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**Stratusphere™ FIT Prerequisites & Preparation Overview**
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## Stratusphere™ Requirements

Liquidware's Stratusphere has four components: Stratusphere Hub Appliance, Stratusphere Database Appliance, Stratusphere Collector Appliance, and Connector ID Key. Here are some of the requirements for these components.

### Stratusphere Hub Appliance (SHA)

Stratusphere Hub Appliance is a required component and forms the central management and reporting core of the Stratusphere platform.

#### Specifications

##### Hypervisors Supported

VMware ESXi 5.5 and higher, Citrix XenServer 6 or higher, Microsoft Hyper-V on Windows 2012 and higher & Azure, AWS EC2, Google Cloud Platform, Red Hat KVM & RHEV, and Nutanix Acropolis 2016.04.09 and newer.

##### Note: VMware vSphere Virtual Machine Hardware Version

Based on some recently published vulnerabilities, VMware has recommended using higher virtual machine hardware versions. Please make sure to upgrade the Stratusphere appliance virtual machine hardware version to at least 10 and higher as supported by your infrastructure. Please reference this [Knowledge Base article](#) from VMware for additional information on how to upgrade virtual machine hardware versions.

*Note: In an unlikely scenario where the appliances need to be run on VMware Player, VMware Server, and VMware Workstation we recommend the use of VMware Converter 4.x to convert the appliance file formats.*

Download Size	~1.2 GB
CPU	4 vCPUs or higher
Memory	8 GB or higher
Storage	57.2 GB pre-allocated hard disk space — Larger installations may require more disk space depending on data retention needs and a fast storage system (local storage can be a good solution).

## Stratusphere Database Appliance (SDA)

Stratusphere Database Appliance (SDA) is an optional component used to store information when more than 1,000 CID Keys are deployed. This option allows a higher volume of CID Keys to call back to the Stratusphere Hub and a high-performance option for better user interface response times.

### Specifications

#### Hypervisors Supported

VMware ESXi 5.5 and higher, Citrix XenServer 6 and higher, Microsoft Hyper-V on Windows 2012 and higher & Azure, AWS EC2, Google Cloud Platform, Red Hat KVM & RHEV, and Nutanix Acropolis 2016.04.19 and newer.

#### Note: VMware vSphere Virtual Machine Hardware Version

Based on some recently published vulnerabilities, VMware has recommended using higher virtual machine hardware versions. Please make sure to upgrade the Stratusphere appliance virtual machine hardware version to at least 10 and higher as supported by your infrastructure. Please reference this [Knowledge Base article](#) from VMware for additional information on how to upgrade virtual machine hardware versions.

*Note: In an unlikely scenario where the appliances need to be run on VMware Player, VMware Server, and VMware Workstation we recommend the use of VMware Converter 4.x to convert the appliance file formats.*

Download Size	~619 MB
CPU	4 vCPUs or higher
Memory	16 GB or higher
Storage	91.85 GB pre-allocated

## Stratusphere Collector Appliance (SCA)

Stratusphere Collector Appliance (SCA) is an optional but important component that can be used in different roles. In the CID Data Collector role, it is used to collect CID Key callback data which is then validated, queued, processed, and inserted into the Stratusphere Database appliance. In the Network Collector role, it is used to capture information about the virtual network. It provides important metrics such as Network Latency and Response Times for network connections.

### Specifications

**Hypervisors Supported** VMware ESXi 5.5 and higher, Citrix XenServer 6 and higher (bonded NICs not supported), and Microsoft Hyper-V on Windows Server 2012 and higher & Azure, AWS EC2, Google Cloud Platform, Red Hat KVM & RHEV, and Nutanix Acropolis 2016.04.19 and newer.

#### **Note: VMware vSphere Virtual Machine Hardware Version**

Based on some recently published vulnerabilities, VMware has recommended using higher virtual machine hardware versions. Please make sure to upgrade the Stratusphere appliance virtual machine hardware version to at least 10 and higher as supported by your infrastructure. Please reference this [Knowledge Base article](#) from VMware for additional information on how to upgrade virtual machine hardware versions.

*Note: In an unlikely scenario where the appliances need to be run on VMware Player, VMware Server, and VMware Workstation we recommend the use of VMware Converter 4.x to convert the appliance file formats.*

<b>Download Size</b>	~1.2 GB
<b>CPU</b>	2 vCPU or higher
<b>Memory</b>	4 GB or higher
<b>Storage</b>	31.40 GB pre-allocated

## Stratusphere Software Download

1. Use our Download site: <https://www.liquidware.com/download>. Fill in the requested information and you can use the links to download our software for your platform.
2. If you are part of our Acceler8 Partner Program, you can use your credentials to log into our Partner Portal at <https://partners.liquidware.com/>. Navigate to the software download page and download the appropriate files and links directly.

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## Stratusphere Installation Preparation

1. Liquidware recommends placing the Stratusphere Hub in the same location where the intended virtual desktops are going to be hosted. This would enable accurately measuring the Network Latency from current desktop location (future Thin Client) to the Stratusphere Hub (future virtual desktop).
2. Please make sure you use the [Stratusphere Sizing Guide](#) available online to properly size the Stratusphere Hub and Database appliances.
3. **Each** Stratusphere virtual appliance needs the following during configuration:
  - a. **DNS Resolvable Hostname (Required)**
  - b. **IP Address (static) (Required)**
  - c. Network mask (Required)
  - d. Default Network Gateway IP Address (Required)
  - e. DNS Server IP Address (2)
  - f. Mail Relay Servers (Optional)
  - g. NTP Servers (Recommended)
  - h. **DNS entry name for the IP Address (Required)**
4. Distribution of the Connector ID Key (CID) to the target desktops needs to be handled by the infrastructure team at the end user. The Standard CID Key installer in the form of an EXE will be provided to the software distribution team who would then be responsible for packaging, distribution, and installation of the CID Key on all targeted desktops. Documentation for installation of the CID Key in various scenarios is available in addendums within the Stratusphere Installation Guide.
5. The Stratusphere software components communicate between each other using TCP connections. Please ensure these ports are open and accessible between the components. Here is a list of TCP network ports used in communication between the Stratusphere Hub, Database, Collector and Connector ID Keys:
  - a. Stratusphere Hub TCP/22 (SSH) : Console access to Stratusphere Hub
  - b. Stratusphere Hub TCP/443 (HTTPS) : Management Web UI
  - c. Stratusphere Hub TCP/443 (CID Key) : Connector ID Key Communications
  - d. Stratusphere Hub TCP/443 : Collector Communications
  - e. Stratusphere Hub TCP/5432 : Postgres Database Access (SHA)
  - f. Stratusphere Database TCP/22 (SSH) : Console access to Stratusphere Database
  - g. Stratusphere Database TCP/5432 : Postgres Database Access (SDA)
  - h. Stratusphere Collector TCP/22 : Console access to Stratusphere Collector
  - i. Stratusphere Collector TCP/443 : Collector Communications
  - j. Stratusphere Collector TCP/443 : Connector ID Key Communications
6. The Stratusphere UI can import user group and machine group information from any LDAP compliant name store such as Microsoft Active Directory and Novell eDirectory. We can use a standard domain user account or better yet, a service account to import user group membership information. This account should have read-only permissions since Stratusphere does not update any information on the name store. However, in most organizations the group

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memberships may not be exactly what you expect to use since they may not be populated in the way we want to use them. Liquidware recommends creating a CSV file with grouping information for users and machines which can then be imported into the Stratusphere UI. This form of import provides a better focus on how the output of the assessment deliverable can be grouped together. Here is the format of the Linux based CSV text file:

```
<group1-name>,<member1-name>;<member2-name>;...<memberN-name>;
```

```
<group2-name>,<member1-name>;<member2-name>;...<memberN-name>;
```

**Note:** To create a Linux based text file, you can use open source applications like [NotePad++](#) that can convert to UNIX based text files.

## Stratusphere FIT Assessment Time Estimates

Step	Task	Time Estimate
1.	Initial conference call with user to explain the concept, requirements and preparation for the Assessment.	1 Hour. (7 days before installation)
2.	Download the Stratusphere Hub and other components in advance. Depending on bandwidth available, it could take a significant amount of time to complete the download.	5min to 1 Hour depending on bandwidth available.
3.	Install and configure 1 Stratusphere Hub.	1 Hour.
4.	Provide the CID Key installer to Software Distribution team for pushing out to physical desktops.	
5.	Perform health check #1 after one day.	1 Hour.
6.	Perform health check #2 after two days.	1 Hour.
7.	Perform health check #3 after three days.	1 Hour.
8.	Import User Group and Machine Group information. Liquidware recommends using the manual CSV based user and machine grouping information. Stratusphere supports Active Directory based user group import as well but, in most cases, too many groups are imported defeating the purpose of a focused import.	2 Hours.
9.	Conduct Data Collection for about 15 days. At the end of the collection period, update CID Key properties to turn OFF CID Keys uploading machine inspection statistics.	15 days.
10.	Perform data analysis and assess the data collected over collection period to create VDI Assessment Findings and Recommendations deliverable document.	5 days.
11.	Present Assessment deliverables to customer.	1 Hour.