Following the SAP system copy, the registration scope between the **restored producer** and the **restored consumer** is reset so that they can interact with each another.

> ### Important
>
> Any changes made to the source producer portal after the backup was created are lost following the restoration of the producer portal.
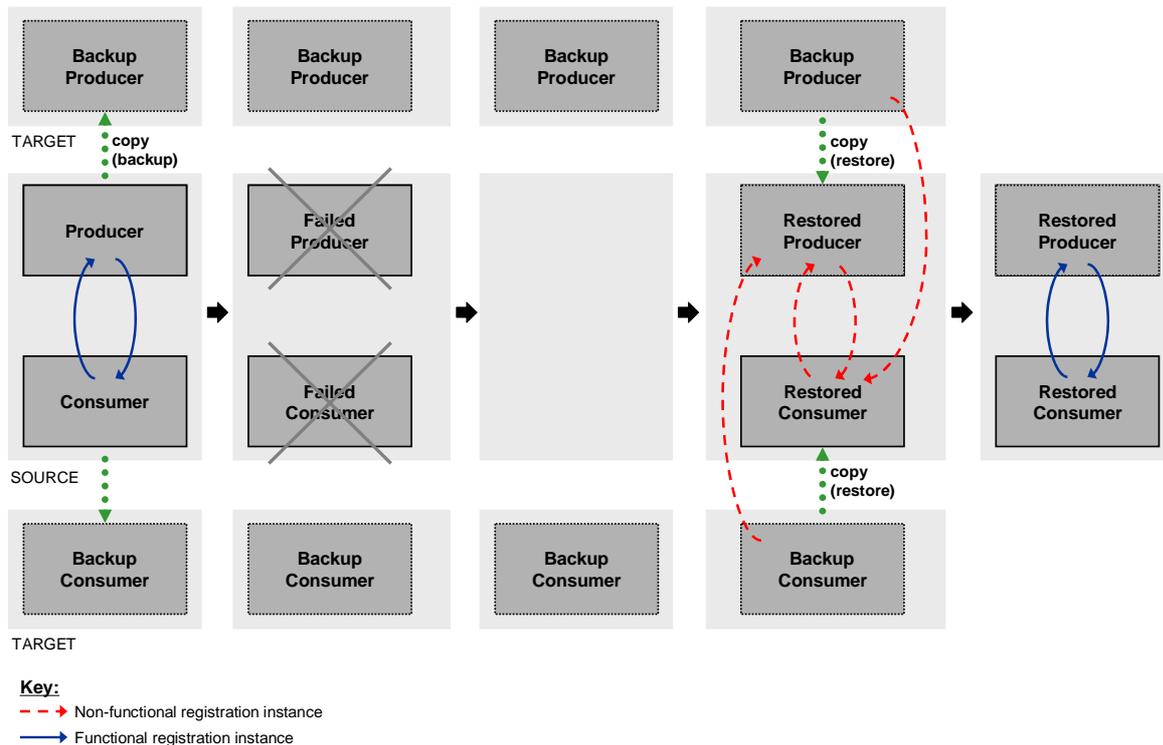

Figure 12: Restoration of the producer and the consumer portals in the source environment using backups of the producer and consumer portals. Following the SAP system copy (to restore the producer and consumer portals), the registration scope between the restored producer and restored consumer needs to be reset.

Pre-Copy Requirements

See Prerequisites on page 11.

Copy Procedure

This backup-and-restore scenario is almost identical to a development-test-production scenario whereby both the producer portal and the consumer portal are replicated to their *target* environment. The only difference here is that the producer and consumer are replicated (restored) through the SAP system copy process back to systems in the *source* environment.

For instructions on restoring both the producer and consumer from the backup systems, follow the procedure described in Development-Test-Production Scenario 1: SAP System Copy of Producer and Consumer on page 12. While performing the procedure, note the following:

- The **backup producer** system and the **backup consumer** system are equivalent to the **master producer** system and the **master consumer** system, respectively.

- The **restored producer** system and the **restored consumer** system are equivalent to the **replicate producer** system and the **replicate consumer** system, respectively.

Results

- The failed producer system in the source environment is restored using a replicate of the backed up system.

- The failed consumer system in the source environment is restored using a replicate of the backed up system.

- The registration scope between the restored producer portal and the restored consumer portal in the source environment is restored.

Post-Copy Guidelines and Notes

See Post-Copy Guidelines and Notes on page 21.

5. Problem Analysis and Recovery

This section provides information about problem analysis and recovery with FPN-based content during or following an SAP system copy.

5.1 Identifying the Problem

If an error occurred while performing the SAP system copy or if FPN-based content ceases to function properly following an SAP system copy, then perform the following steps to identify a possible cause of the problem:

1. Do the following on the consumer portal of the problematic FPN pairing (for example, the secondary/replicated or restored consumer):

    a. In *Manage My Producers* screen, open the relevant producer object that corresponds to the problematic content or registration scope.

    b. In the Producer Editor, perform the following:

        i.   Run a test connection.

        ii. Ensure that the producer-side connection properties contain the correct values of the target producer portal.

        iii. In the Producer Registration screen, ensure that the connection properties correspond to the consumer portal you are working on.

    c. In the same browser session of the consumer portal, enter the URL of the producer portal and press `Enter`. If you can log into the producer portal without entering a user name and password, then the mandatory one-way trust from the consumer system to the producer system is configured successfully.

2. Do the following on the producer portal of the problematic FPN pairing:

    a. In the *View My Consumers* screen, locate the consumer portal that corresponds to the problematic content or registration scope.

    b. Ensure that the consumer-side connection properties contain the correct values of the target consumer portal.

5.2 Recovery from a Problem

If you identified the cause of the problem to be incorrect producer or consumer connection properties (IP address, host name, port number), then repeat step 3 in the "copy procedure" of the relevant scenario described in this document.

If you identified the cause of the problem to be a faulty trust configuration, then perform the trust configuration again.

If all the above steps fail to repair the FPN connectivity and content, then contact SAP Support for further assistance.

🔔 Note

If you are willing to permanently lose all previous remote role assignments (RRA) and invalidate all remote delta links (RDL) and WSRP-based content created on the target or restored consumer within the problematic registration scope, then you can create a new relationship between the affected producer and consumer systems by performing one of following steps on the consumer portal:

- Unregister with the producer and then register again (recommended).
- Delete the producer connection and then create a new one.

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