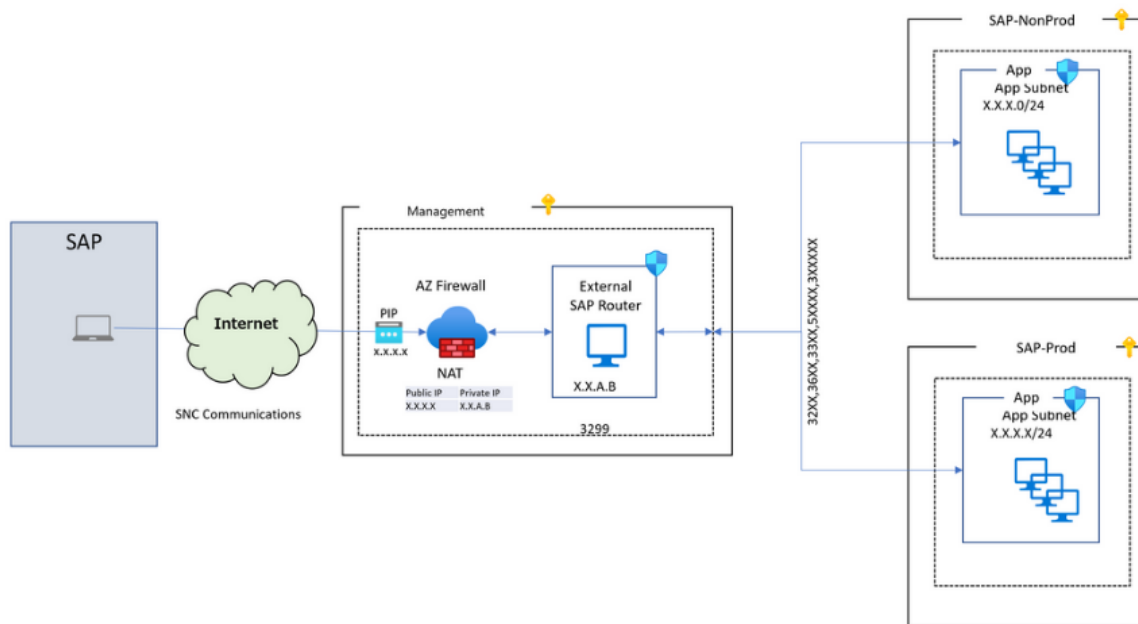# How to update SAProuter   by Irshad Rather

What is SAP Router?

SAP router is a standalone program that protects your SAP network against unauthorized access. SAP router is a proxy in a network connection between SAP systems, or between SAP systems and external networks. SAP router acts as an extra firewall to the existing firewall (port filter). It is usually installed directly on the firewall host. The SAP router port serves as a gateway, through which connections to your firewall-protected system can be opened. You can specify the connections you want to allow in a route permission table.

Reference Network Architecture

Scenario#1 with single SAP Router to manage the connectivity between SAP(side)Router & Customer SAPRouter.

Deploy SAPRouter Virtual Machine

1. Deploy a virtual machine Windows/Linux

Windows/Linux VM, preferably, dedicated for hosting SAPRouter required for the installation and configuration of SAPRouter.

Name ↑↓	Subscription ↑↓	Resource group ↑↓
✓ 🖥 SAPRouter	Microsoft Azure Internal Con...	SAPRG_JT

2. Download SAPRouter Software [30374 - SAProuter installation - SAP ONE Support Launchpad](#)
3. Install SAPRouter Software on the Virtual Machine.
4. Review the status of SAPRouter Service.

Register SAPRouter with SAP

1. Create an SAP OSS Case --> Raise an OSS under component XX-SER-NET-NEW for registering the New SAP Router in SAP premises.
2. Capture details to update SAProuttab file --> follow the SAP standard document to create the saprouttab entries. Below link to be followed [SAProuter.](#)
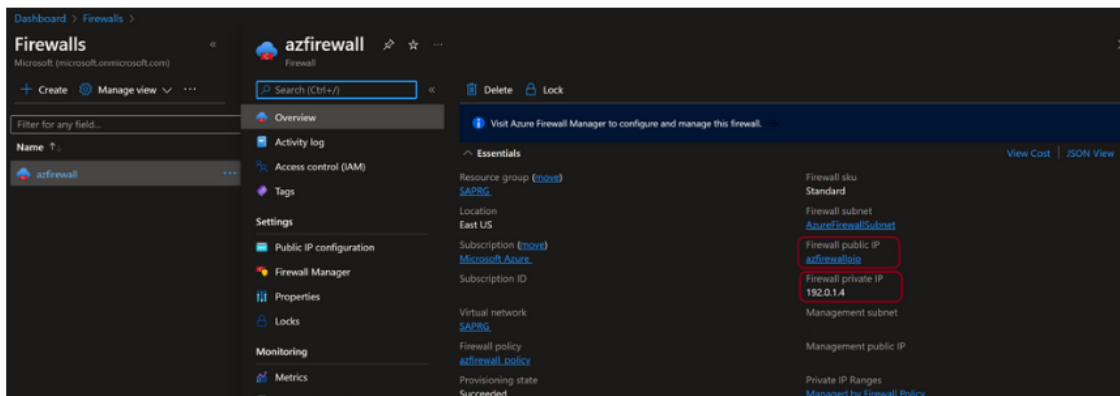
Example of SAProuttab file

## Azure Firewall Configuration

1. Create/Review Azure Firewall

Name ↑↓	Type ↑↓	Resource group ↑↓
☁ azfirewall	Firewall	SAPRG_JT

2. Create/Review Public I.P Assignment

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Scenario#2 with cascade SAPRouter to manage the connectivity between SAP(side)Router & Customer
SAPRouter, where customer deployment will host two SAPRouter's [External + Internal].
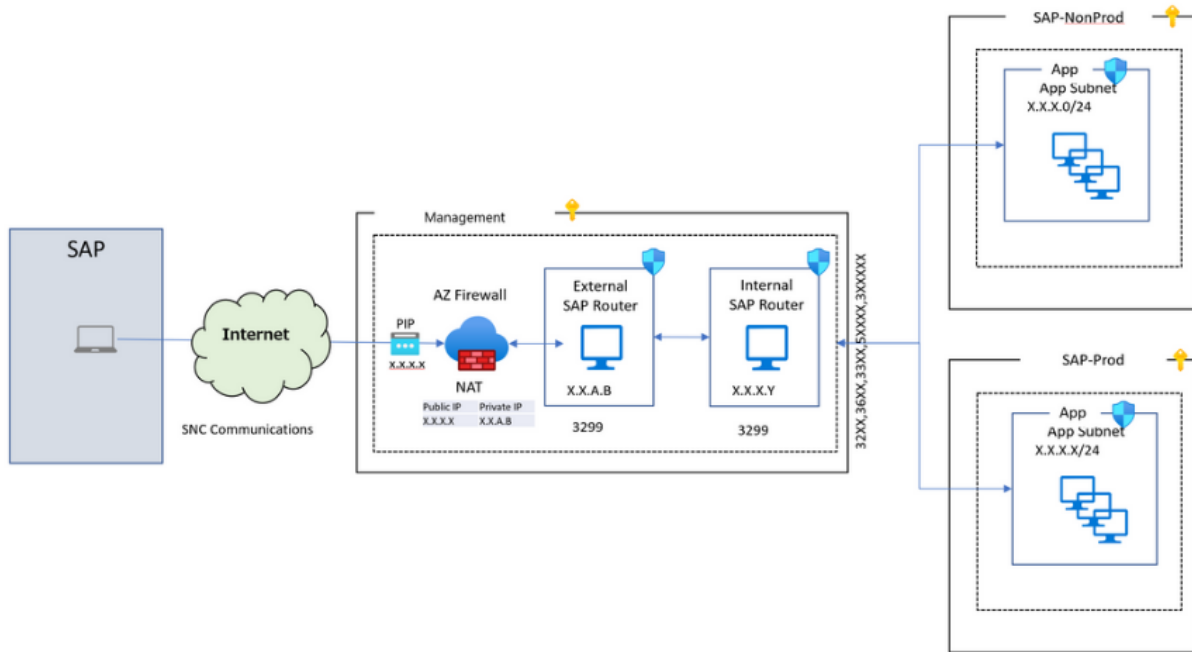
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Test the connectivity

SAP OSS connection from satellite system to SAP (with the help of SAP)

Connection Test HTTP Destination SAP-SUPPORT_NOTE_DOWNLOAD

Destination	SAP-SUPPORT_NOTE_DOWNLOAD
Ty.	HTTP Connection to External Server

Test Result | Response Header Fields | Response Body | Response Text

Detail	Value
Status HTTP Response	404
Status Text	Not Found
Duration Test Call	2171 ms

Connection Test HTTP Destination SAP-SUPPORT_PORTAL

Destination	SAP-SUPPORT_PORTAL
Ty.	HTTP Connection to ABAP System

Test Result | Response Header Fields | Response Body | Response Text

Detail	Value
Status HTTP Response	200

2: What is it used for?

With SAP router you can control and log incoming connections to an SAP system. SAP router can be used to improve network security. Connections and data can be protected by a password from unauthorised external access. With the route permission table you can specify that connections only from selected SAP routers are permitted. With the SNC layer encrypted connections from a known partner can be permitted.

3: What SAP Router doesn't support? Unsupported Scenarios:

- Communication between server components with HTTP-based protocols through the SAProuter (e.g. Web service calls through HTTP) (**For HTTP, SSL will be used**)
- Communication from a user interface such as the browser or the Business Client through SAProuter to an application server (e.g. Web Dynpro or BSP-based applications)
- Binary protocols (e.g. terminal server, X-server) between communication partners

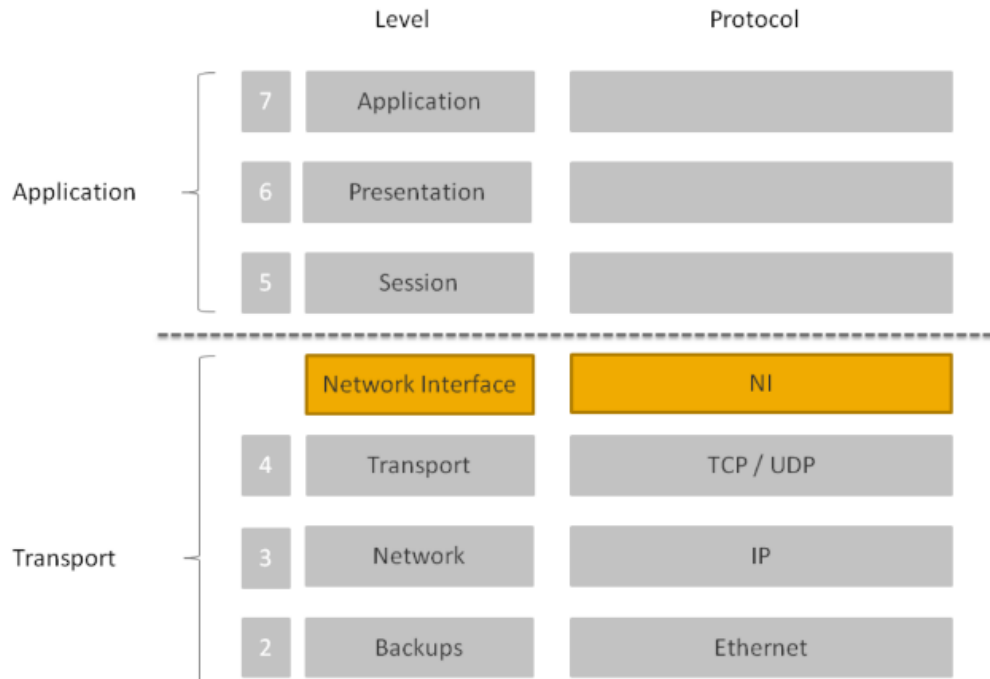## 4: What protocols does SAP Router use?

This is the Network Interface (NI) and is used by SAP router, all SAP programs, and development kits for CPI-C and remote function call (RFC). In the OSI 7 layer model, the NI layer forms the upper part of the transport layer. The NI protocol uses **TCP or UDP**. The protocol is also known as the **SAP protocol**.

5: What is SAP Protocol?

The SAP Protocol is the protocol used by SAP programs that communicate using the NI interface. This is an enhanced version of the TCP/IP protocol, which has been extended by one field and some options for error information.

NI

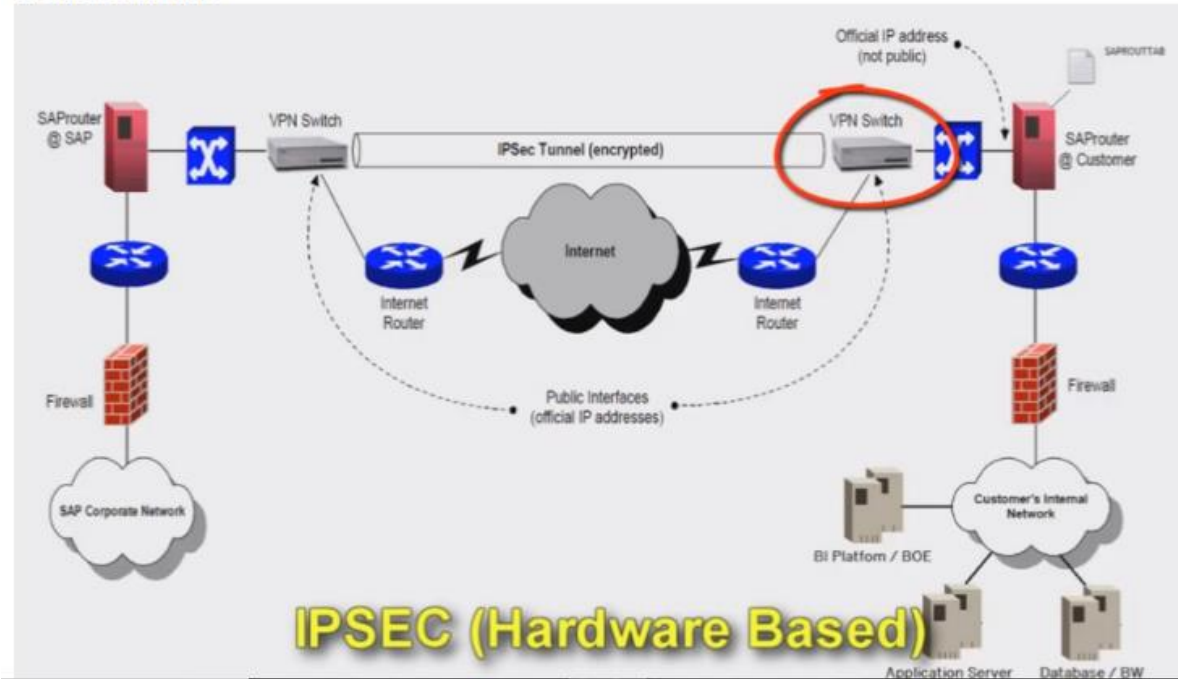|		Level		Protocol
	7	Application		
Application	6	Presentation		
	5	Session		
		Network Interface		NI
	4	Transport		TCP / UDP
Transport	3	Network		IP
	2	Backups		Ethernet

6: How are the connections between a customer's SAP Router to SAP's SAP Router secured?

There are two different options here:

1: IPSEC/VPN

2: SNC **IPSEC/VPN**

LAN-to-LAN IPSec VPNs are established between SAP and the customer's network to provide data confidentiality and integrity services. These VPNs complement the leased lines in the current Remote Customer Support Network environment. State-of-the-art encryption, authentication, and access control technology will be employed. VPN equipment is required at both ends of the connection.

The VPN switch at customer's side must be reachable from the Internet. **SNC**
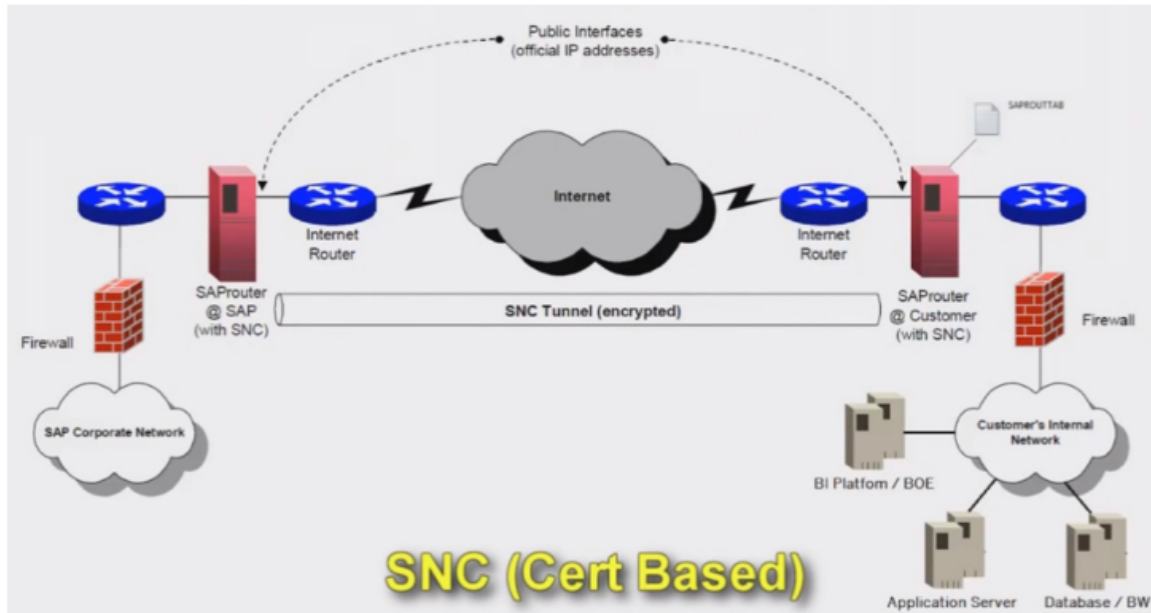
SNC is used to make network connections using the Internet, in particular WAN connections, secure. It provides reliable authentication as well as encryption of the data to be transferred. SAP router allows SNC connections to be set up. The route permission table can be used to specify precisely whether SNC connections are to be

Symptom

- Updating the SAP router **from an old version to a new version** within the frames of maintenance or,
- Updating the SAP router is requested due to a bug in the currently used SAProuter.

REMARK: As of SAP router release and patch level described by the SAP Note 1520179 - SAProuter version number update, the "**from an old version to a new version**" means:

- from *SAProuter release <X>* with *patch level <Y>* to *SAProuter release <X>* with *patch level <Z>* **where <Y> is lower than <Z>**.
  E.g.: from SAProuter release 7.42 patch level 37 to SAProuter release 7.42 patch level 111

Or

- from *SAProuter release <X>* with *any patch level* to *SAProuter release <Y>* with any patch level **where <X> is lower than <Y>**.

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   E.g.: from SAProuter release 7.20 any patch level to SAProuter release 7.42 any patch level

Environment

- SAP NetWeaver
- Database independent
- Operating system independent
- SAP Web Application Server for SAP S/4HANA
- ABAP Platform

Resolution

1. Download the SAProuter executable from the below web page:

   https://support.sap.com/swdc

   Support Packages and Patches -> Access downloads -> By Alphabetical Index (A-Z) -> S -> SAPROUTER -> SAPROUTER <release> -> <select OS version>

   Download the **saprouter_<patchlevel>-<nnnn>.sar** archive. The SAProuter is SAP system **release independent** and can be used for both **unicode and non-unicode** systems. When there are problems with SAProuter, it is recommended to update it to the **latest available version (latest release with latest patch level)**

2. Extract the downloaded SAProuter archive in a temporary directory with **SAPcar**:

   sapcar -xvf saprouter_<patchlevel>-<nnnn>.sar

   REMARK: The **SAPcar** archiving tool is required on the server where the SAProuter is running. For downloading **SAPcar**, follow the SAP Note 212876 - The new archiving tool SAPCAR

3. Stop the currently running SAProuter. (On Windows SAProuter might be running as a *service*, in this case *stop the service itself*).

4. Switch to the work directory of the SAProuter:

   /usr/sap/saprouter
   <drive>:\usr\sap\saprouter
   <drive>:\saprouter

5. Rename the SAProuter executables located in the SAProuter work directory:

   saprouter > saprouter_old

saprouter.exe > saprouter.exe_old

6. Copy the new SAProuter executables into the SAProuter work directory.

7. Start the *SAProuter* or the *SAProuter service*.

See Also

- SAP Note [1897597](#) - SAProuter: Release rollout
- Newer SAProuter releases might require newer C-runtime libraries. For more information, check SAP Community Blog - [C-runtimes needed to run SAP executables](#)

Keywords

saprouter update, saprouter upgrade, saprouter release, patch level, SAPROUTER, SAPcar, sapcar -xvf saprouter_<patchlevel>-<nnnn>.sar, SAProuter service, work directory

Product

Product or Product Version
ABAP platform all versions
SAP NetWeaver all versions
SAP Web Application Server for SAP S/4HANA all versions