Remote PC Array Case Study

Saitama Yokoze Town Hall

Remote PC Array
HYPER CONVERGED SOLUTIONS

Realizing a telework environment that balances business continuity, including resident services, with work style reforms, while ensuring security

## Efforts to realize a telework system for staff as early as possible as the covid pandemic worsens

Yokoze Town is located in the southeastern part of the Chichibu region in the western part of Saitama Prefecture, 70 km from the center of Tokyo. The town is known as a popular tourist spot in the suburbs of Tokyo because of its spectacular natural scenery, rich forest resources, and numerous historical and cultural heritages, centering on Mount Buko. Positioned in a basin nestled in the mountains, the climate is generally mild throughout the four seasons although there are relatively large differences in temperature. Most of the town is mountainous, but there is a flat area in the Yokose River basin running northwest, where the Yokose Town Hall is located. For several years, the Yokoze Town Office has been considering introducing telework as part of its efforts to reform work styles. In the midst of these deliberations, the covid pandemic grew more serious and raised the need for telework. Consequently, the Town Hall began full-scale efforts to establish a telework environment for staff in April 2020. Masakuni Inoue, Deputy Mayor of Yokoze Town, talks about realizing a telework environment at an early stage.

The construction of a telework environment for employees at the Yokoze Town Hall was originally an effort to reform the work style of town office employees and to ensure the continuous operation of businesses, including resident services, as part of the BCP. However, covid prompted the need for early implementation. We therefore built a system that allows remote access to the LGWAN (General Government Wide Area Network) while ensuring security, and initiated efforts to allow early realization of telework operations for town hall staff."

Improving business efficiency and convenience by creating an environment that allows remote access to LGWAN

Based on the information security measures for municipalities recommended by the Ministry of Internal Affairs and Communications, Yokoze Town's information system consists of a network based on "three-layer measures" that separates the My Number usage administration system (basic resident register network), LGWAN connection system, and Internet connection system. Separating the three networks improved robustness and enhanced security, but at the same time, it posed challenges in terms of staff work efficiency and convenience. The realization of a telework environment at the Yokoze Town Hall included the resolution of these issues as part of its objectives.

The network environment of the Yokoze Town Hall is a three-tiered separation, where the main communication takes place within the LGWAN, which is completely cut off from the Internet. Naturally, operations that do not need to be connected to the outside world can be performed within the LGWAN, but the staff members who perform these operations cannot leave their terminals (at the town office).
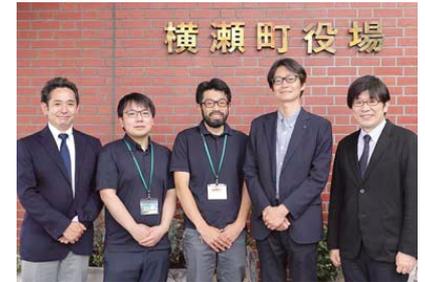
Saitama Yokoze Town Hall
Masakuni Inoue
(Second person from the right)
Kota Katsumada
(Third person from the right)
Yasuhiro Tomita
(Second person from the left)

Solution Business Division, Agent Smith Inc.
Yoshio Kawaguchi (the right end)
Kenki Oba (the left end)
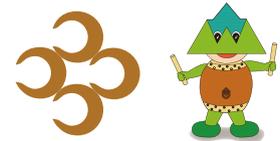
Profile of municipality

Name of municipality:
Saitama Prefecture Yokoze Town

Address:
4545, Yokoze, Chichibu Gun Yokoze Machi, Saitama Prefecture, Japan

Population:
8,030 (As of June 1, 2021)

Yokoze Town is located in the southeastern part of the Chichibu region in the western part of Saitama Prefecture, 70 km from the center of Tokyo.
In addition to the cement-related industry that uses high-quality limestone from Mount Buko, which is one of the 200 famous mountains in Japan, tourism agriculture centered on fruit trees is active. Furthermore, the town spectacular natural scenery, rich forest resources, and numerous historical and cultural heritages, centering on Mount Buko, it is also known as a sightseeing spot in the suburbs of Tokyo, which is a minimum of 72 minutes by train from Tokyo Ikebukuro.
https://www.town.yokoze.saitama.jp/

Another objective of our telework environment is to create an environment that allows remote access to the isolated LGWAN network. (Inoue)

Adopting a system proposal that allows telework without major changes to the existing system environment and offers excellent maintenance and scalability

Saitama Prefecture
Yokoze Town
Deputy Mayor

Masakuni Inoue

The Yokoze Town Hall asked related companies to propose a system for realizing an environment for telework. Kota Katsumada, Town Management Division, Yokose Town Hall, explains the conditions of the proposal as follows.

"We need to be able to do this remotely, at the lowest possible cost, with no major changes to our existing system environment, and without changing our current business operations. Being a small-town hall, maintenance and management with a limited number of personnel should be easy. We also set conditions for the system to be scalable to allow us to gradually increase the number of terminals."

Kenki Ohba, General Manager of the Solution Business Promotion Office, Solution Business Division, Agent Smith Inc. who was responsible for the proposal and actual construction of the system, describes the system proposal as follows.

The first thing that comes to mind when considering the security environment unique to municipalities is a virtual desktop system, but this inevitably increases the burden of maintenance and management. Therefore, we proposed a system centered on the Remote PC Array, which is easy to maintain, manage and scale without significantly changing the existing system environment.

"Remote PC Array" is a remote access solution planned and commercialized by Ascentech based on more than 20 years of experience in building virtual desktops. As a feature, 1U enclosure houses multiple physical PC cartridges and components needed for virtual desktops.

In reviewing the proposals, we set a number of evaluation criteria, and the proposal that best met the criteria was selected. That proposal was to create a telework environment using Agent Smith's "Remote PC Array." We found that the system would allow us to maintain our existing LGWAN environment while providing secure remote access to our normal work environment, and that it was easy to maintain and manage, as well as highly scalable." (Katsumada)

In addition, Yokoze Town has been considering the possibility of using the current system environment without changing it as much as possible when constructing a telework environment, based on the three-tier separation structure unique to local governments. This proposal met that requirement as well. For example, by installing a system with 20 physical PC cartridges per 1U, it means that the number of LGWAN terminals has simply increased by 20, and since the work contents are projected to the telework terminals in the form of screen transfer, the work can be done without leaving any data on the telework terminals.

Yokoze Town Hall
City Management
Division

Kota Katsumada

"The existing LGWAN environment will remain as it is. Furthermore, in the unlikely event that something happens to the device that was taken out, the physical PC in the remote PC array will be protected and the LGWAN environment will not be affected in terms of security." (Katsumada)

Starting small in terms of the scale of telework itself, and aiming for the next stage of development while acquiring know-how

System construction for the realization of a telework environment began in November 2020, and work was completed the following year in February 2021. Yasuhiro Tomita, General Affairs Section, Yokoze Town Hall, talks about the construction of this telework environment.

"The Town Hall currently has around 100 employees. Based on this number, we assumed that 15 units would be the minimum number needed when transitioning to a telework environment for daily operations or emergency response. And since the "Remote PC Array 100" installed this time can accommodate 20 physical PC cartridges in a 1U enclosure, we set up a telework environment in which the remaining 5 terminals can be used as spare terminals when 15 terminals are used, for a total of 20 terminals. In the case of municipals, the software required will differ depending on the department and the work of the individual. From this perspective, it meant that the system introduced could save costs by allowing the software used to be changed on a per-user (terminal) basis."

Yokoze Town Hall
General Affairs Division

Yasuhiro Tomita

As for future developments, Inoue says;

"Although Yokoze is a small town with a population of about 8,000, we were able to develop a telework environment for the town office staff through proposals and construction in accordance with the conditions. We started with a small scale of 20 units, but we hope to gradually increase the number while acquiring know-how with these 20 units. The system installed this time can be scaled up while still using other terminals. What is most important is to ensure the continuity of services for residents and others. We hope to continue our efforts to combine such BCP with reforms in the work styles of town hall employees."

System conceptual diagram