

From
Human Machine Interface
to
Web Machine Interface

- Innovation of HMI -

Hakko Electronics Co., Ltd.

Web Machine Interface

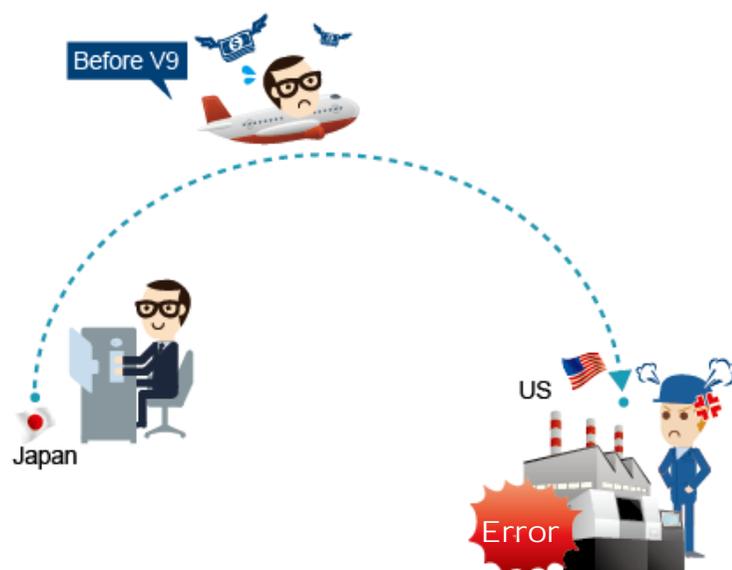
offers **two** services below:

- **VPN remote access service**
- **VPN cloud data utilization service**
(under development)

Why don't you start the remote access by VPN?

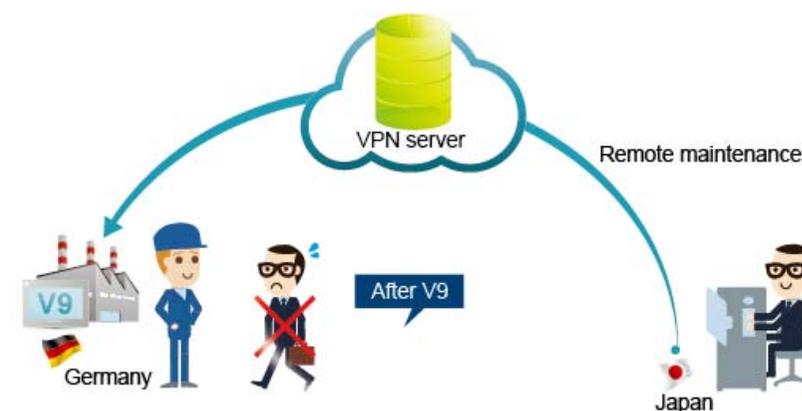
Implementing the remote access on your system can be the strong tool to differentiate competitor with the internet solution.

Before



* When trouble was occurred at site, it was required to visit there by spending your time and money for the trouble shooting.

After

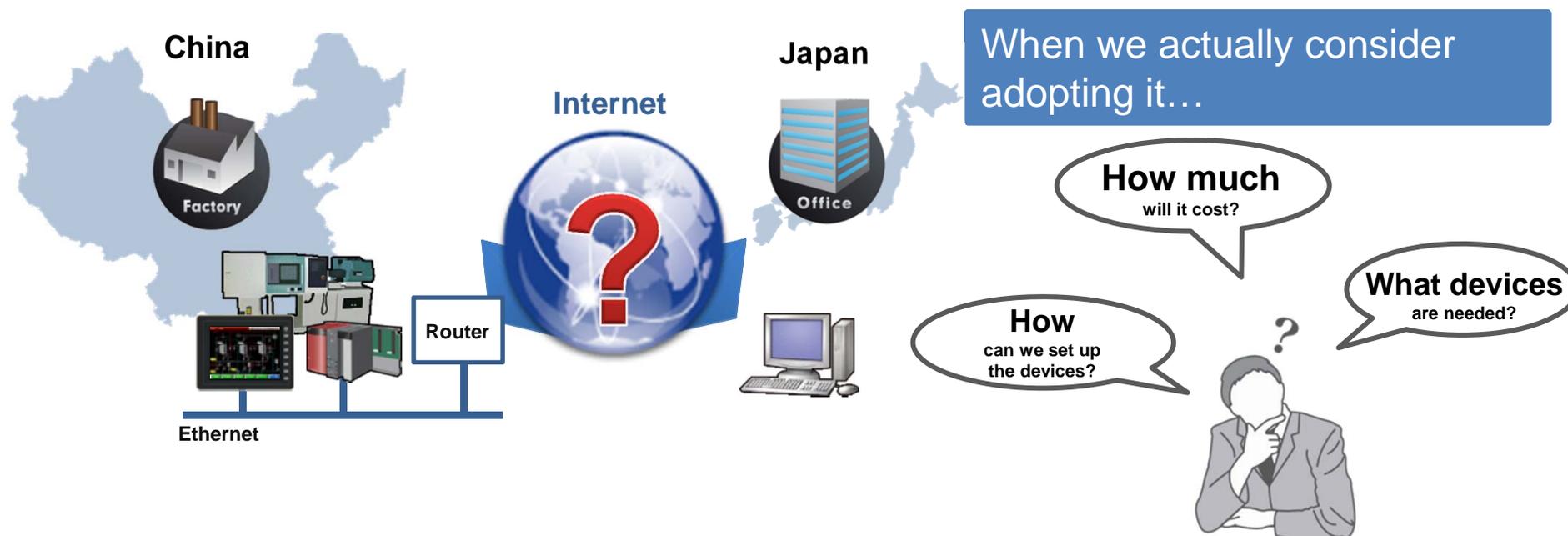


* When trouble was occurred at site, it is possible to understand the situation of the site without visiting there.

Challenges on remote connection

Remote monitoring/maintenance has a variety of challenges...

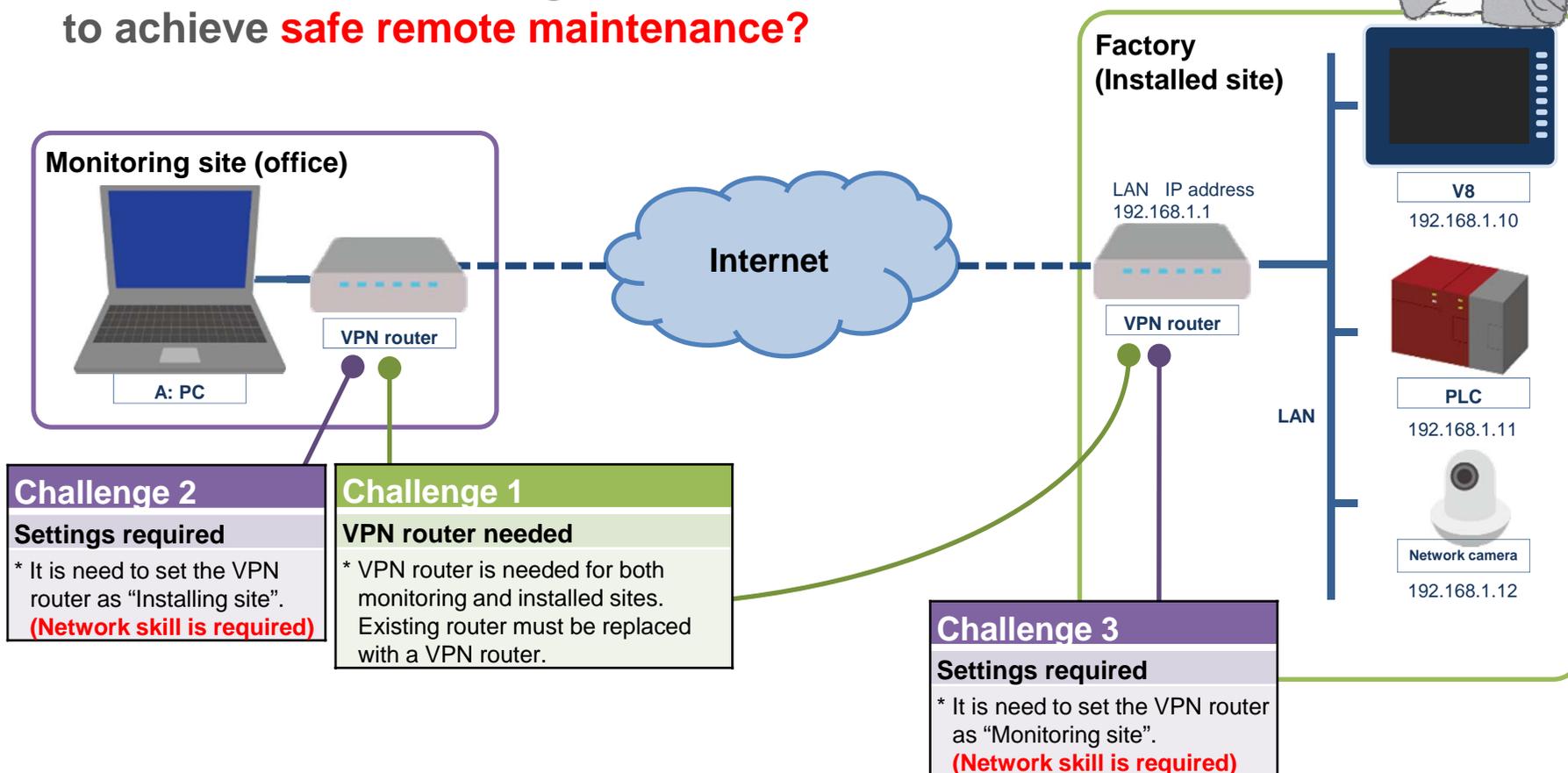
Have you ever seen an illustration like this?



Conventional system example (IP-Sec VPN)

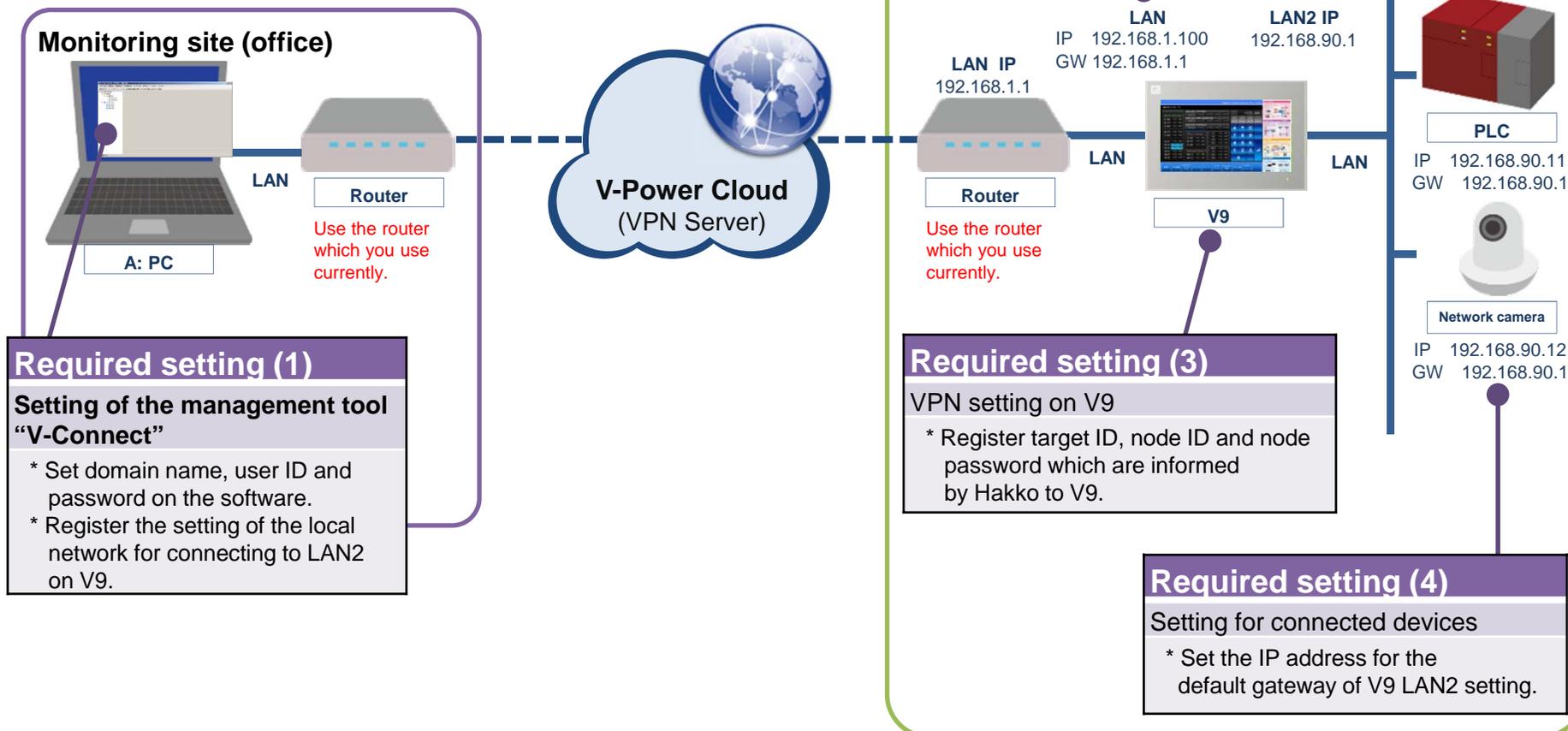


What devices and settings do we need to achieve **safe remote maintenance**?



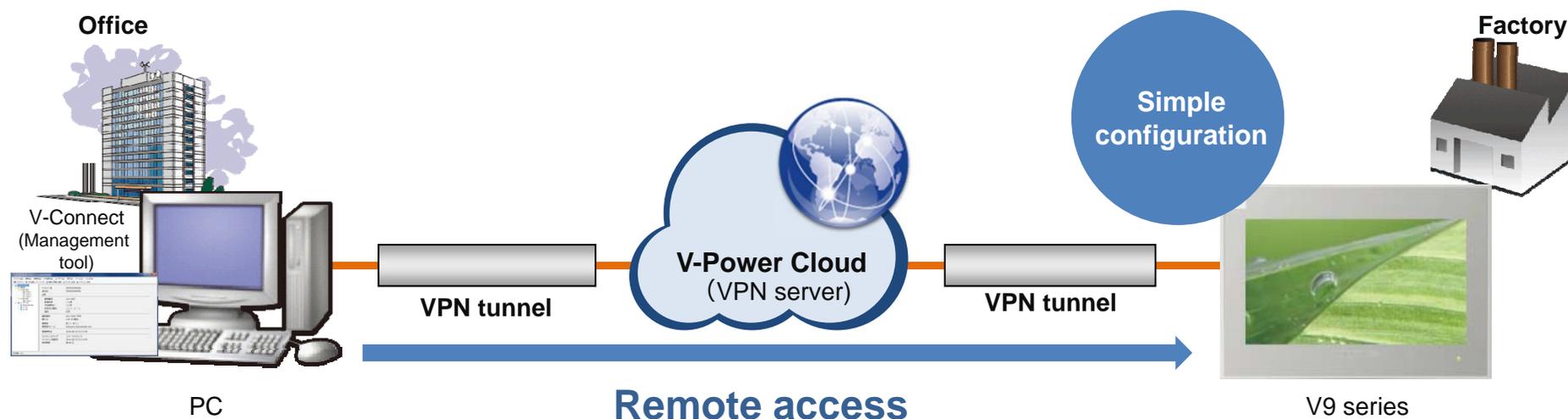
System example with V9

V9 has a built-in router, so external VPN router is not required.



Realize the implementation of VPN solution with lower cost!!

Please experience the VPN solution with **FREE** license (30 days)!!



<Requirement tools and cost>

<Initial cost>

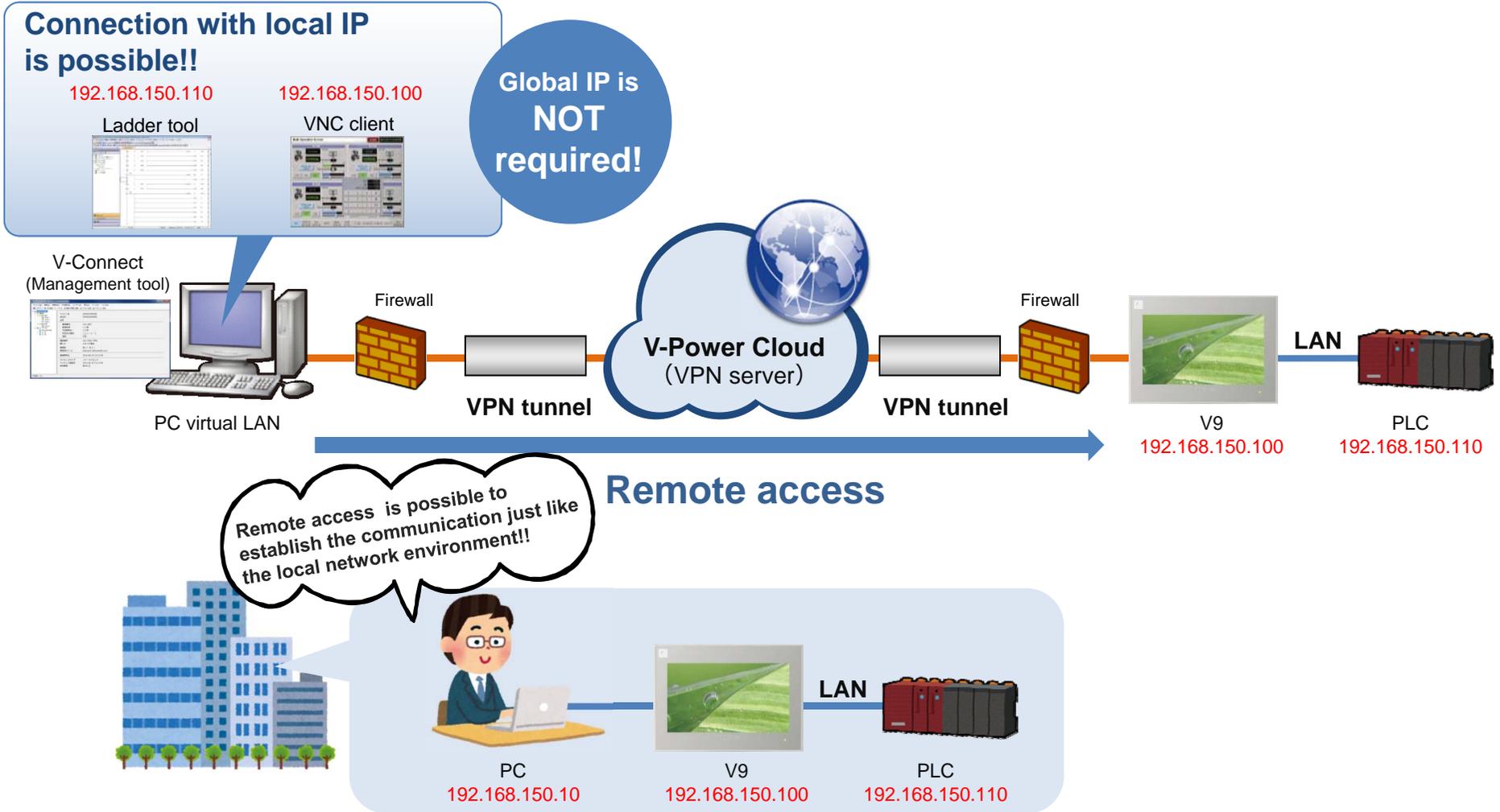
- (1) Management tool "V-Connect"... **FREE**
- (2) V9 series

<Running cost>

- (1) The cost for internet connection in the office... If there is LAN connection in the office: **FREE**
- (2) The cost for internet connection in the factory... If there is LAN connection in the factory: **FREE**
- (3) The cost for remote access license... There are several plans depending on the needs (Annual renewal fee is required).

Local IP connection

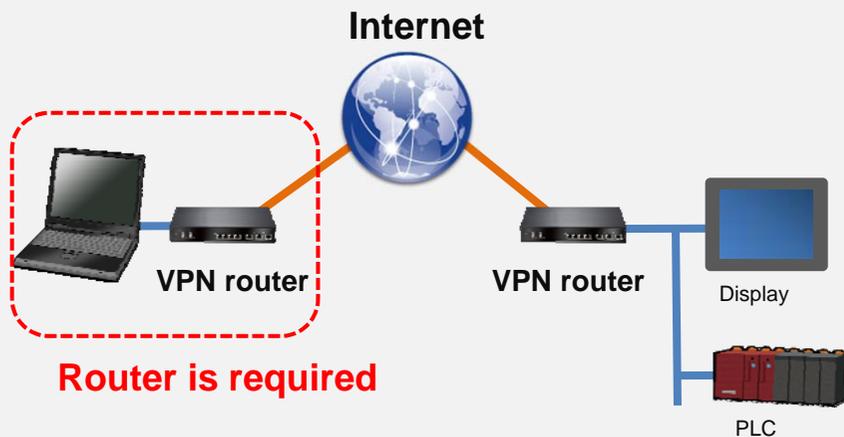
All the devices are possible to be accessed by the local IP from a remote location.



Connection is anytime and anywhere!!

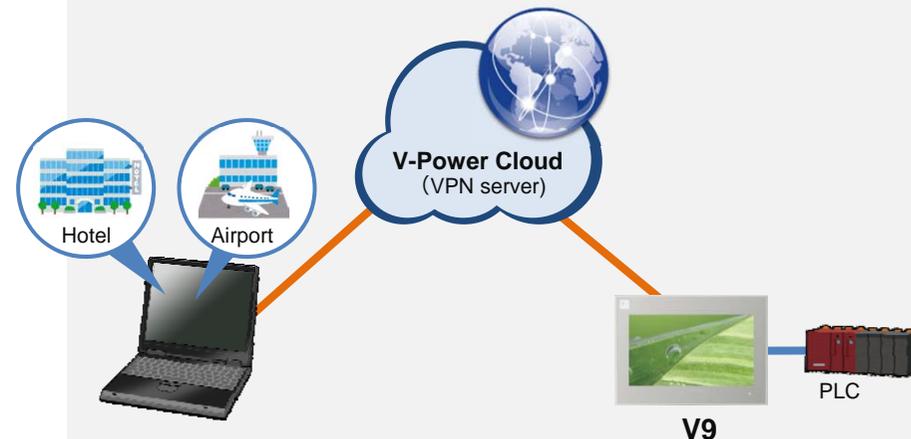
Due to SSL-VPN, it is possible to connect V9 from anywhere if there is the internet connection.

Remote access by IP-Sec VPN



- * Remote access was unavailable from your house or when you are on business trip.
- * IT knowledge is needed compared with SSL-VPN .

Remote access by V9 (SSL-VPN)



Special device is not needed! (VPN router)

It is possible to remote access from your house or even when you are on business trip!!

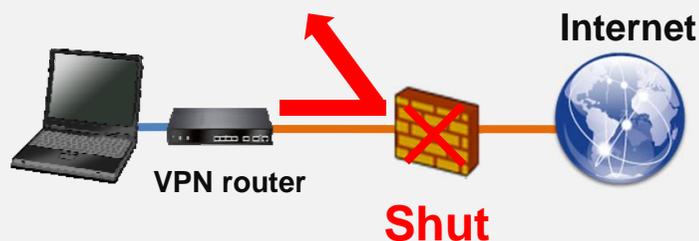
- * It is possible to access whenever you have the internet connection.
- * Advanced skill is not required.

No need to consider the firewall

No issue for firewall with HTTPS protocol by using SSL-VPN.

IP-Sec VPN

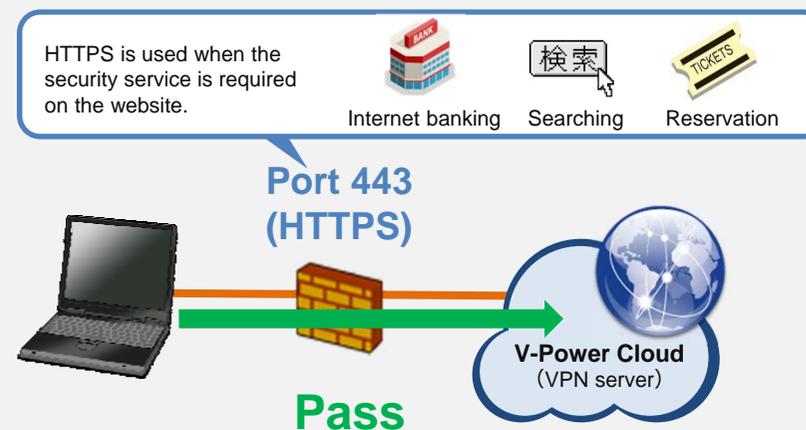
It is necessary to change the firewall setting and open the port of TCP No.51 and No.50.



- * There may be a block by the firewall in the public environment.
- * It is necessary to open the several ports on firewall.

V9 (SSL-VPN)

Normally TCP port No.443 is opened on firewall to connect to the internet from the office. It is not necessary to change the setting because V9 uses SSL-VPN. *1

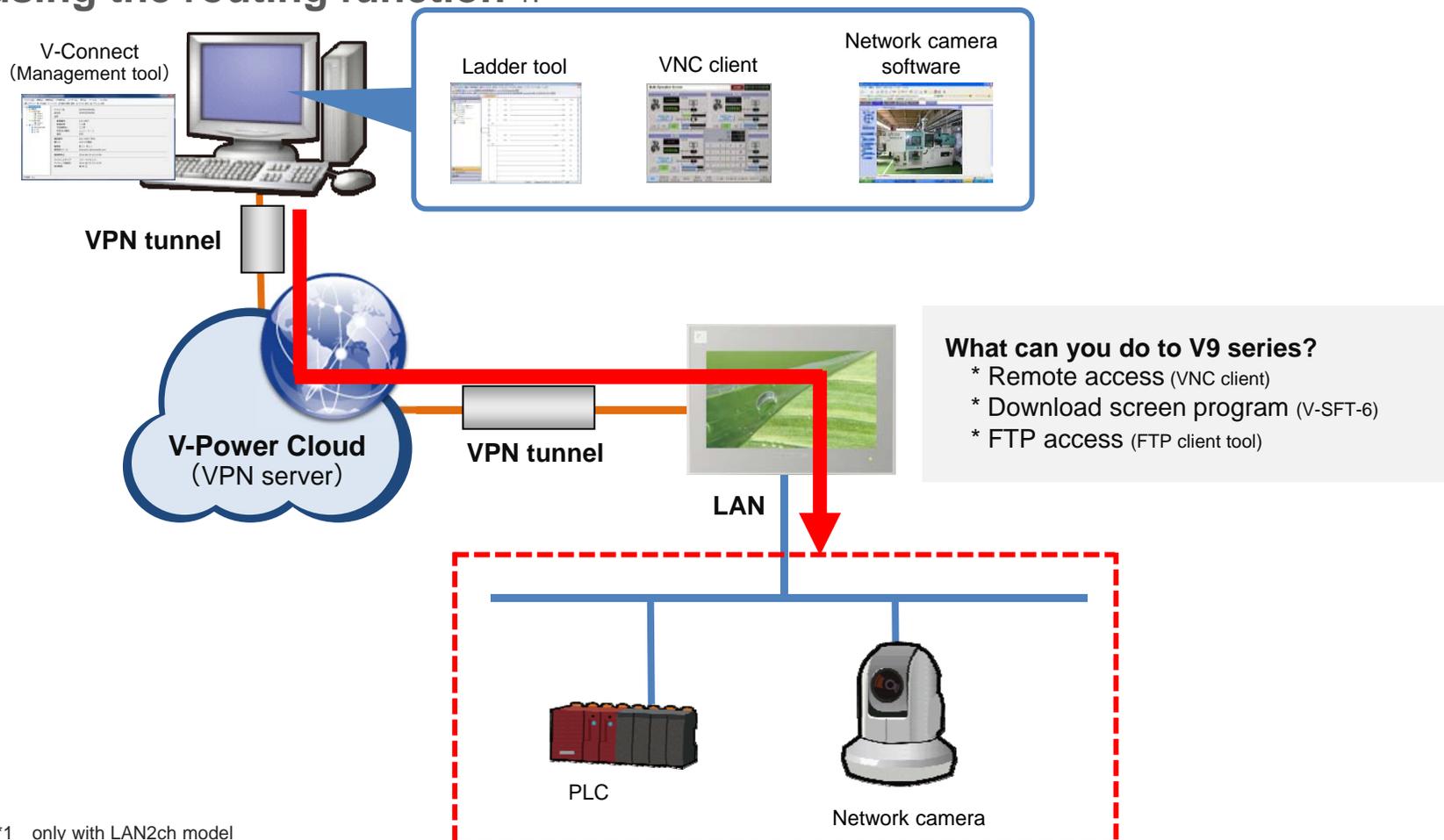


- * It is possible to pass through the firewall whenever there is the internet connection.

*1: There may be set to shut the session with the specific time depending on the customer. In this case, please open this port always.

Remote access to various devices

It is possible to access to the devices which are connected to V9 remotely by using the routing function*1.



*1 only with LAN2ch model

Configuration example (1) (Connection for WAN)

Various choice of connection configuration depending on your needs!!

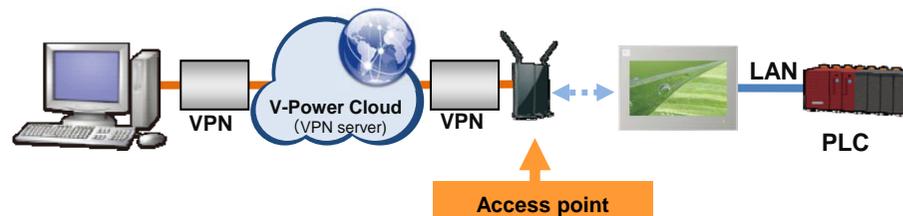
- When the company's network is used: (Wired LAN)

The cheapest system configuration of remote access:



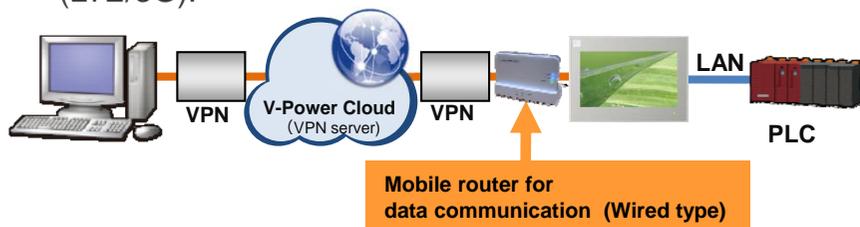
- When the company's network is used: (Wireless LAN)

The network establishment is not required and not need to pay for internet connection.



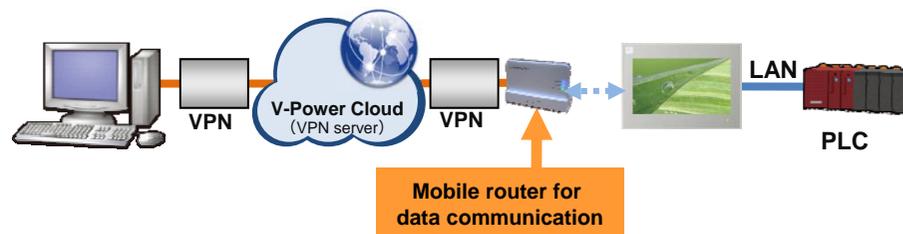
- When mobile internet router is used: (Wired LAN)

Even if it is difficult to make the network connection on the machine or system for VPN, it is possible to remote the site remotely by using mobile router*1 (LTE/3G).



- When mobile internet router is used: (Wireless LAN)

Although the network fee for the mobile router is needed, but the network establishment is not required.



*1 : Wired LAN port is needed.

Configuration example (2)

System configurations below are possible.

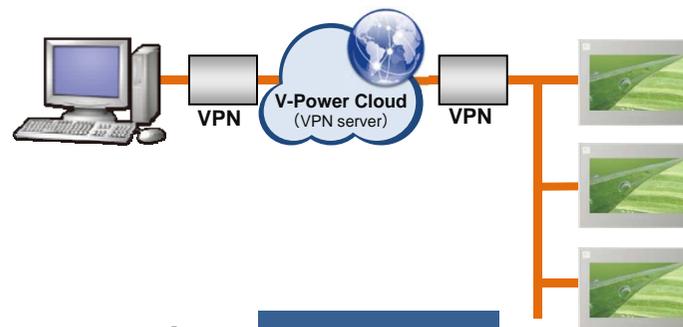
- **1:1 connection**

Connect one PC to monitor and one V9.



- **1:n connection**

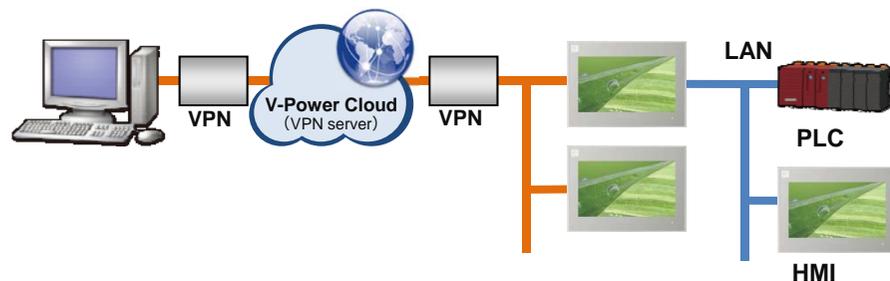
Connect one PC to monitor and multiple V9s.



- **1:n:m connection**

LAN2ch type only

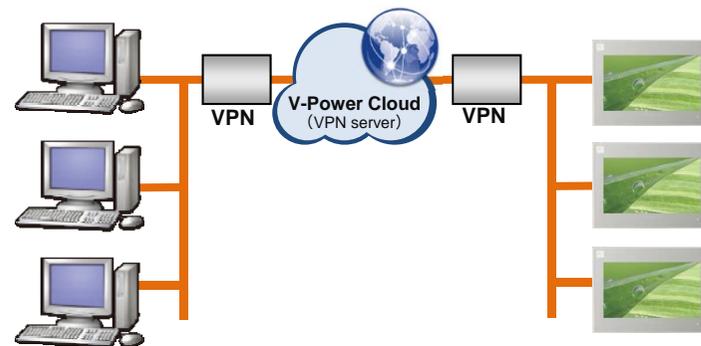
Connect one PC to monitor and multiple V9s which have multiple devices connected on their second LAN ports.



- **n:n connection**

Charged license only

Connect multiple PCs to monitor and multiple V9s.



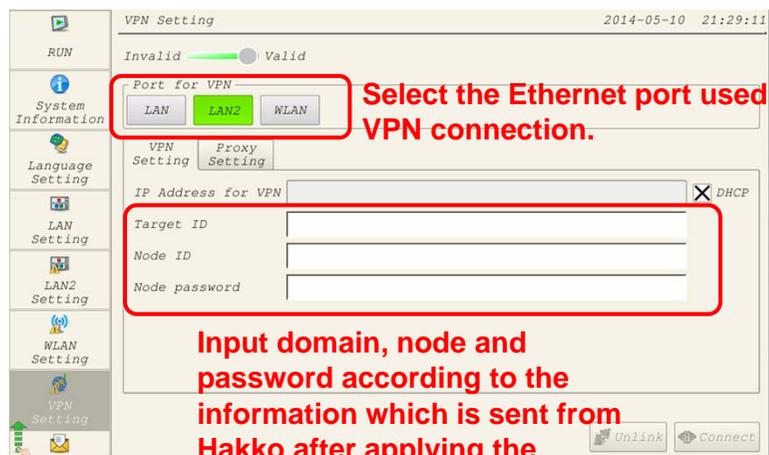
How to set up on V9

VPN setting on V9 local screen.



<VPN setting (Current operation in July)>

Register all the necessary information on V9 to link the information of PC and V9 series.

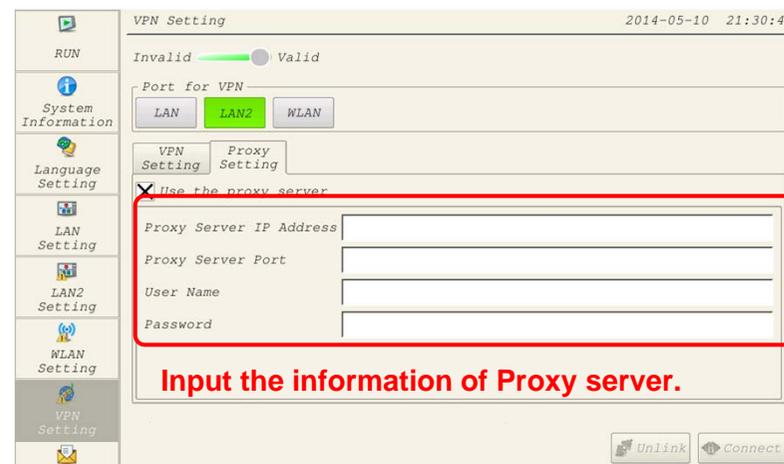


Select the Ethernet port used for VPN connection.

Input domain, node and password according to the information which is sent from Hakko after applying the application form.

<Proxy setting>

Set the information when it is connected to internet via the proxy server.



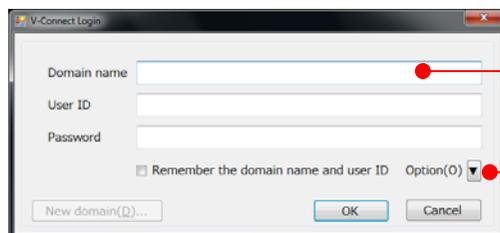
Input the information of Proxy server.

V-Connect (Management tool)

Install the management tool on the PC which you use for remote monitoring and connect to VPN server.

Log in screen

When V-Connect is started up, the log in menu is displayed.



Input Domain name on the application form.

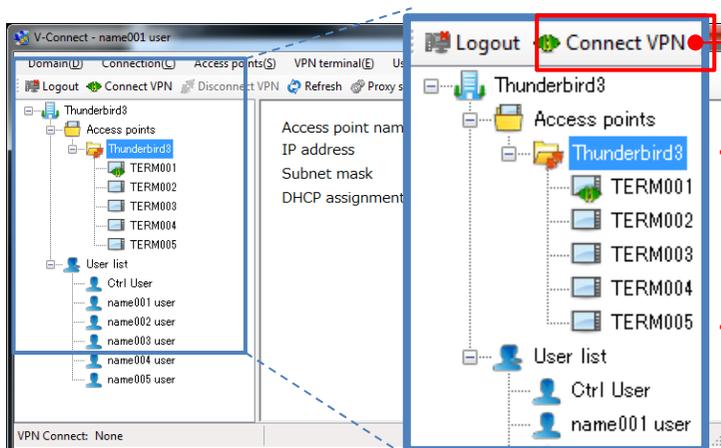
Input these information which you receive from Hakko after applying the license.

Input the proxy information when it is used.



Main screen

The information which is registered on the VPN server is displayed according to the long in information.



Select the connecting devices (e.g.=DEMODOMAIN1) and click "Connect VPN".

V9 information is displayed which is registered on VPN server. It is possible to confirm the connection status of VPN server.

Connection status of V9

 :Connecting to VPN server

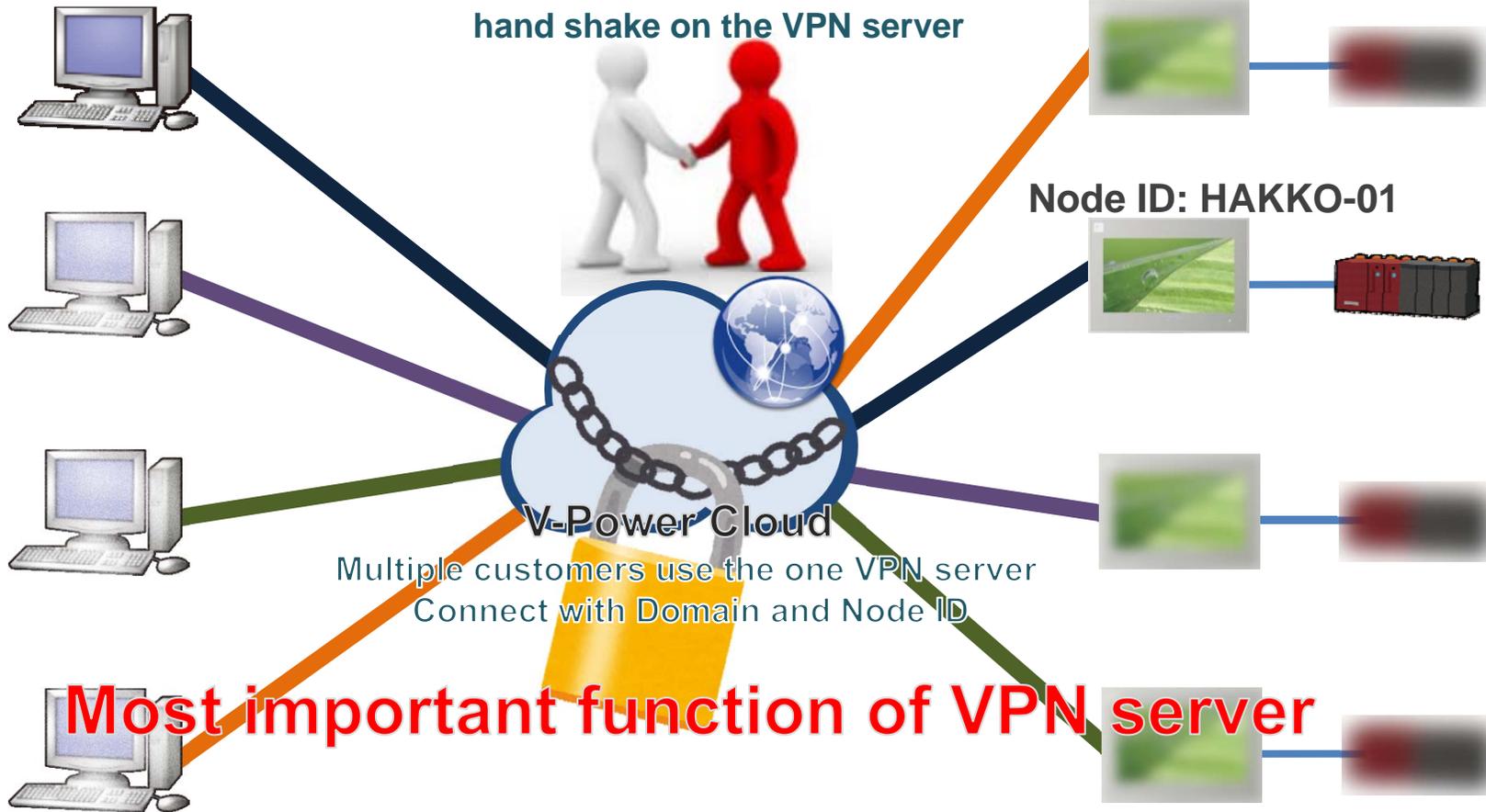
 :Not connecting to VPN server

Easy connection between monitoring site and devices in the factory with domain ID and node ID

How do we establish the connection with your multiple V9s?

e.g.) Domain name: HAKKO

Domain and node ID
hand shake on the VPN server



Application example 1

Preventive maintenance (condition based maintenance)

Remote maintenance system enables systematic maintenance of the equipment by monitoring the operation status and checking for signs of abnormality. Appropriate maintenance can extend the machine's lifespan and reduce the frequency of accidental stoppages.

Before

Cleaning and oil supply are carried out by daily inspection and consumables are replaced by periodical inspection.



- Sudden malfunction
- Drop in operation rate
- Unexpected repair cost

After

Well-planned maintenance can be carried out by monitoring the condition of the equipment and not missing any signs of abnormality.



- Increase operation rate
- Extended equipment life
- Constant product quality
- Leveling of maintenance cost

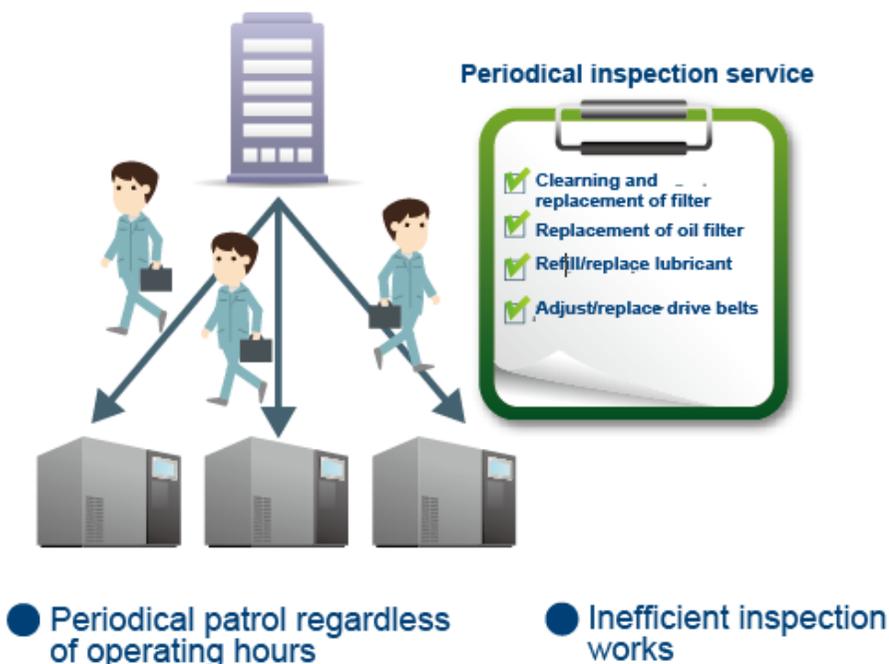
Application example 2

Improvement of the service

It is possible to collect the system information from the each factory by monitoring remotely.
It can help you to make the priority for the visiting the customers.

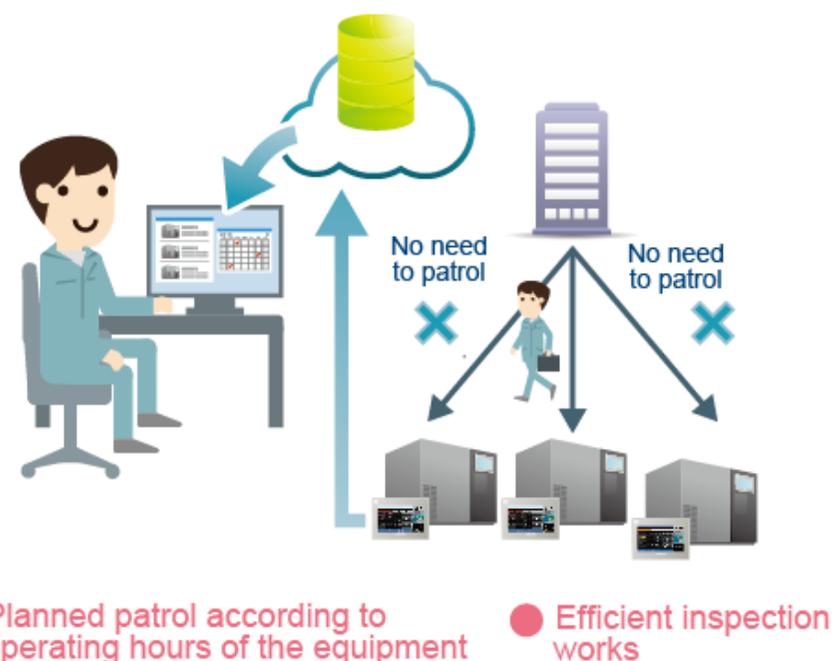
Before

Periodical inspection is carried out regardless of operating hours.



After

Planned patrol is carried out according to operating hours of the equipment



Model

Type	Model	Display size/Resolution		Specifications									VPN		Production type	
				Touch switch	Video/RGB	AUDIO output	Wireless	Extended LAN	UL508	ANSI ISA	CE	KC	Power supply	VPN connection		Routing
Advanced	V9101iWRLD	10.1" wide	1024x600	Capacitance	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	DC24V	Yes	Yes	Standard Product
	V9100iWRLD			Analog resistance	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes	Yes	produced on order item
	V9101iWLD			Capacitance	Yes	Yes	No	Yes	Yes	No	Yes	Yes		Yes	Yes	Standard Product
	V9100iWLD			Analog resistance	Yes	Yes	No	Yes	Yes	No	Yes	Yes		Yes	Yes	produced on order item

Type	Model	Display size/Resolution		Specifications									VPN		Production type	
				Touch switch	Video/RGB	AUDIO output	Wireless	Extended LAN	UL508	ANSI ISA	CE	KC	Power supply	VPN connection		Routing
Standard	V9100iS	10.4"	800x600	Analog resistance	Yes	Yes	No	No	No	No	No	Yes	AC100 to 240V	Yes	No	Standard Product
	V9100iSD			Analog resistance	Yes	Yes	No	No	Yes	#	Yes	Yes		Yes	No	Standard Product
	V9100iSLD			Analog resistance	Yes	Yes	No	Yes	Yes	No	Yes	Yes	DC24V	Yes	Yes	produced on order item
	V9100iSRD	Analog resistance	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes	produced on order item		
	V9080iSD	8.4"	800x600	Analog resistance	Yes	Yes	No	No	Yes	#	Yes	Yes	DC24V	Yes	No	Standard Product
	V9080iSLD			Analog resistance	Yes	Yes	No	Yes	Yes	No	Yes	Yes		Yes	Yes	produced on order item
	V9080iSRD			Analog resistance	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes	produced on order item

Type	Model	Display size/Resolution		Specifications									VPN		Production type	
				Touch switch	Video/RGB	AUDIO output	Wireless	Extended LAN	UL508	ANSI ISA	CE	KC	Power supply	VPN connection		Routing
Lite	V9100iC	10.4"	640x480	Analog resistance	No	No	No	No	No	No	No	Yes	AC100 to 240V	Yes	No	Standard Product
	V9100iCD			Analog resistance	No	No	No	No	Yes	No	Yes	Yes		DC24V	Yes	No
	V9080iCD	8.4"	640x480	Analog resistance	No	No	No	No	Yes	No	Yes	Yes	DC24V	Yes	No	Standard Product

#: ANSI ISA/NEMA4 will be supported after the release.

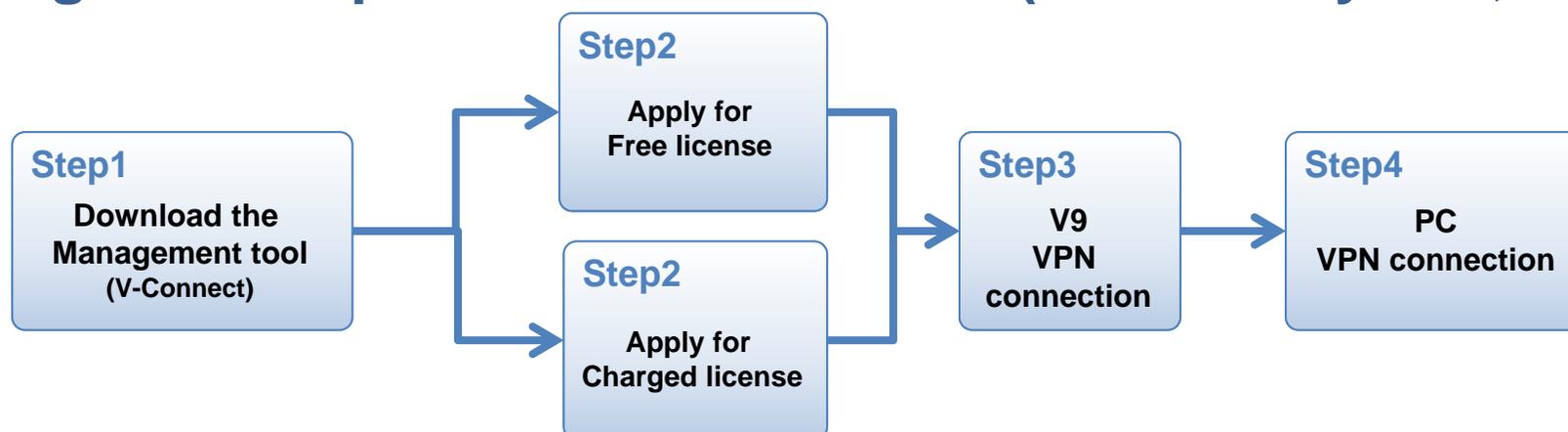
License Types

We provide you various kinds of license depending on your needs.

Type		Free	Value	Simple	Wide	Extra
System Configuration (see below)	1:1	OK	OK	OK	OK	OK
	1:n	OK	OK	OK	OK	OK
	1:n:m	OK	OK	OK	OK	OK
	n:n	—	OK	OK	OK	OK
V9 stations (max)		5	10	30	100	Unlimited
Part Number	Additional connection *1	-			VPN-A	
	1st Year	-	VPN-V	VPN-S	VPN-W	VPN-E
	Renewal (annual)	-	VPN-VR	VPN-SR	VPN-WR	VPN-ER
	Notes	30 days (To be deactivated if paid license is not registered within the period.)				

*1 Registered V9 panels are usually connected as a same network when VPN connection is established.
If you wish to use particular V9 panel(s) as different network, you need additional connection (subdomain) as many as necessary.

Registration process for Customer (Process by Oct, 2014)



STEP1	Download the management tool (V-Connect) - Users download the VPN management tool from our website for free.
STEP2	Apply for Free license Download the application form from our website. Fill out all the information on the sheet and contact with the sales office.
	Apply for Charged license Download the application form from our website when you apply for free license or switch it to the charged license. Fill out all the information on the sheet and contact with the sales office.
STEP3	V9 VPN connection (1) Set up the LAN (IP) setting (Internet connection setting) on V9 local screen. (2) Set Connection ID/Node ID/Password and connect to VPN server. (Set up the proxy setting when it is required.)
STEP4	PC VPN connection Select the MONITOUCH which you wish to connect from the management tool (V-Connect) then establish the VPN connection.

***Download V-Connect and application form from:**

URL : <http://monitouch.fujielectric.com/site/support-e/download-index-01.html>